# U.S. Army Corps of Engineers

New England District
Concord, Massachusetts

# Remedial Investigation
# Former Bucks Harbor Air Force Radar Tracking Station
# Machiasport, Maine

## Contract No. DACA31-96-D-0006
## Task Order No. 17

## Final
## Remedial Investigation Report

## DCN: BUCKS2-041205-AAJG

## April 2005

01M-0007

WESTON SOLUTIONS
Restoring Resource Efficiency

**U.S. Army Corps of Engineers**

New England District
Concord, Massachusetts

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The information contained in this document is based on conditions existing as of October 2003. Past conditions were considered on the basis of observations and readily available records, interviews, and personal recollections provided to WESTON, or reasonably available to WESTON. This final version of the RI Report was prepared based on comments to the October 2003 Draft RI Report by the Maine Department of Environmental Protection (MEDEP) and received by WESTON in December 2003. Any additional investigative work conducted at the Site since the date of the Draft RI Report will be presented by others in a supplement to this RI Report or as part of the Feasibility Study. CENAE is responsible for additional data generated after the date of the October 2003 Draft RI Report.

The conclusions and recommendations submitted in this report are based upon the data obtained through June 2003. The nature and extent of contamination identified may change based on proposed supplemental investigation activities. If variations or other latent conditions appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Water level readings have been made in the monitoring wells at times and under conditions stated on the boring logs and in the report. These data have been reviewed and interpretations have been made in the text of this report. However, it should be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, barometric pressure, and other factors different from those prevailing at the time the measurements were made.

Chemical analyses have been performed for specific parameters during the course of this investigation, as detailed in the text. It must be noted that additional constituents not searched for during this study may be present in soil and groundwater at the Site.

# FINAL

# REMEDIAL INVESTIGATION REPORT
# FORMER BUCKS HARBOR AIR FORCE RADAR TRACKING STATION
# MACHIASPORT, MAINE

Contract No. DACA31-96-D-0006
Task Order No. 17

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April 2005

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# FINAL

# REMEDIAL INVESTIGATION REPORT

# REMEDIAL INVESTIGATION
# FORMER BUCKS HARBOR AIR FORCE
# RADAR TRACKING STATION
# MACHIASPORT, MAINE

Contract No. DACA31-96-D-0006
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April 2005

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# LIST OF ACRONYMS

| | |
|---|---|
| "the site" | Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine |
| 1,1,1-TCA | 1,1,1-trichloroethane |
| 2-D | two-dimensional |
| 3-D | three dimensional |
| ABB | ABB Environmental Services, Inc. |
| ADD | average daily dose |
| AEL | Analytics Environmental Laboratory, LLC |
| AFRTS | Air Force Radar Tracking Station |
| amsl | above mean sea level |
| ANL | Argonne National Laboratory |
| AST | aboveground storage tank |
| ASTM | American Society for Testing Materials |
| ATSDR | Agency for Toxic Substance and Disease Registry |
| ATV | acoustic televiewer |
| AWQC | ambient water quality criteria |
| bgs | below ground surface |
| BHHRA | Baseline Human Health Risk Assessment |
| BV | bathroom volume |
| CA | air concentration |
| CAP | Corrective Action Plan |
| CCC | criteria continuous concentration |
| CCME | Canadian Council of Ministers of the Environment |
| CENAE | U.S. Army Corps of Engineers, New England District |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CES | Ces, Inc. |
| cis-1,2-DCE | cis-1,2-dichloroethene |
| cis-DCE | cis-dichloroethene |
| cm | centimeter |
| CMC | criteria maximum concentration |
| CoC | chain-of-custody |
| COD | chemical oxygen demand |
| COPC | contaminant of potential concern |
| COPECs | constituents of potential ecological concern |
| cps | counts per second |

# LIST OF ACRONYMS
# (Continued)

| | |
|---|---|
| CSF | cancer slope factor |
| CTE | central tendency exposure |
| days/year | days per year |
| DCF | Downeast Correctional Facility |
| DERP-FUDS | Defense Environmental Restoration Program, Formerly Used Defense Sites |
| DNAPLs | dense nonaqueous phase liquids |
| DO | dissolved oxygen |
| DOD | U.S. Department of Defense |
| DOE | U.S. Department of Energy |
| DOI | U.S. Department of the Interior |
| DRO | diesel range organics |
| DW | drinking water |
| ED | exposure duration |
| EEC | Engineering Evaluation of Contamination |
| EGGI | Emery & Garrett Groundwater, Inc. |
| EM | electromagnetic |
| EPA | U.S. Environmental Protection Agency |
| EPC | exposure point concentration |
| ERA | ecological risk assessment |
| ER-L | low effects range |
| FAA | Federal Aviation Administration |
| FL | fraction volatized |
| Franklin | Franklin Environmental Services, Inc. |
| FS | feasibility study |
| ft | feet |
| ft/day | feet per day |
| FV | shower-water flow rate |
| GAC | granular activated charcoal |
| GATR | Ground/Air Transmitter/Receiver |
| GI | gastrointestinal |
| gpm | gallons per minute |
| GPR | ground-penetrating radar |
| Great Works | Great Works Pump and Test Boring |
| Hg | gravity |
| HI | hazard index |

# LIST OF ACRONYMS
# (Continued)

| | |
|---|---|
| Hp | water pressure |
| HPFM | heat-pulse flowmeter |
| HQ | hazard quotient |
| Hz | hertz |
| ILCR | incremental lifetime cancer risk |
| IRIS | Integrated Risk Information System |
| kg | kilogram |
| $K_{oc}$ | organic carbon partition coefficient |
| L | liter |
| L/min | liters per minute |
| LADD | lifetime average daily dose |
| LCS | Laboratory control sample |
| LEL | lowest effect level |
| m | meter |
| $m^3$ | cubic meter |
| Maher | D.L. Maher, Inc. |
| MCL | maximum contaminant level |
| MEDEP | Maine Department of Environmental Protection |
| MEG | maximum exposure guideline |
| MEK | methyl ethyl ketone |
| MEWQC | Maine water quality criteria |
| µg/L | micrograms per liter |
| mg | milligram |
| mg/kg | milligrams per kilogram |
| mg/kg-day | milligrams per kilogram per day |
| mg/L | milligrams per liter |
| $mg/m^3$ | milligrams per cubic meter |
| ml | milliliter |
| µS/cm | microsiemen per centimeter |
| ms | millisecond |
| MS/MSD | matrix spike/matrix spike duplicate |
| MTBE | Methyl Tertiary Butyl Ether |
| NAPL | nonaqueous phase liquid |
| NEL | no effect level |
| NOAA | National Oceanic and Atmospheric Administration |

# LIST OF ACRONYMS
# (Continued)

| | |
|---|---|
| NWS | National Weather Service |
| º F | Degrees Fahrenheit |
| OEHHA | Office of Environmental Health Hazard Assessment |
| OMEE | Ontario Ministry of Environment and Energy |
| ORP | oxidation-reduction potential |
| OTV | optical televiewer |
| OVM | organic vapor monitor |
| PAH | polycyclic aromatic hydrocarbon |
| PCB | polychlorinated biphenyl |
| PCE | tetrachloroethene |
| PEL | probable effect level |
| pH | hydrogen ion concentration |
| POET | point-of-entry treatment |
| ppm | parts per million |
| psi | pounds per square inch |
| QA | quality assurance |
| QC | quality control |
| RAGS | Risk Assessment Guidance for Superfund |
| RBC | risk-based concentration |
| RBSC | risk-based screening concentration |
| RfD | reference dose |
| RI | remedial investigation |
| RME | reasonable maximum exposure |
| ROE | right-of-entry |
| RQD | rock quality designation |
| Rx | receiver |
| SA | site assessment |
| SAB | Science Advisory Board |
| SAP | *Sampling and Analysis Plan* |
| SD | shower duration |
| SOW | scope of work |
| SPR | single-point resistance |
| SQL | sample quantitation limit |
| SQRT | screening quick reference tables |
| STL | Severn Trent Laboratories |

# LIST OF ACRONYMS
# (Continued)

| | |
|---|---|
| SVOC | semivolatile organic compound |
| TCE | trichloroethene |
| THQ | target hazard quotient |
| TOC | total organic carbon |
| TPH | total petroleum hydrocarbons |
| TPH-DRO | total petroleum hydrocarbon-diesel range organics |
| TR | target risk |
| trans-1,2-DCE | trans-1,2-dichloroethene |
| trans-DCE | trans-dichloroethene |
| Tx | transmitter |
| UCL | upper confidence limit |
| USACE | U.S. Army Corps of Engineers |
| USACE-ECB-CX | U.S. Army Corps of Engineers, Environmental Chemistry Branch–Center of Expertise |
| USAF | U.S. Air Force |
| USGS | U.S. Geological Survey |
| UST | underground storage tank |
| VC | vinyl chloride |
| VOC | volatile organic compound |
| WESTON® | Weston Solutions, Inc. |
| WWTP | wastewater treatment plant |

# EXECUTIVE SUMMARY

# EXECUTIVE SUMMARY

A remedial investigation (RI) of the former Bucks Harbor Air Force Radar Tracking Station (AFRTS) ("the site") has been conducted to characterize the nature and extent of volatile organic compounds (VOCs) in groundwater, to evaluate risks to human health and the environment, and to investigate an area for the installation of a potential water supply well. From 1998 to present, the U.S. Army Corps of Engineers (USACE), New England District (CENAE) has been working with the Restoration Advisory Board, the town of Machiasport, and the Maine Department of Environmental Protection (MEDEP) to determine the steps to be taken for the site. The RI was performed as Task Order 17, under contract DACA31-96-D-0006 through the USACE–CENAE, and conducted in accordance with the revised June 2002 *Scope of Work* (SOW) prepared by CENAE and submitted to Weston Solutions, Inc. (WESTON®). The work required under this SOW falls under the Defense Environmental Restoration Program, Formerly Used Defense Sites.

The former Bucks Harbor AFRTS Facility is located in Machiasport, Maine, and was used by the U.S. Air Force (USAF) as a radar tracking station from 1954 to 1984. The former AFRTS Facility is located on Howard Mountain, with several support facilities in the surrounding area, including the Ground/Air Transmitter/Receiver (GATR) site located on Miller Mountain. The AFRTS site is now owned and operated by the State of Maine as the Downeast Correctional Facility (DCF) and the Federal Aviation Administration (FAA) for the purpose of tracking commercial airline traffic.

During its years of operation, the USAF reportedly used solvents, including trichloroethene (TCE) and tetrachloroethene (PCE), for automotive maintenance, as a paint thinner, for degreasing, and for cleaning radar antennas and electrical equipment. Based on interviews with former employees, it is assumed that waste solvents were disposed of on the ground at the various locations they were used, and eventually migrated into the groundwater. The solvents may also have been discharged to the leaching fields at the Transmitter site and GATR site locations.

In 1995, a hydrogeological investigation and an Engineering Evaluation of Contamination (EEC) were initiated by the USACE to characterize the geology and hydrogeology at the DCF Housing Area, to evaluate potential groundwater impacts associated with fuel oil

underground storage tanks removed from the DCF Housing Area between 1991 and 1995, and to investigate sources of VOCs detected in groundwater. These investigations included test pit excavations, the advancement of soil borings, the installation of groundwater monitoring wells, and the collection and laboratory analysis of soil and groundwater samples. The investigations were completed in 1997, and indicated that TCE and other chlorinated VOCs were present in groundwater in areas where solvents were reportedly used and disposed of on the ground surface.

In 1999, CENAE requested that WESTON conduct a supplemental EEC to further investigate the extent of TCE in the vicinity of the Transmitter site. The supplemental investigation included a soil-gas survey, the installation of three shallow bedrock monitoring wells, and soil and groundwater sampling. The results of the soil-gas survey indicated that TCE and PCE were present at various locations at the Transmitter site. The analytical results of groundwater samples collected from on-site monitoring wells detected the presence of TCE at a concentration of 52 micrograms per liter (µg/L), which exceeded the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) and the MEDEP maximum exposure guideline (MEG) of 5 µg/L for that compound.

In 2001, WESTON prepared a preliminary *Draft Feasibility Study (FS)* to recommend the most suitable alternative for supplying a safe and adequate drinking water supply to residents whose private water supply wells had been affected. The preliminary Draft FS identified several alternatives, including the installation of individual water treatment systems, connection to an existing community water supply system, development of a stand-alone water supply system, and the installation of replacement water supply wells for affected residents. However, after a review of the document by CENAE and MEDEP, it was determined that an RI should be completed to investigate water quality in the deeper bedrock water-bearing zone and assess if there are remedial alternatives that would result in cleanup of the impacted groundwater.

The USACE-CENAE and WESTON initiated the RI in June 2002, which included the following investigative activities:

- A positional survey of groundwater monitoring and residential water supply wells.
- An assessment of overburden soil quality.

- Installation and development of deep bedrock groundwater monitoring wells at the Transmitter site, Howard Mountain, and Miller Mountain areas.
- Installation and development of a bedrock production test well.
- Surface and borehole geophysical investigations.
- Packer-permeability testing.
- Groundwater, surface water, and sediment sampling and analysis.
- Groundwater level monitoring.
- Human health and ecological risk assessments.

After a review of site disposal practices and an evaluation of overburden thickness in potential release areas, CENAE and WESTON determined that an investigation of vadose zone soils was not feasible at this site. Most solvents that were discharged to the ground surface likely evaporated or drained into the shallow or exposed bedrock beneath the area of release. Due to the shallow nature of bedrock across the site and the high volatility of the solvents, it was considered unlikely that residual contamination remained at persistent levels in soil at the site. Furthermore, because of the reported sporadic nature of solvent disposal, no specific area was identified that warranted a quantitative soil investigation.

A multiagency team, led by CENAE and made up of personnel from the U.S. Geological Survey Branch of Geophysical Applications and the U.S. Department of Energy Argonne National Laboratory, performed the surface geophysical program. The program's objectives were to assess and use complementary surface geophysical methods to locate primary bedrock groundwater flow pathways and identify favorable locations for the installation of the bedrock monitoring wells. A total of 11 deep bedrock monitoring wells and one bedrock test well were installed by WESTON and sampled to further define the nature and extent of VOC contamination in groundwater. Prior to groundwater sample collection at these locations, borehole geophysics was conducted to identify water-filled and hydraulically active fractures and to assist in planning the site-wide groundwater sampling program.

The monitoring well and residential water supply well sampling data collected in 2003 as part of the RI confirm that historical releases of chlorinated VOCs at several locations at the site have

impacted local groundwater. The most commonly detected compound was TCE, which was detected in the monitoring wells at a maximum concentration of 3,460 µg/L (MW-10), and in the residential water supply wells at a maximum concentration of 65 µg/L (DW-04). In addition to TCE, PCE was also found in several locations at concentrations exceeding applicable EPA MCLs, although at levels far less than those found for TCE. Several other VOCs were also identified in groundwater, but all at concentrations well below their respective EPA MCLs.

At the test well site area, a test well was installed in the deep bedrock water-bearing zone at a depth of 200 feet below ground surface. Estimates of borehole yield observed during well development and sampling activities indicate that the well is capable of producing a minimum of 22 gallons per minute. However, the laboratory analytical results of a groundwater sample collected from the well in June 2003 indicate the presence of PCE at a concentration of 2.4 µg/L, suggesting that the area may not be a suitable location for a public water supply well.

Published geologic information for the Bucks Harbor area, observations made during the drilling and installation of bedrock monitoring wells at the site, and analyses of water quality and geophysics data reveal that the bedrock beneath the Howard Mountain and Miller Mountain areas have distinctly different geologic properties. The bedrock of the Howard Mountain area belongs primarily to the lower Devonian Eastport Formation, which contains flow-banded rhyolite, vitrophyre, and autobreccia, while the Miller Mountain consists primarily of granodiorite, quartz monzonite, and gabbro/diabase intrusions. The flow-banded rhyolite and vitrophyre is the most widespread of the four predominant rock types and has the highest hydraulic conductivity. Although the gabbro/diabase and granodiorite units do not contain as many fractures as the rhyolite, the number and frequency of open, water-filled fractures are similar for all three units.

Within the varying bedrock lithologies at the Howard Mountain and Miller Mountain areas are three separate areas of dissolved VOCs in groundwater at the site. In the Howard Mountain area, one area originates at the Transmitter site and extends to the southwest, and a second originates in the vicinity of the FAA radar antennas and extends to the southeast. The extent of the leading edge of the Transmitter site plume has not been defined. The third area is located in the Miller Mountain area, originating at the GATR site and extending to the southeast. Each of the

three areas of groundwater contamination is aligned with either the northwest-southeast or northeast-southwest trending bedrock fracture sets identified at the site. At the Transmitter and GATR sites the plumes are narrow, and therefore are believed to be restricted to a few closely-spaced fractures. The FAA plume is wider and has two extensions that align with the mapped northeast-southwest bedrock fracture set.

The source of the contamination in the Howard Mountain area is interpreted to be the use of solvent compounds in the vicinity of monitoring well MW-10, likely related to solvent dispensing activities in the basement of former Building 114. The elevated concentrations of TCE and PCE detected in bedrock monitoring well MW-10 indicate that the location of former Building 114, near the top of Howard Mountain, is a source area that should be addressed when evaluating potential remedial alternatives for the site. The TCE in this area is migrating along the predominant fracture set to the southeast and toward Howard Cove. The low levels of PCE detected in test well TW-1 may be related to the source of the elevated concentrations detected in MW-10; however, the lack of breakdown products detected in test well TW-1 suggests that the presence of PCE in the test well area may be related to another separate, unrelated source area.

The compounds of concern at the site are TCE and PCE, which were previously discharged to the ground surface at isolated locations across the site. However, due to the long elapsed time (>19 years), the high solubility of these compounds and their low adsorption potential, and the nature of the spills (relatively small amounts of TCE spilled at numerous separate locations), it is believed that only small amounts of TCE and PCE remain in site soils at the various source areas. Comparison of historical groundwater quality data and precipitation records supports this theory. The TCE and PCE compounds will tend to move with the groundwater flow under advection once they have entered the saturated zone. They will move through fractures in the bedrock in a downgradient direction toward groundwater discharge zones (Bucks Harbor and Howard Cove). Diffusion of the TCE and PCE into small and dead-end fractures, dilution, and some limited mechanical dispersion will tend to reduce their dissolved concentrations along the groundwater flow path. Natural biodegradation of TCE and PCE is thought to be occurring at the site, based on the presence of the breakdown product cis-1,2-dichloroethene (cis-1,2-DCE), but the biodegradation is spatially variable. The relatively low concentrations of cis-1,2-DCE found in the Howard Mountain area, suggest that natural biodegradation is not significantly affecting

the concentration or distribution of these compounds at Howard Mountain or the Transmitter site. At Miller Mountain however, the ratio of TCE to cis-1,2-DCE is much higher, suggesting that natural biodegradation is effectively reducing contaminant concentrations in this area.

A Baseline Human Health Risk Assessment (BHHRA) was performed to predict the cancer risks and noncancer adverse health effects above background levels in susceptible populations potentially exposed to contaminants associated with the site under baseline conditions (i.e., in the absence of remedial action). The results indicate that there were no exceedances of EPA's acceptable incremental lifetime cancer risk (ILCR) and noncancer health effects ceilings at any individual residential well or at Miller Mountain. Although there were no unacceptable risks for any residential well at Howard Mountain, the future adult resident in this sector has an unacceptable ILCR based on the elevated concentration of TCE detected in on-site bedrock monitoring wells. Risks from showering and groundwater ingestion were nearly identical.

As part of the screening-level ecological risk assessment, WESTON collected surface water and sediment samples from four locations in the wetland area and unnamed stream to the northeast of the DCF Housing Area. No VOCs were detected in any of the surface water and sediment samples collected; therefore, the site does not pose a significant risk to ecological receptors or the surrounding environment.

The geological distinctiveness of the two bedrock aquifers in the Howard Mountain and Miller Mountain areas is an important feature that should be noted in this summary. The predominant bedrock lithology, nature of fracturing, permeability, estimated hydraulic conductivity, and biological degradation rates are distinctly different between the two areas; therefore, the nature and extent of contamination are different as well and should be taken into consideration when planning future remedial alternatives. In consideration of this and other conclusions drawn in the report, WESTON recommends the following:

- Installation of additional deep bedrock monitoring wells southwest of the Transmitter site.
- Pumping tests of selected bedrock monitoring wells to assess hydraulic connection of water-bearing fractures.

- Consider removing residential wells in the vicinity of the GATR site/Miller Mountain area from future drinking-water sampling rounds based on 8+ years of residential water quality monitoring that indicate no VOCs are present at concentrations that exceed EPA MCLs or MEDEP MEGs.

- Conduct an investigation of overburden soil quality to assess if residual soil contamination exists in the vicinity of former Building 114.

- Immediately abandon the former water supply well located at the GATR site.

- Perform a long-term pumping test on the test well to evaluate potential contaminant mobilization and impact to the DCF water supply well (WY-3).

Using the information obtained from the RI, the FS will be completed to recommend the most suitable alternative for supplying a safe and adequate drinking-water supply to residents. The proposed additional investigative activities will be performed as part of the FS. Several groundwater remedial alternatives, including options for public water supplies, will be prepared and presented in the *FS Report*. WESTON recommends the following remedial action objectives:

- Evaluate source area remediation and water supply alternatives.

- Regard the Howard Mountain and Miller Mountain areas as separate groundwater aquifers due to the uniqueness of the individual geologic and hydrogeologic properties.

- Provide an alternative water supply to those residents whose drinking water exceeds EPA MCLs and MEDEP MEGs.

- Continue the residential water supply monitoring program in the vicinity of Howard Mountain until all groundwater quality meets EPA MCLs and MEDEP MEGs, to ensure there is no risk to residents and that the groundwater plume is not moving in response to changes in residential pumping patterns. The selected remedy must remain in effect until the impacted aquifer has been restored.

# SECTION 1

# INTRODUCTION

# 1. INTRODUCTION

## 1.1 PURPOSE AND OBJECTIVES

The objectives of the remedial investigation (RI) are to characterize the source, nature, and extent of volatile organic compounds (VOCs) in groundwater beneath the Bucks Harbor Air Force Radar Tracking Station (AFRTS) ("the site"), and to quantitatively evaluate risks to human health and the environment. This RI also evaluates the potential of installing a water supply well in an adjacent area to supply an adequate volume of clean drinking water. The results of the RI will be used to complete the feasibility study (FS) to evaluate and compare potential groundwater remedial alternatives.

The work was performed as Task Order 17, under contract DACA31-96-D-0006 through the U.S. Army Corps of Engineers (USACE), New England District (CENAE). The RI was conducted in accordance with the revised June 2002 *Scope of Work* (SOW) prepared by CENAE and submitted to Weston Solutions, Inc. (WESTON®). The work required under this SOW falls under the Defense Environmental Restoration Program, Formerly Used Defense Sites. Although not a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site, the Bucks Harbor RI was implemented subject to, and in a manner consistent with, the CERCLA process.

The analytical results of the groundwater and residential drinking water samples collected during the RI were compared to the U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs) and maximum exposure guidelines (MEGs) developed by the Maine Bureau of Health's Environmental Toxicology Program. The 1992 MEGs are promulgated by rule, and are therefore, relevant and appropriate requirements.

Field activities conducted as part of the RI included the following:

- A positional survey of groundwater monitoring and residential water supply wells.
- Installation and development of deep bedrock groundwater monitoring wells.
- Installation and development of a bedrock production test well.
- Surface and borehole geophysics.
- Packer-permeability testing.

- Groundwater, surface water, and sediment sampling and analysis.
- Groundwater level monitoring.

Groundwater sampling included the collection and laboratory analysis of drinking water samples from 36 residential wells. The purpose of the continued residential well sampling program is to monitor concentrations of VOCs in residential wells in the vicinity of the former Bucks Harbor AFRTS site and the Ground/Air Transmitter/Receiver (GATR) site. The results of these activities are summarized in this RI Report.

The additional site characterization was designed and executed in response to identified data gaps. As a result, the following additional tasks were performed:

- Positional and elevation surveys of groundwater and residential monitoring wells (Table 1-1).
- Further characterize the nature and extent of VOC contamination in the fractured bedrock water-bearing zones at the site.
- Assessment of the bedrock fracture system that is transmitting contaminated groundwater both vertically and horizontally toward downgradient receptors.
- Evaluate potential human health and ecological risks at the site.
- Evaluate the potential for a water supply well in the bedrock aquifer upgradient of the Downeast Correctional Facility (DCF) Housing Area.

## 1.2 SITE BACKGROUND

### 1.2.1 Site Description

The former Bucks Harbor AFRTS Facility is located in Machiasport, Maine, approximately 25 miles from the Canadian border (Figure 1-1). Machiasport is a small coastal town that includes the communities of Larrabee, Bucks Harbor, and Starboard Cove. The land use within Machiasport is predominantly rural/residential with a few commercial operations. The community and its nearby towns rely on the fishing/lobster industry, tourism, and blueberry harvest for economic growth. All homes and commercial facilities are served by private wells. Most of these wells are drilled bedrock wells completed in the fractured bedrock aquifer that underlies the entire area (Prescott, 1974).

The Bucks Harbor facility was used by the U.S. Air Force (USAF) as a radar tracking station from 1954 to 1984 (ABB Environmental Services, Inc. [ABB], 1997a). During its period of operation, the activities at the site included the following three major functions: Radar Operations, the Cantonment Area, and the Housing Area. Other site features include a sanitary sewer filter bed and sanitary wastewater treatment plant (WWTP). Three outpost facilities are associated with the former AFRTS: the Receiver site, the Transmitter site, and the GATR site (Figure 1-2).

With the advent of more sophisticated satellite-based tracking systems, the USAF ceased operations at the facility in 1984. The radar operations facility was transferred to the Federal Aviation Administration (FAA) for use in tracking commercial air traffic, and the Cantonment Area was transferred to the State of Maine Department of Corrections for use as a minimum-security prison (ABB, 1997d). The former Housing Area and the Transmitter site were also transferred to the State of Maine and are used by the DCF. Inmates and DCF employees currently use the Transmitter site as a carpentry shop. The adjacent Receiver site was sold to a private party and is currently used as a residence (ABB, 1997d). The USAF maintained ownership of the GATR site between 1955 and 1963 before transferring the property to the U.S. Department of the Interior (DOI) in 1982. Whereas the USAF and the FAA jointly operated the radar tracking facilities from the late 1950s until 1984, it is unclear whether the GATR site remained active by the USAF during this timeframe. In 1992, DOI transferred the property to its current owner, the Town of Machiasport (ABB, 1997d). The property has not been used since its transfer to the Town of Machiasport. The locations of the various components of the former AFRTS are shown in Figure 1-2.

The former DCF Housing Area consists of 27 housing units, which historically have been used as rental units and/or for storage by the DCF and its employees (ABB, 1997b). The units are currently unoccupied (WESTON, 2002a). A water supply well is located in the northeastern corner of the Housing Area, which currently supplies water to the DCF and the FAA facilities. The well, identified in subsequent sections of this report as “WY-3,” is 340 feet (ft) deep with an estimated yield of 45 gallons per minute (gpm) (ABB, 1997b).

### 1.2.2 General Geologic Setting

The Bucks Harbor area is situated between two northwest-southeast trending normal faults within the Machias syncline, northwest of the Lubec fault zone (Gates, 1981). The bedrock of the Howard Mountain area is mapped as part of the Eastport Formation, which is classified as lower Devonian in age. It is described as a rhyolitic, flow-banded vitrophyre and autobreccia that was intruded and erupted along a fault bordering the Machias syncline and into the Pembroke and Eastport Formations within the syncline (Gates, 1981). It also includes several northwest-southeast trending diabase dikes of younger Devonian age (Gates, 1981).

To the north of the study area, including Miller Mountain, the bedrock is mapped as younger Devonian igneous rocks, consisting of diabase and gabbro dikes and sills intruded by hornblende-bearing, biotite granodiorite and quartz monzonite (Gates, 1981). These rocks lie stratigraphically above, or crosscut portions of the Silurian Hersey Formation, which is composed of a maroon, green, and gray shale and siltstone with local limestone lenses and tuffs with some fossils. The rocks generally strike in a northeast-southwest direction; however, the dip direction and magnitude vary widely, depending on the location relative to the axis of the Machias syncline. Regional fracture and fault patterns generally trend northwest-southeast, perpendicular to the predominant stress direction of the Acadian Orogeny. An orthogonal set of lesser fractures and faults exists parallel to strike, trending in a northeast-southwest direction.

The dip angles of the joints and fractures observed in the Howard Mountain area are relatively high, generally ranging between 70° and 85° from horizontal (ABB, 1995). The fractures noted in the cores recovered during the RI are consistent with these observations. Three fracture sets are noted in the cores recovered during the RI. One set of fractures is close to horizontal and decreases in frequency with depth; this fracture set is presumably related to near-surface release of vertical stress. A second set of fractures is oriented 35° to 45° from horizontal, while a third set of fractures ranges from 75° to 85° from horizontal. In some cases, the trace of the 35° to 45° fracture set is expressed as a lineation on the face of the 75° to 85° fracture set (WESTON, 2003).

A normal fault is mapped along the northeast face of Howard Mountain, extending from Howard Cove several miles to the northwest. Movement along such faults in rock terrains creates

"rubble zones," in which relatively large volumes of water may be stored. These fractured zones are typically less resistant to erosion than the surrounding bedrock; therefore, they often represent zones of increased porosity and hydraulic conductivity. However, subregional fault zones can also form a barrier to groundwater flow if substantial secondary hydrothermal alteration or chemical weathering of the host rock has resulted in the formation of clay minerals, which can plug the open fractures within the fault zone. Intrusive igneous and metamorphosed crystalline rocks similar to those in the Bucks Harbor region generally have very little, if any, primary porosity. In order for groundwater to occur within the unit, there must be openings in the bedrock that are developed through remnant bedding planes, fracturing, faulting, or weathering (secondary porosity). The fractures can be developed by tectonic movements, pressure relief due to erosion, loading and unloading of glacial ice, shrinking during cooling of intrusive basaltic dikes, and the compression and tensional forces caused by regional tectonic stresses creating folds (Fetter, 1994). The fractures are more frequent near the surface of the bedrock and decrease in frequency with depth. Faults tend to be more regional and often extend to great depths, although their water-bearing capacity typically decreases with depth because the weight of the overlying rock tends to close the openings. Groundwater moving through the bedrock is limited to flow within these fracture sets, and thus, often follows a tortuous route in response to regional hydraulic gradients.

Much of the Howard Mountain and Miller Mountain areas are characterized by frequent bedrock outcrops with a thin veneer of surficial deposits that were deposited approximately 13,000 years ago by glacial processes (Borns, 1974). These deposits consist primarily of brown silty sand with a trace of sub-rounded gravel, and range from 0 to approximately 10 ft thick (ABB, 1995). Located between the base of Howard Mountain and the former DCF Housing Area to the northeast is a glacial till deposit consisting of a heterogeneous mixture of sand, silt, clay, and gravel. It includes two varieties of glacial till: a basal till that is fine grained and very compact with low permeability and poor drainage, and an ablation till that is loose and sandy with moderate permeability and fair drainage (Borns, 1974). Based on logs of soil borings advanced in the area, this unit varies in thickness from 0 to 30 ft, and overlies a glacio-marine silt and clay deposit at least 50 ft thick (ABB, 1997b; WESTON, 2003).

Groundwater flow in the overburden generally mimics topography, especially in the upland areas that are characterized by thin till overlying bedrock. In upland areas, such as the Transmitter site, the top of Howard Mountain, and the top of Miller Mountain, strong downward vertical gradients are anticipated as the groundwater flows from the till into the underlying bedrock. Once in the bedrock, groundwater flows through the various fractures in a generally downgradient direction. Groundwater occurrence and movement within the bedrock are controlled primarily by structural patterns in the bedrock. In lowland areas along the coast, groundwater generally discharges from the bedrock back into the overburden, where it then flows either into local streams or directly into one of the surrounding bays (WESTON, 2001).

Additional information regarding the characteristics of the bedrock unit at the Bucks Harbor site, and the nature and direction of groundwater flow is presented in the updated Site Conceptual Model, which is included in Subsection 3.10 of this RI Report.

### 1.2.3 Site History

Limited documentation is available relative to specific maintenance and/or waste disposal practices by the USAF or other historical site users. The USAF reportedly used solvents, including trichloroethene (TCE) and tetrachloroethene (PCE), for automotive maintenance, as a paint thinner, and for cleaning and degreasing radar antennas. Waste solvents were reportedly disposed of on the ground at the various locations where they were used (ABB, 1997d; WESTON, 2002a). Much of the solvent disposed of on the ground surface likely volatilized into the atmosphere; however, an unknown quantity migrated into the subsurface and eventually into the groundwater. Diesel fuel and heating oil were also stored at various locations at the AFRTS, and spills reportedly occurred at several locations (ABB, 1997d).

Sanitary wastewater generated at the facility was discharged to the filter bed located south of the facility from 1954 to 1958. In 1958, the USAF constructed a WWTP across Machias Road from the facility, where sanitary wastewater was treated and discharged via pipes to the shoreline at Howard Cove. After taking possession of the radar operations facility, the FAA reconnected the filter bed in the early 1980s and discontinued the use of the WWTP. The State of Maine began using the WWTP when they took possession of the facility and opened the DCF. As during

USAF operation of the WWTP, treated wastewater is discharged from the WWTP to Howard Cove.

The USAF used the former Transmitter site building to store radio transmitters and other electronic equipment prior to the opening of the GATR site (ABB, 1997a). The Transmitter site building is served by its own leach field, which is located northwest of the building. The former Transmitter site contained a 1,000-gallon fuel oil aboveground storage tank (AST) connected to the building by an underground fuel line. The AST is currently being used by the DCF for storage of heating oil for the carpentry shop. During a site assessment by ABB in July 1995, ABB and USACE personnel observed a 55-gallon drum and a large debris disposal area containing pallets, metal goods and parts, drums, paint cans, and an old fire truck. The 55-gallon drum was possibly used for waste oils or kerosene (ABB, 1997a). Solvents used to clean the instruments stored in the Transmitter site building may have been disposed of on the ground surface or in the building's wastewater system (ABB, 1997a).

The USAF reportedly used solvents at the former GATR site to clean electrical equipment; therefore, solvents may have been discharged to the leach field or ground surface in that area (ABB, 1997a). An AST and three abandoned transformers were observed during a site walkover in 1995 by ABB (ABB, 1995). The GATR site has an inoperable water supply well that was used for site operations.

### 1.2.4 Previous Investigations

The USACE first investigated environmental conditions at the FAA-owned portion of the AFRTS in 1991 (ABB, 1997a). During that investigation four areas were identified that required further investigation, including three former AST locations and one area of stained soil caused by the release of lubricating oil during the operation of a cooling tower (ABB, 1997a). These four areas were addressed in a *Site Assessment (SA) Report* prepared for the USACE by ABB in February 1995. The *SA Report* for Areas 1 through 4 recommended preparation of a Corrective Action Plan (CAP) for soil removal at each of the four areas, demolition of the former fuel pump house and its foundation, and removal of the remains of the underground fuel distribution system in the FAA portion of the facility (ABB, 1997a). The CAP was prepared by ABB in June 1995, and the work was completed in the summer of 1996.

During that same period, the USACE contracted with Franklin Environmental Services, Inc. (Franklin) to remove 27 fuel oil underground storage tanks (USTs) associated with the DCF Housing Area, two diesel fuel ASTs, two 55-gallon drums, and three electrical switches. During removal of the USTs, soil contamination was noted in many of the tank graves. Franklin excavated approximately 2 cubic yards of soil from each of the former tank locations, and collected soil samples for off-site laboratory analysis of total petroleum hydrocarbons (TPH) and VOCs. The petroleum hydrocarbons and VOC analyses were performed using American Society for Testing Materials Method SM17-5520 [equivalent of EPA Method 418.1] and EPA Method 8240, respectively (ABB, 1997b). The results indicated the presence of TPH at concentrations as high as 14,200 milligrams per kilogram (mg/kg) and low levels of chlorinated VOCs (ABB, 1997b). The chlorinated VOCs were detected in samples from the excavations near Buildings 2, 11, 17, and 21 (ABB, 1997b). In 1995, Franklin prepared a *Tank Closure Report*.

Due to concerns about potential adverse impacts to the environment, Maine Department of Environmental Protection (MEDEP) began sampling groundwater from a limited number of residential wells along Machias Road in May 1995. The USACE subsequently began a quarterly monitoring program for impacted and potentially impacted residential water supply wells. The results of the initial residential groundwater sampling indicated the presence of fuel oil at concentrations as high as 470 micrograms per liter (µg/L) and TCE at concentrations as high as 80 µg/L. This prompted MEDEP to issue a Notice of Violation to FAA stating that two diesel fuel USTs were out of compliance with state regulations. The FAA complied by removing the two tanks in March 1995. On behalf of FAA, Millet Associates, Inc. filed an *SA Report* with MEDEP to detail the tank closures (ABB, 1997a). The FAA also conducted limited soil sampling in the vicinity of Buildings 113 and 114 in preparation for the demolition of these buildings as part of a facility upgrade. The results of the soil sampling indicated the presence of fuel, solvents, pesticides, and metals in site soils (ABB, 1997a).

The USACE residential sampling program began in May 1995 and included the following two public water supply wells (WY) and 14 residential wells (DW): WY-03, WY-04, DW-01, DW-02, DW-03, DW-04, DW-05, DW-06, DW-07, DW-08, DW-09, DW-10, DW-11, DW-12, DW-13, and DW-14 (ABB, 1995a). Three additional residential wells (DW-22, DW-23, and DW-24) in the vicinity of the GATR site were added to the program in November 1995 to

assess the impacts of the GATR site on nearby residential wells (ABB, 1995c). Residential wells DW-02, DW-03, DW-04, DW-09, DW-11, DW-12, DW-13, DW-22, DW-23, and DW-24 were equipped with granular activated charcoal (GAC) point-of-entry treatment (POET) systems by MEDEP, and residents received bottled water supplied by the USACE (ABB, 1995a). In May 1996, an additional residential well (DW-30) located to the west of the AFRTS site was added to the program (ABB, 1996a).

According to previous reports, residential wells DW-06 and DW-10 were removed from the program at the request of the owners following the May 1995 (ABB, 1995b) and November 1995 (ABB, 1995c) sampling rounds, respectively. No detections of VOCs or total petroleum hydrocarbon-diesel range organics (TPH-DRO) were reported in the two rounds of sampling performed for residential well DW-06. No detections of VOCs or TPH-DRO were reported in the last round of sampling performed for residential well DW-10 (November 1995). Cis-1,2-dichloroethene (cis-1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and TCE were detected at residential well DW-10 in the August 1995 sampling round, at estimated concentrations well below their respective EPA MCLs and MEDEP MEGs. Diesel range organics (DRO) was detected at residential well DW-10 in the January 1995 round, at a concentration of 67 μg/L, which is above the MCL/MEG of 50 μg/L; however, DRO was not detected in any of the other three rounds for which data are available.

Residential well DW-14 was removed from the program in 1996, based on the absence of site-related chemicals following three rounds of sampling (ABB, 1996b). Community water supply well WY-04 was removed from the program after the August 1996 sampling round, based on the absence of site-related contaminants following six rounds of sampling and the decision to obtain water from community water supply well WY-03 instead of WY-04 (ABB, 1996c).

Residential well DW-13 was removed from the sampling program after the May 1998 (WESTON, 1999a) sampling round, based on a lack of detections of fuel oil/DRO for four consecutive sampling rounds covering a period of ten months, and the lack of detections for TCE for ten consecutive sampling rounds, covering a period of nearly 3 years. Residential well DW-05 was removed from the program in December 1998, because of a lack of detections following nine rounds of sampling covering a period of 31 months. In October 1999, residential

well DW-13 was not sampled as it was removed from the bottled water and GAC filter maintenance program.

In response to the findings of the initial environmental work, the USACE initiated a remediation program that focused on removing impacted soils associated with the ASTs and USTs and several other spill sites identified in the 1995 ABB *SA Report*. The soil removal effort began in the fall of 1995, and due to heavy rains and resulting high groundwater conditions in the excavations, was continued in the summer of 1996 (ABB 1997a). Following completion of the tank and soil removal program, the USACE contracted with ABB to conduct two additional studies: a hydrogeological investigation and an Engineering Evaluation of Contamination (EEC).

The purpose of the hydrogeological investigation was to characterize the geology and hydrogeology at the DCF Housing Area, and evaluate potential groundwater impacts associated with the USTs that supplied heating oil to the 27 housing units. The sampling program included soil boring and overburden monitoring well installations and the collection of soil, groundwater, surface water, and sediment samples. The samples were submitted for off-site laboratory analysis of TPH-DRO and other parameters (ABB, 1997b). The analytical results of the sampling program indicated the presence of fuel oil contamination in soil near 5 of the 27 housing units, at concentrations above the MEDEP stringent cleanup goal of 10 mg/kg. The contamination was reportedly confined to the vadose zone at three of the five locations, and to a zone of groundwater-saturated soils at the other two locations.

A continuous glacio-marine clay layer was identified throughout the area and varied in thickness from 20 to 28 ft. The depth at which the clay layer was encountered also varied, ranging between 6 and 18 ft below ground surface (bgs). The layer was interpreted to be “of sufficient thickness and consistency to act as a confining layer, thus creating a perched overburden aquifer and preventing the downward migration of contaminants at the site” (ABB, 1997b). Based on this interpretation of site conditions, no further action was recommended for the contaminants detected. This recommendation was supported by the amount of soil excavated and removed from the contaminated areas, limited receptors of perched groundwater, and no apparent migration pathway to create future risk (ABB, 1997b).

The EEC assessed the potential for soil and groundwater contamination at six locations that were identified in the 1995 ABB *SA Report*. The six areas investigated in the EEC were as follows:

- The grease trap/utility trench associated with a former automotive maintenance building in the former Cantonment Area (now the DCF).
- The FAA filter bed and outlet that received sanitary waste from many portions of the facility since 1954.
- The Transmitter site leachfield and Burn Pit No. 2 where solvents used to clean the radio transmitters may have been spilled.
- The GATR site where solvents used to clean electrical equipment may have been spilled.
- The Receiver site where solvents used to clean electrical equipment may have been spilled.
- Burn Pit No. 1 where solvents and fuels were reportedly burned as a disposal method and to facilitate fire-fighter training.

To better define groundwater flow patterns and to help identify source(s) of contamination observed in residential wells along Machias Road, additional groundwater monitoring wells were installed by ABB at locations unrelated to suspected contamination areas. A total of 19 groundwater monitoring wells were installed, 10 test pits were excavated, approximately 50 soil borings were advanced, and more than 60 soil samples were analyzed at an off-site laboratory. Numerous other samples were analyzed at a field laboratory.

The EEC recommended excavation or capping of soils from several areas where the levels exceeded MEDEP soil cleanup criteria. Additional investigation was recommended at the Transmitter site, where one groundwater monitoring well (TSMW-002) was found to contain TCE at concentrations of 22 µg/L, exceeding the federal MCL of 5 µg/L (ABB, 1997a).

In 1998, the USACE contracted WESTON to continue the residential well sampling program for VOCs. The USACE also began working with the Restoration Advisory Board group in Machiasport to evaluate what steps would be taken for the site.

WESTON began sampling residential drinking water wells in December 1998. At that time, the sampling program consisted of the following 14 wells:

- DW-02, DW-03, DW-04, DW-09, DW-12, and DW-23 (sampled on a quarterly basis).
- WY-03, DW-01, DW-07, DW-08, DW-11, DW-22, DW-24, and DW-30 (sampled on a semiannual basis).

The number of residential wells included in the sampling program has changed over the years since December 1998. Because of the absence of TCE in 8 of 12 consecutive sampling rounds, residential wells DW-07, DW-08, DW-22, DW-24, and DW-30 were removed from the sampling program in December 1999 (WESTON, 2000a). As residential wells were removed from the sampling program, the maintenance of filter systems and provision of bottled water were also discontinued (DW-09, DW-11, DW-13, DW-22, and DW-24).

Residential well DW-11 was removed from the sampling program following the June 1999 sampling round, based on the absence of site-related compounds for three consecutive rounds of sampling covering a period of 16 months (WESTON, 1999b).

Due to its proximity to the area of impacted groundwater in the vicinity of the former GATR site, residential well DW-31 was added to the program in September 1999 (WESTON, 1999b). Residential wells DW-30 and DW-31 do not have supplied GAC filter systems and have not received bottled water as part of the program because levels of VOCs present in those wells do not exceed half of the MEGs/MCLs.

The USACE and MEDEP re-evaluated the residential sampling program in December 2000. They decided to expand the program to include residential wells that had been sampled only once in 1995, and to add four new locations in the vicinity of the GATR site, based on residents requests for sampling and their proximity to contamination. The proposed sampling program included 31 wells; however, the actual number of wells included in the program was 28 because one location was determined to be a duplicate of another, and two locations were found to be unoccupied. To date, more than 30 sampling rounds have been conducted, and the results indicate that only four of the residential wells sampled (DW-2, DW-3, DW-4, and DW-12) have contained TCE at concentrations that exceed the MCL/MEG of 5 µg/L. Residential drinking

water wells that have contained TCE at concentrations below the MCL/MEG include DW-1, DW-9, DW-23, DW-31, DW-33, and WY-3. The GAC POET systems are currently being maintained at five residences (DW-2, DW-3, DW-4, DW-12, and DW-23) (WESTON, 2003).

To address the findings of the 1997 EEC conducted by ABB, the USACE contracted with WESTON in 1999 to perform a supplemental EEC to further investigate the extent of TCE in the vicinity of the Transmitter site. The supplemental investigation included a soil-gas survey, four test pit excavations, installation of three shallow bedrock monitoring wells (MW-01, MW-02, and MW-03), and soil and groundwater sampling. The results of the soil-gas survey indicated that TCE, PCE, total petroleum hydrocarbon-gasoline range organics, and TPH-DRO were present at various locations at the Transmitter site. Contaminants detected in soil collected from the four test pits included TPH-DRO, polychlorinated biphenyls (PCBs), and inorganic compounds. The TPH-DRO and PCB concentrations detected in the test pits did not exceed the MEDEP *Draft Risk Assessment Guidance for Superfund (RAGs) for Contaminated Soil-Residential Guideline* (MEDEP, 1998). Arsenic, detected at 11 mg/kg in test pit 3, was the only inorganic compound exceeding its respective MEDEP Residential Guideline of 10 mg/kg (WESTON, 2000b).

Monitoring wells MW-01, MW-02, and MW-03 were installed downgradient of the site, on the southeastern, southwestern, and western sides of the Transmitter site to assess contaminant migration from the site. Water levels were measured in the three new monitoring wells and in three existing wells (TSMW-001, TSMW-002, and TSMW-003). Based on these data, groundwater was interpreted to flow in a radial direction from the site and toward the three new wells installed as part of the investigation. The three new monitoring wells, along with existing monitoring wells TSMW-002 and TSMW-003, were sampled for VOCs and TPH-DRO. The analytical results showed that TCE was detected in groundwater at monitoring well location TSMW-002 at a concentration of 52 µg/L, which exceeded the EPA MCL and the MEDEP MEG of 5 µg/L for that compound. Low levels of TCE, chlorobenzene, cis-1,2-DCE, and dichlorobenzenes were detected in TSMW-003, but did not exceed their respective MCLs or MEGs. Trichloroethane was detected in MW-3 during the August 1999 sampling round at 0.8 µg/L. There were no detections of TPH-DRO in groundwater above the reporting limit during the August 1999 sampling event (WESTON, 2000a).

In 2001, WESTON produced a preliminary *Draft FS* for the Bucks Harbor site to recommend the most suitable alternative for supplying a safe and adequate drinking water supply to residents whose wells had been affected by the contamination related to past U.S. Department of Defense (DOD) operations (WESTON, 2001). Of ten possible alternatives considered, the following five alternatives were retained for detailed evaluation:

- Alternative 2—Granular-Activated Carbon Filter/Long-Term Monitoring (Continued POET for Affected Residences) with In-line Sedimentation Filter and a GAC Replacement Program.
- Alternative 3—Connection to an Existing Public Water Supply (DCF).
- Alternative 4—Construction of a New Stand-alone Public Water Supply.
- Alternative 9—Installation of Replacement Wells for Each of the Affected Residents.
- Alternative 10—Installation of a Water Transmission Line from Machias Road to the Affected Residents.

Each retained alternative was individually assessed in detail in terms of implementation, effectiveness, and cost in accordance with EPA FS guidance. A comparative analysis was then completed to evaluate the relative performance of each alternative in relation to each specific evaluation criterion. The purpose of the comparative analysis was to identify the advantages and disadvantages of each alternative, so that the key tradeoffs to be evaluated by the involved decision-makers could be identified. This assessment did not incorporate the subcriteria of community acceptance and state acceptance, which are typically evaluated following receipt of public and state comments on the Proposed Plan. These subcriteria were to be evaluated following comments on the preliminary *Draft FS* from the community and the appropriate state agencies in order to select the final preferred alternative. However, after a review of the preliminary *Draft FS* by the USACE and MEDEP, CENAE determined that the site had not been sufficiently characterized and that the document, as written, was not in compliance with CERCLA because it evaluated alternative water supplies, but did not address the overall remediation of groundwater in the vicinity of the site. Additional investigation was warranted as part of the remedial investigation process to fill identified data gaps, including the evaluation of water quality in the deeper bedrock water-bearing zone, and assessment of other remedial alternatives that would result in cleanup of the impacted groundwater. Upon completion and

approval of the RI, a *Final FS* will be prepared that evaluates various groundwater cleanup alternatives as well as alternative public water supplies. Following release of the *Final FS Report*, a Proposed Plan will be developed and made available for state and public review.

# SECTION 1

# TABLES

## Table 1-1

## Well Coordinate and Elevation Survey Data
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Survey Point Number | Location Code | Survey Point Description | Northing | Easting | Elevation (ft amsl) |
|---|---|---|---|---|---|
| **Howard Mountain Area** | | | | | |
| 781 | WELL | GTMW-001 OUTER CASING | 352315.1056 | 1271324.6764 | 179.7774 |
| | WELL | GTMW-001 INNER RISER | 352315.1056 | 1271324.6764 | 179.3300 |
| 782 | GND | GND @ GTMW-001 | 352315.1475 | 1271324.7058 | 179.7335 |
| 783 | WELL | BPMW-001 OUTER CASING | 352619.6562 | 1271150.4206 | 181.1509 |
| | WELL | BPMW-001 INNER RISER | 352619.6562 | 1271150.4206 | 180.8600 |
| 784 | GND | GND @ BPMW-001 | 352619.5415 | 1271150.5691 | 181.0793 |
| 785 | WELL | CDM MW-3 OUTER CASING | 352097.7185 | 1271471.2332 | 171.8567 |
| | WELL | CDM MW-3 INNER RISER | 352097.7185 | 1271471.2332 | 171.8100 |
| 786 | GND | GND @ CDM MW-3 | 352097.3212 | 1271471.4711 | 169.5577 |
| 787 | GND | GND @ FAMW-002 | 351887.1835 | 1271634.6574 | 162.8244 |
| 788 | WELL | FAMW-002 INNER RISER | 351887.4649 | 1271635.1510 | 165.3085 |
| 789 | WELL | FAMW-002 OUTER CASING | 351887.4625 | 1271634.9030 | 165.7306 |
| 790 | WELL | FAMW-001 INNER RISER | 351673.5210 | 1271646.7654 | 156.3130 |
| 791 | WELL | FAMW-001 OUTER CASING | 351673.5420 | 1271646.5288 | 157.5776 |
| 792 | GND | GND @ FAMW-001 | 351673.9617 | 1271647.1254 | 154.6018 |
| 793 | GND | GND @ STMW-003 | 350962.9715 | 1272030.8794 | 120.6336 |
| 794 | WELL | STMW-003 INNER RISER | 350962.7461 | 1272030.7401 | 122.1446 |
| 795 | WELL | STMW-003 OUTER CASING | 350962.8872 | 1272030.8278 | 122.6866 |
| 796 | WELL | STMW-002 OUTER CASING | 351881.6142 | 1272174.7009 | 147.9649 |
| 797 | GND | GND @ STMW-002 | 351881.3739 | 1272175.0483 | 145.1312 |
| 798 | WELL | DW4 OUTER CASING | 352400.5594 | 1272430.6010 | 83.9560 |
| 799 | GND | GND @ DW4 | 352400.7651 | 1272430.8026 | 82.8574 |
| 800 | GND | GND @ MW11 | 352644.1947 | 1272525.4638 | 55.7775 |
| 801 | WELL | MW11 OUTER CASING | 352644.2857 | 1272525.3414 | 58.1421 |
| 802 | WELL | MW12 OUTER CASING | 352970.5149 | 1272312.3765 | 44.6694 |
| 803 | GND | GND @ MW12 | 352970.4659 | 1272312.6498 | 43.0574 |
| 804 | WELL | WOODEN WELL | 352373.7977 | 1272616.2240 | 54.3378 |
| 805 | GND | GND @ WOODEN WELL | 352373.3328 | 1272617.9539 | 52.2237 |
| 806 | WELL | DW2 OUTER CASING | 352160.3894 | 1272556.1725 | 66.3052 |
| 807 | GND | GND @ DW2 | 352160.3007 | 1272555.5656 | 63.4518 |
| 808 | WELL | DW1 OUTER CASING | 351821.9084 | 1272602.7246 | 69.1776 |
| 809 | GND | GND @ DW1 | 351822.4527 | 1272602.7723 | 66.9934 |
| 810 | WELL | DW5 OUTER CASING | 352121.4773 | 1272808.8805 | 38.8991 |

## Table 1-1

## Well Coordinate and Elevation Survey Data
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Survey Point Number | Location Code | Survey Point Description | Northing | Easting | Elevation (ft amsl) |
|---|---|---|---|---|---|
| 811 | GND | GND @ DW5 | 352121.4441 | 1272808.2975 | 38.1657 |
| 812 | WELL | STMW-001 INNER RISER | 352736.0088 | 1272809.3065 | 37.0690 |
| 813 | WELL | STMW-001 OUTER CASING | 352736.1127 | 1272809.2950 | 37.7044 |
| 814 | GND | GND @ STMW-001 | 352736.3500 | 1272809.4563 | 34.8737 |
| 815 | WELL | MW103 INNER RISER | 352843.6924 | 1272820.5157 | 40.9459 |
| 816 | WELL | MW103 OUTER CASING | 352843.6752 | 1272820.6265 | 41.3577 |
| 817 | GND | GND @ MW103 | 352843.7084 | 1272821.0619 | 38.1127 |
| 818 | WELL | MW105 INNER RISER | 353067.5623 | 1272830.0924 | 40.0642 |
| 819 | WELL | MW105 OUTER CASING | 353067.8522 | 1272830.0668 | 40.4611 |
| 820 | GND | GND @ MW105 | 353067.9543 | 1272830.3934 | 37.0671 |
| 821 | WELL | MW140 INNER RISER | 353231.7557 | 1272744.4188 | 38.6222 |
| 822 | WELL | MW140 OUTER CASING | 353231.6536 | 1272744.3366 | 39.0163 |
| 823 | GND | GND @ MW140 | 353231.3438 | 1272744.0745 | 35.4533 |
| 824 | WELL | MW101 INNER RISER | 353224.8236 | 1272437.4821 | 42.9128 |
| 825 | WELL | MW101 OUTER CASING | 353224.8619 | 1272437.3884 | 43.0963 |
| 826 | GND | GND @ MW101 | 353224.6069 | 1272438.4437 | 39.6790 |
| 827 | WELL | MW102 INNER RISER | 353550.5942 | 1272440.0350 | 52.5039 |
| 828 | WELL | MW102 OUTER CASING | 353550.5874 | 1272440.3080 | 52.8292 |
| 829 | GND | GND @ MW102 | 353550.8467 | 1272440.4098 | 49.6252 |
| 832 | WELL | TW1 OUTER CASING | 354900.6310 | 1271729.4699 | 61.9872 |
| 833 | GND | GND @ TW1 | 354900.3316 | 1271729.5007 | 59.5856 |
| 834 | WELL | WY3B OUTER CASING | 353700.2859 | 1272349.1837 | 39.4708 |
| 835 | GND | GND @ WY3B | 353699.9312 | 1272349.0639 | 37.3875 |
| 836 | WELL | MW8B OUTER CASING | 351909.3389 | 1271704.1451 | 165.1579 |
| 837 | GND | GND @ MW8B | 351909.6933 | 1271703.7268 | 161.4493 |
| 838 | WELL | STMW-006 INNER RISER | 353111.7605 | 1271484.8044 | 136.8297 |
| 839 | WELL | STMW-006 OUTER CASING | 353111.7742 | 1271484.9639 | 137.0902 |
| 840 | GND | GND @ STMW-006 | 353111.2523 | 1271485.4852 | 133.7288 |
| 406 | WELL | WY4 OUTER CASING | 352104.2321 | 1271450.0324 | 171.4708 |
| 407 | GND | GND @ WY4 | 352104.4415 | 1271450.1675 | 170.6593 |
| 841 | WELL | DW12 OUTER CASING | 351950.0345 | 1272188.9635 | 156.2863 |
| 842 | GND | GND @ DW12 | 351949.8363 | 1272188.7377 | 154.1651 |
| 843 | WELL | DW9 OUTER CASING | 351422.3023 | 1271985.9789 | 127.8380 |
| 844 | GND | GND @ DW9 | 351422.0609 | 1271986.1112 | 125.7984 |

## Table 1-1

## Well Coordinate and Elevation Survey Data
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Survey Point Number | Location Code | Survey Point Description | Northing | Easting | Elevation (ft amsl) |
|---|---|---|---|---|---|
| 845 | WELL | WY3 WHERE ELBOW MEETS CASING | 353576.3339 | 1272311.0140 | 46.0052 |
| 846 | GND | VAULT FLOOR @ WY3 | 353576.6047 | 1272311.2096 | 45.0939 |
| 847 | GND | PAVEMENT OUTSIDE VAULT | 353576.5215 | 1272313.1333 | 53.6646 |
| 200 | WELL | CDM MW-1 INNER RISER | 352638.6905 | 1272012.8345 | 236.9717 |
| 201 | WELL | CDM MW-1 OUTER CASING | 352638.7560 | 1272012.7714 | 237.0450 |
| 202 | GND | GND @ CDM MW-1 | 352639.0642 | 1272012.7835 | 235.2110 |
| 203 | WELL | MW-10 OUTER CASING | 352745.8980 | 1271986.3171 | 245.9554 |
| 204 | GND | GND @ MW-10 | 352745.8829 | 1271986.2395 | 243.3603 |
| 351 | WELL | UNMARKED OUTER CASING | 352703.4808 | 1271879.4377 | 249.6653 |
| 352 | GND | GND @ UNMARKED WELL | 352703.5267 | 1271879.4778 | 249.3615 |
| 379 | WELL | CDM MW-2 OUTER CASING | 352507.0235 | 1271872.7324 | 220.3976 |
| | WELL | CDM MW-2 INNER RISER | 352507.0235 | 1271872.7324 | 220.3600 |
| 380 | GND | GND @ CDM MW-2 | 352507.6932 | 1271872.5452 | 218.3501 |
| 490 | GND | GND @ WY-15 | 352468.3924 | 1271591.9252 | 189.4814 |
| 491 | WELL | WY-15 OUTER CASING | 352468.7663 | 1271591.3962 | 191.6241 |
| 688 | WELL | STMW-001 INNER RISER | 352217.6530 | 1271814.7781 | 198.4371 |
| 689 | WELL | STMW-001 OUTER CASING | 352217.4587 | 1271814.4168 | 199.5411 |
| 690 | GND | GND @ STMW-001 | 352217.5015 | 1271814.1451 | 196.2057 |
| 691 | GND | GND @ MW-9 | 352218.9949 | 1271779.5724 | 194.5924 |
| 692 | WELL | MW-9 OUTER CASING | 352219.0282 | 1271779.6943 | 197.5054 |
| 763 | WELL | UNMARKED WELL FLUSH WITH GND | 352350.1461 | 1271687.3508 | 197.8998 |
| **Miller Mountain Area** | | | | | |
| 148 | WELL | MW13 OUTER CASING | 361765.1670 | 1273376.0779 | 253.9044 |
| 149 | GND | GND @ MW13 | 361765.5372 | 1273376.0904 | 250.3114 |
| 150 | GND | GND @ GAMW-001 | 361765.0231 | 1273381.7723 | 250.5437 |
| 151 | WELL | GAMW-001 INNER RISER | 361764.6819 | 1273382.1237 | 252.1689 |
| 152 | WELL | GAMW-001 OUTER CASING | 361764.9511 | 1273381.9250 | 252.8652 |
| 373 | WELL | WY-GATR OUTER CASING | 361960.4500 | 1273295.5626 | 255.2579 |
| 374 | GND | GND @ WY-GATR | 361960.9214 | 1273296.2317 | 254.6585 |
| 399 | WELL | DW 41 | 360110.2430 | 1273718.0138 | 105.7718 |
| 400 | GND | GND @ DW 41 | 360110.1238 | 1273718.4141 | 104.5898 |
| 401 | WELL | MW 14 | 359871.7058 | 1273851.4569 | 78.5700 |
| 402 | GND | GND @ MW 14 | 359871.9835 | 1273852.0325 | 74.3594 |
| 1310 | PIPE | 2" DRAIN PIPE | 361593.0342 | 1273181.0623 | 236.9423 |

## Table 1-1

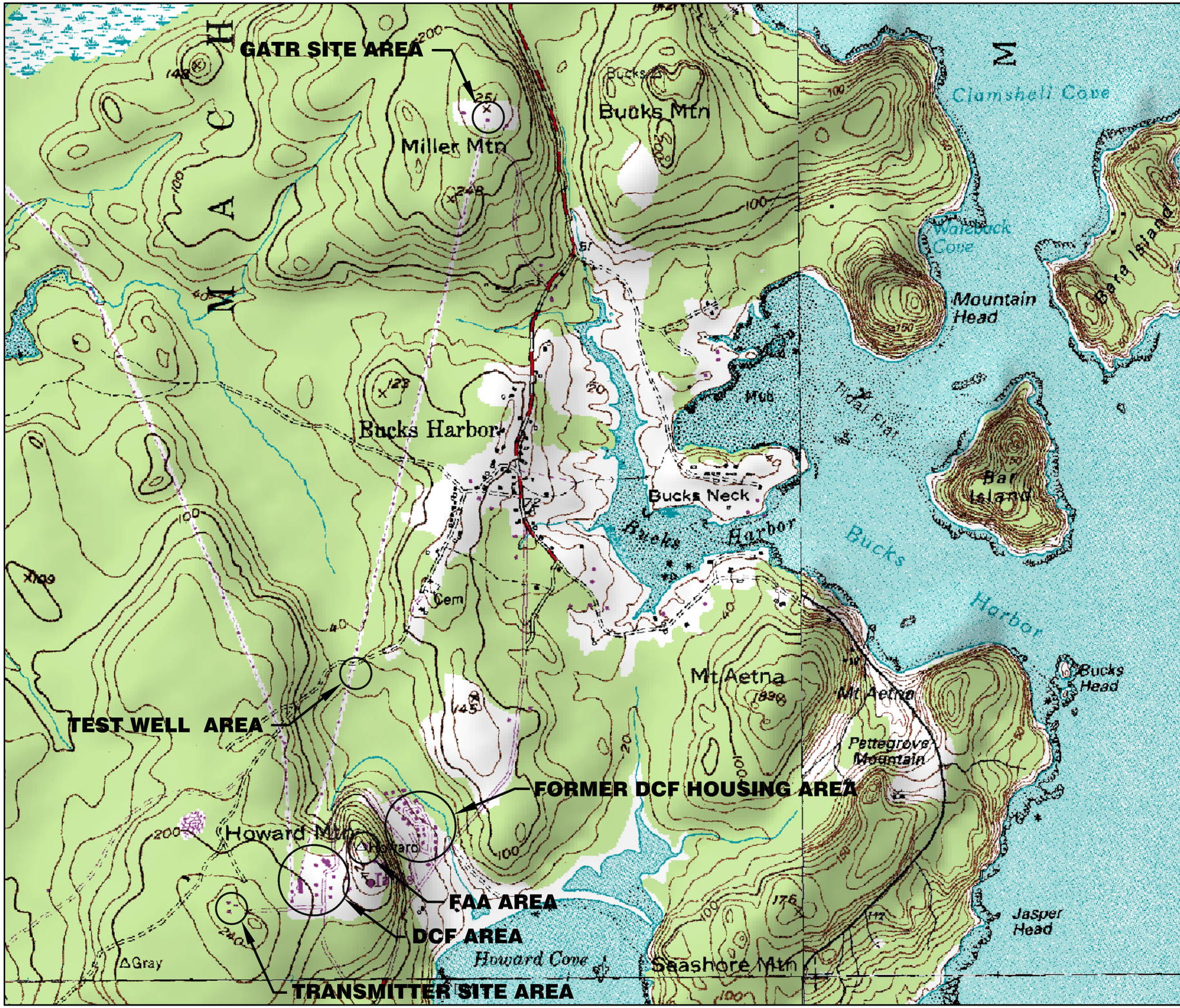
## Well Coordinate and Elevation Survey Data
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

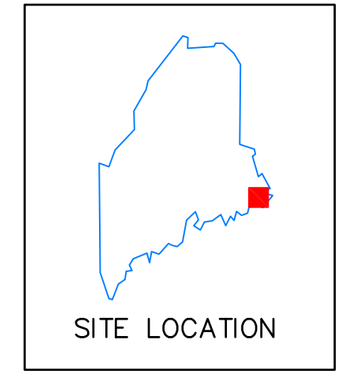
| Survey Point Number | Location Code | Survey Point Description | Northing | Easting | Elevation (ft amsl) |
|---|---|---|---|---|---|
| 1311 | GND | GND @ 2" DRAIN PIPE | 361592.9881 | 1273181.2371 | 235.3696 |
| 1312 | LINE ST | 12" STEEL TROUGH | 361593.0203 | 1273180.5494 | 235.4402 |
| 1313 | LINE | 12" STEEL TROUGH | 361565.5525 | 1273168.8407 | 233.1511 |
| 1314 | WELL | DW 33 | 360550.2520 | 1274388.5973 | 52.8036 |
| 1315 | GND | GND @ DW 33 | 360550.0628 | 1274388.3825 | 50.7645 |
| 1316 | WELL | DW 40 | 361768.9499 | 1274342.0052 | 92.4601 |
| 1317 | GND | GND @ DW 40 | 361769.0180 | 1274341.7280 | 90.1124 |
| 1320 | WELL | DW 23 | 359799.7833 | 1274103.4018 | 54.5362 |
| 1321 | GND | GND @ DW 23 | 359800.3473 | 1274103.1311 | 52.4233 |
| 1322 | WELL | DW 22 | 359851.4325 | 1274154.9004 | 57.4435 |
| 1323 | GND | GND @ DW 22 | 359851.5150 | 1274154.4320 | 57.2268 |
| 1324 | WELL | DW 32 | 359935.0106 | 1274195.7512 | 64.5540 |
| 1325 | GND | GND @ DW 32 | 359934.7364 | 1274195.1620 | 62.9897 |
| 1326 | WELL | DW 31 | 360927.5397 | 1273349.4627 | 208.7986 |
| 1327 | GND | GND @ DW 31 | 360927.6284 | 1273349.8352 | 206.3847 |
| 1328 | WELL | DW 24 | 359043.8434 | 1274028.6491 | 59.9682 |
| 1329 | GND | GND @ DW 24 | 359043.5392 | 1274028.1895 | 58.3377 |
| 1330 | WELL | DW 36 | 358944.3943 | 1273951.0281 | 60.7940 |
| 1331 | GND | GND @ DW 36 | 358944.2541 | 1273950.7899 | 58.5531 |
| 1332 | WELL | DW 34 | 358933.6635 | 1273530.3071 | 67.1665 |
| 1333 | GND | GND @ DW 34 | 358933.6448 | 1273530.5567 | 64.6472 |
| 1334 | WELL | DW 39 | 363540.6375 | 1273150.6759 | 138.2524 |
| 1335 | GND | GND @ DW 39 | 363540.6963 | 1273150.9144 | 136.3397 |
| 1336 | WELL | APPROX. LOC OF GND @ DW 29 | 360117.6152 | 1273901.7858 | 99.0074 |

Notes: GND = Ground
ft amsl = feet above mean sea level
Horizontal control - NAD83, Maine State Plane, East Zone 1801, U.S. feet
Vertical control - NAV88
Survey performed by U.S. Army Corps of Engineers Topographic Survey Crew, 2004.

# SECTION 1

# FIGURES




GRAPHIC SCALE

1200 600 0 600 1200

APPROXIMATE SCALE IN FEET

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

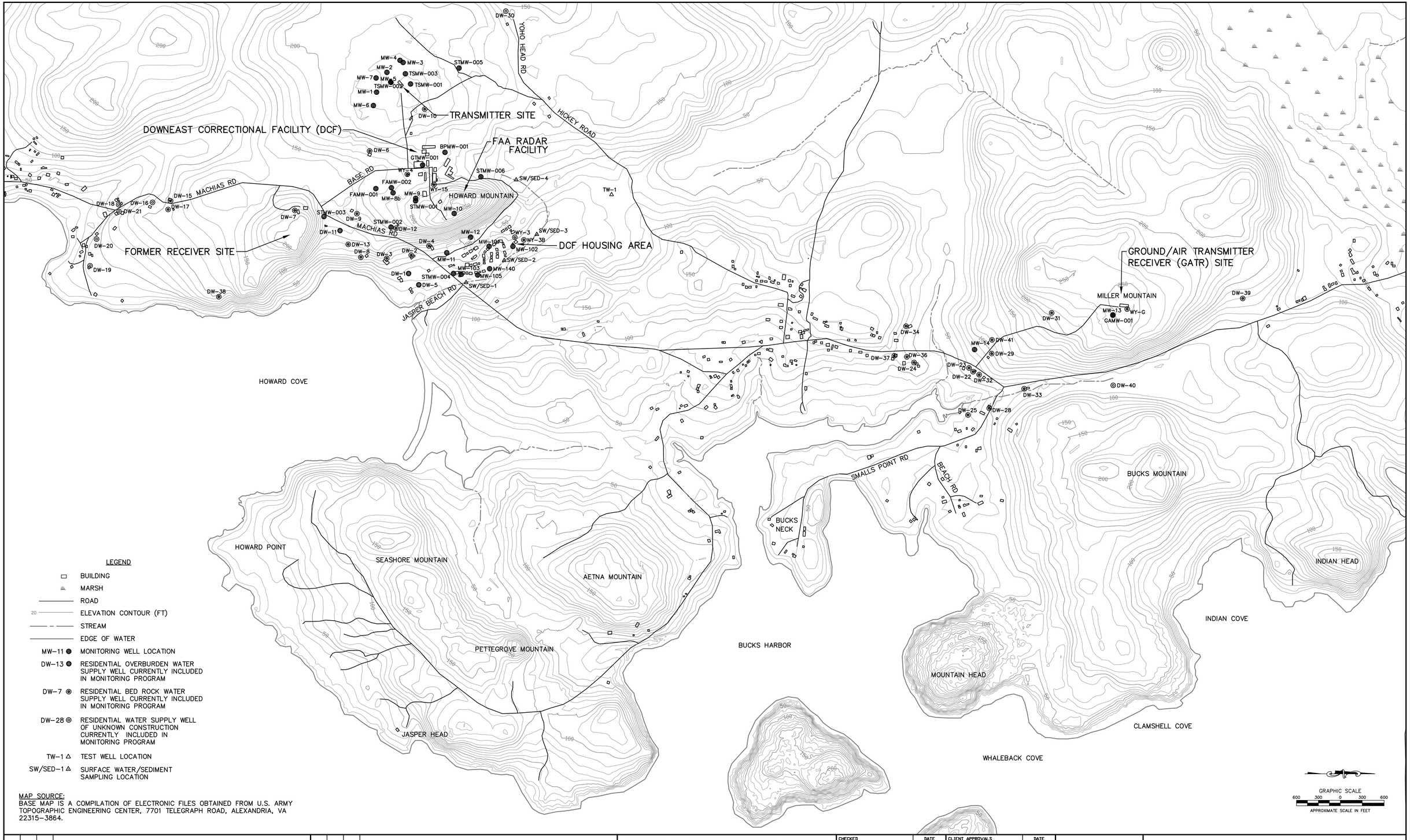
DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

SITE LOCATION MAP

| DRAWN | DATE | FIGURE NO. |
|---|---|---|
| BEG | MAR 2005 | 1–1 |
| CHECKED | W.O. NO. 10971 217 002 | |

M:\Design\DWG\ACOE\BUCKS\2003\LOCUS.dwg, FIG1-1, 3/14/2005 2:19:46 PM, girardeb, 1:1




LEGEND

- BUILDING
- MARSH
- ROAD
- 20 ELEVATION CONTOUR (FT)
- STREAM
- EDGE OF WATER
- MW-11 ● MONITORING WELL LOCATION
- DW-13 ◎ RESIDENTIAL OVERBURDEN WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW-7 ◉ RESIDENTIAL BED ROCK WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW-28 ◎ RESIDENTIAL WATER SUPPLY WELL OF UNKNOWN CONSTRUCTION CURRENTLY INCLUDED IN MONITORING PROGRAM
- TW-1 △ TEST WELL LOCATION
- SW/SED-1 △ SURFACE WATER/SEDIMENT SAMPLING LOCATION

MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864.

GRAPHIC SCALE
600 300 0 300 600
APPROXIMATE SCALE IN FEET

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|
| | | | |

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|
| | | | |

REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| CHECKED | DATE | CLIENT APPROVALS | DATE |
|---|---|---|---|
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

# SITE PLAN

| DRAWN | DATE | FIGURE NO. | REV. NO. |
|---|---|---|---|
| AJM | MAR 2005 | 1-2 | |
| SCALE: AS SHOWN | W.O. NO. 10971 217 002 | SHT. ____ OF ____ | |

M:\Design\DWG\ACOE\Bucks\2003\Site Plan.dwg, FIG1-2, 3/14/2005 2:25:11 PM, gbardeb, 1:1

# SECTION 2

# STUDY AREA INVESTIGATION

# 2. STUDY AREA INVESTIGATION

## 2.1 INTRODUCTION

This section includes information pertaining to the field activities conducted as part of the RI. This includes, but is not limited to: (1) additional research on historical uses of chemicals at the site; (2) surface and borehole geophysical investigations; (3) installation and development of bedrock monitoring wells; (4) installation of a water supply test well; (5) sampling and analysis of multiple matrices; and (6) surveying. These activities are discussed in more detail in the subsections that follow.

## 2.2 CONTAMINANT SOURCE INVESTIGATION

In August 2002, representatives of WESTON, CENAE, and MEDEP visited the site and conducted interviews with people familiar with former site operations and history. The primary objective of these interviews was to identify potential former disposal areas of TCE and other solvents commonly used by civilian and USAF personnel at the site. WESTON, CENAE, and MEDEP personnel interviewed the following individuals who were previously, or are currently, associated with the site and its history: Mr. Bruce Coffin, Mr. Glenn Davis, and Mr. Jean Savard. Mr. Coffin was stationed at the Bucks Harbor AFRTS from October 1955 until 1983, then again from 1985 until his retirement in 1997. Between 1955 and 1983 he was employed as a maintenance technician before taking over as the Maintenance Supervisor for the DCF in the mid 1980s. Mr. Davis previously worked in the maintenance department under the direction of Mr. Coffin before taking over as Maintenance Supervisor upon Mr. Coffin's retirement in 1997. Mr. Savard is employed by the FAA and, along with Mr. Davis, currently works at the AFRTS site.

The information and recollections of the individuals interviewed revealed that there were no "dedicated" areas at the site where solvents were disposed of. Although the use of solvents such as TCE and carbon tetrachloride was common, these solvents were typically disposed of on the ground surface in the various areas where they were used (WESTON, 2002a). According to Mr. Coffin, solvents were routinely used during automobile maintenance, as paint thinner, for

cleaning the radar antennas, and as a degreaser for machinery and various mechanical parts. One or more 55-gallon drums of solvent were reportedly kept in the basement of former Building 114, which was located on top of Howard Mountain (Figure 2-1). The drums were fitted with a spigot for dispensing the solvent into coffee cans or other containers used to transport it to the various areas where it was to be used. Reportedly, approximately one-half the basement area in Building 114 had a dirt floor; therefore, spills of solvents on the floor may have directly infiltrated the subsurface. The other half of the basement floor was equipped with several floor drains that routed spills through pipes to the edge of Howard Mountain and down the face of the rock cliff (WESTON, 2002a).

During investigative activities conducted by ABB in 1997, floor drains were also observed in former Building 501 (Figure 2-1). Although there is no history of such practices, improper disposal of chemicals in these drains could have occurred at this location as well. ABB also discovered a small, rusted metal container and an empty 55-gallon drum labeled "1,1,1-TCA" on the western side of Howard Mountain, adjacent to the existing radar dome. Based on the location of the containers, it appeared that they were pushed off the steep slope from the top of Howard Mountain. According to the FAA, solvents are not currently used at the FAA portion of the facility. The FAA used carbon tetrachloride until the 1960s, and then switched to other solvents, including TCE and 1,1,1-TCA, for radar maintenance (ABB, 1997b).

At the former Transmitter and GATR sites, a septic tank and a leach field are located adjacent to each of the main structures. According to historical information and recollections by Mr. Coffin, the USAF used solvents at each location to clean electrical equipment. Used solvents may have been disposed of via sinks and drains in the buildings, and thus, into the septic systems or disposed of on the ground surface. During a site walk of the GATR site by ABB in May 1995, an empty 5-gallon container labeled "ethylene glycol" was observed east of the access road (ABB, 1997b). The abandoned container at this and other associated sites confirms that poor housekeeping practices were common, and supports the historical recollections of the former site workers. This suggests that other than the Building 114 area, there are no particular "source areas" of contamination at the site; rather, there were likely several smaller, periodic releases that have resulted in an overall adverse impact to groundwater quality.

## 2.3 SOIL AND VADOSE ZONE INVESTIGATION

The term "vadose zone", or unsaturated zone, is defined as the zone between the land surface and the water table that includes the root zone, intermediate zone, and capillary fringe (Fetter, 1994). At the Bucks Harbor site, the depth to bedrock in many areas is very shallow or is exposed at the ground surface. According to Mr. Coffin, the ground surfaces at a majority of the Howard and Miller Mountain areas were bare rock during the time the USAF operated the facility. Over the years since USAF operations, thin layers of soil, vegetation, and fill from the demolition of various on-site structures have accumulated on the rock surface (WESTON, 2002a). The vadose zone at the site, therefore, consists of these thin overburden deposits in addition to an unsaturated, fractured bedrock component. Depending on the specific location within the area, the bedrock component may also be very thin (e.g., at the Transmitter site) or somewhat thicker (e.g., the Miller Mountain area).

CENAE and WESTON had planned to include a soil boring investigation and a soil-gas survey as part of the RI activities. However, after a review of site disposal practices and an evaluation of overburden thickness in potential release areas, CENAE and WESTON determined that an investigation of vadose zone soils was not feasible at this site. Solvents that were discharged to the ground surface likely evaporated and/or entered the bedrock surface in the area where they were released. Due to the shallow nature of bedrock across the site and the high volatility of the solvents, it was considered unlikely that residual contamination remains at persistent levels in soil at the site (ABB, 1997b). Furthermore, because of the sporadic nature of solvent disposal, no specific area was identified that warranted a quantitative soil investigation.

## 2.4 SURFACE GEOPHYSICS

A multi-agency, integrated geophysics program was conducted to support the RI's drilling and bedrock monitoring well installation program. The competent bedrock aquifer at the site occurs as major connected fracture sets or lineaments, and scattered small fractures with little connectivity. The primary fracture sets were the intended targets of the drilling program, but are poorly located or not exposed. The success of the RI's drilling program required that proposed wells penetrate the bedrock aquifer's primary groundwater flow pathways connected to the potential source areas (CENAE, 2003).

The surface geophysics program was therefore developed to optimize locations of the exploratory boreholes drilled in the bedrock, by identifying the depth to bedrock and locations of fractures that may be capable of transporting groundwater contamination. The results of the geophysical profiling, test drilling, and subsequent borehole geophysical logging were combined to further define the Site Conceptual Model of groundwater flow and solute transport, which can be used to design an effective method of remediation (United States Geological Survey [USGS], 2003). A summary of the surface geophysical program is discussed in the subsections that follow.

### 2.4.1 Clearing and Grubbing

A subcontractor to WESTON, J.L. Huntley, Inc., performed clearing and grubbing activities at the AFRTS and GATR sites in support of the surface geophysics field investigation in February and March 2003 (CENAE, 2003). Small trees, brush, and snow were removed from four areas of the site to allow for vehicle and equipment access for the surface geophysics program, which was conducted in March 2003 and is discussed in Subsection 2.4.2. Verbal authorization and/or a right-of-entry (ROE) agreement were received from the property owners for the clearing activities conducted in support of installation and testing of the monitoring wells.

Two transects approximately 9 ft wide were cleared through the forested area surrounding the western and southern sides of the Transmitter site (Figure 2-2). Transect "A" extended in a northeast-southwest direction, approximately 250 ft on either side of proposed drilling location MW-06. Approximately 370 ft of the 500-foot long transect was situated along an existing unpaved logging/access road; therefore, the additional clearing of small trees and brush for this transect was minimal. Transect "B" was oriented in an approximate northwest-southeast direction, and extended approximately 950 ft through proposed drilling locations MW-04 and MW-07. Approximately one-half of this transect utilized a portion of the unpaved logging/access road, which also reduced the amount of clearing required. The northwest extent of this transect terminated approximately 50 ft from Hickey Road on a parcel of land owned by a private resident.

Clearing was performed along one transect approximately 8 ft wide in the vicinity of the DCF sewer line easement (Figure 2-2). Transect "C" was oriented in a northeast-southwest direction,

and extended approximately 200 ft from the Base Road to the DCF sewer line easement. Based on preliminary results of the surface geophysics effort, the transect was extended an additional 200 ft in a northeasterly direction and onto the eastern side of the sewer line easement. Additional geophysics tests were conducted in the vicinity of the former Building 501 location; however, no significant clearing was required to complete the surface geophysics program in this area.

At the GATR site, one transect (Transect "D"), approximately 10 ft wide and 100 ft long, was cut through small trees and brush to the north of bedrock monitoring well MW-14 (Figure 2-3). An ROE agreement was required and received from the property owner for all activities conducted in support of the installation and testing of monitoring well MW-14. The original transect orientation was modified slightly so that the majority of the geophysics testing was conducted along the property owner's driveway, thus reducing the amount of clearing required.

At the test well site, one transect (Transect "E"), approximately 5 to 16 ft wide and 1,000 ft long, was cleared to perform surface geophysics in the area of the proposed test well site (Figure 2-4). A gravel access road was subsequently constructed to allow truck access for the surface geophysics activities, as well as future drilling rig access. The road was extended from Hickey Road, approximately 320 ft into the wooded area, with one small extension off the road to allow for maneuverability of the drilling rig.

### 2.4.2 Geophysical Methods

The multi-agency team that performed the program was led by CENAE and made up of personnel from the USGS Branch of Geophysical Applications, and the U.S. Department of Energy (DOE) Argonne National Laboratory (ANL). Because no single agency had the hardware, data processing and analysis software, or expertise in all of the potentially applicable geophysical methods, a team approach was used to maximize resources and meet an aggressive project schedule.

The program's objectives were to assess and use complementary surface geophysical methods to locate primary bedrock groundwater flow pathways and identify favorable locations for monitoring wells (CENAE, 2003). Several complementary methods were proposed for screening

and locating potential wells: terrain conductivity EM 31/34, GEM-2, ground-penetrating radar (GPR), and seismic refraction tomography (USGS, 2003). The GPR and seismic refraction data were collected in a manner consistent with the guidelines presented in *American Society for Testing Materials Standard D6432, Standard Guide for Using the Surface Ground Penetrating Radar Method for Subsurface Investigation* (ASTM, 2003a), and *ASTM D5777-00, Using the Seismic Refraction Method for Subsurface Investigation*, respectively (ASTM, 2003b).

Prior to conducting geophysical testing at all proposed drilling locations, a geophysical prove-out, or "testing phase," was conducted to develop conclusions regarding the applicability of the selected geophysical techniques and how they could be used at the remaining locations. Once USGS and ANL collected, processed, and integrated their respective data sets, the team developed conclusions regarding the applicability of the selected geophysical techniques and made recommendations for methods to be used in the "execution phase" (CENAE, 2003). A comprehensive description of the surface geophysics program and methodology is included in Appendix A. An overview of the methods used is provided in Subsection 2.4.2.1.

#### *2.4.2.1 Ground-Penetrating Radar and GEM-2*

Ground-penetrating radar is a geophysical method used to measure contrasts in the electromagnetic (EM) properties of subsurface materials and the fluids in these materials. Electromagnetic surveying methods make use of the response of the ground to the propagation of electromagnetic fields, which are composed of an alternating electric intensity and magnetizing force. When an EM pulse impinges upon materials with differing EM properties, some energy is reflected while some is transmitted into deeper materials (USGS, 2003). These response variations provide an indication of the depths at which changes occur in the primary subsurface materials present at the test location.

A transmitting antenna, placed on the surface, is used to transmit an EM pulse containing frequencies in the radar frequency range (10 to 1,000 megahertz) into the subsurface. Reflected energy is returned to the surface and recorded by a receiving antenna. By profiling along the surface, a two-dimensional (2-D) record of EM reflections is created, with distance on the x-axis and travel time on the y-axis.

The USGS evaluated the GPR profiling using RAMAC instrumentation. Selected antenna configurations were optimized for site conditions. Where possible, depth of snow was measured and recorded to illustrate changes in depth and consistency (ice, snow, ice over snow, etc.) of the snow layer to aid in interpreting GPR signal returns. The USGS evaluated EM profiling using the GEM-2 instrument.

System operating performance was tested by conducting airwave walk-away tests at the beginning and end of each field day. This test was used to confirm the RAMAC system operation stability, and to ensure that the sampling frequency used to record the GPR data was known and remained stable during data acquisition (ASTM, 2003a).

The GEM-2 is a hand-held, digital, multifrequency EM-induction instrument. It operates in a frequency range of 330 Hertz (Hz) to 24 kilohertz, and can transmit a waveform containing multiple frequencies. The GEM-2 contains three coils: transmitter (Tx), bucking, and receiver (Rx). The Tx and Rx coils are separated by about 5.5 ft. The GEM-2 also contains a third “bucking coil” that removes (or bucks) the primary field from the receiver coil. All coils are molded into a single board (dubbed “ski”) in a fixed geometry. The GEM-2 uses fixed coil spacing and the frequency sounding method to measure changes in electrical conductivity with depth as the instrument is moved along the survey line. The GEM-2 multiple frequency approach capitalizes on EM skin-depth. Skin-depth is inversely proportional to frequency: low-frequency signals can penetrate deeper than high frequency signals. Low frequencies “see” deep structures; higher frequency signals penetrate a shorter distance, and thus, "see" shallow structures. In this way, scanning over a range of frequencies is equivalent to depth sounding. Data collected using the GEM-2 can be used to generate apparent conductivity profiles or maps for each frequency or the data from all frequencies can be inverted to estimate the 2-D or three-dimensional (3-D) subsurface electrical conductivity structure (CENAE, 2003). Whereas electricity is transmitted more readily by fluids in the pore spaces of overburden materials and by the fluid-grain interfaces than the grains themselves, conductivity profiles prove to be strong indicators of changes in subsurface lithology.

#### *2.4.2.2 Electromagnetic Terrain Conductivity*

The EM terrain conductivity data were collected using the EM-31 and EM-34 survey instruments manufactured by Geonics. During this type of survey, a transmitter coil is used to induce an electrical current into the ground, and a receiver coil measures the strength of the secondary magnetic field generated by these currents. Two components of the secondary magnetic field are recorded: (1) the quadrature-phase component, which is used to measure the ground conductivity; and (2) the in-phase component, which is used for metallic detection due to its extreme sensitivity to large metallic objects. The electrical conductivity of the ground is nearly linearly proportional to the strength of the quadrature-phase component, and is given in units of millisiemens per meter. The in-phase measurement is the ratio of the secondary magnetic field to the primary field, and is expressed in parts per thousand.

The coils can be oriented in either a vertical dipole or horizontal dipole configuration. For the vertical dipole case, the axes of the coils are oriented perpendicular to the ground surface, and for the horizontal dipole, the axes are parallel to the ground surface. For both cases, the coils are maintained in a coplanar state. The vertical dipole orientation is generally preferred over the horizontal dipole because it provides for a greater investigative depth and is less sensitive to near-surface variations.

The separation between the Tx and Rx coils is the primary component that determines the depth of penetration. The "maximum depth" is roughly the depth at which 90% of the instrument response has occurred (0.75x horizontal coil spacing; 1.5x vertical coil spacing). The "effective depth" is the depth range where the instrument's overall response is the greatest. Thus, layers within the effective depth range contribute most to the measured conductivity.

Conductivity values obtained in EM surveying represent weighted mean values of all the layer conductivities from the ground surface to the maximum depth that is sensed by the EM instrument. If the underlying rock or sediment is uniform, the measured conductivity value will be the true conductivity. The amount of contribution to the measured conductivity from a single layer depends on its conductivity, depth, and thickness. Deeper layers contribute less to the final value than do near-surface layers.

The EM-31 Tx and Rx coils are housed in a 3.5 meter (m) long sensor boom, and a single person can operate the instrument. A nominal depth of investigation of 18 ft (5.5 m) is realized when measurements are made using the vertical-dipole mode. Measurements are collected at ½-second intervals, and the quadrature and in-phase components are collected simultaneously. This allows discrimination between anomalies sourced by buried metallic objects from those that are either lithologically or hydrologically controlled. Additional information, consisting of the profile position, and starting and ending points, as well as fiducial mark locations along the profile, were recorded with an OMNI 720 data logger (Polycorder). This information is then downloaded to a personal computer for processing and display.

The EM-34 is a two-person operable instrument that can measure terrain conductivities to depths of 150 ft. Data are collected at approximately one sample per 2 ft, and fiducial marker points are recorded at 20- to 50-foot intervals to help mitigate measurement point location errors due to uneven walking speeds. A Polycorder data logger is used to record the line geometry and profile data, which are downloaded to a personal computer for processing and display (CENAE, 2003).

#### *2.4.2.3 Seismic Refraction Tomography*

Seismic refraction provides acoustic velocity and layer depth information. Variations in acoustic velocity can be used to estimate the depths to various geologic units such as the bedrock surface and also to locate areas of variable density, which could indicate the locations of specific fractures or fractured zones. The refraction method generally depends on an increase in seismic-wave velocity (speed of sound through earth material) with depth, although, the newer tomographic codes presently available have the capability of handling a velocity inversion (zones of lower seismic velocity underlying zones of higher velocity). Both a Tomographic Model and an earth-layer (refractor) cross-section were used as processing outputs from the refraction profiling. The commercially available SeisOpt2D and GeoCT-II codes were used to construct the tomographic model, and the SIPT software package was used to generate the earth-layer cross-section.

In the refraction method, the seismic energy (or wave) bends (refracts) at interfaces between layers of different velocities. In the special case where the seismic wave has been refracted parallel to the interface, the seismic energy travels along this interface, generating a head wave

that returns to the surface. A linear array of acoustic receivers (geophones) is used to record the travel-time of the first returning seismic signal. This information is plotted on a time-distance graph. For the case of plane layer geometry, the time-distance plot will show distinct linear segments for each layer where the inverse of the slope of a segment is equivalent to the apparent seismic velocity for a particular layer.

For the work done in support of the RI, a multichannel engineering seismograph was used to record the seismic refraction information, and a 16-pound sledge hammer was used as the energy source. Due to the relatively shallow bedrock depth, shallow depth of investigation, minimized acoustic noise from traffic or wind, and restricted access during the winter months, the 16-pound sledge proved to be a sufficient acoustic energy source. Geophones (seismic receivers) were spaced at either 6.56-foot (2 m) or 9.84-foot (3 m) intervals, depending on the velocity contrasts encountered during surveying. Shot points were acquired at every fifth geophone position, which allowed input to the tomographic modeling software.

The processing sequence for the refraction data consists of the following:

- Picking first arrival times of return energy for each shot.
- Assigning the array-geometric to the first arrival data.
- Inverting the first-arrival information for velocity and depth using the SIPT algorithm (delay-time method).
- Constructing a tomographic model of the first-arrival information using the SeisOpt2D code available from Optim Software.

The tomography software constructs a velocity model using only first arrival travel-time data and array geometry as input. SeisOpt2D requires no prior assumptions of subsurface structure, or any other subjective data, as input, whereas GeoCT-II requires an initial velocity model prior to inversion. Both software codes construct a globally optimized solution that best fits the measured arrival-time data (CENAE, 2003).

#### *2.4.2.4 Borehole Velocity Survey*

Velocity surveys (check shots) are used to measure the in situ velocity of the underlying sediment and rock, and these data provide confirmatory velocity information for the refraction

models. The general configuration for recording the borehole seismic data consists of a three-component geophone, implementing 40-Hz receiver elements. The downhole geophone is moved in 5-foot increments within the borehole (5-foot receiver spacing). A sledge hammer is used as the energy source, and is placed at offsets up to 15 ft from the borehole. Three additional geophones are placed on the surface at offsets up to 20 ft from the borehole, and are required to resolve any shot-timing variations that occur when using impact sources. Data are recorded at a 0.1 millisecond (ms) interval (10,000 samples per second), which is required so that very small changes in arrival time (< 0.3 ms) can be detected. The small arrival time changes are expected due to the presence of fast-velocity rhyolitic, dioritic, and gabbroic rock, and correspond to a seismic wave traveling from 10,000 to 25,000 ft per second.

Data processing consisted of the following:

- Pick first arrival energy for the downhole and reference geophones.
- Sort the arrival-time data by depth point.
- Compute and apply shot-timing corrections using the arrival time picks obtained from the reference geophones.
- Compute the average velocity to a receiver station using the straight-line distance from the shot to the receiver and the corrected arrival time.
- Convert to vertical travel-time using the depth point for the receiver and the computed average velocities.
- Compute interval velocities using the least squares line-fitting algorithm to estimate the slope (inverse of velocity) between measurement points. The least-squares operator has the advantage of smoothing over small time-picking errors.

The results from the downhole seismic analysis are presented as plots of the raw first-arrival data, the corrected arrival times, and the resulting average and interval velocities versus borehole depth. Where available, the data are correlated with the lithologic information and other available borehole geophysical data.

## 2.5 BEDROCK MONITORING WELL INSTALLATION

A total of 11 open-hole bedrock monitoring wells and one test well were installed during the RI. The locations of the monitoring wells were selected based on the results of the surface

geophysics program and proximity to suspected source areas. The bedrock wells were installed using various drilling techniques, depending on the information desired from the well location and drilling conditions encountered in the field. Permanent 4- or 6-inch-diameter steel casings were installed a minimum of 5 ft into competent bedrock at each well location using air hammer, drive-and-wash, or mud rotary drilling techniques. The casings were grouted with concrete and allowed to cure for at least 24 hours before drilling through the protective steel casing and into bedrock using air hammer or coring techniques.

Throughout the drilling activities, a WESTON geologist monitored the rate at which the air hammer or core barrel advanced through the bedrock, making notes of intervals where the drilling rods quickly dropped, increases in water production, and loss of drilling fluids, all of which could be representative of a fractured zone. Rock cuttings and bedrock cores were examined for composition, mechanical and non-mechanical fractures, iron staining, and evidence of weathering caused by the interaction of groundwater along potential water-bearing fractures. The bedrock wells were drilled to a depth determined in the field, based on the encountered geological conditions and/or water yield. Surface completions at each newly installed bedrock monitoring well consisted of the 4- or 6-inch-diameter steel casing, cut to an appropriate height, grouted in place with concrete, and fitted with a lockable steel slip cap.

A total of eight wells (MW-05, MW-06, MW-07, MW-09, MW-10, MW-11, MW-12, and MW-13) were completed into bedrock using air-hammer drilling techniques. Three wells (MW-04, MW-08b, and MW-14) were installed using an HQ-size (3 5/8-inch outer diameter) core barrel fitted with a diamond bit. Cores were collected for assessing geological conditions and comparison to borehole geophysics data. A summary of total well depths, casing depths, installation methods, bedrock formation, and potential fractured intervals noted during drilling at each well location is presented in Table 2-1. Well construction logs for these wells are included in Appendix B. A summary of the monitoring wells installed prior to the RI is included in Table 2-2.

The 5-foot long bedrock cores were initially logged in the field by a WESTON geologist and stored in standard wooden core boxes at WESTON's Manchester, New Hampshire office. The cores were logged using procedures detailed in EM 1110-1-1804 (USACE, 2001) to document the appearance of the cores and to provide an indication of their physical appearance. The cores

were logged for rock description, fracture density, orientation, rock quality designation (RQD), and solution/void conditions. A State of Maine Certified Geologist further examined the bedrock cores, and developed the rock coring logs included in Appendix B.

The classification and description of each lithologic unit in the bedrock core was logged as completely as possible, and included the following information:

- Unit designation
- Rock type and lithology
- Hardness, relative strength, or induration
- Degree of weathering
- Texture
- Structure
- Discontinuities (faults, factures, joints, seams)
- Orientation with respect to core axis
- Asperity (surface roughness)
- Nature of infilling or coating, if present
- Staining, if present
- Tightness
- Color
- Solution and void conditions
- Swelling and slaking properties, if apparent
- Additional descriptions such as mineralization, inclusions, and fossils

The quality of the rock mass was evaluated by the RQD. The RQD was performed at the time of core retrieval to minimize effects from handling or slaking. The RQD was calculated using the following equation, as defined in EM 1110-1-1804 (USACE, 2001):

$$RQD = \frac{\Sigma \text{ Length of sound core pieces} > 4 \text{ inches}}{\text{Total core run length}}$$

Sound, or intact, pieces of core 4 inches or longer were used to determine the RQD. The core segments were measured along the centerline or axis of the core. Mechanical breaks caused during drilling or handling were disregarded.

### 2.5.1 Transmitter Site

Four bedrock monitoring wells, identified in Figure 1-2 as MW-04 through MW-07, were installed at the Transmitter site, located downslope of the former Transmitter building, leach

field, and existing monitoring well network. According to the bedrock potentiometric surface contours developed during previous investigative phases, the new wells are located hydraulically downgradient of these areas. The wells were installed by a WESTON subcontractor, Great Works Pump and Test Boring (Great Works) of Rollinsford, New Hampshire, between 3 March 2003 and 24 March 2003. Bedrock monitoring wells MW-04 and MW-06 were positioned at locations that move outward (downhill) from the Transmitter building along the two orientations of interpreted photo-lineament features mapped by ABB (ABB, 1995b). The number of measurable joints and fractures observed at each station during the outcrop survey suggested that the fracture density was sufficient to ensure reasonable success in encountering water-bearing fractures along these orientations.

The results of the surface geophysics conducted in February 2003 and March 2003 further defined the ideal locations for installation of these wells. The GPR and seismic refraction tomography profiling conducted in the vicinity of the proposed drilling locations identified areas of diffuse signals and/or low velocities, which can be indicative of less-competent or fractured zones. The coordinates of such locations were identified and later staked in the field for the installation of the wells. Additional details regarding the results of the surface geophysics program are presented in Appendix A.

Great Works began the installation of bedrock monitoring well MW-04 using a wire-line HQ-size (3 5/8-inch outer diameter) core barrel to a depth of 58 ft bgs. However, the abrasive nature of the bedrock material caused excessive wear of the drilling bit and scoring of the core barrel, and the high density of vertical fractures resulted in frequent core barrel jamming. Because the bedrock quality was not increasing with depth, little usable core was recovered. Due to continued coring equipment damage, the decision was made to cease coring activities and switch to an alternate drilling technique to complete the well. Drilling of MW-04 was continued using a 3 7/8-inch outer diameter air hammer, and was completed on 17 March 2003, at a depth of 100 ft bgs.

Bedrock monitoring well MW-05 was co-located with existing hybrid well TSMW-002, which was installed on the southeastern side of the former Transmitter building. Prior to the RI activities, TCE concentrations in samples collected from hybrid monitoring well TSMW-002

were the highest detected in a groundwater monitoring well (52 µg/L in August 1999). Monitoring well TSMW-002 is screened between 3 and 13 ft bgs, with the bedrock surface at approximately 6 ft bgs. The interpretation that this is a groundwater recharge area suggests that a localized source of TCE could exist in this portion of the site. These two wells now serve as a "couplet" to evaluate the vertical hydraulic gradient and difference in TCE concentrations between the shallow and deep bedrock water-bearing zones. Bedrock well MW-05 was installed by Great Works, using a 3⅞-inch outer diameter air hammer, and was completed on 18 March 2003 at a depth of 100 ft bgs.

Bedrock well MW-06 was installed southeast of the former Transmitter site building, along the approximate strike of the major linear features in the area. The well was installed using a 3⅞-inch outer diameter air hammer and was completed on 18 March 2003 at a total depth of 120 ft bgs.

Bedrock monitoring well MW-07 was installed south-southeast of well MW-02 to evaluate bedrock groundwater quality south of the former Transmitter building, between wells MW-04 and MW-06. The well was installed using a 3⅞-inch outer diameter air hammer, and was completed on 24 March 2003 at a depth of 130 ft bgs.

### 2.5.2 Downeast Correctional Facility-Federal Aviation Administration Site

Five bedrock monitoring wells, identified on Figure 1-2 as MW-08b through MW-12, were installed at the DCF-FAA site. Bedrock monitoring well MW-08b was installed immediately downslope from the DCF filter bed, which received sanitary waste discharge from the USAF Operations Area and Cantonment Area from 1954 to 1958, and the FAA from the early 1980s until approximately 1996 (ABB, 1997a). This well is also situated southeast of the sanitary filter bed, along the primary northwest/southeast-oriented fracture system present throughout the area. After installing a 4-inch-diameter steel casing at the original location (MW-08a), the well location was repositioned following analysis of the surface geophysics data collected along the transect through the area.

The well was installed using a wire-line HQ-size (3⅝-inch outer diameter) core barrel to a depth of 55 ft bgs. The bedrock unit encountered during drilling was the same flow-banded rhyolitic

vitrophyre encountered at well MW-04, and although the abrasive nature of the bedrock material and density of vertical fractures was less than observed at well MW-04, the core barrel bits were quickly compromised and advancement into rock was extremely slow. Because the target depth of this well was only 60 ft bgs, and the water yield was acceptable, the decision was made to complete the well at 55 ft bgs. This well was completed on 28 March 2003.

Bedrock monitoring well MW-09 was installed downslope from former Building 501, which served as the former Radome Maintenance Building where solvents were likely used during radar antenna cleaning. This well was also positioned between former Building 501 and existing bedrock monitoring well STMW-001, where TCE and PCE were detected above MCLs in 1996, and southwest of former Building 501, following the orientation of the secondary northeast-southwest fracture system present throughout the area. Bedrock well MW-09 was installed using a 3⅞-inch outer diameter air hammer and was completed at a depth of 120 ft bgs on 25 March 2003.

Bedrock monitoring well MW-10 was installed at the former location of Building 114, which was previously located on the top of Howard Mountain. As previously indicated, Building 114 had a basement with a dirt floor where solvents were reportedly stored and dispensed from 55-gallon drums. The well was installed using a 3⅞-inch outer diameter air hammer and was completed at a depth of 201 ft bgs on 1 April 2003.

Bedrock monitoring wells MW-11 and MW-12 were installed at the base of Howard Mountain on the eastern side, within a major northwest-southeast trending fault zone (Gates, 1981). This orientation follows the interpreted fault pattern in the area and may be a preferential pathway for contaminant migration. The overburden in this area consists primarily of coarse sand and gravel underlain by a dense clay and silt layer on top of the bedrock surface. It was anticipated that the overburden could be up to 75 ft thick in this area, and therefore, mud-rotary drilling techniques were used to install the permanent steel casing into the top of the bedrock unit at these locations. Mud rotary excels at effectively removing cuttings while stabilizing the borehole walls in unconsolidated sands and gravels. These two wells were installed by a subcontractor to WESTON, D.L. Maher, Inc. (Maher), a division of the Boart Longyear Company, of North Reading, Massachusetts. The mud-rotary drilling technique was used to install permanent

6-inch steel casing a minimum of 5 ft into competent bedrock at each location. The wells were then advanced into bedrock using air hammer drilling techniques with an approximate 6.1-inch outer diameter air hammer. Bedrock well MW-11 was completed at a depth of 200 ft on 11 May 2003, and bedrock well MW-12 was completed at a depth of 243 ft on 6 May 2003. The well construction logs for bedrock wells MW-11 and MW-12 are included in Appendix B.

### 2.5.3 Ground/Air Transmitter/Receiver Site

Two bedrock monitoring wells, identified on Figure 1-2 as MW-13 and MW-14, were installed at the GATR site in the Miller Mountain area. Monitoring well MW-13 was co-located with shallow hybrid well GAMW-001, which is located in the inactive leach field at the GATR site. Bedrock well MW-13 was installed by Great Works using a 3 ⅞-inch outer diameter air hammer, and was completed at a depth of 219 ft bgs on 2 April 2003.

Well MW-14 was installed at the base of Miller Mountain in a low seismic velocity zone, located between the leach field area to the north and residential drinking water wells DW-22 and DW-23 to the south. These two residential water supply wells are located downgradient of the GATR site and in a direction that coincides with the predominant northwest-southeast strike direction of joints and fractures identified in local bedrock outcrops. Bedrock well MW-14 was installed using coring techniques with a wire-line HQ-size (3 ⅝-inch outer diameter) core barrel. The well was cored to a depth of 101 ft bgs, and was completed on 26 March 2003.

## 2.6 BEDROCK TEST WELL INSTALLATION

A bedrock test well (TW-01) was installed to evaluate the feasibility of providing a production well to supply drinking water to local residences. The bedrock test well was installed at the intersection of the mapped northwest-southeast trending fault zone and the power line easement northeast of Howard Mountain, and overlies a seismic low velocity zone within the bedrock. The seismic refraction tomography data also indicated that the saturated thickness of the overburden in this area is approximately 50 ft thick, consisting mainly of silt and clay of the Presumpscot formation, with a thin layer of sand and gravel directly above the bedrock surface.

Maher installed bedrock test well TW-01 prior to the installation of bedrock wells MW-11 and MW-12. The same mud-rotary drilling technique used during MW-11 and MW-12 installation was used to install permanent 6-inch steel casing 5 ft into competent bedrock. The bedrock surface at location TW-01 was encountered at a depth of 47.5 ft bgs. The well was advanced into bedrock using air hammer drilling techniques with an approximate 6.1-inch outer diameter air hammer. A hydraulically active fracture zone was encountered at a depth of between 168 and 169 ft bgs, with an estimated yield of 50 gpm. The well was completed to a depth of 200 ft bgs on 11 May 2003. A summary of the casing and well depths, installation methods, bedrock formation, and potential fractured intervals noted during drilling of test well TW-01 is presented in Table 2-1. The construction log for well TW-01 is included in Appendix B.

## 2.7 WELL DEVELOPMENT

The newly installed bedrock monitoring wells and test well were developed to promote the free flow of water into the wells. Well development of the open-hole bedrock monitoring wells was performed immediately after installation by surging the air hammer up and down in the borehole and blowing compressed air provided by the drilling rig. WESTON later performed further development of the monitoring wells by surging and pumping with a submersible 2-inch-diameter Grundfos pump. Due to the expected larger production volume of the test well, a 4-inch-diameter Grundfos pump was used for development at test well TW-01. The wells were surged by moving the pump up and down in the borehole to loosen and remove fines within the bedrock fractures. The wells were pumped at a high rate between surging to remove the fines from the well. Development of the monitoring wells continued until the purge water was clear to the unaided eye. Development of the test well was continued for approximately 4 hours. The pumping rate during development was increased slightly after each of the first two 1-hour periods, and then pumped at the maximum pump capacity for the two remaining hours. The maximum rate achieved by the pump was approximately 22.5 gpm with approximately 10 ft of drawdown. Purge water was field-screened with the organic vapor monitor (OVM) during development. At monitoring wells MW-07 and MW-10, OVM readings of approximately 10 parts per million (ppm) and 30 ppm, respectively, were noted during development. No OVM readings were noted above background at the ten other well locations where development was performed. Water quality field parameters were not obtained during well development.

Measurement of temperature, hydrogen ion concentration (pH), conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity were obtained during groundwater sampling as discussed in Subsection 2.9.1.

## 2.8 BOREHOLE GEOPHYSICS

Geophysical Applications, Inc. of Foxboro, Massachusetts, conducted borehole geophysical logging from 29 May to 16 June 2003. A total of 17 boreholes were logged as part of this investigation. The following downhole geophysical methods were employed at the site:

- Caliper
- Natural gamma
- Single-point resistance/spontaneous potential
- Normal resistivity
- EM induction
- Deviation
- Acoustic image
- Optical image
- Standard fluid logging
- Idronaut probe water quality (includes oxygen saturation, pH, redox, oxygen concentration, specific conductance)
- Ambient and stressed (pumping) heat-pulse flowmeter

Not every method was performed at each borehole location. Also, as discussed in the *Final Sampling and Analysis Plan (SAP)* (WESTON, 2002b), some variations to the field program were required due to site-specific conditions and the relatively shallow well depths of most of the wells tested. Table 2-3 summarizes the geophysical methods used at each borehole. Each of these methods is briefly described in the following subsections. A detailed description of the borehole geophysical methods is contained in the USGS Report in Appendix A.

### 2.8.1 Caliper Logging

Caliper logging records borehole diameter by use of a three-arm, spring-loaded tool (USGS, 2003). Changes in borehole diameter are related to drilling and borehole construction procedures, caving in of less competent rocks, and the presence of fractures.

### 2.8.2 Natural Gamma Logging

Gamma logging records the amount of gamma radiation emitted by the rocks surrounding the borehole in counts per second (cps) (USGS, 2003). Different rock types naturally emit varying amounts of gamma radiation. The vertical resolution of the gamma probe is 30 to 60 centimeters (cm). Although a change in rock type or alteration associated with a fracture can be detected, the tool requires a thickness of 30 cm to obtain a full response. The gamma logs were used to help delineate changes in rock type.

### 2.8.3 Single-Point Resistance Logging

Single-point resistance logging measures the electrical resistance between a surface electrode (or mudfish) and an electrode in the downhole probe in ohms. The measurement, which is highly influenced by borehole diameter, includes the resistance of the formation, fluids saturating the formation, and fluids in the borehole. Increases in borehole diameter typically are associated with a decrease in resistance. Single-point resistance can be used to delineate changes in lithology, clay content, porosity, and total dissolved solids in the formation water. The single-point resistance is measured below the casing and in a water-filled borehole.

### 2.8.4 Normal Resistivity Logging

Normal resistivity logging measures the apparent resistivity of the formation in ohm-meters. The tool applies a constant current across two electrodes while measuring the potential between two other electrodes. The apparent resistivity has to be corrected for borehole diameter, drilling mud invasion, and formation bed thickness to obtain true resistivity (USGS, 2003). The normal resistivity is more accurate than the EM induction tool in measuring the electrical properties of the rock when the formation resistivities are high. Resistivity logs can assist in identifying water-filled

fractures in crystalline rock when used in conjunction with other logs (e.g., fluid or heat-pulse flow meter logs).

### 2.8.5 Electromagnetic-Induction Logging

Electromagnetic-induction logging records the bulk electrical conductivity of the rocks and the fluids in the rocks surrounding the borehole (USGS, 2003). The tool uses an EM induction field to induce an electrical current in the surrounding formation. The induced current in the formation generates a secondary EM field. Changes in electrical conductivity are caused by variations in porosity, borehole diameter, dissolved concentration of the water in the rocks, and by metallic minerals. The log is used to delineate changes in rock type or in electrical properties of water in the rock formation.

### 2.8.6 Deviation Logging

Deviation logging measures the borehole deviation by providing a record of the 3-D geometry of the borehole (USGS, 2003). The deviation log records the azimuthal direction (0 to $360^{o}$) and the inclination (0 to $90^{o}$) over the depth of the borehole. Deviation logs are collected simultaneously with acoustic and optical televiewer tools and were used to correct the orientation of planar features that intersect the borehole.

### 2.8.7 Accoustic Image Logging

Acoustic-televiewer (ATV) logging produces a high-resolution, magnetically oriented, digital image that is used to map the location and orientation of fractures that intersect the borehole (USGS, 2003). The ATV tool emits a narrow acoustic beam that rotates $360^{o}$ and is focused at the borehole wall. The acoustic wave moves through the fluid in the borehole and is reflected off the borehole wall and recorded by the tool. The log records the amplitude and travel time of the reflected wave, which can be displayed as a flattened $360^{o}$ image of the borehole wall. The reflectivity or contrast in acoustic impedance between the fluid and the borehole wall can be related to the rock type.

A fracture that intersects the borehole causes scattering of the acoustic wave and appears as a high contrast, low amplitude line (dark feature) on the acoustic amplitude log. Interpretation of

the magnetically oriented images in conjunction with other logs allows for the determination of transmissive structures that may relate to the hydraulics of the aquifer.

### 2.8.8 Optical Image Logging

Optical-televiewer (OTV) logging records a magnetically oriented, 360° optical image of the borehole wall (USGS, 2003). The location and orientation of fractures, foliation, and lithologic changes can be interpreted from OTV data. Because the OTV is an optical system, low optical contrast features, such as small fractures in dark rocks, can be difficult to delineate. The OTV logs were analyzed to identify lithology and to determine the physical characteristics and orientation of fractures.

### 2.8.9 Water-Quality Logging

A water-quality multi-parameter probe, called the Idronaut probe, was used to measure pressure, temperature, DO, specific conductance, pH, and ORP of the borehole fluid. Because the tool measures the water in the water column, it may not reflect the water chemistry in adjacent fractures. However, the changes in the water chemistry may help identify ambient flow in the borehole or fractures that contribute to the borehole. In addition, some of these parameters have been related to the natural attenuation of chlorinated solvents, and can be used to help characterize the site.

### 2.8.10 Heat-Pulse Flowmeter Logging

Heat-pulse flowmeter (HPFM) logging measures the direction and rate of vertical flow in a borehole. Used in conjunction with other geophysical logs, individual fractures or fracture zones where water enters or exits the borehole can be identified. Under ambient conditions, differences in hydraulic head between two transmissive fractures produce vertical flow in the borehole. If the heads in transmissive zones are the same, no vertical flow will occur in the borehole. Therefore, flowmeter logging also is conducted under stressed (low-rate pumping) conditions to identify transmissive zones with similar ambient heads that would not be identified without stressing the aquifer. The flow under pumped conditions can be proportioned and attributed to specific fracture zones in the borehole. The flowmeter used in this investigation uses a heat-pulse

tracer that moves upward or downward in the presence of vertical flow. The measurements were collected at discrete locations, usually above and below suspected water-bearing fractures.

## 2.9 GROUNDWATER INVESTIGATION

### 2.9.1 Monitoring Well Sampling and Analysis

Groundwater samples were collected from the 11 new bedrock monitoring wells and 22 existing monitoring wells on 16-18 June 2003 to evaluate groundwater quality at the site. The wells were sampled using EPA low-flow sampling methods (EPA, 1996), as described in the *Final SAP* (WESTON, 2002b). Static water levels were recorded in the wells prior to sampling. Water levels were sounded relative to the measuring point elevation at each well (top of steel or polyvinyl chloride casing) using an electronic water-level indicator that was decontaminated between wells. The measurements were recorded to the nearest 0.01-foot. A 2-inch-diameter submersible Grundfos pump and dedicated polyethylene tubing were used to purge the wells. For the 22 existing monitoring wells where borehole geophysics was not performed, the submersible pump intake was set at the mid-point of the water column in the well. For the 11 new bedrock monitoring wells and the test well, the pump intake was set at a location where drilling observations and borehole geophysics data identified a water-bearing or hydraulically active fracture zone. A summary of the pump intake depths for the 11 new bedrock monitoring wells and the test well is presented in Table 2-4.

The purge water was pumped out of the well and through a flow-through cell that continuously monitored the following parameters: temperature, pH, conductivity, ORP, and DO. In addition, turbidity and OVM headspace readings were monitored with separate instruments. Groundwater samples were collected after stabilization of these parameters as outlined in the low-flow sampling guidance (EPA, 1996). Pre-cleaned/certified and, where appropriate, pre-preserved bottles were provided by the laboratory and used for sample collection. The sample bottles were labeled with the location, time, date, analytical parameter, and sampler's initials. The samples were stored in an ice-filled cooler and transported to the laboratory under standard EPA chain-of-custody (CoC) procedures. The submersible pump was decontaminated between sampling locations in accordance with the procedures detailed in the *Final SAP* (WESTON, 2002b).

Groundwater samples were submitted to Analytics Environmental Laboratory, LLC (AEL) in Portsmouth, New Hampshire for off-site laboratory analysis of VOCs by SW-846 Method 5030B/8260B. AEL is a U.S. Army Corps of Engineers, Environmental Chemistry Branch–Center of Expertise (USACE-ECB-CX)-validated laboratory. Groundwater samples for natural attenuation parameters were also collected during the June 2003 sampling round and submitted for analysis of total organic carbon (TOC), nitrate, ethane, ethene, ferrous iron, dissolved manganese, alkalinity, and chemical oxygen demand (COD). A summary of the field, quality assurance (QA), and quality control (QC) samples collected during monitoring well groundwater sampling is presented in Subsection 2.13.

### 2.9.2 Test Well Sampling and Analysis

An initial set of groundwater samples was collected from the test well immediately following well development on 14 May 2003. These samples were submitted for laboratory analysis of VOCs, dissolved iron, and dissolved manganese to obtain a preliminary evaluation of groundwater quality at the well. The samples were collected directly from the discharge tubing of the pump, after purging approximately 4,000 gallons from the well over a 4-hour period. A second groundwater sample was collected from the test well on 16 June 2003, to evaluate groundwater quality under low-flow purging conditions, with the pump intake positioned at the depth of the high-yielding fracture from between 168 and 169 ft bgs. The sampling was performed concurrent with the bedrock monitoring well sampling during 16-18 June 2003, and was conducted in accordance with the same low-flow procedures followed during the monitoring well sampling program. The sample was submitted to AEL for off-site laboratory analysis of VOCs by EPA Method 5030B/524.2. The results of the sampling are presented in Subsection 4.2 of this report.

### 2.9.3 Residential Drinking-Water Sampling and Analysis

Drinking-water samples were collected from 32 of the 36 wells scheduled for sampling in June 2003. The samples were collected from 12 wells in the vicinity of the former AFRTS, 13 wells near the former GATR site, 6 wells in the vicinity of Starboard Cove, and one community supply well (WY-03), which is located in the DCF-FAA area. Water samples were not collected at locations DW-02, DW-11, DW-18, and DW-37. A new owner had just purchased

the property where well DW-02 is located and had yet to move into the residence and turn the water on, and the current owner of well DW-37 is in the process of selling the property and had turned the water off. The water at well DW-18 had been turned off for the winter months and had not been turned back on at the time the sampling was conducted. During scheduling of the sampling at location DW-11, the current renter indicated the property had been sold but did not have the current owner's contact information. The property owner status of this location was still under investigation at the time of the June 2003 sampling, therefore, no samples were collected due to this uncertainty of the ROE status of this property.

The drinking-water samples were collected directly from taps, before any filter or treatment systems, and between GAC filter vessels at locations equipped with POET systems. The water was purged from 20 to 30 minutes at each sampling location, while field measurements of temperature, pH, conductivity, turbidity, DO, and ORP were recorded to coincide with the natural attenuation monitoring program. The ORP readings were measured in the field using an Ag/AgCl reference electrode. They have been corrected to the standard hydrogen electrode by adding 222 millivolts to the field reading, in accordance with manufacturer specifications for the Ag/AgCl electrode (YSI, 2003). The field parameters measured during the June 2003 residential sampling round are presented in Subsection 4.2 of this RI Report.

Four of the water supply wells sampled in June 2003 are equipped with GAC POET systems that were installed by MEDEP and are currently maintained by CENAE. Three of these residential wells (DW-03, DW-04, and DW-12) are located near the former AFRTS site, and one well (DW-23) is located near the former GATR site. At these locations, one untreated water sample was collected prior to the GAC vessels and a second sample was collected from between the GAC vessels. Residential well DW-03 is equipped with two parallel sets of GAC vessels. Three samples were collected at this location in accordance with the *Final SAP* (WESTON, 2002b): one sample prior to the GAC vessels, and one sample from between each of the two sets of GAC vessels.

The residential drinking-water samples were submitted to AEL for laboratory analysis of VOCs by EPA Method 524.2. Groundwater samples for natural attenuation parameters were also collected from selected residential wells during the June 2003 sampling round, and included TOC, nitrate, ethane, ethene, ferrous iron, dissolved manganese, alkalinity, and COD analyses. A

summary of the field, QA, and QC samples collected during residential groundwater sampling is presented in Subsection 2.13.

The latest round of residential well sampling was conducted in September 2003. Two additional sampling rounds are planned for December 2003 and March 2004. Supplementals to the RI report will be prepared to document the results of these sampling events.

## 2.10 PACKER PERMEABILITY TESTING

Based on the borehole geophysics results and remedial action considerations, packer permeability testing was performed on five of the newly installed bedrock monitoring wells between
12 and 17 August 2003. Packer permeability testing was conducted to further evaluate the hydraulic properties of the bedrock water-bearing zone, as well as assess variations of groundwater quality with depth and between specific fractured zones. The wells selected for packer testing were biased toward the potentially more contaminated locations, with additional consideration given to the well depths, bedrock type, and locations where future pumping tests may be performed. The tests were conducted by installing dual packer assemblies into the open borehole, inflating the packers to seal off selected fracture zones, and pumping a metered amount of water under pressure into the test length (DOI, 1990). Maher performed the packer permeability testing under the direction and supervision of a WESTON geologist. The WESTON geologist was on-site during all packer permeability testing to record the necessary field measurements required to calculate the permeability of each tested zone and to collect water quality samples from each test zone.

Four separate intervals within bedrock monitoring wells MW-07, MW-11, MW-12, and MW-14 were tested (Figure 1-2). Due to the limited number of observed bedrock fractures identified during the borehole geophysics in monitoring well MW-10, only three separate intervals were tested at this location. The subcontractor utilized a Smeal pump hoist rig to perform the packer permeability testing and discrete-interval sampling. A Model 34B dual Aardvark packer system was used for the 4-inch-diameter wells MW-07, MW-10, and MW-14, while a larger diameter Model 47 dual Aardvark packer system was used for the 6-inch-diameter wells MW-11 and MW-12. The packer assemblies consisted of two 30-inch long rubber pneumatic packers

(an upper and a lower) separated by a known length of 1-inch-diameter perforated steel pipe with a submersible pump mounted at the midpoint between the packers. Vibrating wire pressure transducers were used to measure the pressure within the test zone and below the lower packer to confirm that the packers were creating an adequate seal with the sides of the borehole. A Solinst water-level indicator was used to measure the water level in the well during the test to ensure the upper packer was adequately sealing the test zone. The dual packer systems were constructed to allow for a 10-foot test zone at monitoring wells MW-07, MW-10, MW-11, and MW-14, and a 15-foot test zone at monitoring well MW-12.

The collection of the discrete-interval groundwater samples was conducted independently of the permeability tests. The groundwater sampling was conducted first, working from top to bottom within the borehole, and the permeability testing was conducted afterward working from the bottom to the top of the borehole.

The sampling was conducted by lowering the packer assembly to the desired depth and inflating the packers using compressed nitrogen to a pressure at least twice that of the static water pressure at the test depth. Once the packers were in place and inflated, the submersible pump was activated, and one volume of water from between the packers was purged to allow for the collection of a groundwater sample that would be representative of the test interval. As indicated previously, monitoring of the water level above the upper packer, and the pressure within the test interval and below the lower packer was conducted to confirm that only water from the test interval was being collected. The water samples were collected directly from the discharge line using pre-preserved and cleaned 40-milliliter (ml) vials supplied by the laboratory. The samples were handled similar to the procedure for the monitoring well samples described in Subsection 2.9.1. Once the sample was collected, the packers were deflated, the assembly lowered to the next test interval, and the packers were re-inflated to begin the next test. Sampling was continued in this manner until the deepest test interval had been sampled.

After all discrete-interval groundwater samples were collected from the well, the packer permeability testing was conducted in the reverse order, moving from the deepest test zone toward the most shallow test zone. The packer permeability testing was performed by inflating the packers at the selected test interval and injecting potable water down the drop pipe into the test zone, measuring the flow rate and the applied pressure at the wellhead. Again, the water

level and the pressure within and below the test interval were monitored to check for leakage. These measurements, in combination with the dimensions of the packer assembly, were used to calculate the permeability of the formation at each test interval. These calculations, a summary of the packer test intervals, and the overall results of the packer-permeability testing program are presented in Subsection 3.6.

The groundwater samples collected during packer permeability testing were submitted to AEL for laboratory analysis of VOCs by EPA Method 5030B/8260B. A summary of the field, QA, and QC samples collected during packer testing groundwater sampling is presented in Subsection 2.13.

## 2.11 SEDIMENT AND SURFACE WATER INVESTIGATION

As part of the ecological risk assessment (ERA), WESTON collected sediment and surface water samples from four locations in the wetland area and unnamed stream northeast of the DCF Housing Area (Figure 1-2). Samples were collected by the WESTON field geologist on 12 June 2003 following the procedures described in the *Final SAP* (WESTON, 2002b). Sample locations were selected to include one upgradient location (the farthest upstream point, ECOSED-4), one downgradient location (downgradient of the DCF Housing Area, ECOSED-1), and two locations in between (ECOSED-2 and ECOSED-3) in the vicinity of potential source areas. Sediment and surface water samples were collected using the specific methodologies as discussed in the following subsections. A summary of the field, QA, and QC samples collected during surface-water and sediment sampling is presented in Subsection 2.13.

### 2.11.1 Sediment Sampling and Analysis

Sediment samples were collected as distinct grab samples at each designated location. Sampling began at the farthest downstream locations and continued in the upstream direction. Sediment samples were collected after surface waters were collected at the same location. This sampling strategy minimized the potential for cross-contamination of adjacent sampling locations within the investigation area. Sediment samples were collected from fully submerged locations where sediment deposition was likely. Sediment sampling was generally biased toward fine-grained sediments whenever possible.

Sediment samples collected were submitted to AEL for analysis of VOCs by SW-846 Method 5035/8260B (including percent solids) and TOC analysis by Method 9060. The sediment samples were collected using a thin-wall tube sampler, which was driven into the sediment to a depth of approximately 6 inches. The tube sampler was then extracted from the water and gently rested on a hard surface so as not to disturb the sample. In accordance with the methods outlined in the *Final SAP* (WESTON, 2002b), the sediment in the center of the tube was spooned out with a decontaminated scoopula and transferred to the appropriate sample containers. The VOC sample was collected into a 40-ml vial first, followed by the percent solids and TOC samples.

### 2.11.2 Surface Water Sampling and Analysis

Surface water samples were collected as grab samples by dipping the sample container directly into the water at each selected location. Sampling began at the farthest downstream location and continued in the upstream direction. As indicated in the previous subsection, surface water samples were collected at a location prior to the collection of sediment at the same location. This sampling strategy minimized the potential for cross-contamination of adjacent sampling locations within the investigation area.

The grab surface-water samples collected were submitted to AEL for laboratory analysis of VOCs by SW-846 Method 5030B/8260B. The surface-water samples for VOC analysis were collected by partially submerging the 40-ml sample vials into the water column in a way that the preservatives were not lost. The 40-ml vials were filled such that a meniscus was visible, and when the bottle was capped, no air bubbles were present.

## 2.12 WELL LOCATION SURVEY

A location survey of the residential wells included in the sampling program was performed by WESTON using differential global positioning system instrumentation. The well coordinates were identified by WESTON field personnel using a Trimble PRO-XRS real-time GPS unit with satellite correction and sub-meter accuracy. The unit was mobilized to each well location and the coordinates recorded in reference to the Maine State Plane Coordinate System East Zone NAD 83. The location data were incorporated into the Site Plan, included as Figure 1-2.

The location and elevation for each new monitoring well and the 22 existing monitoring wells included in the sampling program were established by CES, Inc. (CES), a state-licensed surveyor. The survey was conducted in accordance with the CENAE 2002 *SOW* and the precision and accuracy requirements from USACE Engineer Manual EM 1110-1-1005 *(Engineering and Design Topographic Surveying)*, which were forwarded to WESTON in March 2003 (USACE, 1994). The horizontal coordinates and ground elevations were surveyed to the closest 1.0- and 0.1-foot intervals, respectively, with coordinates referenced to the Maine State Plane Coordinate System East Zone NAD 83. The benchmarks used by CES for the survey are identified as designations "L 94 PID: PD0129," which is a brass disk located approximately 6 miles north of the site, and **"**Marstin Reset PID: PD1027," a brass disk located approximately 3 miles west of the site. Monitoring well casing elevations were surveyed to the nearest 0.01 foot. The vertical survey was performed with elevations referenced to the National Geodetic Vertical Datum of 1929. CES tied into the following elevation benchmarks local to the site**:** "Howard 2 RM 4 PID: PD0221," "Tidal 1 Sta 4 PID: PD0219," and "Tidal 2 Sta 4 PID: PD0218."

## 2.13 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

Field activities included the collection and analysis of groundwater, surface water, and sediment samples. Monitoring well and residential well groundwater samples were collected and analyzed for the following parameters: VOCs, TOC, nitrate, sulfate, ethane, ethene, ferrous iron, dissolved manganese, alkalinity, and COD. The groundwater sample collected from the test well was analyzed for VOCs. Surface water samples collected in support of the ERA were analyzed for VOCs. Sediment samples collected in support of the ERA were analyzed for VOCs (including percent solids) and TOC. Trip blanks, temperature blanks, rinsate blanks, duplicates, and matrix spike/matrix spike duplicate (MS/MSD) samples were submitted as QC samples for each sample type at the frequency shown in Table 2-5. The laboratory preparatory and analytical methods for each of these parameters are also listed in Table 2-5.

Five types of QA/QC samples were collected at the Bucks Harbor facility during the RI field investigations. These samples were used to verify laboratory precision and accuracy, and to

verify that no outside contamination was introduced into the samples during transit. Table 2-5 shows the number of QA/QC samples submitted for each field sampling activity.

To verify the accuracy of the contract laboratory techniques, field samples were split and sent to the CENAE QA laboratory and analyzed to evaluate contractor laboratory performance. The QA samples represented approximately 1 out of every 10 field samples collected. The second sample taken and sent to the contractor laboratory served as a field duplicate to determine the precision of the contract analytical laboratory. Rinsate samples were also collected at a frequency of 1 in 10 groundwater samples, duplicated, and sent to both the contract analytical laboratory and the CENAE QA laboratory. Matrix spike/matrix spike duplicate samples were collected at selected locations during sampling at a minimum of a 1 in 20 sample frequency. Matrix spike/matrix spike duplicate samples were used to evaluate precision and accuracy in the actual matrix, and also to evaluate possible matrix effects. One trip blank was provided per cooler of samples submitted for VOC analysis in order to evaluate sample contamination due to sampling and shipping. The QA laboratory for this project was Severn Trent Laboratories (STL) of 208 South Park Drive in Colchester, Vermont. STL is also a USACE-ECB-CX-validated laboratory. The QA project number for the Bucks Harbor site is EO901.

WESTON conducted data validation on sample analyses performed by the contract laboratory in accordance with the procedures detailed in the *Final SAP* (WESTON, 2002b). The WESTON project chemist made no data validation qualifications to the data collected in support of the RI activities. Additional information regarding the outcome of the data validation is presented in Subsection 4.4 of this report.

# SECTION 2

# TABLES

## Table 2-1

## Borehole Observation and Well Construction Summary
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Well ID | Site | Drilling Method | Predominant Rock Type | Total Depth (ft bgs) | Depth to WBR (ft bgs) | Depth to CBR (ft bgs) | Steel Casing Depth (ft bgs) | Fractured Intervals (ft bgs) | Fractured Intervals and Observations Noted During Drilling and Geophysics |
|---|---|---|---|---|---|---|---|---|---|
| MW-04 | TS | Core/AH | Devi | 100 | 6.5 | 9.5 | 15 | All | Heavy vertical fracturing throughout (see core log) |
| MW-05 | TS | AH | Devi | 100 | 5 | 6 | 11 | 60-65 | Soft, fast drilling; no significant water production |
| | | | | | | | | 80-100 | Mod. fracturing, slight increase in yield |
| MW-06 | TS | AH | Devi | 120 | 3.5 | 4 | 9 | 9-95 | Drill rate 40-70 secs/ft, very little (if any) water |
| | | | | | | | | 95-105 | Mod fracturing, slight increase in yield (1/2 gpm +/-) |
| | | | | | | | | 105-120 | Drill rate 1 min/ft, increase in yield to +/- 1 gpm |
| MW-07 | TS | AH | Devi | 130 | 0.5 | 2 | 7 | 17-23 | Multiple fractures, low yield, ambient borehole gain |
| | | | | | | | | 46-48 | Large fractures, low yield, ambient loss |
| | | | | | | | | 75-85 | Large frequent fractures, slight ambient loss |
| | | | | | | | | 115-125 | Large fracs, incr. FCond., hyd. active zone at 121 |
| MW-08(b) | DCF-FAA | Core | Devi | 55 | 2.5 | 3.5 | 9 | 46-51 | High-angle fracs, slight weathering (see core log) |
| MW-09 | DCF-FAA | AH | Devi | 120 | -- | 3.5 | 9 | 65-70 | Small veins, low yield, drilling approx. 1 min/ft |
| | | | | | | | | 76-77 | Massive, mafic cuttings, drilling approx. 3 mins/ft |
| | | | | | | | | 97 | Small fracture noted, slight increase in yield |
| | | | | | | | | 97-120 | No fractures noted |
| MW-10 | DCF-FAA | AH | Devi | 200 | 13 | 14 | 19 | 65-95 | Mod fractures, no yield observed (water at 121 ft) |
| | | | | | | | | 153 | inflow 147-158, large fracture and incr. yield at 153 |
| | | | | | | | | 165-170 | minor inflow, very slight increase in yield at 170 |
| | | | | | | | | 172-200 | No fractures noted |
| MW-11 | Marshall (Base of Howard Mtn.) | AR | Devi | 200 | -- | 86 | 97 | 97-107 | Fast drilling, v. large fractures, lg. increase in flow |
| | | | | | | | | 126-138 | Mod fracs, FCond slope change, hyd. active at 127 |
| | | | | | | | | 146, 152-162 | Large fractures, substantial incr in flow 157-167 |
| | | | | | | | | 165-175 | Numerous fracs, hyd. active near 165 (FTemp/pH) |
| | | | | | | | | 183-193 | Fast drilling, mult fractures, slight water gain |
| MW-12 | Marshall (Base of Howard Mtn.) | AR | Devi/d | 243 | -- | 12 | 18.5 | 44-48 | Large fracture at 46 ft, hyd. active at 48 ft |
| | | | | | | | | 83-98 | Numerous small fracs, slight water gain, $O_2$% dip |
| | | | | | | | | 168-172 | Fractures, lith change to gabbro at 171, little yield |
| | | | | | | | | 210-222 | Lith change to Devi at 210, fracs, slight incr in yield |
| | | | | | | | | 230-237 | Mod fracs, slight pH variations, no sig yield change |
| MW-13 | Miller Mtn. | AH/RB | Diabase/ Gabbro | 220 | 11 | 12 | 17 | 0-88 | Slow drilling through diabase/gabbro; no water |
| | | | | | | | | 88, 102 | Small fracs, possible quartz veins; little to no yield |
| | | | | | | | | 100-200 | Minor fracs throughout, slight incr. in yield to 1/2 gpm |
| MW-14 | Miller Mtn. | Core | Dhgr (See core log for lithology changes) | 101 | 12 | 13 | 18 | 38-48 | Angled fracs, incr in upwards flow, FTemp inflection |
| | | | | | | | | 50-60 | Lith change at 54, large fracs, water qual deflects. |
| | | | | | | | | 63-73 | High angle fracs, variations in flow, high gamma 68 ft |
| | | | | | | | | 73-83 | High angle fracs, variations in flow, high gamma 77 ft |

## Table 2-1

## Borehole Observation and Well Construction Summary
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Well ID | Site | Drilling Method | Predominant Rock Type | Total Depth (ft bgs) | Depth to WBR (ft bgs) | Depth to CBR (ft bgs) | Steel Casing Depth (ft bgs) | Fractured Intervals (ft bgs) | Fractured Intervals and Observations Noted During Drilling and Geophysics |
|---|---|---|---|---|---|---|---|---|---|
| TW-1 | Test Well | AR | Devi | 200 | -- | 47.5 | 54.5 | 0-32.5 | OB: Unconsolidated f-m-c sand, f-m gravel, silt; loose, moist to wet, poorly sorted |
| | | | | | | | | 32.5-46.5 | OB: Silt & f-sand, trace clay; firm, mod. Sorted |
| | | | | | | | | 46.5-47.5 | OB: f-m-c sand and gravel, WBR fragments |
| | | | | | | | | 100-110 | Fractures, Fcond inflections, hyd. active 98-107 |
| | | | | | | | | 132-140 | Large fractures, SPR inflections, no signif. yield |
| | | | | | | | | 168-169 | Major water bearing zone (50 gpm est.), SPR dip |

Notes: AH = Air hammer (5 7/8-inch roller bit to set 4-inch steel casing, then 3 7/8-inch air hammer into rock).
AR = Air rotary (9 7/8-inch roller bit to set 6-inch steel casing, then 6.068-inch air hammer into rock).
CBR = Competent bedrock.
Core = HQ-size core barrel.
d = Diabase and gabbro dikes, sills, plutons.
DCF-FAA = Dept. of Corrections/Federal Aviation Administration.
Devi = Devonian Eastport Formation (rhyolitic flow-banded devitrified vitrophyre). Maroon-gray in color, transitioning to all gray at times.
Dhgr = Hornblende-bearing biotite granodiorite and quartz monzonite.
f-m-c = Fine, medium, coarse.
ft bgs = Feet below ground surface.
OB = Overburden unit.
RB = Roller-bit (3 7/8-inch)
TS = Transmitter site.
WBR = Weathered bedrock.
-- = Not applicable.

## Table 2-2

## Shallow Bedrock/Hybrid Monitoring Well Summary
## Former Bucks Harbor AFRTS/GATR Areas
## Machiasport, ME

| Well Number | Location Monitored | Well Type | Approx. Well Depth (ft bgs) | Approx. Elevation (amsl)* | | Approx. Screen/Open Hole Interval (ft bgs) and Depth to BR |
|---|---|---|---|---|---|---|
| | | | | Ground Surface | Bottom | |
| MW-101 | DCF Housing Area | Overburden | 13.5 | 40.33 | 26.83 | 3.5 - 13.5 (BR not encountered) |
| MW-102 | DCF Housing Area | Overburden | 23 | 50.35 | 27.35 | 13 - 23 (BR not encountered) |
| MW-103 | DCF Housing Area | Overburden | 16 | 38.95 | 22.95 | 6 - 16 (BR not encountered) |
| MW-105 | DCF Housing Area | Overburden | 16 | 37.85 | 21.85 | 6 - 16 (BR not encountered) |
| MW-140 | DCF Housing Area | Overburden | 15 | 36.14 | 21.14 | 5 - 15 (BR not encountered) |
| TSMW-001 | Transmitter Site | Bedrock | 19 | 234.72 | 215.72 | 9 - 19 (BR = 6.5) |
| TSMW-002 | Transmitter Site | Hybrid | 13 | 221.94 | 208.94 | 3 - 13 (BR = 6.0) |
| TSMW-003 | Transmitter Site | Hybrid | 18 | 228.32 | 210.32 | 8 - 18 (BR = 12.0) |
| MW-01 | Transmitter Site | Hybrid | 14 | 219.35 | 205.35 | 4 - 14 (BR = 5.0) |
| MW-02 | Transmitter Site | Bedrock | 14.5 | 209.18 | 194.68 | 4.5 - 14.5 (BR = 2.0) |
| MW-03 | Transmitter Site | Hybrid | 15 | 219.37 | 204.37 | 5 - 15 (BR = 9.5) |
| GAMW-001 | GATR Site | Hybrid | 15 | 251.22 | 236.22 | 5 - 15 (BR = 12.0) |
| BPMW-001 | DCF (Burn Pit No. 1) | Bedrock | 13 | 181.86 | 168.86 | 3 - 13 (BR = 2.0) |
| GTMW-001 | DCF (Grease Trap/Utility Trench) | Hybrid | 15 | 180.85 | 165.85 | 5 - 15 (BR = 6.0) |
| FAMW-001 | FAA Radar Facility | Hybrid | 13 | 155.55 | 142.55 | 3 - 13 (BR = 5.0) |
| FAMW-002 | FAA Radar Facility | Hybrid | 14 | 163.74 | 149.74 | 4 - 14 (BR = 4.5) |
| STMW-001 | FAA Radar Facility | Bedrock | 45 | 196.99 | 151.99 | 25 - 45 (BR = 5.0) |
| STMW-002 | FAA Radar Facility | Bedrock | 57.5 | 146.00 | 88.50 | 4 - 57.5 (BR = 4.0) |
| STMW-003 | Receiver Site | Overburden | 17 | 121.54 | 104.54 | 7 - 17 (BR = >17) |
| STMW-004 | DCF Housing Area | Overburden | 37 | 35.46 | -1.54 | 27 - 37 (BR = >37) |
| STMW-005 | Transmitter Site | Overburden | 18 | 198.04 | 180.04 | 8 - 18 (BR = >18) |
| STMW-006 | FAA Radar Facility | Overburden | 13.5 | 134.86 | 121.36 | 3.5 - 13.5 (BR = >13.5) |

*Ground surface elevation data from survey by CES, Inc., August 2003

amsl = Above mean sea level.

BR = Bedrock.

ft bgs = Feet below ground surface.

DCF = Downeast Correctional Facility

FAA = Federal Aviation Administration

## Table 2-3

## Summary of Borehole Geophysical Tests
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Well ID | Depth of Borehole Logging (ft bgs) | Caliper | Natural Gamma | SP/ SPR | Normal Resistivity | EM Induction | Deviation | Acoustic Televiewer | Optical Televiewer | Heat-Pulse Flowmeter | Idronaut Fluid Log |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-04 | 99 | X | X | X | X | X | X | X | X | X | X |
| MW-05 | 99 | X | X | X | X | X | X | X | | X | X |
| MW-06 | 119 | X | X | X | X | X | X | X | | X | X |
| MW-07 | 129 | X | X | X | X | X | X | X | | X | X |
| MW-08b | 52 | X | X | X | X | X | X | X | X | X | X |
| MW-09 | 119 | X | X | X | X | X | X | X | | X | X |
| MW-10 | 200 | X | X | X | X | X | X | X | X | X | X |
| MW-11 | 198 | X | X | X | X | X | X | X | | X | X |
| MW-12 | 242 | X | X | X | X | X | X | X | | X | X |
| MW-13 | 218 | X | X | X | | X | X | X | | X | X |
| MW-14 | 100 | X | X | X | X | X | X | X | X | X | X |
| TW-1 | 199 | X | X | X | | X | X | X | | | |
| DW-1 | 247 | X | X | X | X | X | X | X | | | X |
| DW-3 | 300 | X | X | X | X | X | X | X | | | X |
| DW-4 | 241 | X | X | X | X | X | X | X | | | X |
| DW-9 | 261 | X | X | X | X | X | X | X | | | X |
| DW-12 | 304 | X | X | X | X | X | X | X | | | X |
| WY-3 | 340 | X | X | X | X | X | X | X | X | | X |
| WY-3b | 218 | X | X | X | X | X | | | | | X |

Notes: ft bgs = feet below ground surface
EM = Electromagnetic
SP = Spontaneous potential
SPR = Single-point resistance
No available data

## Table 2-4

## Pump Intake Depth Summary
## June 2003 Sampling Round
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Well ID | Total Depth (ft) | Pump Intake Depth (ft bgs) | Rationale |
|---|---|---|---|
| MW-04 | 100 | 25 | Lithologic contact between units at 27 ft; hydr active; heavy vert. fracturing |
| MW-05 | 100 | 55 | Fracs; hydr active; slight increase in yield noted during geophysics |
| MW-06 | 120 | 60 | Fracs, hydr active; slight increase in yield noted during geophysics |
| MW-07 | 130 | 121 | Large frequent fractures, slight ambient loss noted during geophysics |
| MW-08b | 55 | 23 | High-angle fracs, slight weathering, mineralization |
| MW-09 | 120 | 80 | Fracs; slight increase in yield noted during geophysics |
| MW-10 | 200 | 153 | Inflow between 147-158; large fracture and increase in yield at 153 ft |
| MW-11 | 200 | 165 | Large fractures; substantial incr in flow 157-167 |
| MW-12 | 243 | 219 | Moderately fractured zone; water quality parameter fluctuation at 219 ft |
| MW-13 | 220 | 150 | Minor fracs; slight incr. in yield to approx. 1/2 gpm |
| MW-14 | 101 | 54 | Lithology change at 54 ft; large fracs; water qual deflections |
| TW-1 | 200 | 168 | Large fractures; SPR inflections |

fracs = Fractures
ft bgs = Feet below ground surface
hydr = Hydraulically
vert = Vertical

## Table 2-5

## Quality Assurance/Quality Control Sampling Summary
## Former Bucks Harbor AFRTS/GATR Areas
## Machiasport, ME

| Location | Analysis (Method) | Field Samples | QC Samples | | | | Field + QC Samples | QA Samples | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Trip Blank | MS/ MSD | Duplicate | Rinse Blank | | Trip Blank | Dup. | Rinse Blank | QA Samples |
| **Monitoring Well Samples** | | | | | | | | | | | |
| | VOC (SW-846 Method 5030B/8260B) | 33 | 1 | 1/1 | 3 | 3 | 42 | 2 | 3 | 3 | 8 |
| | TOC (SW 846 Method 415.1 or 9060) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Nitrate (EPA Method 352.1) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Sulfate (EPA Method 375.1) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Ethane/ethene (SW 846 Method 8015 modified) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Ferrous iron (Method SM3500D) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Dissolved manganese (SW 846 Method 3010A/6010B) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | Alkalinity (EPA Method 310.1) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| | COD (EPA Method 410.1) | 33 | 0 | 0 | 3 | 0 | 36 | 0 | 3 | 0 | 3 |
| **Packer Testing Samples** | | | | | | | | | | | |
| | VOC (SW-846 Method 8260B) | 20 | 2 | 0 | 2 | 0 | 24 | 1 | 2 | 0 | 3 |
| **Test Well Sampling** | | | | | | | | | | | |
| | VOC (EPA Method 524.2) | 1 | 0 | 1/1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |

## Table 2-5

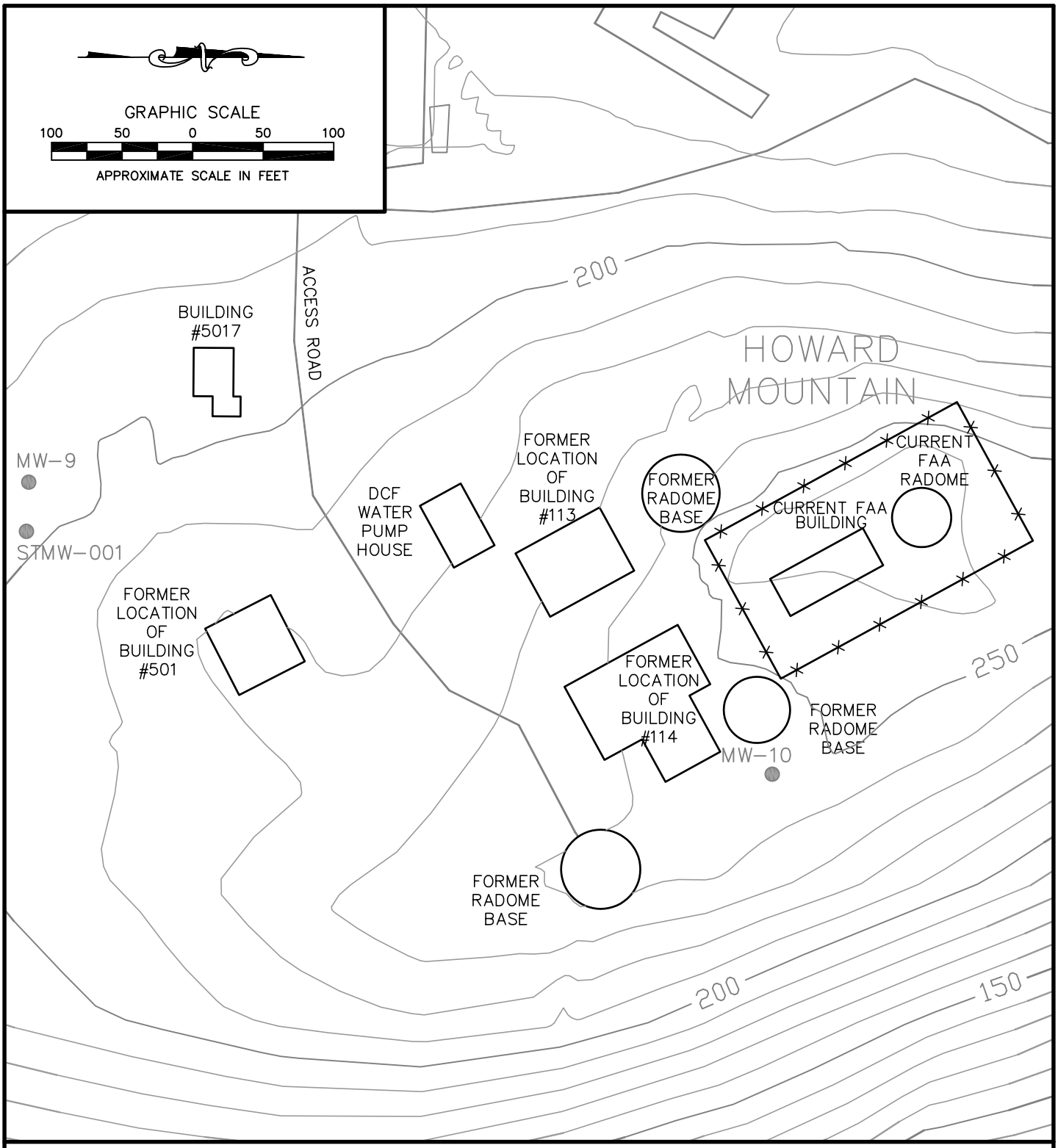
## Quality Assurance/Quality Control Sampling Summary
## Former Bucks Harbor AFRTS/GATR Areas
## Machiasport, ME
## (Continued)

| Location | Analysis (Method) | Field Samples | QC Samples | | | | Field + QC Samples | QA Samples | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Trip Blank | MS/ MSD | Duplicate | Rinse Blank | | Trip Blank | Dup. | Rinse Blank | QA Samples |
| **Ecological Risk Assessment Sampling** | | | | | | | | | | | |
| | VOCs – surface water (SW-846 Method 8260B) | 4 | 1 | 1/1 | 1 | 1 | 9 | 1 | 1 | 0 | 2 |
| | VOCs – sediment (SW-846 Method 8260B) | 4 | 1 | 1/1 | 1 | 1 | 9 | 1 | 1 | 0 | 2 |
| | TOC – sediment (Method 9060) | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| **Residential Well Samples** | | | | | | | | | | | |
| | VOC (EPA Method 524.2) | 38 | 1 | 2/2 | 4 | 0 | 47 | 3 | 4 | 0 | 7 |
| | TOC (SW 846 Method 415.1 or 9060) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Nitrate (EPA Method 352.1) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Sulfate (EPA Method 375.1) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Ethane/ethene (SW 846 Method 8015 modified) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Ferrous iron (Method SM3500D) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Dissolved manganese (SW 846 Method 3010A/6010B) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | Alkalinity (EPA Method 310.1) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |
| | COD (EPA Method 410.1) | 27 | 0 | 0 | 3 | 0 | 30 | 0 | 3 | 0 | 3 |

Note: Temperature blanks will also be submitted at a rate of one per cooler.
COD = chemical oxygen demand
EPA = U.S. Environmental Protection Agency
MS/MSD = Matrix Spike / Matrix Spike Duplicate
QA = quality assurance
QC = quality control
TOC = total organic carbon
VOC = volatile organic compounds

# SECTION 2

# FIGURES




NOTE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864, AND FIGURE 2-2 OF 1997 ABB "ENGINEERING EVALUATION OF CONTAMINATION REPORT". THE LOCATIONS AND DIMENSIONS OF BUILDINGS AND OTHER STRUCTURES ARE APPROXIMATE.

# REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

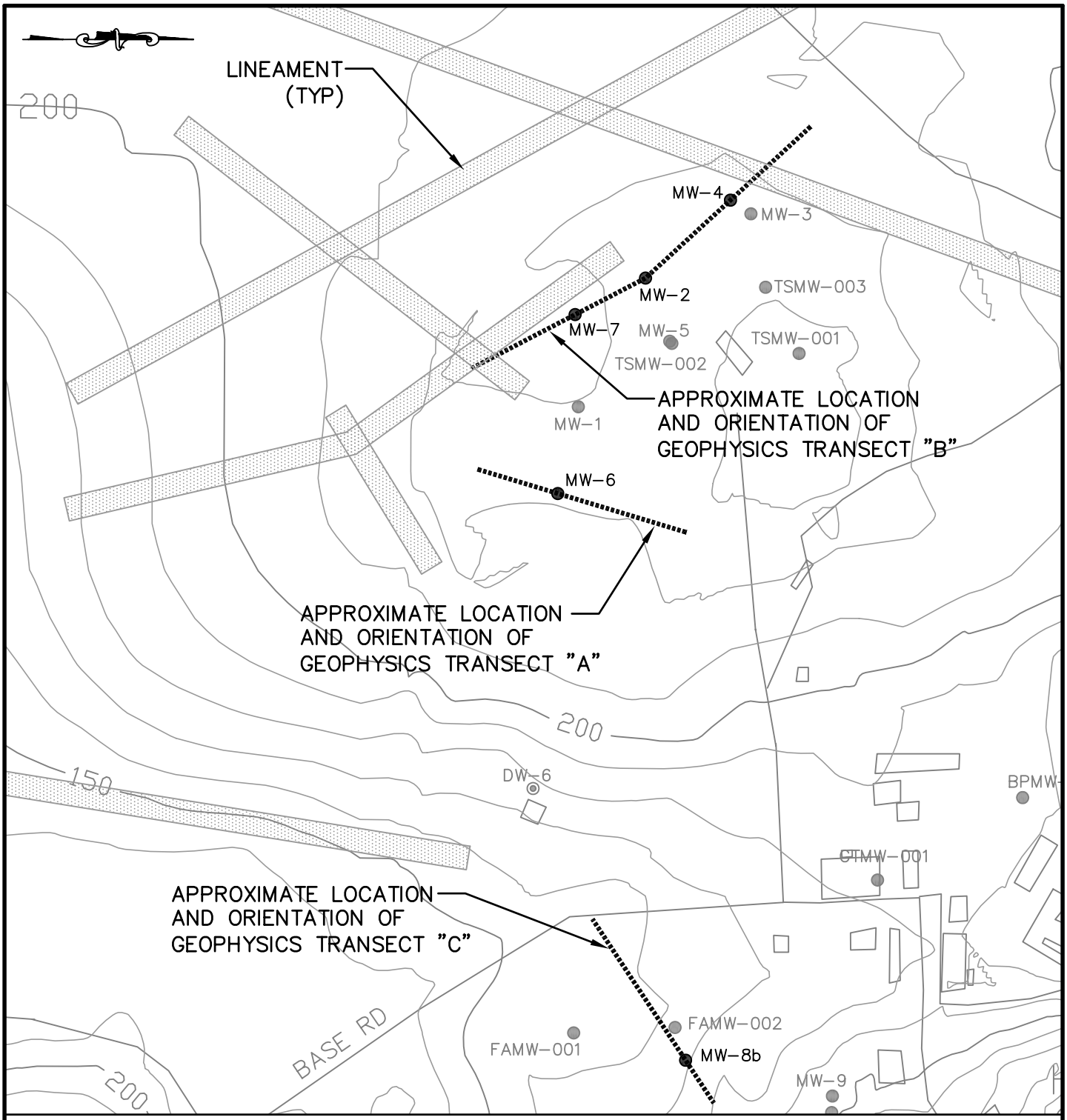
DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

## SITE PLAN OF THE HOWARD MOUNTAIN/FAA AREA

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | |
|---|---|
| DRAWN | AJM |
| DATE | MAR 2005 |
| FIGURE NO. | 2-1 |

M:\Design\DWG\ACOE\BUCKS\2003\HOWARD MOUNTAIN.dwg, FIG2-1, 3/14/2005 2:18:44 PM, girardeb, 1:1




MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864.
LINEAMENT SOURCE:
ABB FINAL FRACTURE TRACE ANALYSIS REPORT, SEPT. 1995. LINEAMENTS ARE SHOWN AS WIDE SHADED AREAS TO REFLECT MAPPING UNCERTAINTY.

GRAPHIC SCALE
300 150 0 150 300
APPROXIMATE SCALE IN FEET

# REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

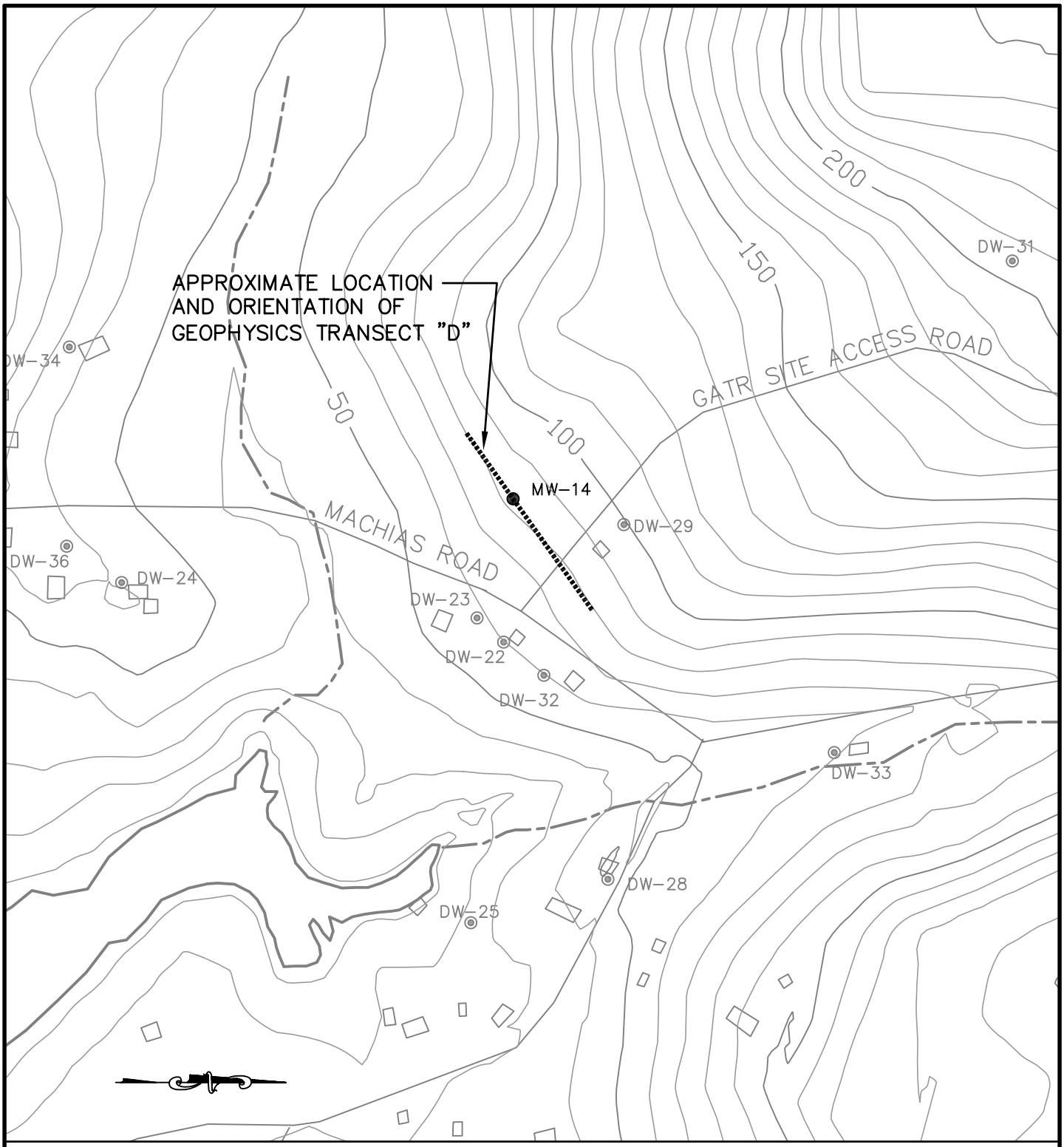
DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

## SURFACE GEOPHYSICS TRANSECTS "A", "B", AND "C"

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | |
|---|---|
| DRAWN | AJM |
| DATE | MAR 2005 |
| FIGURE NO. | 2-2 |

M:\Design\DWG\ACOE\BUCKS\2003\TRANSECTS.dwg, FIG2-2, 3/18/2005 1:29:49 PM, girardeb, 1:1




MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864.

GRAPHIC SCALE
300 150 0 150 300
APPROXIMATE SCALE IN FEET

# REMEDIAL INVESTIGATION REPORT
## FORMER BUCKS HARBOR AFRTS/GATR AREA
## MACHIASPORT, MAINE

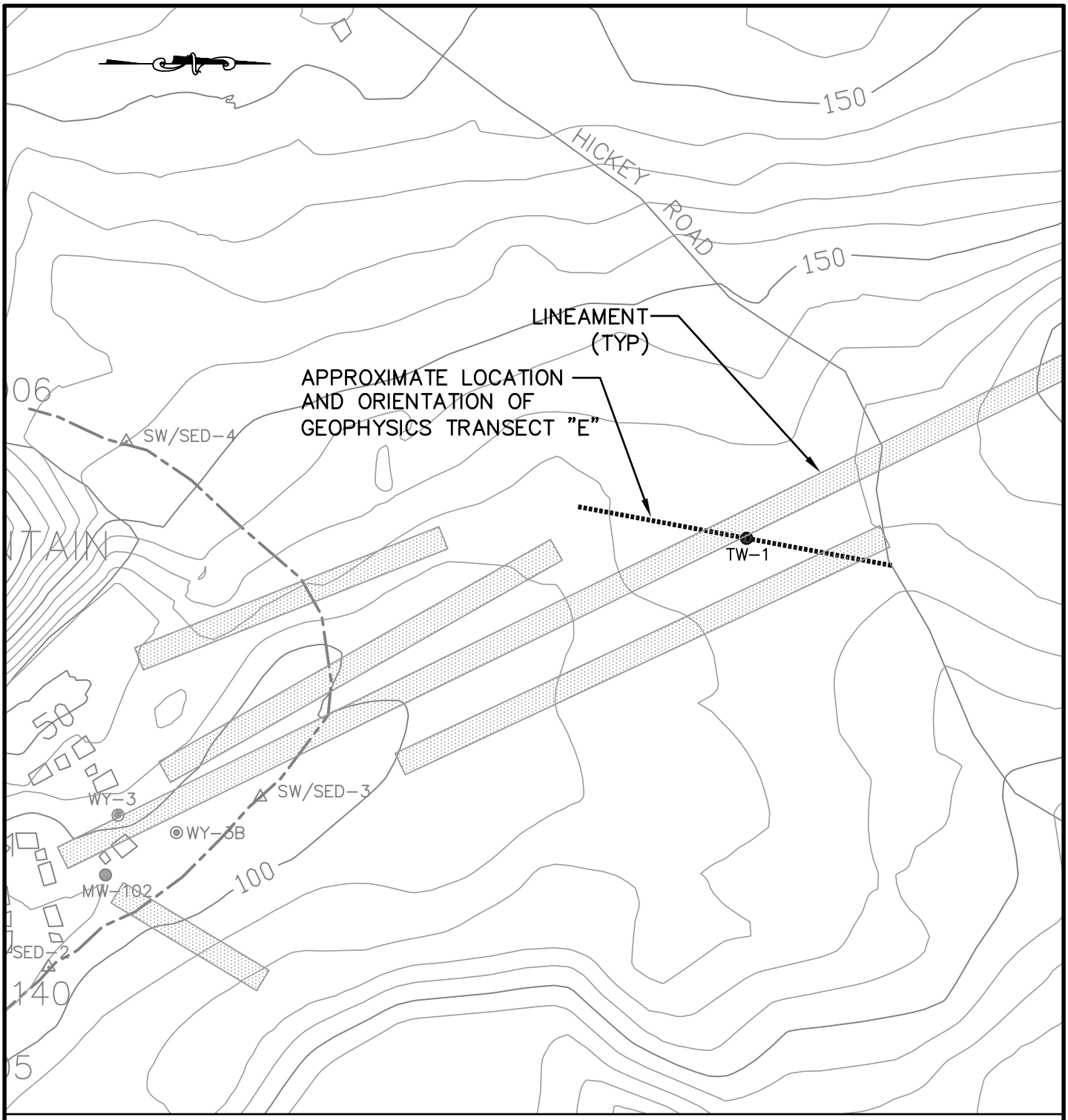
DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

## SURFACE GEOPHYSICS TRANSECT "D"

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | |
|---|---|
| DRAWN | AJM |
| DATE | MAR 2005 |
| FIGURE NO. | 2-3 |

M:\Design\DWG\ACOE\BUCKS\2003\TRANSECTS.dwg, FIG2-3, 3/18/2005 1:30:47 PM, girardeb, 1:1




MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864.
LINEAMENT SOURCE:
ABB FINAL FRACTURE TRACE ANALYSIS REPORT, SEPT. 1995. LINEAMENTS ARE SHOWN AS WIDE SHADED AREAS TO REFLECT MAPPING UNCERTAINTY.

GRAPHIC SCALE
300 150 0 150 300
APPROXIMATE SCALE IN FEET

# REMEDIAL INVESTIGATION REPORT
## FORMER BUCKS HARBOR AFRTS/GATR AREA
## MACHIASPORT, MAINE

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

## SURFACE GEOPHYSICS TRANSECT "E"

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | |
|---|---|
| DRAWN | AJM |
| DATE | MAR 2005 |
| FIGURE NO. | 2-4 |

M:\Design\DWG\ACOE\BUCKS\2003\TRANSECTS.dwg, FIG2-4, 3/18/2005 1:52:49 PM, girardeb, 1:1

# SECTION 3

# PHYSICAL CHARACTERISTICS OF THE STUDY AREA

# 3. PHYSICAL CHARACTERISTICS OF THE STUDY AREA

## 3.1 PHYSIOGRAPHY/TOPOGRAPHY

The Bucks Harbor study area is characterized by small hills that have been shaped by glacial processes and recent erosion that have resulted in well-developed northwest-southeast oriented drainage, which is parallel to the direction of glacial movement (USGS, 2003). Drainage patterns are further influenced by erosional processes along the northwest-southeast trending fractures and high angle and reverse fault zones mapped in the region (Gates, 1981). The majority of the RI was focused on or near three hilltop areas: the Transmitter site, Howard Mountain, and Miller Mountain (Figure 1-1). The AFRTS area, including the DCF and FAA facilities, is located near the top of Howard Mountain at an approximate elevation of 250 ft above mean sea level (amsl). The Transmitter site is located on an unnamed coastal mountain area that is adjacent to, and southwest of, Howard Mountain at an elevation of approximately 240 ft amsl. The GATR site is located at the top of Miller Mountain, approximately 1 mile north of Howard Mountain, at an elevation of approximately 250 ft amsl. Less topographic relief exists between these main features, including gently rolling hillsides, river basins, and coastal areas with elevations ranging between approximately 0 and 150 ft amsl (USGS, 1977).

## 3.2 CLIMATE

The weather and climate characteristics of New England are among the most varied in the world. Along with high seasonal variability, New England encounters droughts, heavy rainfall, hurricanes, tornadoes, and blizzards. These climatic variations are influenced and controlled by many factors, including the physical geographical setting, the region's latitude and longitude, and coastal orientation. New England falls along the boundary between two predominant air circulations patterns, the Mid Latitude Westerlies and the Polar Easterlies. The boundary between these two air masses migrates north and south over the year, resulting in distinct seasonality throughout the region (National Oceanic and Atmospheric Administration [NOAA], 1995).

The State of Maine is divided into three major climatological divisions; the Coastal Division, the Southern Interior, and the Northern Interior (Keim, 1999). The Coastal Division extends about 20 miles inland along the entire length of Maine's coast. The coastal climate is tempered by the Atlantic Ocean, which results in lower summer temperatures and higher winter temperatures compared to Maine's interior regions [National Climactic Data Center (NCDC), 2003; Northeast Regional Climate Center (NERCC), 2003; Keim, 1999]. In the study area, about 1 mile southwest of Bucks Harbor, peak temperatures normally occur in July and average about 70 degrees Fahrenheit (ºF), with 2 to 7 days above 90ºF. Winters are much cooler with averages around 20ºF, with 10 to 20 days of subzero temperatures. According to records of the National Weather Service (NWS, 2003), annual precipitation averages about 49 inches and is more or less evenly distributed throughout the year. Snowfall ranges between 50 and 70 inches annually, and spring snowmelt combines with the slightly higher precipitation at that time of year resulting in seasonal high groundwater recharge rates. Typically, the driest and wettest months are August (average precipitation is 3.09 inches) and November (average precipitation is 5.45 inches), respectively (NOAA, 1995). Annualized water budgets for the local area, based on stream gauging and base flow measurements, suggest that the evapotranspiration rate is about 20 inches per year (Prescott, 1974).

## 3.3 SURFACE WATER HYDROLOGY

The former Bucks Harbor AFRTS is located along the Atlantic Coast of Maine on a north-south trending peninsula formed by Little Kennebec Bay to the west and Machias Bay to the east. Both of these bays open to the Atlantic Ocean. Several small streams that drain the surrounding upland areas feed Little Kennebec Bay. The largest of these, Meadow Brook, is located about 2 miles northwest of the GATR site on Miller Mountain (USGS, 1977). The Machias River feeds Machias Bay, which is the largest surface drainage in the region and the regional groundwater discharge point (other than the coastline).

U.S. Geological Survey topographic maps of the area indicate that major streams, such as the Machias River and its tributaries, flow predominantly from the northwest to the southeast, paralleling the primary regional bedrock structural trend. Many of the minor tributaries trend northeast to southwest, more or less perpendicular to the major drainage systems and parallel to

the secondary bedrock structural trend (Gates, 1981). The regional drainage pattern is indicative of one that is predominantly dependent on structural trends in the bedrock, but that has been altered somewhat by glacial deposition, resulting in a combination of trellis and deranged drainage patterns (Ritter, 1978). This is consistent with the relatively thin overburden deposits, which would result in a strong bedrock influence and the predominant glacial origin of the landscape. This has resulted in a pattern of upland areas with a thin mantle of till overlying bedrock with intervening lowland areas having thicker deposits of glacial material and a deranged drainage pattern.

The average annual discharge of the Machias River distributed over the drainage basin is approximately 27 inches. Of the water that runs off, as much as 40% (11 inches) is derived from precipitation that has percolated to the water table, where it moved as groundwater and discharged to streams (Prescott, 1974). Most of the difference between precipitation and runoff (about 20 inches per year) is evaporated or transpired (Prescott, 1974). The streams immediate to the study area are very minor, typically less than 1 mile long, and follow the slope of the land and/or bedrock structures until reaching larger bodies of water, either Little Kennebec Bay to the west or Machias Bay to the east, eventually discharging to the Atlantic Ocean.

One such small, unnamed stream originates northwest of Howard Mountain as a series of springs and seeps and flows around to the north and then southeast, past the DCF Housing Area and along the north side of Jasper Beach Road. Another is located approximately ½-mile south of the GATR site and flows eastward until it discharges into a small arm of Bucks Harbor. Numerous small, centrally drained wetland areas exist across the study area and are indicative of the deranged drainage pattern described previously.

## 3.4 GEOLOGY

### 3.4.1 Overburden

According to the *Surficial Geology of the Machias Quadrangle* by Harold W. Borns, Jr. (1974), much of the Bucks Harbor region is characterized by frequent bedrock outcrops with a thin veneer of surficial deposits (generally less than 10 ft thick) that were deposited about 13,000 years ago by glacial processes. However, some areas of thicker glacial sediments

(up to 100 ft thick) exist both east and west of Howard Mountain and into Bucks Harbor. East of the study area, deposits of sand and gravel (with minor areas of till) interpreted as glacial-lake delta deposits are present. Juxtaposed to these sediments are glacial tills described as a mixture of sand, silt, clay, and stones. The till is generally very dense and yields little groundwater. West of Howard Mountain and the Transmitter site, in a northeast-southwest trending belt, are end-moraine deposits composed primarily of sand deposited by meltwater streams emerging from the glacier. Glacio-marine terrace deposits of the Presumpscot Formation are present northwest of Howard Mountain and may overlie some of the coarser glacio-fluvial delta deposits. Soil borings advanced by ABB in this area indicate the unit consists of silt, sand, and gravel glaciofluvial deposits overlying gray, glacial marine clay. The clay layer was noted to vary in texture and consistency and range from between 20 to 28 ft thick (ABB, 1997b). It was also noted that the unit may be of sufficient consistency and depth to act as a confining layer, thus, creating a perched overburden aquifer (ABB, 1997b).

The overburden noted in the soil borings performed during the RI was consistent with that described by Borns, generally consisting of 2- to 14-foot thick overburden deposits of sand and gravel (WESTON, 2003). This is likely due to the majority of the borings being located on the bedrock high points of Howard and Miller Mountains. However, locations MW-11 and TW-1 were two notable exceptions to this pattern. At monitoring well MW-11, a much thicker deposit of glacial till was encountered (86 ft). The upper 46 ft were described as ablation till (deposited in place as the glacier melts away), while the lower 40 ft were described as denser, basal till. At test well TW-1, located in the topographic low area between Howard and Miller Mountains, 47 ft of overburden deposits were noted. The upper 12 ft of overburden were described as silty sand, while the lower 35 ft were described as gray clay, typical of the glaciomarine Pleistocene Presumpscot Formation. This would appear to indicate that the summits of Howard and Miller Mountains were not submerged by the ocean during the deglaciation of the region at the end of the Pleistocene, while the lower-lying areas between them were submerged.

### 3.4.2 Bedrock

The rocks of the Bucks Harbor area lie within the easternmost lithotectonic belt of the Coastal Lithotectonic Block known as the Ellsworth Belt (Berry and Osberg, 1989; Osberg et al., 1985). The Coastal Lithotectonic Block includes the easternmost bedrock exposed in Maine, comprised of a group of fault-bounded lithotectonic belts or terranes, each having its own lithostratigraphy, but of uncertain relative provinciality. Regionally, the Norumbega fault zone represents the western boundary of the Coastal Lithotectonic Block. Current interpretations suggest these terranes were juxtaposed during a series of orogenic events spanning the Cambrian through Devonian time concluding with the Acadian Orogeny. The Ellsworth Belt extends from Penobscot Bay, Maine, to Passamaquoddy Bay, New Brunswick, Canada, and is interpreted to have been deposited on Precambrian Avalonian basement, although only Paleozoic rocks are exposed. The bedrock in this belt consists of Middle Ordovician to Devonian mafic to felsic volcanic rocks interlayered with fossiliferous clastic sedimentary rocks. This stratigraphy was extensively intruded by Devonian plutonic rocks of varying composition (Hogan and Sinha, 1989).

Based on the bimodal chemistry of the volcanic rocks present in the Ellsworth Belt, they are interpreted to have a continental tholeiitic affinity having been extruded through continental crust of the Avalon Terrane during Ordovician-Early Devonian time prior to the onset of the Devonian Acadian Orogeny (Gates and Moench, 1981). Comparison of the volcanic rock chemistry of this belt with that of volcanic rocks from around the world of known tectonic position, indicates that these volcanic rocks were derived from partial melting of the upper mantle that was subsequently extruded through extended continental crust. Furthermore, the compositional changes in the volcanic rocks and textural features recorded in this sequence during the 20+ million year period from Early Silurian to Early Devonian time indicates emergence of the depositional environment from subaqueous shallow marine to subaerial by Early Devonian time.

The oldest rocks of the Ellsworth Belt are known as the Columbia Falls Formation consisting of siliceous, feldspathic siltstone and phyllite of an uncertain Middle Ordovician age, possibly as old as Late Proterozoic. The Columbia Falls Formation is correlated with the Ellsworth Formation that comprises the southern portion of the Ellsworth Belt

(Berry and Osberg, 1989). With the exception of the Columbia Falls Formation, the relative ages of the overlying Siluro-Devonian formations described in this belt are defined by widely preserved fossil assemblages. The overlying stratigraphic sequence in the northern part of the Coastal Lithotectonic Belt exposed in the Bucks Harbor area from oldest to youngest includes the Quoddy, Dennys, Edmunds, Leighton, Hersey, and Eastport Formations. The Quoddy Formation is comprised of sulfidic siltstone and argillites interbedded with volcanic ash deposits. It is largely separated from the rest of the sequence by extensive faulting but is interpreted as the basal unit of the bimodal volcanic sequence, conformably underlying the Dennys Formation. Based on the assigned age of the Columbia Falls Formation, an unconformity is interpreted between the Columbia Falls Formation and the Quoddy Formation. The Dennys Formation consists of basalt and siliceous volcanic rocks interbedded with argillites. Overlying the Dennys Formation, the Edmunds Formation consists of dacitic and rhyolitic tuffs, breccias, and volcanoclastic conglomerate including minor basalts and interbedded fossiliferous black shale. The overlying Leighton Formation consists of interbedded gray siltstone, limey shale, basalt flows, and rhyolitic tuffs with debris flows. The Hersey Formation is comprised of maroon siltstone and shale. Importantly, the Hersey Formation is the only member of this sequence not containing volcanic rocks, representing a hiatus in regional volcanic activity during latest Silurian and earliest Devonian time. Fossil assemblages indicate that deposition of the Hersey Formation spans the Silurian-Devonian boundary. The Eastport Formation includes the youngest volcanic rocks of the Coastal Lithotectonic Block and is comprised of basaltic and rhyolitic flows, tuffs, and tuff breccias interbedded with siltstones, shales, cherty limestone, and conglomerate. Importantly, some flows and tuff of the Eastport Formation are interpreted as subaerial deposits, indicating emergence of the Ellsworth Belt by Early Devonian time (Gates and Moench, 1981).

The rocks of the northern portion of the Ellsworth Belt have experienced folding, faulting, and low grade, greenschist facies metamorphism resulting from the Devonian Acadian Orogeny (Guidotti, 1989). The Acadian Orogeny is interpreted to have resulted from the convergence of the Avalon Terrane with North America (Berry and Osberg, 1989). In the Bucks Harbor area, the tectonic and metamorphic overprint is very weak. Regional Acadian metamorphism resulted in chlorite and rare muscovite growth and limited foliation development, while numerous faults of Acadian age and younger have resulted in a disrupted map pattern. Numerous northwest- and

northeast-trending, high-angle reverse and normal faults of Acadian age transect the Bucks Harbor area. The Machias syncline is the most recognizable, map-scale fold in the area defining a structural basin cored by the volcanic rocks of the Eastport Formation and bordered to the south and west by older Silurian volcanic rocks (Gates, 1981). The Lubec fault zone, a northeast trending regional discontinuity, defines the eastern flank of the Machias syncline, separating the older volcanic rocks of the Quoddy Formation exposed on offshore islands to the east from the younger volcanic rocks exposed in the syncline.

Plutonic rocks ranging in composition from granite to gabbro occur extensively throughout the Coastal Lithotectonic Block derived from felsic, mafic, and hybrid magmas derived from melting of the upper mantle and continental crust during Silurian to Early Carboniferous time (Hogan and Sinha, 1989). The largest volume of plutonic rocks in the region was emplaced during Devonian time. In many cases these plutonic rocks obscured contact relations, truncated Acadian fault zones, and imposed contact metamorphic mineral assemblages on the country rock (Guidotti, 1989). Importantly, age determinations from these intrusive rocks provide constraints on the age of regional faulting, the sequence and timing of accretion of lithotectonic terranes, and insight into the tectonic setting that generated the widespread plutonic activity preserved in the Coastal Lithotectonic Block. In the Bucks Harbor area, Devonian hornblende gabbro is mapped intruding Siluro-Devonian gabbroic rocks that, in turn, intruded the layered volcanoclastic rocks of this area (Gates, 1981).

A series of hydrogeological cross-sections were prepared to illustrate subsurface conditions at the site. The locations of the cross-sections are shown in Figure 3-1 and were selected such that they intersected potential contaminant migration pathways as determined, based on groundwater quality results. The cross-sections were developed using data from the borehole logs, downhole geophysics, packer permeability and water quality testing, and monitoring and residential well water quality sampling. These cross-sections show the interrelationships of the various rock types and are presented as Figures 3-2 through 3-4.

Locally, the core and drilling logs recorded from borings in the Howard Mountain area during the RI investigation confirm that bedrock in that area belongs primarily to the lower Devonian Eastport Formation, which contains flow-banded rhyolite, vitrophyre, and autobreccia. Exceptions are noted in the logs for borings MW-9 and MW-12. In boring MW-9, the rhyolitic

member of the lower Devonian Eastport Formation was noted from the bedrock surface downward, but diabase was noted from 80 ft bgs to the bottom of the boring at 120 ft bgs. This is consistent with the mapped bedrock geology, which depicts a diabase dike 500 ft west of boring MW-9 (Gates, 1981). In boring MW-12, the rhyolitic member of the lower Devonian Eastport Formation was noted from the bedrock surface to a depth of 171 ft bgs, where a diabase or gabbroic intrusion was noted to a depth of 203 ft bgs. The rhyolite was again observed from 203 ft bgs to the bottom of the borehole at 243 ft bgs. This is consistent with the mapped bedrock geology, which depicts a relatively small gabbro intrusion 500 ft northwest of boring MW-12, along the strike of the normal fault (Gates, 1981).

The core logs recorded from the two borings in the Miller Mountain area during the RI (MW-13 and MW-14) confirm that bedrock in that area is at the margin of the rhyolitic member of the lower Devonian Eastport Formation. In boring MW-13, it was noted from the bedrock surface downward, with intrusions of dark gray granodiorite noted at intervals 37 to 38 ft bgs, 40 to 47 ft bgs, and 60 to 65 ft bgs. This is not entirely consistent with the mapped bedrock geology, which depicts a relatively large diabase/gabbro intrusion in the area. However, a hornblende-bearing granodiorite and quartz monzonite is mapped 600 ft southwest of boring MW-13, and the rhyolitic member of the lower Devonian Eastport Formation is mapped 700 ft northeast of boring MW-13 (Gates, 1981). The boring log for MW-13 indicates that unmapped intrusions of these units are present in the area. In boring MW-14, better correlation with the mapped bedrock geology is noted. Pink Devonian granodiorite was noted from the bedrock surface to 54 ft bgs, where gabbro was noted from 54 ft bgs to the end of the boring at 101 ft bgs. This is consistent with the mapped bedrock geology, which depicts the boundary between the hornblende-bearing granodiorite and quartz monzonite and diabase/gabbro intrusions with uncertainty due to lack of outcrops (Gates, 1981). The boring log for MW-14 indicates that the intrusion of the hornblende-bearing granodiorite and quartz monzonite extends further to the east than mapped, and that it overlies the diabase/gabbro intrusion.

## 3.5 ANALYSIS OF SURFACE AND BOREHOLE GEOPHYSICAL TESTING

### 3.5.1 Introduction

Surface Geophysical Methods, including GPR, multifrequency EM, seismic refraction tomography, and inductive terrain conductivity, were used to assess subsurface bedrock conditions and to assist in determining locations for bedrock monitoring wells designed to intercept primary contaminant migration pathways for impacted groundwater. Multifrequency EM and inductive terrain conductivity were found to be largely ineffective at this site due to the close proximity of a large-scale, low-frequency Naval telecommunications array and the very electrically resistive bedrock. Ground-penetrating radar and seismic refraction tomography, however, proved highly effective at mapping the bedrock surface and identifying fractured zones at depth. Seven surface geophysics lines were conducted; three bracketing the southern side of the Transmitter site, two south of Howard Mountain, one at the proposed location of the water supply test well, and one south-southeast of Miller Mountain (Figures 2-2 through 2-4). The locations of the surface geophysics lines were based on existing knowledge of regional bedrock fracture orientations, groundwater quality and flow data, and presumed contaminant migration pathways.

Bedrock wells were drilled at selected locations along each of the seven surface geophysics lines. An additional five bedrock wells were drilled at locations targeting specific areas such as former building locations or adjacent to existing shallow bedrock wells to investigate vertical groundwater flow conditions. Surface geophysics were not conducted at these locations due to the boring's site specific objectives or lack of relatively flat ground needed to achieve depth penetration. Downhole geophysical logging was performed at all 12 of the wells using a variety of methods. Natural gamma, EM induction, caliper, normal resistivity, spontaneous potential, single point resistance, and optical and acoustic televiewers were used to assess the physical properties of the bedrock as well as fracture location and orientation. Fluid resistivity, temperature, water quality, and HPFM readings were used to assess the hydrological characteristics of the fractures in an effort to assess ambient water quality and determine which ones were hydraulically active, and thus, could represent a migration pathway for site contaminants. Heat-pulse flow meter logging measures the direction and rate of vertical flow in a

borehole. Under ambient conditions, differences in hydraulic head between two transmissive fractures produce vertical flow in the borehole. Flow meter logging also is conducted under stressed (low-rate pumping) conditions to identify transmissive zones with similar ambient heads that would not be identified without stressing the aquifer. The flow under pumped conditions can be proportioned and attributed to specific fracture zones in the borehole.

The following subsections present a summary of the results of the downhole logging at each of the wells. A complete description of the surface and borehole geophysics studies, including graphical logs and profiles, and a detailed discussion of the results is presented in the USGS Report included in Appendix A.

### 3.5.2 Monitoring well MW-04/Surface Geophysics Line L-04

Monitoring well MW-04 is located on the southwestern flank of the Transmitter site hill coincident within a fracture zone identified by the surface geophysics survey. Surface geophysics line L-04 was run in a northwest-southeast orientation southwest of the Transmitter site. The Seismic refraction tomography profile along line L-04 identified a zone of lower velocity. This velocity low was coincident with a GPR anomaly at depth showing an increase in reflected energy, suggesting a fractured bedrock zone.

The depth to bedrock at this location was estimated to be 10 ft based on the results of the surface geophysical survey, and 11 ft based on the borehole geophysics. Bedrock was observed at a depth of 9 ft during drilling of this well.

In general, borehole geophysics results for MW-04 correlated well with rock core obtained from that well, confirming the performance of the various methods applied at the site. The OTV, ATV, and natural gamma logs all clearly show the contact between the reddish flow-banded rhyolite and the dark gray vitrophyre at 27 ft. The OTV and ATV logs confirm that the altered vitrophyre is more highly fractured than the underlying flow-banded rhyolitic and vitrophyre unit. Two predominant fracture sets were observed; an east-west striking set that dips steeply to the north, and a second set that strikes over a range of orientations (southwest-northeast to east-west) and dips steeply to the west and northwest.

Three significant water-filled fractures were identified in monitoring well MW-04. A series of east-west striking fractures that dip steeply to the south were encountered at a depth of approximately 21 ft. A corresponding variation in normal resistivity, specific conductance, and pH suggest that these fractures are water-filled. Results of the HPFM analysis show a large inflow of water within this zone under ambient as well as pumping conditions, suggesting that this series of fractures does transmit water and is a likely groundwater flow pathway.

A second set of east-west striking fractures that dip steeply to the south were encountered at a depth of approximately 49 to 52 ft. This zone also showed a decrease in normal resistivity, suggesting that the fractures are water-filled. Slight variations in the fluid logs suggest that this zone may be hydraulically active. No water movement was noted in either the ambient or stressed HPFM analysis, however, suggesting that there is little to no groundwater movement from this zone under static conditions. It is possible, however, that this zone could produce water if the well was pumped, and it could still represent a groundwater flow pathway.

The third set of fractures was encountered at a depth of approximately 80 ft. These fractures also strike roughly east-west, but have a much smaller dip than the other two sets of fractures. Once again, a decrease in normal resistivity was observed, suggesting that the fractures are water-filled, although the HPFM did not indicate groundwater movement under ambient conditions.

It is possible that a fourth fracture zone exists just below the bottom of the steel casing. The HPFM suggests that some water is leaving the casing in this depth interval, and the caliper log suggests there may be a fracture as well. However, interference from the casing makes interpretation of most of the parameters difficult.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 80 ft below grade) was at an elevation of approximately 136 ft amsl.

### 3.5.3 Monitoring Well MW-05

Monitoring well MW-05 is located at the Transmitter Site and is paired with shallow bedrock monitoring well TSMW-002. The rationale for placement of this well was to evaluate VOC

concentrations at depth in the vicinity of the Transmitter Site and to facilitate measurement of the vertical hydraulic gradient within the bedrock. No surface geophysics was performed at this location.

The results of the borehole geophysics correlated well with the drilling log from that location. The depth to bedrock at this location was estimated to be 10 ft, based on the borehole geophysics (primarily the natural gamma log). Bedrock was observed at a depth of 6 ft during drilling of this well. A marked increase in normal resistivity and single-point resistance (SPR) and a slight gamma increase match up with an observed lithology change from a reddish flow-banded rhyolite to a dark gray vitrophyre at about 79 to 80 ft, likely coincident with the horizontal fractured noted on the ATV and caliper logs. This contact was not as well defined by the ATV logging as it was at location MW-04. A series of fractures was noted during drilling between 60 and 65 ft, which were confirmed by the caliper log and variations in SPR and normal resistivity.

Numerous fractures were noted in the ATV logs, typically co-located with enlargements in the borehole as measured by the caliper log. Fracture frequency was high within the upper 50 ft of the borehole, but dropped to infrequent below that depth. Two predominate fracture sets were observed, one nearly horizontal and one striking northeast-southwest. The northeast-southwest striking fractures exhibited moderate dips to the southeast and northwest.

Three significant water-filled fractures were identified in monitoring well MW-05. A series of northeast-southwest striking fractures with parallel dips were encountered at a depth of approximately 24 to 26 ft. A borehole enlargement and a corresponding variation in fluid temperature and normal resistivity suggest that these fractures are water-filled. Results of the HPFM analysis show a slight inflow under ambient conditions and a large inflow under pumping conditions originating in the interval that includes this zone, suggesting that this series of fractures does transmit water and is hydraulically active.

A very large, open horizontal fracture was identified at approximately 61 ft based on the ATV and caliper logs. Slight groundwater outflow was noted from this interval under ambient conditions during the HPFM analysis. Strong groundwater inflow was measured from within this zone during the HPFM pumping analysis suggesting this zone is a hydraulically active.

Another large, open horizontal fracture was identified at approximately 79 to 80 ft, coincident with the lithologic contact between the reddish flow-banded rhyolite and the dark gray vitrophyre, based on the ATV and caliper logs. A small amount of groundwater inflow was observed from this zone during the HPFM pumping analysis. No flow was noted during the ambient HPFM analysis. Based the HPFM pumping analysis, this zone appears to be hydraulically active.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 80 ft below grade) was at an elevation of approximately 143 ft amsl.

### 3.5.4 Monitoring Well MW-06/Surface Geophysics Line L-06

Monitoring well MW-06 is located on the southeastern flank of the Transmitter site hill coincident with a fracture zone identified by the surface geophysics survey. Surface geophysics line L-06 was run in a northeast-southwest orientation southeast of the Transmitter site in an attempt to identify any northwest-southeast trending fractures that could represent a contaminant migration pathway from the Transmitter site. The seismic refraction tomography profile along line L-06 identified lateral variations in velocity that were coincident with lateral variations in GPR character, suggesting a fractured bedrock zone.

The GPR survey correctly predicted the depth to bedrock at this location to be on the order of 4 to 6 ft. The seismic refraction tomography and borehole velocity analysis, however, predicted that bedrock would be encountered much deeper (10 to 25 ft). The highly weathered nature of the bedrock at this location may have been partially responsible for this discrepancy. Another possibility is that acoustic, GPR, and drilling top-of-rock values are not the same due to the measuring technique (38-inch resolution, 1-inch resolution, and 6-inch resolution, respectively). The depth to bedrock at this location was estimated to be 3 ft based on the down hole geophysics (primarily the natural gamma log). Bedrock was observed at a depth of 4 ft during drilling of this well.

The ATV and natural gamma logs suggest that there are no changes in rock type over the depth of this well. The ATV and caliper logs indicate far fewer fractures were encountered at this

location than at the other six locations. In general, the bedrock is interpreted to be competent and fairly uniform over the entire depth of the borehole. The majority of the few fractures that were encountered had variable strikes and dipped generally southward. One large horizontal fracture was encountered just below the bottom of the well casing.

Three significant water-filled fractures were identified in monitoring well MW-06. A single horizontal fracture was encountered just below the bottom of the steel casing at a depth of approximately 10 ft (3 m). Corresponding variations in specific conductivity and normal resistivity suggest that this fracture is water-filled. Results of the HPFM analysis show a large increase in ambient water flow originating in the interval that includes this fracture. Under pumping conditions, the HPFM showed that all of the water entering the borehole came from this fracture. This shallow, horizontal fracture likely receives groundwater from the overburden and weathered bedrock zones, and therefore, is indicative of conditions in the shallow zone. All data suggest that this fracture is likely a significant groundwater flow pathway.

A set of east-west striking fractures with opposing dips (one to the north and one to the south) was encountered at a depth of approximately 64 ft (19.5 m). This zone also showed a decrease in normal resistivity and variations in specific conductivity and pH, suggesting that the fractures are water-filled. Outward water movement was noted for this zone in the HPFM analysis, suggesting that there is some groundwater movement from this zone under static conditions in the borehole. No change was noted by the HPFM under pumping conditions. It is believed that the intersection of the two observed fractures represents a groundwater flow pathway, based on the ambient HPFM results.

A single fracture dipping to the southeast was encountered at a depth of approximately 116 ft (35.5 m), just above the bottom of the borehole. Large variations in water quality parameters and fluid conductivity suggest that the fracture is water-filled, although the HPFM did not indicate groundwater movement under ambient or pumping conditions. This suggests that this fracture is not extensive and likely not a significant groundwater migration pathway.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 64 ft below grade) was at an elevation of approximately 158 ft amsl.

### 3.5.5 Monitoring Well MW-07/Surface Geophysics Line L-07

Monitoring well MW-07 is located on the southern flank of the Transmitter site hill coincident with a fracture zone identified by the surface geophysics survey. Surface geophysics line L-07 was run in a northwest-southeast direction south of the Transmitter site. A narrow GPR anomaly was observed at depth showing an increase in reflected energy, suggesting a fractured bedrock zone. The seismic refraction tomography profile along line L-07 indicated that bedrock was shallow. Although two zones of lower velocity were identified in the seismic refraction survey, they were interpreted to be artifacts of the shallow bedrock.

Both the GPR and seismic refraction surveys correctly predicted the shallow depth of the bedrock surface at this location. No lithologic contacts were encountered, based on the ATV and natural gamma logs, however, variations in the single point resistance logs and ATV amplitude may be related to textural variations in the flow banded rhyolite and vitrophyre unit. The ATV log indicates that a higher frequency of fractures was encountered between 5 and 25 ft and 35 to 60 ft. In general, these fractures strike east-west and dip steeply to the north or south, or strike northeast-southwest with variable dip angles to the southeast and northwest.

Several significant water-filled fractures were identified in monitoring well MW-07, including fractures encountered at 20, 50, 80, and 121 ft. The zone at about 20 ft consists of several south-dipping, east-west striking fractures between 18 and 22 ft that were identified from the caliper and ATV logs and is characterized by normal resistivity and SPR lows, suggesting that the fractures are water-filled. In addition, the HPFM log indicates that there is ambient downward flow originating within this zone and strong inflow under pumping conditions. This suggests that the fractures in this zone represent a significant groundwater flow pathway.

A second fracture zone was encountered between 46 and 52 ft as defined by the caliper and ATV logs. This zone includes several steep north-dipping fractures striking roughly east-west. Again, normal resistivity and SPR logs show a strong decline, suggesting water-filled fractures. The HPFM indicated some downward flow from within this zone under ambient conditions. No flow was noted from within this zone under pumping conditions.

The zone at 80 ft includes just a single southeast-dipping fracture defined by the caliper and ATV logs. Normal resistivity and SPR logs show a transition at this depth with lower values

below and high values above, suggesting steady flow from this zone. The HPFM showed water exiting the borehole at this interval under ambient conditions and possibly some weak in-flow under pumping conditions.

The deepest water-filled fracture within this borehole was located at a depth of approximately 121 ft. A single northwest-dipping fracture was identified based on the caliper and ATV logs. Variations in fluid conductivity, pH, and redox, coupled with SPR and gamma lows, suggest that this fracture is water-filled. No flow was noted from this zone using the HPFM under ambient or pumping conditions. It is unclear whether this zone is hydraulically active.

Water quality logs confirm that all water within the borehole is fresh. A conservative estimate of the deepest fracture believed to be hydraulically active is at 121 ft below grade, which corresponds to an elevation of approximately 85 ft amsl.

### 3.5.6 Monitoring Well MW-8b/Surface Geophysics Line L-08

Monitoring well MW-8b is located on the southern flank of Howard Mountain coincident with a fracture zone identified by the surface geophysics survey. Surface geophysics line L-08 was run in a northeast-southwest orientation downgradient (south) of the drainage between the Transmitter site and Howard Mountain. The GPR survey identified an area of increased reflected energy at depth in this area, suggesting a fractured bedrock zone with an apparent dip to the northeast. A narrow low-velocity zone shown on the seismic refraction profile is an artifact of the analysis and is not necessarily indicative of fractured bedrock.

The GPR and seismic surveys predicted a depth to bedrock at this location of between approximately 6 ft and 16 ft, but the borehole survey predicted that bedrock would be found at 5 ft. Bedrock was observed at 3 ft below grade during drilling. No lithologic contacts were encountered based on the ATV and gamma logs; both suggest the rock is the rhyolitic flow-banded vitrophyre unit. A variation in bedrock texture is suggested by the OTV log at approximately 18 to 19 ft. The bedrock above 18 ft has large phenocrysts and appears to be more brecciated. Below a depth of 18 ft, the rock is fine-grained.

The ATV and OTV logs indicate that fractures are frequent throughout the length of the borehole, although the zone from 12 to 20 ft is more highly fractured. In general, the fractures

strike southwest-northeast and dip southeast over a range of nearly horizontal to nearly vertical. Overall, the sides of the borehole were very smooth with just two significant enlargements, interpreted to be fractures, at 18 and 45 ft.

Fluid temperature and conductivity logs, along with water quality logs, show only minor gradual changes over the entire depth of the borehole, suggesting there is little to no vertical water movement within the borehole under ambient conditions. This was confirmed with the HPFM, which did not show any vertical water movement within the borehole under ambient conditions.

Three significant water-filled fractures were identified in monitoring well MW-8b; one at 12 to 14 ft, a second at 22 to 25 ft, and a third at approximately 45 ft. The shallow zone at 12 to 14 ft coincides with a pH inflection, weak ambient flow, and numerous fractures identified on the ATV log. The zone between 22 and 25 ft is characterized by caliper and fluid inflections and weak ambient downward flow. The HPFM showed large increases in flow from within these zones under pumping conditions, suggesting that they may be important groundwater migration pathways.

The third water-filled zone at 45 ft is characterized by a large caliper inflection and several southeast-dipping fractures evident on the ATV log. The HPFM showed a small increase in flow within this zone under pumping conditions, suggesting that it may transmit small amounts of water.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 45 ft below grade) was at an elevation of approximately 119 ft amsl.

### 3.5.7 Monitoring Well MW-09/Surface Geophysics Line L-09

Monitoring well MW-09 is located on the southern flank of Howard Mountain coincident with a fracture zone identified by the surface geophysics survey. Surface geophysics line L-09 was run in a northeast-southwest orientation downgradient (south) of the drainage between the Transmitter site and Howard Mountain and is essentially a continuation of line L-08 to the northeast. The GPR survey identified a large area of increased reflected energy but was unable to resolve the depth to bedrock in this area, suggesting heavily fractured bedrock near the surface.

The seismic refraction tomography profile is consistent with the findings of the GPR survey in that it predicts the shallow bedrock to be moderate to highly fractured.

The depth to bedrock at this location was estimated to be 3.6 ft, based on the results of the surface geophysical survey and the borehole geophysics. Bedrock was observed at a depth of 4 ft during drilling of this well.

The ATV and natural gamma logs clearly show a contact between the gray flow-banded rhyolite vitrophyre unit and the underlying aphanitic diabase dike at approximately 75 ft. The ATV log confirms that both units are moderately to highly fractured. The more prominent fractures tend to strike east-west and dip to the north. The less prominent fractures tend to strike either east-west and dip south, or southwest-northeast and dip to the northwest.

The caliper and water quality logs suggest that there are two predominant water-filled fractures; one at 15 ft and another at approximately 75 ft. The shallow zone at 15 ft is defined by a significant enlargement in the borehole as determined from the caliper log. This corresponds with a large fracture observed on the ATV log and with variations in fluid temperature and conductivity. The HPFM did not show any vertical flow within the borehole under ambient conditions but did show significant flow from the zone at 15 ft under pumping conditions, confirming that this zone represents an active groundwater flow pathway.

The deeper zone at 75 ft coincides with the lithology change from the gray flow-banded basaltic vitrophyre unit to the underlying aphanitic diabase dike. Several fractures were also noted at the contact. Abrupt variations in fluid temperature and conductivity logs as well as water quality logs suggest this zone is hydraulically active, although this could not be confirmed with the HPFM.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 75 ft below grade) was at an elevation of approximately 121 ft amsl.

### 3.5.8 Monitoring Well MW-10

Monitoring well MW-10 is located near the top of Howard Mountain, just downgradient of the former location of Building 114. A storage tank used to dispense TCE is reported to have been located within the basement of Building 114. This area is also near the various radar antennas, where TCE may have been used to clean them. The depth to groundwater at MW-10 was measured at approximately 120 ft, thus, only the caliper, natural gamma, OTV, and EM induction logs could be run above the 120-ft depth. No surface geophysics was performed at this location.

The depth to bedrock at this location was estimated to be 12 ft, based on the down hole geophysics (primarily the natural gamma log). Bedrock was observed at a depth of 14 ft during drilling of this well.

The natural gamma probe recorded an unusually large concentration of gamma counts at approximately 76 ft. This anomaly corresponds with a large crystal of light colored mineral visible on the OTV log. It is unknown whether this light colored mineral is responsible for the natural gamma anomaly, or exactly what the light colored mineral is.

Frequent fractures were noted over much of the borehole; however, based on examination of the drill cuttings, most of the fractures appear to be healed with limonite and hematite mineralization. Based on the OTV and ATV logs, the fractures exhibit a wide range of orientations and dips.

Just two significant water-filled fractures were observed based on the downhole geophysics. A large, open near horizontal fracture was identified, based on the OTV, ATV, and caliper logs at approximately 153 ft. This fracture corresponds with a drop in the normal resistivity suggesting that the fracture is water-filled. The HPFM analysis indicated a large inflow from this zone under pumping conditions, although no flow was noted under ambient conditions. This suggests that there is little vertical flow within the borehole but that the fracture at 153 ft is hydraulically active. An increase in yield was also noted at this depth during drilling of the borehole.

A pair of open fractures, striking northwest-southeast and dipping about 45º to the northeast were encountered between 165 and 168 ft, based on the caliper, OTV, and ATV logs. These

fractures correspond with a decrease in normal resistivity, suggesting that they are water-filled. Although the HPFM analysis did not show any flow associated with this zone under ambient conditions, a slight inflow was noted under pumping conditions. This suggests that these fractures are hydraulically active, although they are not nearly as significant a feature as the horizontal fracture at 153 ft, based on the observed flow rates.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 168 ft below grade) was at an elevation of approximately 77 ft amsl.

### 3.5.9 Monitoring Well MW-11

Monitoring well MW-11 is located at the base of Howard Mountain to the east of the radar antennas, along the alignment of a major northwest-southeast trending fault zone (Gates, 1981). This orientation is parallel to the predominant bedrock structural alignment in the area and may represent a preferential migration pathway for groundwater and contaminant migration. No surface geophysics was performed at this location.

Based on the drilling log, the overburden at this location was approximately 86 ft thick and consisted of approximately 46 ft of coarse-grained glacio-fluvial material overlying a dense till. Although the natural gamma log suggested a possible lithology change at about 190 ft, no change in lithology was noted during the drilling, based on the cuttings. The caliper log indicates that the borehole diameter is quite variable, especially below 150 ft, ranging from 6.5 to 8 inches. Based on the ATV log, fracture frequency generally decreases with depth in this borehole. The majority of the observed fractures strike roughly north-south with the dip directions evenly distributed between east and west.

This borehole is very active hydraulically. Numerous hydraulically active fractures were noted during drilling, and based on the borehole geophysics including ones at approximately 98, 109, 127, 152-155, 163, 170, and 188 ft below grade. The highly active conditions noted within this borehole seem to confirm that it taps the regional fault system that had been targeted, and that the fault zone does act as a significant migration pathway for groundwater flow.

The feature at 98 ft is a large, open near horizontal fracture, based on the ATV and caliper logs. This fracture corresponds with a sharp increase in fluid conductivity suggesting that the fracture is hydraulically active. This was confirmed by the HPFM analysis, which indicated significant inflow from this zone under pumping conditions, although no flow was noted under ambient conditions.

The fractures at 109 and 127 ft were also identified using the caliper and ATV logs and are coincident with a variation in fluid conductivity suggesting that groundwater is either entering or leaving the borehole at these depths. No flow was noted from these fractures during either the ambient or pumping HPFM logs; however, it is possible that the high flows noted from other fractures in the borehole masked smaller flows from these fractures.

A series of water-filled fractures were noted during drilling between 152 and 170 ft, based on an increase in well yield of approximately 1 to 3 gpm over this interval. The caliper log shows that the borehole diameter is quite enlarged over much of this zone, opening to as wide at 7.5 inches. The ATV log confirms there are several moderately dipping fractures within this zone. Variations in water quality parameters and a general decrease in normal resistivity suggest that these fractures are water-filled. The HPFM indicated that water is entering the borehole from within this zone under pumping conditions, confirming the observations made during drilling. No significant flow was noted within the borehole under static conditions, suggesting there is little vertical flow of groundwater in this area.

A pair of open fractures was identified on the caliper and ATV logs between 188 and 190 ft. Although no flow was noted during the ambient HPFM logging, minor inflow was noted from this interval during the pumping analysis. This corresponds with the drilling observations, which indicated an increase in yield of approximately 1 to 2 gpm from this zone, suggesting that it is hydraulically active.

The deepest fracture that is believed to be hydraulically active (at 190 ft below grade) was at an elevation approximately 131 ft below mean sea level. A marked increase in fluid conductivity was noted between 100 and 110 ft [up to 5,300 microsiemens per centimeter (µS/cm)]. These fractures are at an elevation of between 41 and 51 ft below mean sea level. The data suggest that the hydraulically active fractures noted within this interval may contain brackish water. It should

be noted that several hydraulically active fractures were observed below 110 ft, and the fluid conductivity logs suggest that these fractures all contain fresh water. Thus, this well is not believed to have penetrated the fresh/saline water interface, but rather has intersected a fracture(s) that is in direct communication with the saline waters of Howard Cove.

### 3.5.10 Monitoring Well MW-12

Monitoring well MW-12 is located at the base of Howard Mountain, northwest of monitoring well MW-11, along the alignment of the same major northwest-southeast trending fault zone intercepted by monitoring well MW-11 (Gates, 1981). Based on regional groundwater flow patterns, this location is believed to be upgradient of MW-11. No surface geophysics was performed at this location.

The overburden at this location was significantly thinner than was observed at monitoring well MW-11 and consisted of approximately 12 ft of till. Variations in the caliper, natural gamma, and normal resistivity logs suggest a different lithology between approximately 170 and 209 ft. This corresponds with observations of drill cuttings, which identified a layer of massive porphorytic gabbro between 171 and 203 ft that differed from the flow-banded rhyolite observed over the rest of the borehole. The variation in the depths of the two contacts predicted by the different methods (borehole geophysics vs. drill cuttings) is minor and likely a result of the delay in cuttings reaching the surface from the time they are encountered. In contrast to observations at monitoring well MW-11, the caliper log indicates that the borehole diameter at monitoring well MW-12 is fairly consistent, ranging from 6 to 7 inches.

Fractures were very common throughout the depth of this borehole, based on the ATV log. The majority of the observed fractures strike roughly northwest-southeast (generally parallel to the overall trend of the fault zone) and dip steeply to the southwest. Larger low-angle fractures were noted at the upper and lower lithologic contacts between the gabbro and rhyolite. In general, this borehole was not found to be very active hydraulically, suggesting that it is not located within the same fault zone encountered by MW-11. Just two potentially active fractures were identified by the borehole geophysics as described below.

A significant enlargement of the borehole was observed just below the bottom of the steel casing at approximately 18 ft. This feature corresponds with a series of steeply dipping fractures noted on the ATV log. Variations in fluid conductivity, temperature and water quality parameters at this depth suggest the fracture is water-filled. No flow was noted from within this zone during either the ambient or pumping HPFM analysis, suggesting that this fracture may not be hydraulically active. No groundwater flow was noted during drilling at this depth interval.

A second set of fractures was encountered at approximately 42-43 ft, based on the caliper and ATV logs. Sharp changes in fluid conductivity and temperature, as well as water quality parameters at this depth suggest the fractures are water-filled. Slight groundwater inflow was noted during the pumping HPFM analysis suggesting that this feature is hydraulically active. The ambient HPFM did not show any vertical flow throughout the borehole, suggesting that there is little vertical gradient within the bedrock in this area, and that the majority of the flow is horizontal.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 43 ft below grade) was at an elevation roughly coincident with mean sea level. This suggests that the freshwater lens in this area extends to at least this depth.

### 3.5.11 Monitoring Well MW-13

Monitoring well MW-13 is located near the top of Miller Mountain at the GATR site, and is paired with shallow bedrock monitoring well GAMW-001. The rationale for placement of this well was to evaluate VOC concentrations at depth in the vicinity of the GATR site and to facilitate measurement of the vertical hydraulic gradient within the bedrock. No surface geophysics was performed at this location.

Variations in the natural gamma log suggest a different lithology between approximately 35 and 47 ft. This corresponds with observations of drill cuttings, which identified a layer of gray granite between 37 and 47 ft that differed from the vitrophyre observed over the rest of the borehole. The variation in the depths of the two contacts predicted by the different methods (borehole geophysics vs. drill cuttings) is minor and likely a result of the delay in cuttings

reaching the surface from the time they are encountered. The caliper log indicates a change in borehole diameter at approximately 88 ft that corresponds to a change in drilling bits used at this location. The SPR and normal resistivity logs could not be conducted in this borehole because of the dry gravel overburden present at this site, which resulted in an unusually high contact resistance at the surface electrode.

Fractures were very common throughout the depth of this borehole, based on the ATV log. The majority of the observed fractures strike roughly northwest-southeast and dip steeply to the southwest. Larger low-angle fractures were noted at the upper and lower lithologic contacts between the granite and the vitrophyre. In general, this borehole was not found to be very active hydraulically. The ambient HPFM did not show any vertical flow throughout the borehole, suggesting that there is little vertical gradient within the bedrock in this area, and that the majority of the flow is horizontal. Three potentially active fractures were identified by the borehole geophysics as described below.

Several low-angle fractures were identified, based on the caliper and ATV logs at approximately 35 ft. This depth corresponds with the upper contact between the granite and the vitrophyre units. A sharp variation in fluid temperature was noted at this depth, suggesting the fracture may be hydraulically active. No flow was noted from within this zone during either the ambient or pumping HPFM analysis; however, a slight increase in yield was noted at this contact during drilling, suggesting that this interval is hydraulically active to some extent.

Several smaller high-angle fractures were encountered at approximately 46-47 ft, based on the ATV log. This depth interval corresponds with the lower contact between the granite and the vitrophyre units. A sharp variation in fluid temperature and conductivity was noted at this depth, suggesting the fracture may be hydraulically active. No flow was noted from within this zone during the ambient HPFM analysis; however, some limited inflow was noted during the pumping HPFM analysis. No increase in yield was noted at this contact during drilling. This fracture is believed to be hydraulically active to a small degree, based on the result of the HPFM analysis.

A single, low angle fracture was identified at 74 ft based on the ATV log. A fluctuation in fluid conductivity at that depth suggests this fracture may be hydraulically active. Slight groundwater inflow was noted from within this zone during the HPFM pumping analysis, further suggesting

the fracture may be hydraulically active. No increase in yield was noted during drilling at this interval.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 74 ft below grade) was at an elevation of 180 ft amsl.

### 3.5.12 Monitoring Well MW-14/Surface Geophysical Line L-14

Monitoring well MW-14 is located at the base of Miller Mountain to the south-southeast, downgradient of the GATR site and within the mapped extent of the TCE contamination in that area. The location for monitoring well MW-14 was selected based on the results of the seismic refraction tomography survey, which identified a large area of lower seismic velocity possibly indicating a highly fractured zone within the bedrock. The GPR survey did not show any reflection anomalies in this area due to coupling problems caused by rough terrain.

The depth to bedrock at this location was estimated to be 10 ft based on the results of the surface geophysical survey and 16 ft, based on the borehole geophysics. Bedrock was observed at a depth of 13 ft during drilling of this well.

The OTV, ATV, and natural gamma logs clearly show a contact between the red to brown biotite granodiorite and the underlying dark green porphyritic gabbro at approximately 54 ft. The ATV log suggests that the granodiorite and the upper portion of the gabbro are highly fractured, but rock core from this borehole shows that only the granodiorite is highly fractured and that the gabbro is generally massive with few open fractures. Fracture orientation and dip in the granodiorite is highly variable. Within the gabbro, however, most fractures strike northwest-southeast, and dip moderately to the southwest.

The downhole logging results indicates that several potential water-filled fractures exist within the borehole. A series of fractures identified by the caliper, OTV, and ATV logs, at about 17 ft, are coincident with variations in fluid temperature and conductivity as well as multiple water quality parameters. The HPFM log shows in-flow from the formation within this zone under both ambient and pumping conditions. This zone is likely a significant groundwater flow pathway.

A number of low angle fractures were identified on the caliper, OTV, and ATV logs near the lithologic contact at 53 ft. These fractures are coincident with minor fluctuations in water quality parameters and large-scale variations in natural gamma (due to the lithology change) and normal resistivity. The HPFM results suggest that this interval produces water under ambient as well as pumping conditions. This contact represents a significant groundwater migration pathway.

A third hydraulically active zone was identified at a depth of approximately 78 ft by the HPFM results. This zone loses water under ambient and low-flow pumping conditions but is not correlated with variations on any of the other logs. However, the ATV does indicate a single near-horizontal fracture at this depth that could transmit water. It is unclear whether this zone represents a significant groundwater flow pathway.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 78 ft below grade) was at an elevation approximately coincident with mean sea level.

### 3.5.13 Test Well TW-1

Test well TW-1 was installed north-northwest of Howard Mountain in the vicinity of a large northwest-southeast trending normal fault zone mapped in the area. Based on earlier interpretations of the regional geology by ABB (ABB, 1997c) and Emery and Garrett Groundwater, Inc. (EGGI, 2002), the area was believed to consist of a favorable overburden groundwater-yielding zone that could produce enough water to supply local residents impacted by site activities. As such, it was proposed in the *Final SAP* that the test well be installed through an unconsolidated sand and gravel formation to a depth of approximately 100 ft bgs and completed as an overburden well using a 6-inch-diameter wire-wrapped well screen (WESTON, 2002b).

During implementation of the surface geophysics program in the Howard Mountain area, the CENAE-led team chose to also conduct additional geophysics at the test well site to evaluate the subsurface overburden stratigraphy, depth to bedrock, and approximate location of the normal fault, in the event that a bedrock test well was also needed and/or feasible. Surface geophysics lines were run along the former power line easement (Figure 2-4) in a north-northeast to

south-southwest direction in an effort to intercept the mapped normal fault and document its location. The results of the surface geophysical survey (seismic) estimated that the depth to bedrock was only 46 ft below grade, and that the velocities of some stratigraphic layers were more representative of the silts and clays of the nearby Presumpscot Formation. Therefore, it was determined by CENAE and WESTON that the overburden stratigraphy at the test well site was not favorable for an overburden test well, and test well TW-1 was instead installed as a deep bedrock well.

Test well TW-1 was installed in the center of a large area with low seismic velocities as determined from the seismic refraction tomography survey. Inductive terrain conductivity survey results showed an area of higher conductivity coincident with the seismic velocity low, suggesting an area of highly fractured bedrock that contains significant amounts of water. Based on the drilling log, the overburden at this location was approximately 47 ft thick and consisted of approximately 12 ft of fine-grained glacio-fluvial material, overlying a clays of the glacio-marine Presumpscot Formation. The natural gamma log suggested lithology changes at approximately 55, 60, and 140 ft, but no lithologic changes were observed during drilling of this well based on examination of the cuttings. The caliper log indicates that the borehole diameter is quite variable, especially below 95 ft, ranging from 6.25 to 7.5 inches. Based on the ATV log, fractures are common throughout the borehole. The majority of the observed fractures strike roughly northeast-southwest with most dipping toward the southeast. The HPFM testing of this borehole was not conducted.

This borehole contained several large hydraulically active fractures. A cluster of northeast-southwest striking fractures was noted between 132 and 142 ft, based on the caliper and ATV logs. A corresponding decrease in the SPR log suggests that these fractures are water-filled. Increased yield within this zone noted during drilling confirms that this zone is hydraulically active.

The caliper log shows a very large fracture at 169 ft. The ATV log indicates this fracture strikes northeast-southwest and dips to the east-southeast. The SPR log confirms that the fracture is water-filled. Observations during drilling indicate that this fracture can produce upwards of 50 gpm of water when pumped. This fracture represents a very significant hydraulically active zone that may be related to the regional northwest-southeast trending fault zone mapped in this

area (Gates, 1981). A single northwest-southeast striking fracture was identified at approximately 182 ft based on the caliper and ATV logs. A sharp decrease in SPR suggests that this fracture is water-filled. No increase in observed yield was noted at this depth during drilling, but it is very likely that small-scale flow from this zone would have been masked by the large flow from the 50 gpm fracture at 169 ft. Thus, this fracture may still represent a hydraulically active zone.

Water quality logs confirm that all water within the borehole is fresh. The deepest fracture that is believed to be hydraulically active (at 183 ft below grade) was at an elevation approximately 120 ft below mean sea level. This suggests that the freshwater lens in this area extends to at least this depth.

### 3.5.14 Residential Water Supply Well DW-1

Existing residential water supply well DW-1 is located in the lowland area southeast of Howard Mountain. This well has historically contained concentrations of TCE less than 1 µg/L, and as such is located near the downgradient edge of the area of groundwater contamination emanating from the former Building 114 area. A specification plate on the well cap on the well indicated that the total depth of the well was originally 305 ft; however, the borehole geophysical tools could only be advanced to a depth of 247 ft and terminated in soft material. Thus, it is believed that the lower 58 ft of this well is filled with sediment.

The caliper log clearly shows that the steel casing for this well extends to a depth of 102 ft below grade. The natural gamma log for this well shows an inflection at approximately 35 ft that is believed to represent the overburden/bedrock contact. Another inflection in the gamma log occurs at a depth of approximately 82 ft, suggesting a change from weathered to competent bedrock. This conclusion is supported by the length of the steel casing at this location, which extends to a depth of 102 ft. Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well [100 to 150 cps] and the others performed in the area. No other significant fluctuations of the natural gamma log were noted, suggesting that there are no lithology changes within the borehole.

Frequent fractures were noted throughout the borehole, with the predominant strike being generally northeast-southwest. The majority of the fractures dip steeply to the northwest; however, the majority of the open fractures dip to the west and southeast.

Three unusually large open features were noted, based on the caliper and ATV logs. A fracture dipping steeply to the west is located at about 193 ft. An irregular gaping open zone dips moderately to the northwest at 218 ft. The caliper reading at this depth exceeds 16 inches and the vertical opening spans approximately 2 ft. The third feature is an open fracture at 226 ft that dips steeply to the east. These zones correspond with a large drop in normal resistivity confirming that the features are water-filled. Fluid conductivity and temperature fluctuations beginning at 190 ft and extending below 230 ft, suggest that this zone is hydraulically active.

The deepest fracture that is believed to be hydraulically active (at 230 ft below grade) was at an elevation approximately 160 ft below mean sea level. A marked increase in fluid conductivity was noted below this fracture (up to 4,500 µS/cm). These data suggests that the fracture at 230 ft contains brackish water. Although the homeowner has not reported any problems with saltwater intrusion, it is likely that extensive pumping of this well would draw in brackish or saline waters.

### 3.5.15 Residential Water Supply Well DW-3

Existing residential water supply well DW-3 is located at the base of Howard Mountain to the southeast. This well has historically contained concentrations of TCE between 0.5 and 8.2 µg/L and, as such, is located along the presumed centerline of the area of groundwater contamination emanating from the former Building 114 area. Based on the depth to which the geophysical tools could be lowered, this well is approximately 298 ft deep, with steel casing extending to approximately 18 ft below grade, based on the caliper log.

Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well (100 to 150 cps) and the others performed in the area. The natural gamma log for this well shows a narrow zone of reduced gamma activity between 144 and 156 ft. Based on a comparison with natural gamma logs from nearby monitoring wells (MW-8b, MW-09, MW-10, and MW-11), these zones are interpreted to represent intrusion of either a diabase dike or the gray vitrophyre.

Frequent fractures were noted throughout the borehole. No single orientation is predominant, with fractures striking in numerous directions. The caliper log indicates that the borehole sides are slightly irregular throughout the uncased portion. The greatest enlargement was noted at 172 ft, but did not correlate with a hydraulically active fracture.

Several hydraulically active zones were identified, based on the borehole geophysics data. Borehole enlargements recorded on the caliper log correlate with a series of open fractures noted on the ATV log at approximately 58 and 156 ft. Sharp variations in the water quality parameters suggest that these zones are hydraulically active. Similar variations in water quality parameters were observed at 238, 246, and 255 ft. Results of the caliper and ATV logs indicate open fractures at these depths as well, suggesting they are hydraulically active. It should be noted that the hydraulically active zone identified at 155 corresponds with the observed lithology change, suggesting that the fracture is coincident with the lithologic contacts.

The deepest fracture that is believed to be hydraulically active (at 255 ft below grade) was at an elevation approximately 180 ft below mean sea level. This suggests that the freshwater lens in this area extends to at least this depth. Because this well is pumped on a daily basis, the presence of saline water in the well would have been noticed by the homeowner, further suggesting that this well does not experience salt water intrusion.

### 3.5.16 Residential Water Supply Well DW-4

Existing residential water supply well DW-4 is located at the base of Howard Mountain to the east. This well has historically contained concentrations of TCE between 32 and 93 µg/L and, as such, is located along the presumed centerline of the area of groundwater contamination emanating from the former Building 114 area. Based on the depth to which the geophysical tools could be lowered, this well is approximately 241 ft deep, with steel casing extending to approximately 16 ft below grade, based on the caliper log.

Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well (100 to 150 cps) and the others performed in the area. The natural gamma log for this well shows two narrow zones of reduced gamma activity (between 110 and 120 ft and between 190 and 210 ft). Based on a comparison with natural

gamma logs from nearby monitoring wells (MW-8b, MW-09, MW-10, and MW-11), these zones are interpreted to represent intrusion of either a diabase dike or the gray vitrophyre.

Frequent fractures were noted throughout the borehole, with the predominant strike being generally northeast-southwest and dipping steeply to the northwest or southeast. A second set of less numerous fractures was observed to strike nearly north-south and dip steeply to the west. The majority of the open fractures strike north-south and dip to the west. The caliper log indicates that the borehole sides are moderately irregular throughout the uncased portion. A large void was measured between approximately 202 and 212 ft.

Several hydraulically active zones were identified, based on the borehole geophysics data. Small borehole enlargements recorded on the caliper log correlate with a series of open fractures noted on the ATV log at approximately 38 and 51 ft. Sharp variations in fluid conductivity and temperature as well as the water quality parameters suggest that these zones are hydraulically active. Similar variations in fluid conductivity, temperature, and water quality parameters were observed at 124, 188, 208, and 220 ft. Results of the caliper and ATV logs indicate open fractures at these depths as well, suggesting they are hydraulically active. It should be noted that the hydraulically active zones identified at 124, 188, and 208 ft correspond with the noted lithology change, suggesting that the fractures are coincident with the lithologic contacts.

The deepest fracture that is believed to be hydraulically active (at 220 ft below grade) was at an elevation approximately 136 ft below mean sea level. A marked increase in fluid conductivity was noted below this fracture (up to 1,700 uS/cm). These data suggests that the fracture at 220 ft contains brackish water. Although the homeowner has not reported any problems with saltwater intrusion, it is likely that extensive pumping of this well would draw in brackish or saline waters.

### 3.5.17 Residential Water Supply Well DW-9

Existing residential water supply well DW-9 is located on the south side of Howard Mountain. This well has historically contained concentrations of TCE less between 0.5 and 0.7 µg/L and, as such, is located near the western edge of the area of groundwater contamination emanating from the former Building 114 area. This well was unusual in that it was the only well encountered within the study area that was artesian. A small quantity of water flowed from the well

throughout the geophysical logging. Based on the depth to which the geophysical tools could be lowered, this well is approximately 260 ft deep, with steel casing extending to approximately 18 ft below grade, based on the caliper log.

Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well (100 to 150 cps) and the others performed in the area. The natural gamma log for this well shows three narrow zones of reduced gamma activity (between 135 and 145 ft, 162 and 168 ft, and between 118 and 184 ft). Based on a comparison with natural gamma logs from nearby monitoring wells (MW-8b, MW-09, MW-10, and MW-11), these zones are interpreted to represent intrusions of either a diabase dike or the gray vitrophyre.

Frequent fractures were noted throughout the borehole, with the predominant strike being generally northeast-southwest. The majority of the fractures dip steeply to the northwest; however, the majority of the open fractures dip to the west and southeast.

Three hydraulically active zones were identified based on the borehole geophysics data. Borehole enlargements recorded on the caliper log correlate with a series of open fractures noted on the ATV log at 130, 162, and 248 ft. Sharp variations in oxygen content and ORP suggest that these zones are hydraulically active. The fact that this well is artesian and that groundwater was actively flowing during the logging makes interpretation of the data difficult because it tends to homogenize water quality within the borehole, masking the impacts of individual fractures.

The deepest fracture that is believed to be hydraulically active (at 248 ft below grade) was at an elevation of approximately 120 ft below mean sea level, suggesting that an intrusion of saline water is possible at this location.

### 3.5.18 Residential Water Supply Well DW-12

Existing residential water supply well DW-12 is located on the southeastern slope of Howard Mountain about midway between the top and the surrounding lowland areas. This well has historically contained concentrations of TCE between 1 and 3 µg/L and, as such, is located along the southwestern edge of the area of groundwater contamination emanating from the former Building 114 area. A specification plate on the well cap for the well indicated that the

total depth of the well was originally 303 ft and that it was cased to 21 ft below grade. No appreciable sediment buildup was noted in the bottom of the well.

The caliper and ATV logs confirmed that the steel casing for this well extends to a depth of 21 ft below grade. Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well (100 to 150 cps) and the others performed in the area. The natural gamma log for this well shows two narrow zones of reduced gamma activity (between 80 and 90 ft and between 236 and 247 ft). Based on a comparison with natural gamma logs from nearby monitoring wells (MW-8, MW-9, MW-10, and MW-11), these zones are interpreted to represent intrusion of either a diabase dike or the gray vitrophyre.

Frequent fractures were noted throughout the borehole, with the predominant strike being generally northeast-southwest and dipping steeply to the northwest (more common) or southeast (less common). A second set of less numerous fractures was observed to strike northwest-southeast and dip steeply southwest. The majority of the open fractures strike northeast-southwest and dip to the northwest.

The caliper log indicates that the borehole sides are irregular throughout the uncased portion. The caliper log was especially irregular between 21 and 225 ft. A noticeable reduction in borehole diameter was observed below 225 ft, possibly indicating a change in drilling equipment (e.g., to a slightly smaller bit).

Two hydraulically active zones were identified, based on the borehole geophysics data. A large borehole enlargement recorded on the caliper log correlates with a series of open fractures noted on the ATV log at 211 to 214 ft. Sharp variations in fluid conductivity and temperature as well as the water quality parameters suggests that this zone is hydraulically active. Similar variations in fluid conductivity, temperature, and water quality parameters were observed between 280 and 285 ft. Results of the ATV log indicates an open fracture at this depth as well, suggesting a hydraulically active fracture.

The deepest fracture that is believed to be hydraulically active (at 285 ft below grade) was at an elevation approximately 128 ft below mean sea level. This suggests that the freshwater lens in this area extends to at least this depth. Because this well is pumped on a daily basis, the presence

of saline water in the well would have been noticed by the homeowner, further suggesting that this well does not experience salt water intrusion.

### 3.5.19 Water Supply Well WY-3

Water supply well WY-3 serves the DCF Housing Area, as well as the DCF itself. This well is located in the lowland area east of Howard Mountain and is believed to be within the fault zone mapped along the east side of Howard Mountain (Gates, 1981). The yield of the well is reportedly greater than 50 gpm (ABB, 1997b). This well has historically contained concentrations of TCE between 0.5 and 0.7 µg/L and, as such, is located along the southeastern edge of the area of groundwater contamination emanating from the former Building 114 area. Based on the depth to which the geophysical tools could be lowered, this well is approximately 340 ft deep, with steel casing extending to approximately 80 ft below grade, based on the caliper and OTV logs.

The borehole for this well is highly irregular, based on the caliper log, which shows variations from 8 to 12 inches. Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma log from this well and that obtained from test well TW-1, located just to the northwest. Lower gamma counts in the intervals of 118 to 130 ft, 141 to 181 ft, 190 to 204 ft, and below 325 ft suggest a different lithology, possibly either the diabase dike or the gray vitrophyre, observed at nearby monitoring wells (MW-8b, MW-09, MW-10, and MW-11).

Frequent fractures were noted throughout the borehole, based on the ATV and OTV logs, with the predominant strike being generally northwest-southeast and dipping steeply to the southwest (more common) or northwest (less common). A second set of less numerous fractures was observed to strike northeast-southwest and dip steeply southeast.

Several hydraulically active zones were identified, based on the borehole geophysics data. Borehole enlargements recorded on the caliper log at 87, 118, 252, 264, and 325 ft, correlate with sharp variations in fluid conductivity and temperature, as well as the water quality parameters. These variations suggest that these zones are hydraulically active. It should be noted

that the hydraulically active fractures identified at 118 and 325 ft correlate with the lithologic contacts interpreted from the gamma and ATV logs.

The fluid conductivity log shows a marked increase below approximately 324 ft (to more than 4,000 µS/cm). This well has reportedly had problems with saltwater intrusion when pumped at rates higher than approximately 40 gpm for extended periods (ABB, 1997b). These data suggest that the freshwater lens in this area may be at an elevation of about 279 ft below mean sea level, and that the hydraulically active fractures between approximately 250 and 270 ft below grade may contain brackish water. This is likely where most of the water is coming from, based on the inflections of fluid temperature, conductivity, and pH evident on the WY-3 conventional log.

### 3.5.20 Water Supply Well WY-3b

Water supply well WY-3b is associated with the Housing Area water supply well (WY-3), and is located in the lowland area east of Howard Mountain. This well is believed to be within the fault zone mapped along the east side of Howard Mountain (Gates, 1981). No water quality samples have been collected from this well. Based on the depth to which the geophysical tools could be lowered, this well is approximately 218 ft deep, with steel casing extending to approximately 56 ft below grade, based on the caliper and ATV logs. The ATV log was terminated at a depth of 175 ft when falling rock within the borehole jeopardized the camera.

The borehole for this well is highly irregular, based on the caliper log, which shows variations from 8 to 14 inches. Several near vertical fractures were observed on the ATV log and the intersection of these fractures with other, less-steep fractures is responsible for the irregular borehole and the falling rocks that were observed. Bedrock at this location is interpreted to be the flow-banded rhyolite, based on a comparison of the natural gamma particle counts for this well (100 to 150 cps) and the others performed in the area. The natural gamma log for this well does not show any significant variations, suggesting that the lithology is consistent throughout.

Several hydraulically active zones were identified based on the downhole geophysics data. Large borehole enlargements recorded on the caliper log at 68, 94, 110, and 201 ft correlate with sharp variations in fluid conductivity and temperature as well as the water quality parameters. These variations suggest that these zones are hydraulically active.

The deepest fracture that is believed to be hydraulically active (at 201 ft below grade) was at an elevation approximately 161 ft below mean sea level. This suggests that the freshwater lens in this area extends to at least this depth.

## 3.6 ANALYSIS OF PACKER-PERMEABILITY TESTING

### 3.6.1 Introduction

As discussed in Subsection 2.10, packer-permeability testing was performed on newly installed bedrock monitoring wells MW-7, MW-10, MW-11, MW-12, and MW-14 between 12 and 17 August 2003. The tests were conducted by installing dual packer assemblies into the open borehole, inflating the packers to seal off selected fracture zones selected based on borehole geophysics results, and pumping a metered amount of water under pressure into the test length (DOI, 1990). The dual packer systems were constructed to allow for a 10-foot test zone at monitoring wells MW-07, MW-10, MW-11, and MW-14, and a 15-foot test zone at well MW-12.

Discrete-interval groundwater sampling was conducted on each test zone independently of the permeability tests by pumping out a minimum of one volume of water from within the test zone. The discrete-interval sampling was conducted moving from the shallowest zone to the deepest zone within the well. Immediately following the discrete interval sampling, the packer permeability testing was conducted in the reverse order (deep to shallow).

### 3.6.2 Factors Affecting the Permeability Calculations

During the packer testing program, static water levels were measured in the well to ensure the upper packer was adequately sealing the test zone. Vibrating wire pressure transducers were used to measure the pressure within and below the test zone to confirm that the lower packer was creating an adequate seal with the sides of the borehole. In every case, the lower packer was determined to provide an adequate seal based on the readings of the lower pressure transducer. However, leakage around the upper packer was noted on several occasions as determined by a rising water level within the borehole above the upper packer. In addition, recovering water

levels from the just-completed water quality testing further complicated the interpretation of the test results.

In general, three situations were encountered during the packer testing program:

1. An adequate seal of the test zone was achieved during the injection test by both packers (as indicated by stable water-level and pressure transducer readings) resulting in a straightforward calculation of the permeability within the test zone.

2. An inadequate seal of the test zone by the upper packer was apparent, based on a steady increase in water-level elevation within the well. The poor seal of the test interval was likely due to hydraulic communication of numerous high-angle to near-vertical fractures providing natural pathways around the packers, or poor sealing of the pneumatic rubber packers against the rough sides of the borehole. Based on a review of the downhole geophysics logs, it is likely that both of these conditions contributed to the leakage.

3. A combination of an inadequate seal of the test zone as described in situation 2 and the natural recovery of the well. The discrete-interval sampling was conducted immediately prior to the injection tests. In many cases where an inadequate seal of the upper packer was observed (situation 2), the well purging as part of the discrete interval sampling lowered the water level in the well, resulting in non-static well conditions. Therefore, the water level was below static at the start of the injection test. In addition to the water-level rise measured by potential hydraulic communication or packer leakage, the water level was also rising in the surrounding formation to achieve the well's natural static condition.

In an effort to take into account the observed leakage and non-static conditions, a range of permeability values were calculated for test zones where these conditions were observed. Three permeability estimates were calculated for zones with leakage:

- Permeability of the zone assuming no leakage or well recovery.
- Permeability of the zone adjusted for leakage only by the rate of water-level increase measured in the well.
- Permeability of the zone adjusted for a combination of leakage and well recovery.

The conditions observed during each test were evaluated to determine which of the three estimates most likely represents the actual permeability for the test zone. This was considered the "best estimate" of permeability for that test zone, although the results of all three analyses are presented to provide the overall range of possible permeabilities.

### 3.6.3 Calculation of Permeability

The permeability of each test zone was calculated using the following equation from the "Procedure for Constant Head Hydraulic Conductivity Tests in Single Drill Holes," in the *U.S. Bureau of Reclamation Earth Manual* (DOI, 1990):

$$k = \frac{Q}{2\prod LH} \ln L/r \text{, where } L \geq 10r \qquad \text{(Equation 1)}$$

Where:

**k** = *Permeability* (hydraulic conductivity) in feet per day (ft/day).

**Q** = *Constant rate of flow* into the test interval in cubic ft/day.

$\prod$ = *Constant of pi* (approximately 3.14)

**L** = *Length of the test* interval in ft.

**H** =Differential head of water at the test interval in ft, *Hg* + *Hp*, as defined by the following:

**Hg**, *gravity* = Distance from groundwater level to pressure gauge in ft.

**Hp**, *pressure* = Water pressure applied during injection in pounds per square inch (psi) x 2.31 ft of water/psi.

**r** = *Radius* of the borehole in ft.

**ln** = *Natural logarithm*.

Equation 1 is most applicable and reliable where the length of the test zone is at least five times the borehole radius, and the full length of the test zone is below the water table. Both of these conditions were met in each of the tests conducted during this investigation. The resultant calculated value is considered an apparent permeability in fractured material (DOI, 1990). Most of the zones tested were highly fractured based on rock cores and downhole geophysics results, and a range of permeability values were calculated based on the field observations and measurements as discussed in the following subsection.

### 3.6.4 Determining Values for Parameters in Equation 1

During each injection test, measurements were made to determine the values to be used in Equation 1 to calculate the permeability for each 10-minute test. The field sheets for each packer permeability injection test are located in Appendix C. The length of the test was predetermined

to be 10 or 15 ft in length, but the actual packer assembly was measured to verify the exact test length. The borehole radius for each test interval was interpreted from the caliper log for the borehole.

The head associated with the applied Hp during each test was calculated using the applied pressure in units of psi, which was measured using a pressure gauge at the wellhead. The water pressure was recorded every 30 seconds during each 10-minute injection test. The change in water pressure during a given 10-minute test did not typically change more than a few psi. The average water pressure for a 10-minute test was used to calculate Hp. The head associated with Hg was determined by measuring the distance between the water pressure gauge and the "static" groundwater level. However, the water-level elevation at the start of each test was typically not the static water level of the well, due to the initial purging of the well for the discrete-interval groundwater sampling and/or the injection test(s) conducted prior to the test. Therefore, the water-level elevation was measured at the start of the test and during the test. The average water-level elevation during the test was then used to determine Hg for the test.

The Q into each test interval was measured using an in-line flow meter with the water injection system. The volume of water injected was recorded every 30 seconds during each 10-minute test using the flow meter, and then an average injection flow rate ($Q_i$) was calculated for each test. Flow rate adjustment factors were also estimated to account for situations were leakage/communication and/or well recovery were observed during the test. The leakage/communication flow rate adjustment factor ($Q_L$) was determined by monitoring the change in water-level elevation in the borehole during each 10-minute test, then converting those measurements to a volumetric flow rate for the 10-minute test. If leakage was observed, this $Q_L$ factor was subtracted from the average injection flow rate, and inserted into Equation 1. If the water-level elevation prior to the injection test was below static conditions, a further well recovery flow rate adjustment factor ($Q_r$) was estimated, based on observations during the discrete-interval sampling, and previous observations noted during well development and sampling activities. This $Q_r$ factor was subtracted from the $Q_L$ factor, and this overall flow rate adjustment factor was then subtracted from the average injection flow rate to obtain an overall Q,

for a best estimate of the permeability of the interval. For example:

- If no leakage or well recovery was observed during the test, then $Q = Q_i$.
- If leakage was observed during the test, then $Q = Q_i - Q_L$.
- If leakage and well recovery were observed during the test, then $Q = Q_i - (Q_L - Q_r)$.

Table 3-1 summarizes the calculated and estimated values used in Equation 1 for calculating permeability for each test in each monitoring well.

### 3.6.5 Results

The following subsections present brief descriptions of the packer permeability tests conducted at each well, the factors affecting the permeability calculations, and the results of the calculations.

#### *3.6.5.1 Monitoring Well MW-07 (Transmitter Site Area)*

The four packer test intervals for monitoring well MW-07 are summarized in Table 3-1. The first packer test was conducted in the deepest zone following the discrete-interval sampling, and then packer testing continued in the remaining intervals, moving upward in the well. The water-level elevation measured in monitoring well MW-07 at the start of each of the first three injection tests was below the static condition of the well, suggesting that recharge of the well was occurring during the performance of these three tests. The water-level increase from potential leakage/communication in the well during the injection tests and the estimated well recovery were factored into the calculations for a range of permeability for these test zones, as shown in Table 3-1. The best permeability estimates for these three zones are represented by the calculated values shaded in Table 3-1, which take into account the leakage of injected water out of the test zone and into the well and the natural recovery of the well.

An adequate packer seal was achieved for the fourth test zone in monitoring well MW-07 (15 to 25 ft bgs). The water-level rise during the test was minimal, and the water level at the start of the test was close to the static condition for the well. Therefore, the best permeability estimate for this shallow zone was a straightforward calculation using Equation 1.

The permeability calculations for the packer tests conducted in monitoring well MW-07 are summarized in Table 3-1. The calculated permeability values for the four packer test intervals in bedrock monitoring well MW-07 range from <0.001 feet per day (ft/day) to 0.134 ft/day. However, taking into consideration the observations and field measurements made during each packer test at monitoring well MW-07 as discussed previously, a better estimate of permeability for the zones tested at MW-07 ranges from 0.001 ft/day to 0.103 ft/day with an average permeability of 0.07 ft/day.

#### *3.6.5.2 Monitoring Well MW-10 (Top of Howard Mountain)*

The three packer test intervals for monitoring well MW-10 are summarized in Table 3-1. The first packer test was conducted in the deepest zone following the discrete-interval sampling, and then packer testing continued in the remaining intervals, moving upward in the well. The water-level elevation measured in monitoring well MW-10 at the start of the deepest injection test (164 to 174 ft bgs) was approximately 5 ft below the static condition of the well. During the injection test, the water level increased in the well to approximately 30 ft above static conditions. Well recovery did not contribute to the water-level rise in this well because the water level actually increased to above static conditions. The best permeability estimate for this zone is represented by the calculated value shaded in Table 3-1, which takes into account the leakage of injected water out of the test zone and into the well.

An adequate packer seal was achieved for the final two test zones in monitoring well MW-10 (130 to 140 ft bgs and 150 to 160 ft bgs). The water-level rise during the test was minimal and the water level at the start of the test was above the static condition, so an estimate of well recovery was not applicable. Therefore, the best permeability estimates for these zones were straight-forward calculations using Equation 1.

The permeability calculations for the packer tests conducted in monitoring well MW-10 are summarized in Table 3-1. The calculated permeability values for the three packer test intervals in bedrock monitoring well MW-10 range from 0.057 ft/day to 0.528 ft/day. Taking into consideration the observations and field measurements made during each packer test at monitoring well MW-10 as discussed previously, does not change this range. The average permeability for the three zones tested in this well is 0.286 ft/day.

### *3.6.5.3 Monitoring Well MW-11 (Base of Howard Mountain)*

The four packer test intervals for monitoring well MW-11 are summarized in Table 3-1. The first packer test was conducted in the deepest zone following the discrete-interval sampling, and then packer testing continued in the remaining intervals, moving upward in the well. The water-level elevation measured in monitoring well MW-11 at the start of each of the first two injection tests was below the static condition of the well. The increase in water level in the well from potential leakage/communication in the well during these two injection tests and the estimated well recovery were factored into the calculations for a range of permeability for these test zones, as shown in Table 3-1. By the third injection test, the water-level elevation in the well had risen above the static condition of the well. Therefore, the increase in water-level elevation measured during this third injection test was solely attributable to leakage around the packer assembly, whether by hydraulic communication of fractures, or poor sealing of the packers due to the rough sides of the borehole. The best permeability estimates for these three zones are represented by the calculated values shaded in Table 3-1, which take into account the leakage of injected water out of the test zone and into the well, and the natural recovery of the well (where applicable).

An adequate packer seal was achieved for the final test zone in monitoring well MW-11 (97 to 107 ft bgs). The water-level rise during the test was minimal, and the water level at the start of the test was close to the static condition for the well. Therefore, the best permeability estimate for this shallow zone is a straight calculation using Equation 1.

The permeability calculations for the packer tests conducted in monitoring well MW-11 are summarized in Table 3-1. The calculated permeability values for the four packer test intervals in bedrock monitoring well MW-11 range from <0.001 ft/day to 0.516 ft/day. However, taking into consideration the observations and field measurements made during each packer test at monitoring well MW-11 as discussed previously, a better estimate of permeability for the zones tested at MW-11 ranges from 0.008 ft/day to 0.418 ft/day with an average permeability of 0.187 ft/day.

### 3.6.5.4 Monitoring Well MW-12 (Base of Howard Mountain)

The four packer test intervals for monitoring well MW-12 are summarized in Table 3-1. The first packer test was conducted in the deepest zone following the discrete-interval sampling, and then packer testing continued in the remaining intervals, moving upward in the well. The water-level elevation measured in monitoring well MW-12 at the start of all four injection tests was below the static condition of the well. The water-level increase in the well from potential leakage/communication in the well during the injection tests and the estimated well recovery were factored into the calculations for a range of permeability for these test zones, as shown in Table 3-1. The best permeability estimates for these four zones are represented by the calculated values shaded in Table 3-1, which take into account the leakage of injected water out of the test zone and into the well, and the natural recovery of the well.

The permeability calculations for the packer tests conducted in monitoring well MW-12 are summarized in Table 3-1. The calculated permeability values for the four packer test intervals in bedrock monitoring well MW-12 range from <0.001 ft/day to 0.272 ft/day. However, taking into consideration the observations and field measurements made during each packer test at monitoring well MW-12 as discussed previously, a better estimate of permeability for the zones tested at MW-12 ranges from 0.005 ft/day to 0.09 ft/day, with an average permeability of 0.065 ft/day.

### 3.6.5.5 Monitoring Well MW-14 (Base of Miller Mountain)

The four packer test intervals for monitoring well MW-14 are summarized in Table 3-1. The first packer test was conducted in the deepest zone following the discrete-interval sampling, and then packer testing continued in the remaining intervals, moving upward in the well. An adequate packer seal was achieved during all four injection tests in monitoring well MW-14. The water-level rise during the test was minimal, and the water level at the start of the each test was close to the static condition for the well. Therefore, the best permeability estimates for these zones were straightforward calculations using Equation 1.

The permeability calculations for the packer tests conducted in monitoring well MW-14 are summarized in Table 3-1. The calculated permeability values for the four packer test intervals in

bedrock monitoring well MW-14 range from 0.058 ft/day to 0.102 ft/day with an average permeability of 0.084 ft/day.

The overall range of permeability at the site, the relationship of permeability to rock type, and the implications on groundwater flow conditions at the site are discussed in Subsection 3.7 (Hydrogeology).

## 3.7 HYDROGEOLOGY

The discussion presented in this subsection is based on a combination of site-specific data and general hydrogeological principles that have been applied to site conditions. All fresh water available for use in the Bucks Harbor area comes from precipitation within the drainage basins or streams flowing through the area. Groundwater levels typically reach their lowest point during August as a result of the low rainfall and high evapotranspiration rates (USGS, 2004). In October rainfall increases, evapotranspiration rates decline as trees and plants go dormant for the winter, stream flow increases, and groundwater levels rise. In December, despite a high rate of precipitation, groundwater levels generally decline because much of the December precipitation may be stored as snow or the ground may be frozen, thus inhibiting recharge. Groundwater levels increase in late February and early March, when water from snowmelt combines with increased precipitation and percolates into the ground, recharging the body of groundwater. Groundwater levels typically reach their seasonal high in mid to late April, but the timing can vary based on the severity of the winter season and on the amount of snowfall. During the late spring, as a result of the onset of the growing season and increased evapotranspiration, groundwater levels and stream flow begin to decline. This decline in groundwater levels and stream flow persists throughout the summer months until the cycle begins again (Prescott, 1974).

### 3.7.1 Overburden

As discussed in Subsection 3.4.1, overburden deposits at the site are generally thin (less than 10 ft), and in fact are absent in many areas of the site. A thin veneer of dense, low permeability glacial till blankets the upland areas, while thicker deposits of glacio-fluvial and glacio-marine materials are found in the lowland areas. Even when present, the overburden is unsaturated in many areas of the site, including the tops of Miller and Howard Mountains and

the Transmitter site. However, perched groundwater may be present in these areas seasonally (early spring and late fall) as increased recharge during these periods collects on the bedrock surface. The thicker overburden deposits, such as those in the lowland areas between Howard and Miller Mountains, will contain groundwater throughout the year and can in fact yield enough water for residential use. Several shallow dug wells tap the overburden groundwater around the base of Miller and Howard Mountains.

Hydraulic conductivities in the overburden vary widely based on texture. The hydraulic conductivity of the till typically ranges from less than 0.01 ft/day to about 20 ft/day in the sandier, less dense, ablation till (ABB, 1997b). The hydraulic conductivity of sand and gravel glacio-fluvial deposits can exceed several hundred ft/day (Prescott, 1974). Glacio-marine deposits of the Presumpscot Formation are fine-grained silts and sand, with a hydraulic conductivity that is generally less than 20 ft/day. Previous studies conducted at the site have reported hydraulic conductivity values in the various overburden deposits ranging from 1.5 ft/day in till deposits on Howard Mountain to 86 ft/day in sandy glacio-fluvial deposits in the vicinity of the Housing Area, based on slug tests conducted on groundwater monitoring wells (ABB, 1997a).

### 3.7.2 Bedrock

Groundwater in bedrock exists predominantly in fractures and faults in the rock (secondary porosity). The metamorphic and igneous rocks of the area hold little or no water within their matrix (primary porosity). Thus, groundwater occurrence and movement are primarily controlled by gradient and structural patterns in the bedrock. As indicated previously, the predominant trend of fractures and faults in the region is northwest-southeast, perpendicular to strike (Gates, 1981; ABB, 1997a). A second, lesser set of fractures and faults parallels the regional strike, trending northeast-southwest. Groundwater moving through the bedrock is limited to flow within these faults and fracture sets, and thus, often follows a tortuous, zig-zagging route in response to regional hydraulic gradients. An important factor is the spacing between hydraulically active fractures. The closer the spacing between hydraulically active fractures, the more the system will behave like a porous media system, especially at larger scales.

Faults tend to be larger than fractures and more regional. They often extend to great depths and can yield significant amounts of water due to their larger extent, or can act as barriers to groundwater flow. Individual fractures are generally smaller than faults and do not extend very far laterally. In addition, the water-bearing capacity typically decreases with depth as the weight of the overlying rock tends to close the openings (Davis and DeWiest, 1966). Networks or intersections of fractures, however, can be as important as faults in determining groundwater flow, particularly on the smaller scale associated with a site such as the Bucks Harbor AFRTS (Davis and DeWiest, 1966). The location of site-specific fractures and faults and their impacts on groundwater flow conditions is discussed in Subsection 3.7.3.

As discussed in Subsection 3.4.2, several different rock types are present in the Bucks Harbor region. The four predominant rock types and fracture characteristics, and their relationship with groundwater flow, are described in subsections that follow. The hydraulic conductivity estimates presented for each rock type were estimated based on the results of the packer permeability testing discussed in Subsection 2.10.

#### *3.7.2.1 Red to Gray Flow-Banded Rhyolite and Vitrophyre*

This unit was the most common rock type encountered and underlies most of the study area. It is typically moderately to heavily fractured, although the majority of the fractures are healed with limonite and hematite mineralization. Yields of monitoring wells completed in this unit vary from 0.5 to 5 gpm. Although softer and more fractured than the other rock types at the site, the fine-grained nature of the rock as well as its chemical composition tends to heal any fractures that are present, limiting groundwater movement to a few larger, discrete fractures that remain open. The RQD for this unit ranged from 7% at monitoring well MW-4 to 61% at monitoring well MW-8, with an overall average of 37%. The hydraulic conductivity estimates for the unit range from less than 0.01 to 0.5 ft/day, with an average of 0.17 ft/day.

#### *3.7.2.2 Massive Green Porphyritic Gabbro*

This unit was found at two locations (monitoring wells MW-12 and MW-14) in the study area. This unit contains few fractures and had an average RQD of 65%. The few fractures that were encountered, however, were generally open and water producing. Although no wells were

screened completely within the gabbro, monitoring well MW-14 was largely within this unit and had a yield of 2 gpm. Hydraulic conductivity estimates for the gabbro range from 0.06 to 0.10 ft/day, with an average value of 0.08 ft/day.

#### *3.7.2.3 Massive Red to Gray Biotite Granodiorite*

This unit was found at two locations in the vicinity of Miller Mountain (monitoring wells MW-13 and MW-14). This unit contains few fractures and had an average RQD of 48%. The few fractures that were encountered, however, were generally open and water-filled. No wells were screened completely within the granodiorite; however, the upper 40% of MW-14 was largely within this unit and had a yield of 2 gpm. The estimated hydraulic conductivity for the granodiorite is 0.09 ft/day, based on one packer-permeability result.

#### *3.7.2.4 Aphanitic Diabase Dike*

This unit was encountered only from 75 to 120 ft (bottom of boring) at monitoring well MW-9. No core was obtained from this borehole; therefore, all characteristics are based on observations made during drilling and downhole geophysics. The unit has been identified as diabase, as opposed to a more coarse-grained gabbro, based on field observations of cuttings during drilling. The borehole appeared very smooth and no water-filled fractures were identified by the downhole geophysics or during drilling. No packer permeability tests were performed on this boring. This unit is interpreted to be massive, with no significant open fractures and very low permeability.

#### *3.7.2.5 Assessment of Bedrock Lithology*

The flow-banded rhyolite and vitrophyre is the most widespread of the four predominant rock types and has the highest hydraulic conductivity. Although the gabbro and granodiorite units do not contain as many fractures as the rhyolite, the number and frequency of open, water-filled fractures is similar for all three units. Although the average hydraulic conductivity of the rhyolite is twice that of the gabbro and granodiorite, this variation is not considered significant given the limited number of permeability tests conducted. It is more likely that the similar hydrological properties of these three rock types allow them to behave as a single hydrostratigraphic unit. The

extremely massive nature of the diabase dike unit suggests it could act as an aquitard, limiting groundwater flow. However, the limited extent of the diabase dike would tend to limit any impact it may have on the overall groundwater flow system within the study area. Large open, low-angle fractures were typically found at or near the contacts between the various units suggesting that the contacts may represent an important groundwater flow pathway, connecting the various linear features. Low-angle to horizontal water-filled fractures were noted in several boreholes just below the well casing. A number of these fractures were interpreted to yield measurable volumes of water, based on the results of the HPFM logging. These fractures may represent unloading features resulting from the removal of the glacial ice sheets and could also tend to transmit water between adjacent linear features.

Finally, the Miller Mountain area is hydrogeologically separate from that of the Howard Mountain area. The geological distinctiveness of the two areas is an important feature that should be noted. The predominant bedrock lithology, nature of fracturing, permeability, estimated hydraulic conductivity, and biological degradation rates are distinctly different between the two areas; therefore, the nature and extent of contamination are different as well and should be taken into consideration when planning future remedial alternatives.

### 3.7.3 Groundwater Flow

Groundwater movement is governed by hydraulic gradients; groundwater moves from areas of higher hydraulic head to areas of lower hydraulic head. Groundwater flow patterns are determined by the subsurface materials through which the groundwater flows (Freeze and Cherry, 1979). As stated previously, groundwater flow in bedrock is restricted to fractures, and thus, the groundwater will move in a tortuous zig-zag pattern following fractures as it moves downgradient. Groundwater in overburden deposits has no such restriction, but will tend to seek the path of least resistance, flowing predominantly in the more permeable deposits (Freeze and Cherry, 1979).

In addition to moving horizontally, groundwater will also move vertically. The overall groundwater flow direction is a combination of the horizontal and vertical flow vectors. In upland areas, such as near the tops of hills, groundwater will tend to move downward as it moves laterally, recharging the deeper zones. In lowland areas such as adjacent to streams or coastal

areas, groundwater will tend to move upward as it moves laterally, discharging to surface water bodies, where it can then easily flow to regional discharge points (Fetter, 1994).

A synoptic round of groundwater elevation measurements was conducted in June 2003, and the resulting data form the basis for the interpretation of groundwater flow included in this subsection. The groundwater level data are presented in Table 3-2. Table 3-3 summarizes the calculation of vertical gradients.

#### *3.7.3.1 Overburden*

Observations of subsurface conditions during drilling suggest that overburden groundwater flow in upland areas such as the tops of Howard and Miller Mountains or the Transmitter site is discontinuous and/or seasonal due to the limited thickness of the till in these areas (generally less than 10 ft). In these areas, groundwater, when present, will tend to perch on the bedrock surface and move laterally along it in a downslope direction. Downward vertical gradients will tend to move groundwater from the till into the underlying bedrock via hydraulically active fractures that intersect the soil-bedrock interface. Thus, overburden groundwater flow directions in the upland areas will closely mimic surface topography. In areas where the bedrock surface intersects the ground surface, seeps will tend to form. Several such seeps were observed in the wooded areas south and east of the Transmitter site.

In the lowland areas adjacent to Miller and Howard Mountains, where the overburden deposits are thicker and more permeable, the overburden groundwater system is likely more developed. Groundwater in these areas is typically found within 5 ft of the ground surface and exists under unconfined conditions. There are insufficient overburden monitoring wells in the study area to allow an overburden groundwater contour map to be constructed or a detailed analysis of overburden flow patterns to be made. Based on basic hydrogeological principles, lateral groundwater flow is interpreted to be from the higher elevations on the flanks of the various hills (recharge areas) toward the various wetlands and small streams that serve as local groundwater discharge areas. Vertical gradients within the overburden are expected to be downward closer to the upland areas, switching to upward in the vicinity of the wetland areas and streams. Overburden in the lowland areas will also receive groundwater from the bedrock in response to upward vertical gradients between the overburden and bedrock in these areas. Groundwater flow

will tend to be faster within the coarser sand and gravel glacio-fluvial deposits and slower within the glacio-marine deposits (Presumpscot Formation). The presence of the low-permeability glacio-marine deposits may tend to restrict vertical movement of groundwater between the bedrock and shallower glacio-fluvial deposits.

#### *3.7.3.2 Bedrock*

Within the bedrock, groundwater will move along the various fractures in a generally downgradient direction. As discussed in the previous subsection, there appears to be little difference in the hydraulic properties of the three predominant bedrock units identified within the study area (gabbro, granodiorite, and the rhyolite). The diabase dike unit is presumed to have minor impacts on groundwater flow patterns at the site due to its limited extent within the study area.

Thus, the predominant factor in determining groundwater flow directions in bedrock at the site is the presence and orientation of hydraulically active fractures. Analysis of the bedrock cores, downhole geophysics logs, and permeability test results has indicated that all of the monitoring wells drilled at the site intersected several (generally, three to four) hydraulically active fractures. In general, more hydraulically active fractures were observed closer to the ground surface and that the frequency of hydraulically active fractures decreased with depth. Thus, the shallower bedrock is believed to be more hydraulically active than the deeper bedrock. Summaries of the hydraulically active fractures observed in the monitoring wells and residential drinking water wells during the borehole geophysics program versus elevation above mean sea level are presented in Figures 3-5 and 3-6, respectively.

With the exception of the test well, none of the hydraulically active fractures encountered by the monitoring well borings were considered large or extensive features, even though the wells were drilled along suspected linear features. Specific fractures could not be reliably correlated between boreholes, based on orientation. In general, the majority of the observed hydraulically active fractures were found to strike northeast-southwest or northwest-southeast, paralleling the predominant regional structural trends in the bedrock as identified during previous studies in the area (Gates, 1981; ABB, 1995b).

Based on these observations, the conceptual model of the bedrock zone is that the observed linear features represent discrete fractured zones composed of numerous smaller fractures, rather than a single large traceable fracture. Groundwater moves along the planar features within the various smaller fractures, and moves between the linear features along low-angle or near horizontal fractures associated with lithologic contacts or shallow glacial unloading structures and where the planar features intersect.

In an effort to evaluate the general pattern of groundwater movement in the vicinity of the site, groundwater elevations for monitoring wells calculated from the synoptic water-level measurements were plotted on the Site Plan. The limited number of monitoring points in the vicinity of the GATR site restricted interpretation of groundwater flow patterns to the vicinity of the former AFRTS. With the exception of well MW-10, only groundwater elevations from wells screened in the shallow bedrock were used. Groundwater elevations in the deep bedrock were highly variable due to the strong vertical component of flow at depth, and so were not plotted and contoured. The groundwater elevations were contoured and the resulting Shallow Bedrock Groundwater Contour Map is presented in Figure 3-7. Figure 3-7 indicates that a groundwater divide exists near the Transmitter site, with groundwater west of the site flowing to the west, and groundwater east of the site flowing toward Howard Mountain. In the vicinity of Howard Mountain, the flow becomes more radial, discharging to Howard Cove and the small, unnamed stream just to the north. This general flow pattern is consistent with the migration of VOCs in groundwater at the site.

Groundwater elevation data from paired monitoring wells were used to assess general patterns of vertical groundwater movement within the bedrock. Table 3-3 summarizes the vertical gradient calculations. Three well pairs were used in this analysis: MW-5/TSMW-002 at the Transmitter site, MW-13/GAMW-001 at the GATR site, and MW-9/STMW-001 at the base of Howard Mountain. Strong downward gradients were measured at monitoring wells MW-5/TSMW-002 and MW-13/GAMW-001, which are both located on the tops of mountains (Transmitter site and Miller Mountain, respectively). A strong upward gradient was measured at monitoring well MW-9/STMW-001, which is located in a lowland area south of Howard Mountain. These observations support the interpreted general groundwater flow pattern of downward movement in upland (recharge) areas and upward movement in lowland

(discharge) areas. Vertical groundwater movement is depicted in the hydrogeologic cross-sections in Figures 3-2 through 3-4.

## 3.8 DEMOGRAPHY AND LAND USE

Machiasport is a small coastal town (approximately 21 square miles) in Downeast Maine that includes the communities of Larrabee, Bucks Harbor, and Starboard Cove. The land use within Machiasport is predominantly rural residential with a few commercial operations. The community and its nearby towns rely on the fishing/lobster industry, tourism, and blueberry harvest for economic growth. All homes and commercial facilities are served by private wells. Most of these wells are drilled bedrock wells completed in the fractured bedrock aquifer that underlies the entire area (Prescott, 1974).

Bucks Harbor, in the Town of Machiasport, is a small coastal community with several dozen homes, two commercial facilities owned by Atlantic Salmon, Inc., and the former Bucks Harbor AFRTS and GATR sites. As previously discussed in Section 1, the former radar operations facility was transferred to the FAA for use in tracking commercial air traffic, and the former Cantonment Area was transferred to the State of Maine DCF for use as a minimum-security prison. The former Housing Area and the Transmitter site were also transferred to the State of Maine and are used by the DCF. Inmates and DCF employees currently use the Transmitter site as a carpentry shop. The Receiver site was sold to a private party and is currently used as a residence. In 1992, DOI transferred the GATR site to its current owner, the Town of Machiasport. The property is currently inactive (ABB, 1997d).

According to the 2000 U.S. Census, the population of Machiasport is 1,160 persons (DOC, 2001). Machiasport is located in Washington County, which has a land area of 2,569 square miles, and a listed 2000 U.S. Census population of just under 34,000. Approximately 93.5% of the population in Washington County is Caucasian, and 4.4% are American Indian and Alaskan Natives. Almost 23% of the population is under 18 years of age, and almost 83% is under the age of 65. Approximately 560 homes are established in Machiasport, with 315 of those being owner-occupied. The median value of an owner-occupied home is $68,700 (DOC, 2001; EPODUNK, 2003).

## 3.9 ECOLOGY

A forested upland habitat exists along the unnamed streambed that extends from the northwestern corner of the base of Howard Mountain toward the northeastern extent of the DCF Housing Area and into Howard Cove (Figure 1-1). The stream and surrounding habitat in the area encompasses approximately 6.5 acres and consists of several thriving species of trees, grasses, ferns, and various mosses (WESTON, 2002a).

The majority of the area was thickly wooded with a closed canopy and dominated by balsam fir (*Abies balsamea*) and eastern hemlock (*Tsuga canadensis*), with lesser numbers of red maple (*Acer rubrum*), staghorn sumac (*Rhus typhina*), northern white cedar (*Thuja occidentalis*), and paper birch (*Betula papyrifera*). Massachusetts fern (*Thelypteris simulata*), lady fern (*Athyrium asplenioides*), speckled alder (*Alnus rugosa*), broadleaf spirea (*Spiraea latifolia*), and various grasses were also present in the herbaceous layer. No wildlife were observed in this habitat; however, evidence of white-tailed deer (*Odocoileus virginianus*) was found in the way of tracks, trails, and scat. Woodcuttings and a small beaver dam were also found, which is evidence that beavers (*Castor canadensis*) use this habitat area. The black-capped chickadee (*Parus atricapillus*), great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*), and Philadelphia vireo (*Vireo philadelphicus*) were also observed during site visits to the area.

No macroinvertebrates were observed in the stream; however, evidence of some macroinvertebrates was found with the presence of caddis fly larval casings found on the bottom of many rocks on the streambed. Additional information regarding specific areas where the various wildlife and fauna were observed is included in the ecological risk assessment, which is presented in Section 7 of this report.

## 3.10 SITE CONCEPTUAL MODEL

The conceptual hydrogeological model for the site represents how the hydrological cycle interacts with the local geology, describing the presumed migration of water through the system. It begins with precipitation falling on the landscape and ends with that same water eventually discharging to the ocean, where it will evaporate and fall again as precipitation, thereby perpetuating the cycle (Anderson and Woessner, 1992).

As indicated in previous subsections, the average rainfall for the region is approximately 49 inches. This water falls more or less evenly over the landscape. Some of the precipitation will run off directly into surface water bodies (approximately 16 inches), particularly if the land surface is steeply sloping (as on the east side of Howard Mountain), or if the ground surface is covered by asphalt or concrete (Prescott, 1974). Water that does not run off will soak into the ground and replenish soil moisture levels. Soil moisture is available for use by plants and trees, which then release water to the atmosphere by transpiration. Soil moisture near the ground surface is lost directly to the atmosphere by evaporation. Evaporation and transpiration (evapotranspiration) account for about 20 inches of water annually. The remaining 13 inches of water continues to move vertically downward through the unsaturated zone, making its way past the root zone and eventually reaching the groundwater table (saturated zone) (Prescott, 1974).

Groundwater flows from areas of higher hydraulic head to areas of lower hydraulic head, and is controlled by the subsurface materials through which the groundwater flows. Upland areas in the vicinity of Bucks Harbor are underlain by a thin, discontinuous layer (less than 10 ft) of low permeability till. Precipitation that moves past the root zone will continue to move downward until it reaches either a saturated zone within the till or the bedrock surface. In areas where the till is unsaturated, the infiltrating water will move along the surface of the bedrock, creating a seasonal perched groundwater zone. Water in the perched zone will move downward into the bedrock in areas where fractures reach the bedrock surface. In areas were there is a sufficient thickness of till to maintain a saturated zone, groundwater will tend to move very slowly, paralleling the surface drainage. In addition to moving horizontally, groundwater will also move vertically. In upland areas, groundwater will tend to move vertically downward, recharging the underlying bedrock. In lowland areas, such as adjacent to streams or coastal areas, groundwater will tend to move upward, both from the bedrock into the overburden and also within the overburden itself, eventually discharging to various surface water bodies.

Groundwater movement in bedrock is restricted to open fractures, and thus, the groundwater will move in a tortuous zig-zag pattern following these fractures as it moves downgradient in response to local hydraulic head distributions. The local hydraulic head distributions in fractured bedrock systems can be significantly altered by the withdrawal of groundwater as from the

operation of water supply wells. This is especially true in areas such as Bucks Harbor where there is no municipal water supply and residents each have their own well. In addition to altering the local hydraulic head distributions (and therefore, the groundwater flow patterns) within the bedrock, pumping of bedrock wells can increase the groundwater velocity through nearby fractures.

In the Bucks Harbor area, precipitation that reaches the water table in upland areas such as the Transmitter site, the GATR site, and Howard Mountain will move vertically downward, through the thin till deposits and into the deeper bedrock fractures. Once in the bedrock it will move along the fractures toward the coastline. Two fracture orientations predominate within the study area, i.e., northwest-southeast and northeast-southwest (Gates, 1981; ABB, 1997a; USGS, 2003). Thus, groundwater in bedrock will tend to move along fractures oriented in these directions, working its way toward the coastline. In the case of Howard Mountain, groundwater in the bedrock moves to the southeast, eventually moving upward and discharging into Howard Cove. Bedrock groundwater at the GATR site also moves in a southeastern direction, discharging into Bucks Harbor. Bedrock groundwater originating beneath the Transmitter site splits, with some flow to the east toward Howard Mountain and eventually Howard Cove, and some flows to the west where it discharges to Little Kennebec Bay.

As groundwater in the bedrock moves closer to the coastline or other lowland areas (such as those adjacent to streams or rivers), it will begin to move upward until it re-enters the overburden. Once in the overburden, the groundwater will move toward nearby surface water bodies where it will discharge via seeps and springs, eventually making its way to the Atlantic Ocean. As the fresh water within the bedrock and overburden moves towards the coastline, it will encounter the saline waters of the ocean. Under ambient conditions, the fresh water will tend to diffuse into the saline waters at a rate that is equal to the recharge rate of the groundwater basin (Fetter, 1994). Pumping of fresh groundwater can induce the freshwater/saline water boundary to move inland and upward to the point that saline water is drawn into the pumping well (salt water intrusion). Fractured bedrock aquifers are particularly susceptible to salt water intrusion because of their limited storage capacity.

The presence of saline water was inferred from borehole geophysical logs and specific conductivity measurements of well water samples in monitoring well MW-11, residential wells

DW-1 and DW-4, and public water supply well WY-3. Of these, only supply well WY-3 has been reported to have historical problems with saltwater intrusion. In three of the four wells (DW-1, DW-4, and WY-3) the saline water was interpreted to be entering the well at the deepest observed hydraulically active fracture, suggesting that these wells were drilled to within a few feet of the bottom of the freshwater lens. Monitoring well MW-11, however, was observed to have saline water entering along a pair of hydraulically active fractures that were much higher in the borehole, suggesting that these fractures are in direct hydraulic communication with the saline waters of Howard Cove. It should be noted that three of the four wells (excepting MW-11) are located within the interpreted boundary of the FAA plume, and are along the major northwest-southeast trending fault that forms the western face of Howard Mountain. Thus, evaluations of any remedial alternatives that require extraction of groundwater will have to take into account the potential for saltwater intrusion. While fault zones such as the one at the base of Howard Mountain may be 10s to 100s of feet wide, these wells may be located within a single "zone" rather than a single narrow feature.

Finally, the GATR site area is hydrogeologically separate from that of the Howard Mountain area. The geological distinctiveness of the two bedrock aquifers is an important feature of the area that should be noted. The predominant bedrock lithology, nature of fracturing, permeability, estimated hydraulic conductivity, and biological degradation rates are distinctly different between the two areas; therefore, the nature and extent of contamination are different as well and should be taken into consideration when planning future remedial alternatives.

# SECTION 3

# TABLES

**Table 3-1**

**August 2003 Packer Permeability Results**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, ME**

| Monitor Well Location ID | Test Interval (ft bgs) | Rock Type[1] | Flow Rate Factors (Q) | | | Total Head (H) (feet) | Test Zone Length (L) (feet) | Borehole Radius ( r ) (feet) | Permeability (k) | | | Calculated Permeability (k) or Range (feet/day) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injected Volume ($Q_i$) ($ft^3$/day) | Estimated Well Recovery Factor ($Q_r$) ($ft^3$/day) | Leakage Factor ($Q_L$) ($ft^3$/day) | | | | No Leakage or Well Recovery (feet/day) | Adjusted for Leakage Only (feet/day) | Adjusted for Leakage and Well Recovery (feet/day) | |
| MW-07 | 15-25 | Rhyolite | 52.2 | Negligible | Negligible | 34.14 | 10.2 | 0.18 | 0.096 | --- | --- | 0.096 |
| | 44-54 | Rhyolite | 105.9 | 144.4 | 169.1 | 49.85 | 10.2 | 0.18 | 0.134 | < 0.001 | 0.103 | < 0.001 - 0.134 |
| | 75-85 | Rhyolite | 26.4 | 96.2 | 122.2 | 49.81 | 10.2 | 0.18 | 0.033 | < 0.001 | 0.001 | < 0.001 - 0.033 |
| | 115-125 | Rhyolite | 83.4 | 48.1 | 77.7 | 42.17 | 10.2 | 0.18 | 0.125 | 0.009 | 0.080 | 0.009 - 0.125 |
| MW-10 | 130-140 | Rhyolite | 123.2 | None, above static | Negligible | 136.89 | 10.2 | 0.17 | 0.057 | --- | --- | 0.057 |
| | 150-160 | Rhyolite | 1145.5 | None, above static | Negligible | 138.64 | 10.2 | 0.17 | 0.528 | --- | --- | 0.528 |
| | 164-174 | Rhyolite | 995.3 | Negligible | 437.7 | 130.61 | 10.2 | 0.17 | 0.487 | 0.273 | --- | 0.273 - 0.487 |
| MW-11 | 97-107 | Rhyolite | 317.6 | Negligible | Negligible | 77.43 | 10.2 | 0.26 | 0.235 | --- | --- | 0.235 |
| | 147-157 | Rhyolite | 552.5 | None, above static | 393.1 | 60.71 | 10.2 | 0.27 | 0.516 | 0.149 | --- | 0.149 - 0.516 |
| | 157-167 | Rhyolite | 635.3 | 288.8 | 468.6 | 72.28 | 10.2 | 0.27 | 0.498 | 0.131 | 0.357 | 0.498 - 0.131 |
| | 183-193 | Rhyolite | 810.5 | 48.1 | 842.8 | 105.56 | 10.2 | 0.27 | 0.435 | < 0.001 | 0.008 | < 0.001 - 0.435 |
| MW-12 | 40-55 | Rhyolite | 96.3 | 48.1 | 84.3 | 37.83 | 10.7 | 0.26 | 0.141 | 0.018 | 0.088 | 0.018 - 0.141 |
| | 83-98 | Rhyolite | 229.1 | 96.2 | 249.1 | 46.59 | 10.7 | 0.26 | 0.272 | < 0.001 | 0.090 | < 0.001 - 0.272 |
| | 161-176 | Rhyolite/ Gabbro | 190.6 | 96.2 | 196.5 | 64.66 | 10.7 | 0.26 | 0.163 | < 0.001 | 0.077 | < 0.001 - 0.163 |
| | 207-222 | Rhyolite | 5.4 | 96.2 | 96.1 | 60.22 | 10.7 | 0.26 | 0.005 | < 0.001 | 0.005 | < 0.001 - 0.005 |
| MW-14 | 38-48 | Granodiorite | 62.6 | Negligible | Negligible | 42.58 | 10.2 | 0.17 | 0.094 | --- | --- | 0.094 |
| | 50-60 | Granodiorite/ Gabbro | 77.1 | Negligible | Negligible | 48.19 | 10.2 | 0.17 | 0.102 | --- | --- | 0.102 |
| | 63-73 | Gabbro | 96.3 | Negligible | Negligible | 74.86 | 10.2 | 0.17 | 0.082 | --- | --- | 0.082 |
| | 73-83 | Gabbro | 50.5 | Negligible | Negligible | 55.85 | 10.2 | 0.17 | 0.058 | --- | --- | 0.058 |

Notes:

1. Refer to well construction logs for a more detailed description of these rock types.

2. Shading indicates "best" estimate of permeabilty for the test based on field observations and measurements.
   ft/bgs = feet below ground surface
   $ft^3$/day = cubic feet per day

## Table 3-2

## Comprehensive Groundwater Elevations in Monitoring Wells
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Wells ID | MP | MP Elevation | Aug-96 | | Dec-00 | | Aug-01 | | Jun-03 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | DTW | GW-Elev | DTW | GW-Elev | DTW | GW-Elev | DTW | GW-Elev |
| BPMW-001 | TIC | 181.76 | 3.30 | 178.46 | NM | NM | 3.95 | 177.81 | 2.20 | 179.56 |
| FAMW-001 | TIC | 157.31 | 4.70 | 152.61 | NM | NM | 5.05 | 152.26 | 5.66 | 151.65 |
| FAMW-002 | TIC | 166.38 | 9.57 | 156.81 | NM | NM | 9.98 | 156.40 | 7.35 | 159.03 |
| GAMW-001 | TIC | 253.04 | 11.17 | 241.87 | NM | NM | 14.12 | 238.92 | 7.85 | 245.19 |
| GTMW-001 | TOC (PVC) | 180.30 | 7.15 | 173.15 | NM | NM | 6.71 | 173.59 | 5.70 | 174.60 |
| MW-1 | TIC | 222.13 | 1.90 | 220.23 | 4.18 | 217.95 | 7.40 | 214.73 | 3.88 | 218.25 |
| MW-10 | TOC | 246.94 | NM | NM | NM | NM | NM | NM | 124.10 | 122.84 |
| MW-101 | TIC | 43.56 | 4.84 | 38.72 | NM | NM | 5.75 | 37.81 | 4.80 | 38.76 |
| MW-102 | TIC | 53.26 | 18.11 | 35.15 | NM | NM | 18.28 | 34.98 | 17.67 | 35.59 |
| MW-103 | TIC | 41.81 | 12.81 | 29.00 | NM | NM | 13.94 | 27.87 | 12.00 | 29.81 |
| MW-105 | TIC | 40.86 | 15.67 | 25.19 | NM | NM | 16.05 | 24.81 | 12.61 | 28.25 |
| MW-11 | TOC | 59.02 | NM | NM | NM | NM | NM | NM | 55.90 | 3.12 |
| MW-12 | TOC | 45.45 | NM | NM | NM | NM | NM | NM | 1.85 | 43.60 |
| MW-13 | TOC | 254.74 | NM | NM | NM | NM | NM | NM | 28.80 | 225.94 |
| MW-14 | TOC | 79.47 | NM | NM | NM | NM | NM | NM | 21.50 | 57.97 |
| MW-140 | TIC | 39.40 | 11.38 | 28.02 | NM | NM | 12.22 | 27.18 | 10.19 | 29.21 |
| MW-2 | TIC | 211.78 | 2.65 | 209.13 | 4.96 | 206.82 | 6.80 | 204.98 | 4.95 | 206.83 |
| MW-3 | TIC | 221.96 | 8.01 | 213.95 | 7.77 | 214.19 | 12.20 | 209.76 | 7.55 | 214.41 |
| MW-4 | TOC | 218.43 | NM | NM | NM | NM | NM | NM | 6.45 | 211.98 |
| MW-5 | TOC | 224.99 | NM | NM | NM | NM | NM | NM | 9.60 | 215.39 |
| MW-6 | TOC | 224.59 | NM | NM | NM | NM | NM | NM | 7.95 | 216.64 |
| MW-7 | TOC | 208.87 | NM | NM | NM | NM | NM | NM | 2.97 | 205.90 |
| MW-8 | TOC | 165.99 | NM | NM | NM | NM | NM | NM | 7.60 | 158.39 |
| MW-9 | TOC | 198.47 | NM | NM | NM | NM | NM | NM | 9.80 | 188.67 |
| STMW-001 | TIC | 199.33 | 34.10 | 165.23 | NM | NM | 34.76 | 164.57 | 31.00 | 168.33 |
| STMW-002 | TOC | 148.81 | 14.10 | 134.71 | NM | NM | 14.47 | 134.34 | 10.90 | 137.91 |
| STMW-003 | TIC | 123.12 | 12.73 | 110.39 | NM | NM | 12.13 | 110.99 | 11.42 | 111.70 |
| STMW-004 | TIC | 37.88 | 35.69 | 2.19 | NM | NM | 36.11 | 1.77 | 35.35 | 2.53 |
| STMW-005 | TIC | 196.91 | 14.21 | 182.70 | NM | NM | 16.49 | 180.42 | 9.38 | 187.53 |
| STMW-006 | TIC | 137.79 | 5.78 | 132.01 | NM | NM | 6.82 | 130.97 | 4.58 | 133.21 |
| TSMW-001 | TIC | 236.49 | 10.82 | 225.67 | 11.93 | 224.56 | 14.60 | 221.89 | 11.95 | 224.54 |
| TSMW-002 | TIC | 225.12 | 3.23 | 221.89 | 5.25 | 219.87 | 7.55 | 217.57 | 5.70 | 219.42 |
| TSMW-003 | TIC | 231.42 | 11.08 | 220.34 | 13.49 | 217.93 | 15.75 | 215.67 | 13.40 | 218.02 |
| TW-1 | TOC | 62.93 | NM | NM | NM | NM | NM | NM | 4.70 | 58.23 |

Notes:

DTW: Depth to Water

GW: ground water

MP: Measuring Point

NM: not measured

TIC: Top Inner Casing

TOC: Top Outer Casing

## Table 3-3

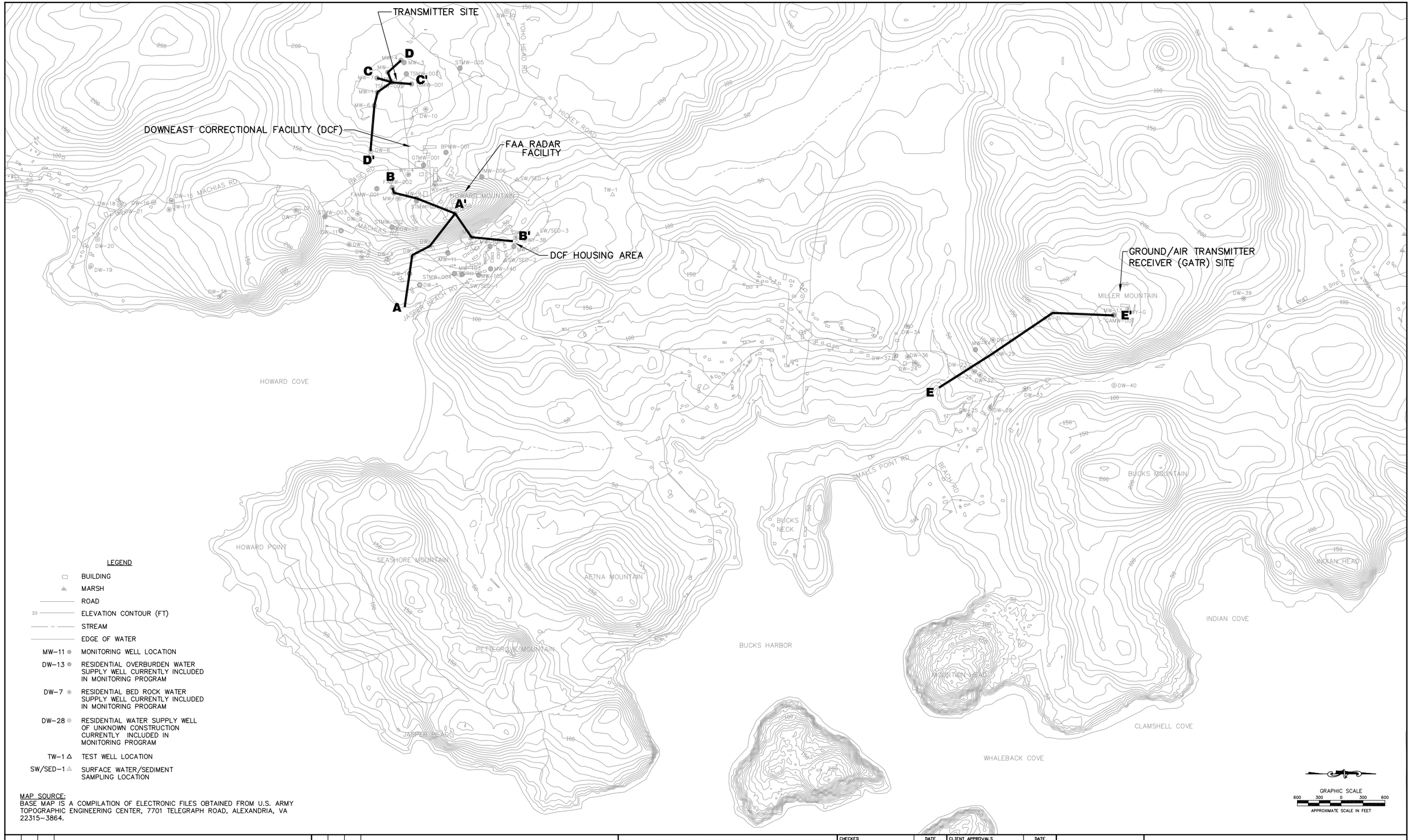
## June 2003 Vertical Hydraulic Gradients
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Monitor Well ID | Unit Screened | Screen Depth (feet bgs) | Screen Midpoint | Difference in Screen Elevation (feet) | Change in Groundwater Elevation (feet) | Magnitude of Vertical Gradient (feet/feet) | Direction of Vertical Gradient |
|---|---|---|---|---|---|---|---|
| *Well Couplets* | | | | | | | |
| TSMW-002 | Hybrid | 3-13 | 8.0 | 45.2 | 4.03 | 0.089 | Down |
| MW-5 | Bedrock | 100 (open hole) | 53.2 | | | | |
| GAMW-001 | Hybrid | 5-15 | 6.0 | 116.6 | 19.25 | 0.165 | Down |
| MW-13 | Bedrock | hole) | 122.6 | | | | |
| STMW-001 | Bedrock | 25-45 | 28.7 | 34.8 | 20.34 | 0.584 | UP |
| MW-9 | Bedrock | 120 (open hole) | 63.5 | | | | |
| *Wells within 50 feet* | | | | | | | |
| MW-3 | Hybrid | 5-15 | 5.0 | 46.5 | 2.43 | 0.052 | Down |
| MW-4 | Bedrock | 100 (open hole) | 51.5 | | | | |

Notes:
bgs - below ground surface
Equivalent screen midpoint for open hole monitoring wells is the midpoint of the saturated zone of the well.
* - Sceen Midpoint in this case is equivalent to the water level surface (estimated below ground surface) because it resides in the screened interval.

# SECTION 3

# FIGURES




LEGEND

- BUILDING
- MARSH
- ROAD
- 20 ELEVATION CONTOUR (FT)
- STREAM
- EDGE OF WATER
- MW–11 MONITORING WELL LOCATION
- DW–13 RESIDENTIAL OVERBURDEN WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW–7 RESIDENTIAL BED ROCK WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW–28 RESIDENTIAL WATER SUPPLY WELL OF UNKNOWN CONSTRUCTION CURRENTLY INCLUDED IN MONITORING PROGRAM
- TW–1 Δ TEST WELL LOCATION
- SW/SED–1 SURFACE WATER/SEDIMENT SAMPLING LOCATION

MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.

GRAPHIC SCALE
600 300 0 300 600
APPROXIMATE SCALE IN FEET

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

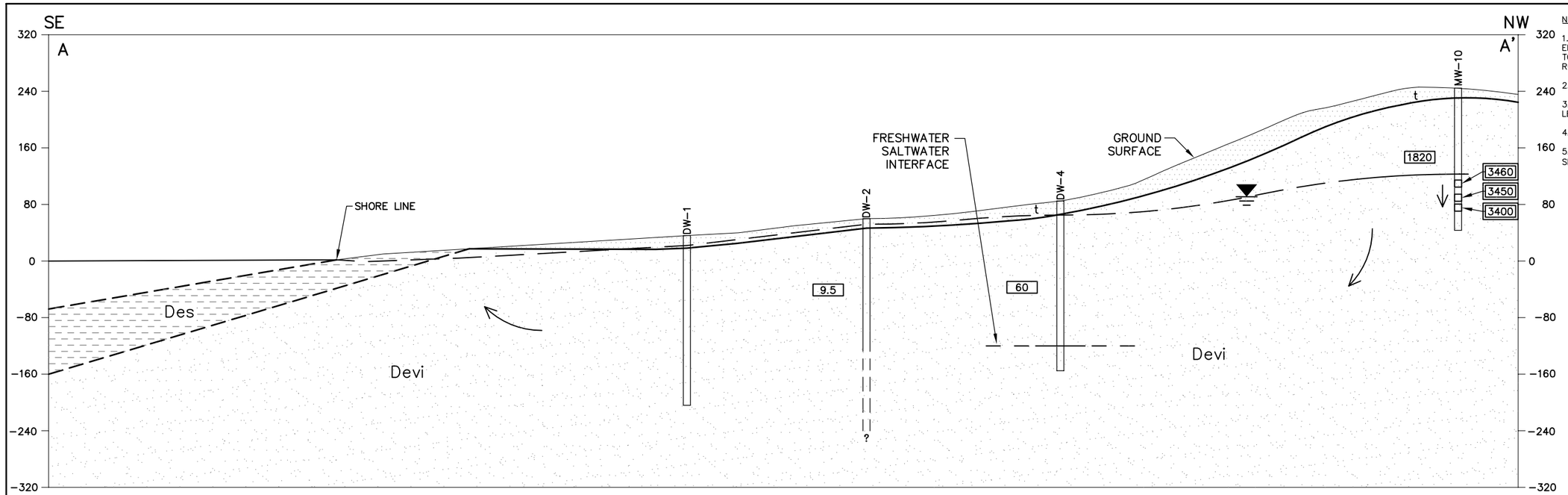
| | | | |
|---|---|---|---|
| CHECKED | DATE | CLIENT APPRDVALS | DATE |
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

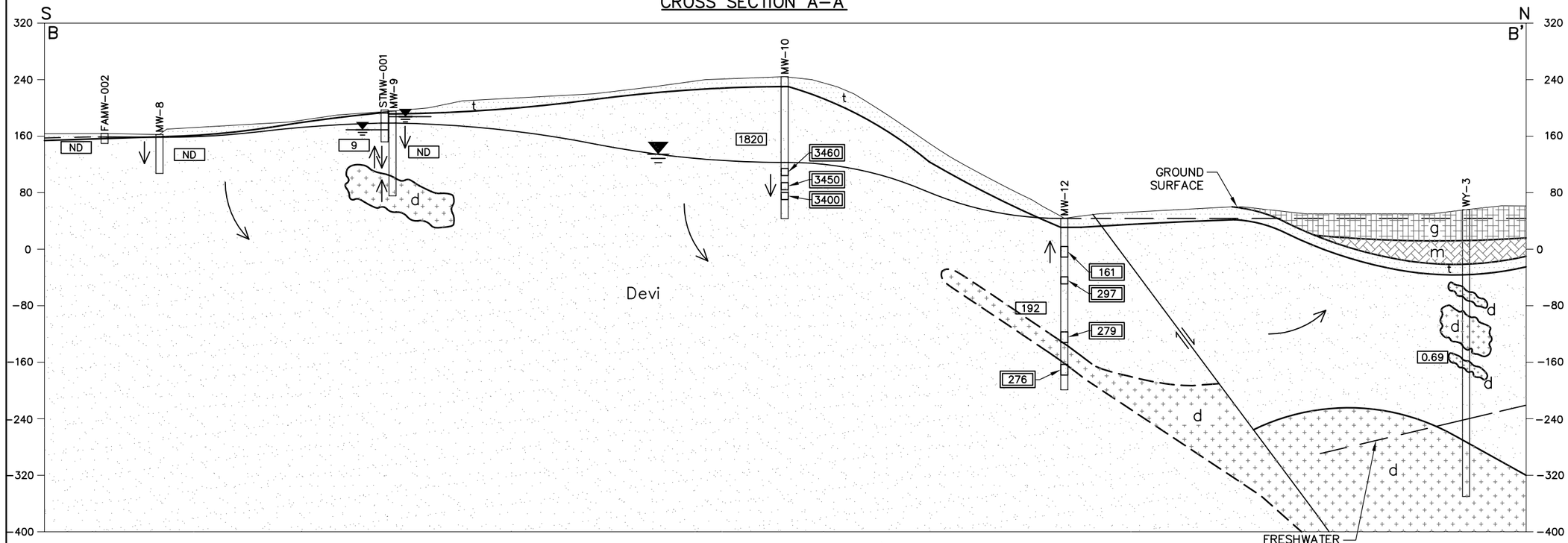
# LOCATIONS OF GEOLOGIC CROSS–SECTIONS

| | | | |
|---|---|---|---|
| DRAWN AJM | DATE MAR 2005 | FIGURE NO. 3–1 | REV. NO. |
| SCALE AS SHOWN | W.O. NO. 10971 217 002 | SHT. ____ OF ____ | |

M:\Design\DWG\ACOE\BUCKS\2003\Geologic Cross-Section Transects.dwg, FIG3-1, 3/14/2005 2:16:41 PM, girardeb, 1:2




CROSS SECTION A–A'




CROSS SECTION B–B'

NOTES:

1. TOPOGRAPHY IS FROM A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.
2. THE GEOLOGY IS FROM GATES, 1981.
3. THE ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL.
4. THE CONTACTS ARE DASHED WHERE INFERRED.
5. THERE IS NO VERTICAL EXAGGERATION FOR CROSS SECTIONS A–A' AND B–B'.

LEGEND

- GROUNDWATER POTENTIOMETRIC SURFACE.
- t — GLACIAL TILL, COMPRISED OF HETEROGENEOUS MIXTURE OF SAND, SILT, CLAY, AND GRAVEL.
- g — GLACIOFLUVIAL DEPOSITS OF WELL–ROUNDED SAND AND GRAVEL WITH SOME SILT.
- m — CLAYEY SILT WITH SAND AND MINOR AMOUNTS OF GRAVEL (PRESUMPSCOT FORMATION)
- d — DIABASE AND GABBRO DIKES, SILLS, AND IRREGULAR SMALL PLUTONS.
- Devi — FLOW BANDED RHYOLITE, VITROPHYRE, AND AUTOBRECCIA.
- Des — SHALE, SILTSTONE, AND FINE–GRAINED BEDDED TUFFS.
- [3400] — AUGUST 2003 PACKER TESTING TCE CONCENTRATION (PPB)
- 3400 — JUNE 2003 GROUNWATER MONITORING ROUND TCE CONCENTRATION (PPB)
- ESTIMATED DIRECTION OF REGIONAL GROUNDWATER GRADIENT
- INDICATES DIRECTION OF GROUNDWATER FLOW IN BOREHOLE BASED ON HPFM DATA.

GRAPHIC SCALE
80 40 0 40 80
APPROXIMATE SCALE IN FEET

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | | | |
|---|---|---|---|
| CHECKED | DATE | CLIENT APPROVALS | DATE |
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

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CONCORD, MASSACHUSETTS

# CROSS SECTIONS A–A' & B–B'

| DRAWN | DATE | FIGURE NO. | REV. NO. |
|---|---|---|---|
| BEG | MAR 2005 | 3–2 | |
| SCALE | W.O. NO. | SHT. ____ OF ____ | |
| AS SHOWN | 10971 217 002 | | |

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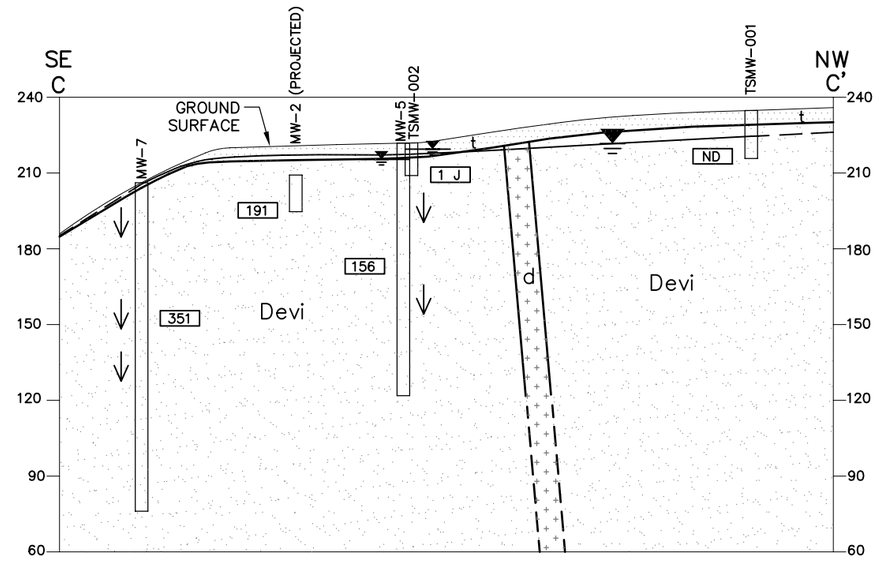
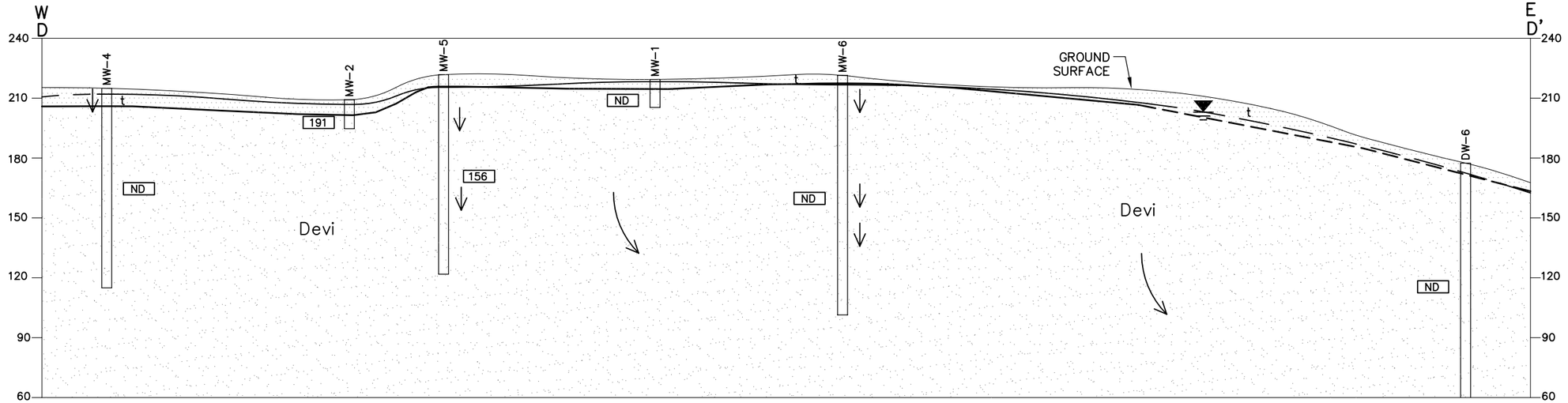



CROSS SECTION C–C'




CROSS SECTION D–D'

NOTES:

1. TOPOGRAPHY IS FROM A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.
2. THE GEOLOGY IS FROM GATES, 1981.
3. THE ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL.
4. THE CONTACTS ARE DASHED WHERE INFERRED.
5. VERTICAL EXAGGERATION IS 2X FOR CROSS SECTIONS C–C' AND D–D'.

LEGEND

- GROUNDWATER POTENTIOMETRIC SURFACE.
- t — GLACIAL TILL, COMPRISED OF HETEROGENEOUS MIXTURE OF SAND, SILT, CLAY, AND GRAVEL.
- d — DIABASE AND GABBRO DIKES, SILLS, AND IRREGULAR SMALL PLUTONS.
- Dhgr — HORNBLENDE–BEARING BIOTITE GRANODIORITE AND QUARTZ MONZONITE.
- Devi — FLOW BANDED RHYOLITE, VITROPHYRE, AND AUTOBRECCIA.
- Des — SHALE, SILTSTONE, AND FINE–GRAINED BEDDED TUFFS.
- 3400 — JUNE 2003 GROUNWATER MONITORING ROUND TCE CONCENTRATION (PPB)
- ESTIMATED DIRECTION OF REGIONAL GROUNDWATER GRADIENT
- INDICATES DIRECTION OF GROUNDWATER FLOW IN BOREHOLE BASED ON HPFM DATA.

GRAPHIC SCALE
60 30 0 30 60
APPROXIMATE HORIZONTAL SCALE IN FEET
VERTICAL EXAGGERATION 2X

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | | | |
|---|---|---|---|
| CHECKED | DATE | CLIENT APPROVALS | DATE |
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

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# CROSS SECTION C–C' & D–D'

| DRAWN | DATE | FIGURE NO. | REV. NO. |
|---|---|---|---|
| BEG | MAR 2005 | 3–3 | |
| SCALE | W.O. NO. | SHT. ____ OF ____ | |
| AS SHOWN | 10971 217 002 | | |

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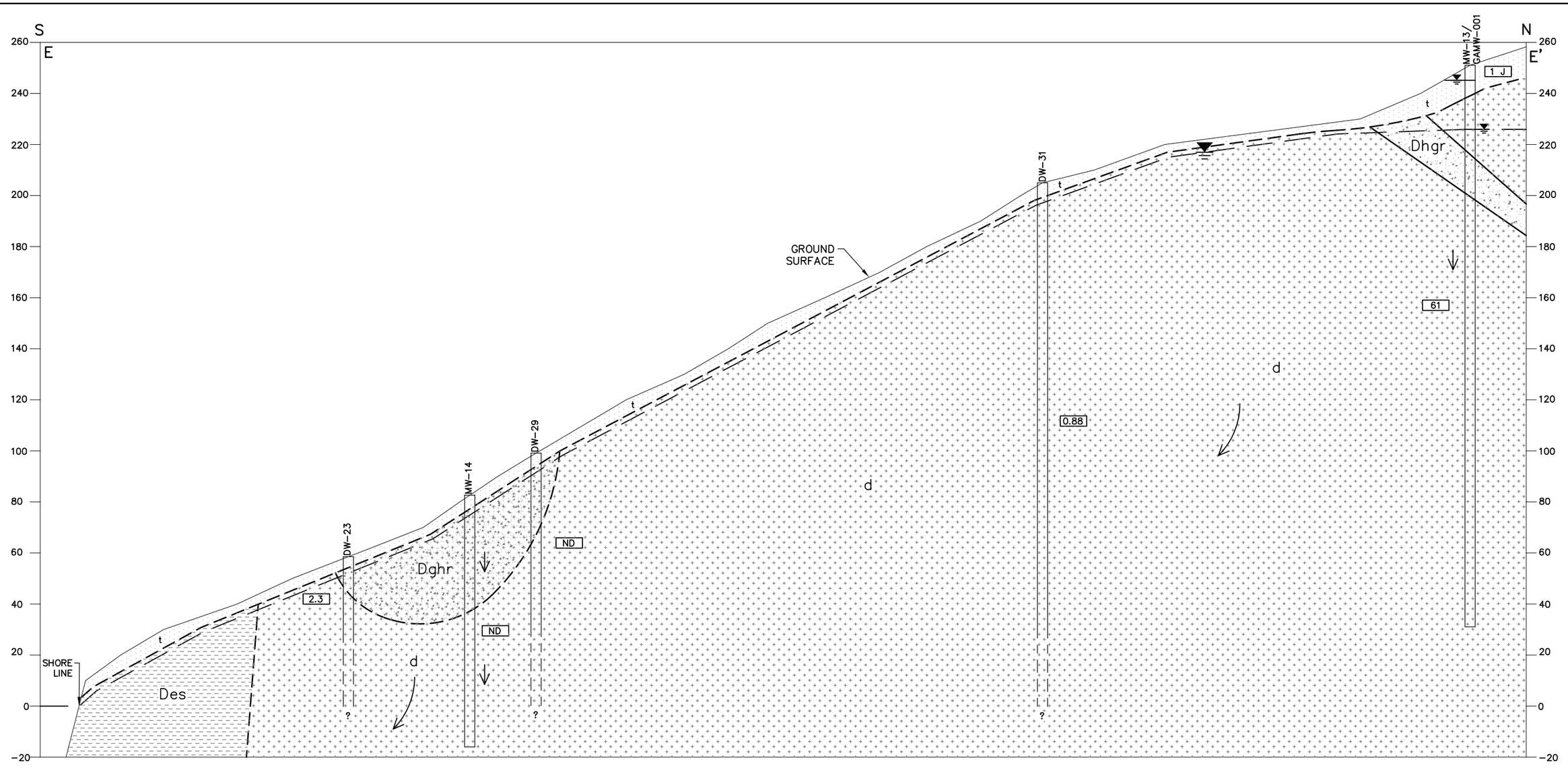


## CROSS SECTION E–E'

NOTES:

1. TOPOGRAPHY IS FROM A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.
2. THE GEOLOGY IS FROM GATES, 1981.
3. THE ELEVATIONS ARE FEET ABOVE MEAN SEA LEVEL.
4. THE CONTACTS ARE DASHED WHERE INFERRED.
5. VERTICAL EXAGGERATION IS 5X FOR CROSS SECTION E–E'.

LEGEND

| | |
|---|---|
| ▼ | GROUNDWATER POTENTIOMETRIC SURFACE. |
| t | GLACIAL TILL, COMPRISED OF HETEROGENEOUS MIXTURE OF SAND, SILT, CLAY, AND GRAVEL. |
| d | DIABASE AND GABBRO DIKES, SILLS, AND IRREGULAR SMALL PLUTONS. |
| Dhgr | HORNBLENDE–BEARING BIOTITE GRANODIORITE AND QUARTZ MONZONITE. |
| Des | SHALE, SILTSTONE, AND FINE–GRAINED BEDDED TUFFS. |
| 3400 | JUNE 2003 GROUNWATER MONITORING ROUND TCE CONCENTRATION (PPB) |

ESTIMATED DIRECTION OF REGIONAL GROUNDWATER GRADIENT

INDICATES DIRECTION OF GROUNDWATER FLOW IN BOREHOLE BASED ON HPFM DATA.

GRAPHIC SCALE
100 50 0 50 100
APPROXIMATE HORIZONTAL SCALE IN FEET
VERTICAL EXAGGERATION 5X

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|

FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

| | | | |
|---|---|---|---|
| CHECKED | DATE | CLIENT APPROVALS | DATE |
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

# CROSS SECTION E–E'

| | | | |
|---|---|---|---|
| DRAWN: BEG | DATE: MAR 2005 | FIGURE NO.: 3–4 | REV. NO. |
| SCALE: AS SHOWN | W.O. NO.: 10971 217 002 | SHT. ____ OF ____ | |

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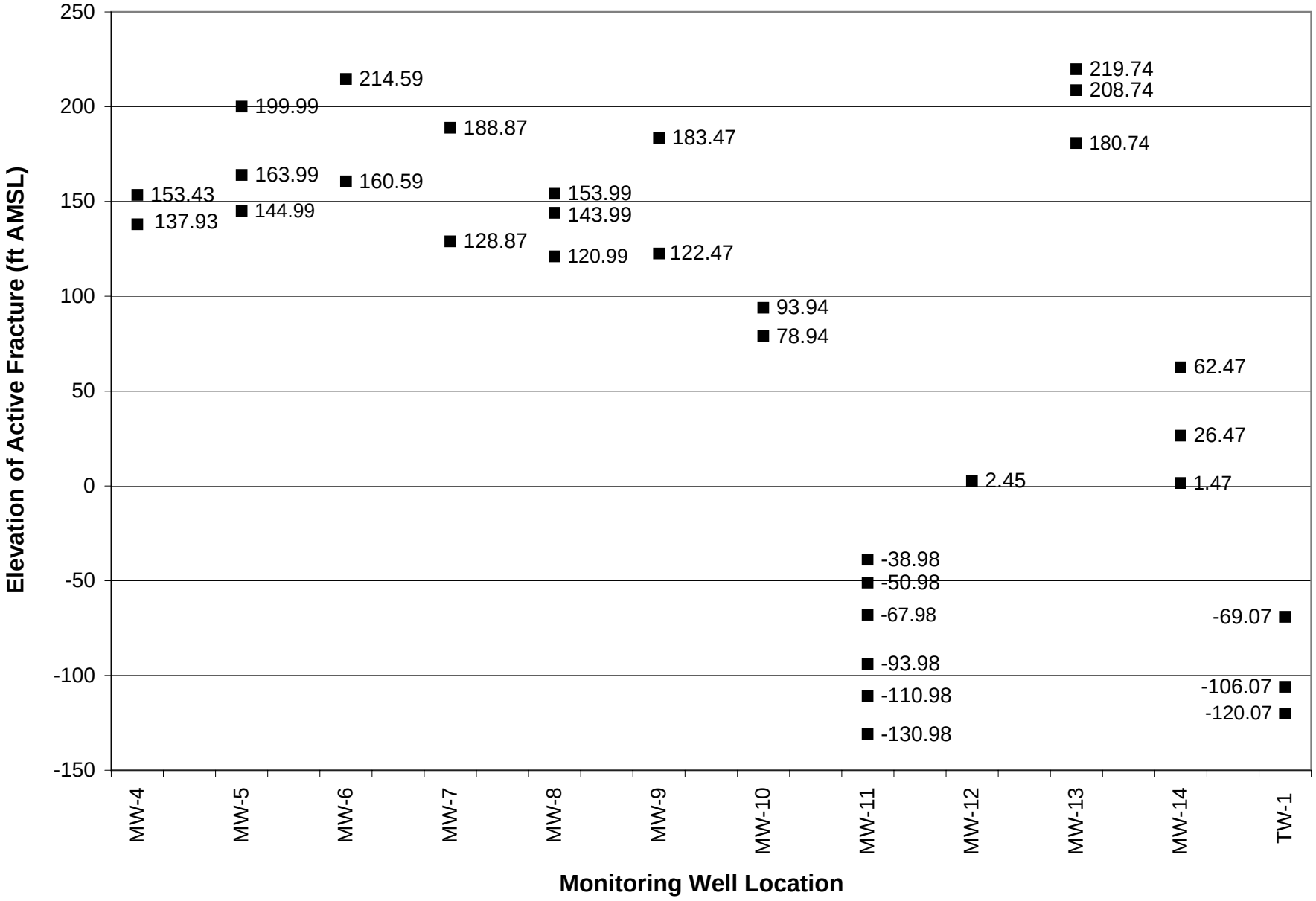
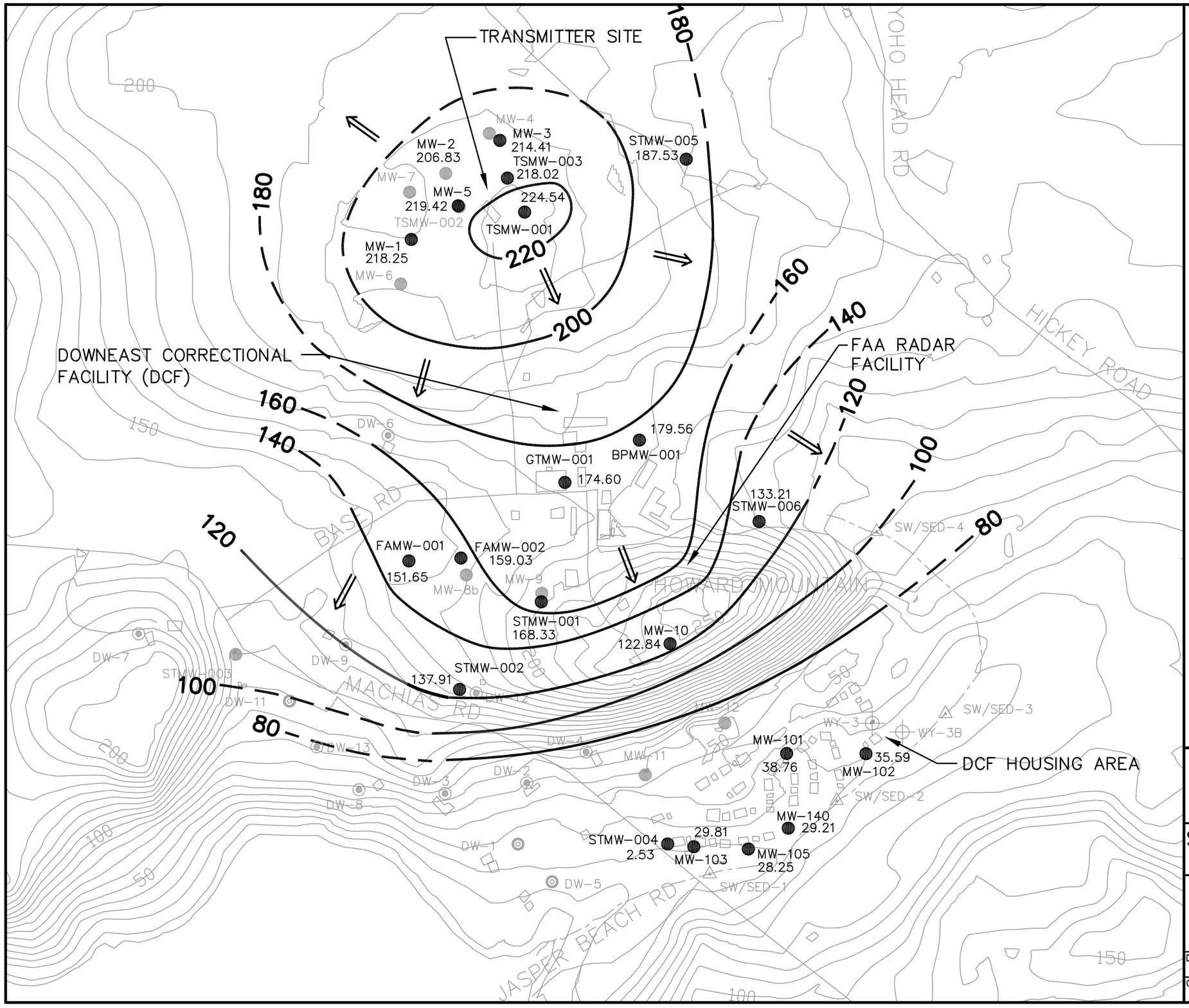
**Figure 3-5**
**Hydraulically Active Fractures vs. Elevation AMSL**
**Monitoring Wells**






## LEGEND

- BUILDING
- MARSH
- ROAD
- ELEVATION CONTOUR (FT)
- 20 STREAM
- EDGE OF WATER
- MW–11 MONITORING WELL LOCATION
- DW–13 RESIDENTIAL OVERBURDEN WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW–7 RESIDENTIAL BEDROCK WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW–28 RESIDENTIAL WATER SUPPLY WELL OF UNKNOWN CONSTRUCTION CURRENTLY INCLUDED IN MONITORING PROGRAM
- WY–3 PUBLIC BEDROCK WATER SUPPLY WELL LOCATIONS FOR DCF
- MW–1 218.25 MONITORING WELL LOCATION WITH POTENTIOMETRIC SURFACE ELEVATION (JUNE 2003)
- GROUNDWATER CONTOUR LINE (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTE:
ONLY GROUNDWATER ELEVATIONS FROM SHALLOW BEDROCK WELLS WERE USED TO DEVELOP POTENTIOMETRIC CONTOURS. GROUNDWATER ELEVATIONS IN THE DEEP BEDROCK WERE HIGHLY VARIABLE DUE TO THE STRONG VERTICAL COMPONENT OF FLOW AT DEPTH AND THEREFORE NOT USED.

MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.

GRAPHIC SCALE
400 200 0 200 400
APPROXIMATE SCALE IN FEET

WESTON SOLUTIONS
MANCHESTER NEW HAMPSHIRE

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

# SHALLOW BEDROCK GROUNDWATER CONTOUR MAP
# HOWARD MOUNTAIN AREA

## REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

| DRAWN | DATE | FIGURE NO. |
|---|---|---|
| AJM | MAR 2005 | 3–7 |
| CHECKED | W.O. NO. | |
| JPR | 10971 217 002 | |

M:\Design\DWG\ACOE_BUCKS\2003\Groundwater Contour Map.dwg, FIG3-7, 3/18/2005 1:59:52 PM, girardeb, 1:1

# SECTION 4

# NATURE AND EXTENT OF CONTAMINATION

# 4. NATURE AND EXTENT OF CONTAMINATION

## 4.1 INTRODUCTION

This section presents the laboratory analytical results of groundwater, surface water, and sediment samples collected during the RI. The groundwater data presented in Subsection 4.2 are from the monitoring well, residential well, and test well groundwater sampling programs, as well as from discrete-zone sampling conducted during the packer permeability testing. Analytical results for groundwater samples collected from various monitoring wells during three previous sampling rounds (September 1996, August 1999, and June 2003) are also provided for comparative purposes. The data are compared to applicable federal and state criteria. Information on the laboratory analytical data packages for samples collected during the RI is presented in Appendix D.

As discussed in Subsections 2.2 and 2.3, an investigation into potential sources of groundwater contamination initially indicated that there were no "dedicated" or specific areas at the site where chlorinated solvents and/or other VOCs were disposed of. Rather, multiple releases of smaller quantities at varying locations across the site appear to have been the more common practice. As such, subsurface contamination from many parts of the site is primarily limited to saturated zones within the overburden and bedrock, which, therefore, are the focus of this section. Because of the absence or limited thickness of overburden in the vicinity of known or suspected release areas, an assessment of the nature and extent of contamination in vadose zone soils was not feasible.

However, groundwater data generated during the later phases of the RI suggest that repeated releases from the dispensing drum reportedly stored in the basement of former Building 114 may have occurred and could represent a larger and more continuous release to the subsurface. This issue is discussed in further detail in Subsections 4.2, 4.5, and 5.7 of this report.

## 4.2 GROUNDWATER

### 4.2.1 Monitoring Well Analytical Results

Laboratory analytical results from groundwater samples collected in June 2003 from 33 monitoring wells indicate that elevated concentrations of chlorinated VOCs are present at the site (see Table 4-1). Trichloroethene was detected at concentrations that exceed the 5 µg/L EPA MCL in 7 of the 33 monitoring wells tested. These concentrations range from 9 µg/L in shallow bedrock monitoring well STMW-001 to 1,880 µg/L in deep bedrock monitoring well MW-10. As discussed in Subsection 4.2.4 below, even higher concentrations of TCE were detected in samples collected from monitoring well MW-10 during packer permeability testing (3,460 µg/L). The concentrations of TCE detected at the top of Howard Mountain represent the highest levels detected in a monitoring well since groundwater sampling activities began in 1996. Trichloroethene was also detected at concentrations below the 5 µg/L EPA MCL in seven other monitoring wells.

Tetrachloroethene was detected above the 5 µg/L EPA MCL in two of the monitoring wells tested: STMW-001 (7 µg/L) and MW-10 (12 µg/L). Wells STMW-001 and MW-10 are each located in the Howard Mountain area, adjacent to former building locations 501 and 114, respectively (Figure 1-2). Tetrachloroethene was also detected in bedrock monitoring well MW-12 at an estimated concentration of 1 µg/L; however, this value is below the 5 µg/L EPA MCL.

Additional VOCs that were detected during the June 2003 groundwater sampling round include: cis-1,2-DCE, trans-1,2-dichloroethene (trans-1,2-DCE), 1,1,1-TCA, 1,1-dichloroethane 1,2,4-trichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, chlorobenzene, toluene, and acetone. These compounds were all detected below their respective federal and state water quality criteria. Summaries of the VOCs detected in all monitoring wells to date, the natural attenuation parameters collected in June 2003, and the field water quality parameters collected in June 2003 are presented in Tables 4-1, 4-2, and 4-3, respectively.

### 4.2.2 Residential and Public Water Supply Well Analytical Results

The laboratory analytical results of the groundwater samples collected in March 2003 and June 2003 indicate that chlorinated VOCs are present in 19 of the 32 residential wells at the site, and the one public water supply well sampled (AEL, 2003). A summary of the VOCs detected in the residential wells in 2003 is presented in Table 4-4. A summary of the natural attenuation parameters collected from the wells is presented in Table 4-5. A graphical representation of the VOCs detected in all residential wells between January 2001 and June 2003 is included as Figure 4-1.

As with the monitoring well water quality results, TCE is the compound found at the highest concentration in residential and public water supply wells. Detected concentrations of TCE range from 65 µg/L in well DW-04 (March 2003) to 0.55 µg/L in residential well DW-33 (June 2003). Of the 19 residential wells where VOCs were detected, two residential wells had concentrations of VOCs that exceed state or federal groundwater standards (DW-03 and DW-04). Trichloroethene was found in public water supply well WY-3 at a concentration of 0.69 µg/L, well below the EPA MCL of 5 µg/L.

### 4.2.3 Test Well Analytical Results

No VOCs were detected in the groundwater sample collected from test well TW-01 during well development in May 2003. The analytical results of the inorganic samples collected indicated no detections of dissolved iron or manganese above the laboratory reporting limits of 0.05 milligrams per liter (mg/L) and 0.01 mg/L, respectively (AEL, 2003).

The analytical results of the groundwater sample collected during the June 2003 monitoring well sampling round indicated the presence of PCE at a concentration of 2.4 µg/L (AEL, 2003). This concentration is below the EPA MCL of 5 µg/L. No other VOCs were detected in the sample collected from test well TW-01. A summary of the VOCs detected in the test well to date and the field water quality parameters collected in June 2003 are presented in Tables 4-1 and 4-3, respectively.

The difference in VOC results at location TW-01 between the May well development sample and the June sampling event is likely due to the variation in sampling and purging methods.

During the May sampling event (well development), a 4-inch-diameter electric submersible pump was placed on the bottom of the well and used to purge the well at a high flow rate (between approximately 10 gpm and 22 gpm). The laboratory sample was collected from the discharge line at the completion of the 4-hour development period after substantial turbulence, vertical mixing of the water column, and dilution from groundwater in various fractures moving toward the well. During the June 2003 sampling event, a 2-inch diameter electric submersible pump was placed at a depth of 168 ft bgs where a high-yielding fracture was noted during drilling. The well was sampled using low-flow sampling techniques (as described in the *SAP*) (WESTON, 2002), which minimized turbulence, vertical mixing of the water column, and dilution by groundwater from nearby fractures. This allowed for the collection of a sample from a discrete interval that was more representative of water quality conditions in close proximity to the well. In addition, because the discharge rate was so much lower during the low-flow sampling, volatilization during sampling was minimized, something that could not be controlled during well development.

### 4.2.4 Packer Water Quality Test Results

Similar to the analytical results of samples collected during the June 2003 groundwater monitoring round, concentrations of VOCs as high as 3,460 µg/L (TCE in monitoring well MW-10) were detected during discrete-zone sampling of deep bedrock monitoring wells MW-07, MW-10, MW-11, MW-12, and MW-14 (see Table 4-6). Little variation was noted in the concentrations of VOCs detected within the various test intervals within each borehole, suggesting that a high degree of hydraulic communication exists between the fractured intervals. It is unclear whether the hydraulic communication between the test intervals is the result of numerous high-angle to near-vertical fractures providing natural pathways around the pneumatic packers, or poor sealing of the packers due to the rough sides of the borehole. A review of the borehole geophysics results and visual inspection of the bedrock cores confirms that either of these conditions could be responsible for the poor seal by the pneumatic packers in various boreholes.

The most commonly detected VOC was TCE, which was detected at concentrations between 161 µg/L and 3,460 µg/L in 11 of the 19 samples collected. All 11 of these samples were

collected from monitoring wells MW-07, MW-10, and MW-12 in the Howard Mountain area. Trichloroethene was also detected in three of the four samples collected from monitoring well MW-11, but at concentrations below the 5 µg/L MCL. There were no detections of TCE in the four samples collected from monitoring well MW-14.

Tetrachloroethene was also detected at concentrations in excess of the 5 µg/L MCL in all three samples collected from monitoring well MW-10. Tetrachloroethene and seven other VOCs (cis-1,2-DCE, trans-1,2-DCE, toluene, naphthalene, methyl ethyl ketone [MEK], styrene, and acetone) were also detected in various samples, but at concentrations below their respective groundwater standards. A summary of the VOCs detected during the packer permeability testing is presented in Table 4-6.

## 4.3 SURFACE WATER AND SEDIMENT

No VOCs were detected in the surface water or sediment samples collected from the four locations in the wetland area and unnamed stream northeast of the DCF Housing Area. A more comprehensive discussion of the implications of these results can be found in the ecological risk evaluation, which is presented in Section 7.

## 4.4 QUALITY ASSURANCE/QUALITY CONTROL RESULTS

Quality Assurance/Quality Control samples, including trip blanks, rinsate blanks, duplicate samples, and MS/MSD samples were collected during this investigation as described in previous sections of this report.

Laboratory narratives confirm that all samples were delivered to the laboratory under proper CoC procedures and were preserved properly. All samples were analyzed within the required method holding time. No VOCs were detected in either the trip blank or rinsate blank samples, confirming that sample quality was not compromised or contaminated during transport and that the field decontamination procedures were effective.

As shown in Table 4-7, the relative percent differences calculated using the VOC results for the field duplicate samples were less than 30% for aqueous samples and less than 50% for solid samples, confirming that the field sampling procedures as well as the laboratory analytical

procedures demonstrated good precision. The MS/MSD results were within established guidelines for the matrices sampled, confirming that the matrices did not interfere with the recovery of target compounds and the analyses were performed properly for specific sample matrices.

## 4.5 DISCUSSION

The groundwater quality data collected from the residential wells and monitoring wells at the site confirm that historical releases of chlorinated VOCs at the Transmitter site, GATR site, and the FAA facility have impacted local groundwater. The most predominant compound identified was TCE, which was detected at 35 different wells, including 19 residential wells, 14 monitoring wells, one public water supply well, and the test well. Concentrations of TCE were found to exceed the applicable EPA MCL of 5 µg/L in 10 wells (two residential wells and eight monitoring wells) with results as high as 3,460 µg/L.

In addition to TCE, PCE was found in two monitoring wells (STMW-001 and MW-10) at concentrations exceeding the EPA MCL of 5 µg/L, although at levels far less than those found for TCE in these wells. Tetrachloroethene was also found in monitoring well MW-12, residential wells DW-04 and DW-12, and at test well TW-01 at concentrations well below the EPA MCL of 5 µg/L. Residential well DW-02 has contained concentrations of PCE well below the EPA MCL of 5 µg/L in the past, but none was found in the most recent sampling rounds. In all cases, PCE has been found only in wells with higher concentrations of TCE, suggesting that the PCE is co-located with TCE and was a lesser component of the initial solvent release.

Several VOCs other than TCE and PCE were identified in residential and monitoring wells at the site, including cis-1,2-DCE, trans-1,2-DCE, toluene, naphthalene, MEK, styrene, and acetone, but all at concentrations well below their respective EPA MCLs. Thus, the primary contaminant of concern at the site is TCE, with PCE as a secondary contaminant of concern. Because PCE is largely co-located with TCE, TCE was the primary focus of the data evaluation presented in the following subsections. Water quality data for TCE were evaluated for trends in lateral and vertical distribution and concentrations over time.

### 4.5.1 Lateral Extent of Contamination

Trichloroethene results from the comprehensive June 2003 monitoring well and residential well sampling programs were plotted on a site plan to evaluate the lateral distribution (Figure 4-2). This figure clearly shows that there are three separate areas of dissolved VOCs in groundwater at the site. Although the term groundwater "plume" implies a porous media approach, for the sake of convenience the term will be used throughout this report to refer to specific areas of dissolved concentrations of site contaminants in bedrock groundwater moving within discrete fractures. The three groundwater plumes identified at the site are: (1) one originating at the Transmitter site and extending to the southwest (Transmitter site plume); (2) one originating in the vicinity of the FAA radar antennas and extending to the southeast (FAA plume); and (3) one originating at the GATR site and extending to the southeast (GATR plume). Each of the three areas of groundwater contamination is aligned with either the northwest-southeast or northeast-southwest trending bedrock fracture sets identified at the site (Gates, 1981; ABB, 1997a). Both the Transmitter site and GATR site plumes are narrow, and therefore, are believed to be restricted to a few closely spaced fractures. The GATR site plume extends southeastward from the top of Miller Mountain to where it is interpreted to discharge into a small arm of Bucks Harbor. The Transmitter site plume extends southwestward toward undeveloped property where its terminus is undefined.

The FAA plume is wider and has two extensions (one to the southwest and one to the northeast), which align with the northeast-southwest bedrock fracture set (ABB, 1995b). It is believed that the source of the FAA plume was the use of solvent compounds in the vicinity of the radar antennas/Building 114 area and that the TCE is migrating along the predominant fracture set to the southeast where it ultimately discharges to Howard Cove. Operation of residential and housing area water supply wells (DW-09, DW-12, and WY-03) are drawing contaminated groundwater from the predominant northwest-southeast trending fracture, along the orthogonal fractures, creating the two plume extensions.

Tetrachloroethene is found only within the FAA plume and, as discussed previously, closely follows the distribution of TCE. The exception to this is the presence of PCE in one sample collected from test well TW-01. Trichloroethene was not detected in either sample collected from the test well, but 2.5 µg/L of PCE was detected in the sample collected using low-flow

techniques. This variation from the trend observed at the locations within the FAA plume suggests that the PCE found in the test well is not related to the same source as that of the FAA plume. It appears that either a separate source (likely located to the northwest) is responsible for the PCE in the test well or that the single detection is erroneous. Further water quality sampling of the test well would be required to confirm the results of the initial sample analysis.

### 4.5.2 Vertical Extent of Contamination

In general, VOC concentrations are higher in the deep bedrock than in shallow bedrock or overburden groundwater. This is most evident within the GATR site plume, where TCE was not detected in shallow bedrock groundwater near the source (well GAMW-001), but was found at 61 µg/L in a paired deep bedrock monitoring well (MW-13). The results of the packer water quality testing were inconclusive with regard to the vertical distribution of contaminants due to suspected migration of groundwater around the pneumatic packers used to seal off the test intervals. It is not known whether the inability of the packers to seal the test intervals was due to the presence of high-angle or near-vertical fractures that allowed groundwater to migrate vertically into the test interval, or to a poor seal of the packers against the rough sides of the borehole. Either situation is possible based on WESTON's examination of the rock cores and the downhole caliper logs (see Appendices A and B). In any case, the packer water quality tests showed little vertical variation in contaminant concentration at any of the five locations tested.

### 4.5.3 Long-Term Water Quality Trends

Historical water quality results from residential wells were examined to assess long-term variations in groundwater quality. Residential well data were used in this assessment because these data provided the longest observational time period (nearly 9 years) and had the most extensive data set. Site monitoring well data includes a maximum of only three sampling rounds, which provides an insufficient data set for trend analysis. Evaluation of the sampling and analytical methods used and also the laboratory employed to perform the analysis suggest the data should be comparable (in accordance with QA/QC results discussed previously in Subsection 4.4). The same sampling procedure and analytical method were used for all sampling rounds and although several different laboratories were used from 1994 to 1998, only AEL has been used from 1998 to the present.

Historical TCE concentrations from five residential wells located within the FAA plume (DW-02, DW-03, DW-04, and DW-12) and GATR site plume (DW-23) were plotted versus time as shown in Figure 4-3. The plot suggests that TCE concentrations in the center of the FAA plume (DW-02, DW-03, and DW-04) have been slowly increasing. This apparent increase in TCE concentration is likely due to the prolonged period of below-normal precipitation, as discussed below. However, the concentration of TCE in residential well DW-12, believed to be located in a crossing fracture southwest of the main body of the FAA plume, has been decreasing. Historical water quality data from residential well DW-23, located within the main body of the GATR site plume, suggest that TCE concentrations in this plume are remaining relatively constant.

Concentrations of PCE have been consistently been found only in residential well DW-04. The detections of PCE in residential wells DW-02 and DW-12 have been sporadic over time and have been at concentrations just above the method detection limit of 0.5 µg/L. Concentrations of PCE in residential well DW-04 have ranged from 0.5 µg/L to 1 µg/L and the fluctuations have paralleled those of TCE, as are depicted on Figure 4-3.

The MEDEP conducted an independent evaluation of historical water quality results and correlated them with precipitation. The resulting graph prepared by MEDEP is presented as Figure 4-4. This evaluation suggests an inverse relationship exists between precipitation and dissolved VOC concentrations in groundwater. An inverse relationship between precipitation and dissolved groundwater quality can be indicative of residual nonaqueous phase liquid (NAPL) within the saturated zone. This is because the reduced precipitation will result in lower groundwater levels, reducing the amount of groundwater flowing through the system that is available to dilute dissolved concentrations diffusing from the residual NAPL adsorbed to the aquifer matrix (Charnley et al., 1988). Typically, if a significant source of contamination remains within the unsaturated zone, the concentration of dissolved contaminants in downgradient monitoring wells will show a positive correlation with precipitation. This is because increased precipitation would tend to flush more contamination from the unsaturated zone into the saturated zone, thereby increasing contaminant concentrations downgradient (Charnley et al., 1988).

### 4.5.4 Natural Attenuation Assessment

Natural attenuation of VOCs in groundwater refers to the general decrease in concentration of a particular compound as it moves away from the source area, and is the result of a combination of processes including biological degradation, adsorption to the aquifer matrix, chemical interactions, molecular diffusion, and mechanical dispersion. Because the predominant migration pathway at the site is groundwater movement through bedrock fractures, adsorption and dispersion tend to be less important because these processes are limited by the restriction of flow to a relatively few discrete fractures. Diffusion can play an important role in reducing contaminant concentrations along a groundwater flow path. The role of diffusion is discussed in more detail in Section 5. Other than diffusion, biological degradation remains as the predominant mechanism for natural attenuation at this site (Gorelick et al., 1993).

Biological degradation of the VOCs found at the site (TCE and PCE) occurs in the form of reductive dechlorination, by which chlorine ions are removed from the contaminant molecules by indigenous microorganisms (Vogel et al., 1987; Freedman and Gossett, 1989). The presence of

cis-dichloroethene (cis-DCE), which is a breakdown product of TCE, provides evidence that reductive dechlorination is occurring at the site. Trichoroethene can also degrade to trans-dichloroethene (trans-DCE) (Vogel et al., 1987), but this pathway is less common and because trans-DCE was only detected at one location at a very low concentration (1 µg/L at monitoring well MW-10), this pathway is not considered to be of importance at this site.

Water quality parameters that can further suggest biological degradation of VOCs is occurring include DO, ORP, alkalinity, COD, ferrous iron, manganese, TOC, ethane, and ethene. Table 4-2 summarizes these water quality parameters along with total VOC concentrations. However, no clear trends were identified based on this data within any of the three plumes identified at the site. Comparison of the DO and ORP data collected during low-flow sampling of the wells with data from the Idronaut water quality probe used during the borehole geophysics program indicate a generally good correlation between the two methods.

Comparison of the ratio of cis-DCE to TCE shows that at most locations the cis-DCE concentration is less than 5% of the TCE concentration, confirming that only minor biological

breakdown of the TCE is occurring (EPA, 1998). The exception to this, however, is at the GATR site on Miller Mountain where cis-DCE is found at concentrations that are 30% of the TCE concentration. This suggests that more biodegradation is occurring within the GATR site plume than within the other two plumes. This agrees with the long-term trend analysis, which showed that contaminant concentrations downgradient of the GATR site are remaining fairly constant, while those downgradient of Howard Mountain are slowly increasing (refer to Subsection 4.5.3).

It should be noted that vinyl chloride (VC) was not detected in any of the water quality samples at the site, suggesting that biodegradation beyond the cis-DCE stage is not occurring, or that any VC that is produced as a result of biodegradation is quickly broken down into inert byproducts. It is more likely that the VC is rapidly breaking down because it should degrade easily under the aerobic conditions that exist at the site (Vogel et al., 1987).

# SECTION 4

# TABLES

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Transmitter Site Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | TSMW-001 Hybrid | | | TSMW-002 Hybrid | | | TSMW-003 Hybrid | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | ND | NS | 2 U | **22** | **52** | 1 J | 1 | 1 | 2 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | ND | ND | 2 U | 1 | ND | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | ND | ND | 2 U | ND | 1 | 2 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | ND | ND | 2 U | ND | 2 J | 3 |
| Chlorobenzene | NA | ND | NS | 2 U | ND | ND | 2 U | 0.8 J | 2 | 3 |
| Ethylbenzene | 70 | ND | NS | 2 U | ND | ND | 2 U | 0.7 J | ND | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | ND | ND | 2 U | ND | ND | 2 U |
| Acetone | 700 | ND | NS | 10 U | ND | ND | 10 U | ND | ND | 10 U |

Notes:

1. Concentrations in **BOLD** are in excess of Maine Department of Environmental Protection (MEDEP) or U.S. Environmental Protection Agencey (EPA) groundwater standard.
2. All values shown are in units of micrograms per liter (µg/L).
3. *Whichever is lowest.

J = Compound detected below reporting limit; concentration is estimated.
MCL = Maximum Contaminant Level.
MEG = Maximum Exposure Guidline.
ND = Compound not detected; reporting limit not available.
NS = Not sampled.
U = Compound not detected at associated numerical reporting limit.
-- = Not sampled because well had not yet been installed.
Hybrid = Well is screened across both the overburden and shallow bedrock zones
Please refer to Table 2-4 for information on well-specific depths of the pump intake during sample collection.

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Transmitter Site Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MW-01 Hybrid | | | MW-02 Shallow BR | | | MW-03 Hybrid | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | -- | ND | 2 U | -- | ND | **191** | -- | 0.8 | 2 U |
| Tetrachloroethene | 5 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| cis-1,2-Dichloroethene | 70 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| trans-1,2-Dichloroethene | 100 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| Toluene | 1,000 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| 1,1,1-Trichloroethane | 200 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| 1,1-Dichloroethane | 70 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| 1,2,4-Trichlorobenzene | 70 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| 1,3-Dichlorobenzene | 60 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| 1,4-Dichlorobenzene | 21 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| Chlorobenzene | NA | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| Ethylbenzene | 70 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| Chloromethane | 3 | -- | ND | 2 U | -- | ND | 2 U | -- | ND | 2 U |
| Acetone | 700 | -- | ND | 10 U | -- | ND | 10 U | -- | ND | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Transmitter Site Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | STMW-005 Overburden | | | MW-04 Deep BR | | | MW-05 Deep BR | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | **156** |
| Tetrachloroethene | 5 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Ethylbenzene | 70 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Acetone | 700 | ND | NS | 10 U | -- | -- | 10 U | -- | -- | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Transmitter Site Area | | | | | | DCF/Filter Bed Area | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MW-06 Deep BR | | | MW-07 Deep BR | | | BPMW-001 Shallow BR | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | -- | -- | 2 U | -- | -- | **351** | -- | -- | 2 U |
| Tetrachloroethene | 5 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| cis-1,2-Dichloroethene | 70 | -- | -- | 2 U | -- | -- | 3 | -- | -- | 2 U |
| trans-1,2-Dichloroethene | 100 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Toluene | 1,000 | -- | -- | 2 U | -- | -- | 2 | -- | -- | 2 U |
| 1,1,1-Trichloroethane | 200 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,1-Dichloroethane | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,2,4-Trichlorobenzene | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,3-Dichlorobenzene | 60 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,4-Dichlorobenzene | 21 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chlorobenzene | NA | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Ethylbenzene | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chloromethane | 3 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Acetone | 700 | -- | -- | 10 U | -- | -- | 10 U | -- | -- | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DCF/Filter Bed Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GTMW-001 Hybrid | | | FAMW-001 Hybrid | | | FAMW-002 Hybrid | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | 2 J | NS | 1 J | ND | NS | 2 U | ND | NS | 2 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | 0.6 J | NS | 2 U | ND | NS | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | 0.5 J | NS | 2 U | ND | NS | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Ethylbenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Acetone | 700 | ND | NS | 10 U | ND | NS | 10 U | ND | NS | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DCF/Filter Bed Area | | | | | | Howard Mountain/FAA Area | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | STMW-003 Overburden | | | MW-08b Shallow BR | | | STMW-001 Shallow BR | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | 0.9 J | NS | 2 U | -- | -- | 2 U | **18** | NS | **9** |
| Tetrachloroethene | 5 | ND | NS | 2 U | -- | -- | 2 U | **7** | NS | **7** |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | -- | -- | 2 U | 8 | NS | 3 |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| Ethylbenzene | 70 | 1 | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | -- | -- | 2 U | ND | NS | 2 U |
| Acetone | 700 | ND | NS | 10 U | -- | -- | 10 U | ND | NS | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Howard Mountain/FAA Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | STMW-002 Shallow BR | | | STMW-006 Overburden | | | MW-09 Deep BR | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | ND | NS | 1 J | 0.8 J | NS | 2 U | -- | -- | 2 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| Ethylbenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | ND | NS | 2 U | -- | -- | 2 U |
| Acetone | 700 | ND | NS | 12 | ND | NS | 10 U | -- | -- | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Howard Mountain/FAA Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MW-10 Deep BR | | | MW-11 Deep BR | | | MW-12 Deep BR | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | -- | -- | **1,880** | -- | -- | 2 U | -- | -- | **192** |
| Tetrachloroethene | 5 | -- | -- | **12** | -- | -- | 2 U | -- | -- | 1 J |
| cis-1,2-Dichloroethene | 70 | -- | -- | 49 | -- | -- | 2 U | -- | -- | 13 |
| trans-1,2-Dichloroethene | 100 | -- | -- | 1 J | -- | -- | 2 U | -- | -- | 2 U |
| Toluene | 1,000 | -- | -- | 2 | -- | -- | 2 U | -- | -- | 2 U |
| 1,1,1-Trichloroethane | 200 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,1-Dichloroethane | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,2,4-Trichlorobenzene | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,3-Dichlorobenzene | 60 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| 1,4-Dichlorobenzene | 21 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chlorobenzene | NA | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Ethylbenzene | 70 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Chloromethane | 3 | -- | -- | 2 U | -- | -- | 2 U | -- | -- | 2 U |
| Acetone | 700 | -- | -- | 10 U | -- | -- | 10 U | -- | -- | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DCF Housing Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MW-101 Overburden | | | MW-102 Overburden | | | MW-103 Overburden | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | ND | NS | 1 J | ND | NS | 2 U | ND | NS | 2 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Ethylbenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Acetone | 700 | ND | NS | 10 U | ND | NS | 10 U | ND | NS | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DCF Housing Area | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | MW-105 Overburden | | | MW-140 Overburden | | | STMW-004 Overburden | | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 |
| Trichloroethene | 5 | ND | NS | 1 J | ND | NS | 4 | ND | NS | 2 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Toluene | 1,000 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chlorobenzene | NA | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Ethylbenzene | 70 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Chloromethane | 3 | ND | NS | 2 U | ND | NS | 2 U | ND | NS | 2 U |
| Acetone | 700 | ND | NS | 14 | ND | NS | 10 U | ND | NS | 10 U |

**Table 4-1**

**Summary of VOCs Detected in Groundwater Monitoring Wells**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, Maine**

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | Miller Mountain/GATR Site | | | | | | | | | Test Well Site | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | GAMW-001 Hybrid | | | MW-13 Deep BR | | | MW-14 Deep BR | | | TW-01 Deep BR | |
| | | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | Sep-96 | Aug-99 | Jun-03 | May-03 | Jun-03 |
| Trichloroethene | 5 | 1 | NS | 1 J | -- | -- | **61** | -- | -- | 2 U | 0.5 U | 0.5 U |
| Tetrachloroethene | 5 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 2.4 |
| cis-1,2-Dichloroethene | 70 | ND | NS | 2 U | -- | -- | 23 | -- | -- | 2 U | 0.5 U | 0.5 U |
| trans-1,2-Dichloroethene | 100 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| Toluene | 1,000 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| 1,1,1-Trichloroethane | 200 | ND | NS | 2 U | -- | -- | 20 | -- | -- | 2 U | 0.5 U | 0.5 U |
| 1,1-Dichloroethane | 70 | ND | NS | 2 U | -- | -- | 2 | -- | -- | 2 U | 0.5 U | 0.5 U |
| 1,2,4-Trichlorobenzene | 70 | ND | NS | 2 U | -- | -- | 4 | -- | -- | 2 U | 0.5 U | 0.5 U |
| 1,3-Dichlorobenzene | 60 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| 1,4-Dichlorobenzene | 21 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| Chlorobenzene | NA | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| Ethylbenzene | 70 | ND | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| Chloromethane | 3 | 0.8 J | NS | 2 U | -- | -- | 2 U | -- | -- | 2 U | 0.5 U | 0.5 U |
| Acetone | 700 | ND | NS | 10 U | -- | -- | 10 U | -- | -- | 10 U | 0.5 U | 5 U |

## Table 4-2

## Groundwater Monitoring Wells
## Monitored Natural Attenuation Parameter Results - June 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Monitoring Well ID | Total VOCs (µg/L) | Alkalinity (mg/L) | COD (mg/L) | Nitrate (mg/L) | Sulfate (mg/L) | Ferrous Iron (mg/L) | Manganese (mg/L) | TOC (mg/L) | Ethane (µg/L) | Ethene (µg/L) | DO (mg/L) | ORP (mv) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BPMW-001 | ND | 9.3 | 94 | 0.37 | 14 | 8.6 | 0.21 | 15 | ND | ND | 5.11 | 367 |
| FAMW-001 | ND | 7.9 | 20 | ND | 11 | 1.8 | 0.21 | 4.1 | ND | ND | 0.54 | 410 |
| FAMW-002 | ND | ND | 28 | 0.05 | ND | 0.15 | 0.012 | 3.9 | ND | ND | 3.73 | 446 |
| GAMW-001 | 1 | 19 | 7.6 | 0.061 | ND | 0.12 | 0.0031 | 2.8 | ND | ND | 5.86 | 402 |
| GTMW-001 | 1 | 62 | 46 | 1.1 | 12 | ND | 0.55 | 18 | ND | ND | 0.1 | 565 |
| MW-01 | ND | ND | ND | ND | 9.5 | ND | 0.013 | 1.6 | ND | ND | 5.34 | 667 |
| MW-02 | 191 | 29 | 7.3 | 0.45 | 20 | ND | 0.0061 | 0.85 | ND | ND | 3.45 | 652 |
| MW-03 | ND | 12 | 11 | 1.4 | 15 | ND | 0.0032 | 2.5 | ND | ND | 6.62 | 699 |
| MW-04 | ND | 23 | 11 | 0.23 | 15 | 0.38 | 0.049 | 0.94 | ND | ND | 5.44 | 451 |
| MW-05 | 156 | 9.8 | 6.8 | 0.12 | 8.8 | 0.17 | 0.018 | 1.6 | ND | ND | 8.55 | 667 |
| MW-06 | ND | 5.8 | 4.7 | 0.036 | 8.4 | 0.35 | 0.0066 | 0.66 | ND | ND | 11.65 | 683 |
| MW-07 | 356 | 21 | 9.9 | ND | 11 | 3.6 | 0.25 | 0.94 | ND | ND | 0.39 | 212 |
| MW-08b | ND | 8.3 | 5.2 | 0.058 | 9.1 | 0.89 | 0.05 | 1.4 | ND | ND | 3.9 | 293 |
| MW-09 | ND | 24 | 13 | 0.12 | 8 | 0.12 | 0.05 | 1.3 | ND | ND | 5.2 | 388 |
| MW-10 | 1884 | 130 | 10 | 0.82 | 29 | 0.11 | 0.018 | 0.7 | ND | ND | 4.37 | 551 |
| MW-101 | 1 | 34 | 6.2 | 0.22 | 20 | 0.11 | 0.014 | 0.81 | ND | ND | 4.56 | 542 |
| MW-102 | ND | 170 | 69 | ND | 13 | 14 | 9.4 | 14 | ND | ND | 3.14 | 277 |
| MW-103 | ND | 43 | 22 | 0.32 | 11 | 0.16 | 0.0092 | 2 | ND | ND | 3.62 | 308 |
| MW-105 | 15 | 67 | 78 | 0.46 | 5.1 | 8.9 | 1.5 | 19 | ND | ND | 9.49 | 473 |
| MW-11 | ND | 29 | 23 | ND | 120 | 0.32 | 0.0014 | 0.61 | ND | ND | 1.13 | 313 |
| MW-12 | 206 | 110 | 8.2 | 0.21 | 20 | 0.17 | 0.0021 | 0.48 | ND | ND | 4.87 | 388 |
| MW-13 | 110 | 88 | 15 | 0.083 | 4.5 | 0.58 | 0.0072 | 2.4 | ND | ND | 7.78 | 369 |
| MW-14 | ND | 67 | 9.7 | ND | 6.3 | ND | 0.51 | 1.1 | ND | ND | 6.88 | 352 |
| MW-140 | 4 | 60 | 23 | 0.43 | 19 | 0.32 | 0.026 | 9.5 | ND | ND | 2.98 | 318 |
| STMW-001 | 19 | 15 | 12 | 2.5 | 17 | 0.12 | 0.32 | 1.1 | ND | ND | 4.86 | 469 |
| STMW-002 | 13 | 23 | 30 | 0.079 | 11 | 1.2 | 0.29 | 10 | ND | ND | 0.4 | 692 |
| STMW-003 | ND | 27 | 38 | ND | 13 | 6.4 | 0.22 | 9.5 | ND | ND | 0.1 | 462 |
| STMW-004 | ND | 97 | 16 | 1.8 | 16 | 0.15 | ND | 0.64 | ND | ND | 4.92 | 332 |
| STMW-005 | ND | 11 | 21 | ND | ND | ND | 0.022 | 2.8 | ND | ND | 7.65 | 472 |
| STMW-006 | ND | 45 | 18 | 0.5 | 2.7 | 0.17 | ND | 2.6 | ND | ND | 4.96 | 606 |
| TSMW-001 | ND | 8.4 | 7.3 | 0.2 | 16 | ND | 0.082 | 5.4 | ND | ND | 8.09 | 461 |
| TSMW-002 | 1 | ND | 8.8 | ND | 5.2 | ND | 0.0059 | 1.7 | ND | ND | 7.08 | 499 |
| TSMW-003 | 8 | 13 | 18 | 0.22 | 8.5 | ND | 0.019 | 2.4 | ND | ND | 8.01 | 394 |
| TW-01 | 2.4 | NM | NM | NM | NM | ND | ND | NM | NM | NM | 0.32 | 338 |

Notes:

COD = Chemical oxygen demand.

DO = Dissolved oxygen.

µg/L = Micrograms/liter.

mg/L = Milligrams/liter.

mV = MilliVolts.

ND = Compound not detected in sample above method reporting limit.

NM = Parameter not measured in accordance with the Sampling and Analysis Plan (WESTON, 2002).

ORP = Oxidation reduction potential (oxidation-reduction potential value has been SHE-corrected).

TOC = Total organic carbon.

VOC = volatile organic compound.

**Table 4-3**

**June 2003 Field Water Quality Parameters**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, ME**

| Monitor Well Location ID | Sample Date | Temperature (°C) | Specific Conductance[1] (µS/cm) | pH | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential[2] (mV) | Turbidity (NTU) | Purge Water Headspace with PID (ppm) |
|---|---|---|---|---|---|---|---|---|
| MW-101 | 6/16/2003 | 10.54 | 128 | 6.88 | 4.56 | 542 | 75 | BKG |
| MW-102 | 6/17/2003 | 7.98 | 427 | 6.18 | 3.14 | 277 | 420 | BKG |
| MW-103 | 6/17/2003 | 8.01 | 430 | 6.22 | 3.62 | 308 | 116 | BKG |
| MW-105 | 6/16/2003 | 23.9 | 50 | 6.90 | 9.49 | 473 | 190 | BKG |
| MW-140 | 6/16/2003 | 8.32 | 367 | 6.41 | 2.98 | 318 | 26 | BKG |
| TSMW-001 | 6/17/2003 | 9.36 | 67 | 5.42 | 8.09 | 461 | 100 | BKG |
| TSMW-002 | 6/17/2003 | 9.65 | 42 | 5.37 | 7.08 | 499 | 4.2 | BKG |
| TSMW-003 | 6/17/2003 | 9.3 | 75 | 5.51 | 8.01 | 394 | 8.8 | BKG |
| GAMW-001 | 6/16/2003 | 11.17 | 46 | 5.86 | 5.86 | 402 | 2 | BKG |
| BPMW-001 | 6/17/2003 | 12.73 | 80 | 5.51 | 5.11 | 367 | 46 | BKG |
| GTMW-001 | 6/17/2003 | 20.08 | 299 | 6.20 | 0.10 | 565 | 11 | BKG |
| FAMW-001 | 6/17/2003 | 9.44 | 78 | 5.40 | 0.54 | 410 | 11 | BKG |
| FAMW-002 | 6/17/2003 | 9.44 | 50 | 5.32 | 3.73 | 446 | 110 | BKG |
| STMW-001 | 6/16/2003 | 11.29 | 148 | 6.01 | 4.86 | 469 | 46 | BKG |
| STMW-002 | 6/16/2003 | 9.05 | 90 | 5.42 | 0.40 | 692 | 75 | BKG |
| STMW-003 | 6/16/2003 | 9.14 | 170 | 5.81 | 0.10 | 462 | 270 | BKG |
| STMW-004 | 6/17/2003 | 8.12 | 367 | 6.54 | 4.92 | 332 | 26 | BKG |
| STMW-005 | 6/18/2003 | 6.52 | 51 | 5.47 | 7.65 | 472 | 25 | BKG |
| STMW-006 | 6/18/2003 | 8.18 | 137 | 6.31 | 4.96 | 606 | 33 | BKG |
| MW-01 | 6/17/2003 | 8.61 | 51 | 5.33 | 5.34 | 667 | 0.6 | BKG |
| MW-02 | 6/17/2003 | 10.45 | 125 | 6.06 | 3.45 | 652 | 1.8 | BKG |
| MW-03 | 6/17/2003 | 7.9 | 95 | 5.74 | 6.62 | 699 | 0.9 | BKG |
| MW-04 | 6/18/2003 | 8.11 | 85 | 6.49 | 5.44 | 451 | 76 | BKG |
| MW-05 | 6/17/2003 | 8.43 | 71 | 5.75 | 8.55 | 667 | 7 | 7 |
| MW-06 | 6/17/2003 | 8.80 | 50 | 5.78 | 11.65 | 683 | 5.7 | BKG |
| MW-07 | 6/17/2003 | 8.97 | 126 | 6.02 | 0.39 | 212 | 18.6 | 19 |
| MW-08b | 6/17/2003 | 7.01 | 60 | 5.57 | 3.90 | 293 | 6.1 | BKG |
| MW-09 | 6/16/2003 | 9.66 | 71 | 6.22 | 5.20 | 388 | 14 | BKG |
| MW-10 | 6/18/2003 | 11.8 | 282 | 7.47 | 4.37 | 551 | 11 | 89 |
| MW-11 | 6/16/2003 | 7.71 | 4,620 | 9.56 | 1.13 | 313 | 4.4 | 1 |
| MW-12 | 6/16/2003 | 7.98 | 769 | 8.96 | 4.87 | 388 | 13 | 19 |
| MW-13 | 6/16/2003 | 10.13 | 160 | 9.14 | 7.78 | 369 | 79 | 3 |
| MW-14 | 6/16/2003 | 9.29 | 142 | 6.62 | 6.88 | 352 | 1.6 | BKG |
| TW-01 | 6/16/2003 | 7.09 | 234 | 9.16 | 0.32 | 338 | 1.8 | BKG |

Notes: 1. Microsiemens per centimeter (µS/cm) at 25 °C.
2. Oxidation-reduction potential value has been SHE-corrected.
BKG = Background
mg/L = Milligrams per liter.
mV = MilliVolt.
NTU = nephelometric turbidity unit
PID = Photoionization detector.

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-01 Before Filter | | DW-03 Before Filter | | DW-04 Before Filter | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | 0.92 | **6.4** | **6.1** | **65** | **60** |
| Tetrachloroethene | 5 | NS | ND | ND | ND | 0.66 | 0.88 |
| cis-1,2-Dichloroethene | 70 | NS | ND | 0.33 J | 0.34 J | 3.7 J | 3.2 J |
| trans-1,2-Dichloroethene | 100 | NS | ND | ND | ND | ND | 0.5 |
| Dichlorodifluoromethane | 1,400 | NS | ND | ND | ND | ND | ND |
| Toluene | 1,000 | NS | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 70 | NS | ND | ND | ND | ND | ND |
| Methyl tert-butyl ether | 35 | NS | ND | ND | ND | ND | ND |
| Chloroform | 57 | NS | ND | ND | ND | ND | 0.45 J |

Notes: 1. All values shown are in units of micrograms per liter (µg/L).

2. * Whichever is lowest.

3. Concentrations in **BOLD** are in excess of Maine Department of Environmental Protection (MEDEP) or U.S. Environmental Protection Agency (EPA) groundwater standard.

J = Estimated value

MCL = Maximum Contaminant Level

MEG = Maximum Exposure Guideline

ND = Compound not detected; reporting limit not available.

NS = Not sampled.

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-07 | | DW-09 Before Filter | | DW-12 Before Filter | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | ND | NS | 0.71 | 2.3 | 2.6 |
| Tetrachloroethene | 5 | NS | ND | NS | ND | ND | 0.36 J |
| cis-1,2-Dichloroethene | 70 | NS | ND | NS | ND | 0.35 J | 0.44 J |
| trans-1,2-Dichloroethene | 100 | NS | ND | NS | ND | ND | ND |
| Dichlorodifluoromethane | 1,400 | NS | 0.82 | NS | ND | 0.52 | 0.56 |
| Toluene | 1,000 | NS | ND | NS | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | NS | ND | ND | ND |
| 1,1-Dichloroethane | 70 | NS | ND | NS | ND | ND | ND |
| Methyl tert-butyl ether | 35 | NS | ND | NS | ND | ND | ND |
| Chloroform | 57 | NS | ND | NS | ND | ND | ND |

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-13 (New Deep Bedrock Well) | | DW-15 | | DW-20 | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | ND | NS | ND | NS | ND |
| Tetrachloroethene | 5 | NS | ND | NS | ND | NS | ND |
| cis-1,2-Dichloroethene | 70 | NS | ND | NS | ND | NS | ND |
| trans-1,2-Dichloroethene | 100 | NS | ND | NS | ND | NS | ND |
| Dichlorodifluoromethane | 1,400 | NS | ND | NS | ND | NS | ND |
| Toluene | 1,000 | NS | 0.26 J | NS | ND | NS | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | NS | ND | NS | ND |
| 1,1-Dichloroethane | 70 | NS | ND | NS | ND | NS | ND |
| Methyl tert-butyl ether | 35 | NS | ND | NS | 15 | NS | ND |
| Chloroform | 57 | NS | ND | NS | ND | NS | 0.38 J |

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-21 | | DW-23 Before Filters | | DW-23 Between Filters | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | ND | 1.6 | 2.3 | ND | 2.2 |
| Tetrachloroethene | 5 | NS | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 70 | NS | ND | 4.3 | 5.1 | ND | 4.4 |
| trans-1,2-Dichloroethene | 100 | NS | ND | ND | 0.28 J | ND | ND |
| Dichlorodifluoromethane | 1,400 | NS | ND | ND | ND | ND | ND |
| Toluene | 1,000 | NS | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | 0.66 | 0.74 | ND | 0.7 |
| 1,1-Dichloroethane | 70 | NS | ND | 0.37 J | 0.36 J | ND | 0.33 J |
| Methyl tert-butyl ether | 35 | NS | 13 | ND | ND | ND | ND |
| Chloroform | 57 | NS | ND | ND | ND | ND | ND |

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-25 | | DW-29 | | DW-30 | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | ND | NS | ND | NS | ND |
| Tetrachloroethene | 5 | NS | ND | NS | ND | NS | ND |
| cis-1,2-Dichloroethene | 70 | NS | ND | NS | ND | NS | ND |
| trans-1,2-Dichloroethene | 100 | NS | ND | NS | ND | NS | ND |
| Dichlorodifluoromethane | 1,400 | NS | ND | NS | ND | NS | ND |
| Toluene | 1,000 | NS | ND | NS | ND | NS | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | NS | ND | NS | ND |
| 1,1-Dichloroethane | 70 | NS | ND | NS | ND | NS | ND |
| Methyl tert-butyl ether | 35 | NS | ND | NS | ND | NS | ND |
| Chloroform | 57 | NS | 0.51 | NS | 0.36 J | NS | 1.2 |

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-31 | | DW-33 | | DW-38 | |
|---|---|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | 0.88 | NS | 0.55 | NS | ND |
| Tetrachloroethene | 5 | NS | ND | NS | ND | NS | ND |
| cis-1,2-Dichloroethene | 70 | NS | 1.3 | NS | 0.89 | NS | ND |
| trans-1,2-Dichloroethene | 100 | NS | ND | NS | ND | NS | ND |
| Dichlorodifluoromethane | 1,400 | NS | ND | NS | ND | NS | ND |
| Toluene | 1,000 | NS | ND | NS | ND | NS | 0.36 J |
| 1,1,1-Trichloroethane | 200 | NS | 0.29 J | NS | 0.27 J | NS | ND |
| 1,1-Dichloroethane | 70 | NS | ND | NS | ND | NS | ND |
| Methyl tert-butyl ether | 35 | NS | ND | NS | ND | NS | ND |
| Chloroform | 57 | NS | ND | NS | 0.46 J | NS | ND |

## Table 4-4

## Summary of VOCs Detected in Drinking Water Wells in 2003
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | DW-40 | | WY-03 | |
|---|---|---|---|---|---|
| | | Mar-03 | Jun-03 | Mar-03 | Jun-03 |
| Trichloroethene | 5 | NS | ND | NS | 0.69 |
| Tetrachloroethene | 5 | NS | ND | NS | ND |
| cis-1,2-Dichloroethene | 70 | NS | ND | NS | ND |
| trans-1,2-Dichloroethene | 100 | NS | ND | NS | ND |
| Dichlorodifluoromethane | 1,400 | NS | ND | NS | ND |
| Toluene | 1,000 | NS | ND | NS | ND |
| 1,1,1-Trichloroethane | 200 | NS | ND | NS | ND |
| 1,1-Dichloroethane | 70 | NS | ND | NS | ND |
| Methyl tert-butyl ether | 35 | NS | ND | NS | ND |
| Chloroform | 57 | NS | 0.42 J | NS | ND |

**Table 4-5**

**Residential Drinking-Water Wells**
**Monitored Natural Attenuation Parameter Results**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, ME**

| Monitoring Well ID | Total VOCs (µg/L) | Alkalinity (mg/L) | COD (mg/L) | Nitrate (mg/L) | Sulfate (mg/L) | Ferrous Iron (mg/L) | Manganese (mg/L) | TOC (mg/L) | Ethane (µg/L) | Ethene (µg/L) | DO (mg/L) | ORP [3] (mv) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-01 | 0.92 | 110 | 5.6 | 0.12 | 24 | ND | ND | 0.49 | ND | ND | 2.48 | 127 |
| DW-02 | Not Sampled. House was in the process of being sold/bought and plumbing system had not been re-connected yet. | | | | | | | | | | | |
| DW-03 | 6.44 | 110 | 7.8 | 0.25 | 8.6 | ND | 0.0051 | 0.66 | ND | ND | 5.72 | 579 |
| DW-04 | 66.36 | 130 | 11 | 0.34 | 20 | 0.14 | ND | 0.48 | ND | ND | 5.16 | 600 |
| DW-05 | ND | 26 | ND | 0.88 | 8 | ND | 0.038 | 1.8 | ND | ND | 9.8 | 581 |
| DW-06 | ND | 57 | ND | 0.042 | 3.1 | ND | 0.014 | 0.6 | ND | ND | 7.29 | 556 |
| DW-07 | 0.82 | 140 | 9.2 | 0.041 | 27 | ND | 0.018 | 0.93 | ND | ND | 6.98 | 520 |
| DW-08 | ND | 85 | 7.7 | 0.19 | 5.4 | ND | 0.17 | 0.52 | ND | ND | 7.09 | 527 |
| DW-09 | 0.71 | 120 | 5.6 | 0.11 | 11 | ND | 0.0025 | 0.58 | ND | ND | 7.83 | 554 |
| DW-11 | Not Sampled. Renter indicated there was a new property owner. Right-of-entry not issued/signed yet. | | | | | | | | | | | |
| DW-12 | 3.96 | 100 | 4.7 | 0.46 | 5.4 | ND | 0.013 | 0.78 | ND | ND | 6.97 | 533 |
| DW-13 (01) [1] | ND | 27 | 6.2 | 0.48 | 7.2 | ND | 0.05 | 1.5 | ND | ND | 11.05 | 430 |
| DW-13 (02) [2] | 0.26 | 170 | 10 | ND | ND | ND | 0.036 | 0.51 | ND | ND | 12.78 | 503 |
| DW-15 | 15 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 2.01 | -26 |
| DW-16 | ND | NM | NM | NM | NM | NM | NM | NM | NM | NM | 4.19 | 531 |
| DW-17 | ND | NM | NM | NM | NM | NM | NM | NM | NM | NM | 7.38 | 472 |
| DW-18 | Not Sampled. House not occupied on consistent basis, and outside spigot was not operating. | | | | | | | | | | | |
| DW-19 | ND | NM | NM | NM | NM | NM | NM | NM | NM | NM | 7.2 | 662 |
| DW-20 | 0.38 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 8.98 | 672 |
| DW-21 | 13 | NM | NM | NM | NM | NM | NM | NM | NM | NM | 3.13 | 788 |
| DW-22 | ND | 22 | 5.6 | 1.6 | 13 | ND | 0.089 | 1 | ND | ND | 6.4 | 589 |
| DW-23 | 8.78 | 71 | 9.2 | 0.11 | 10 | ND | ND | 0.49 | ND | ND | 2.9 | 520 |
| DW-24 | ND | 81 | 5.6 | ND | 22 | ND | ND | 0.24 | ND | ND | 4.35 | 564 |
| DW-25 | 0.51 | 63 | 12 | 0.17 | 5.6 | ND | ND | 0.47 | ND | ND | 6.69 | 488 |
| DW-28 | ND | 81 | ND | 0.046 | 8.5 | ND | ND | 0.41 | ND | ND | 4.7 | 495 |
| DW-29 | 0.36 | ND | 3.6 | ND | 4.8 | 0.2 | 0.016 | 1 | ND | ND | 10.03 | 470 |
| DW-30 | 1.2 | 5.6 | 9.7 | 0.059 | 4.8 | ND | 0.0025 | 0.76 | ND | ND | 9.88 | 525 |
| DW-31 | 2.47 | 67 | 4.2 | 0.039 | 3.7 | ND | 0.0028 | 1.5 | ND | ND | 9.21 | 609 |
| DW-32 | ND | 24 | 5.7 | 0.27 | 5.3 | ND | 0.0025 | 0.83 | ND | ND | 8.85 | 521 |
| DW-33 | 2.17 | 83 | 4.2 | 0.056 | 4.6 | ND | 0.0029 | 0.47 | ND | ND | 5.65 | 317 |
| DW-34 | ND | 51 | 6.7 | 0.72 | 8 | ND | 0.00073 | 0.41 | ND | ND | 8.62 | 574 |
| DW-36 | ND | 71 | 9.3 | ND | 15 | 0.26 | 0.12 | 0.45 | ND | ND | 3.17 | 364 |
| DW-37 | Not Sampled. House was listed for sale and plumbing has been disconnected (at least at outside spigot). | | | | | | | | | | | |
| DW-38 | 0.36 | 110 | 6.2 | ND | 4.7 | ND | 0.013 | 1.1 | ND | ND | 6.41 | 538 |
| DW-39 | ND | 9.4 | 6.2 | 0.099 | 3.8 | ND | 0.0072 | 0.84 | ND | ND | 7.34 | 572 |
| DW-40 | 0.42 | 62 | ND | ND | 4.4 | ND | ND | 0.5 | ND | ND | 6.56 | 516 |
| WY-03 | 0.69 | 100 | 7.2 | 0.53 | 25 | ND | 0.0012 | 0.69 | ND | ND | 7.29 | 472 |

Notes: Parameter sample location is prior to treatment at all locations.
1. First sample collected at location DW-13 from established sampling location, which is a dug well.
2. Second sample collected at residential location DW-13 from newly installed drilled well (approx. 300 ft deep).
3. Oxidation-reduction potential (ORP) value has been SHE-corrected.
NM = Parameter not measured in accordance with the Sampling and Analysis Plan (WESTON, 2002).
COD = Chemical oxygen demand.
DO = Dissolved oxygen.
µg/L = Micrograms/liter.
mg/L = Milligrams/liter.
mV = MilliVolts.
ND = Compound not detected in sample above method reporting limit.
TOC = Total organic carbon.
VOC = volatile organic compound

## Table 4-6

## VOCs Detected During Packer Permeability Testing
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | MW-07 Packered Interval (ft bgs) | | | | MW-10 Packered Interval (ft bgs) | | |
|---|---|---|---|---|---|---|---|---|
| | | 15-25 | 44-54 | 75-85 | 115-125 | 130-140 | 150-160 | 164-174 |
| Trichloroethene | 5 | **472** | **392** | **376** | **501** | **3,460** | **3,450** | **3,400** |
| Tetrachloroethene | 5 | 2 U | 2 U | 2 U | 2 U | **17** | **17** | **15** |
| cis-1,2-Dichloroethene | 70 | 3 | 3 | 3 | 3 | 61 | 60 | 56 |
| trans-1,2-Dichloroethene | 100 | 2 U | 2 U | 2 U | 2 U | 2 | 3 | 2 |
| Toluene | 1,000 | 2 U | 2 U | 2 U | 2 U | 2 | 2 | 1 J |
| Naphthalene | 20 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Methyl ethyl ketone (MEK) | 1,440 | 10 U | 18 | 8 J | 10 U | 29 | 9 J | 10 U |
| Styrene | 100 | 2 U | 2 U | 2 U | 2 U | 1 J | 2 U | 2 U |
| Acetone | 700 | 10 U | 34 | 14 | 10 U | 59 | 18 | 10 U |

Notes: 1. All concentrations shown in units of micrograms per liter (µg/L).

2. Concentrations in **BOLD** are in excess of Maine Department of Environmental Protection (MEDEP) or U.S. Environmental Protection Agency (EPA) groundwater standard.

3. * Whichever is lowest.

ft bgs = Feet below ground surface.

J = Compound detected at concentration below reporting limit. Value is estimated.

U = Not detected at associated numerical reporting limit.

MCL = Maximum Contaminant Level

MEG = Meximum Exposure Guideline

## Table 4-6

## VOCs Detected During Packer Permeability Testing
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | MW-11 Packered Interval (ft bgs) | | | | MW-12 Packered Interval (ft bgs) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 97-107 | 147-157 | 157-167 | 183-193 | 40-55 | 83-98 | 161-176 | 207-222 |
| Trichloroethene | 5 | 4 | **5** | 3 | 2 U | **161** | **297** | **279** | **276** |
| Tetrachloroethene | 5 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 | 1 J | 2 |
| cis-1,2-Dichloroethene | 70 | 2 U | 2 U | 2 U | 2 U | 10 | 15 | 15 | 15 |
| trans-1,2-Dichloroethene | 100 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Toluene | 1,000 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Naphthalene | 20 | 2 U | 2 U | 2 U | 2 | 2 U | 2 U | 2 U | 2 U |
| Methyl ethyl ketone (MEK) | 1,440 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| Styrene | 100 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Acetone | 700 | 15 | 12 | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |

## Table 4-6

## VOCs Detected During Packer Permeability Testing
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, Maine

| Volatile Organic Compound | MEDEP MEG or EPA MCL* (µg/L) | MW-14 Packered Interval (ft bgs) 38-48 | 50-60 | 63-73 | 73-83 |
|---|---|---|---|---|---|
| Trichloroethene | 5 | 2 U | 2 U | 2 U | 2 U |
| Tetrachloroethene | 5 | 2 U | 2 U | 2 U | 2 U |
| cis-1,2-Dichloroethene | 70 | 2 U | 2 U | 2 U | 2 U |
| trans-1,2-Dichloroethene | 100 | 2 U | 2 U | 2 U | 2 U |
| Toluene | 1,000 | 1 J | 1 J | 2 | 1 J |
| Naphthalene | 20 | 2 U | 2 U | 2 U | 2 U |
| Methyl ethyl ketone (MEK) | 1,440 | 8 J | 15 | 8 J | 9 J |
| Styrene | 100 | 2 U | 2 U | 2 U | 2 U |
| Acetone | 700 | 15 | 22 | 13 | 15 |

## Table 4-7

## QA/QC Sample Summary
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| VOC | MEDEP MEG or EPA MCL* (µg/L) | MW-05 | | MW-07 | | MW-10 | |
|---|---|---|---|---|---|---|---|
| | | Field Sample | Duplicate | Field Sample | Duplicate | Field Sample | Duplicate |
| | | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 |
| Trichloroethene | 5 | **156** | **161** | **351** | **360** | **1,820** | **1,880** |
| Tetrachloroethene | 5 | 2 U | 2 U | 2 U | 2 U | **12** | **12** |
| cis-1,2-Dichloroethene | 70 | 2 | 2 | 3 | 3 | 49 | 49 |
| trans-1,2-Dichloroethene | 100 | 2 U | 2 U | 2 U | 2 U | 1 J | 1 J |
| 1,1,1-Trichloroethane | 200 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Toluene | 1,000 | 2 U | 2 U | 2 | 1 J | 2 | 2 |
| Bromoform | 44 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Chloroform | 57 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Dibromochloromethane | 4 | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |

Notes: 1. All values shown are in units of micrograms per liter (µg/L).

2. Concentrations in **BOLD** are in excess of Maine Department of Environmental Protection (MEI or U.S. Environmental Protection Agency (EPA) groundwater standard.

3. * Whichever is lowest.

J = Compound detected below reporting limit; concentration is estimated.

## Table 4-7

## QA/QC Sample Summary
## Former Bucks Harbor AFRTS/GATR Sites
## Machiasport, ME

| VOC | MEDEP MEG or EPA MCL* (µg/L) | DW-03 | | DW-04 | | DW-12 | | DW-23 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Field Sample | Duplicate | Field Sample | Duplicate | Field Sample | Duplicate | Field Sample | Duplicate |
| | | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 | Jun-03 |
| Trichloroethene | 5 | **6.1** | **6.2** | **60** | **59** | 2.6 | 2.5 | 2.3 | 2.3 |
| Tetrachloroethene | 5 | 0.5 U | 0.5 U | 0.88 | 0.81 | 0.36 J | 0.39 J | 0.36 J | 0.5 U |
| cis-1,2-Dichloroethene | 70 | 0.34 J | 0.33 J | 3.2 | 3.4 | 0.44 J | 0.44 J | 5.1 | 5.2 |
| trans-1,2-Dichloroethene | 100 | 0.5 U | 0.5 U | 0.5 U | 0.57 | 0.5 U | 0.5 U | 0.28 J | 0.31 J |
| 1,1,1-Trichloroethane | 200 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.74 | 0.75 |
| Toluene | 1,000 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Bromoform | 44 | 0.5 U | 0.5 U | 0.99 | 0.86 | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Chloroform | 57 | 0.5 U | 0.5 U | 0.45 J | 0.44 J | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Dibromochloromethane | 4 | 0.5 U | 0.5 U | 0.34 J | 0.29 J | 0.56 | 0.63 | 0.5 U | 0.5 U |

DEP)

# SECTION 4

# FIGURES


| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-20 | chloroform | 57 | ND | NS | ND | NS | ND | ND | NS | 0.32J | NS | 0.38J |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-18 | VOCs | NS | NS | NS | ND | NS | NS | NS | NS | NS | NS |

| SAMPLE | ANALYTE | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|
| DW-6 | VOCs | ND | NS | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-9 | trichloroethene | 5 | 0.7 | NS | 0.71 | NS | 0.75 | 0.75 | NS | 0.74 | NS | 0.71 |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-15 | t-amylmethylether | NA | ND | NS | 1.4 | NS | ND | ND | NS | ND | NS | ND |
| | MTBE | 35 | 6.3 | NS | 95 | NS | 18 | 11 | NS | 9.5 | NS | 15 |
| | TOLUENE | 1000 | ND | NS | 0.37J | NS | ND | ND | NS | ND | NS | ND |
| | XYLENE | 10,000 | ND | NS | 0.48J | NS | ND | ND | NS | ND | NS | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-13 | TOLUENE | 1000 | NS | ND | 0.41J | NS | NS | ND | NS | NS | NS | 0.26J |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-11 | VOCs | ND | NS | ND | NS | NS | ND | NS | NS | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-30 | chloroform | 57 | 1.1 | NS | 1.1 | NS | NS | 1.6 | NS | NS | NS | 1.2 |
| | trichloroethene | 5 | ND | NS | ND | NS | NS | ND | NS | NS | NS | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-12 | cis-1,2-dichloroethene | 70 | ND/ND | ND | ND | 0.41J | ND/ND | 0.56/0.57 | 0.61 | ND/0.41J | 0.35J | 0.44J |
| | dichlorodifluoromethane | 1400 | 1.7/1.6 | 1.6 | 1.1 | 0.71 | 1.4/1.6 | 0.61/0.63 | 0.33J | 0.71/0.76 | 0.52 | 0.56 |
| | tetrachloroethene | 5 | ND/ND | ND | ND | ND | ND/ND | ND/ND | 0.25J | ND/ND | ND | 0.36J |
| | trichloroethene | 5 | 0.92/0.91 | 0.86 | 0.80 | 2.8 | 1.1/1.1 | 3.6/3.4 | 3.3 | 2.8/2.4 | 2.3 | 2.6 |
| | xylenes | 10,000 | ND/ND | ND | ND | ND | ND/ND | ND/ND | ND | ND/ND | ND | ND |
| | trans-1,2-DCE | 100 | ND/ND | ND | ND | ND | ND/ND | ND/ND | ND | 0.39J/ND | ND | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-4 | cis-1,2-dichloroethene | 70 | 3.4J/3.4J | 3.5/3.4 | 3.6/3.7 | 3.4/3.4 | 4.3/4.3 | 4.4/4.2 | 5.1/4.6 | 4.5/4.6 | 3.7/3.6 | 3.2J |
| | trans-1,2-dichloroethene | 100 | ND/ND | ND/0.38J | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | 0.5 |
| | tetrachloroethene | 5 | 0.77J/0.76J | 0.78/0.82 | 0.67/0.67 | 1/1 | 0.80/0.78 | 0.74/0.78 | 0.70/0.72 | 0.90/0.90 | 0.66/0.65 | 0.88 |
| | trichloroethene | 5 | 56/56 D | 58/59 D | 67/68 D | 66/67 | 80/78 | 65/71 | 93/88 | 90/91 | 65/65 | 60 |
| | toluene | ND | 0.71/0.77 | ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND |
| | chloroform | 57 | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | 0.34J/0.30J | 0.29J/0.29J | ND/ND | 0.45J |
| | methyl-tert-butyl-ether | 35 | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | ND/ND | 0.42J/0.52 | ND/ND | ND/ND | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WY-3 | bromoform | 44 | ND | NS | ND | NS | 3.8 | 5.0 | NS | ND | NS | NS |
| | dibromochloromethane | 4 | ND | NS | ND | NS | 0.47J | 0.82 | NS | ND | NS | NS |
| | trichloroethene | 5 | 0.64 | NS | 0.57 | NS | 0.65 | 0.63 | NS | 0.63 | NS | 0.69 |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-23 | 1,1-DICHLOROETHANE | 70 | 0.52/ND | 0.40J/0.38J | ND/0.38J | 0.38J/ND | 0.44J/0.45J | ND/ND | 0.47J | 0.37J/0.36J | 0.37J | 0.36J/0.33J |
| | 1,2-DICHLOROETHANE | 4 | ND/ND | ND/ND | ND/ND | ND/0.35J | ND/ND | ND/ND | ND | ND/ND | ND | ND/ND |
| | 1,1-DICHLOROETHENE | 0.6 | ND/ND | 0.25J/0.26J | ND/ND | ND/ND | ND/ND | ND/ND | 0.32J | ND/ND | ND | ND/ND |
| | cis-1, 2-DICHLOROETHENE | 70 | 6.3/6.1 | 5.7/5.6 | 3.4/5.8 | 5.4/5.4 | 6.1/6.3 | 6.7/6.9 | 7.4 | 5.2/4.8 | 4.3 | 5.1/4.4 |
| | trans-1,2-DICHLOROETHENE | 100 | ND/ND | ND/ND | ND/ND | 0.41J/0.37J | 0.39J/ND | ND/ND | ND | ND/ND | ND | 0.28J/ND |
| | 1, 1, 1-TRICHLOROETHANE | 200 | 1.2/1.1 | 0.80/0.78 | 0.48J/0.94 | 0.93/0.95 | 0.84/0.84 | 0.9/1.0 | 1.1 | 0.72/0.66 | 0.66 | 0.74/1 |
| | TRICHLOROETHENE | 5 | 2.8/2.7 | 2.4/2.2 | 1.2/2.7 | 2.5/2.6 | 1.7/1.7 | 2.6/2.6 | 2.9 | 1.4/1.3 | 1.6 | 2.3/2.2 |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-29 | chloroform | 57 | ND | NS | ND | NS | NS | ND | NS | 0.30J | NS | 0.36J |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-31 | cis-1, 2-DICHLOROETHENE | 70 | NS | NS | 1.5 | 1.5 | NS | 1.6 | 1.8 | 1.4 | NS | 1.3 |
| | TRICHLOROETHENE | 5 | NS | NS | 0.98 | 1.1 | NS | 1.0 | 1.1 | 1.0 | NS | 0.88 |
| | 1,1,1-TRICHLOROETHANE | 200 | NS | NS | ND | 0.4J | NS | ND | 0.4J | 0.35J | NS | 0.29J |
| | 1,1-DICHLOROETHANE | 70 | NS | NS | ND | ND | NS | ND | 0.3J | 0.27J | NS | ND |
| | dichlorodiflouromethane | 1400 | NS | NS | ND | ND | NS | ND | ND | 0.76 | NS | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|
| DW-38 | TOLUENE | 1000 | 0.59 | ND | NS | ND | NS | 0.36J |

| SAMPLE | ANALYTE | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|
| DW-34 | VOCs | ND | NS | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-17 | CHLOROFORM | 57 | ND | NS | ND | NS | 0.39J | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-16 | VOCs | ND | NS | ND | NS | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-5 | VOCs | NS | NS | ND | NS | NS | ND | NS | NS | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-21 | BENZENE | 5 | 0.78 | NS | ND | NS | 0.65 | ND/ND | NS | ND | NS | ND |
| | MTBE | 35 | 35 | NS | 36 | NS | 24 | 21/21 | NS | 14 | NS | 13 |
| | t-amylmethylether | NA | ND | NS | ND | NS | ND | ND/ND | NS | 0.55 | NS | ND |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-07 | dichlorodifluoromethane | 1400 | ND | NS | 0.55 | NS | NS | 0.51 | NS | NS | NS | 0.82 |
| | trichloroethene | 5 | ND | NS | ND | NS | NS | ND | NS | NS | NS | ND |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-19 | VOCs | ND | NS | ND | NS | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 |
|---|---|---|---|---|---|---|---|---|---|---|
| DW-8 | VOCs | ND | NS | ND | NS | NS | ND | NS | NS | NS |

| SAMPLE | ANALYTE | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|
| DW-37 | VOCs | ND | NS | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|
| DW-36 | MTBE | 35 | ND | NS | 0.44J | ND | NS | 0.28J | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-3 | bromodichloromethane | 6 | ND | ND | ND | ND | ND | ND | ND/ND | ND | ND | ND |
| | bromoform | 44 | ND | ND | ND | ND | ND | ND | ND/ND | ND | ND | ND |
| | chloroform | 57 | ND | ND | ND | ND | ND | ND | ND/ND | ND | ND | ND |
| | dibromochloromethane | 4 | ND | ND | ND | ND | ND | ND | ND/ND | ND | ND | ND |
| | trichloroethene | 5 | 4.6 | 4.3 | 4.1 | 4.3 | 5.2 | 5.7 | 7.4/7.2 | 0.82 | 6.4 | ND |
| | cis-1-2-dichloroethene | 70 | ND | 0.26J | ND | ND | 0.28J | ND | 0.36J/0.39J | 0.38J | 0.33J | 0.34J |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-1 | trichloroethene | 5 | 0.72 | NS | 0.74 | NS | 0.85 | 0.89 | NS | 0.84 | NS | 0.92 |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-2 | bromomethane | 10 | ND | ND | ND/ND | ND | NS | ND | ND | NS | NS | NS |
| | cis-1,2-dichloroethene | 70 | 0.87 | 0.50 | 0.71/0.74 | 0.53 | NS | 0.97 | 0.38J | NS | NS | NS |
| | tetrachloroethene | 5 | 0.62 | 0.39J | 0.44J/0.44J | 0.4J | NS | 0.53 | ND | NS | NS | NS |
| | trichloroethene | 5 | 15 | 9.1 | 14/13 | 10 | NS | 18 | 9.5 | NS | NS | NS |
| | trichlorofluoromethane | 2100 | ND | ND | ND/ND | ND | NS | ND | ND | NS | NS | NS |
| | xylenes | 10,000 | ND | ND | ND/ND | ND | NS | ND | ND | NS | NS | NS |

| SAMPLE | ANALYTE | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|
| DW-39 | VOCs | ND | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-22 | VOCs | ND | NS | ND | NS | NS | ND | NS | NS | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-32 | CIS-1,2-DICHLOROETHENE | 70 | ND | NS | ND | NS | 0.29J | ND | NS | ND | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|
| DW-40 | CHLOROFORM | 57 | 0.52 | 0.63 | NS | 0.54 | NS | 0.42J |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-33 | cis-1, 2-DICHLOROETHENE | 70 | 1.1 | NS | 1.0/1.0 | NS | 1.3 | 1.4 | NS | 1.2 | NS | 0.89 |
| | TRICHLOROETHENE | 5 | 0.55 | NS | 0.54/0.50 | NS | 0.62 | 0.64 | NS | 0.57 | NS | 0.55 |
| | CHLOROFORM | 57 | ND | NS | ND/ND | NS | 0.40J | ND | NS | 0.46J | NS | 0.46J |
| | 1,1,1-TRICHLOROETHANE | 200 | ND | NS | ND/ND | NS | 0.37J | ND | NS | 0.32J | NS | 0.27J |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|
| DW-28 | CHLOROFORM | 57 | 0.83 | NS | NS | ND | NS | ND | NS | NS |
| | cis-1,2-DCE | 70 | ND | NS | NS | ND | NS | 0.31J | NS | NS |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-25 | CHLOROFORM | 57 | ND | NS | ND | NS | 0.54 | 0.52 | NS | 0.59 | NS | 0.51 |

| SAMPLE | ANALYTE | MEG/MCL (ug/l) | 1/01 | 3/01 | 6/01 | 8/01 | 3/02 | 6/02 | 9/02 | 12/02 | 3/03 | 6/03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW-24 | cis-1, 2-DICHLOROETHENE | 70 | ND | NS | ND | NS | NS | ND | NS | ND | NS | NS |

LEGEND

- BUILDING
- MARSH
- ROAD
- 20 — ELEVATION CONTOUR (FT)
- STREAM
- EDGE OF WATER
- MW-11 — MONITORING WELL LOCATION
- DW-13 — RESIDENTIAL OVERBURDEN WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW-7 — RESIDENTIAL BED ROCK WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW-28 — RESIDENTIAL WATER SUPPLY WELL OF UNKNOWN CONSTRUCTION CURRENTLY INCLUDED IN MONITORING PROGRAM
- TW-1 — TEST WELL LOCATION
- SW/SED-1 — SURFACE WATER/SEDIMENT SAMPLING LOCATION

NOTES:
THE LOWER OF THE MEG AND MCL VALUES IS USED FOR COMPARISON.
WELL LOCATIONS FOR DW-10, DW-14, WY-4, & WY-15 ARE APPROXIMATE.

MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315-3864.

| NO. | DATE | APPR. | REVISION | NO. | DATE | APPR. | REVISION |
|---|---|---|---|---|---|---|---|

# REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS — MANCHESTER, NEW HAMPSHIRE

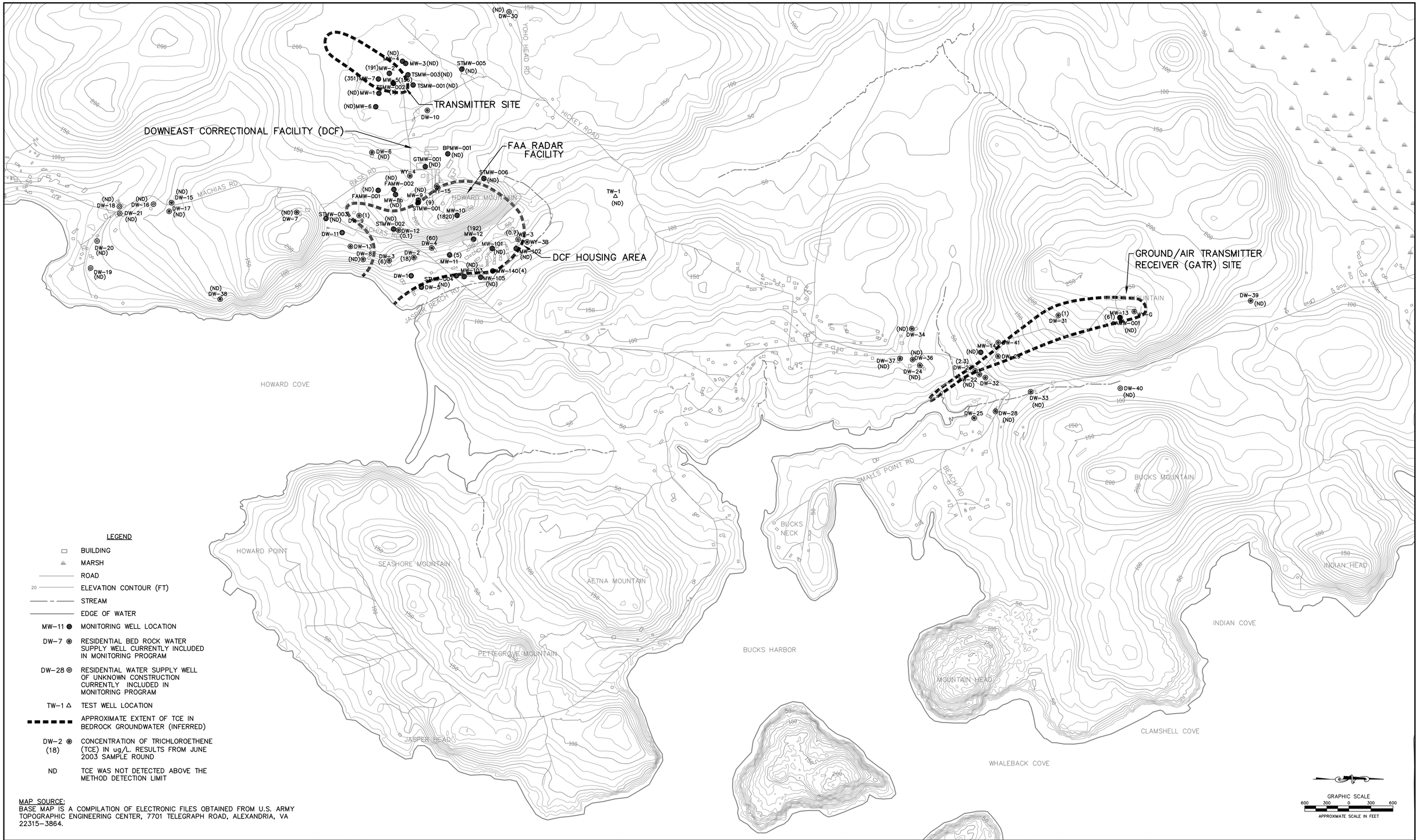
CHECKED | DATE | CLIENT APPROVALS | DATE
DES. ENG.
PROJ. ENG.
PROJ. MGR.
APPROVED
APPROVED | ISSUED FOR | DATE

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

# VOC CONCENTRATIONS IN WATER SUPPLY WELLS JAN 2001 – JUN 2003

DRAWN: AJM
DATE: MAR 2005
FIGURE NO. 4-1
REV. NO.
SCALE: AS SHOWN
W.O. NO. 10971 217 002
SHT. ____ OF ____

M:\Design\DWG\ACOE\BUCKS\2003\Chem Box Map.dwg, FIG4-1, 3/14/2005 2:10:18 PM, girardeb, 1:1




LEGEND

- BUILDING
- MARSH
- ROAD
- 20 — ELEVATION CONTOUR (FT)
- STREAM
- EDGE OF WATER
- MW–11 ● MONITORING WELL LOCATION
- DW–7 ◎ RESIDENTIAL BED ROCK WATER SUPPLY WELL CURRENTLY INCLUDED IN MONITORING PROGRAM
- DW–28 ◎ RESIDENTIAL WATER SUPPLY WELL OF UNKNOWN CONSTRUCTION CURRENTLY INCLUDED IN MONITORING PROGRAM
- TW–1 △ TEST WELL LOCATION
- APPROXIMATE EXTENT OF TCE IN BEDROCK GROUNDWATER (INFERRED)
- DW–2 ◎ (18) CONCENTRATION OF TRICHLOROETHENE (TCE) IN ug/L. RESULTS FROM JUNE 2003 SAMPLE ROUND
- ND TCE WAS NOT DETECTED ABOVE THE METHOD DETECTION LIMIT

MAP SOURCE:
BASE MAP IS A COMPILATION OF ELECTRONIC FILES OBTAINED FROM U.S. ARMY TOPOGRAPHIC ENGINEERING CENTER, 7701 TELEGRAPH ROAD, ALEXANDRIA, VA 22315–3864.

GRAPHIC SCALE
600 300 0 300 600
APPROXIMATE SCALE IN FEET

| NO. | DATE | APPR. | REVISION |
|---|---|---|---|
| NO. | DATE | APPR. | REVISION |

# REMEDIAL INVESTIGATION REPORT
FORMER BUCKS HARBOR AFRTS/GATR AREA
MACHIASPORT, MAINE

WESTON SOLUTIONS — MANCHESTER NEW HAMPSHIRE

| | | CLIENT APPRDVALS | DATE |
|---|---|---|---|
| CHECKED | | | |
| DES. ENG. | | | |
| PROJ. ENG. | | | |
| PROJ. MGR. | | | |
| APPROVED | | | |
| APPROVED | | ISSUED FOR | DATE |

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

# EXTENT OF TCE IN BEDROCK GROUNDWATER JUNE 2003

| DRAWN | DATE | FIGURE NO. | REV. NO. |
|---|---|---|---|
| AJM | MAR 2005 | 4–2 | |
| SCALE | W.O. NO. | SHT. ____ OF ____ | |
| AS SHOWN | 10971 217 002 | | |

M:\Design\UWC\ACOE\BUCKS\2003\Plume Map.dwg, FIG4-2, 3/14/2005 2:21:20 PM, glorakb, 1:1

**Figure 4-3**
**Trichloroethene (TCE) Concentrations (µg/L) versus Time in Residential Drinking Water Wells**

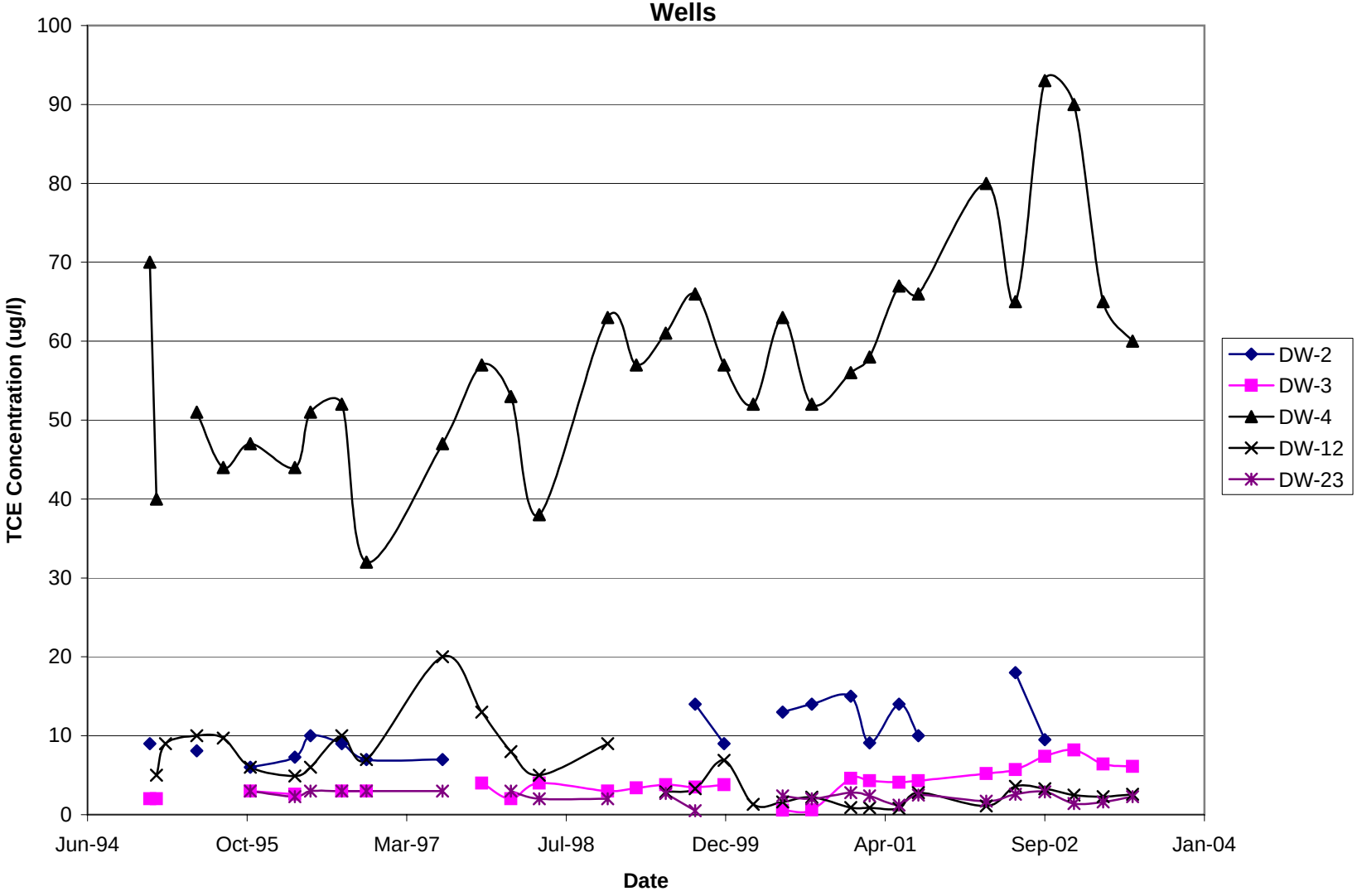
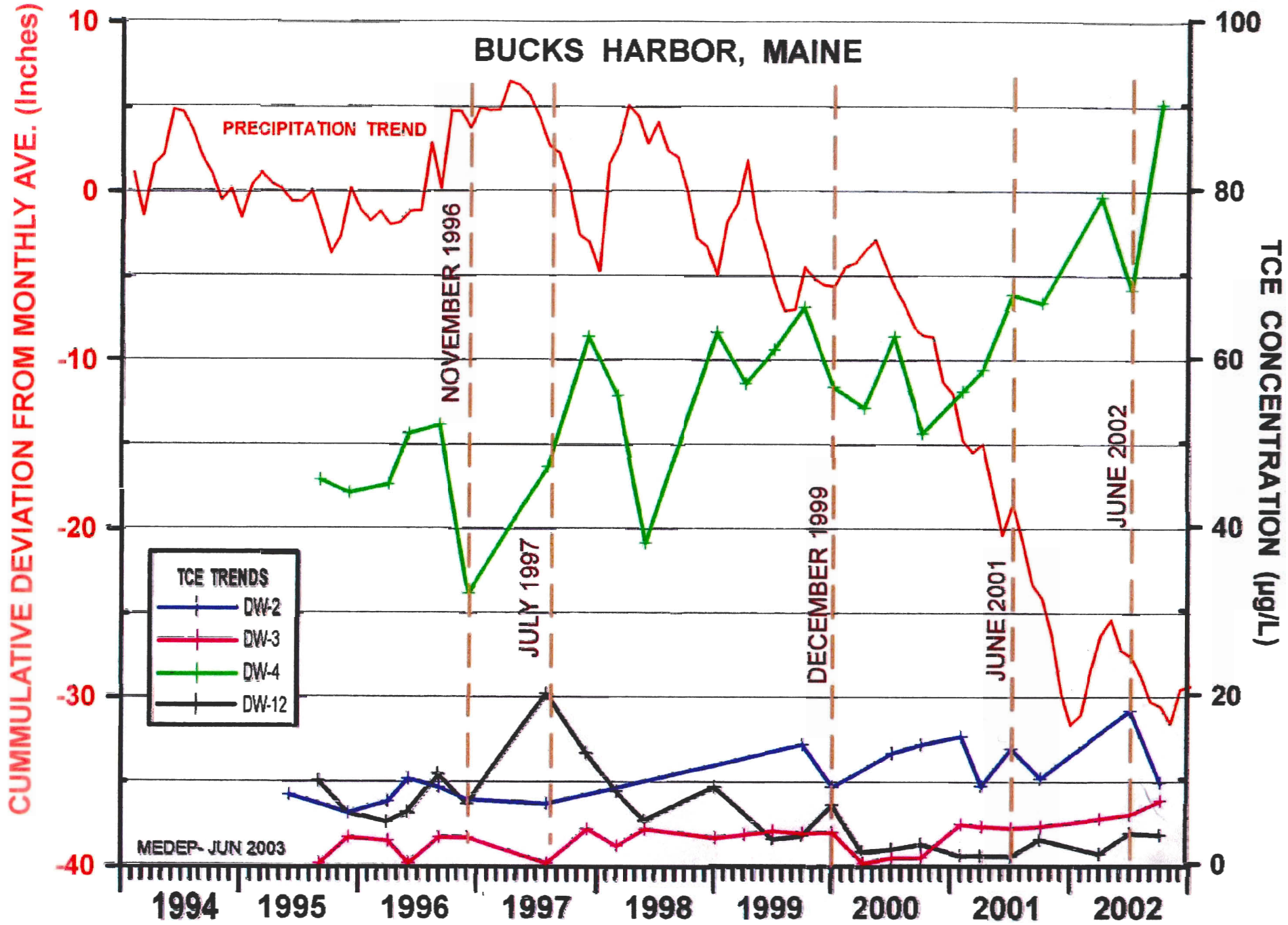


Figure 4-4

# Precipitation and TCE Concentrations in Selected Residential Wells



# SECTION 5

# ENVIRONMENTAL FATE AND TRANSPORT

# 5. ENVIRONMENTAL FATE AND TRANSPORT

## 5.1 INTRODUCTION

This section discusses the physical and chemical processes that affect contaminant migration in the various media at the site. The properties of the chemicals detected at the site are reviewed, and the interactions of these chemicals within groundwater and surface water are summarized. Difficulties and concerns associated with their presence in the subsurface are also presented.

## 5.2 SITE CONTAMINANTS

Based on the historical uses of the Bucks Harbor AFRTS facility, as well as the results of this RI and previous investigations (ABB, 1997a, 1997b, 1997c, 1997d; WESTON, 2000b), it has been determined that chlorinated VOCs are the primary compounds of concern at the site. Specifically, TCE and PCE have been detected in groundwater samples above applicable standards. The MEDEP MEG and EPA MCL for both TCE and PCE in groundwater is 5 µg/L. The MEDEP's action level for each compound is one-half the MCL/MEG, or 2.5 µg/L. Neither TCE nor PCE were detected in surface water or sediment samples collected at the site. No soil sampling was conducted as part of this RI, due to the limited thickness of unsaturated soils in the presumed source areas and the presumed diffuse nature of the initial release(s).

Historically, DRO had also been detected in several monitoring wells and residential drinking water wells in the vicinity of Howard Mountain at concentrations above the MEDEP MEG (there is no EPA MCL for DRO). However, Franklin Environmental Services, under contract to CENAE, conducted UST and soil removal activities at the site in 1995 (ABB, 1997b), and DRO concentrations in groundwater have decreased to below the MEDEP MEG of 50 µg/L (WESTON, 1999b).

Based on this information, TCE and PCE in site soils and groundwater are the primary focus of the fate and transport analysis presented in this section.

## 5.3 CONTAMINANT MIGRATION PATHWAYS

Contaminant presence at the site is apparently the result of operational activities at the site during 1954 to 1984. According to former employees (WESTON, 2002a), TCE and PCE were used

at the site for parts and materials degreasing and equipment cleaning. Small amounts (less than 1 gallon) of spent solvent were routinely discharged to the ground surface at the location(s) at which they were used. In addition, one or more 55-gallon drums of TCE were reportedly kept in the basement of former Building 114, located at the top of Howard Mountain (Figure 2-1). The drums were fitted with a spigot for dispensing the solvent into small containers used to transport it to the various areas where it was to be used. One-half of the basement floor was reportedly dirt, thus, it is possible that spills of solvent from this dispensing area could have infiltrated directly into the subsurface. The basement floor also had floor drains that routed spills through pipes to the face of Howard Mountain. These practices have resulted in the release of small amounts of contaminants over a wide area. Thus, it is unlikely that a concentrated source of TCE or PCE exists in the unsaturated soils at the site. Rather, it is more likely that smaller amounts of residual solvents are located at discrete areas scattered around the site (ABB, 1997d; WESTON, 2002a).

Precipitation falling on the site will tend to flush contaminants from the unsaturated soils and carry them through the bedrock's fracture network to the groundwater both in the dissolved phase, as well as NAPL. A portion of the NAPL and dissolved phases could have migrated into dead-end fractures within the bedrock, becoming residual contamination with little significant movement. Once the compounds reach the saturated zone, the primary migration pathway is via groundwater flow through the fractured bedrock (Gorelick et al., 1993; Fetter, 1994). The natural hydraulic flow of groundwater, combined with the use of groundwater as a drinking water source by local residents, government agencies, and businesses, has resulted in the migration of dissolved TCE and PCE away from the source areas (Howard and Miller Mountains and the Transmitter site) and toward local groundwater discharge areas (Howard Cove and Bucks Harbor). Surface water and sediment sampling in the smaller surface water bodies between the source area and the major discharge areas did not detect any TCE or PCE.

## 5.4 FATE AND TRANSPORT CHARACTERISTICS OF SITE CONTAMINANTS

An evaluation of the environmental fate and transport characteristics of the compounds of concern at the site addresses the mobility, stability, volatility, and persistence of each substance. Of these parameters, mobility and persistence are of primary importance (Gorelick et al., 1993). Mobility represents the potential for a chemical to migrate along a given pathway. Persistence is a measure of how long a chemical will remain in the environment.

The following five primary physical and chemical properties affect the transport of organic compounds in the environment:

- Specific gravity
- Water solubility
- Vapor pressure
- Henry's Law constant
- Organic carbon partition coefficient

The values of these parameters for TCE and PCE are listed in Table 5-1. Other properties not listed that may affect contaminant migration include water diffusion coefficient, viscosity, and temperature. Brief descriptions of the above parameters follow.

**Specific gravity** is ratio of a compound's density compared to the density of water. A compound with a specific gravity greater than one (1) will tend to sink within the saturated zone, when in its pure form. Compounds with a specific gravity less than one (1) will tend to float on top of the water table, when in their pure form.

**Water solubility** is the maximum concentration of a compound that can dissolve in water at a specific pH and temperature. Highly soluble compounds tend to be more mobile in groundwater and leach more readily from soils.

**Vapor pressure** is a relative measure of volatility of a substance in its pure state. Compounds with high vapor pressures readily volatilize from liquid form.

**Henry's Law constant** describes the distribution of a chemical between air and soil or water at equilibrium. It is usually defined as the ratio of the partial pressure of the compound in air, measured in atmospheres, to the mole fraction of the compound in a water solution. A high

Henry's Law constant indicates a higher tendency for a compound to volatilize from soil or water.

The **organic carbon partition coefficient** ($K_{oc}$) indicates the tendency for a chemical to be absorbed by organic carbon in the solid matrix of the vadose and water-bearing zones. Low $K_{oc}$ values indicate less adsorption resulting in faster leaching from soil in the source areas and less retardation of the contaminant as it is transported by groundwater movement. This translates into lower persistence of contaminants in unsaturated soils and higher persistence of contaminants in the groundwater.

Based on an evaluation of these parameters, TCE and PCE have relatively high specific gravity, high solubility in water, high vapor pressure, high Henry's Law constant, and low $K_{oc}$. As a result, they would be expected to easily leach from soils in the unsaturated zone and move with groundwater in the water-bearing zone. Once they reach a surface water body, they would be expected to quickly volatilize into the atmosphere. Because of their high specific gravity, PCE and TCE are referred to as dense (i.e., heavier than water) nonaqueous phase liquids (DNAPL), and will tend to sink within the saturated zone when in their nonaqueous phase or at very high dissolved concentrations.

## 5.5 CONTAMINANT TRANSPORT IN GROUNDWATER

Dissolved concentrations of TCE and PCE have been identified in groundwater at the site. This subsection describes four predominant mechanisms that influence the migration of dissolved compounds in groundwater as follows:

- **Advection** - The transport of dissolved solutes by the motion of flowing groundwater. The amount (mass) of contaminant being transported is a function of its concentration in the groundwater and the quantity of moving groundwater (Gorelick et al., 1993). Advection will vary based on groundwater flow conditions, including hydraulic gradient and hydraulic conductivity.

- **Hydrodynamic dispersion -** The spreading of solutes from the path they would be expected to follow strictly according to advection hydraulics. Hydrodynamic dispersion is a combination of mechanical dispersion and molecular diffusion. Mechanical dispersion refers to the spreading of solutes as a result of the interaction of the groundwater with the aquifer matrix due to spatial and hydraulic conductivity

variations in the water-bearing zone as well as fluid mixing (Fetter, 1994). Molecular diffusion refers to the process by which a solute will move from an area of greater concentration toward an area of lower concentration. Diffusion will occur as long as a concentration gradient exists even if the fluid is not moving. Diffusion is generally responsible for the slow migration of contaminants into lower permeability zones, such as dead-end fractures and clay layers, adjacent to higher permeability zones, where the main mass of contamination exists (Fetter, 1994).

- **Adsorption** - The retention of dissolved chemicals on the solid matrix of the water-bearing zone due to partitioning between groundwater and the surfaces of the solid matrix. Adsorption of a compound results in a reduction of concentration in the aqueous phase and a retardation of the velocity of contaminant migration. The degree of retardation experienced by a particular organic contaminant will depend on the fraction of organic carbon in the aquifer matrix. The higher the organic carbon fraction, the greater the contaminant retardation (Fetter, 1994).

- **Degradation** - The biological decomposition or chemical alteration of dissolved compounds. Degradation includes the processes of phototransformation, biodegradation, metabolic reactions, hydrolysis, and dissociation/redox reactions. Of these only biodegradation is considered an important mechanism for the degradation of TCE and PCE in natural groundwaters below the root zone. Phototransformation requires sunlight, metabolic reactions and hydrolysis are not known to occur with TCE or PCE, and dissociation/redox reactions require the presence of certain catalysts that are not typically found in groundwater. Biodegradation is the biological process by which aerobic or anaerobic (in the case of TCE and PCE) microbes break down organic chemicals. This is a very important process by which soil or aquatic microbes can detoxify chemicals (Ney, 1998). Reduction of the concentration of a particular organic compound due to biodegradation does not ensure a reduction in toxicity. Many of the daughter products of biodegradation processes are as toxic, or more toxic, than their parents. Biodegradation of TCE, for example, can result in the formation of VC, which is more toxic than its parent (Gorelick et al., 1993).

## 5.6 SITE-SPECIFIC FATE AND TRANSPORT

This subsection applies the general concepts and information provided previously to the actual site conditions to assess the fate and transport of site contaminants.

The compounds of concern at the site are TCE and PCE. These compounds were released to surface soils in three separate areas (Transmitter site, GATR site, and Howard Mountain) as a result of disposal practices acceptable at the time of the USAF operations. The nature of the disposal practices suggests it is likely that small amounts of these compounds were discharged at discrete areas scattered around the site. The exception to this is a 55-gallon drum of solvent that

was reportedly stored in the basement of former Building 114 and used to dispense solvent to smaller containers for use in other areas of the site (WESTON, 2002). Portions of the basement floor of Building 114 were reportedly dirt, and it is possible that spills during the dispensing process could have infiltrated directly into the ground in this area.

The unsaturated zone within the suspected source areas at the site is characterized by a relatively thin layer of till that is underlain by fractured bedrock. The upper few feet of the bedrock was typically found to be slightly to moderately chemically weathered. The thickness of the unsaturated zone varied from approximately 10 to 120 ft. In general, a greater thickness of the unsaturated zone would tend to increase the likelihood that residual solvents remain above the water table in that area.

The high solubility and low $K_{oc}$ of TCE and PCE suggest that these compounds would readily leach from the unsaturated soil and bedrock and enter the groundwater as precipitation infiltrates through the unsaturated soil and bedrock zones underlying the source areas. This would explain the lack of TCE and PCE suspected in site soils; although, it is still possible that some residual NAPL remains within the bedrock unsaturated zone at depth, especially in dead-end fractures. Typically, if a significant source of contamination remains within the unsaturated zone, the concentration of dissolved contaminants in downgradient monitoring wells will show a positive correlation with precipitation. This is because increased precipitation would tend to flush more contamination from the unsaturated zone into the saturated zone, thereby increasing contaminant concentrations downgradient. Analysis of data collected at the Bucks Harbor AFRTS (see Subsection 4.5.3) have shown that contaminant concentrations have an inverse relationship with precipitation, further suggesting that there is little contamination remaining within the unsaturated zone at this site.

The high specific gravity of TCE and PCE suggests that if a spill or leak is large enough, the material may remain as free-phase product or NAPL, even within the saturated zone. Residual NAPL can become adsorbed onto the soil, and to a much lesser extent, the bedrock fracture surfaces as well within the saturated zone and act as a secondary source of dissolved contamination. Typically, if residual NAPL is present within the saturated zone, contaminant concentrations in downgradient monitoring wells will exhibit an inverse relationship with

precipitation. This is because the reduced precipitation will result in lower groundwater levels, reducing the amount of groundwater flowing through the system that is available to dilute the contaminant concentrations. As mentioned previously, analyses at this site have shown that contaminant concentrations have an inverse relationship with precipitation, suggesting that residual NAPL could be present within the saturated bedrock zone.

Based on observations during drilling and groundwater monitoring activities at the site, no free-phase solvent or NAPL has been identified in site soils or on bedrock fracture surfaces to date. The highest concentration of a DNAPL compound (TCE) was identified in the groundwater at monitoring well MW-10, at a level of 3.4 mg/L. This represents approximately 0.3% of the solubility of TCE in water (1,100 mg/L at standard temperature and pressure) (Montgomery and Welkom, 1990). According to Newell and Ross (1991), a concentration of DNAPL-related chemicals in groundwater greater than 1% of pure-phase solubility indicates the potential for free-phase (mobile) DNAPL to exist at the site. Although the presence of other VOCs dissolved in groundwater suggests that any DNAPL found at the site could contain those compounds, it is unlikely that the percentage of compounds other than TCE would be very high based on the ratio of those compounds to TCE in the dissolved samples. Thus, co-solvency is not considered likely to lower the solubility of TCE in groundwater at the site. Therefore, it is unlikely that mobile NAPL exists at the site. Given the observed concentrations in the vicinity of Building 114, it is possible that residual non-mobile NAPL exists in dead-end fractures and/or on soil particles in the unsaturated zone. While the probability of mobile DNAPL is low, it will be considered during future source area treatment monitoring.

Once the dissolved-phase contaminants have entered the groundwater flow system, they will move in the direction of groundwater movement by advection. Mechanical dispersion is believed to play a lesser role in the downgradient migration of contaminants due to the limited mixing that occurs in flow through fractures. Some dilution will occur as the fractures containing contaminants receive water from fractures with clean water and recharge from above. Diffusion will tend to move contaminants into smaller and dead-end fractures transverse to the primary direction of contaminant movement. This is important because reverse diffusion from these dead-end fractures must be considered when evaluating potential remedial measures for the site.

Adsorption to the aquifer matrix is limited due to the nature of the bedrock and the low $K_{oc}$ of the target compounds. The volcanic-intrusive igneous bedrock, such as that found at the site, would be expected to have a very low organic carbon content and thus, would not tend to bind contaminants to the fracture surfaces.

The potential for natural biodegradation to occur at the site was discussed previously in Section 4. WESTON's analysis of the potential for biodegradation concluded that in the absence of additional site data, it is unlikely that significant natural biodegradation of the TCE and PCE is occurring within the FAA or Transmitter site plumes in the Howard Mountain area, but that natural biodegradation is more prevalent within the GATR site plume in the Miller Mountain area. The reader is referred to Section 4 for a more detailed discussion of natural biodegradation at the site.

## 5.7 SUMMARY

In summary, it is believed that only small amounts of TCE and PCE are likely to remain in site soils at the presumed source areas due to the high solubility of these compounds and the diffuse nature of the release mechanism. However, groundwater data generated during the later phases of the RI suggest that potential repeated releases from the dispensing drum reportedly stored in the basement of former Building 114 could represent a larger and more continuous release. Releases related to the dispensing drum are the likely source of the higher concentrations of TCE found in monitoring well MW-10. Although it is possible that free-phase TCE could exist within the overburden and/or dead-end fractures within the unsaturated zone, evaluation of groundwater quality data versus precipitation suggest that this is not the case. It is possible that residual NAPL exists within the saturated zone in the vicinity of Howard Mountain based on the relatively high dissolved concentrations found in monitoring well MW-10, but it is unlikely that mobile NAPL exists in this area. Similarly, it is unlikely that any NAPL (residual or mobile) is present at either the Transmitter site or the GATR site based on the observed dissolved concentrations.

Trichloroethene and PCE will tend to move with the groundwater flow under advection once they have entered the saturated zone. They will move through fractures in the bedrock in a

downgradient direction toward groundwater discharge zones (Bucks Harbor and Howard Cove). Diffusion of the TCE and PCE into small and dead-end fractures, dilution, and some limited mechanical dispersion will tend to reduce their dissolved concentrations along the groundwater flow path. Limited natural biodegradation of TCE and PCE is occurring based on the presence of cis-DCE breakdown products. However, only minor amounts of cis-DCE (less than 5% of the TCE and PCE concentrations) are found at the site, suggesting that this mechanism is not significantly affecting the concentration or distribution of TCE and PCE at Howard Mountain or the Transmitter site. At Miller Mountain, however, the ratio of TCE to cis-DCE is much higher (more than 2.5:1), suggesting that natural biodegradation is effectively reducing contaminant concentrations in this area.

# SECTION 5

# TABLES

**Table 5-1**

**Physical Properties of Organic Contaminants**
**Former Bucks Harbor AFRTS/GATR Sites**
**Machiasport, ME**

| Chemical | Specific Gravity (g/cc) | Aqueous Solubility (mg/L) | Vapor Pressure (mm Hg) | Henry's Law (atm-$m^3$ mol) | Log $K_{oc}$ (ml/g) | Log $K_{ow}$ | Water Diffusion Coefficient (sq. cm/sec) | Estimated Half-Life (days) | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Soil | Groundwater |
| Tetrachloroethene | 1.62[a] | 150[a] | 14[a] | 121 | 2.42[a] | 2.60[a] | 7.5E-06[b] | 180 - 360[b] | 360 - 720[b] |
| Trichloroethene | 1.46[a] | 1,100[a] | 57.8[a] | 87 | 2.10[a] | 2.53[a] | 8.3E-06[b] | 180 - 360[b] | 321 - 1,653[b] |

Note: All values represent properties measured at standard temperature and pressure (STP).

[a] J.H. Montgomery, and L.M. Welkom. 1990. *Groundwater Chemicals Desk Reference* , Lewis Publ., Chelsea, MI. 65 p.

[b] J.E. Lucius et al. 1990. *Properties and Hazards of 108 Selected Substances* , USGS Open File Report, 90-408. 559 p.

atm-$m^3$ mol = atmospheres per cubic meter per mole
g/cc = grams per cubic centimeter
$K_{OC}$ = organic carbon partition coefficient
$K_{OW}$ = octanol-water partition coefficient
mg/L = milligrams per liter
mL/g = milliliters per gram
mm HG = millimeters of mercury
sq. cm/sec = square centimeters per second

# SECTION 6

# BASELINE HUMAN HEALTH RISK ASSESSMENT

# 6. BASELINE HUMAN HEALTH RISK ASSESSMENT

## 6.1 OBJECTIVES

A baseline human health risk assessment (BHHRA) was performed for the Bucks Harbor former AFRTS and GATR Site in Machiasport, Maine, according to the National Contingency Plan (NCP). The objectives were to predict the cancer risks and noncancer adverse health effects above background levels in susceptible populations potentially exposed to contaminants associated with the site under baseline conditions (i.e., in the absence of remedial action). The BHHRA has evaluated both current and future exposure scenarios. Table 6-1 provides the exposure pathways analysis that summarizes the sources of chemical exposure, exposure media, exposure pathways, susceptible populations, exposure routes, and rationale. The exposure scenarios include off-site current residents, current on-site prison inmates at the Downeast Correctional Facility (DCF), and on-site future residents (i.e., direct exposure drinking water, inhalation of VOCs while showering). The tables for Section 6 are provided in Appendix E of this report.

## 6.2 APPROACH AND REGULATORY GUIDANCE

The individual steps of the BHHRA process as performed for the Bucks Harbor former AFRTS and GATR site are discussed in the following subsections:

- Hazard Identification and Data Evaluation (Subsection 6.3)
- Exposure Assessment (Subsection 6.4)
- Dose-Response (Toxicity) Assessment (Subsection 6.5)
- Risk Characterization (Subsection 6.6)
- Uncertainty Analysis (Subsection 6.7)

Risk assessment guidance documents and information sources that were used to prepare this report include the following:

- *Guidance for Data Usability for Risk Assessment* (EPA, 1992a).
- *U.S. Army Corps of Engineers Risk Assessment Guidance* (USACE, 1995).

- *Risk Assessment Guidance for Superfund (RAGS), Volume 1 – Human Health Evaluation Manual, Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments (RAGS, Part D)* (EPA, 2001).
- *Risk Assessment Guidance for Superfund (RAGS), Part A, Volume 1* (EPA, 1989).
- *Exposure Factors Handbook* (EFH) (EPA, 1997a).
- *Guidance Manual for Human Health Risk Assessments at Hazardous Substance Sites*, State of Maine, Departments of Environmental Protection and Human Services (MEDEP, 1994).
- Other documents or directives have been cited in the text where appropriate.

Documentation of the calculations and the summary tables for this section are presented in Appendix E and will be cited as required in the appropriate sections of the report.

## 6.3 HAZARD IDENTIFICATION AND DATA EVALUATION

The objectives of the hazard identification step are to:

- Identify and statistically evaluate the potential contaminants in each sampled medium.
- Classify chemicals as to their adverse health effects.
- Determine the usability of the analytical data in the risk assessment.
- Select the contaminants of potential concern (COPCs). MEDEP use the term "Study Chemicals" to denote those chemicals to be evaluated in a risk assessment. This term is similar to the term "COPC" as used in EPA *Superfund Risk Assessment Guidance*. The term "COPC" has been used in this report in order to be consistent with EPA *Superfund Risk Assessment Guidelines* (See Subsection 6.3.3.1).

### 6.3.1 Data Validation

Site data were collected, analyzed, and validated in accordance with the general methods discussed in EPA guidance documents (EPA, 1989, 1992a). Validation of the analytical data was conducted in accordance with EPA guidelines. These guidelines ensure that the data will meet uniform requirements for data usability for conducting this risk assessment.

The parameters included in the data validation are the following:

- Data completeness
- Holding time
- Calibrations
- Laboratory and field blanks analyses
- Surrogate recoveries
- Matrix spike/matrix spike duplicate analyses
- Laboratory control sample (LCS) and LCS duplicate
- Field duplicates
- Internal standards
- Pesticide instrument performance
- Sample cleanup
- Compound identification
- Compound quantitation

### 6.3.2 Data Reduction

The following guidelines for data reduction were used to produce the data summaries for each medium. These guidelines are consistent with EPA and MEDEP risk assessment guidance documents (EPA, 1989, 1992a; MEDEP, 1994):

- If a chemical was not positively identified in any sample from a given medium because it was reported as a nondetect and/or because of blank contamination, it was addressed for that medium.

- All data with "J" qualifiers were assumed to be positive identifications for those media. "J" values are estimated concentrations reported below the minimum confident quantitation limit.

- For sample sets from a specific medium that contain at least one detection, any nondetects in that same sample set were treated at one-half the sample quantitation limit (SQL) for the purposes of calculating the 95% upper confidence limit (UCL) of the arithmetic mean.

- Duplicate samples were considered as one data point in summarizing the analytical results and for calculating the exposure point concentration (EPC). The values reported for a duplicate sample were treated according to the following rules:

    - For duplicates in which both sample values were detected concentrations, the values were averaged unless the relative difference between the two samples, based on the magnitude of the lower of the two values, was equal to or greater than 50% for soils/sediments or 30% for groundwater and surface water.

- In the latter cases, the maximum value of the duplicate set was used as the sample concentration.
- If a duplicate set consisted of nondetected and detected values, the detected value was used as the sample concentration in subsequent calculations.

Both duplicate samples were included in the summary table with respect to reporting the range of detected concentrations.

### 6.3.3 Data Evaluation and Selection of Chemicals of Potential Concern

#### 6.3.3.1 Introduction

The objectives of the data evaluation are to summarize the analytical data for each sampled medium, to select the media that will be evaluated, and to determine the chemicals of potential concern (COPCs) (EPA, 1989). MEDEP (1994) uses the term "Study Chemical," which is similar to the term "COPC," and is determined by methods similar to EPA *Risk Assessment Guidelines* (EPA, 1989, 1993). The term "COPC" has been retained for this report.

The data were segregated according to medium and exposure area as determined from the exposure pathways analysis presented (Table 6-1). The media for evaluation included only groundwater data from on-site and off-site areas. The rationale for evaluating these groundwater samples with respect to the potential for exposure is discussed in Subsection 6.4.

Two general sets of groundwater data were evaluated for this final report. The first set included drinking water (DW) well samples located off-site in residential areas. These data were evaluated for a *current off-site residential* exposure scenario. The well identified as WY-03 was evaluated for a *current prison inmate* scenario at the Downeast Correctional Facility (DCF). The second set, which was not included in the draft of this report, included on-site monitoring well (MW) data and were evaluated for a *future on-site residential* scenario. Two subsets of the on-site MW data were separately evaluated for the Howard Mountain and Miller Mountain exposure areas.

The DW and MW raw data with sample identifications and locations for all wells (i.e., drinking water wells and monitoring wells) are presented in Appendix E.1. The data distributions for the DW and WY well data were determined using the Shapiro-Wilk test

(Pioneer Technologies, 2002; Gilbert, 1987). If the program indicated that the data distribution for a given chemical was indeterminable, a lognormal distribution was assumed (EPA, 1992b). For the on-site MW data, statistical distributions for each exposure area were determined using ProUCL software (EPA, 2004a). Data distribution information for all detected chemicals can be found in Appendix E.2.

#### 6.3.3.2 Approach for Selecting COPCs

A conservative list of COPCs for each medium was developed for the risk characterization according to the EPA Region *Risk Assessment Guidance* (EPA, 1993). The maximum detected concentration of each chemical, by medium, was compared with medium-specific risk-based screening concentrations (RBSCs) based on residential exposure. The RBSCs for tap water were developed from Region III risk-based concentrations (RBCs) (EPA, 2004b). Target risk (TR) and target hazard quotient (THQ) levels for RBSCs were set at 1E-06 and 0.1, respectively, unless otherwise noted. This lowers the noncancer RBC values presented in the EPA Region III *RBC tables* by an order of magnitude in order to address the additivity of noncancer effects when there is exposure to multiple chemicals (EPA, 1993). If the maximum detected chemical concentration was less than its respective medium-specific RBSC, that chemical was eliminated from the COPC list. If the maximum detected concentration for a given chemical exceeded its respective RBSC, that chemical was carried forward in the BHHRA as a COPC. All chemicals that were detected in the groundwater data sets had corresponding tap water RBSCs in the EPA Region III *RBC Tables* (EPA, 2004b).

#### 6.3.3.3 Drinking Water Wells

A total of 35 drinking water wells and 1 DCF Housing Area supply well were analyzed for the BHHRA. Drinking water wells were sampled up to 17 times (i.e., 4 years of quarterly monitoring). The monitoring data from all sampling rounds from each residential well were separately evaluated. Of the 36 wells, 11 (DW-05, DW-06, DW-08, DW-11, DW-16, DW-18, DW-19, DW-22, DW-34, DW-37, and DW-39) did not have any detected chemicals in any sampling round evaluated, and therefore, these wells were not further assessed. Tables 6-2 through 6-26 summarize the groundwater data detected in each of the remaining 25 individual private wells at Bucks Harbor. The following is a list of the chemicals detected at each respective

drinking water well. The frequency of detection for each chemical in each well is shown in parentheses.

- **DW-01**: Trichloroethene (9/9).
- **DW-02**: Tetrachloroethene (6/10), trichloroethene (10/10), and cis-1,2-dichloroethene (9/10).
- **DW-03**: Trichloroethene (16/17) and cis-1,2-dichloroethene (5/17).
- **DW-04**: Chloroform (1/17), methyl tertiary butyl ether (MTBE) (1/17), tetrachloroethene (16/17), toluene (1/17), trichloroethene (17/17), xylenes (1/13), cis-1,2-dichloroethene (17/17), and trans-1,2-dichloroethene (1/17).
- **DW-07**: Dichlorodifluoromethane (4/5).
- **DW-09**: Trichloroethene (12/13).
- **DW-12**: Dichlorodifluoromethane (13/16), tetrachloroethene (1/16), trichloroethene (16/16), cis-1,2-dichloroethene (9/16), and trans-1,2-dichloroethene (1/16).
- **DW-13**: Toluene (1/3).
- **DW-15**: MTBE (5/5), toluene (1/5), xylenes (1/4), and t-amyl methyl ether (1/5).
- **DW-17**: Chloroform (1/5).
- **DW-20**: Chloroform (1/5).
- **DW-21**: Benzene (2/5), MTBE (5/5), and t-amyl methyl ether (1/5).
- **DW-23**: 1,1,1-Trichloroethane (13/17), 1,1-dichloroethane (8/17), 1,1-dichloroethene (2/17), 1,2-dichloroethane (1/17), trichloroethene (14/17), cis-1,2-dichloroethene (14/17), and trans-1,2-dichloroethene (3/17).
- **DW-24**: cis-1,2-Dichloroethene (1/5).
- **DW-25**: Chloroform (3/5).
- **DW-28**: Chloroform (1/3) and cis-1,2-dichloroethene (1/3).
- **DW-29**: Chloroform (1/4).
- **DW-30**: Chloroform (4/5).
- **DW-31**: 1,1,1-Trichloroethane (3/8), 1,1-dichloroethane (2/8), dichlorodifluoro-methane (1/8), trichloroethene (8/8), and cis-1,2-dichloroethene (8/8).

- **DW-32**: cis-1,2-Dichloroethene (1/5).
- **DW-33**: 1,1,1-Trichloroethane (2/5), chloroform (2/5), trichloroethene (5/5), and cis-1,2-dichloroethene (5/5).
- **DW-36**: MTBE (2/4).
- **DW-38**: Toluene (1/3).
- **DW-40**: Chloroform (3/3).
- **WY-03**: Bromoform (3/10), dibromochloromethane (2/10), and trichloroethene (10/10)*

| **Merged List of Chemicals Detected Above Detection Limit in Drinking Water Wells** | |
|---|---|
| **Chemical Class** | **Chemical** |
| Volatile Organic Compound | 1,1-Dichloroethane |
| | cis-1,2-Dichloroethene |
| | trans-1,2-Dichloroethene |
| | t-Amyl methyl ether |
| | Benzene |
| | Bromoform |
| | Chloroform |
| | Dichlorodifluoromethane |
| | Dibromochloromethane |
| | Methyl-tert-butyl ether |
| | Tetrachloroethene |
| | Toluene |
| | Trichloroethene |
| | Xylenes |

Of the 25 DW wells with at least one detection, 19 wells were further evaluated in the BHHRA because one or more chemicals were selected as COPCs (i.e., where the maximum detected

* Well WY-03 is an on-site well used for the prison inmate scenario at the DCF.

concentration of a chemical exceeded its RBSC). The methods for calculating the EPCs are discussed in the *Exposure Assessment* (Subsection 6.4.3).

- **DW-01**: Trichloroethene
- **DW-02**: Tetrachloroethene and trichloroethene
- **DW-03**: Trichloroethene
- **DW-04**: Chloroform, tetrachloroethene, and trichloroethene
- **DW-09**: Trichloroethene
- **DW-12**: Tetrachloroethene and trichloroethene
- **DW-15**: MTBE and t-amyl methyl ether
- **DW-17**: Chloroform
- **DW-20**: Chloroform
- **DW-21**: Benzene, MTBE, and t-amyl methyl ether
- **DW-23**: 1,2-Dichloroethane, trichloroethene, and cis-1,2-dichloroethene
- **DW-25**: Chloroform
- **DW-28**: Chloroform
- **DW-29**: Chloroform
- **DW-30**: Chloroform
- **DW-31**: Trichloroethene
- **DW-33**: Chloroform and trichloroethene
- **DW-40**: Chloroform
- **WY-03**: Dibromochloromethane and trichloroethene

In summary, wells DW-07, DW-13, DW-24, DW-32, DW-36, and DW-38 showed no chemicals exceeding their respective RBSCs. TCE and chloroform were the two primary COPCs found in the wells, with 10 and 9 well exceedances, respectively. Tetrachloroethene, MTBE, and t-amyl-methyl ether each exceeded in two wells, and benzene, cis-1,2-dichloroethene, 1,2-dichloroethene, and dibromochloromethane each exceeded in one well.

#### 6.3.3.4 Monitoring Wells Evaluated for Future Residential Use

In contrast to the residential drinking water wells, which were evaluated separately, the wells from the Howard Mountain and Miller Mountain exposure areas were each grouped and evaluated as complete data sets. (i.e., the COPC EPC for each exposure area were determined from a statistical average of all the wells within a given exposure area). Data for the monitoring wells for Howard Mountain and Miller Mountain exposure areas were separately evaluated because each area has its own distinct geological characteristics and contaminant concentration profiles.

The Transmitter Site area, DCF Filter Bed Area, Howard Mountain FAA Area, and DCF Housing Area are all considered "Howard Mountain Area" locations. The hand full of wells identified as "Miller Mountain/GATR Site" belong to what we identify as the "Miller Mountain" site. The Test Well is linked hydrogeologically to Howard Mountain, so it was included in the Howard Mountain evaluation.

Only June 2003 data was evaluated, as it is one complete set, was collected at the same time, has a complete list of sample quantitation limits, and is the most current indicator of groundwater conditions.

Thirty-two (32) monitoring wells from Howard Mountain and three (3) monitoring wells from Miller Mountain, respectively, were evaluated in this BHHRA.

Tables 6-27 and 6-28 present data summaries of 32 monitoring wells from Howard Mountain and three monitoring wells from Miller Mountain, respectively. The following is a list of the chemicals detected in at least one monitoring well from the Howard Mountain area. The frequency of detection for each chemical is shown in parentheses.

- 1,3-Dichlorobenzene (1/32)
- 1,4-Dichlorobenzene (1/32)
- Acetone (2/32)
- Chlorobenzene (1/32)
- Tetrachloroethene (4/32)
- Toluene (2/32)
- Trichloroethene (12/32)
- cis-1,2-Dichloroethene (5/32)
- trans-1,2-Dichloroethene (1/32)

The following is a list of the chemicals detected in at least one monitoring well from the Miller Mountain area. The frequency of detection for each chemical is shown in parentheses.

- 1,1,1-Trichloroethane (1/3)
- 1,1-Dichloroethane (1/3)
- 1,2,4-Trichlorobenzene (1/3)
- Trichloroethene (2/3)
- cis-1,2-Dichloroethene (1/3)

Maximum concentrations of each chemical that exceeded its respective EPA Region III tap water RBSC were selected as COPCs and carried through the risk assessment (EPA, 1993, 2004b).

| **Merged List of Chemicals Detected Above Detection Limit in Monitoring Wells** | |
|---|---|
| **Chemical Class** | **Chemical** |
| **Volatile Organic Compound** | **Howard Mountain** |
| | 1,3-Dichlorobenzene |
| | 1,4-Dichlorobenzene |
| | cis-1,2-Dichloroethene |
| | trans-1,2-Dichloroethene |
| | Acetone |
| | Chlorobenzene |
| | Tetrachloroethene |
| | Toluene |
| | Trichloroethene |
| | **Miller Mountain** |
| | 1,1,1-Trichloroethane |
| | 1,2,4-Trichlorobenzene |
| | 1,1-Dichloroethane |
| | cis-1,2-Dichloroethene |
| | Tetrachloroethene |
| | Trichloroethene |

The following chemicals were selected as COPCs for Howard Mountain:

- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Tetrachloroethene
- Trichloroethene
- cis-1,2-Dichloroethene

The following chemicals were selected as COPCs for Miller Mountain:

- 1,2,4-Trichlorobenzene
- Trichloroethene
- cis-1,2-Dichchloroethene

## 6.4 EXPOSURE ASSESSMENT

The goal of the exposure assessment is to determine the extent of potential exposure of susceptible populations. The exposure assessment involves several discrete elements, including:

- Characterization of current and planned future land and water uses on or near the site.
- Identification of the potential chemical sources, exposure pathways and routes, and susceptible populations (i.e., exposure pathways analysis).
- Estimation of exposure point concentrations (EPCs) for each chemical in each medium.
- Identification of the exposure models and a description of the assumptions used to calculate daily intakes or doses.
- Estimation of daily doses by medium and exposure route for both carcinogenic and noncancer effects in susceptible populations.

### 6.4.1 Characterization of Land and Water Uses

Machiasport is a small coastal town that includes the communities of Larrabee, Bucks Harbor, and Starboard Cove. The USAF operated a radar tracking station in Machiasport from 1954 to 1984, located approximately 25 miles from the Canadian border (see Figure 1-1). The Base was used after 1984 by the FAA to track commercial aircraft. Part of the former USAF facility is used by the Department of Corrections of the State of Maine for use as a minimum-security prison (DCF).

The current off-Base land use within Machiasport is predominantly rural residential with a few commercial operations. All homes and commercial facilities are served by private wells, in which solvents such as TCE and PCE have been detected as a result of former on-Base activities. Most of the private wells are drilled bedrock wells completed in the fractured bedrock aquifer that underlies the entire area.

On the former site, a drinking water well (WY-03) is used by the DCF to provide water to current inmates and its employees. Several additional wells on-site are located on Miller Mountain and Howard Mountain. Although these areas are not currently inhabited by

residents or used by commercial/industrial workers, certain areas may be developed residentially in the future.

### 6.4.2 Exposure Pathways Analysis

An exposure pathways analysis depicts the chemical sources, chemical migration pathways in affected media, potential exposure routes, and known or potential human populations. A key function of the analysis is to identify complete exposure pathways and to assist in the development of exposure scenarios and dose estimation models. A complete exposure pathway is one that has all of the elements just described. Table 6-1 (previously cited) is an exposure pathways analysis that details the exposure pathways selected for Bucks Harbor and summarizes the potential future exposure pathways based on the site information discussed previously.

The BHHRA focuses on those human populations assumed to be the most likely exposed to off-site and on-site contamination. This approach ensures that the risk range over various population subgroups has been characterized for all current and potential future activities. Each population assessed in the risk assessment was evaluated using "reasonable maximum exposure" (RME) assumptions. The RME case is designed to be a measure of high-end exposure and ultimately, leads to an estimate of upper-bound population risk (EPA, 1989). A central tendency exposure (CTE) assessment, which is based on average exposure assumptions, was also performed; this is presented in Appendix E.3.

The exposure scenarios and their rationales were selected on the basis of these discussions of land and water uses. These were:

- **Current Off-Site Resident**—There are a number of residences off-site that use private wells for drinking water. A child aged 1 to 6 years and an adult were evaluated for exposure to groundwater through tap water ingestion (child and adult), and indoor water uses related to inhalation of volatiles while showering (adult). Dermal contact while bathing was semi-quantitatively evaluated in the Uncertainty Analysis. Each drinking water well was individually evaluated (i.e., per residence).

- **Current On-Site Prison Inmate**—An adult inmate was evaluated for groundwater exposure through tap water ingestion and inhalation while showering using well WY-03 as the drinking water source.

- **Future On-Site Resident.** A future resident child aged 1 to 6 years and a resident adult were evaluated for exposure to groundwater through tap water ingestion (child and adult), and inhalation while showering. Dermal contact while bathing was semi-quantitatively evaluated in the Uncertainty Analysis. Monitoring well data were separately grouped based on future residents residing at Howard Mountain and Miller Mountain.

The potential for vapor intrusion into current and future residences was not quantitatively evaluated. Groundwater data were screened by comparing maximum detected concentrations of all COPCs with risk-based vapor intrusion data (EPA, 2002). The results of the screening analysis are presented and discussed in Subsection 6.6.4.

### 6.4.3 Exposure Point Concentrations

The chemical-specific EPCs for the various scenarios were calculated based on the following data sets:

- For current off-site resident and on-site prison inmate, EPCs for groundwater were based on the untreated groundwater data from the 24 individual residential drinking water wells and the DCF Housing Area supply well (WY-03).
- For the future resident, EPCs were calculated for each COPC on the collective monitoring well data from Howard Mountain and Miller Mountain.
- For VOCs in groundwater, the EPCs for indoor showering exposure of adults were calculated according to the method of Foster and Chrostowski (1987).

For the off-site current resident and on-site prison inmate scenarios, the EPCs were calculated for each chemical based on the 95% UCL concentration of the arithmetic mean of the data from all rounds. The 95% UCL of the mean for each COPC was calculated in accordance with EPA guidance for either a lognormal or normal distribution (EPA, 1992b). The selection of the appropriate method was dependent on the results of the Shapiro-Wilk *W*-test (Gilbert, 1987). If the distribution test results were indeterminate, a lognormal distribution was assumed.

Sample non-detects were included at one-half the sample quantitation limit (SQL) for those COPCs that had nondetects reported. The appropriate formula (dependent on the type of

distribution) was used to estimate the 95% UCL of the mean. The formulas used for each type of distribution are as follows:

**Lognormal Distribution:**

$$UCL = e^{\left(\bar{x} + 0.5s^2 + sH/\sqrt{n-1}\right)}$$

Where:

| | | |
|---|---|---|
| UCL | = | 95% upper confidence limit of the arithmetic mean. |
| e | = | Constant (base of the natural log, equal to 2.718). |
| $\bar{x}$ | = | Arithmetic mean of the log-transformed data for contaminant i. |
| s | = | Standard deviation of the log-transformed data. |
| H | = | H-statistic, determined by the standard deviation and sample size. |
| n | = | Sample size for contaminant in the designated media set. |

**Normal Distribution:**

$$UCL = \bar{x} + t\,(s/\sqrt{n})$$

Where:

| | | |
|---|---|---|
| UCL | = | 95% Upper confidence limit of the arithmetic mean. |
| $\bar{x}$ | = | Arithmetic mean of the untransformed data. |
| s | = | Standard deviation of the untransformed data. |
| t | = | Student-t statistic. |
| n | = | Sample size for contaminant in the designated media set. |

If the 95% UCL concentration exceeded the maximum detected concentration for a chemical, the maximum detected concentration in a given medium was used as the EPC. Tables 6-29 through 6-47 present the EPCs for the residential and DCF Housing Area supply wells.

For the MW data for Howard and Miller Mountains incorporated in this revised risk assessment, the EPCs were determined using the newest version of ProUCL (EPA, 2004a). This statistical program calculates EPCs by several statistical approaches (e.g., Land method, Student's *t*, bootstrap, and Chebyshev), and then provides a recommendation for which method provides the

most statistically valid estimate of the average concentration (i.e., 95% UCL). ProUCL was developed for data sets that are highly censored and/or when the results of statistical distribution tests indicate the data are neither normally nor lognormally distributed (EPA, 2002a, 1992b). Tables 6-48 and 6-49 present the EPCs for the monitoring wells for Howard and Miller Mountain Areas. Each table lists the statistical distribution of the data and the mathematical formula on which the EPCs were based. Appendix E contains the Shapiro-Wilk *W* test and ProUCL outputs for each data set, as applicable.

The ProUCL program was not used to recalculate the drinking water well data previously developed for the current resident. Although there were some indeterminate distributions in these data (and therefore, a lognormal distribution was assumed), the 95% UCLs calculated from these cases is expected to be more conservative than that which would be recommended by the ProUCL model.

### 6.4.4 Exposure Dose Models and Assumptions

The mathematical models and exposure assumptions that were used to calculate the daily intakes (i.e., the daily doses) of COPCs for each receptor population through the applicable exposure routes are presented in this subsection. Many of the exposure parameters that were used are standard default values recommended by EPA guidance (EPA, 1989, 1991a, 1997, 2001) and MEDEP guidance (MEDEP, 1994). Site-specific assumptions and professional judgment were used where information was not available.

Two types of daily exposure doses were calculated. The first model, in which the daily doses (chronic daily intakes) were averaged over the assumed exposure duration, was used to evaluate the potential for noncancer health effects (i.e., the average daily dose [ADD]). The second model, in which the doses were averaged over a 70-year lifetime, was used to evaluate potential carcinogenic risk (i.e., the lifetime average daily dose [LADD]).

The two dose models are identical with the exception of the averaging time, as shown below:

| **Dose (Intake, mg/kg-day) = (C x CR x EFD)/(BW x AT)** |
|---|
| Where: |
| *Chemical-Related Variable*: |
| C = Exposure concentration of chemical in medium (air, soil, water, food) contacted during the exposure period, and expressed as amount of chemical per weight or volume of medium (e.g., mg chemical/$m^3$ in air, mg chemical/kg in soil, mg chemical/L in water). |
| *Variables that Describe the Exposed Population*: |
| CR = Contact rate, expressed as the amount of medium contacted per unit time (e.g., mg soil/day, L water/day). |
| EFD = Exposure frequency and duration; describes how long and how often exposure occurs. Usually calculated using two terms: |
| EF = Exposure frequency (days/year). |
| ED = Exposure duration (years). |
| BW = Body weight; the average body weight over the exposure period (kg). |
| *Assessment-Determined Variables*: |
| AT = Averaging time; period over which exposure is averaged (days); ED (years) x 365 days/year for calculating the ADD, and 70 years x 365 days/year for the LADD. |

Source: EPA, 1989.

The final exposure doses were expressed as administered (oral, inhalation) doses, in milligrams of contaminant per kilogram body weight per day (mg/kg-day).

The rationale for selecting groundwater contact rates is presented in the following subsections. The tables presenting the dose algorithms, exposure inputs, and references are provided at the end of Section 6 (see Tables 6-50 through 6-54). The exposure inputs are consistent with MEDEP *Risk Assessment Guidance* (MEDEP, 1994).

#### *6.4.4.1 Ingestion of Groundwater*

The ingestion of groundwater as a drinking water source was evaluated for the current and future child and adult resident and the current adult prison inmate. Adult residents and children were assumed to ingest 2 liters (L) of water per day and 1 L of water per day, respectively. The on-site prison inmate was assumed to ingest 2 L of water each day from on-site sources.

#### 6.4.4.2 Inhalation of Volatile Organic Compounds While Showering

Inhalation of VOCs while showering was assessed quantitatively for the adult resident and on-site prison inmate. The Foster-Chrostowski Model (Foster and Chrostowski, 1987) was used to estimate the air concentration (CA) of the VOCs from the groundwater levels. The algorithms for calculating CA and the exposure doses for the adult resident and on-site prison inmate are shown in Tables 6-51 and 6-54, respectively. The predicted shower stall air concentration of each VOC is dependent on the groundwater chemical-specific EPC, shower-water flow rate (FV), the shower duration (SD), the fraction volatilized (FL), and the bathroom volume (BV). The following assumptions were used:

- FL – 30 liters per minute (L/min)
- SD – 15 min
- FV – 1 (100%)
- BV – 12 cubic meters ($m^3$)

Based on prison inmate showering information for the DCF obtained from (Personal Communication; WESTON, 2005), the assumptions used to estimate inhalation while showering for the resident are similar to the DCF (i.e., shower stall volume and showering duration). The flow rate and fraction volatilized were assumed to be identical for both scenarios.

#### 6.4.4.3 Dermal Contact While Bathing

The models and assumptions for the semi-quantitative evaluation of this potential pathway for children are presented in the Uncertainty Analysis.

#### 6.4.4.4 Current and Future Adult Resident

Tables 6-50 and 6-51 present the algorithms for current and future adult contact with drinking water via ingestion and inhalation (while showering). An exposure frequency of 350 days/year, exposure duration of 30 years, and a body weight of 70 kg were used for all pathways of exposure. Drinking water ingestion was assumed to be 2 L/day (EPA, 1991a). Showering time was assumed to be 15 minutes. The inhalation rate while showering was assumed to be 0.5 $m^3$/hour, which is the value for sedentary activities (see Table 5-23; EPA, 1997a).

The CA of VOCs was calculated using the Foster-Chrostowski Model shown at the bottom of Table 6-51 (Foster and Chrostowski, 1987). The drinking well water chemical-specific EPCs were obtained from Tables 6-29 through 6-49.

#### *6.4.4.5 Current and Future Child Resident*

Table 6-52 presents the algorithms for child contact with drinking water via ingestion. An exposure frequency of 350 days/year, an exposure duration of 6 years, and a body weight of 15 kg were used for all pathways of exposure. Drinking water ingestion was assumed to be 1 L/day (EPA, 1991a) The EPCs were obtained from Tables 6-29 through 6-49. Inhalation of VOCs from bathwater was not evaluated for the current or future child resident. Dermal contact while bathing was evaluated semi-quantitatively in the Uncertainty Analysis.

#### *6.4.4.6 Current On-Site Prison Inmate*

Tables 6-53 and 6-54 present the algorithms for adult contact with drinking water via ingestion and inhalation (while showering). An exposure frequency of 365 days/year, an exposure duration of 30 years, and a body weight of 70 kg were used for all pathways of exposure. Drinking water ingestion was assumed to be 2 L/day (EPA, 1991a) Showering time was assumed to be 15 minutes. The inhalation rate while showering was assumed to be 0.5 $m^3$/hour (EPA, 1997a; sedentary activity). The CA of VOCs was calculated using the Foster-Chrostowski Model shown at the bottom of Table 6-54 (Foster and Chrostowski, 1987). The EPCs were obtained from Table 6-47. The water flow rate in the shower was assumed to be 30 L/min, and the bathroom volume was assumed to be 12 $m^3$.

### 6.4.5 Calculated Exposure Doses

Noncancer exposure daily intakes (ADD) and carcinogenic exposure daily intakes (LADD) for the current resident adult and child, and prison inmate were calculated for each well location and are presented in Tables 6-55 through 6-91 (well locations are shown in column three of each table). Future resident adult and child intakes for exposure at Howard Mountain and Miller Mountain are shown in Tables 6-92 through 6-95.

## 6.5 DOSE-RESPONSE (TOXICITY) ASSESSMENT

### 6.5.1 Introduction

The purpose of the toxicity assessment is to identify the toxicity values used to estimate risk. EPA generally classifies chemicals as those that are carcinogens and those that produce only noncancer health effects. Carcinogens can produce noncancer health effects as well. Therefore, the noncancer health effects calculations collectively reflect all chemicals including carcinogens.

### 6.5.2 Reference Doses

Toxicity values used to determine noncancer health effects are termed reference doses (RfDs). RfDs represent the daily dose for an individual not anticipated to result in any deleterious noncancer health effects over a lifetime of exposure (EPA, 1989). Therefore, it is assumed that there is a "safe" daily dose below which no adverse health effects will likely occur, even over a lifetime of exposure (i.e., there is a dose "threshold"). The lower the RfD value, the more potent is the chemical in potentially producing noncancer health effects. RfDs have been developed for chronic exposure (>7 years), and in some cases, subchronic exposure (≤7 years) periods. Chronic RfDs were used for all exposure scenarios. The impact of subchronic reference doses on noncancer health effects for the construction worker and trespasser has been discussed in the Uncertainty Analysis. These two potentially exposed populations have continuous exposure durations well below 7 years.

Oral and dermal RfDs were conventionally expressed as the dose in milligrams of chemical per kilogram of body weight per day (mg/kg-d). Inhalation RfDs were derived from reference concentrations (RfCs, $mg/m^3$ for a 70 kg person breathing 20 $m^3$/day). These were converted into units of mg/kg-d for purposes of calculation in the risk assessment.

Tables 6-96 and 6-97 summarize the toxicity criteria used for noncancer health effects.

### 6.5.3 Cancer Slope Factors

Toxicity values used to determine carcinogenicity are termed cancer slope factors (CSFs), which are a measure of carcinogenic potency. The higher the CSF value, the more potent is the

chemical in potentially producing cancer over a lifetime. Oral and dermal CSFs were conventionally expressed as $(mg/kg\text{-}d)^{-1}$ (i.e., risk per unit dose). Inhalation CSFs were derived as unit risk factors (URFs; $[mg/m^3]^{-1}$ for a 70-kg person breathing 20-m3/day). These were converted into units of $(mg/kg\text{-}d)^{-1}$ for purposes of calculation in the risk assessment. Cancer slope factors are generally developed from lifetime animal studies in which very high doses are used, much higher than would be expected to occur in humans with typical environmental exposures. The human CSF is determined by extrapolating downward the carcinogenic dose in animals to a dose more representative of human environmental exposure. Most CSFs were very conservative because the statistical extrapolation tests used assume the extrapolation is linear down to infinitesimally small doses (i.e., it is assumed that there is no threshold for carcinogenesis). Infrequently, some CSFs may be derived from human epidemiologic studies. Note that EPA's currently used carcinogen classification system assumes that even if a chemical is only suspected to cause cancer in humans, it is evaluated as a human carcinogen.

The *Draft Final Guidelines for Carcinogen Risk Assessment* (EPA, 2003a) recommends a different scheme for weighing evidence of carcinogenicity than has been traditionally used in risk assessments. Previous risk assessment guidance assigned a weight-of-evidence classification to each evaluated chemical as follows: Group A (human carcinogen); Group B (probable human carcinogen); Group C (possible human carcinogen); Group D (not classifiable); or Group E (no evidence of carcinogenicity) (EPA, 1989). The *Draft Final Guidelines for Carcinogen Risk Assessment* (EPA, 2003a) recommend replacing these classifications with descriptions of "known likely," "cannot be determined," or "not likely." However, because most chemicals are still classified by the old system in the *Integrated Risk Information System* (IRIS) database, the older system has been retained in this risk assessment.

Tables 6-98 and 6-99 summarize the toxicity criteria used for carcinogenicity.

### 6.5.4 Dermal Toxicity Criteria

Although EPA has developed oral and/or inhalation slope factors for a number of carcinogens, dermal slope factors have not been derived for any chemicals. The general approach used for estimating noncancer dermal RfDs was used to derive dermal CSFs (EPA, 1989). Dermal slope factors were derived by dividing its oral slope factor by an appropriate chemical-specific

gastrointestinal (GI) absorption factor (EPA, 1998). This results in the conversion of the oral slope factor, which represents the carcinogenic potency of the "administered" dose, to a dermal slope factor, which represents the carcinogenic potency of the "absorbed" dose. The conversion is necessary to be able to calculate risk through the dermal pathway. The dermal slope factors must be consistent with the dermal doses, which are calculated in the exposure assessment as absorbed doses. The oral and inhalation doses, by contrast, are calculated as administered doses and are evaluated using CSFs based on the administered dose.

Dermal RfDs and CSFs were extrapolated from their respective oral criteria by dividing or multiplying by, respectively, the appropriate chemical-specific GI absorption factors recommended in the *Dermal Risk Assessment Guidance* (EPA, 2001c).

Dermal RfDs and CSFs can be found in Tables 6-96 and 6-98.

### 6.5.6 Sources of Toxicity Information

The current guidance for obtaining toxicity values for Superfund risk assessments recommends that the IRIS serve as the primary source of both RfDs and CSFs (EPA, 2003b). Secondary sources should be peer-reviewed provisional toxicity values which can be found in the *Provisional Peer-Reviewed Toxicity Values* (PPRTV) database available through Oak Ridge National Laboratory (EPA, 2005a). However, this database is restricted to EPA use only, and can only be accessed with the authorization of the EPA Superfund Office (EPA, 2005a). Finally, sources such as the California EPA (OEHHA, 2003) and the ATSDR *Minimal Risk Levels* (MRLs) (ATSDR, 2004) can serve as third tier sources. HEAST is listed as the last source of toxicity information since many of its provisional toxicity values are outdated (EPA, 1997b).

This report uses the OEHHA values for TCE via ingestion and inhalation for calculation of noncancer health effects and cancer risk. The Department of Defense, through the Air Force Institute for Environment, Safety and Occupational Health Risk Analysis prepared comments on the TCE risk assessment (EPA, 2001c) and has many concerns with its conclusions and methods used to derive them. In view of these concerns, the USACE is not confident that the draft values will be finalized and is reluctant to use them in their risk assessments. Instead, the USACE recommends use of the OEHHA values, the practice of which is consistent with new toxicity

value guidance (EPA, 2003). However, the impact of using the draft RfD and CSF recently proposed by EPA (EPA, 2001c) is discussed in the "Uncertainty Analysis."

### 6.5.7 Toxicology Profiles

Brief toxicology profiles of those COPCs significantly contributing to risk are in Appendix F.

## 6.6 RISK CHARACTERIZATION

### 6.6.1 Approach

The objective of the risk characterization section is to evaluate the likelihood of potential carcinogenic risks and the extent of adverse noncancer health effects occurring as a result of exposure to COPCs. The potential for human carcinogenic risks and noncancer health effects of COPCs were evaluated separately because of differences in the processes by which these health effects are believed to occur. Carcinogenic risks were calculated for those COPCs with evidence of carcinogenicity and for which cancer toxicity values are available. Noncancer health effects were evaluated for COPCs (i.e., including carcinogens) for which noncancer toxicity values are available.

In accordance with EPA policy (EPA, 1989), carcinogenic risk was expressed as the probability that an individual will develop cancer during a 70-year lifetime in excess of the background risk for developing cancer (i.e., approximately 1 in 3 individuals). This is referred to as incremental lifetime cancer risk (ILCR). ILCR was calculated for each carcinogen through each applicable exposure route (i.e., oral, inhalation, or dermal) using the following equation:

**Incremental Lifetime Cancer Risk (ILCR) = LADD x CSF**

Where:

LADD = Lifetime average daily intake (dose) of the carcinogen averaged over a 70-year lifetime (mg/kg-day).

CSF = Chemical- and route-specific cancer slope factor $(mg/kg\text{-}day)^{-1}$.

For the resident, cancer risks were calculated separately for the child and adult. The total lifetime excess cancer risk for each scenario was calculated by adding the cancer risks calculated for each chemical for all exposure routes.

The potential for noncancer toxicity in an individual as a result of exposure to a single chemical through a single exposure pathway is referred to as the hazard quotient (HQ) using the following equation:

**Hazard Quotient (HQ) = ADD/RfD**

Where:

ADD = Chronic average daily dose for the chemical averaged over the appropriate exposure period (mg/kg-day).

RfD = Chemical- and route-specific reference dose (mg/kg-day) for a similar exposure period.

Total noncancer health effects (hazard index [HI]) were evaluated for each age-specific receptor by adding the HQs calculated for each chemical by exposure route, and then adding the HIs across all exposure routes. If the total HI for a given scenario is less than or equal to one, it is believed that there is not a significant potential for noncancer health effects to that receptor, even in the most susceptible members of the population. If the HI exceeds one, there may be a risk of noncancer health effects. In that case, the HQs calculated for each chemical, which reflect different critical toxic endpoints, may not be additive. Therefore, HIs are segregated according to the toxic endpoint (EPA, 1989).

## 6.6.2 Risk Results

### *6.6.2.1 Noncancer Health Effects*

#### *6.6.2.1.1 Current Resident*

Tables 6-100 through 6-117 show the noncancer health effects for each COPC for the current adult resident individualized for each of the 18 drinking water wells. Total HI for each of the 18 drinking water wells was less than 1.

Tables 6-118 through 6-135 show the noncancer health effects for the child resident separated for each of the 18 drinking water wells with COPCs. All of the COPCs in all 18 drinking water wells had HQs less than 1.

#### *6.6.2.1.2 Future Resident*

Tables 6-137 and 6-139 show the noncancer health effects for the future adult resident for Howard Mountain and Miller Mountain, respectively. Total HI was 3.3 and 0.6, respectively. Trichloroethene contributed almost 98% of the HI at Howard Mountain. All other COPCs had HQs less than 1.

Tables 6-138 through 6-140 show the noncancer health effects for the child resident for Howard Mountain and Miller Mountain, respectively. Total HIs were 7.1 and 0.8, respectively. Trichloroethene contributed 98% of the noncancer HI in Howard Mountain. All other COPCs for Howard Mountain and Miller Mountain had HQs below 1.

#### *6.6.2.1.3 Current Prison Inmate*

Table 6-136 shows the noncancer health effects for the on-site prison inmate for the DCF Housing Area supply well (WY-03). Total HI for the groundwater ingestion and inhalation pathways was less than 0.01.

### *6.6.2.2 Incremental Lifetime Cancer Risks*

#### *6.6.2.2.1 Current Adult Resident*

Tables 6-100 through 6-117 show the ILCRs for the current adult resident individualized for each of the 18 drinking water wells. Total ILCRs from eight drinking water wells (DW-01, DW-03, DW-09, DW-17, DW-20, DW-23, DW-29, and DW-31) did not exceed 1E-06.

The remaining 10 drinking water wells had cancer risks that exceeded 1E-06:

- Five wells showed exceedances solely contributed by chloroform via the groundwater inhalation (showering) pathway. These wells and their ILCRs were:
  - DW-25: ILCR, 1.3E-06
  - DW-28: ILCR, 1.9E-06
  - DW-30: ILCR, 3.3E-06
  - DW-33: ILCR, 1E-06
  - DW-40: ILCR, 1.4E-06
- Two wells showed exceedances from PCE and TCE via the groundwater ingestion and inhalation pathways. These wells and their cancer risks were:
  - DW-02: total ILCR, 8.2E-06 (PCE: 36% ingestion and 3% inhalation; TCE: 27% ingestion and 34% inhalation).
  - DW-04: total ILCR, 3E-05 (PCE: 17% ingestion and 1.4% inhalation; TCE: 35% ingestion and 45% inhalation).
- Two wells showed exceedances solely contributed by MTBE via the groundwater ingestion pathway. These wells and their cancer risks were:
  - DW-15: ILCR, 4.5E-06
  - DW-21: ILCR, 1.6E-06
- One well (DW-12: ILCR, 3.2E-06) showed an exceedance solely from PCE via the groundwater ingestion (49% contribution) and inhalation (4% contribution) pathways.

The highest total adult ILCR of all current residential drinking water wells was DW-04, with a value of 3E-05. This total risk is within EPA's acceptable risk range of 1E-06 to 1E-04. All other individual wells were associated with an adult ILCR less than 1E-05.

#### *6.6.2.2.2 Current Child Resident*

Tables 6-118 through 6-135 show the ILCRs for the child resident separated for each of the 18 drinking water wells with COPCs. All child ICLRs for residential drinking water wells were less than 1E-05. Of the drinking water wells, 15 did not have any cancer risks that exceeded 1E-06.

The remaining three drinking water wells had cancer risks that exceeded the point of departure of 1E-06:

- One well (DW-02: ILCR, 2.4E-06) showed exceedances from PCE and TCE via the groundwater ingestion pathway (ILCR, 1.4E-06 and 1E-06, respectively).
- One well (DW-04: ILCR, 7.4E-06) showed an exceedance from PCE (32% contribution) and TCE (68% contribution) via the groundwater ingestion pathway.
- One well (DW-15: ILCR, 2.1E-06) showed exceedances solely from MTBE via the groundwater ingestion pathway.

Total ILCR for the combined adult and child at DW-04 was close to 3.7E-05. This was the highest total child ILCR for all residential drinking water wells. This total risk is within EPA's acceptable risk range of 1E-06 to 1E-04.

#### *6.6.2.2.3 Future Adult Resident*

Tables 6-137 and 6-139 show cancer risks for the future adult resident for Howard and Miller Mountains, respectively:

- Howard Mountain was associated with an adult cancer risk of 2.5E-04. TCE was the main contributor with 40% (ILCR, 1.0E-04) via the ingestion pathway and 51% (ILCR, 1.3E-04) via the inhalation pathway. PCE contributed 9% of the total ILCR; it exceeded the cancer risk point of departure with ILCRs of 2.1E-05 and 1.8E-06 via the ingestion and inhalation pathways, respectively. All other COPCs had ILCRs below 1E-06.
- Miller Mountain was associated with an adult cancer risk of 2.1E-05. TCE was the only carcinogenic COPC with 44% (ILCR, 9.3E-06) via the ingestion pathway and 56% (ILCR, 1.2E-05) via the inhalation pathway.

#### *6.6.2.2.4 Future Child Resident*

Tables 6-138 and 6-140 show the ILCRs for the future child resident for Howard and Miller Mountains, respectively.

Both areas had cancer risks that exceeded the point of departure of 1E-06:

- Howard Mountain was associated with a child cancer risk of 5.7E-05. TCE was the main contributor with a cancer risk via groundwater ingestion of 4.7E-05 (83% contribution). Tetrachloroethene contributed 17% of the total ILCR and exceeded the cancer risk point of departure with an ILCR of 9.6E-06. All other COPCs had ILCRs below 1E-06.

- Miller Mountain was associated with a child cancer risk of 4.4E-06. Trichloroethene was the only carcinogenic COPC with 100% of the cancer risk via the groundwater ingestion pathway.

Total child and adult ILCR for Howard Mountain was 3.1E-04 which exceeds the EPA acceptable guidelines for cancer risk. For Miller Mountain, the total ILCR was 2.5E-05, which is also acceptable under EPA guidelines.

#### *6.6.2.2.4 Current Prison Inmate*

Table 6-136 shows the calculations of chemical cancer risks and noncancer hazards for the current prison inmate for the DCF Housing Area supply well (WY-03). Well WY-03 was associated with an ILCR of less than 1E-06.

#### 6.6.2.2.5 Summary of Major Cancer Risks and Hazard Indices

The summary table below presents the key cancer risks and hazard indices. Ingestion and inhalation accounted for approximately 50% each towards the adult cancer risk. For HI, inhalation was approximately 10% of the total HI. Dermal contact while bathing for the child was not quantitatively evaluated for all chemicals. However, TCE was quantitatively evaluated in the Uncertainty Analysis and its impact on total child risk and HI was discussed.

| Location | Cancer Risk | | Hazard Index | |
|---|---|---|---|---|
| | Adult | Child | Adult | Child |
| **DW-04** [a] | 3E-05 [b,c] | 7.4E-06 [b,c] | <1 | <1 |
| | Ingestion, 1.5E-05<br>Inhalation, 1.5E-05 | Ingestion, 7.4E-06 | ---------- | ---------- |
| **Howard Mountain** [d] | 2.5E-04 [e] | 5.7E-05 [e] | 3.3 [b] | 7.1 [b] |
| | Ingestion, 1.2E-04<br>Inhalation, 1.3E-04 | Ingestion, 5.7E-05 | Ingestion, 3<br>Inhalation, 0.3 | Ingestion, 7.1 |
| **Miller Mountain** [d] | 2.1E-05 [b] | 4.4E-06 [b] | <1 | <1 |
| | Ingestion, 9.3E-06<br>Inhalation, 1.2E-05 | Ingestion, 5.7E-05 | ---------- | ---------- |
| **WY-03** [f] | 6.8E-07 | NA | <0.01 | NA |
| | ---------- | NA | ---------- | NA |

[a] Current resident
[b] TCE was principal contributor (>98%).
[c] All other DW wells for current resident have total cancer risks <1E-05.
[d] Future resident
[e] TCE was principal contributor (>80%).
[f] Current prison Inmate

NA = Not applicable

### 6.6.3 Summary of Chemicals Whose Risks Exceed Points of Departure

Tables 6-141 through 6-153 summarize those chemicals exceeding an HQ of 1 or a cancer risk of 1E-06 for the current child and adult residents.

Tables 6-154 through 6-157 present summaries of those chemicals exceeding an HQ of 1 or a cancer risk of 1E-06 for future child and adult residents at Howard and Miller Mountains, respectively.

#### *6.6.3.1 Noncancer Health Effects for All Exposure Scenarios*

None of the chemicals in the drinking water wells (i.e., current child or adult resident) exceeded an HQ of 1.

For the monitoring wells on Howard Mountain, TCE had HQs of 3.3 and 7.1 for the future adult and child residents, respectively. TCE contributed 98% of the noncancer HI in Howard Mountain. None of the chemicals in the monitoring wells on Miller Mountain exceeded an HQ of 1.

None of the chemicals detected in well WY-03 exceeded an HQ of 1 (prison inmate scenario).

#### *6.6.3.2 Incremental Lifetime Cancer Risks*

##### *6.6.3.2.1 Current Resident*

Chloroform exceeded the point of departure of 1E-06 for the current adult resident groundwater exposure scenario (inhalation while showering) in five of the 18 drinking water wells (DW-25, DW-28, DW-30, DW-33, and DW-40). The adult resident exceedances were via the groundwater inhalation pathway with chloroform ILCRs of 1.3E-06 (Table 6-146), 1.9E-06 (Table 6-147), 3.3E-06 (Table 6-148), 1.0E-06 (Table 6-149), and 1.4E-06 (Table 6-150).

TCE exceeded the point of departure of 1E-06 for the current adult resident and child resident for two of the 18 wells (DW-02 and DW-04). The adult resident exceedances for TCE were via the groundwater ingestion and groundwater inhalation pathways with cancer risks of:

- DW-02: ILCR, 4.9E-06 (Table 6-141)
- DW-04: ILCR, 2.4E-05 (Table 6-142)

The young child resident exceedances for TCE were via the groundwater ingestion pathway with a cancer risk of:

- DW-02: ILCR, 1E-06 (Table 6-151)
- DW-04: ILCR, 5E-06 (Table 6-152)

PCE exceeded the point of departure of 1E-06 for the adult resident and child resident for three of the 18 wells (DW-02, DW-04, and DW-12). The adult resident exceedances for PCE were via the groundwater ingestion and groundwater inhalation pathways with cancer risks of:

- DW-02: ILCR, 3.24E-06 (Table 6-141)
- DW-04: ILCR, 5.45E-06 (Table 6-142)
- DW-12: ILCR, 1.72E-06 (Table 6-143)

The young child resident exceedances for PCE were via the groundwater ingestion pathway with a cancer risk of:

- DW-02: ILCR, 1.4E-06 (Table 6-151)
- DW-04: CR, 2.3E-06 (Table 6-152)

Methyl tertiary butyl ether exceeded the point of departure of 1E-06 for the adult and child resident groundwater ingestion pathway in two of the 18 drinking water wells (DW-15 and DW-21). The adult resident MTBE exceedances had cancer risks of 4.5E-06 (Table 6-144) and 1.6E-06 (Table 6-145), respectively. The young child resident had one MTBE exceedance at drinking water well DW-15 with a cancer risk of 2.1E-06 (Table 6-153).

#### *6.6.3.2.2 Future Resident - Howard Mountain*

Trichloroethene and PCE exceeded the point of departure of 1E-06 for the adult resident and child resident. The adult resident exceedances for TCE were via the groundwater ingestion and groundwater inhalation pathways with cancer risks of 1E-04 and 1.3E-04, respectively. The child resident exceedance for TCE was via the groundwater ingestion pathway with a cancer risk of 4.7E-05.

The adult resident exceedances for PCE were *via* the groundwater ingestion and groundwater inhalation pathways with cancer risks of 2.1E-05 and 1.8E-06, respectively. The child resident exceedance for PCE was *via* the groundwater ingestion pathway with a cancer risk of 9.6E-06.

#### *6.6.3.2.3 Future Resident - Miller Mountain*

Trichloroethene was the only carcinogenic COPC selected for Miller Mountain. Trichloroethene exceeded the point of departure of 1E-06 for the adult resident and child resident. The adult resident exceedances for TCE were via the groundwater ingestion and groundwater inhalation pathways with cancer risks of 9.3E-06 and 1.2E-05, respectively. The child resident exceedance for TCE was via the groundwater ingestion pathway with a cancer risk of 4.4E-06.

The adult resident exceedances for PCE were via the groundwater ingestion and groundwater inhalation pathways with cancer risks of 2.1E-05 and 1.8E-06, respectively. The child resident exceedance for PCE was via the groundwater ingestion pathway with a cancer risk of 9.6E-06.

### 6.6.4 Vapor Intrusion Pathway Screening Analysis

EPA recently published the *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils Vapor Intrusion* (EPA, 2002b). The target screening level concentrations for soil gas, groundwater, and indoor air published in this guidance are intended to provide a screening tool for determining whether more intensive air sampling is required. The screening values are based on potential migration of VOCs from groundwater through soils and into the interior of a residence. The screening numbers for each chemical equate to an indoor air concentration that is protective of a residential exposure (30 years, 350 days/year, 24-hours/day) based on defined target risk or hazard quotient levels. As stated in the *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils Vapor Intrusion* (EPA, 2002b):

> *"For groundwater, an attenuation factor of 0.001 (generally considered reasonably conservative) is used in combination with the conservative assumption that the partitioning of chemicals between groundwater and soil vapor is assumed to obey Henry's Law. (Note that if the risk-based concentration calculated for groundwater falls below the chemical's MCL, the MCL is recommended as the target concentrations.) EPA generally considers the attenuation factors used in this guidance to be reasonable upper bound values based on data from sites where paired indoor air, soil gas and groundwater samples were available (see Appendix F), and also theoretical considerations."*

Soil gas concentration data were not available; therefore, only groundwater data were evaluated in this screen. Table 6-158 presents the results of a preliminary Tier II screening analysis as recommended by EPA (2002b). The maximum detected concentrations of all COPCs in all wells (i.e., drinking water, monitoring wells, DCF) were compared to the screening values at a target risk (TR) of 1E-06 or target hazard quotient (THQ) of 1. Two VOCs exceeded their screening levels. These were PCE and TCE, both in the monitoring wells at Howard Mountain. The exceedance by PCE was small – about two-fold. However, the exceedance for TCE was significant – about 360 fold. Note that the vapor intrusion screening values for TCE and PCE are both 5 μg/L (i.e., their MCLs) (EPA, 2002b).

Based on the results of the preliminary Tier II screening analysis, a more detailed Tier II screening evaluation was conducted by assessing the extent to which TCE and PCE exceeded their respective screening values in all wells (residential, monitoring, WY-03). The summary table below shows that maximum detected concentrations of TCE in four (4) private residential wells (DW-2, DW-3, DW-4 and DW-12) and the wells at Miller Mountain also exceeded the vapor intrusion screening value (in addition to Howard Mountain).

| Well Location | Maximum Detected TCE Concentration (µg/L) | Exposure Point Concentration of TCE (µg/L) | Exceedance Ratio [a] | |
|---|---|---|---|---|
| | | | Maximum | EPC |
| DW-2 | 18 | 0.62 | 3.6 | 0.12 |
| DW-3 | 8.2 | 4.99 | 1.6 | 1 |
| DW-4 | 90.5 | 70.4 | 18.1 | 14 |
| DW-12 | 9 | 4.3 | 1.8 | 0.9 |
| Howard Mountain | 1,820 | 660 | 364 | 132 |
| Miller Mountain | 61 | 61 | 12 | 12 |

[a] Ratio of sample concentration to vapor intrusion screening value.

For the private wells, the TCE EPC at DW-4 also exceeded the vapor intrusion value (i.e., factor of 14). However, the EPCs for the remaining private wells were less than the TCE screening value. The EPCs for TCE at Howard Mountain and Miller Mountain exceeded the TCE screening value by factors of approximately 132 and 12, respectively.

Although the maximum detected value of PCE at Howard Mountain exceeded its screening value in the preliminary analysis, maximum detected levels of PCE in all other wells (i.e., private wells, monitoring wells, and Miller Mountain) were not in excess. Also note that the EPC for PCE at Howard Mountain was 3.3 µg/L, which is less than the screening value.

Based on these initial screening assessments, TCE in groundwater poses a potential risk of vapor intrusion into the current residence at DW-4, and future residences on Howard Mountain and Miller Mountain.

## 6.7 UNCERTAINTY ANALYSIS

Each step in the risk assessment process requires some degree of assumption. These assumptions contribute to uncertainty in the risk evaluation. In the absence of empirical or site-specific data, assumptions are developed based on best estimates of data quality, exposure parameters, and dose-response relationships. To assist in the development of these estimates, EPA recommends the use of guidelines and standard exposure factors in Superfund risk assessments (EPA, 1989, 1991a, 1997a). The use of these standard factors is intended to promote consistency among risk assessments where assumptions must be made, but their usefulness in accurately predicting risk depends on their applicability to site-specific conditions. In most cases, use of default exposure assumptions may contribute to over-estimation of plausible real-life exposures, and, therefore, true risks may be over-estimated. The RME calculation is recognized by many risk assessors to represent an unrealistically high exposure level to the general population, i.e., only about 5 to 10% of the general population would be expected to be exposed to this dose level. The combination of multiple $90^{th}$ to $95^{th}$ percentile RME default assumptions, combined with conservative toxicity values, can yield site risk estimates that may be over-protective. Nevertheless, these assumptions are appropriate when performing risk assessments of this type so that risk managers can be reasonably assured that human health risks are not under-estimated (i.e., are health-protective), and so that risk assessments for different sites can be uniformly compared.

The basic objectives of the risk characterization and uncertainty analysis steps are defined in several guidance documents provided by EPA (EPA, 1989, 1995b) and are summarized as follows:

- Provide to the appropriate decision-makers a summary of those factors that significantly influence the risk results, evaluate their range of variability, and assess the contribution of these factors to the under- or over-estimation of risk.
- Discuss the data underlying the assumptions that most significantly influence risk to highlight the strengths and weaknesses of the risk assessment results.
- Provide a discussion of both the confidence and uncertainty in the data (i.e., sampling and analysis, exposure, and toxicity) used to characterize site risk. This includes statements of the impact of key variables on site risk.

- Providing clear and transparent explanations of the types of risk calculated, use of multiple descriptors (i.e., CTE, RME), and ranges of risks as a function of average and high-end assumptions. This is not only important information needed by the risk manager, but helps to avoid public confusion and misinterpretation of the results. Although "risk communication" to the public is separate from the purpose of the risk assessment, the risk results nevertheless should be conveyed in a manner that is consistent with other similar risk assessments, that clearly differentiates the various types of risk (e.g., screening-level risks, individual risks, population risks), and that helps the public understand the logic behind any risk reduction standards that may be proposed in the future.

This Uncertainty Analysis discussion first presents a discussion of general uncertainties associated with the risk assessment process, followed by a discussion of site-specific uncertainties. The focus will be on those chemicals and exposure pathways that pose a potential cancer risk of greater than 1E-06 or a total HI of greater than 1 (including segregated HI).

## 6.7.1 General Uncertainties

### *6.7.1.1 Sample Data*

The analytical data usually contain some samples with positive results and others with nondetect results. The nondetect results are usually reported as SQLs or detection limits. In such a case, the chemical may be present at a concentration just below the reported SQL or the detection limit, or it may not be present in the sample at all. The 95% UCL of the mean concentration was used as the EPC for estimation of risks. The use of one-half the SQL or the detection limit may have resulted in either an under- or over-estimation of the actual exposure concentration, and thereby, the cancer risk HQs.

#### 6.7.1.1.1 Exposure Assumptions

The exposure assumptions directly influence the calculated doses (daily intakes), and ultimately, the calculation of risk. In general, conservative exposure assumptions were made in calculating exposure doses. The assumptions include the selection of exposure routes and scenarios, and the exposure input factors (e.g., contact rate, exposure frequency, exposure duration, and body weight) used to estimate exposure doses. In most cases, these uncertainties contribute to over-estimation of plausible real-life exposures, and therefore, true risks are over-estimated.

These assumptions are appropriate when performing risk assessments of this type so that risk managers can be reasonably assured that human health risks are not under-estimated (i.e., are health-protective), and so that risk assessments for different sites can be uniformly compared.

The concept of RME is used to develop the exposure potentials in standard human health benchmarks. The RME is defined as the "maximum exposure that is reasonably expected to occur at the site" (EPA, 1989). Several significant variables that determine the exposure doses for the RME are based on upper bound (typically, $90^{th}$ to $95^{th}$ percentile) estimates.

These are:

- Intake/contact rates
- Exposure frequency
- Exposure duration

Therefore, the calculated exposure dose for any given chemical (i.e., the exposure function of the benchmarks), which results from the integration of all of these variables, represents an upper-bound estimate of the probable exposure dose. The use of these upper-bound exposure parameters, coupled with conservative estimates of toxicity, may yield conservative (i.e., upper-bound) estimates of potential ILCRs or noncancer health effects.

#### *6.7.1.2 Chemical Toxicity Assumptions*

Perhaps the greatest single source of uncertainty in risk assessments is the toxicity assessment. Sources of uncertainty in the toxicity assessment include using the dose response information from the following:

- Effects observed at high doses to predict the adverse health effects that may occur following exposure to the low levels expected from human contact with the chemical in the environment.
- Short-term exposure studies to predict the effects of long-term exposures, and vice-versa.

- Animal studies to predict effects in humans.
- Homogeneous animal populations or healthy human populations to predict the effects likely to be observed in the general population consisting of individuals with a wide range of sensitivities.

In the development of RfDs for noncancer-causing chemicals, it is assumed that a threshold dose exists below which there is no potential for adverse health effects to the most sensitive individuals in the population. The RfD is typically derived by applying several uncertainty factors of 10 each to a no-observed-adverse-effect level (NOAEL) or a lowest-observed-adverse-effect level (LOAEL) determined from a dose-response study in animals. An additional modifying factor of from 1 to 10, which accounts for a qualitative professional assessment of additional uncertainties in the available toxicity data, also may be applied (EPA, 1989). For practical purposes, the total safety factor (uncertainty plus modifying factors) in deriving an RfD has a ceiling of 3,000. In general, the calculated RfD is overly protective, and its use probably results in some degree of over-estimation of the potential for noncancer health effects. The extrapolation of cancer potency from laboratory animals to humans, which forms the basis for the cancer risk estimates, may be associated with uncertainties ranging from as much as three to five orders of magnitude (1,000 to 100,000-fold) for selected chemicals.

The use of toxicity criteria intentionally designed to be conservative is likely to over-estimate the COPC's toxic potency. The extrapolation of animal carcinogen bioassay results to potential human cancer risk at much lower levels of exposure involves a number of assumptions regarding effect threshold, interspecies extrapolation, high- to low-dose extrapolation, and route-to-route extrapolation. The scientific validity of these assumptions is uncertain. Each of the potentially numerous steps in the extrapolation process is designed to prevent under-estimation of risk. However, in concert with other conservative assumptions (e.g., sampling, data evaluation, and exposure assumptions), they potentially result in a significant over-estimation of risk.

### 6.7.2 Site-Specific Uncertainties

#### *6.7.2.1 Trichloroethene Toxicity*

Trichloroethene was responsible for the majority of cancer risk and HI calculated for the current and future adult and child residents (refer to summary table in Subsection 6.6.2.2.5). For adults, the TCE risk was approximately 50% each from ingestion of tap water and inhalation while showering. Inhalation was not evaluated in children. Note that dermal contact while bathing in TCE-contaminated water has been evaluated in Subsection 6.7.2.2. The purpose of this discussion is to discuss the current uncertainty in TCE CSFs and to estimate the impact of the proposed TCE CSFs and RfDs on the health effects that were calculated in the text of the Bucks Harbor Risk Assessment.

The EPA recently published the *Draft Trichloroethylene Health Risk Assessment* (EPA, 2001c) and proposed a draft CSF range for TCE of from 2E-02 to 4E-01 $(mg/kg\text{-}day)^{-1}$. The TCE risk assessment performed in 2001 by EPA, which developed the toxicity values, is currently under review by the National Academy of Sciences. The EPA (2003c) *Draft Risk Assessment* is an "external review draft" that is still undergoing the peer review process within EPA. The EPA's *Science Advisory Board* (SAB) raised a number of significant questions on the derivation of the CSF and has requested EPA to re-evaluate its study in a number of areas (SAB, 2002). EPA is still in the process of reviewing the risk assessment (EPA, 2005) and has asked the SAB for additional guidance before EPA submits the revised risk assessment and recommends values for IRIS. It is not clear how soon this submission will occur at the moment.

Although some EPA regions are using the upper bound value EPA proposed cancer slope factor for TCE, EPA's *National Center for Environmental Assessment* (NCEA) has ceased recommending this value for use in risk assessments. EPA's Science Advisor and head of EPA's Office of Research and Development, Paul Gilman, has been quoted in *Inside EPA* saying that he "does not support the TCE 2001 draft health risk assessment." The Department of Defense, through the Air Force Institute for Environment, Safety and Occupational Health Risk Analysis, prepared comments on the TCE risk assessment (EPA, 2001c) and has many concerns with its conclusions and methods used to derive them. In view of these concerns, the USACE is not confident that the draft values will be finalized and is reluctant to use them in their risk

assessments. Instead, the USACE recommends use of the OEHHA values, the practice of which is consistent with new toxicity value guidance (EPA, 2003).

The summary table below compares the EPA provisional toxicity criteria (1989), the EPA proposed criteria (EPA, 2003c), and the OEHHA criteria (OEHHA, 2003) for TCE. The provisional RfD (oral) was used as a default in the Bucks Harbor risk assessment because OEHHA did not list one.

| Summary of Trichloroethene Toxicity Values | | | |
|---|---|---|---|
| **Toxicity Criterion** | **EPA 1989 Provisional** | **EPA 2001 Proposed** | **OEHHA 2003** |
| **$RfD_o$ (mg/kg-d)** | 6E-03 | 3-E04 | NTV [a] |
| **$CSF_o$ $(mg/kg\text{-}d)^{-1}$** | 1.1E-02 | 4E-01 [b] | 1.3E-02 |
| **$RfD_i$ (mg/kg-d)** | None | 1.1E-02 | 1.7E-01 |
| **$CSF_i$ $(mg/kg\text{-}d)^{-1}$** | 6E-03 | 4E-01 [a] | 7E-03 |

[a] The noncancer health effects calculated for ingestion in the current BHHRA used the EPA 1989 provisional RfD.
[b] Upper bound value

NTV = No toxicity value available.

The proposed upper bound CSF value 4E-01 $(mg/kg/d)^{-1}$ is approximately 57 times more potent than the OEHHA inhalation CSF of 7E-03 $(mg/kg\text{-}day)^{-1}$, and is approximately 31 times more potent than the OEHHA oral CSF. Similarly, the proposed EPA oral and inhalation RfDs (3E-04 and 1.1E-02 mg/kg-d, respectively) are approximately 20 and 15 times more potent than the respective OEHHA values.

A semi-quantitative estimate of the impact of the proposed toxicity values was made on the risk characterization results. Several assumptions were made for this approximation:

- Trichloroethene is primarily responsible for total risk from all COPCs in all scenarios.
- Of the total risk from TCE, 50% is due to tap water ingestion and 50% is due to inhalation while showering using TCE-contaminated groundwater.

- Total risk would be expected to increase by approximately 44 times (i.e., weighted factor based on 50% inhalation and ingestion) if the proposed slope factors (EPA, 2001c) were used.

- For the child, where only ingestion was evaluated, the total risk would increase by approximately 31 times.

Table 6-159 shows the potential impact on total cancer risk in all wells and sets of data using the proposed EPA CSF (EPA, (2001c). This table is only a semi-quantitative approximation because of the assumptions discussed above. Only wells, where TCE was detected and evaluated for risk, are included in Table 6-159 (i.e., some residential wells did not have detectable levels of TCE). The table can be summarized as follows:

- **Adult** – Only Howard Mountain showed total risks greater than 1E-04 using the OEHHA toxicity values for TCE in the original calculations in the Risk Characterization. Using the EPA proposed CSF, cancer risks greater than 1E-04 were noted for DW-02, DW-04, DW-12 and Howard Mountain.

- **Child** - There were no cancer risks greater than 1E-04 using the OEHHA toxicity values for TCE in the original calculations in the Risk Characterization. Using the EPA proposed CSF, cancer risks greater than 1E-04 were noted for DW-04 and Howard Mountain.

#### *6.7.2.2 Dermal Exposure to Current and Future Child Resident While Bathing*

Dermal absorption while bathing was not quantitatively evaluated for all chemicals for the current and future child residents. However, since TCE was the principal chemical responsible for total ILCR and HI, the impact of TCE skin absorption through bathing was evaluated. The dermally-absorbed dose through bathing in TCE-contaminated groundwater was calculated for the current and future child resident according to *EPA Risk Assessment Guidance for Superfund, Volume 1, Human Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment)* (EPA, 2004d). Table 6-160 provides the specific algorithms and inputs recommended by EPA. A detailed description of these algorithms, exposure inputs can be found in Section 3 and Appendix A of the *EPA Risk Assessment Guidance* (EPA, 2004d). The chemical specific inputs used in the dose calculations are found in Appendix B of the *Risk Assessment Guidance* (EPA, 2004d). The entire skin surface area of the child bather was assumed to be exposed for one hour (EPA, 2004d; Exhibit 3-2). An event duration ($t_{event}$) of 1 hour for the daily

RME exposure time was used as recommended in Exhibit 3-2 (EPA, 2004d).Table 6-161 shows the child resident TCE cancer risk and hazard quotient through bathing for well DW-04, Howard Mountain and Miller Mountain (i.e., those wells or scenarios where total risk exceeded 1E-05). The dermal risks for TCE exposure were 1.3E-07, 1.2E-06 and 1.1E-07, respectively. Because TCE was the principal driver for tap water ingestion for the current and future child resident (see Subsection 6.6.2.2.5), the dermal bathing risks calculated for TCE were added to ingestion risk for TCE to yield a new estimate of TCE ILCR (see Summary table below):

| Location | TCE Child Resident Cancer Risk | |
|---|---|---|
| | Tap Water Ingestion [a,b] | Combined Ingestion and Dermal Contact [a,b] |
| **DW-04** | 5.0E-06 | 5.1E-06 |
| **Howard Mountain** | 4.7E-05 | 4.8E-05 |
| **Miller Mountain** | 4.4E-06 | 4.5E-06 |

[a] Based on OEHHA cancer criteria (see Subsection 6.6.2.2.5)
[b] Assumes that TCE was principally responsible for total cancer risk.

As can be seen from the summary table, an estimate of the increase in TCE risk to the current and future child resident as a result of bathing was negligible. Similar results would be expected for PCE, which in some cases of tap water ingestion , provided as much as 20% of total risk. Therefore, total ILCR would not be expected to increase significantly for the child as a result of dermal contact while bathing. An identical pattern of negligible contribution of dermal absorption while bathing can be seen for HI for the child at DW-04, Howard Mountain and Miller Mountain (Table 6-161).

## 6.8 REMEDIATION GOALS

It is assumed that groundwater will be cleaned up to MCLs where clean up is deemed necessary. Therefore, no risk-based clean up goals were calculated.

## 6.9 SUMMARY AND CONCLUSIONS

A BHHRA was conducted for current (off-site) and future (on-site) residents at the former Bucks Harbor facility (EPA's *Risk Assessment Guidance for Superfund)* (RAGS Parts A, D

and E were followed). Only groundwater data were evaluated. Current use was evaluated on a well-by-well basis (Wells DW-01 through DW-40). The EPCs were calculated for the monitoring well data from Howard Mountain and Miller Mountain with respect to future residential use. A current on-site prison inmate scenario for the DCF was evaluated using data from well WY-03. Selection of contaminants of potential concern (COPCs) were as follows:

- **Current residential wells:** TCE; PCE; chloroform; MTBE; t-amyl methyl ether; benzene; 1,2-dichloroethane; cis-1,2-DCE, and dibromochloromethane.
- **Howard Mountain:** 1,3-dichlorobenzene; 1,4-dichlorobenzene; PCE; TCE; and cis-1,2-DCE.
- **Miller Mountain:** 1,2,4-trichlorobenzene; TCE; and cis-1,2-DCE.

The primary COPC in terms of risk for all scenarios was TCE with lesser contributions from PCE. Risk results are summarized as follows:

- There were no exceedances of EPA's acceptable ILCR and noncancer health effects ceilings (HI) for combined exposure pathways of 1E-04 or 1, respectively, at any individual residential well (i.e., current resident child and adult) or Miller Mountain (i.e., future resident child and adult).
- Future adult residents at Howard Mountain would be expected to have an ILCR greater than the EPA ceiling ILCR for acceptability of 1E-04 (i.e., 2.5E-04). Trichloroethene was the principal contributor accounting for the majority of risk. Risk from showering and groundwater ingestion were nearly identical.
- Future adult and child residents at Howard Mountain would be expected to have HIs of 3.3 and 7.1, respectively. Trichloroethene was the principal contributor. For both the adult and child, HI was primarily through tap water ingestion.
- Prison inmates had acceptable ILCRs and HIs.
- Trichloroethene vapor intrusion into future residences at Howard Mountain and Miller Mountain, and in the current residence at DW-04, poses a potential indoor air risk that may require further evaluation.

The following are the conclusions for this BHHRA:

- The future adult resident in the Howard Mountain sector of the site has an unacceptable ILCR of 2.5E-04. This risk exceeds the upper bound risk level of 1E-04 established by EPA (1991b). Total ILCR is primarily attributable to TCE. The uncertainty analysis showed that this risk would be significantly increased (approximately 40-fold) if EPA proposed draft slope factors were used in the calculations. This would drive up the total ILCR for future residents of Howard Mountain. Additionally, the ILCRs for current adult residents would be increased above 1E-04 for DW-12, DW-4 and DW-12. Child cancer risk at DW-01, Howard Mountain and Miller Mountain would also exceed 1E-04.

- There were also unacceptable hazard indices for children and adults based on an acceptable EPA HI of 1. Although there were no unacceptable risks for any residential well, well DW-04 would be significantly greater than 1E-04 risk and HI of 10 if the EPA proposed draft slope factors and RfDs.

- Vapor intrusion by TCE may be a potential indoor air issue for future residents at Howard Mountain and Miller Mountain, and for current residents at DW-04. For the future residents, preferential pathways of vapor migration will need to be identified to see if this affects the screening results. For current future residents, a more site-specific evaluation of potential vapor intrusion should be performed. This may involve gathering soil gas data in the vicinity of DW-04 and other wells on-site. Soil gas data provide more accurate estimates of indoor air potential risk. If soil gas data show there is still a potential risk, then measuring indoor air concentrations of VOCs may be necessary at DW-04.

# SECTION 7

# ECOLOGICAL RISK ASSESSMENT

# 7. ECOLOGICAL RISK ASSESSMENT

## 7.1 ECOLOGICAL SCREENING RISK ASSESSMENT

### 7.1.1 Habitat Characterization

WESTON conducted a habitat reconnaissance at the site on 6 and 7 August 2002. The goals of this cursory examination were to characterize the physical setting and identify potential ecological receptors, habitat types, and potential receptor pathways.

#### *7.1.1.1 Physical Setting*

The DCF Housing Area is located northeast of the site. A large geological fault line lies in the middle of the former AFRTS and GATR sites, and forms an outcropping with an elevation of approximately 240 ft amsl. Ground elevations adjacent to the existing radar tower and prison range from 180 to 240 ft amsl. Elevations at the DCF Housing Area range from 24 ft amsl at the stream and ponded area to the northeast to a maximum of 66 ft amsl at its southwestern border. To the west of the DCF Housing Area where a stream originates, the elevation is approximately 180 ft amsl. Surface water drainage at the site is either toward the north into the above-mentioned stream or to the south directly into Howard Cove (Figure 7-1).

#### *7.1.1.2 Forested Upland Habitat/High Gradient Stream*

A forested upland habitat was identified on the site at the beginning of the stream directly north of the former AFRTS site to the northernmost part of the stream (Figure 7-1). The stream and surrounding habitat in this area encompassed approximately 2 acres and showed vegetation to be thriving. The majority of the area was thickly wooded with a closed canopy and dominated by balsam fir (*Abies balsamea*) and eastern hemlock (*Tsuga canadensis*), with lesser numbers of paper birch (*Betula papyrifera*). Massachusetts fern (*Thelypteris simulata*) and lady fern (*Athyrium asplenioides*) were also present in the herbaceous layer. No wildlife was observed in this habitat; however, evidence of white-tailed deer (*Odocoileus virginianus*) was found in the way of tracks, trails, and scat.

The headwaters of the stream were found in this area where small seeps and forested wetlands were present. The stream flow direction from this headwaters area generally was from southwest to northeast through this forested upland habitat area. For the most part, this high gradient section of stream was only 3 ft wide and approximately 4 inches deep in pooled areas. The velocity in this section of stream was moderate. The stream substrate consisted of very fine sediments, gravel, and cobble with some woody debris that had collected over time. No macroinvertebrates were observed in the stream at this reach; however, evidence of some macroinvertebrates was found with the presence of caddis fly larval casings found on the bottom of many rocks on the streambed during cursory examinations of rocks and cobbles within the streambed. The potential lack of macroinvertebrate communities may be due to intermittent stream flow, water turbidity and sedimentation, lack of stream vegetation, or warm water conditions. Specific macroinvertebrate sampling would need to be conducted to further evaluate the presence of any macroinvertebrate communities.

#### *7.1.1.3 Forested Upland Habitat/Low Gradient Stream*

The forested upland community continued along the stream from the northernmost part of the stream to approximately the northern property boundary of the DCF Housing Area (Figure 7-1). The stream and surrounding habitat in this area encompassed approximately 1 acre. The majority of the area was thickly wooded with a closed canopy dominated by balsam fir and eastern hemlock, with lesser numbers of red maple (*Acer rubrum*), staghorn sumac (*Rhus typhina*), paper birch, and northern white cedar (*Thuja occidentalis*). Massachusetts fern, lady fern, and various mosses were also present in the herbaceous layer. No mammals were observed in this habitat; however, evidence of some mammals was found. White-tailed deer tracks, trails, scat, and rubs were found in this habitat. Woodcuttings and a small beaver dam were also found, which is evidence that beavers (*Castor canadensis*) use this habitat area. The black-capped chickadee (*Parus atricapillus*) was observed during the site visit at this area.

The flow direction in the stream was generally from northwest to southeast through this forested area. This section of stream differed from upstream conditions because it was determined to be low gradient. For the most part, this section of stream was only 3 ft wide and approximately 6 inches deep. The velocity in this section of the stream also changed to low, due to the lower, flatter elevation. The bottom was muddy and consisted of very fine sediments with woody

debris. In one section of the stream within this habitat, the stream seemed to disappear under heavy sediment deposits and then resurface about 6 ft away. Cursory observations of the rocks and cobbles in the streambed showed no macroinvertebrates or evidence that any may have been present. This potential lack of macroinvertebrate communities may be due to the cursory nature of the habitat survey, intermittent stream flow, water turbidity and sedimentation, lack of stream vegetation, or warm water conditions. Specific macroinvertebrate sampling would need to be conducted to further evaluate the presence of a macroinvertebrate community.

#### *7.1.1.4 Emergent and Scrub/Shrub Wetland/Low Gradient Stream*

The area along the stream from the property boundary of the DCF Housing Area in the north to approximately Route 92 to the south was primarily emergent and scrub/shrub wetland with some standing dead timber (Figure 7-1). The stream and surrounding habitat in this area encompassed approximately 3.5 acres and showed vegetation to be thriving. The dominant plant species here were speckled alder (*Alnus rugosa*), broadleaf spirea (*Spiraea latifolia*), and various grasses. The outlying perimeter of the area consisted of balsam fir, eastern hemlock, and red maple. No mammals were observed in this habitat; however, evidence of some mammals was found. White-tailed deer tracks, trails, scat, and rubs were found throughout the habitat. Woodcuttings were also found at the northern end of the area, which is evidence of either beaver or muskrat (*Ondatra zibethicus*) using the habitat. The birds observed identified during the site visit at this area were the great blue heron (*Ardea herodias*), osprey (*Pandion haliaetus*), and Philadelphia vireo (*Vireo philadelphicus*). However, it should be noted that the osprey was seen flying over the area, not actually feeding or perching there.

The flow direction in the stream was from north to south through this area. At the southern end of the stream near Route 92 was a ponded area (approximately 0.10 acre). For the most part, this low gradient section of stream was only 3 ft wide and approximately 6 inches deep with negligible velocity. The bottom was muddy and consisted of very fine sediments with woody debris that had collected over time. Cursory observations of the rocks and cobbles in the streambed showed no macroinvertebrates or evidence that any may have been present. This potential lack of macroinvertebrate communities may be due to the cursory nature of the habitat survey, intermittent stream flow, water turbidity and sedimentation, lack of stream vegetation, or

warm water conditions. Specific macroinvertebrate sampling would need to be conducted to further evaluate the presence of a macroinvertebrate community.

The ponded area at the southern end of the stream had a mud bottom consisting of very fine sediments and some aquatic vegetation (submerged and floating) and approximately 8 inches of water. A school of approximately 30 small baitfish (less than 0.5 inch long) was observed in the pond, and were probably serving as forage for a great blue heron observed feeding at this location. The pond had flood lines along the shores that indicate that the pond may hold from 12 to 18 inches of water during storm events and may be affected by surface-water runoff from the adjacent DCF Housing Area. An outfall near a pumping station in the DCF Housing Area empties into the southern end of the pond. The pond then drains into a pipe that directs water under Route 92 toward Howard Cove. However, the stream never directly empties into Howard Cove. Instead, water collects in another ponded area at the base of a berm that separates it from the cove. Because no drainage pipes were found to allow water passage under the berm, it was assumed that the surface water seeps back into the groundwater or percolates through the stone berm at Jasper Beach and into Howard Cove.

## 7.2 ECOLOGICAL RISK ASSESSMENT RESULTS AND DISCUSSION

As part of the screening-level ecological risk assessment, WESTON collected sediment and surface water samples from four locations in the wetland area and unnamed stream to the northeast of the DCF-FAA Housing Area (Figure 7-1). Since the primary focus of this RI is on the characterization of groundwater contamination, no soil borings were collected from the site. Sediment and surface water were sampled from the site to determine whether the potential groundwater to surface water pathway was complete and, if contamination was present, determine the potential risk to ecological receptors on a screening level basis. The results of this sediment and surface water sampling are presented below.

### 7.2.1 Sediments

#### *7.2.1.1 Sampling Methods*

Sediment samples were collected as distinct grab samples at each designated location. Sampling locations were chosen in depositional areas in the stream where sediments have accumulated over time. Sampling began at the farthest downstream location and continued in the upstream direction. Sediment samples were collected after surface water samples were collected at the same location. This sampling strategy minimized the potential for cross-contamination of adjacent sampling locations within the investigation area. Sediment samples were collected for VOC analysis using EPA Method 8260B and TOC analysis using EPA Method 9060.

Sediment samples were collected using a thin-wall tube sampler. The tube sampler was driven into the sediment to a completion depth of approximately 6 inches. The tube sampler was extracted from the water and gently rested on a hard surface as not to disturb the sample. Using a decontaminated scoopula, the sediment in the center of the tube was spooned out and collected in the appropriate sample containers. Sediment sampling was generally biased toward fine-grained sediments whenever possible. The sediment touching the side of the tube sampler was avoided as the integrity of the VOCs may have been affected as the tube was driven into the sediment.

#### *7.2.1.2 Results*

Tables 7-1 and 7-2 summarize the sediment data (0 to 0.5 ft bgs) used for the ecological risk screening assessment. Four samples were collected from the stream adjacent to the DCF Housing Area to characterize the sediments at the site. Table 7-1 lists the chemicals analyzed in site sediments, and provides the maximum concentration, (SQLs and, where available, freshwater sediment benchmarks for each chemical. Table 7-2 provides the marine sediment benchmarks available for each chemical. These tables also present the ratio of the maximum concentration for each of the analytes with the lowest ecological screening benchmark evaluated.

The results of the sediment analysis yielded nondetect values for the following seven chemicals: TCE, PCE, cis-1,2-DCE, chloroform, toluene, o-xylene, and m,p-xylene. However, to assess any

potential ecological risks associated with censored data for the COPECs, the SQLs provided by the analytical laboratory were used to screen against the sediment benchmarks. Because the stream running along the site is a freshwater stream, freshwater sediment benchmarks were used in

Table 7-1. However, because the stream eventually discharges into a marine environment (nearby Howard Cove), the constituents were also screened against marine sediment benchmarks in Table 7-2.

The freshwater sediment benchmarks used in Table 7-1 are as follows:

- Ontario Ministry of Environment and Energy (OMEE) no effect level (NEL) and lowest effect level (LEL) benchmarks (Persaud et al., 1993).
- Canadian Council of Ministers of the Environment (CCME) probable effect level (PEL) benchmarks (CCME, 1998).
- National Oceanic and Atmospheric Administration low effects range (ER-L) and screening quick reference tables (SQRT) benchmarks (Long et al., 1995; NOAA, 1999).
- Oak Ridge National Laboratory probable effect concentration and threshold effect concentration benchmarks (Sample et al., 1996).

These benchmarks provide screening values for a number of constituents including metals, polycyclic aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), and some VOCs. However, for the chemicals analyzed at AFRTS, no sediment benchmarks have been developed.

The marine sediment benchmarks used in Table 7-2 are as follows:

- OMEE NELs and LELs.
- CCME PELs.
- National Oceanic and Atmospheric Administration ER-Ls and SQRTs.

These benchmarks provide screening values for a number of constituents including metals, PAHs, SVOCs, and some VOCs. However, for the chemicals analyzed at AFRTS, no sediment benchmarks have been developed.

### 7.2.2 Surface Water

#### *7.2.2.1 Sampling Methods*

Surface water samples were collected as distinct grab samples from fully submerged locations within the streambed. Sampling locations were co-located with the sediment sampling locations. The surface water samples were collected by partially submerging the sample vials into the water column in a way that the preservatives were not lost. Surface water samples were collected for VOC analysis using EPA Method 8260B. Sampling began at the farthest downstream location and continued in the upstream direction. Surface water samples were collected at a location prior to the collection of sediment at the same location. This sampling strategy minimized the potential for cross-contamination of adjacent sampling locations within the investigation area.

#### *7.2.2.2 Results*

Tables 7-3 and 7-4 summarize the AFRTS surface water data used for the ecological risk screening assessment. Four samples were collected from the stream to characterize the surface water at the site. Table 7-3 lists the chemicals analyzed in AFRTS surface waters, and provides the maximum concentration, SQLs, and where available, freshwater benchmarks, for each chemical. Table 7-4 provides the marine water benchmarks available for each chemical. These tables also present the ratio of the maximum concentration for each of the analytes with the lowest ecological screening benchmark evaluated.

The results of the surface water analyses yielded nondetect values for the following seven chemicals: TCE, PCE, cis-1,2-DCE, chloroform, toluene, o-xylene, and m,p-xylene. However, to assess any potential ecological risks associated with censored data for the constituents of potential ecological concern (COPECs), the SQLs provided by the analytical laboratory were used to screen against the surface water benchmarks. Because the stream running along the site is a freshwater stream, freshwater benchmarks were used in Table 7-3. However, because the stream eventually discharges into a marine environment (nearby Howard Cove), the constituents were also screened against marine water sediment benchmarks in Table 7-4.

The freshwater benchmarks used in Table 7-3 are as follows:

- Federal freshwater ambient water quality criteria (AWQC)-acute (criteria maximum concentration [CMC]) and chronic (criteria continuous concentration [CCC]) criteria.
- Maine Water Quality Criteria (MEWQC)-freshwater.
- ORNL Tier II acute and chronic criteria.

These benchmarks provide screening values for a number of constituents including metals, PAHs, SVOCs, and VOCs. However, for cis-1,2-DCE, no benchmark has been developed. The remainder of the chemical quantitation limits remained well below all of the freshwater benchmarks.

The marine water benchmarks used in Table 7-4 are as follows:

- Federal marine water AWQC CMCs and CCCs.
- MEWQC-marine.

These benchmarks provide screening values for a number of constituents including metals, PAHs, SVOCs, and VOCs. However, for cis-1,2-DCE, chloroform, o-xylene, and m,p-xylene, no marine benchmarks have been developed. The remainder of the chemical quantitation limits remained well below all of the marine water benchmarks.

## 7.3 SUMMARY AND RECOMMENDATIONS

No freshwater or marine ecological benchmarks were available for the seven COPECs in sediment. Surface water benchmarks for freshwater and marine ecological receptors were available for a subset of the COPECs. The SQLs were all below the sediment benchmark values. Based on the absence of detections, the current concentrations of the COPECs in sediment and surface water at the site do not pose a significant risk to ecological receptors or the surrounding environment. Consequently, WESTON recommends that no additional sampling or baseline evaluation of potential ecological risk is warranted for the site.

# SECTION 7

# TABLES

**Table 7-1**

**Comparison of Chemical Concentrations in Sediments to Freshwater Sediment Benchmarks**
**Samples ECOSED1, ECOSED2, ECOSED3, and ECOSED4**
**Bucks Harbor**
**Former Air Force Radar Tracking Station & Ground/Air Transmitter/Receiver Site**
**Machiasport, ME**

| Chemical | Maximum Detected Concentration (µg/kg) | Sample Quantitation Limit (µg/kg) | Sediment Benchmarks | | | | | | | Lowest Ecological Benchmark | Ratio of Quantitation Limit to Lowest Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | OMEE | | CCME | NOAA | NOAA SQRT | ORNL | | | |
| | | | NEL[a] (µg/kg DW) | LEL[a] (µg/kg DW) | PEL[b] (µg/kg DW) | ER-L[c] (µg/kg DW) | Freshwater PEL[d] (µg/kg DW) | TEC[e] (µg/kg DW) | PEC[e] (µg/kg DW) | | |
| *Volatile Organic Compounds* | | | | | | | | | | | |
| Trichloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Tetrachloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| cis-1,2-Dichloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Chloroform | ND | 300 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Toluene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| o-Xylene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| m,p-Xylene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |

[a] Persaud, D., R. Jaagumagi, and A. Hayton. 1993. *Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario* . Ontario Ministry of Environment and Energy (OMEE). Queen's Printer for Ontario.

[b] CCME (Canadian Council of Ministers of the Environment). 1998. *Canadian Sediment Quality Guidelines for the Protection of Aquatic Life.*

[c] Long et al. 1995. *Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments.*

[d] NOAA (National Oceanic and Atmospheric Administration). September 1999. NOAA Screening Quick Reference Tables. Hazmat Report 99-1.

[e] Sample, B.E., D.M. Opresko, and G.W. Suter II. *Toxicological Benchmarks for Wildlife: 1996 Revision.* Oak Ridge National Laboratories.

DW = Dry weight.
ER-L = Effects range-low.
LEL = Lowest effect level.
µg/kg = Micrograms per kilogram.
NBA = No benchmark available.
ND = Not detected.
NEL = No effect level.
PEC = Probable effect concentration.
PEL = Probable effect level.
SQRT = Screening quick reference tables.
TEC = Threshold effect concentration.

**Table 7-2**

**Comparison of Chemical Concentrations in Sediments to Marine Sediment Benchmarks**
**Samples ECOSED1, ECOSED2, ECOSED3, and ECOSED4**
**Bucks Harbor**
**Former Air Force Radar Tracking Station & Ground/Air Transmitter/Receiver Site**
**Machiasport, ME**

| Chemical | Maximum Detected Concentration (µg/kg) | Sample Quantitation Limit (µg/kg) | Sediment Benchmarks | | | | | Lowest Ecological Benchmark | Ratio of Quantitation Limit to Lowest Benchmark |
|---|---|---|---|---|---|---|---|---|---|
| | | | OMEE | | CCME | NOAA | NOAA SQRT | | |
| | | | NEL[a] (µg/kg DW) | LEL[a] (µg/kg DW) | PEL[b] (µg/kg DW) | ER-L[c] (µg/kg DW) | Marine PEL[d] (µg/kg DW) | | |
| *Volatile Organic Compounds* | | | | | | | | | |
| Trichloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Tetrachloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| cis-1,2-Dichloroethene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Chloroform | ND | 300 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Toluene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| o-Xylene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| m,p-Xylene | ND | 400 | NBA | NBA | NBA | NBA | NBA | NBA | --- |

[a] Persaud, D., R. Jaagumagi, and A. Hayton. 1993. *Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario* . Ontario Ministry of Environment and Energy (OMEE). Queen's Printer for Ontario.

[b] CCME (Canadian Council of Ministers of the Environment). 1998. *Canadian Sediment Quality Guidelines for the Protection of Aquatic Life.*

[c] Long et al. 1995. *Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments.*

[d] NOAA (National Oceanic and Atmospheric Administration). September 1999. NOAA Screening Quick Reference Tables. Hazmat Report 99-1.

DW = Dry weight.
ER-L = Effects range-low.
LEL = Lowest effect level.
µg/kg = Micrograms per kilogram.
NBA = No benchmark available.
ND = Not detected.
NEL = No effect level.
PEL = Probable effect level.
SQRT = Screening quick reference tables.

**Table 7-3**

**Comparison of Surface Water Data to Federal and State Freshwater Quality Criteria**
**Samples ECOSW1, ECOSW2, ECOSW3, and ECOSW4**
**Bucks Harbor**
**Former Air Force Radar Tracking Station & Ground/Air Transmitter/Receiver Site**
**Machiasport, ME**

| Chemical | Maximum Detected Concentration (µg/L) | Sample Quantitation Limit (µg/L) | Federal Freshwater AWQC[a] | | Maine WQC[b] | | ORNL Tier II[c] | | Lowest Ecological Benchmark | Ratio of Quantitation Limit to Lowest Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CMC (µg/L) | CCC (µg/L) | CMC (µg/L) | CCC (µg/L) | Secondary Acute (µg/L) | Secondary Chronic (µg/L) | | |
| *Volatile Organic Chemicals* | | | | | | | | | | |
| Trichloroethene | ND | 2 | NBA | NBA | 45,000 | 21,900 | 440 | 47 | 47 | 0.043 |
| Tetrachloroethene | ND | 2 | NBA | NBA | 5,280 | 840 | 830 | 98 | 98 | 0.020 |
| cis-1,2-Dichloroethene | ND | 2 | NBA | NBA | NBA | NBA | NBA | NBA | NBA | --- |
| Chloroform | ND | 2 | NBA | NBA | 28,900 | 1,240 | 490 | 28 | 28 | 0.071 |
| Toluene | ND | 2 | NBA | NBA | 17,500 | NBA | 120 | 9.8 | 10 | 0.204 |
| o-Xylene | ND | 2 | NBA | NBA | NBA | NBA | 230 | 13 | 13 | 0.154 |
| m,p-Xylene | ND | 2 | NBA | NBA | NBA | NBA | 230 | 13 | 13 | 0.154 |

[a] EPA (U. S. Environmental Protection Agency). *National Recommended Water Quality Criteria 2002.* EPA 822-R-02-001. November 2002.

[b] MEDEP.

[c] Suter, G.W. and C.L. Tsao. 1996. *Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision.*

AWQC = Ambient water quality criteria.

CCC = Criterion continuous concentration (chronic criterion).

CMC = Criterion maximum concentration (acute criterion).

µg/L = Micrograms per liter.

NBA = No benchmark available.

ND = Not detected.

WQC = Water quality criteria.

**Table 7-4**

**Comparison of Surface Water Data to Federal and State Marine Water Quality Criteria**
**Samples ECOSW1, ECOSW2, ECOSW3, and ECOSW4**
**Bucks Harbor**
**Former Air Force Radar Tracking Station & Ground/Air Transmitter/Receiver Site**
**Machiasport, ME**

| Chemical | Maximum Detected Concentration (µg/L) | Sample Quantitation Limit (µg/L) | Federal Marine Water AWQC[a] | | Maine WQC[b] | | Lowest Ecological Benchmark | Ratio of Quantitation Limit to Lowest Benchmark |
|---|---|---|---|---|---|---|---|---|
| | | | CMC (µg/L) | CCC (µg/L) | CMC (µg/L) | CCC (µg/L) | | |
| *Volatile Organic Chemicals* | | | | | | | | |
| Trichloroethene | ND | 2 | NBA | NBA | 2,000 | NBA | 2,000 | 0.001 |
| Tetrachloroethene | ND | 2 | NBA | NBA | 10,200 | 450 | 450 | 0.0044 |
| cis-1,2-Dichloroethene | ND | 2 | NBA | NBA | NBA | NBA | NBA | --- |
| Chloroform | ND | 2 | NBA | NBA | NBA | NBA | NBA | --- |
| Toluene | ND | 2 | NBA | NBA | 6,300 | 5,000 | 5,000 | 0.00040 |
| o-Xylene | ND | 2 | NBA | NBA | NBA | NBA | NBA | --- |
| m,p-Xylene | ND | 2 | NBA | NBA | NBA | NBA | NBA | --- |

[a] EPA (U. S. Environmental Protection Agency). *National Recommended Water Quality Criteria 2002.* EPA 822-R-02-001. November 2002.

[b] MEDEP.

AWQC = Ambient water quality criteria.

CCC = Criterion continuous concentration (chronic criterion).

CMC = Criterion maximum concentration (acute criterion).

µg/L = Micrograms per liter.

NBA = No benchmark available.

ND = Not detected.

WQC = Water quality criteria.

# SECTION 7

# FIGURES




t:/bucks harbor/mxd/bucks_harbor_points.mxd

**Legend**

- Forested Upland/High Gradient Stream
- Forested Upland/Low Gradient Stream
- Emergent Scrub/Shrub Wetland/ Low Gradient Stream
- Contours
- Sample points

N
W E
S

0 400
Feet

WESTON SOLUTIONS

**Figure 7-1**
**Habitat Assessment**

Former Bucks Harbor Air Force Radar Tracking Station and Ground/Air Transmittal/Receiver Site
Machiasport, Maine

# SECTION 8

# CONCLUSIONS AND RECOMMENDATIONS

# 8. CONCLUSIONS AND RECOMMENDATIONS

## 8.1 CONCLUSIONS

This RI was conducted to characterize the nature and extent of VOCs in groundwater beneath the Bucks Harbor site, to quantitatively evaluate risks to human health and the environment, and to investigate an adjacent area for a potential production well to supply drinking water to local residents. Between June 2002 and August 2003, a comprehensive field investigation was conducted, including surface and borehole geophysical investigations; installation of bedrock monitoring wells and a bedrock test well; surveying; packer permeability testing; and the collection and analysis of groundwater, surface water, sediment, and residential drinking water samples.

The data and information generated during the RI are described in the preceding sections of this report and in the attached appendices. The subsections that follow provide a summary of the results with respect to contaminant distribution, fate and transport of the contaminants, and potential risk to human and ecological receptors. Conclusions are also drawn regarding the limitations of the investigation and uncertainties in the baseline risk assessment. Finally, recommendations on supplemental investigations that could be performed to satisfy future project objectives are presented.

### 8.1.1 Nature and Extent of Contamination

The monitoring well, residential water supply well, and test well sampling data collected in 2003 as part of the RI, confirm that historical releases of chlorinated VOCs at several locations at the site have impacted local groundwater. The most commonly detected compound was TCE, which was detected in the monitoring wells at a maximum concentration of 3,460 µg/L (MW-10), and in the residential water supply wells at a maximum concentration of 65 µg/L (DW-4). In addition to TCE, PCE was also detected in two monitoring wells (STMW-001 and MW-10), at concentrations exceeding applicable EPA MCLs, although at levels far less than those found for TCE. A low level of PCE was also detected in the test well (TW-1), which may be related to former operations at the AFRTS site or a separate, localized release. Several other VOCs were identified in groundwater at the site including cis-1,2-DCE, trans-1,2-DCE, toluene, naphthalene,

MEK, styrene, and acetone, but all at concentrations well below their respective EPA MCLs. Thus, the primary contaminant at the site is TCE, with PCE as a secondary concern.

There are three separate areas of dissolved VOCs in groundwater at the site: (1) originating at the Transmitter site and extending to the southwest; (2) originating in the vicinity of the FAA radar antennas and extending to the southeast; and (3) originating at the GATR site and extending to the southeast. Each of the three areas of groundwater contamination is aligned with either the northwest-southeast or northeast-southwest trending bedrock fracture sets identified at the site (Gates, 1981; ABB, 1997a). At the Transmitter and GATR sites the plumes are narrow, and therefore, are believed to be restricted to a few closely spaced fractures. The FAA plume is wider and has two extensions that align with the mapped northeast-southwest bedrock fracture set. It is believed that the source of the contamination at the FAA site was the use of solvent compounds in the vicinity of monitoring well MW-10, possibly related to solvent dispensing activities in the basement of former Building 114, and that TCE is migrating along the predominant fracture set to the southeast before moving vertically upwards into the overburden and ultimately discharging to Howard Cove. Daily operation of local water supply wells are drawing contaminated groundwater from the predominant northwest-southeast trending fracture, along the orthogonal fractures, creating two extensions to the contaminant plume.

Vertically, VOC concentrations are generally higher within the deep bedrock water-bearing zone than in shallow bedrock or overburden groundwater. This is most evident at the GATR site, where TCE was not detected in shallow bedrock groundwater near the presumed source area, but was found at 61 µg/L in a deep bedrock monitoring well (MW-13) at that location. The results of the packer water quality testing were inconclusive with regard to the vertical distribution of contaminants due to suspected migration of groundwater around the pneumatic packers used to seal off the test intervals. It is not known whether the inability of the packers to seal the test intervals was due to the presence of high-angle or near-vertical fractures that allowed groundwater to migrate vertically into the test interval, or to a poor seal of the packers against the rough sides of the borehole. Regardless, the packer water quality tests showed little vertical variation in contaminant concentration at any of the five locations tested.

Long-term variations of water quality in residential drinking-water supply wells affected by VOCs were also evaluated. Historical concentrations of TCE in five residential wells located within the FAA plume (DW-2, DW-3, DW-4, and DW-12) and the GATR site plume (DW-23) were plotted versus time. The plot suggests that TCE concentrations in the center of the FAA plume (DW-2, DW-3, and DW-4) have been slowly increasing; however, the concentration of TCE in well DW-12, located southwest of the main body of the plume, has been decreasing, possibly related to a reduction in the amount of water withdrawn from this well. Historical water quality data from well DW-23, located within the main body of the GATR site plume, suggest that TCE concentrations in this plume are remaining relatively constant and below the EPA MCL and MEDEP MEG of 5 µg/L.

### 8.1.2 Natural Attenuation Assessment

Based on an analysis of water quality parameters and an assessment of the hydrogeological processes operating within the local bedrock aquifer, there is no significant biodegradation of chlorinated solvents occurring at this site. Comparison of the ratio of cis-1,2-DCE to TCE shows that at most locations the cis-1,2-DCE concentration is less than 5% of the TCE concentration, confirming that only minor biological breakdown of the TCE is occurring in the FAA and Transmitter site areas. At the GATR site on Miller Mountain, however, cis-1,2-DCE is found at concentrations that are 30% of the TCE concentration. This suggests that more biodegradation is occurring within the GATR site plume than within the other two plumes. This is consistent with the long-term trend analysis, which shows that contaminant concentrations downgradient of the GATR site remain fairly constant, while those downgradient of Howard Mountain are slowly increasing.

It should be noted that VC was not detected in any of the water quality samples at the site, suggesting that biodegradation beyond the cis-1,2-DCE stage is not occurring, or that any VC produced through biodegradation is quickly broken down into inert byproducts. It is more likely that the VC is rapidly breaking down because it should degrade easily under the aerobic conditions that exist at the site (Vogel et al., 1987).

### 8.1.3 Fate and Transport

The compounds of concern at the site are TCE and PCE. However, based on the high solubility of these compounds, their low adsorption potential, and the largely diffuse nature of the release mechanism, it is believed that only small amounts of TCE and PCE remain in site soils at the various source areas. Further evidence for this is a comparison of historical groundwater quality results with precipitation, which shows a negative correlation, suggesting that there is little TCE in the unsaturated zone to be leached out with increased precipitation.

It is possible that residual NAPL exists within the saturated zone in the vicinity of Howard Mountain based on the relatively high dissolved concentrations found in monitoring well MW-10, but unlikely that mobile NAPL exists in this area. Similarly, it is unlikely that any NAPL (residual or mobile) is present at either the Transmitter Site or the GATR Site based on the observed dissolved concentrations.

The TCE and PCE compounds will tend to move with the groundwater flow under advection once they have entered the saturated zone. They will move through fractures in the bedrock in a downgradient direction toward groundwater discharge zones (Bucks Harbor and Howard Cove). Diffusion of the TCE and PCE into small and dead-end fractures, dilution, and some limited mechanical dispersion will tend to reduce their dissolved concentrations along the groundwater flow path. Adsorption results in contaminant reductions and a retardation of the velocity of contaminant migration. The degree of retardation experienced by a particular organic contaminant will depend on the fraction of organic carbon in the aquifer matrix.

Limited natural biodegradation of TCE and PCE is occurring, based on the presence of cis-1,2-DCE breakdown products in groundwater at the site. However, this mechanism does not appear to be significantly affecting the concentration or distribution of these compounds in the Howard Mountain area based on the persistence of concentrations observed in the Transmitter site and FAA areas. However, natural biodegradation does appear to be responsible for the decreasing concentrations of TCE at the GATR site on Miller Mountain, based on the higher ratio of TCE to cis-1,2-DCE in this area, and the observed decreasing trend in overall TCE concentrations.

### 8.1.4 Risk Assessment

The objectives of the BHHRA were to predict the cancer risks and noncancer adverse health effects above background levels in susceptible populations potentially exposed to contaminants associated with the site under existing baseline conditions (i.e., in the absence of remedial action). The BHHRA evaluated both current and future exposure scenarios. The results indicate that on-site and off-site cumulative cancer risks for all human health risk scenarios did not exceed the upper bound acceptable level of 1E-04, and only one well (DW-4) marginally exceeded 1E-05. Therefore, total on-site and off-site cancer risks, as calculated, were well within the risk range EPA uses to regulate hazardous waste sites under Superfund (i.e., 1E-06 to 1E-04) (EPA, 1991b) and noncancer effects were not at issue. Assuming that sources of chemicals associated with significant risks have been remedied, the conservative assumptions used in this BHHRA provide an adequate degree of health protectiveness to off-site residents and on-site prison inmates.

As part of the Screening-Level Ecological Risk Assessment, WESTON collected surface water and sediment samples from four locations in the wetland area and unnamed stream northeast of the DCF Housing Area. As discussed in Sections 4 and 7, no VOCs were detected in any of the surface-water and sediment samples collected. Based on the absence of detections, the current concentrations of the COPECs in sediment and surface water at the site do not pose a significant risk to ecological receptors or the surrounding environment. Therefore, WESTON believes that additional sampling or a baseline evaluation of potential ecological risk is not warranted for the site.

### 8.1.5 Baseline Risk Assessment Analysis of Uncertainty

Each step in the risk assessment process requires some degree of assumption, which contributes to uncertainty in the risk evaluation. In the absence of empirical or site-specific data, assumptions are developed based on best estimates of data quality, exposure parameters, and dose-response relationships. To assist in the development of these estimates, EPA recommends the use of guidelines and standard exposure factors to promote consistency among risk assessments where assumptions must be made; however, their usefulness in accurately predicting risk depends on their applicability to site-specific conditions. In most cases, use of default

exposure assumptions may contribute to over-estimation of plausible real-life exposures, and therefore, true risks may be over-estimated.

This BHHRA calculated risks using these conservative assumptions and the RME approach, which is recognized by many risk assessors to represent an unrealistically high exposure level to the general population. The RME default assumptions, combined with conservative toxicity values, can yield site risk estimates that may be over-protective. Nevertheless, these assumptions are appropriate when performing risk assessments of this type so that risk managers can be reasonably assured that human health risks are not under-estimated (i.e., are health-protective), and so that risk assessments for different sites can be uniformly compared.

Despite the use of the conservative assumptions, total on-site and off-site cancer risks were well within the risk range EPA uses to regulate hazardous waste sites, and non-cancer effects were not at issue. Furthermore, in the absence of detections of VOCs in surface water and sediment samples, the ERA performed concluded that no significant risk exists to ecological receptors.

### 8.1.6 Data Limitations

Several data limitations and site-specific conditions should be considered when evaluating the results and conclusions presented in this report. The conclusions and recommendations presented in this RI Report are based on site conditions that exist as of September 2003. Past conditions were considered on the basis of observations and readily available records, interviews, recollections, and information provided to WESTON or reasonably available to WESTON. The results of groundwater samples collected from, in some instances, widely spaced subsurface explorations and at depths determined by data obtained during the investigation were evaluated. Water-level readings have been made in the monitoring wells at times and under conditions stated in the report. These data have been reviewed and interpretations have been made in the text of this report; however, it should be noted that fluctuations in the level of the groundwater could occur due to variations in rainfall, barometric pressure, and other factors different from those prevailing at the time the measurements were made. Chemical analyses have been performed for specific parameters during the course of this investigation, as detailed in the text.

These data limitations, however, can be applied to most RIs under a variety of conditions. With respect to the Bucks Harbor AFRTS and GATR sites, there are also some site-specific data gaps that should be acknowledged:

- **Howard Mountain Area:** The analytical results of groundwater samples collected from the Transmitter site area, indicate the presence of TCE at concentrations well above the EPA MCL and MEDEP MEG of 5 µg/L. Based on the orientation of the mapped northeast-southwest bedrock fracture set, and the water-level elevations in the monitoring wells, the plume is migrating in a southwesterly direction (Figure 4-2). Whereas no additional bedrock monitoring wells are located southwest of monitoring well MW-07, the nature and extent of the plume in this direction has not been defined, nor have potential risks to downgradient receptors been identified.

- **Howard Mountain Area:** The information obtained from previous investigations and during interviews with former USAF employees and people with knowledge of site history indicated that there were no specific areas where TCE and other solvents were discharged to the ground surface; rather, the releases were intermittent and limited to the areas where they were used. The overburden thickness in these areas was reportedly thin, which, when combined with the high volatility of the solvents and low $K_{oc}$ value, suggested that the presence of residual contamination in soil at the site was unlikely.

  However, the storage of drums containing TCE in the basement of the former Building 114 could represent a source area. Leaks or spills from the drums combined with the floor drains/drain pipe features associated with the building likely resulted in a release of chlorinated solvents to the subsurface. In consideration of the overburden thickness encountered during installation of monitoring well MW-10, and the concentrations of TCE detected in groundwater at this location, soil conditions in the area around former Building 114 have not been thoroughly evaluated.

- **Howard Mountain/Miller Mountain Areas:** The hydraulic interconnectivity of the bedrock fractures in the water-bearing zone has not been verified. Analyses of the bedrock cores, borehole geophysics logs, and permeability test results indicate that all of the monitoring wells drilled at the site intersected several water-bearing fractures; however, specific fractures could not be reliably correlated between boreholes. Water level fluctuations in on-site monitoring wells in response to daily pumping of residential water supply wells were not monitored, and no pumping or step-drawdown tests were performed during the investigation. Data from such tests would provide an evaluation of the level of communication between fractures in adjacent well locations within the bedrock aquifer, and further refine the Site Conceptual Model.

The data show that the Miller Mountain area is hydrogeologically separate from that of the Howard Mountain area. The geological distinctiveness of the two bedrock aquifers is not considered a data limitation or a data gap, but is an important feature of the area that should be

noted in this summary. The predominant bedrock lithology, nature of fracturing, permeability, estimated hydraulic conductivity, and biological degradation rates are distinctly different between the two areas; therefore, the nature and extent of contamination are different as well and should be taken into consideration when planning future remedial alternatives.

## 8.2 RECOMMENDATIONS FOR FUTURE WORK

In consideration of the data limitations and conclusions identified, WESTON recommends the following:

### 8.2.1 Howard Mountain Area

- Installation of additional deep bedrock monitoring wells southwest of the Transmitter site to assess the lateral extent of the TCE plume, and to evaluate potential impacts to downgradient receptors.

- Pumping tests of selected bedrock monitoring wells to assess hydraulic connection of water-bearing fractures. Observation wells should be equipped with electronic data loggers to record drawdown in response to pumping and communication within the bedrock aquifer.

- Conduct an investigation of overburden soil quality to assess if residual soil contamination exists in the vicinity of former Building 114.

- Perform a long-term pumping test on the test well to evaluate potential contaminant mobilization. The presence of PCE in a groundwater sample collected from test well TW-1 suggests that this location may be inadequate for water supply purposes. If salt water or elevated concentrations of PCE are detected in test well TW-1 during testing, or if long-term pumping results in a negative impact to the DCF water supply well (WY-3), then the test well area should be eliminated from further consideration as a potential water supply well location.

### 8.2.2 Miller Mountain Area

- Consider removing residential wells in the vicinity of the GATR site/Miller Mountain area from future drinking-water sampling rounds based on 8+ years of residential water quality monitoring that indicate no VOCs are present at concentrations that exceed EPA MCLs or MEDEP MEGs. However, water quality monitoring of well MW-13 and, if possible, the former GATR site water supply well should be conducted until concentrations at the site have dropped below the EPA MCL.

- Immediately secure or abandon the former water supply well located at the GATR site. This well is accessible to the public and subject to vandalism, including the introduction of potentially hazardous substances into the water-bearing zone in which it was installed.

### 8.2.3 Recommended Remedial Action ObSjectives

Using the information obtained from the RI, the FS will be completed to recommend the most suitable alternative for supplying a safe and adequate drinking-water supply to residents. The proposed additional investigative activities will be performed as part of the FS. Several groundwater remedial alternatives, including options for public water supplies, will be prepared and presented in the FS Report. WESTON recommends the following remedial action objectives:

- Evaluate source area remediation and water supply alternatives.
- Regard the Howard Mountain and Miller Mountain areas as separate groundwater aquifers due to the uniqueness of the individual geologic and hydrogeologic properties.
- Provide an alternative water supply to those residents whose drinking water exceeds EPA MCLs and MEDEP MEGs.
- Continue the residential water supply monitoring program in the vicinity of Howard Mountain until all groundwater quality meets EPA MCLs and MEDEP MEGs, to ensure there is no risk to residents, and that the groundwater plume is not moving in response to changes in residential pumping patterns. The selected remedy must remain in effect until the impacted aquifer has been restored.

# SECTION 9

# REFERENCES

# 9. REFERENCES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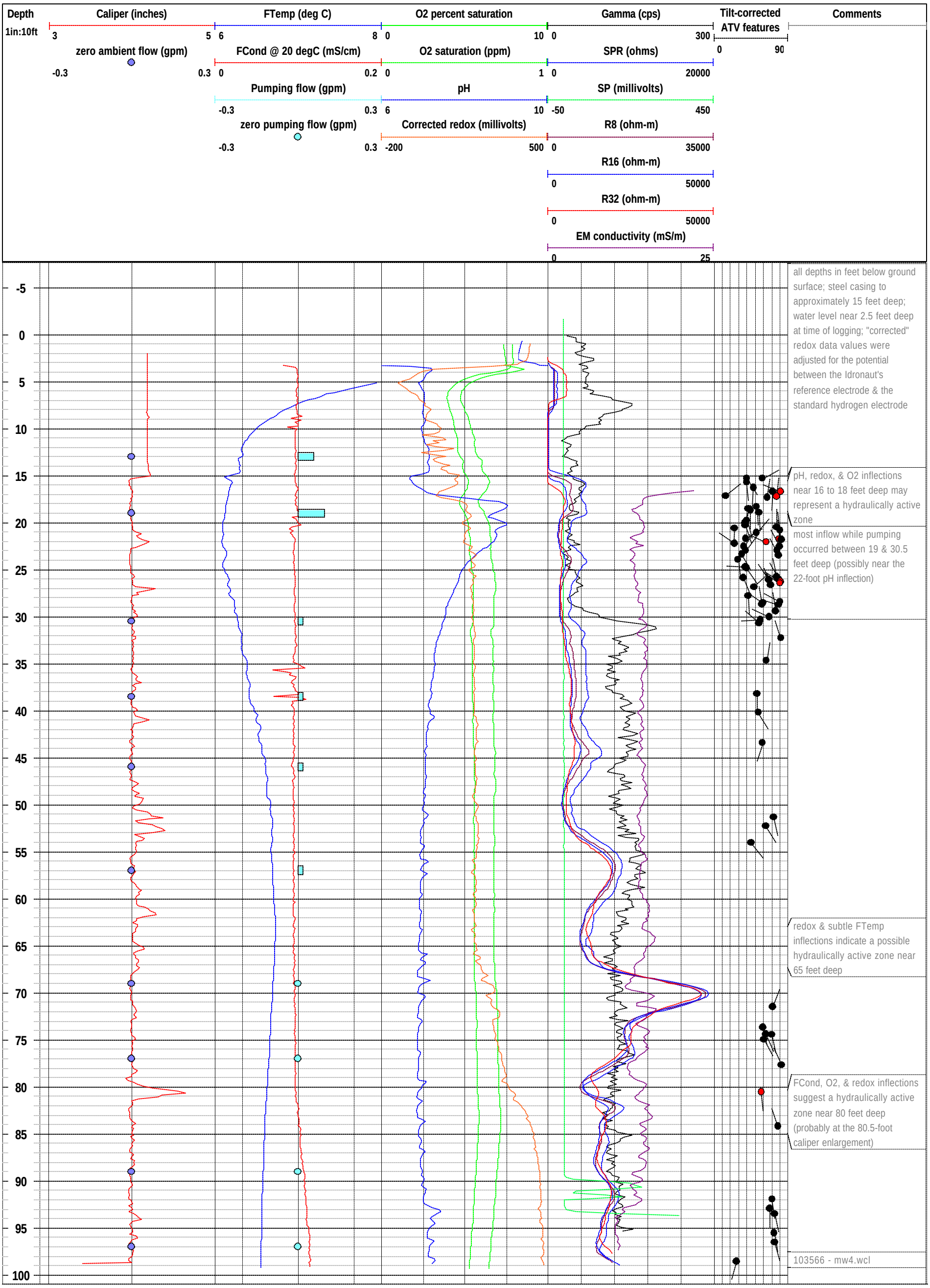
# APPENDIX A

# USGS GEOPHYSICAL REPORT

# Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-04 conventional logs



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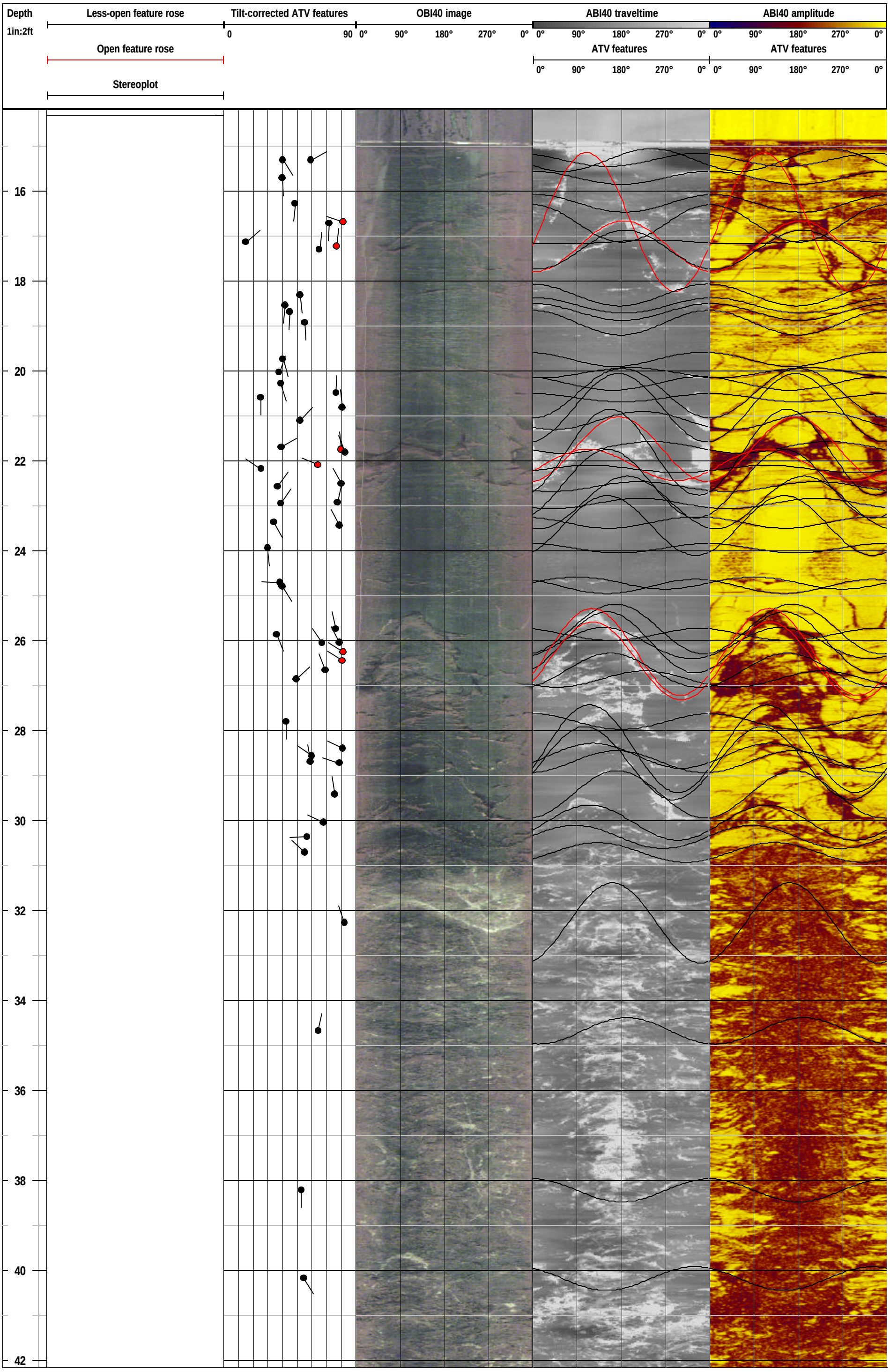

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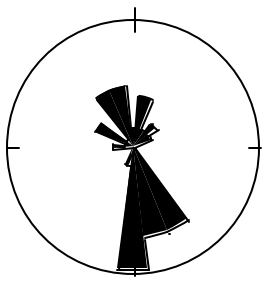

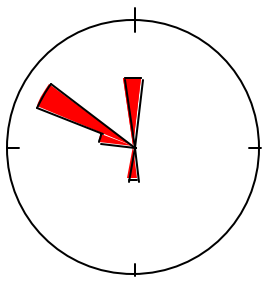

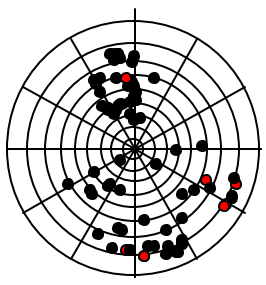

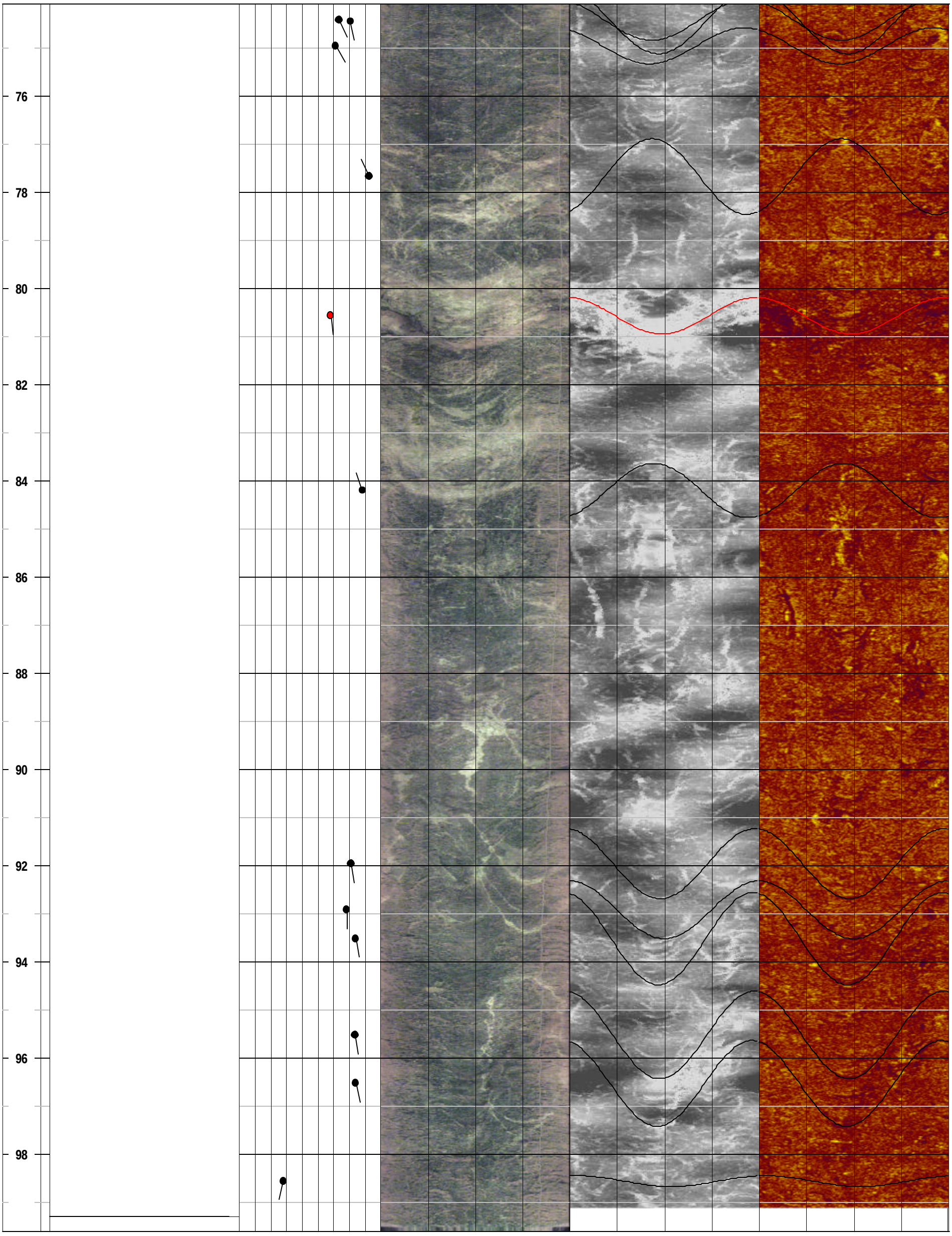
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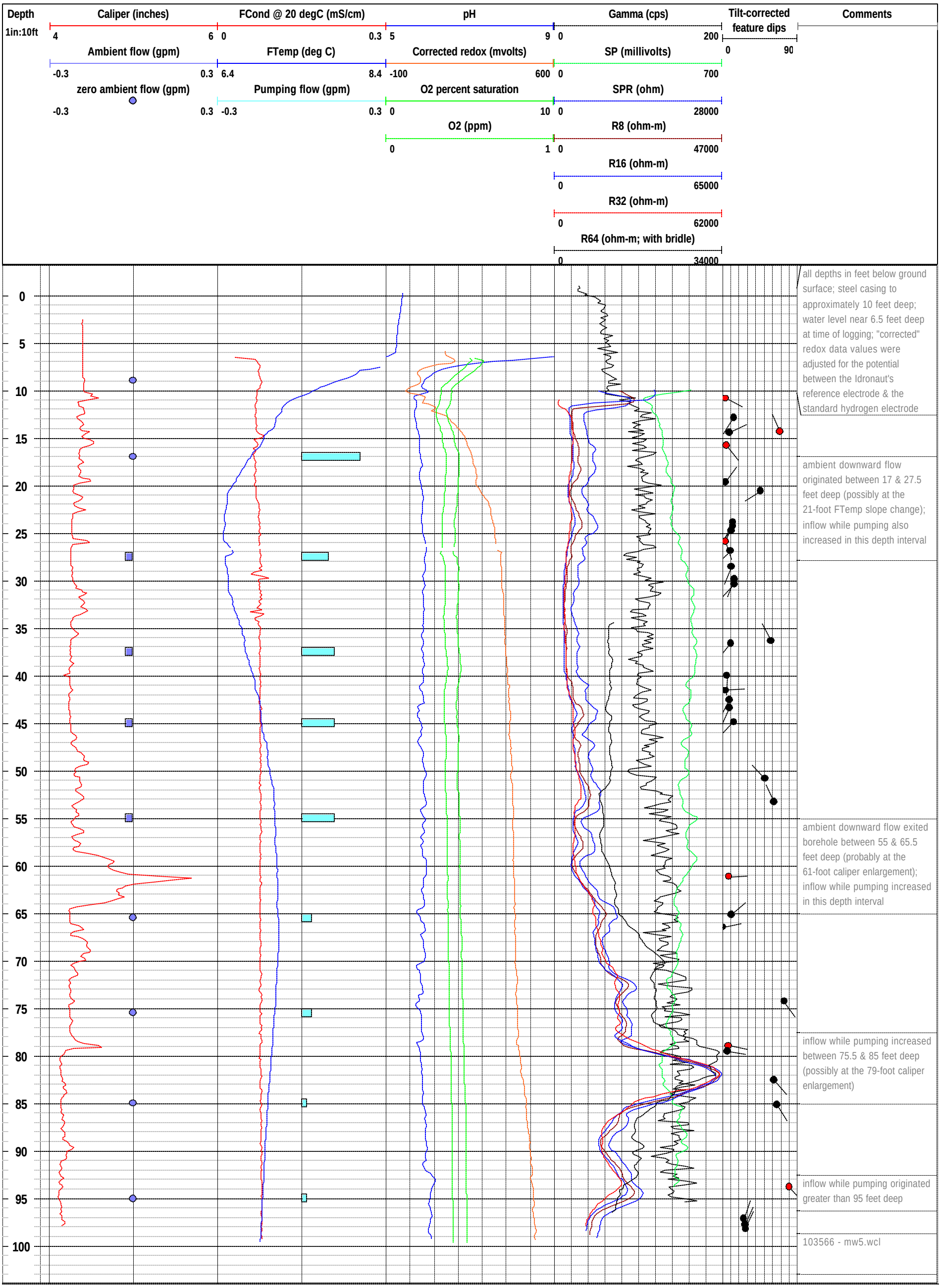

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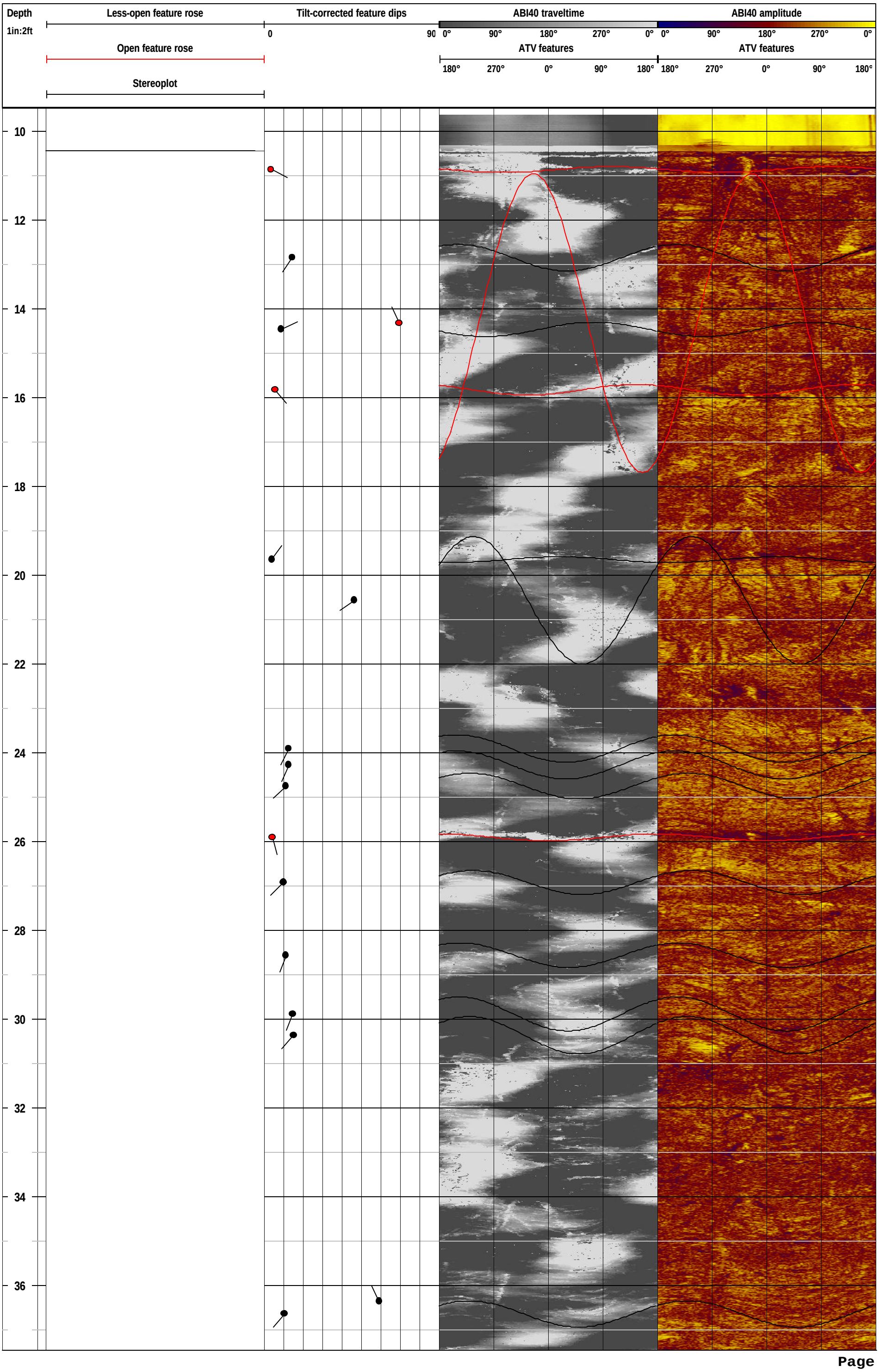

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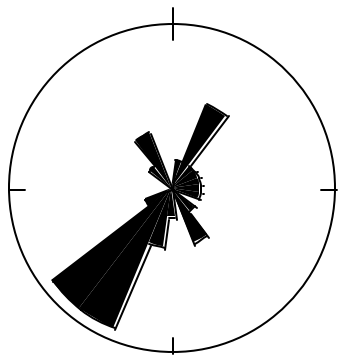

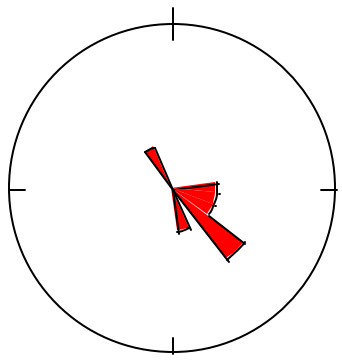

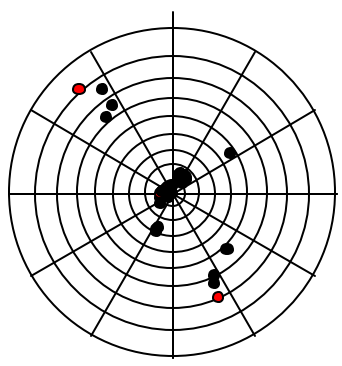

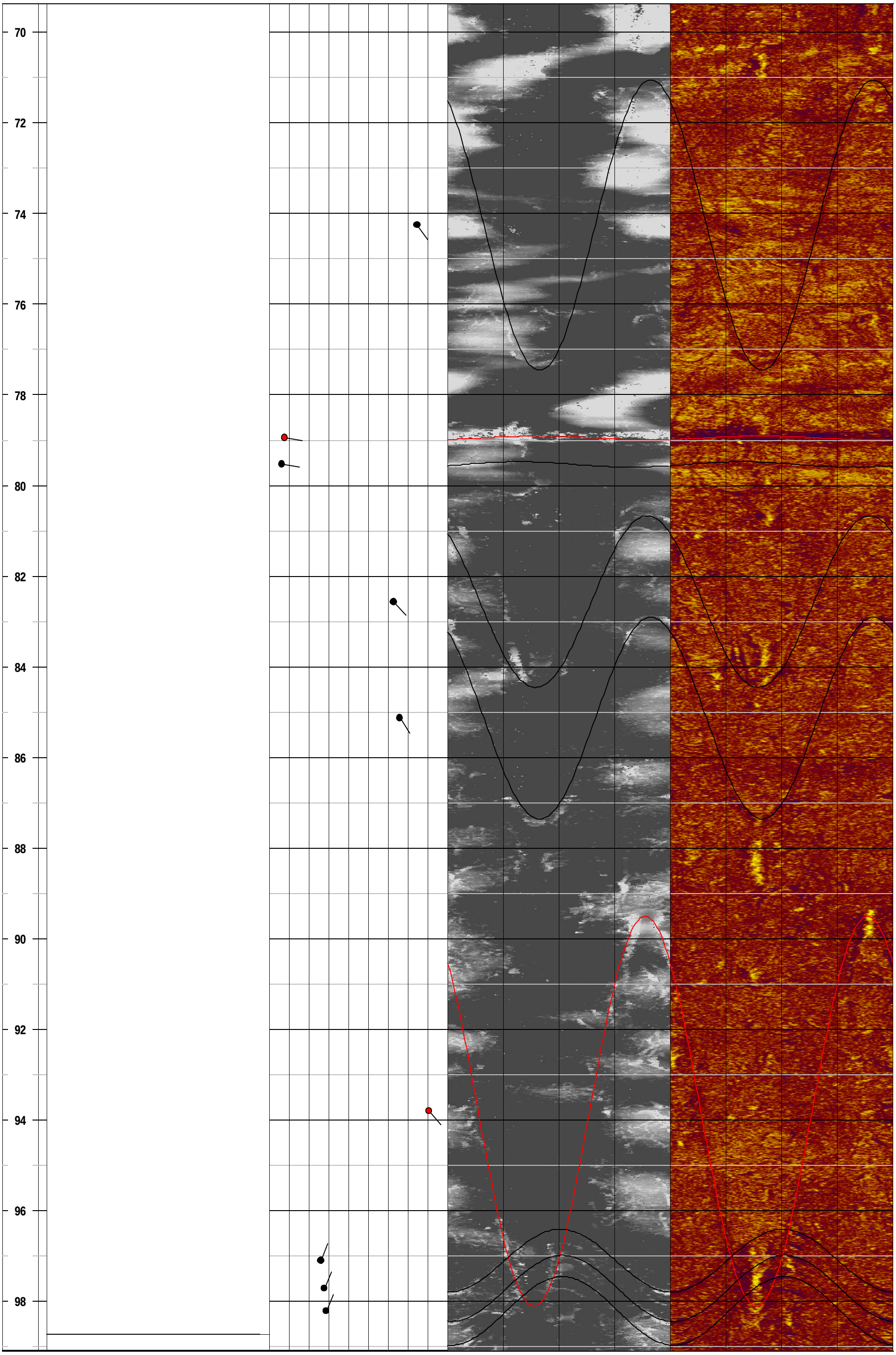
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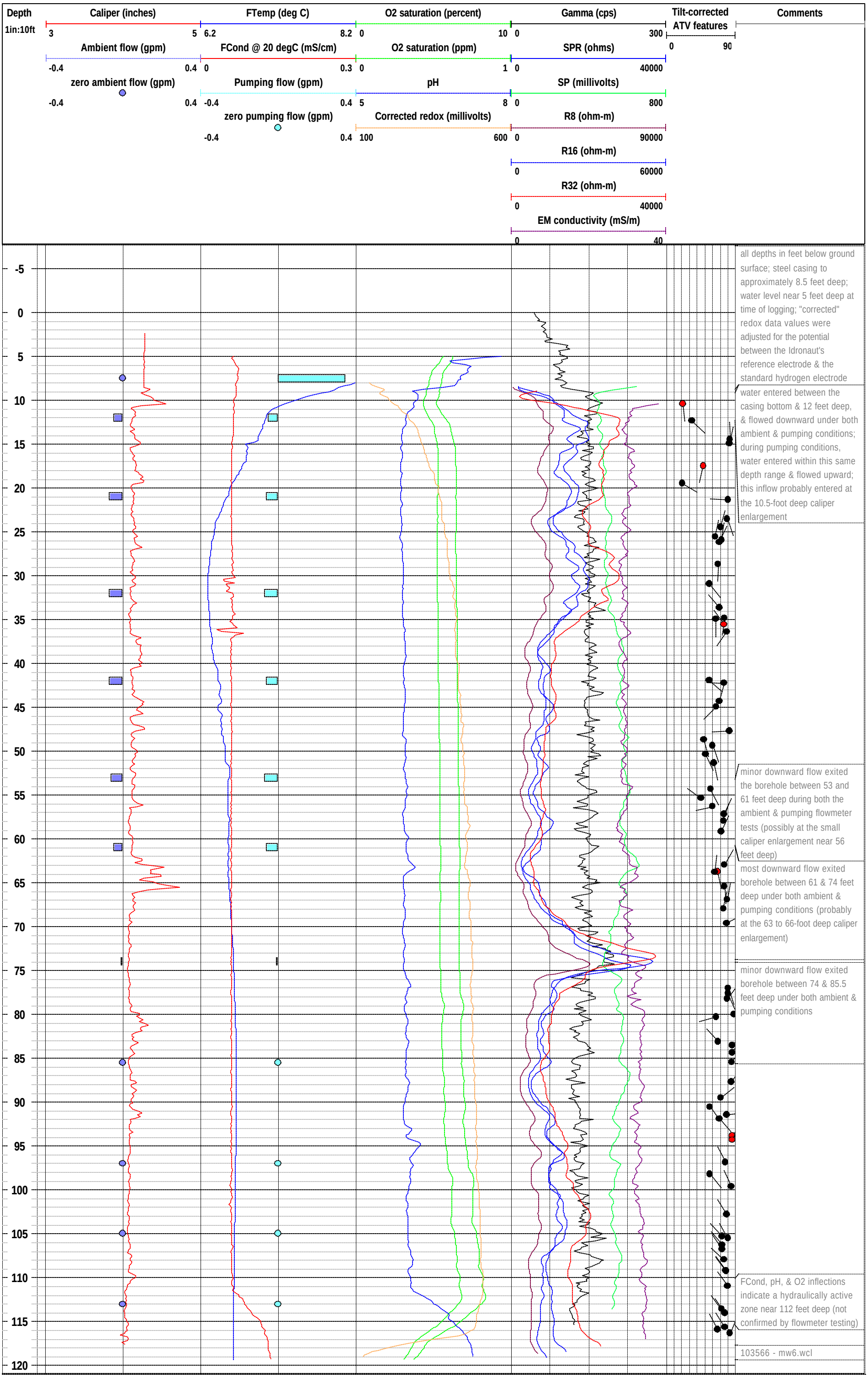

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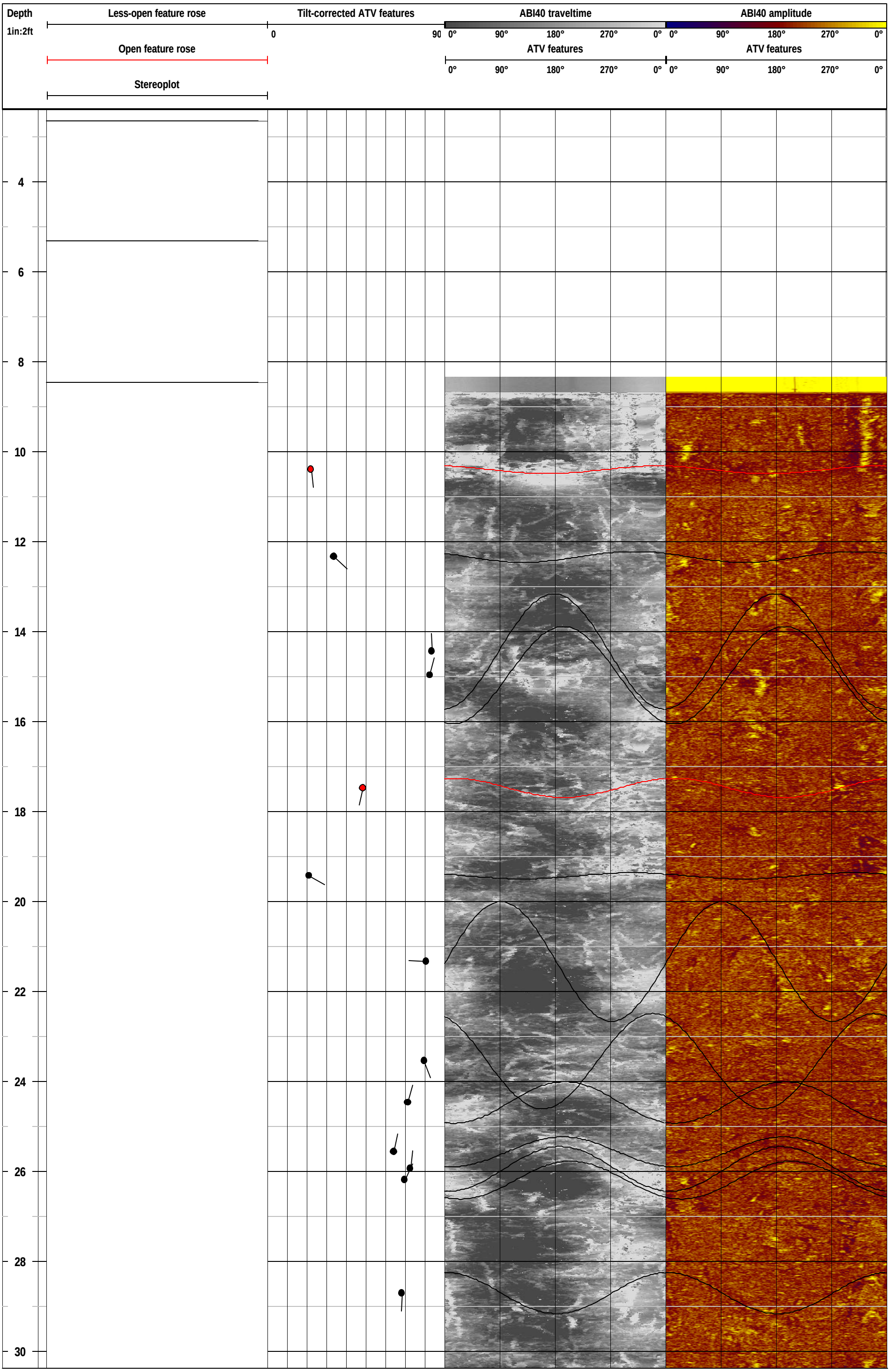

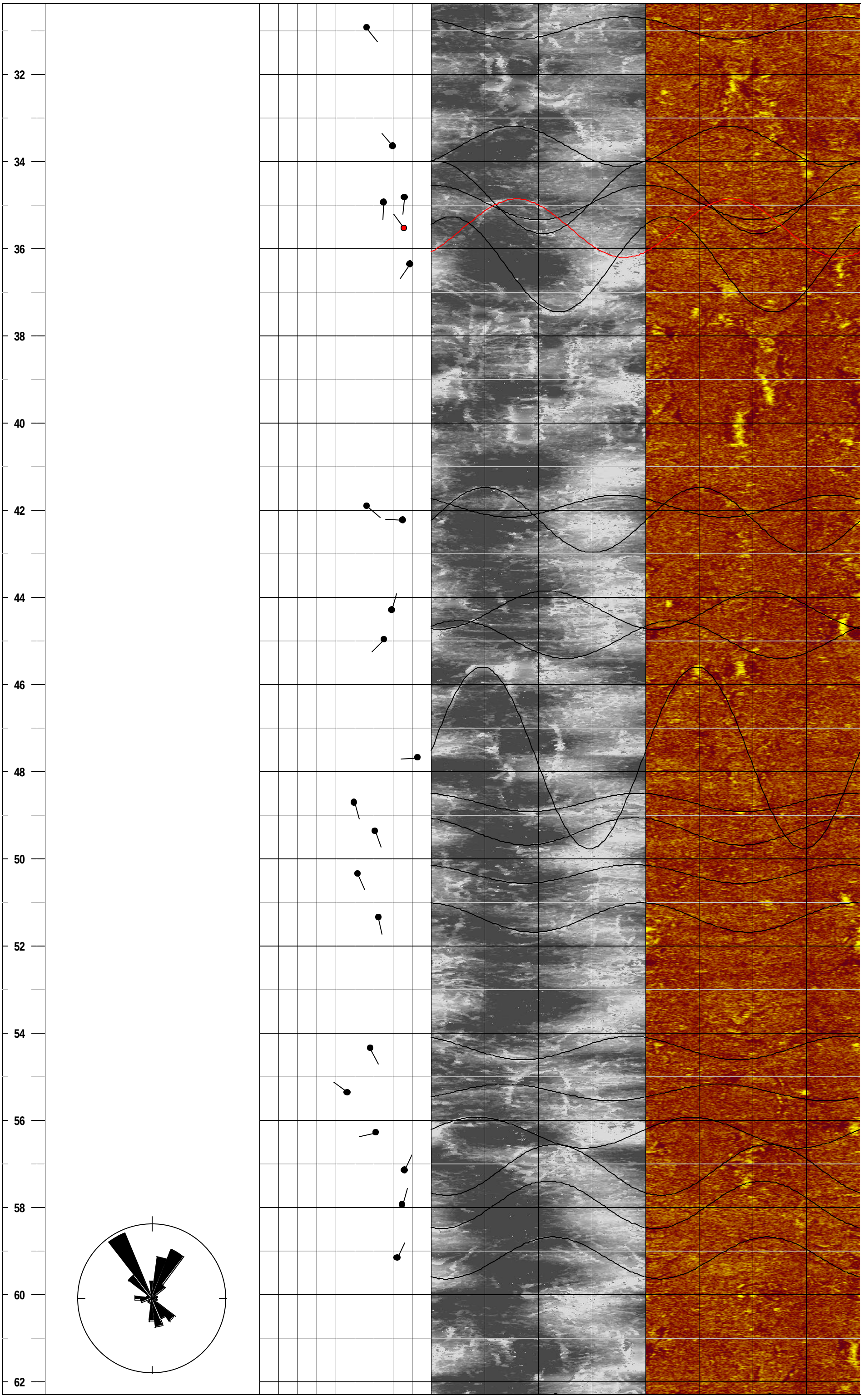
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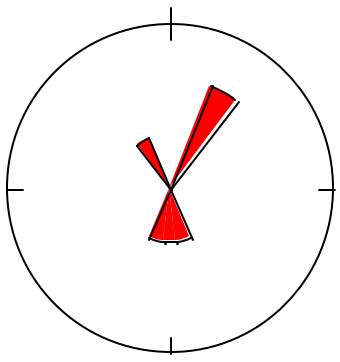

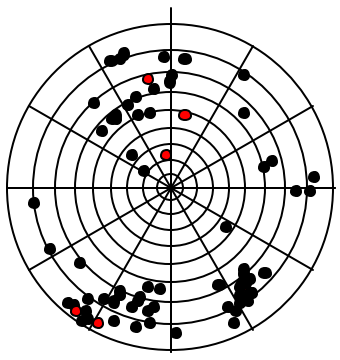

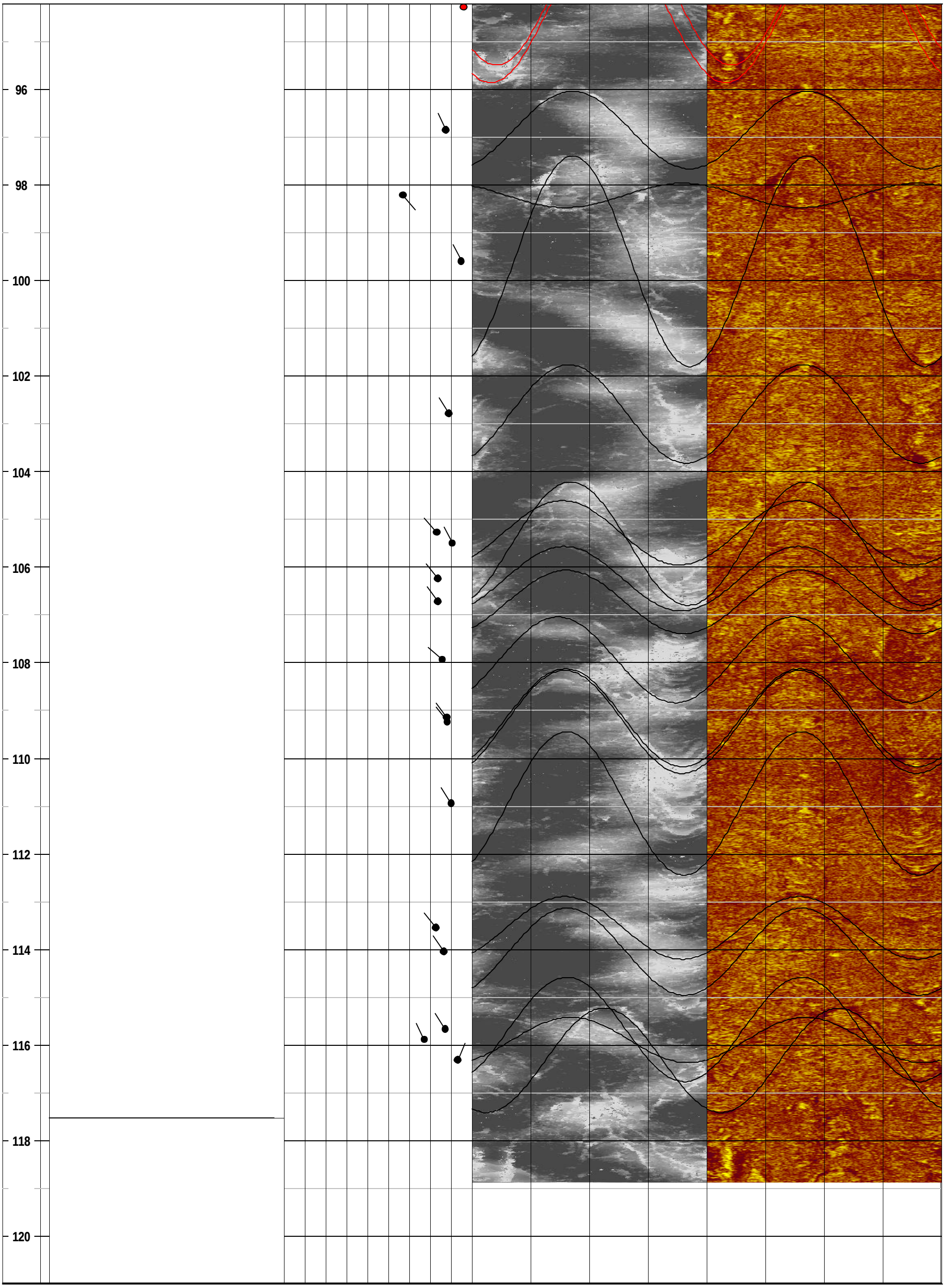
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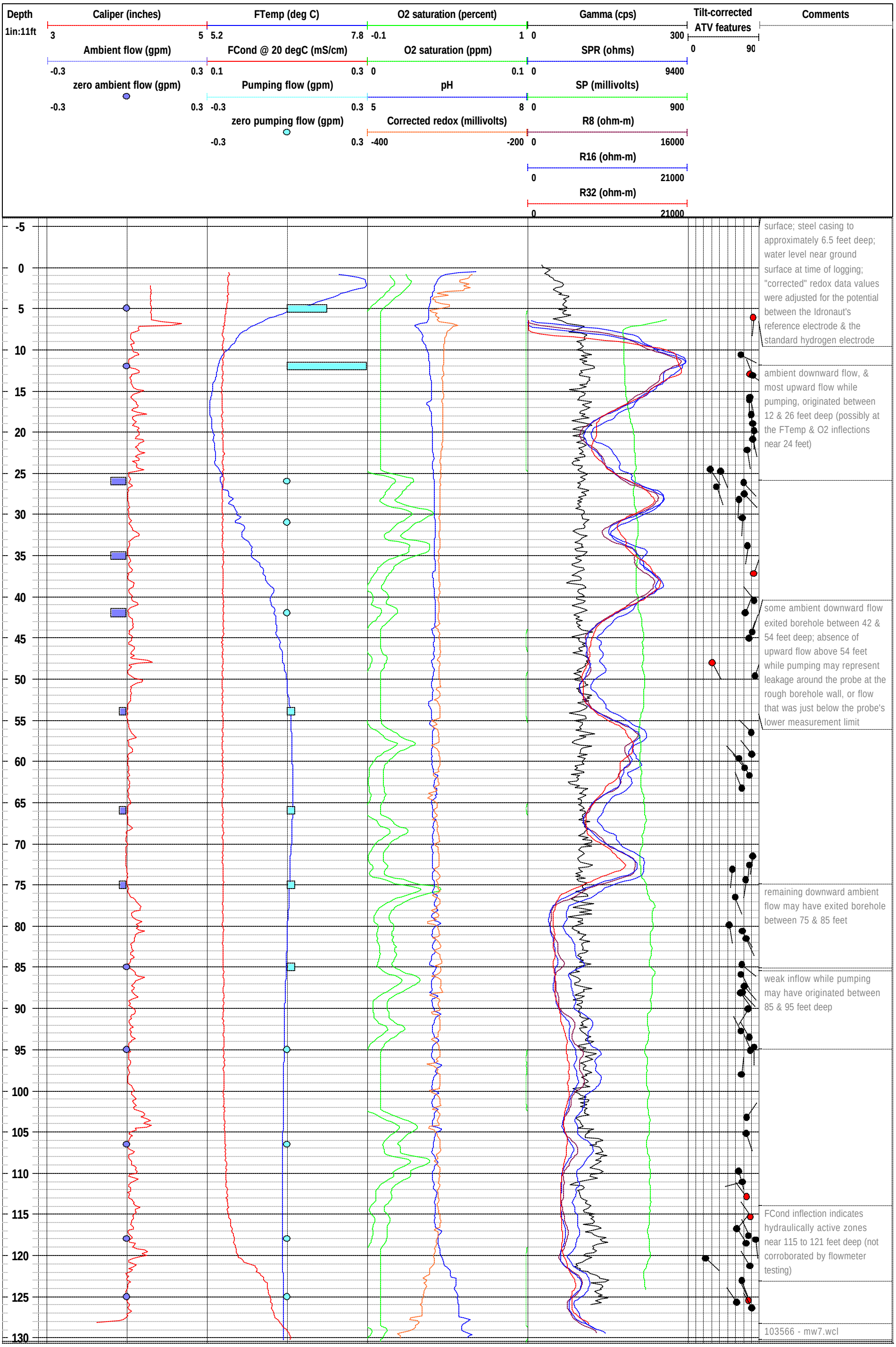

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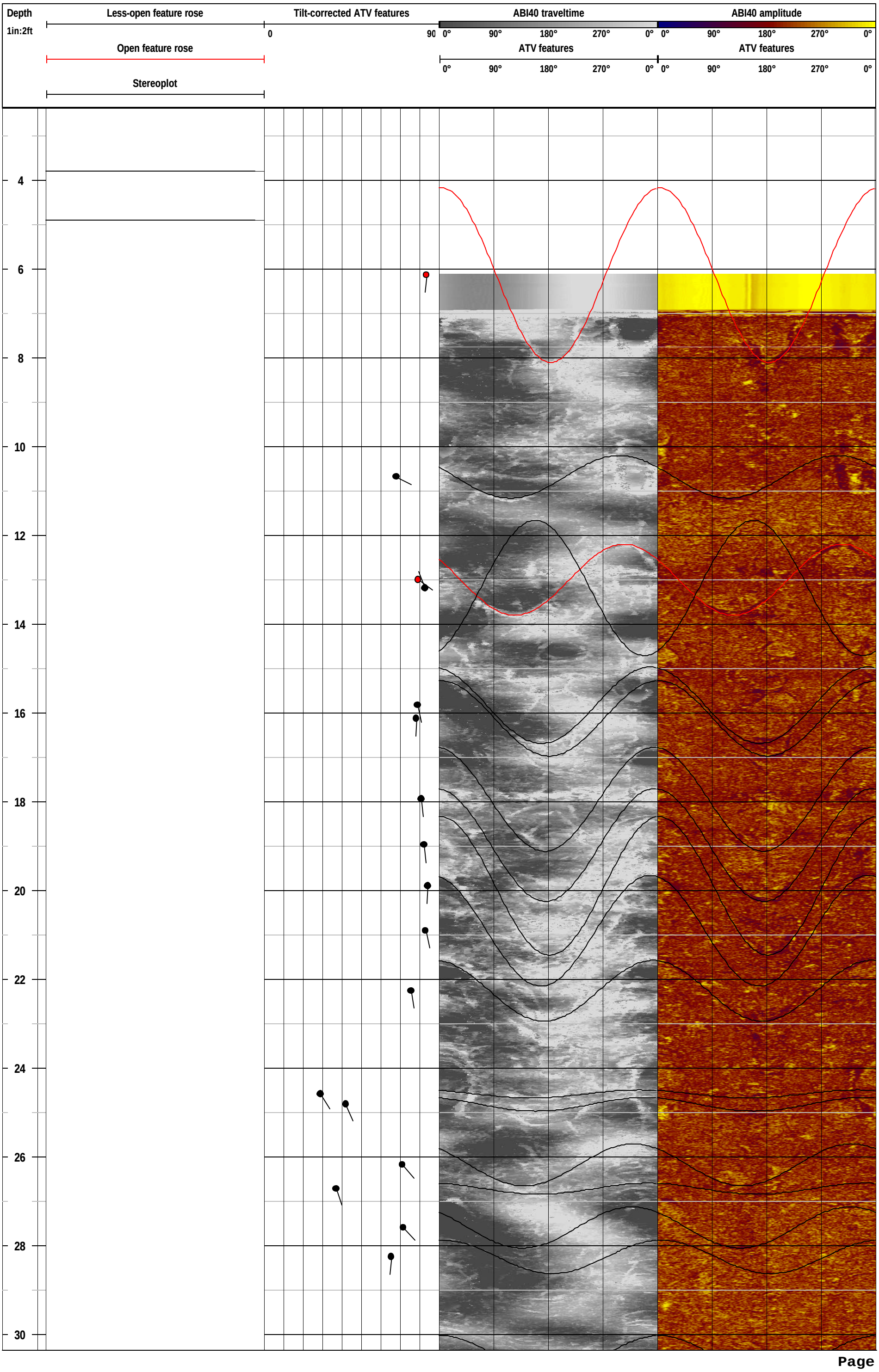

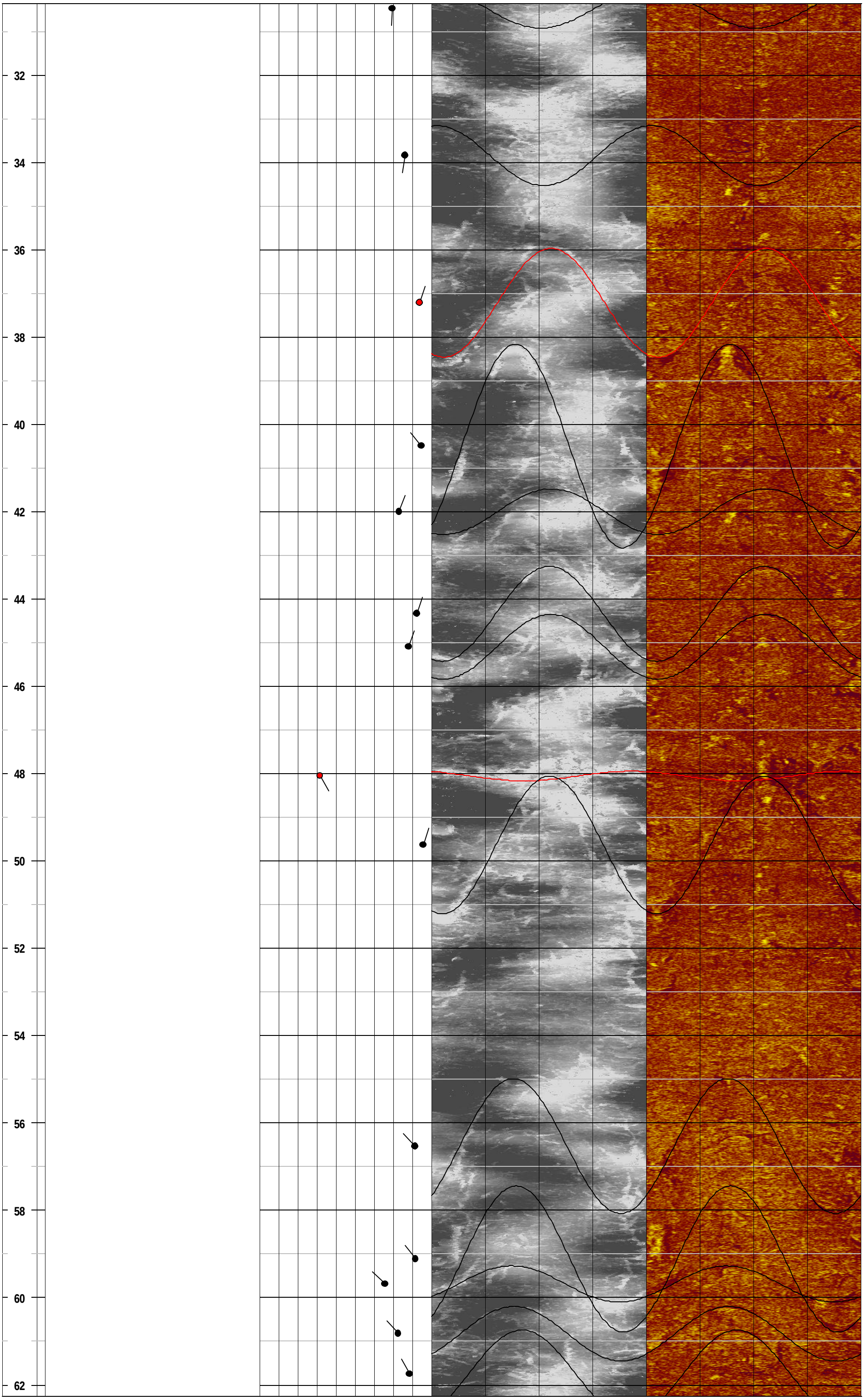
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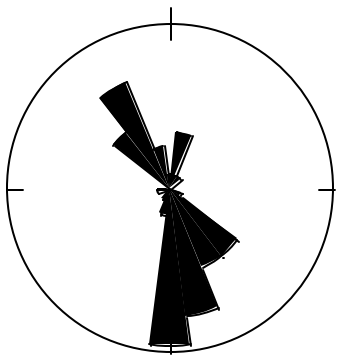

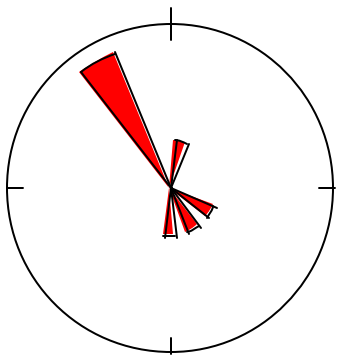

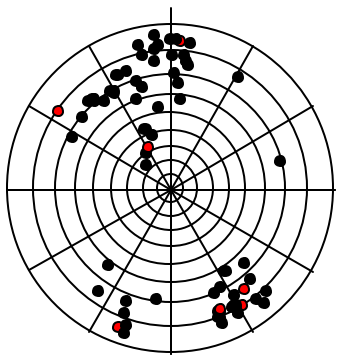

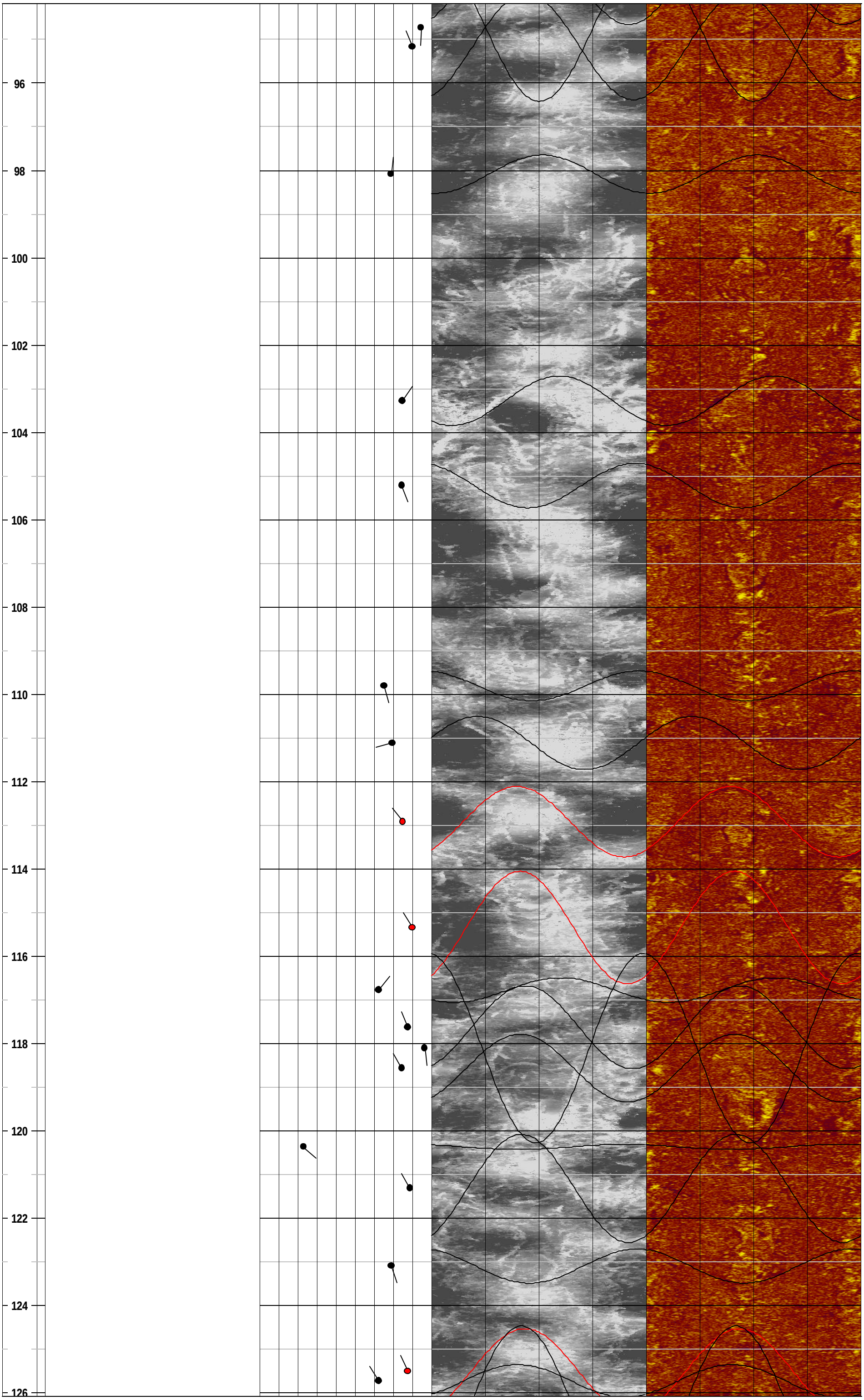
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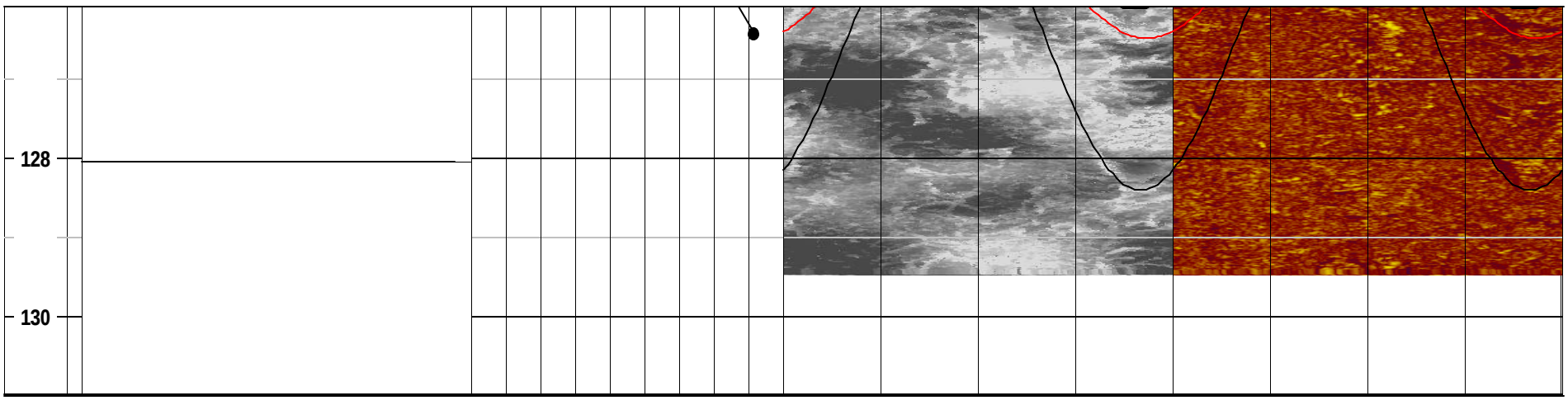
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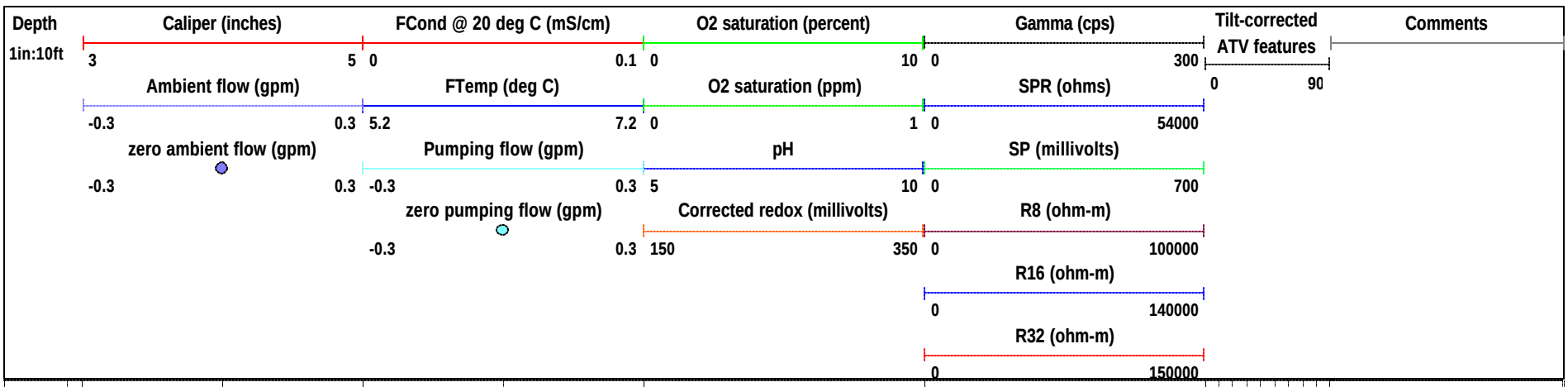


all depths in feet below ground surface; steel casing to approximately 8.5 feet deep; water level near 4 feet deep at time of logging; "corrected" redox data values were adjusted for the potential between the Idronaut's reference electrode & the standard hydrogen electrode

most inflow while pumping occurred between 12 & 20 feet deep (possibly near the 14-foot pH inflection); weak ambient downward flow also entered the borehole in this depth interval

inflow while pumping originated between 20 & 27 feet deep (possibly near the 22-foot FTemp inflection); weak ambient downward flow exited the borehole in this depth interval

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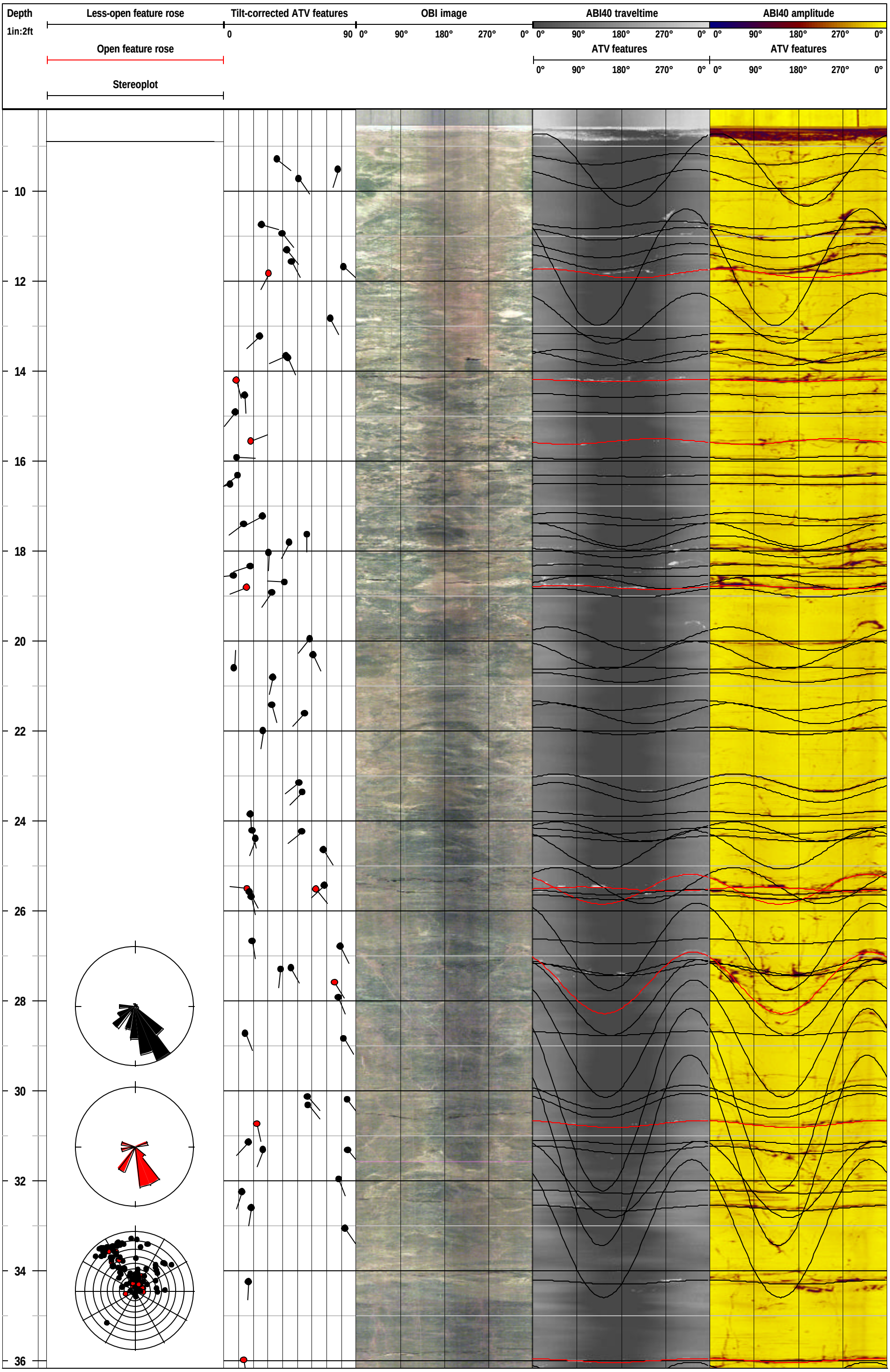
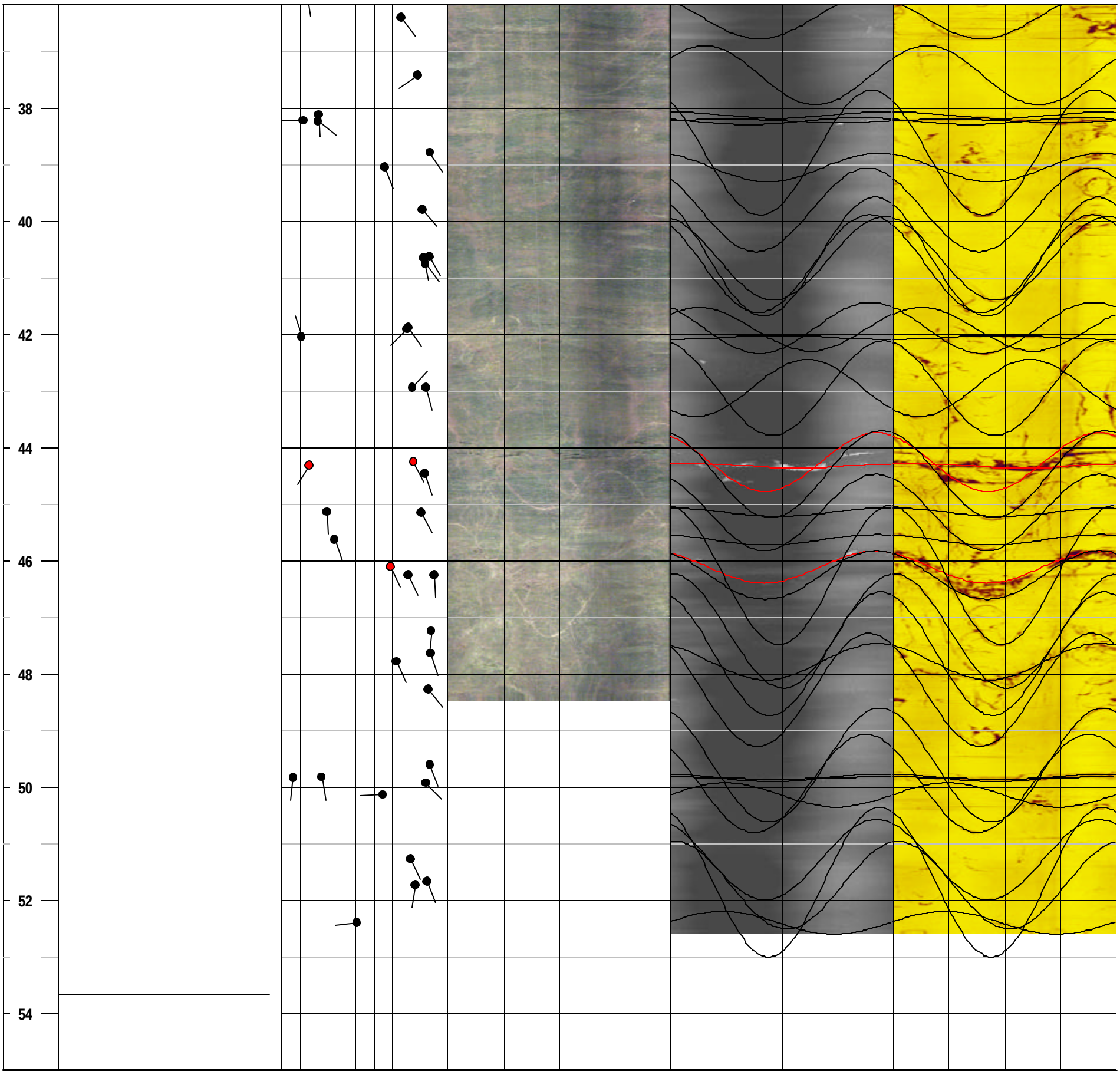
Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-08b optical & acoustic televiewer logs

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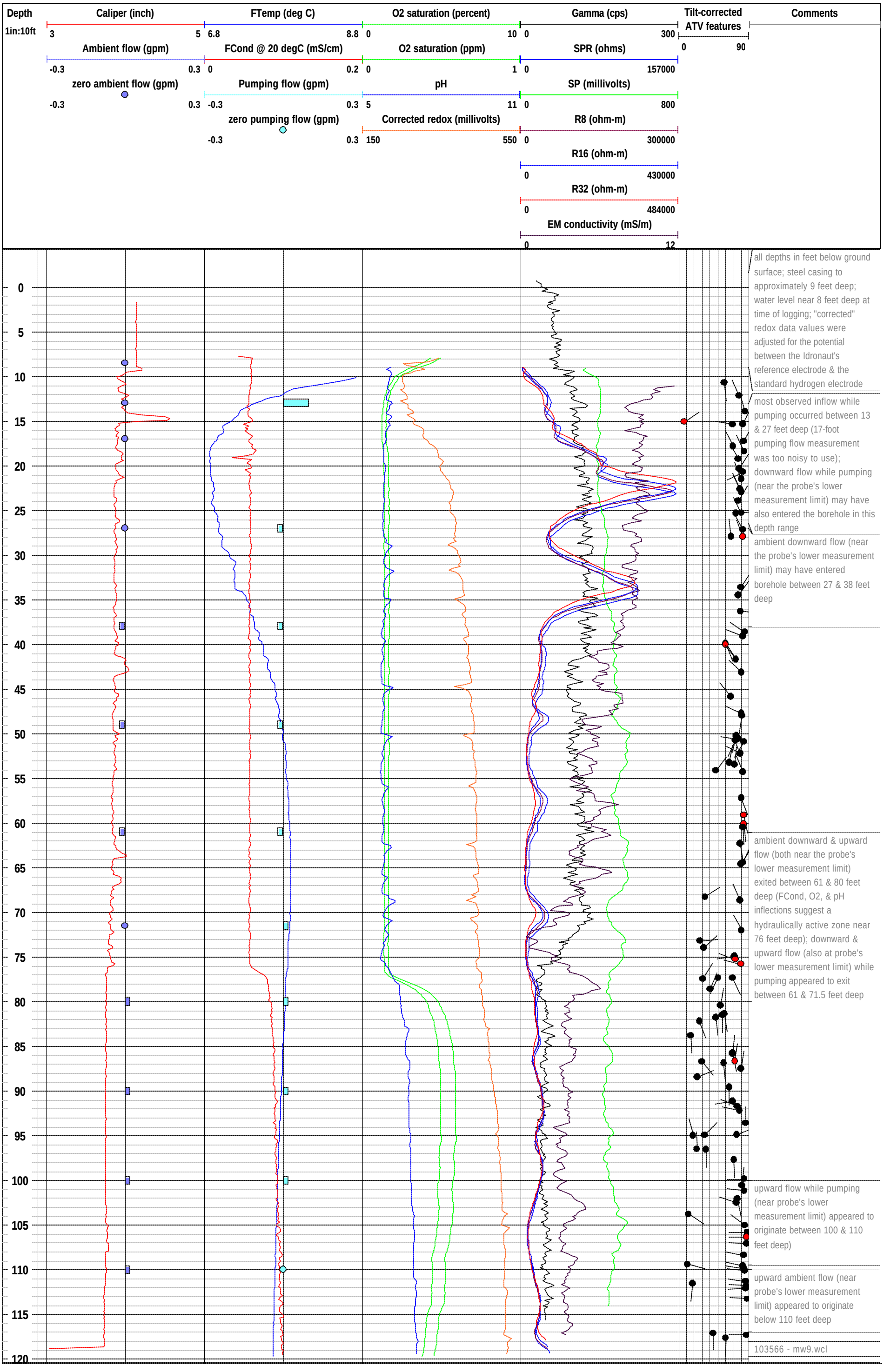

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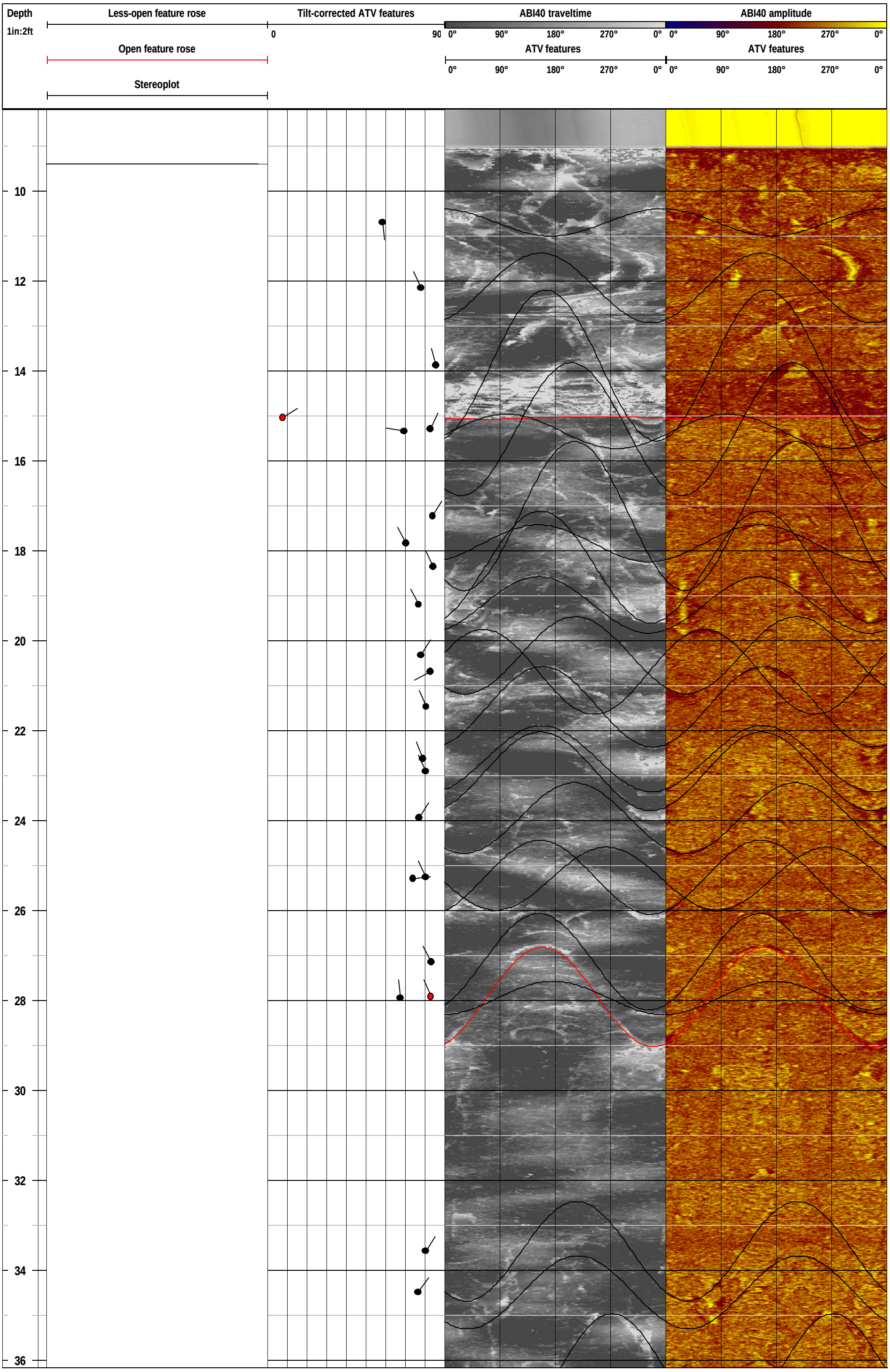

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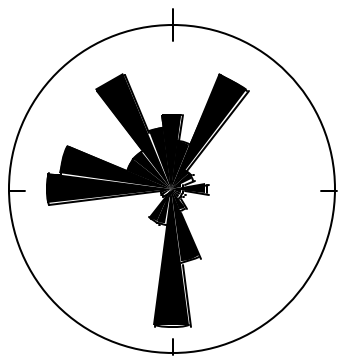

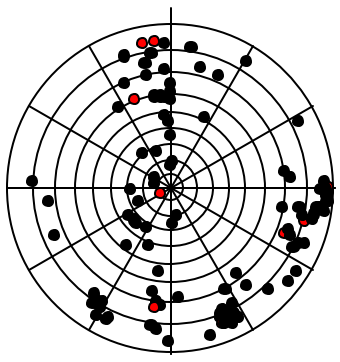

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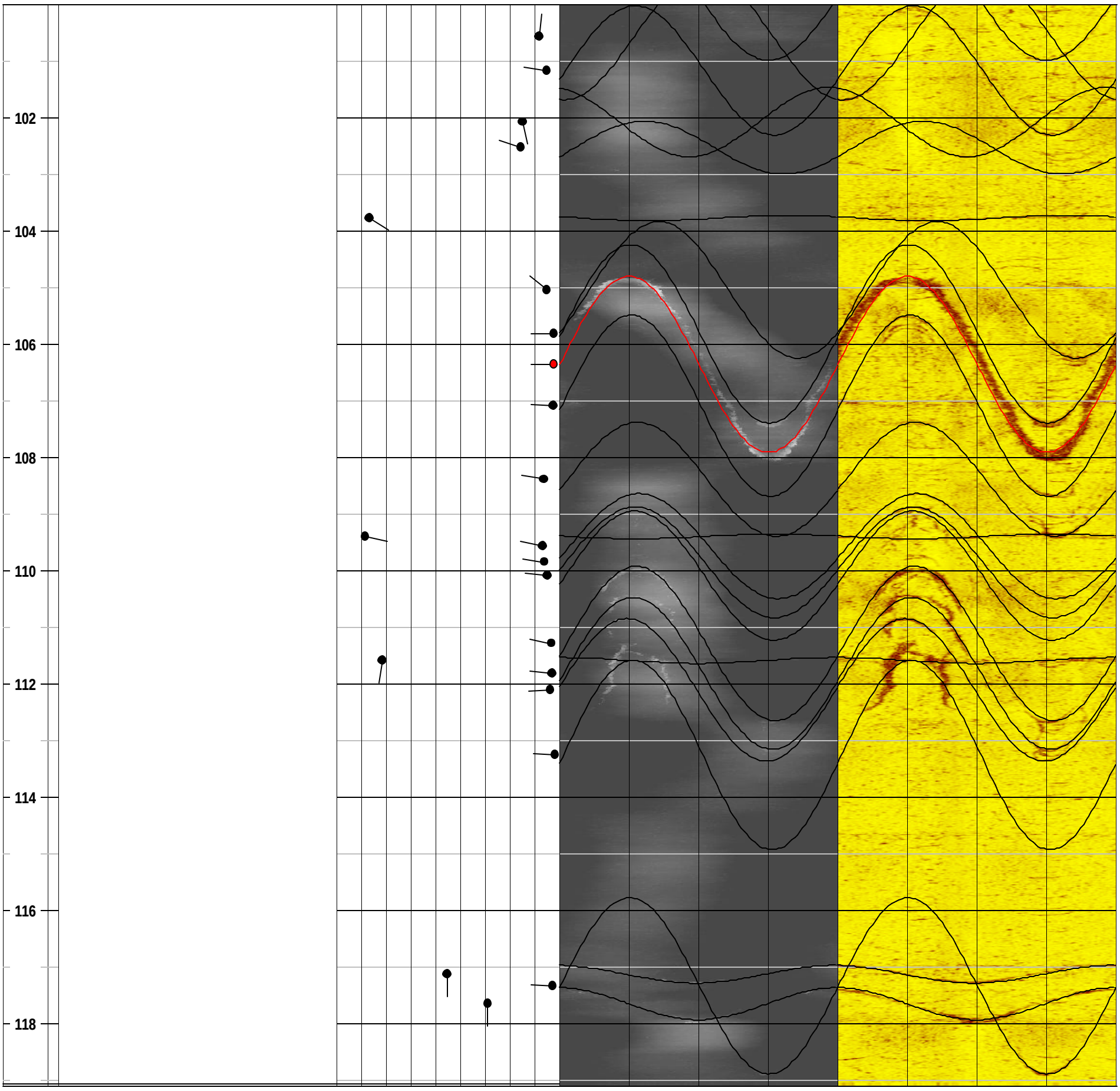
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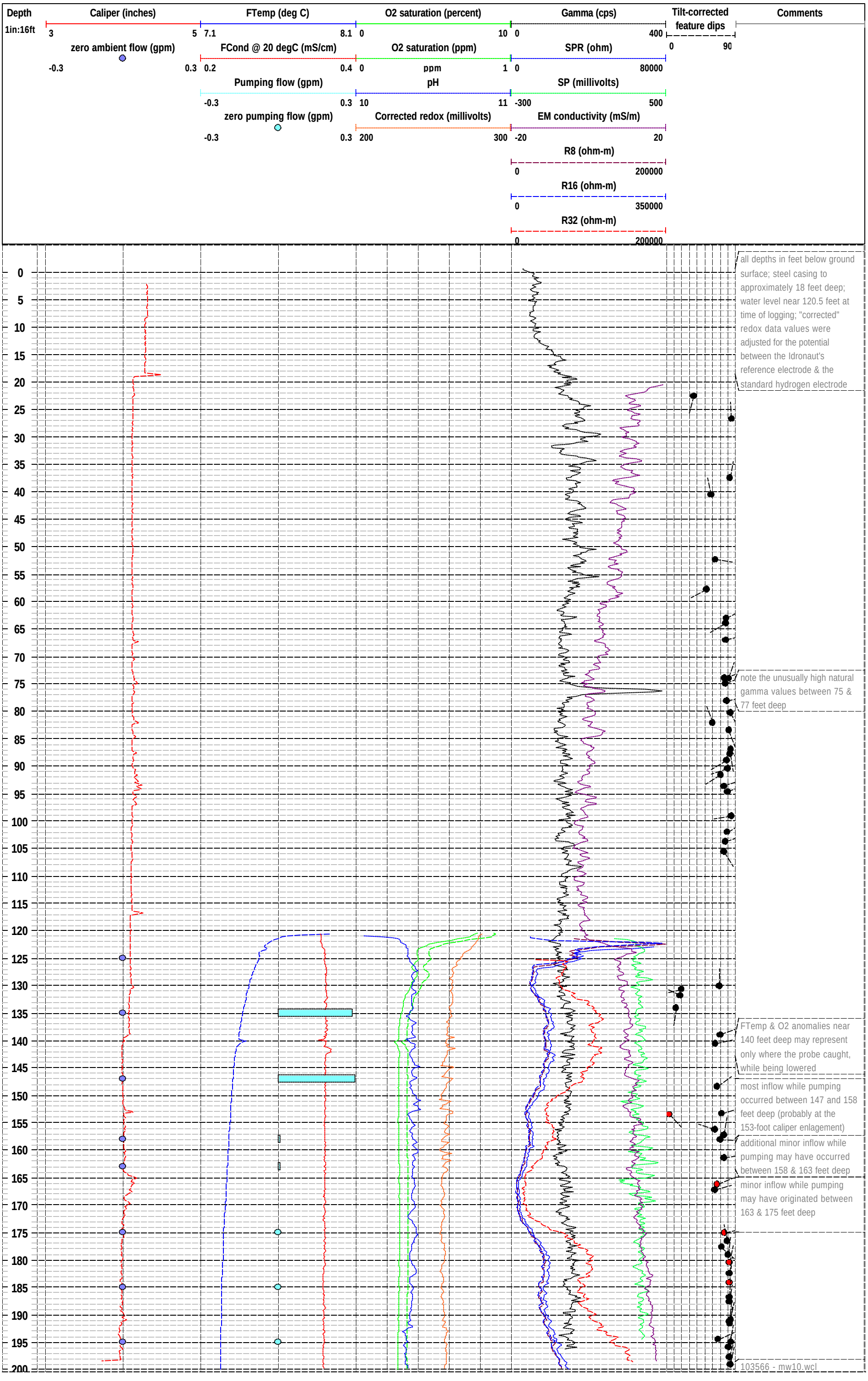
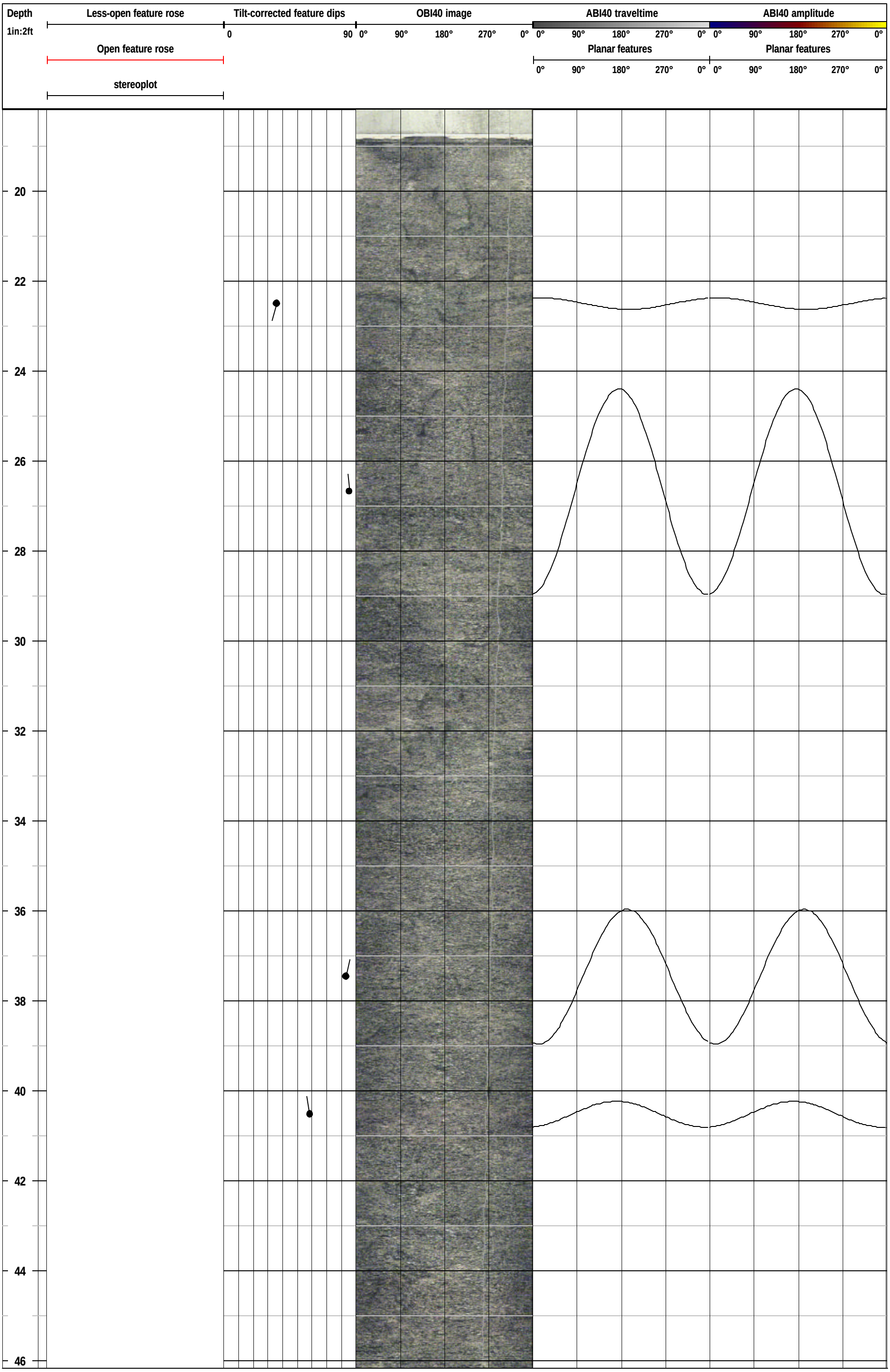
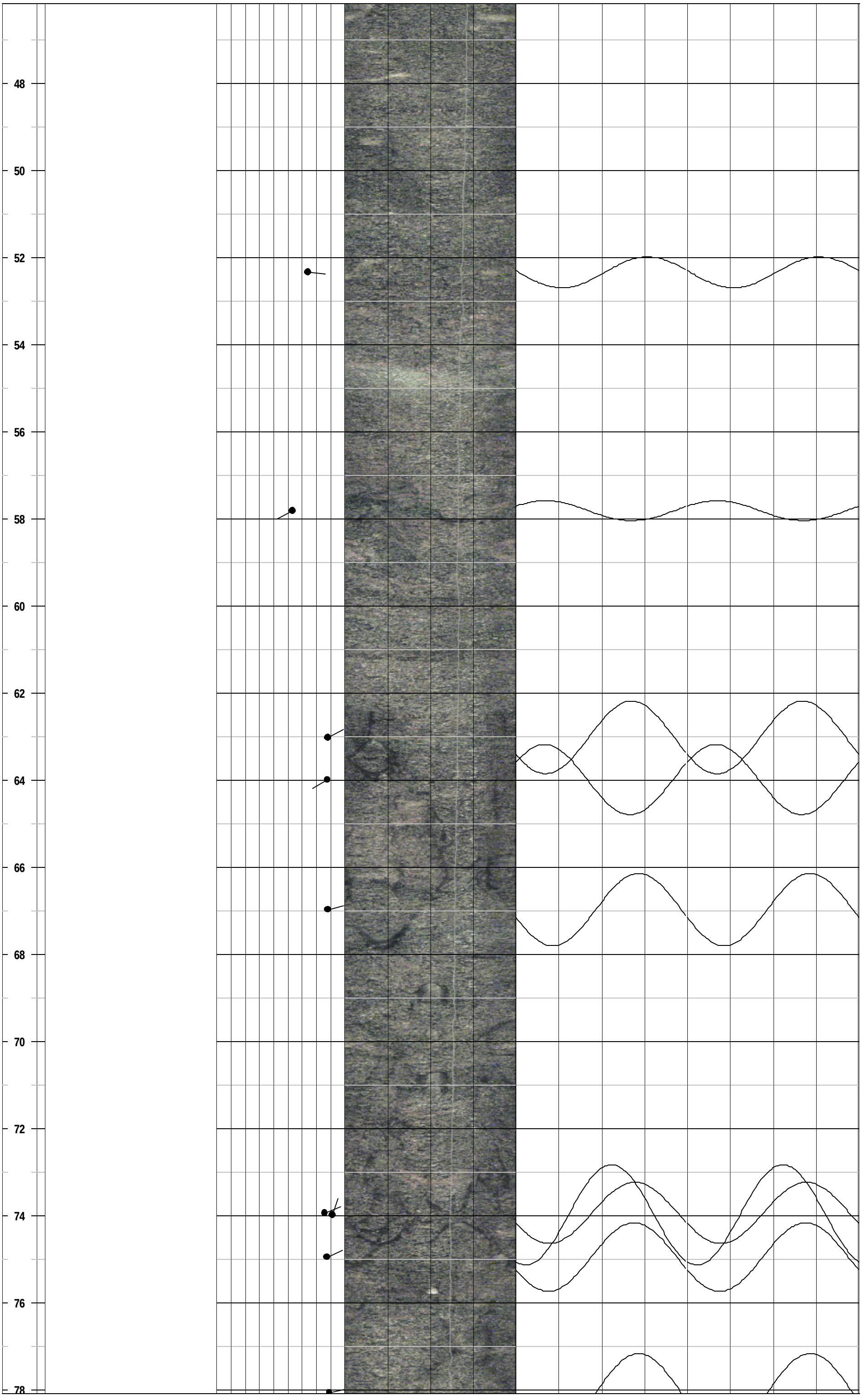


Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-10 optical & acoustic televiewer logs

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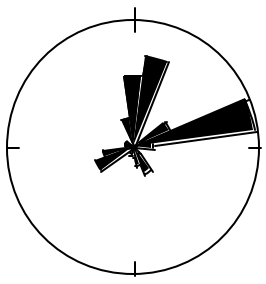

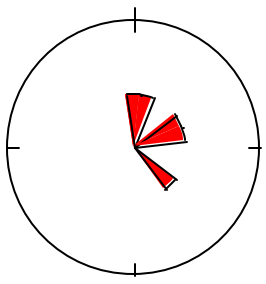

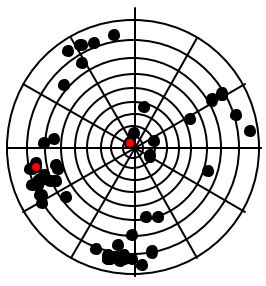

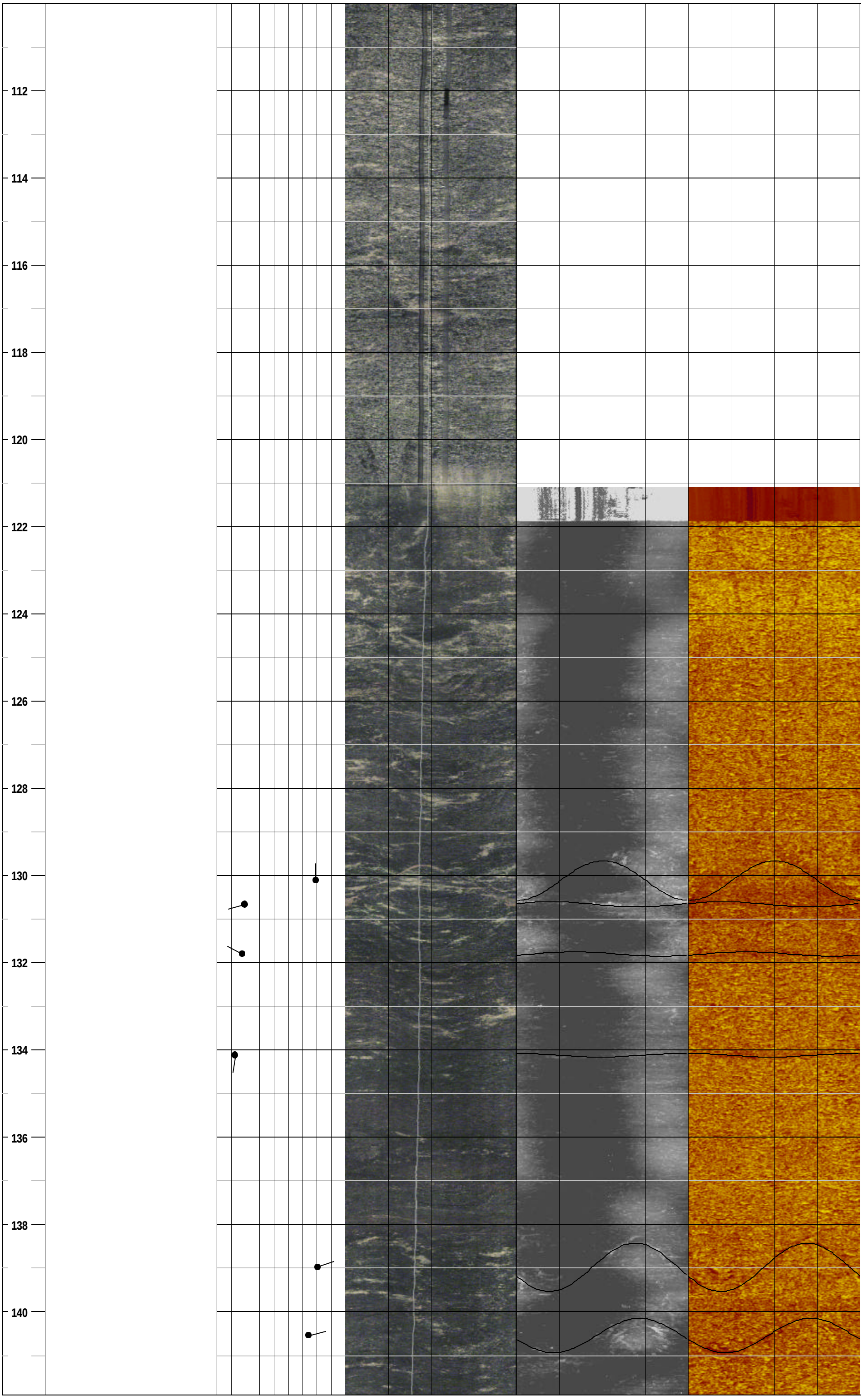
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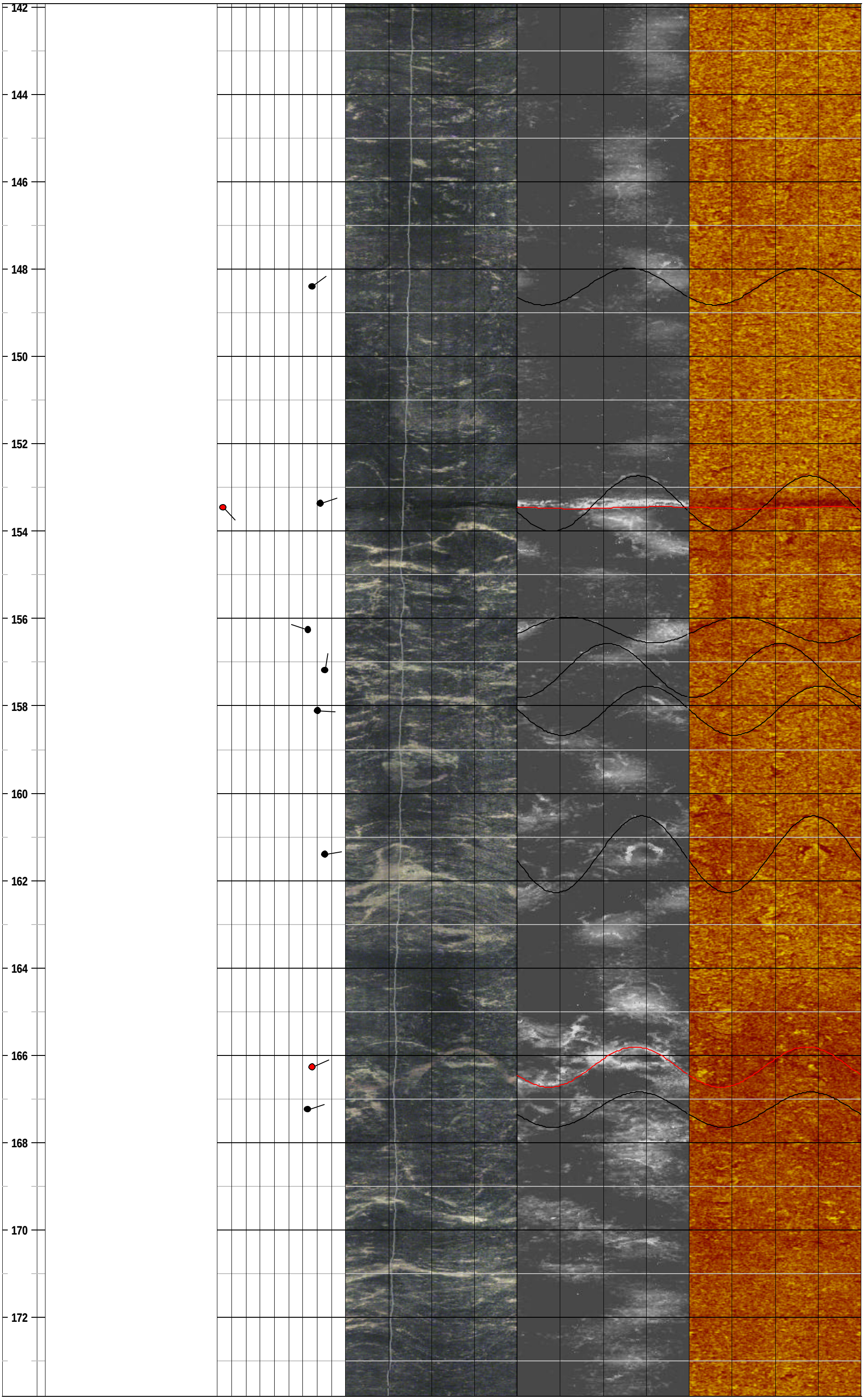
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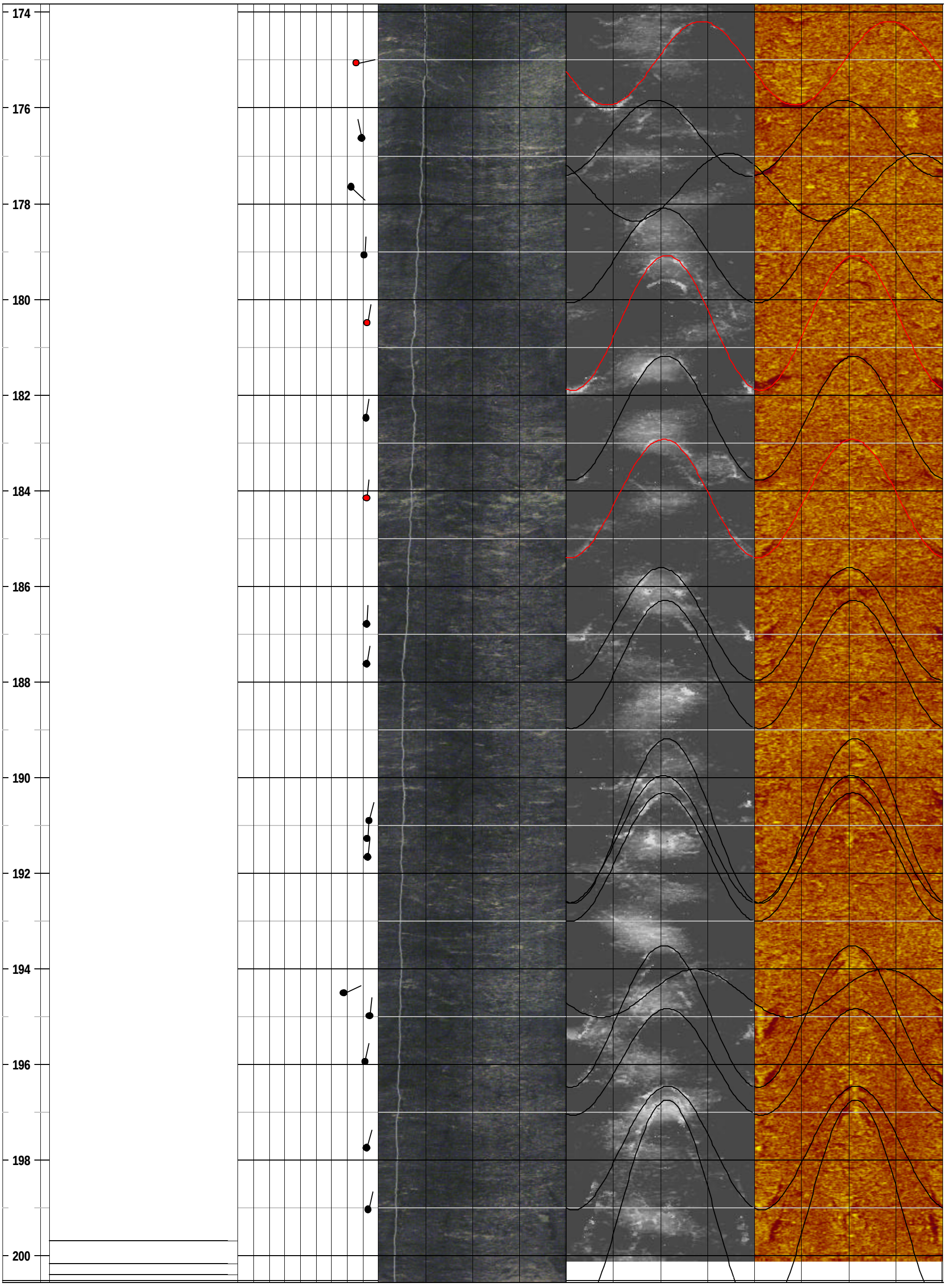
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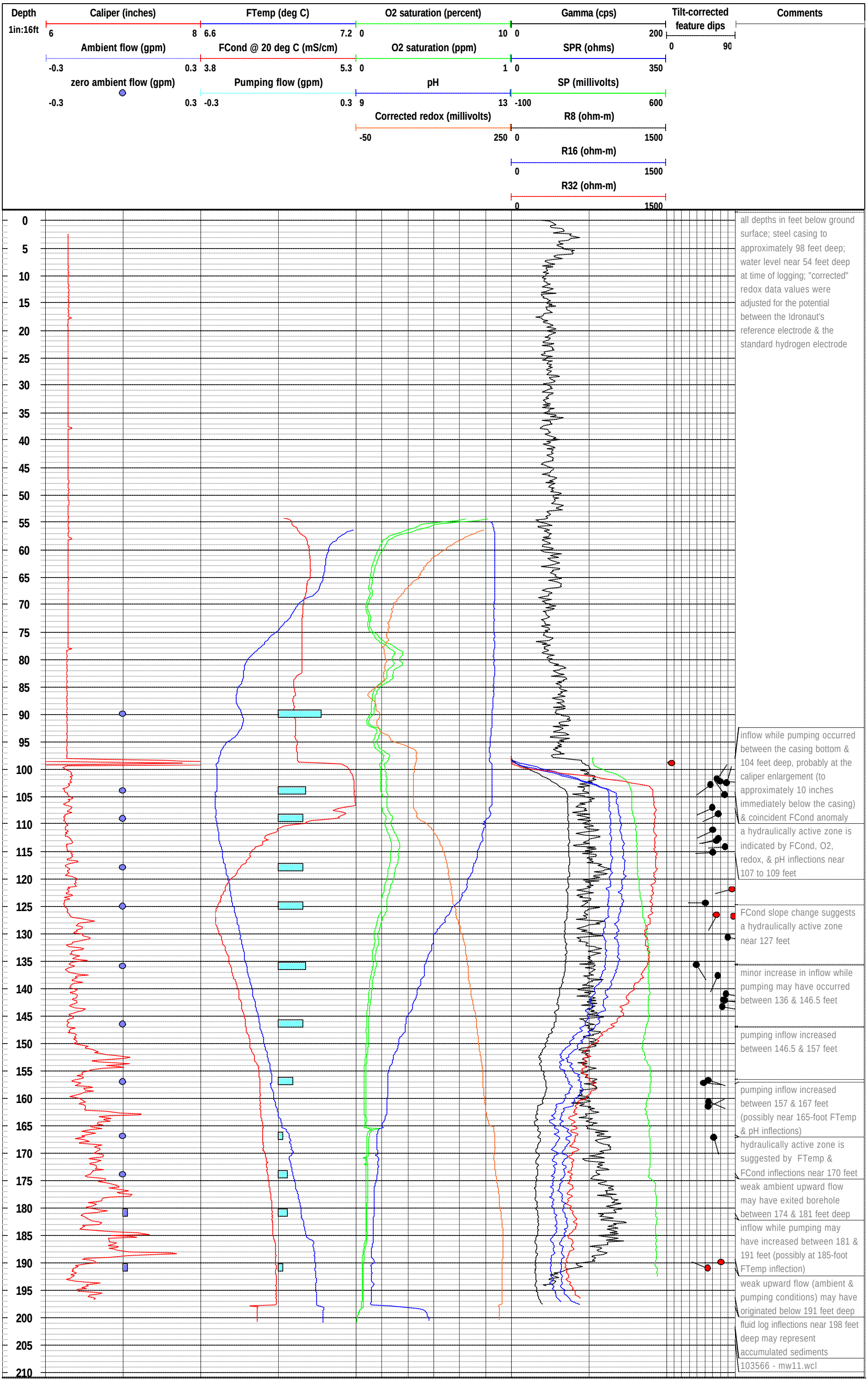
# Project - Well: Weston - USACE/Bucks Harbor, ME - MW-11 conventional logs




all depths in feet below ground surface; steel casing to approximately 98 feet deep; water level near 54 feet deep at time of logging; "corrected" redox data values were adjusted for the potential between the Idronaut's reference electrode & the standard hydrogen electrode

inflow while pumping occurred between the casing bottom & 104 feet deep, probably at the caliper enlargement (to approximately 10 inches immediately below the casing) & coincident FCond anomaly

a hydraulically active zone is indicated by FCond, O2, redox, & pH inflections near 107 to 109 feet

FCond slope change suggests a hydraulically active zone near 127 feet

minor increase in inflow while pumping may have occurred between 136 & 146.5 feet

pumping inflow increased between 146.5 & 157 feet

pumping inflow increased between 157 & 167 feet (possibly near 165-foot FTemp & pH inflections)

hydraulically active zone is suggested by FTemp & FCond inflections near 170 feet

weak ambient upward flow may have exited borehole between 174 & 181 feet deep

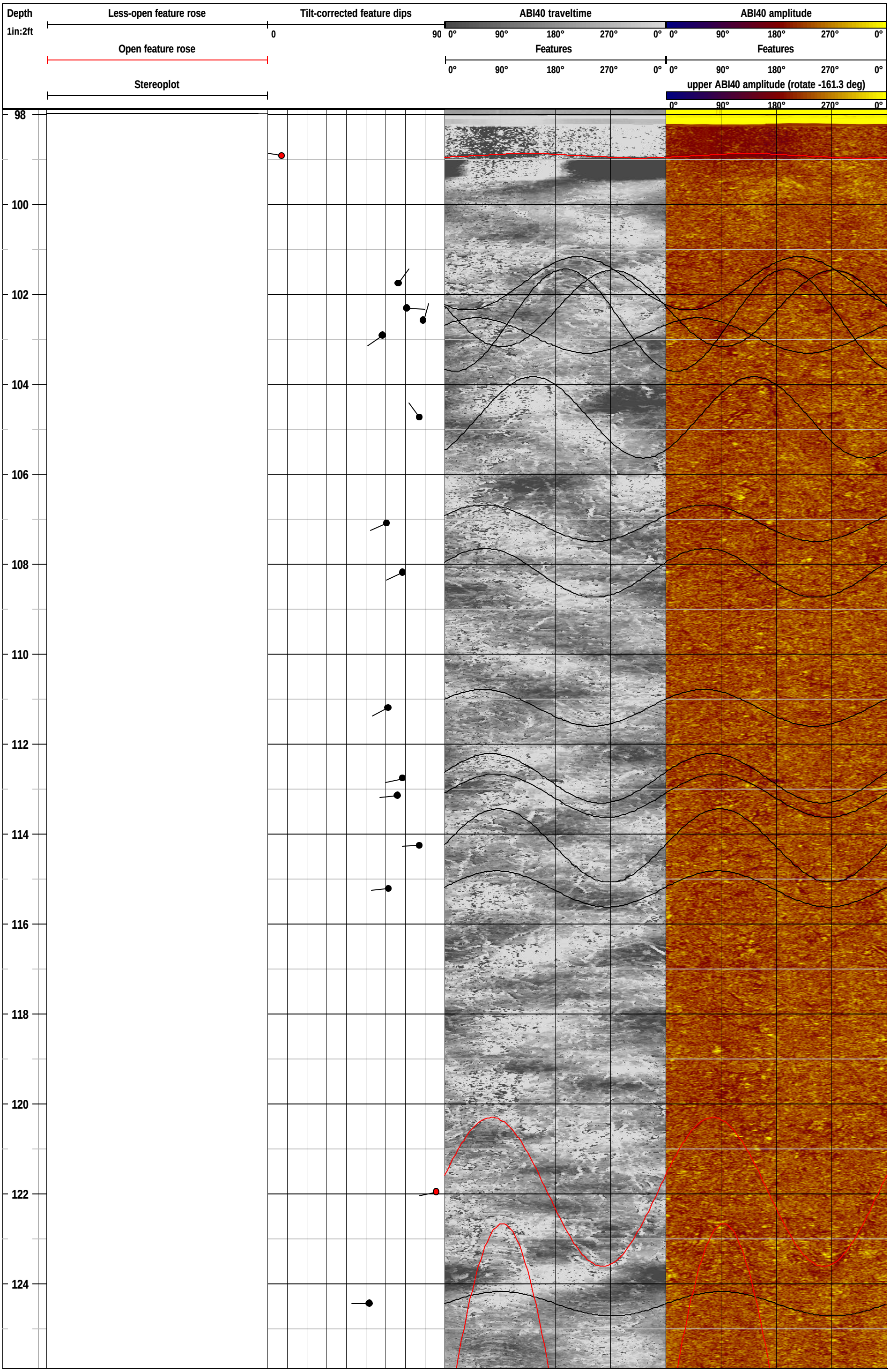
inflow while pumping may have increased between 181 & 191 feet (possibly at 185-foot FTemp inflection)

weak upward flow (ambient & pumping conditions) may have originated below 191 feet deep

fluid log inflections near 198 feet deep may represent accumulated sediments

103566 - mw11.wcl

Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-11 acoustic televiewer log



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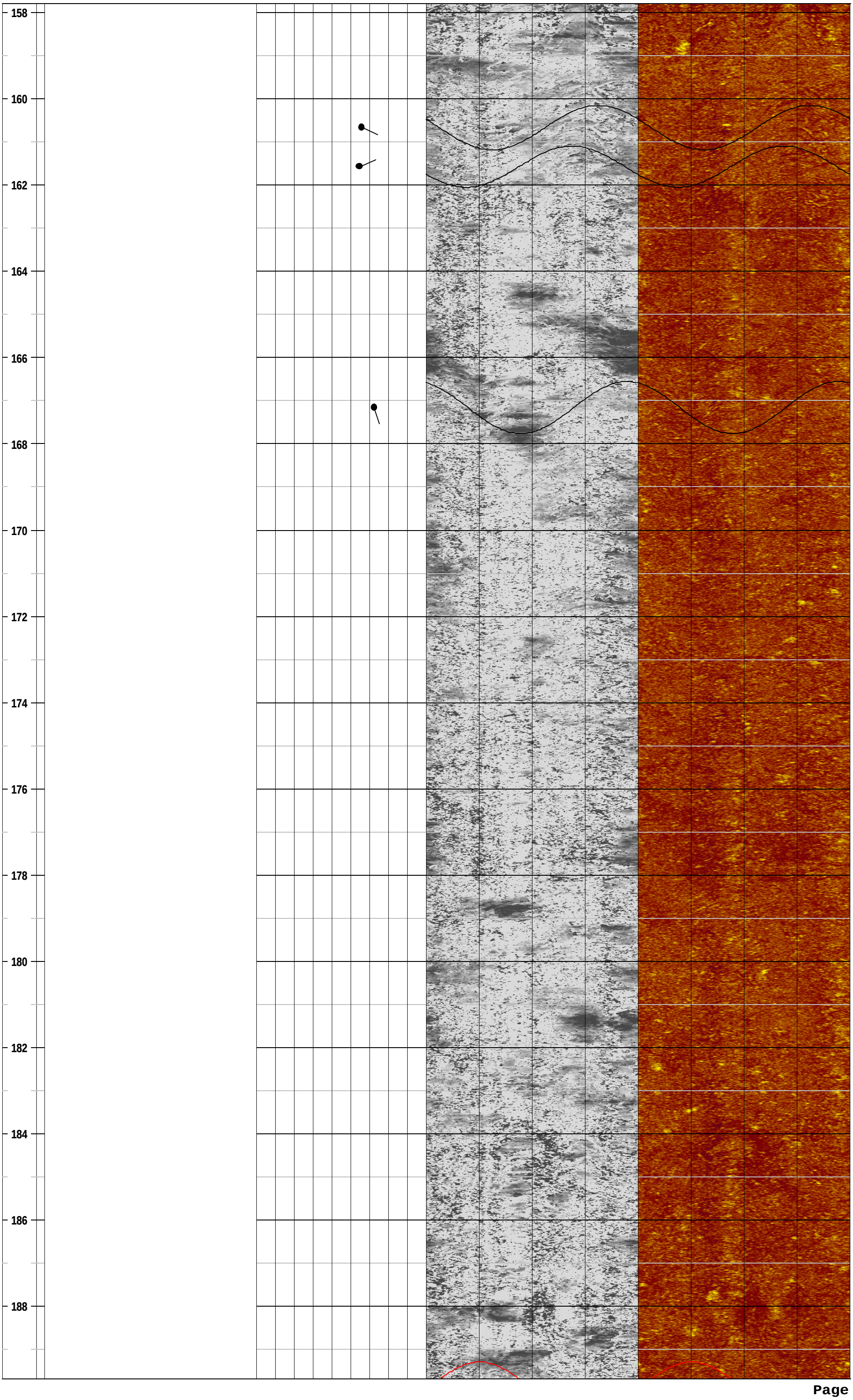
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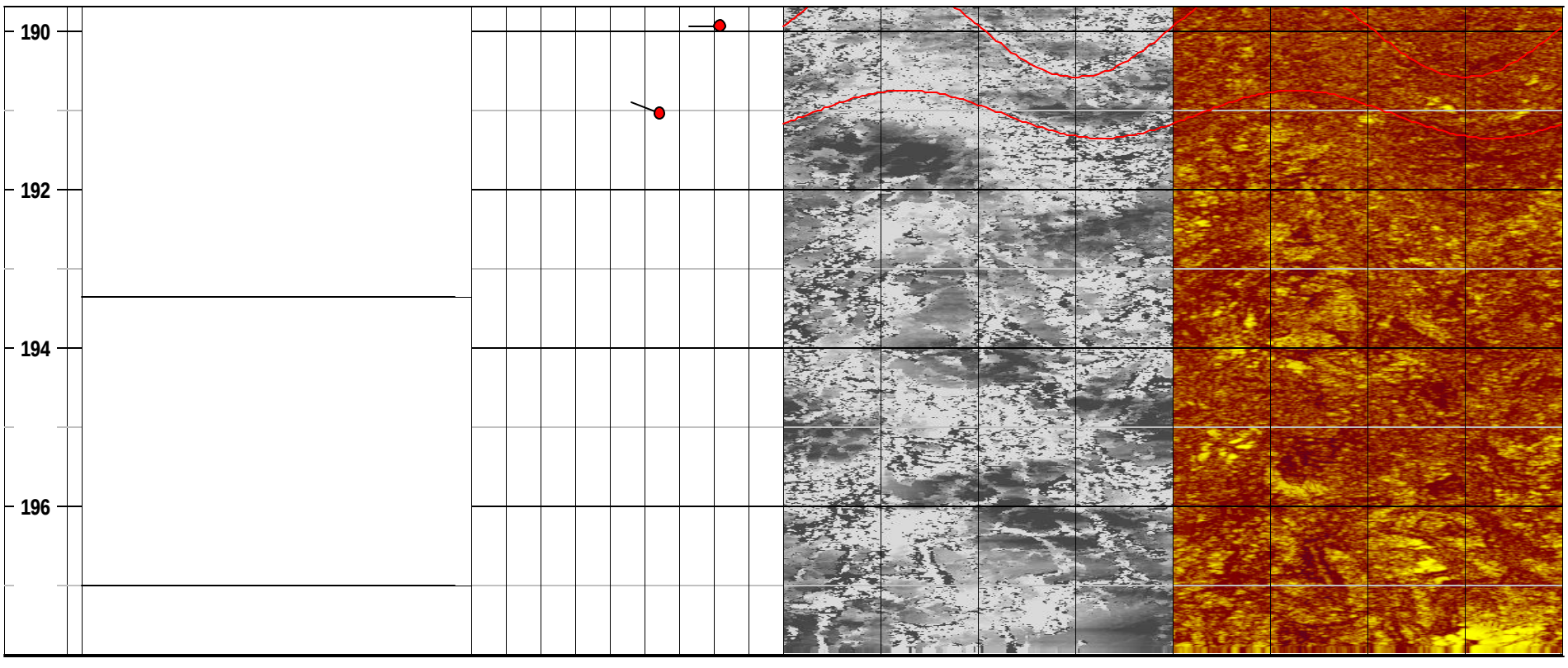
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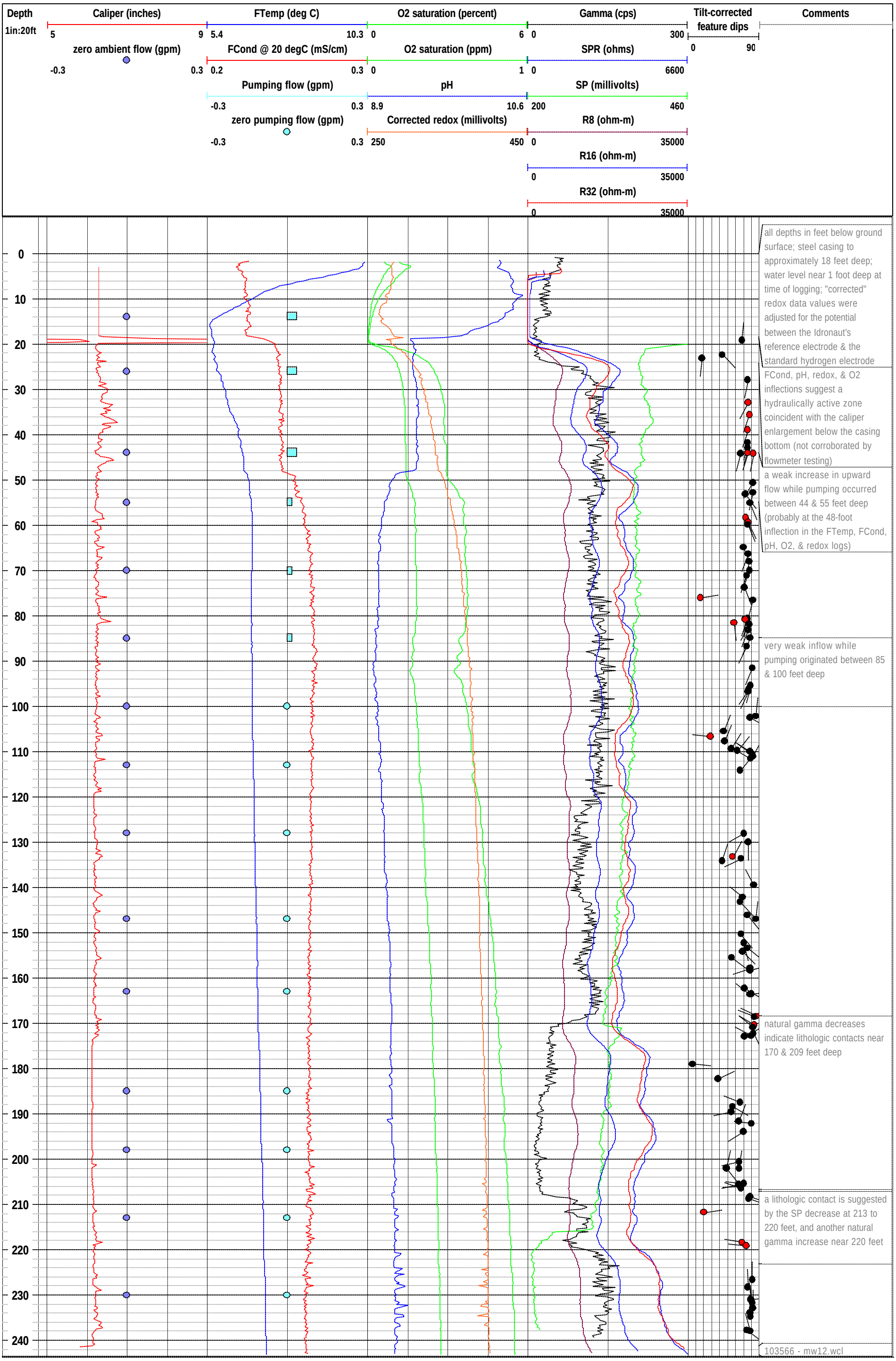
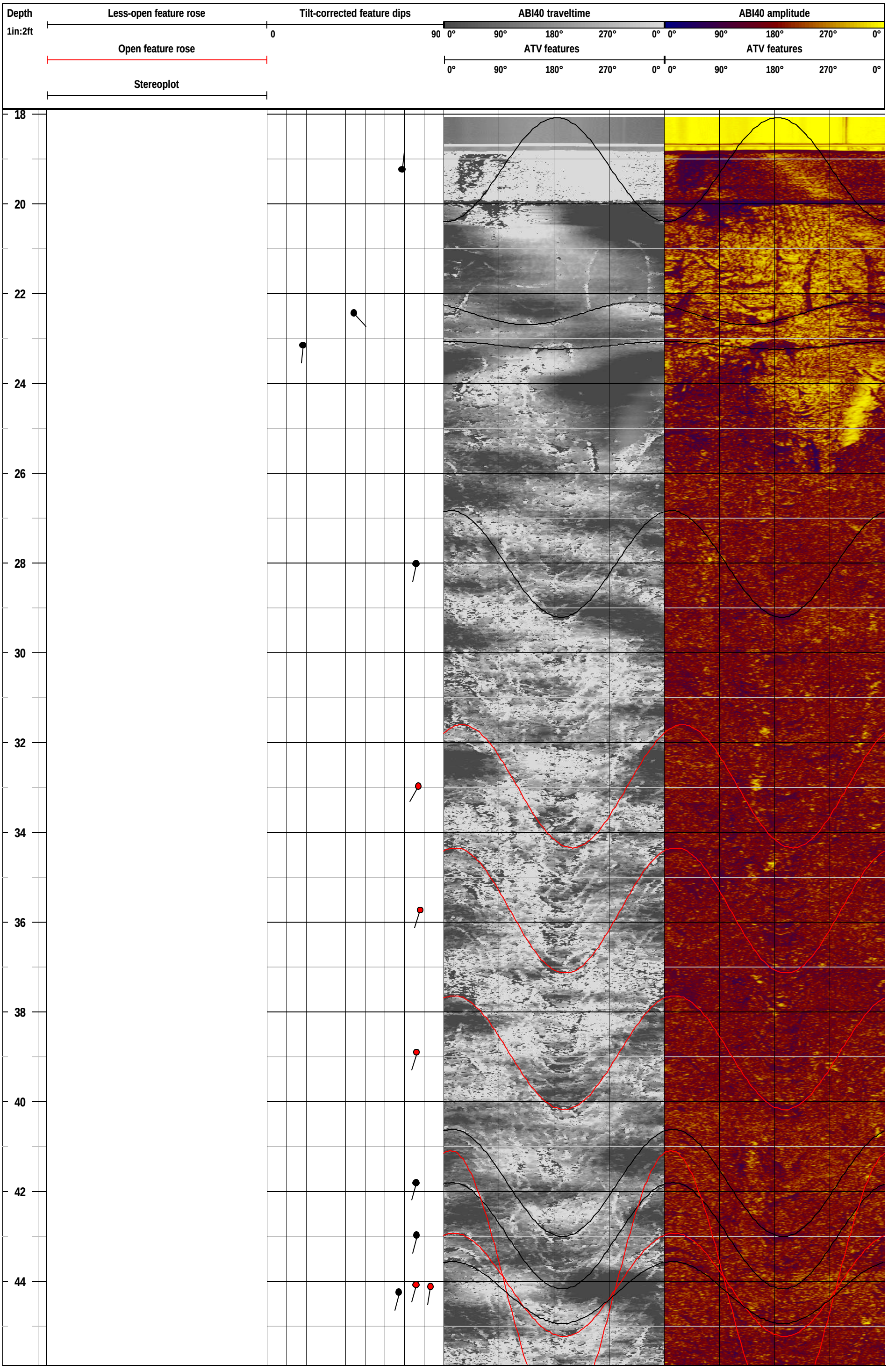
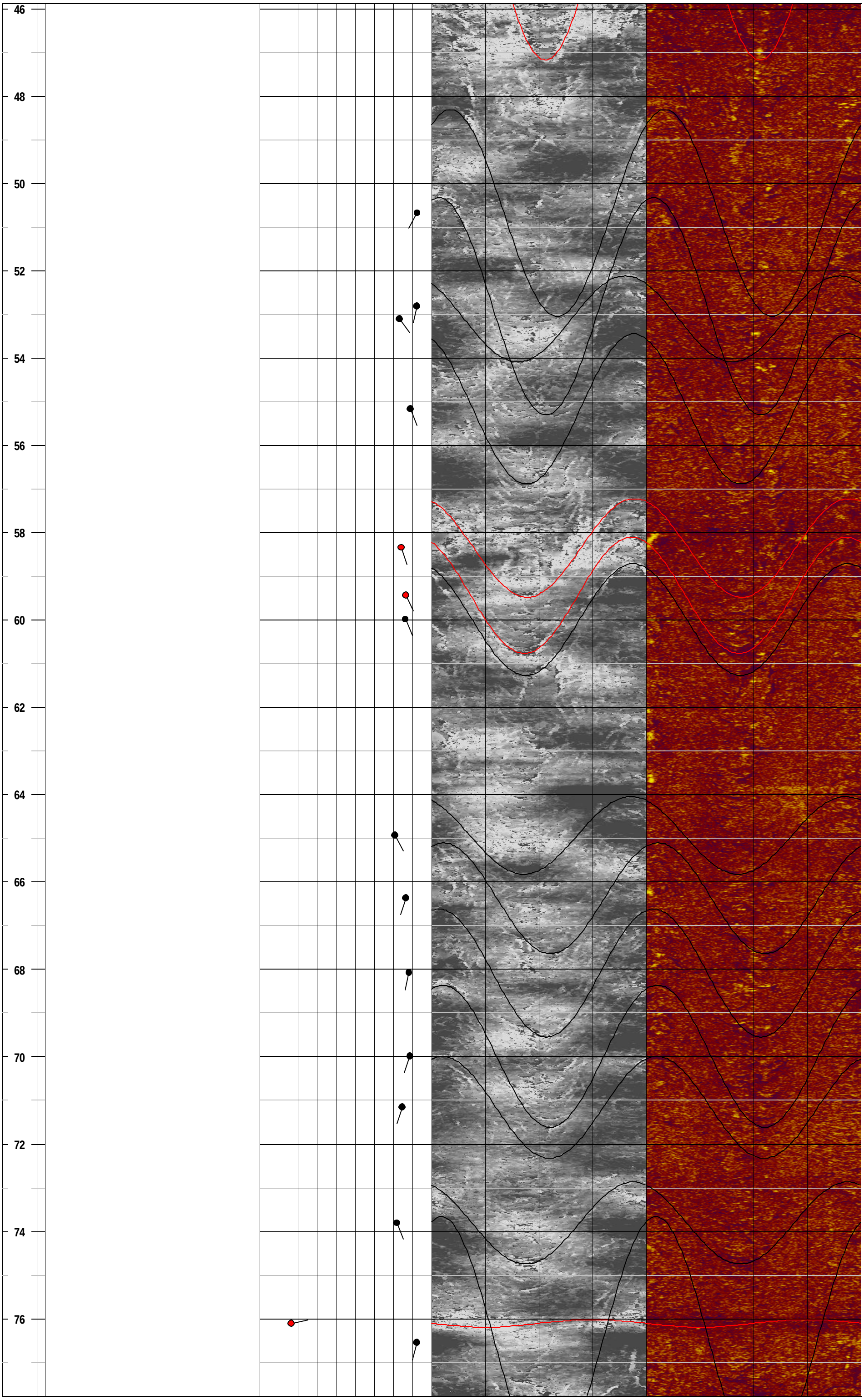
# Project - Well: Weston - USACE/Bucks Harbor, ME - MW-12 conventional logs



# Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-12 acoustic televiewer log

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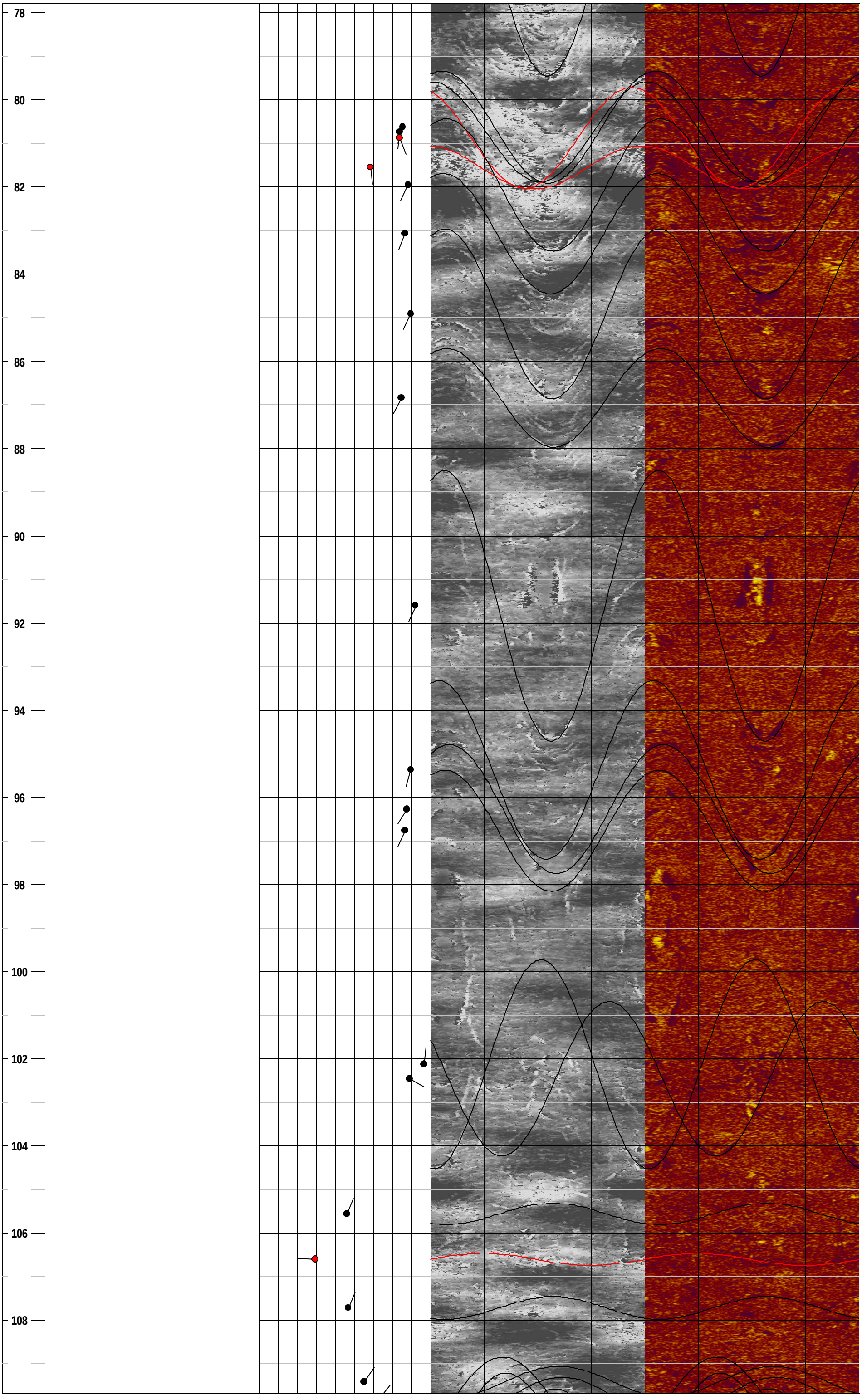
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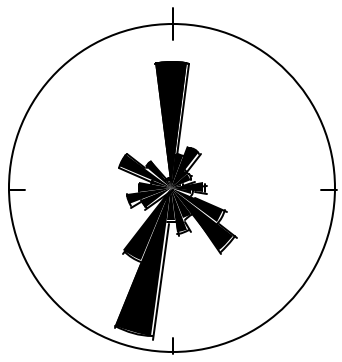

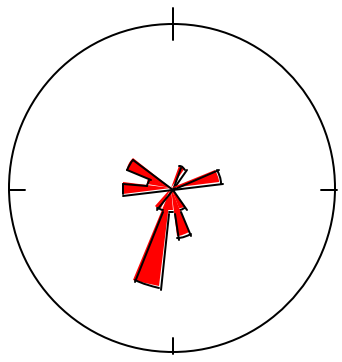

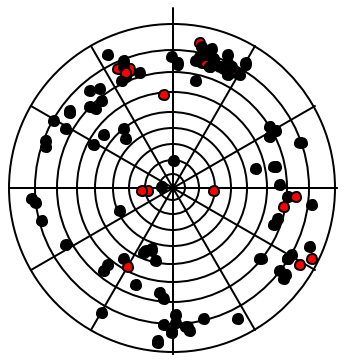

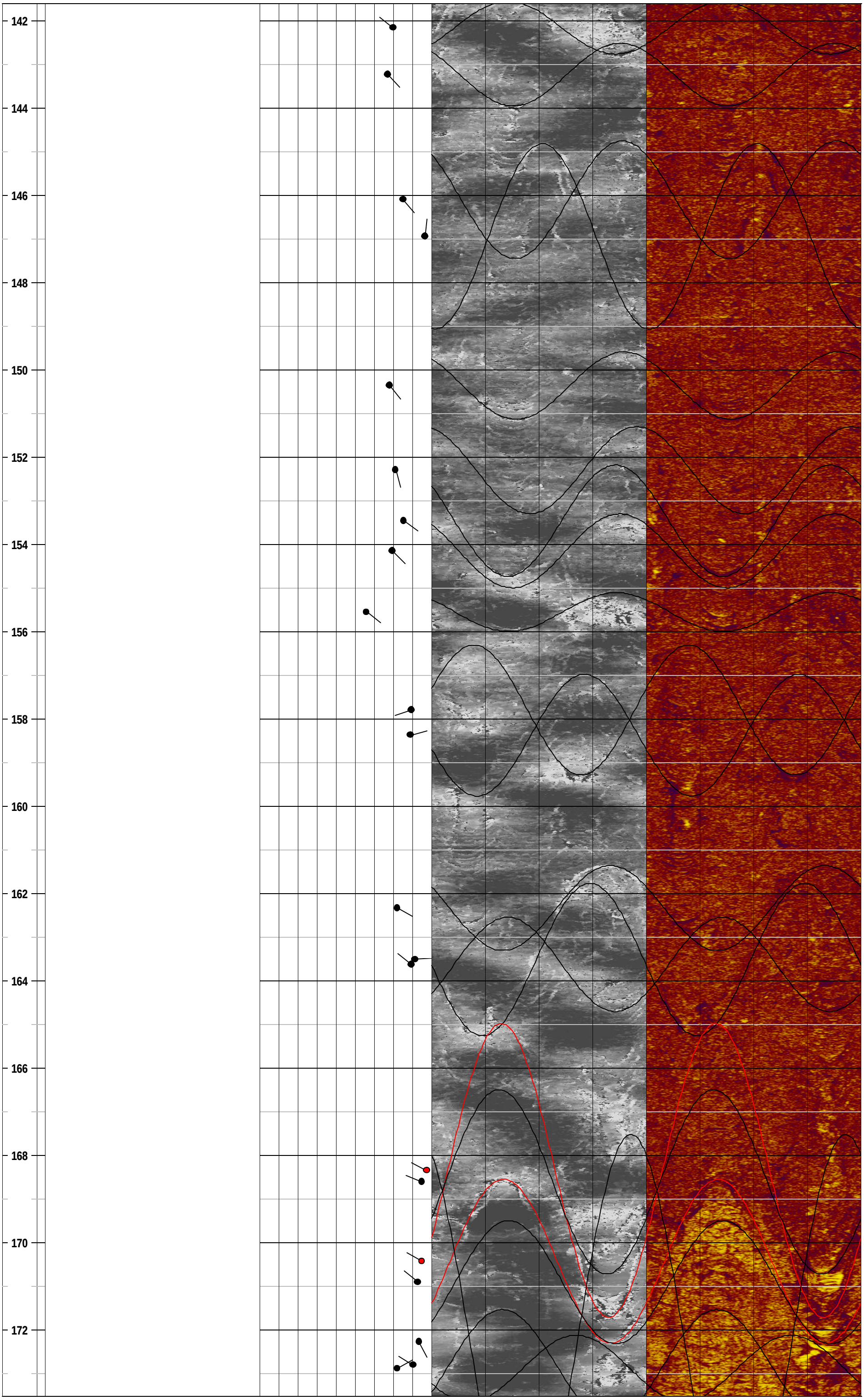
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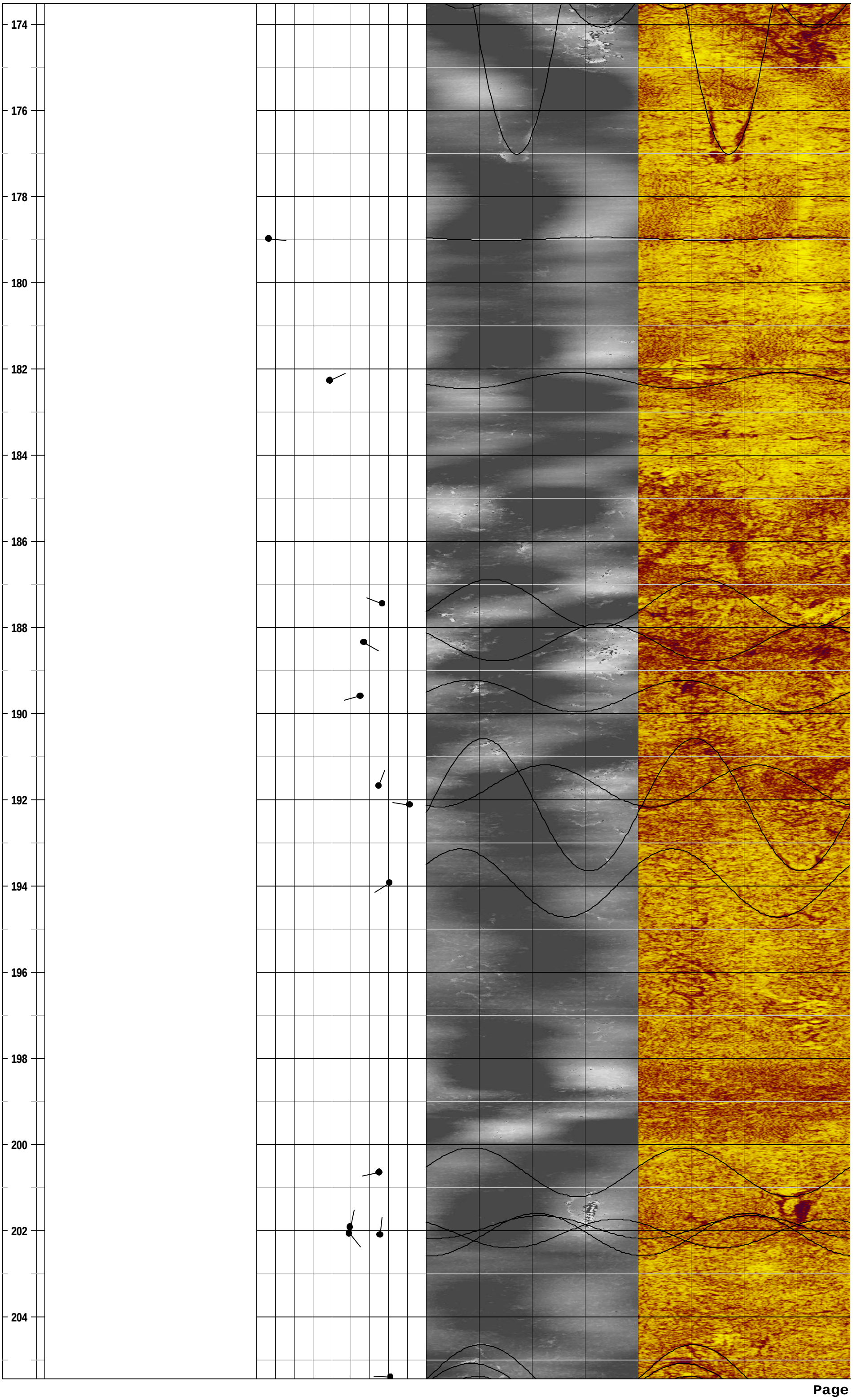
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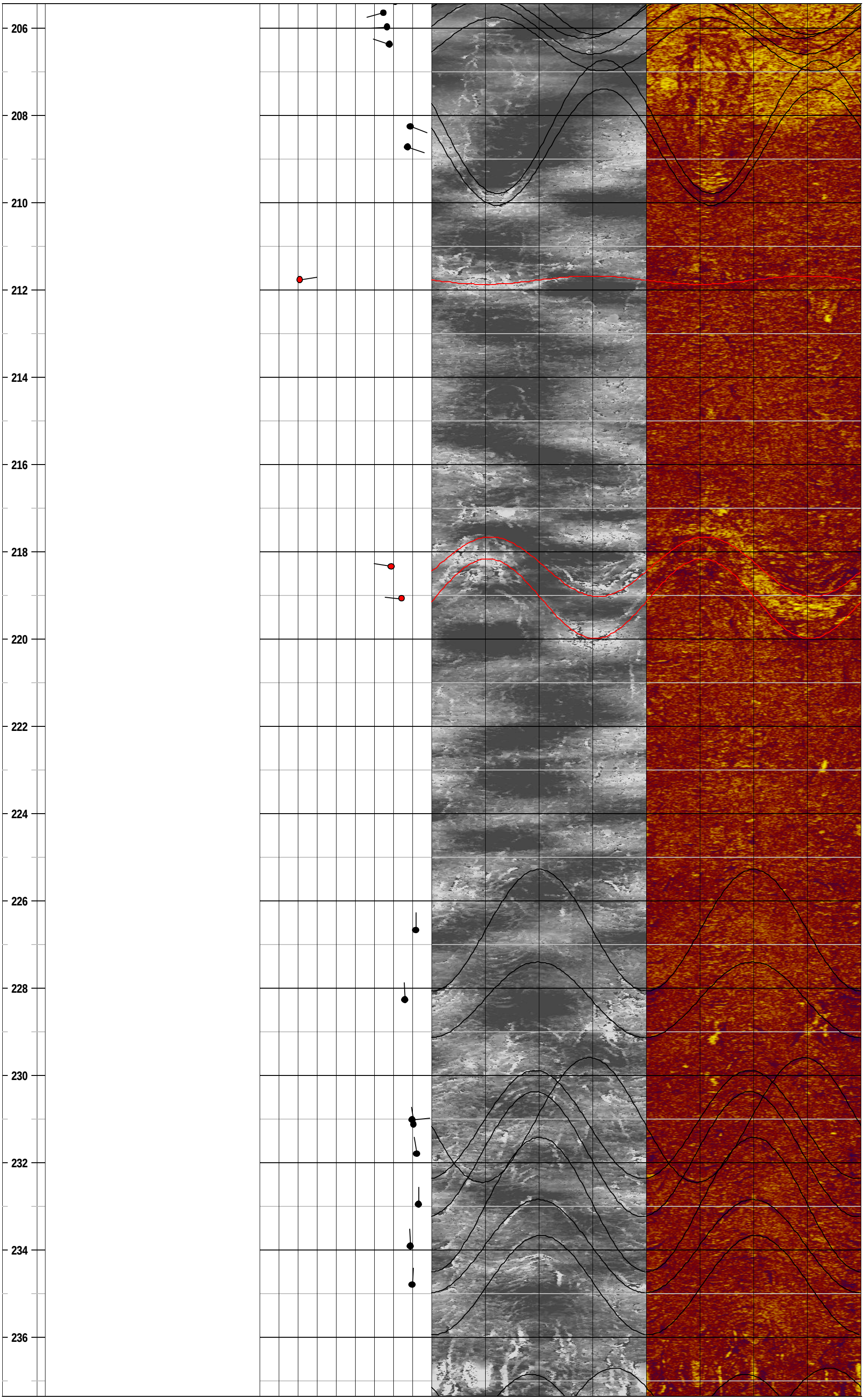
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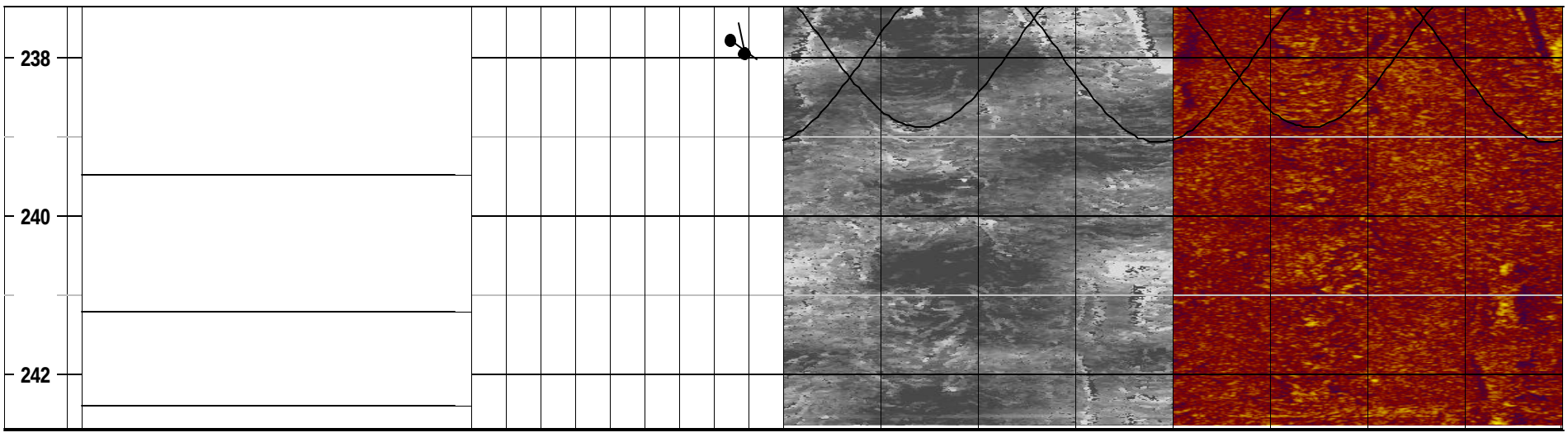
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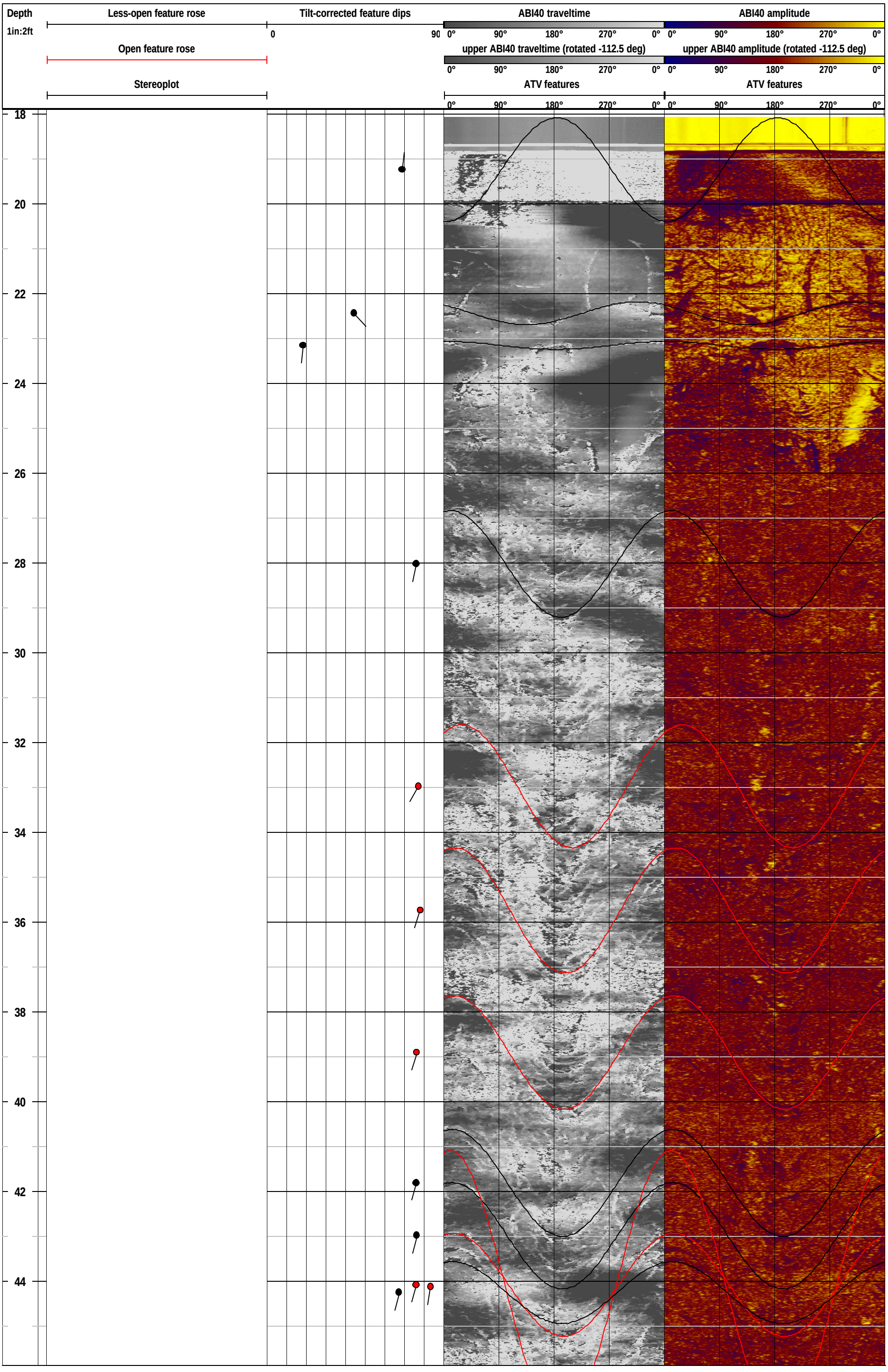
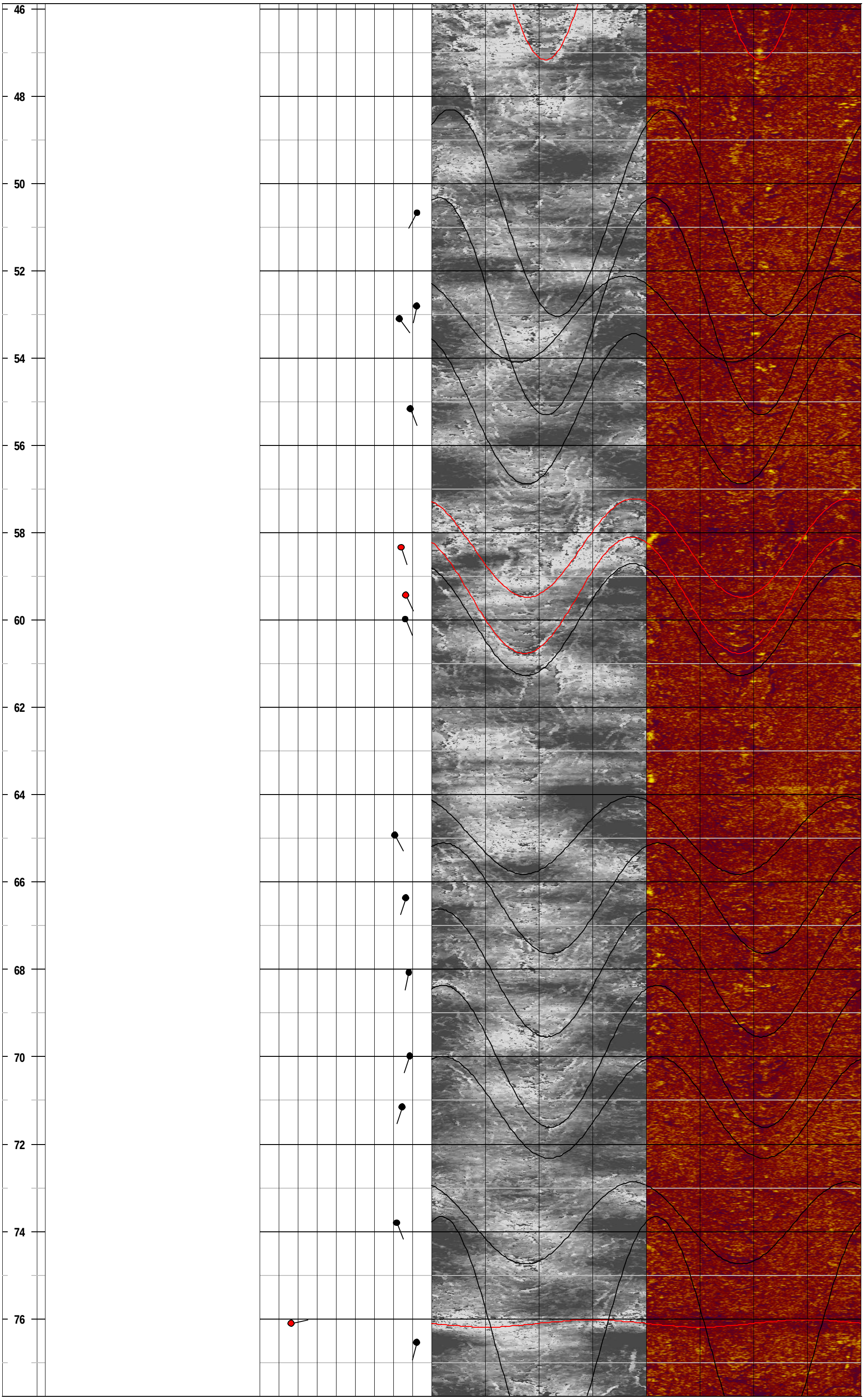
# Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-12 acoustic televiewer log

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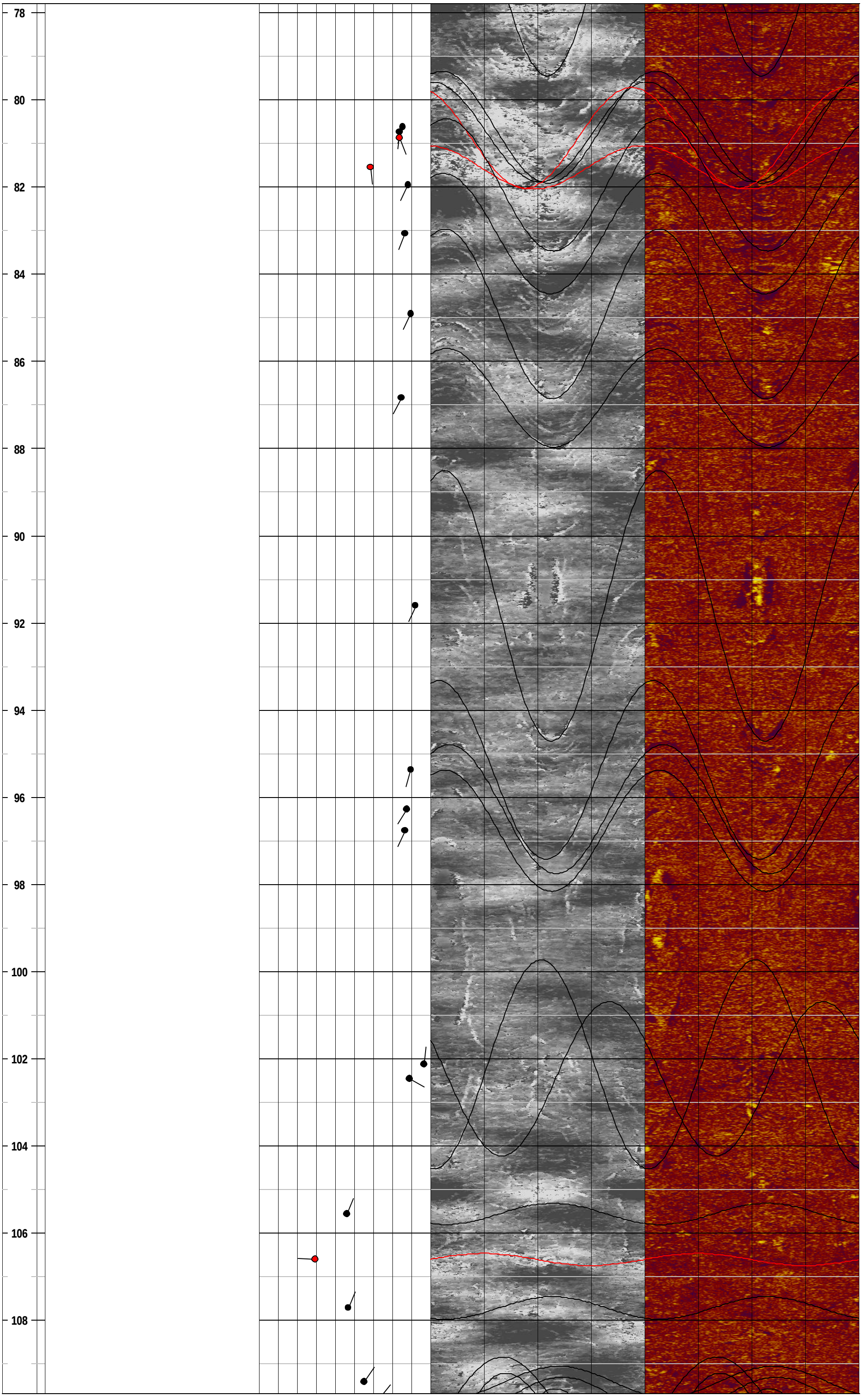
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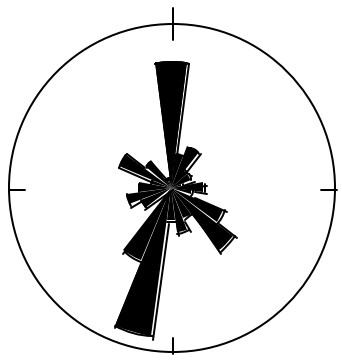

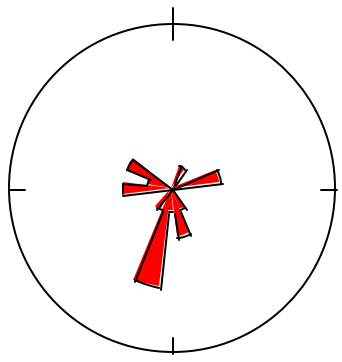

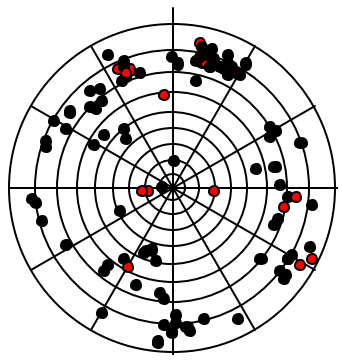

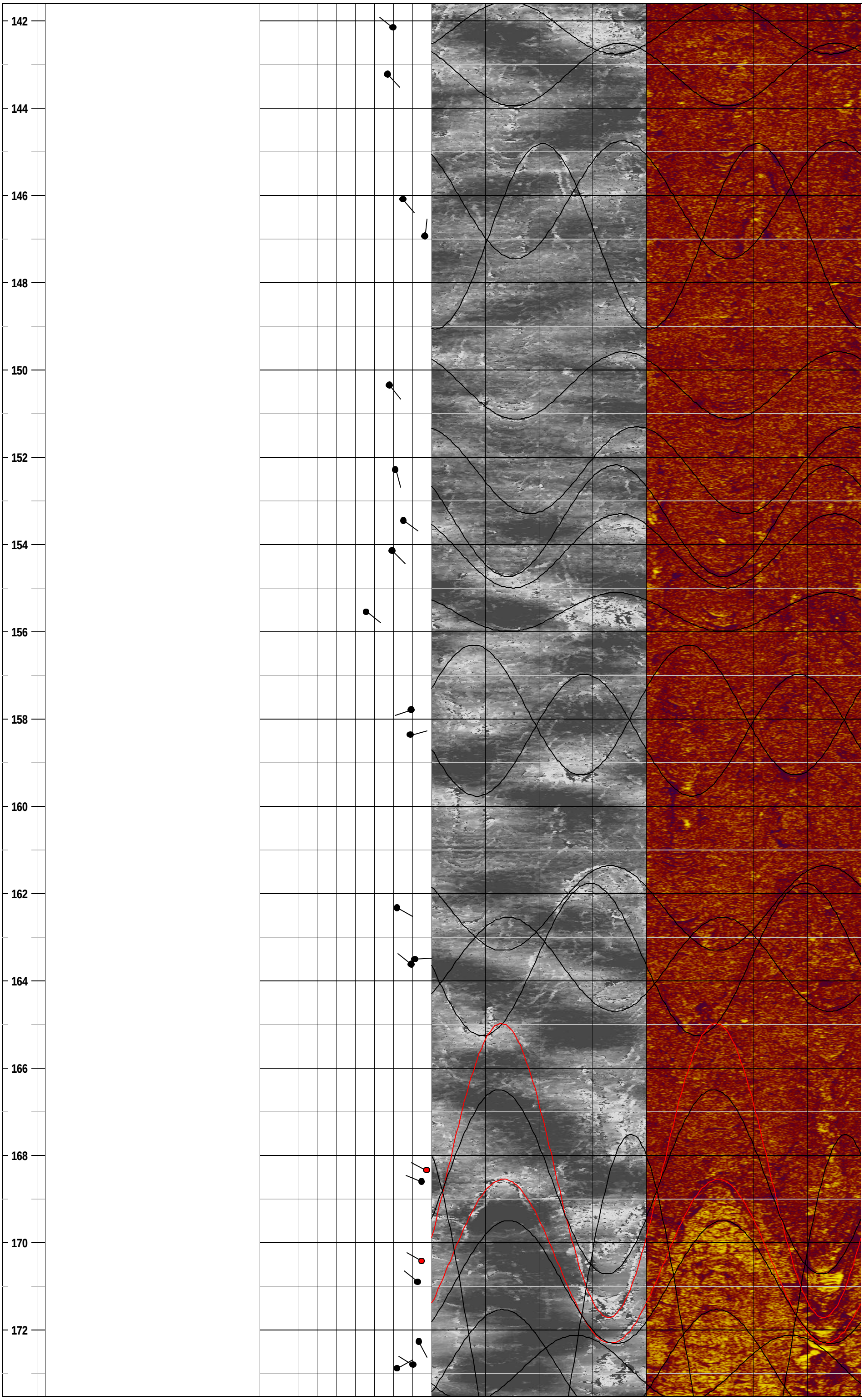
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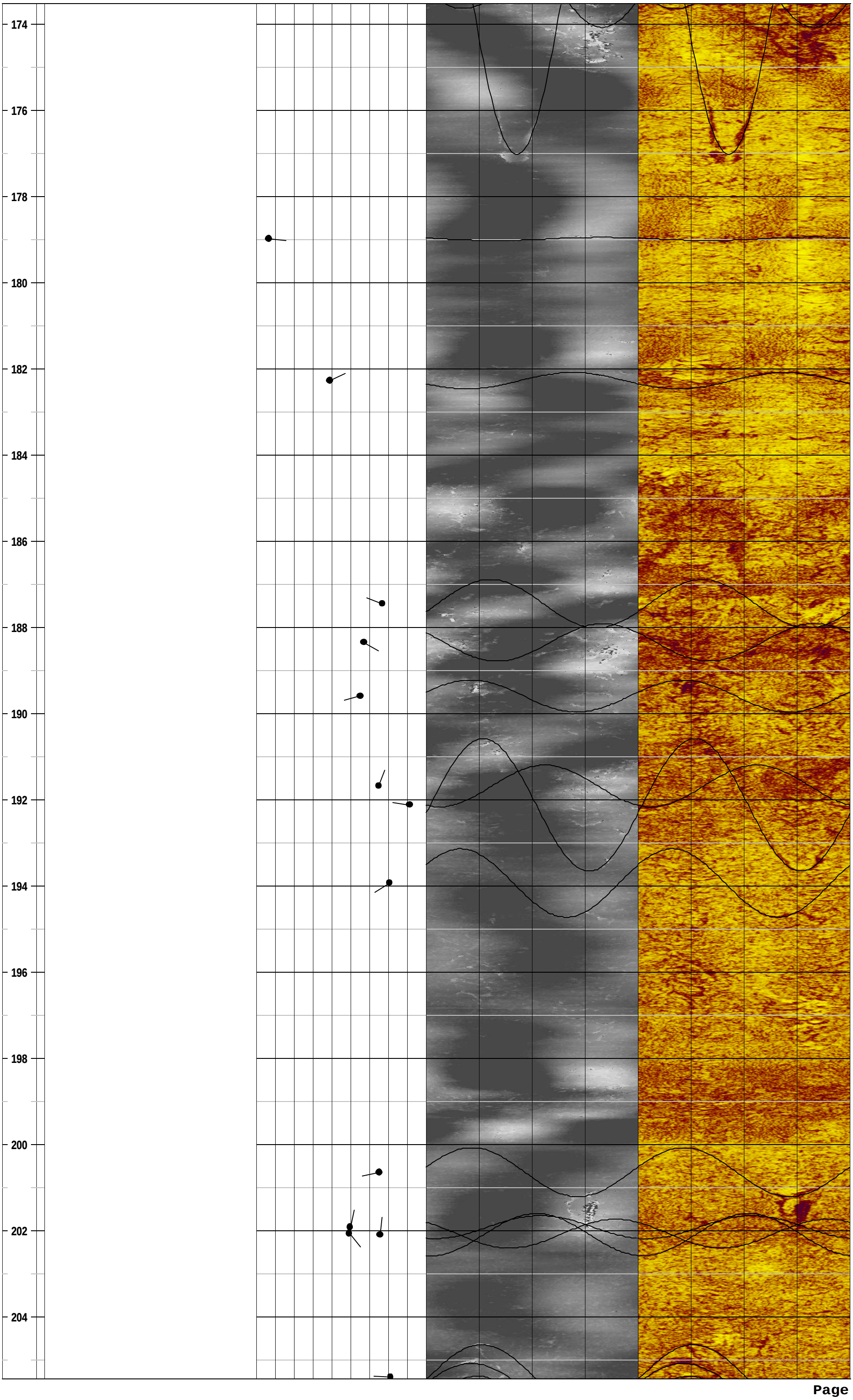
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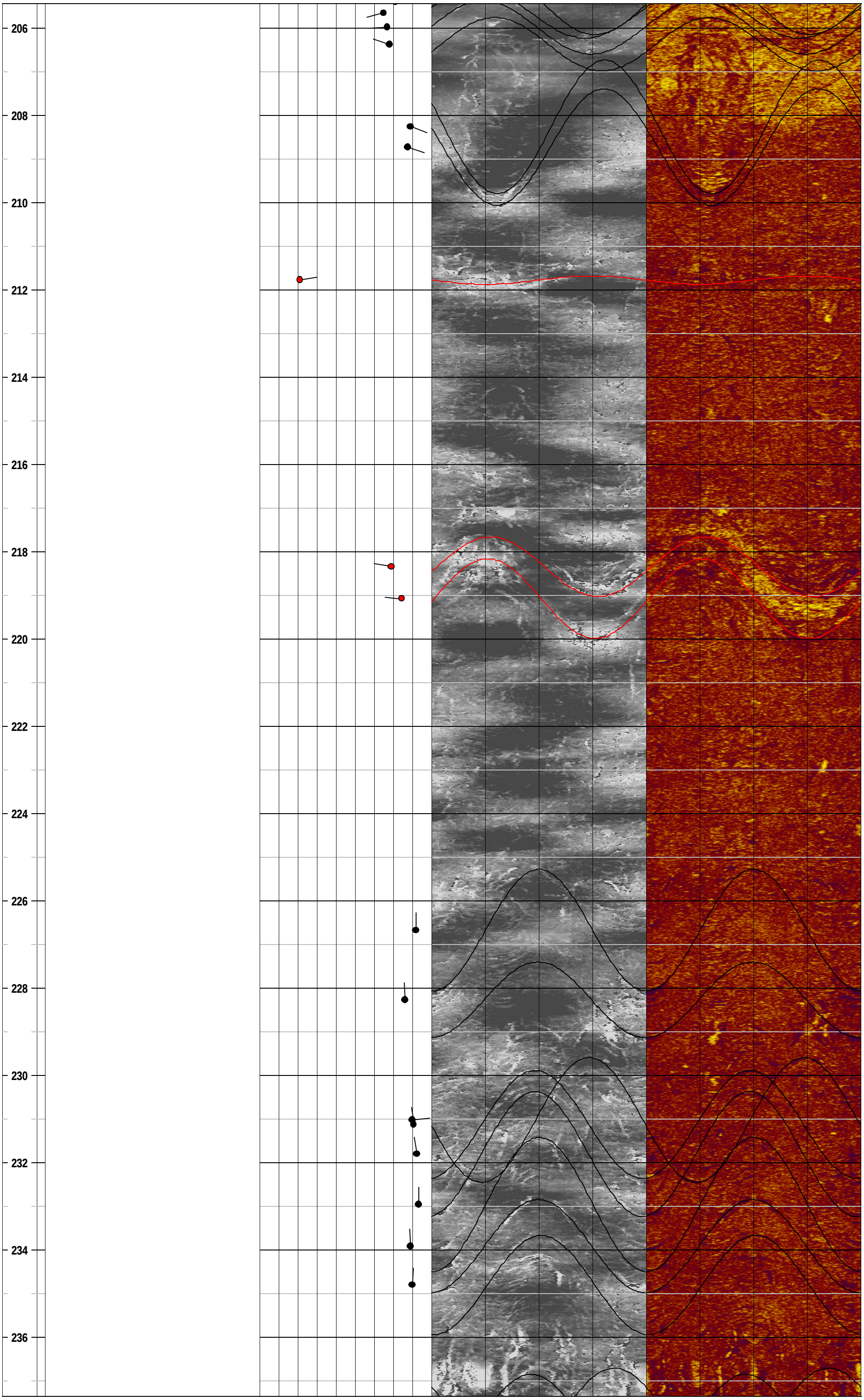
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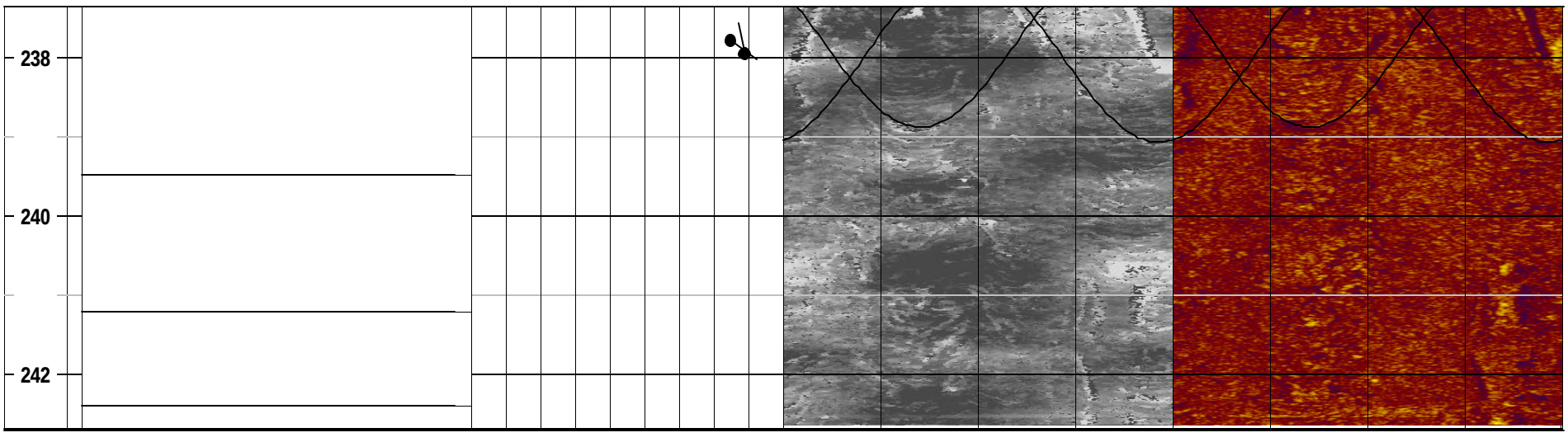
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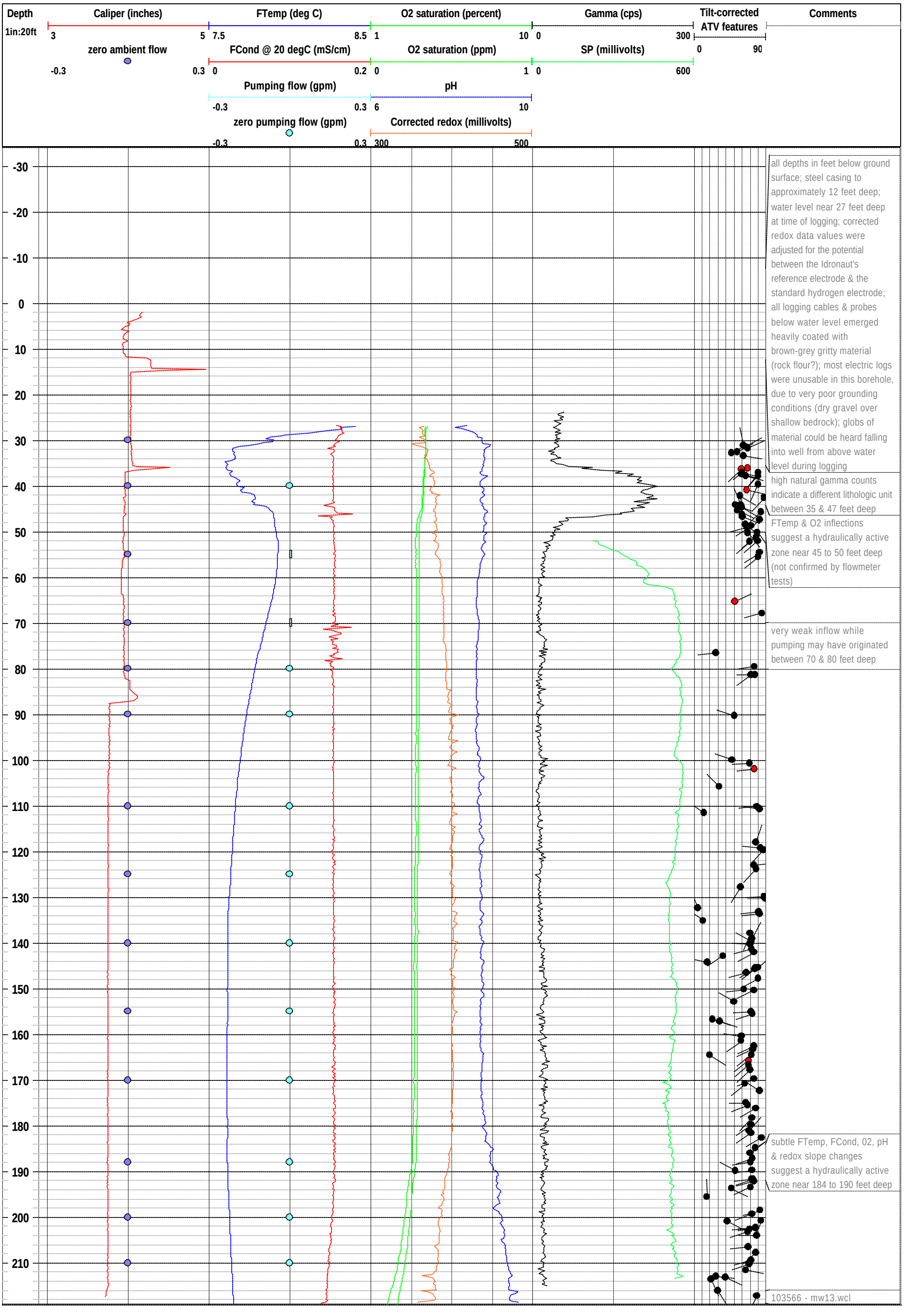
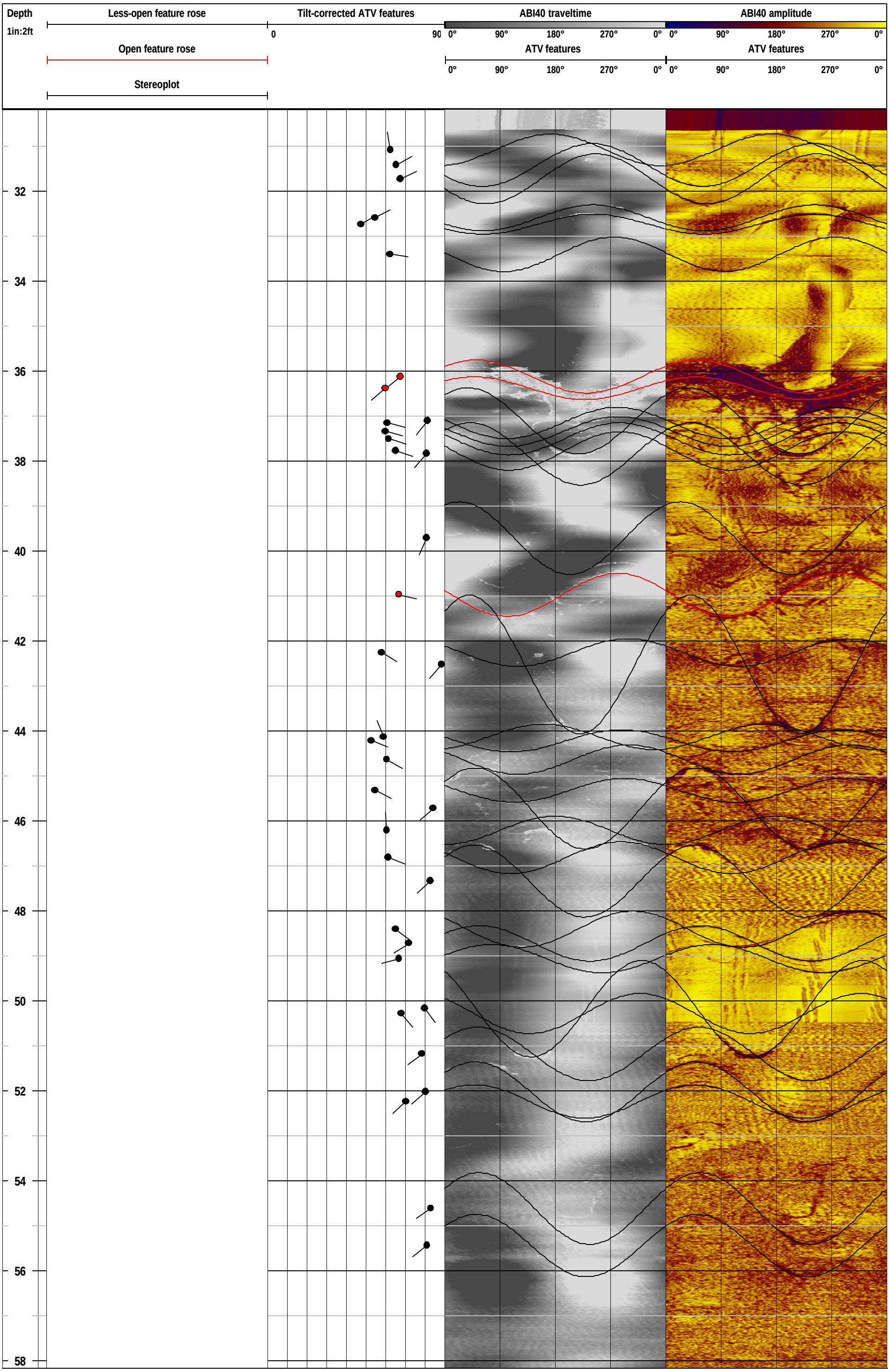
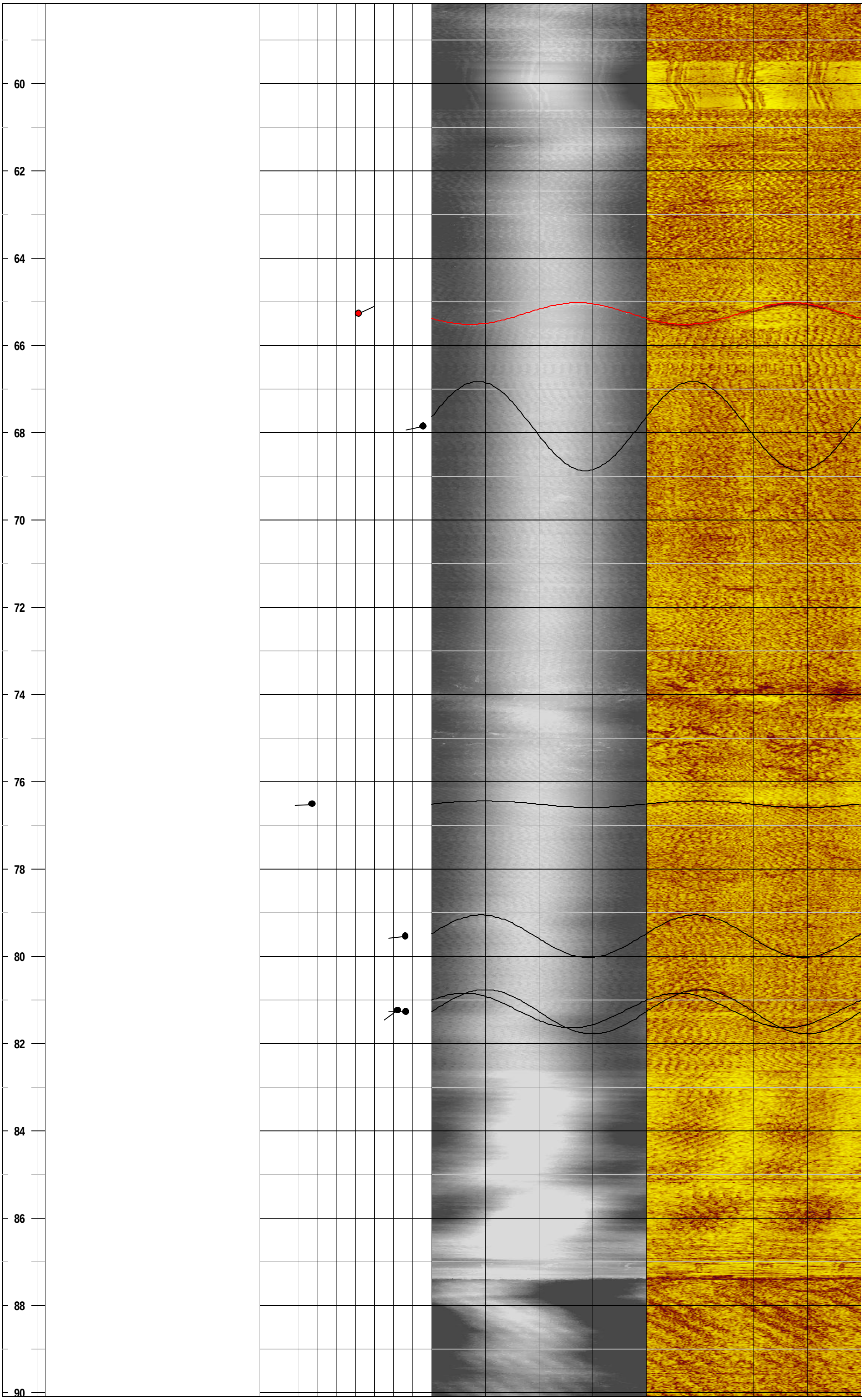
# Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-13 conventional logs



Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-13 acoustic televiewer log

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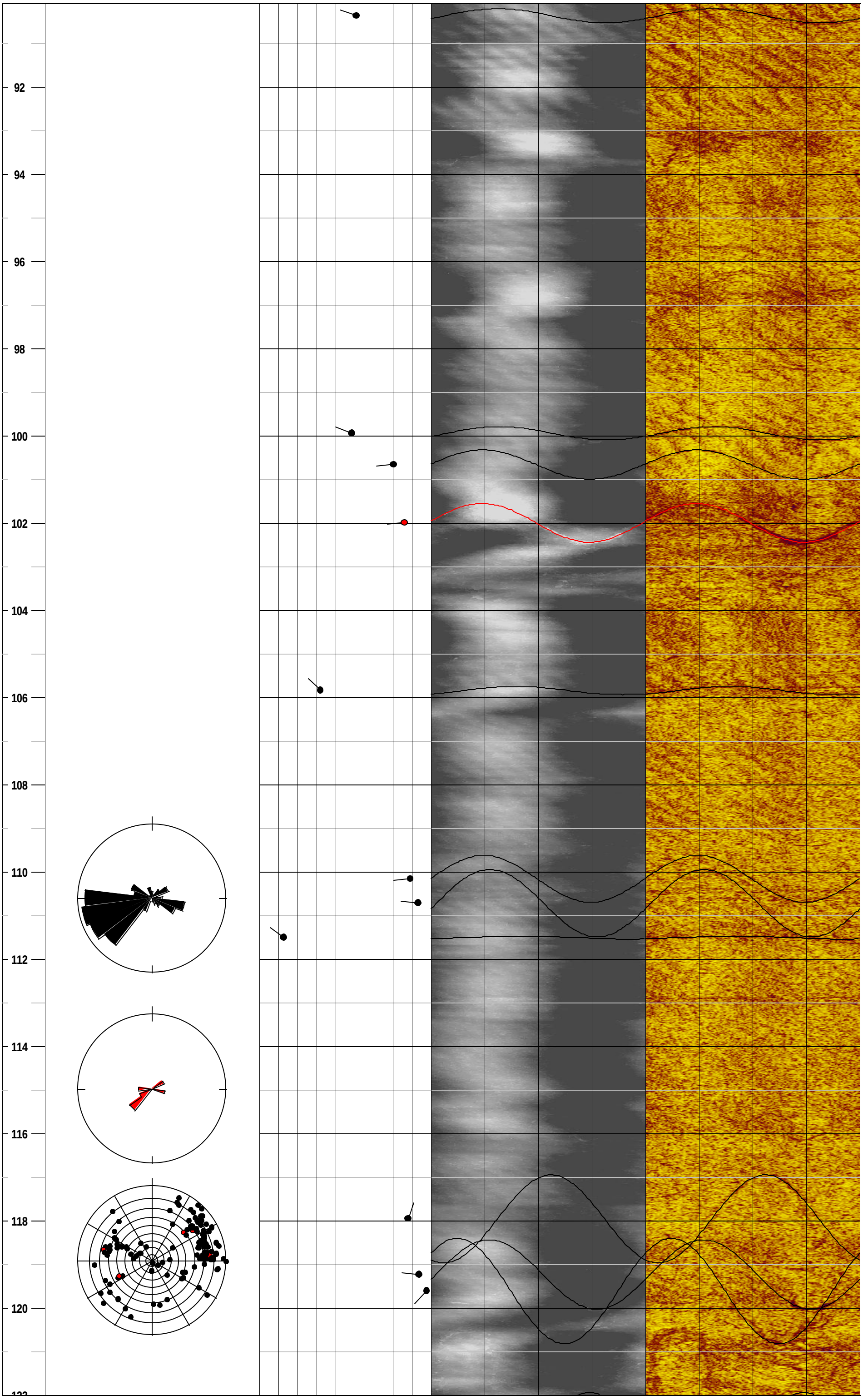
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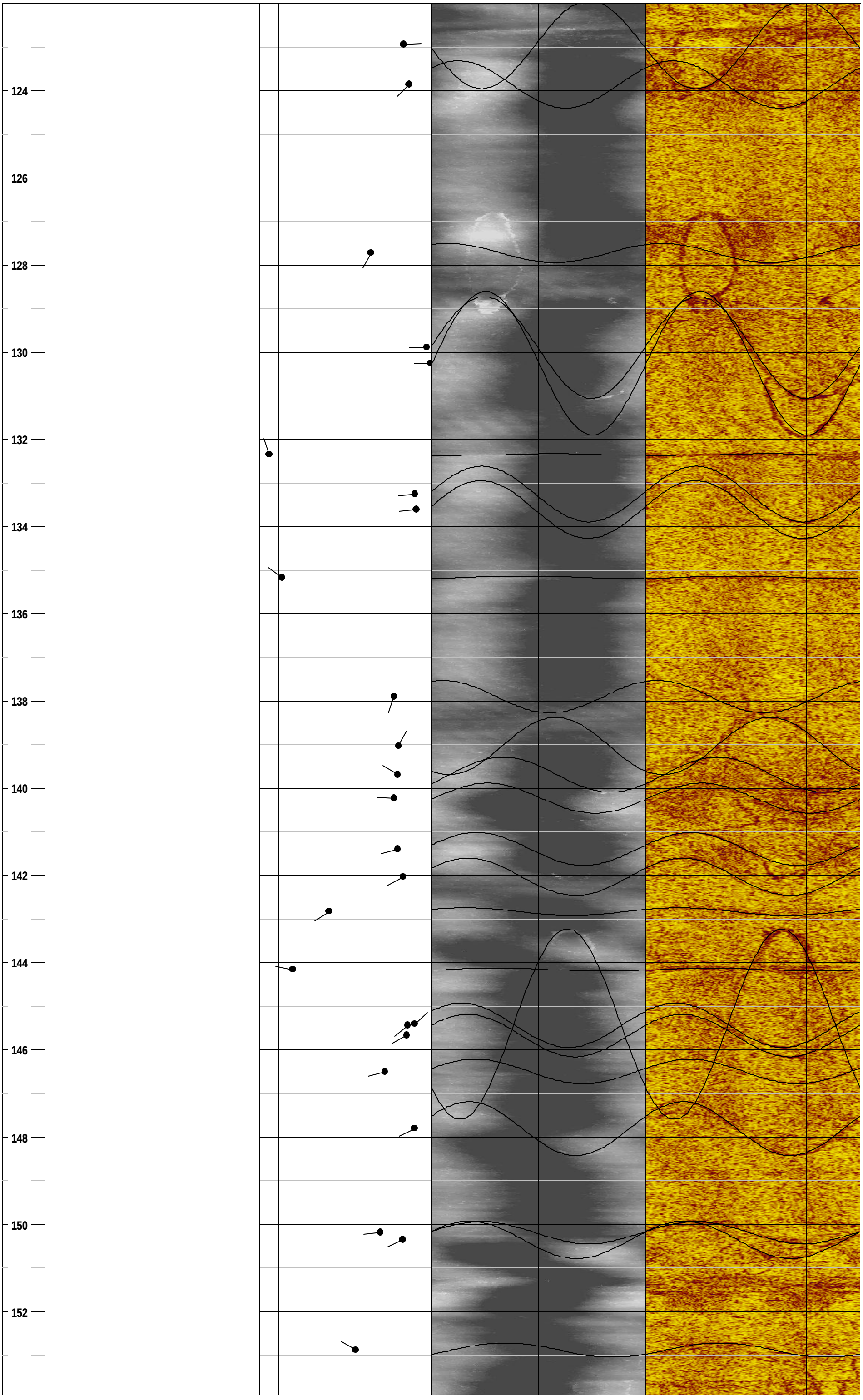
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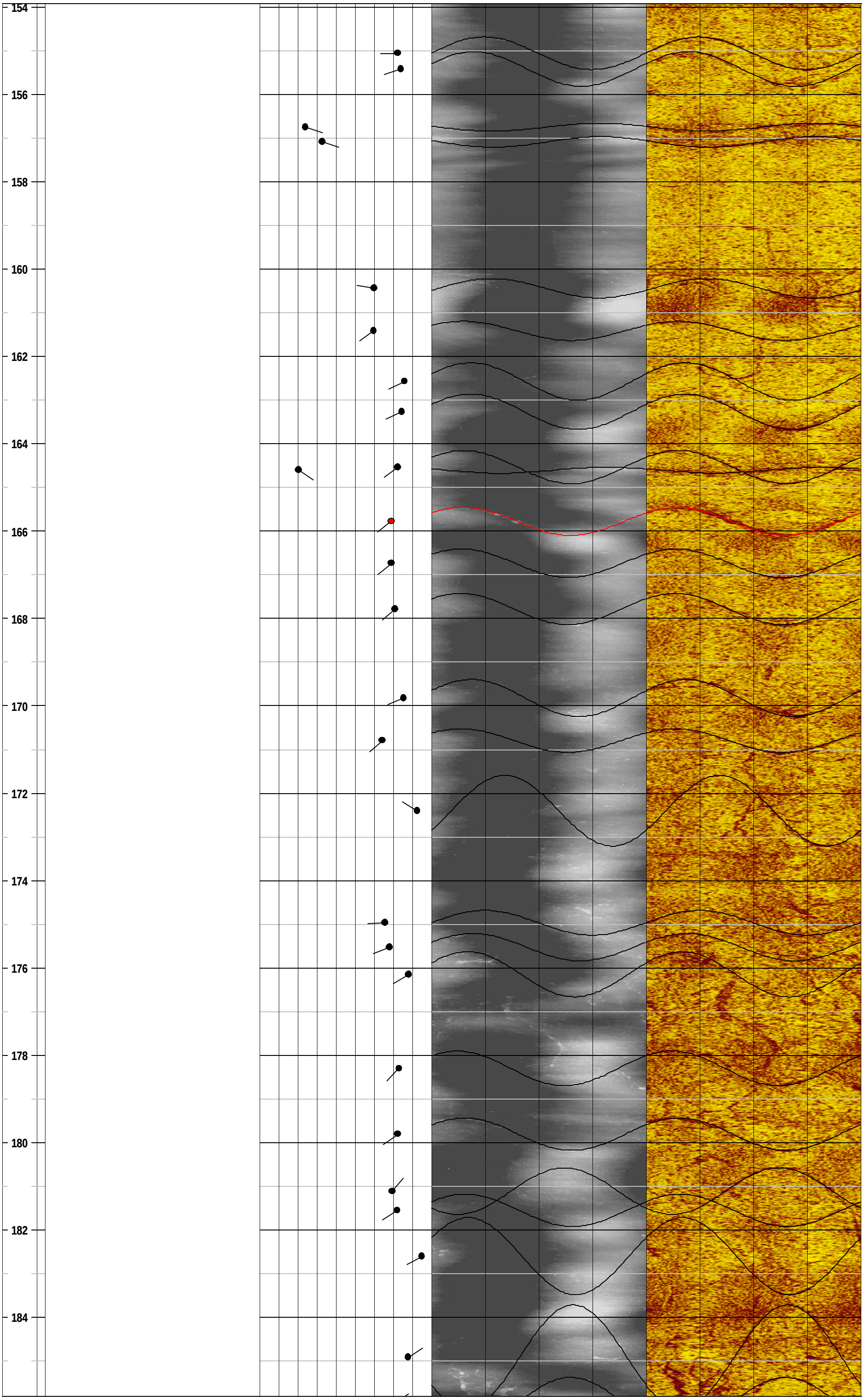
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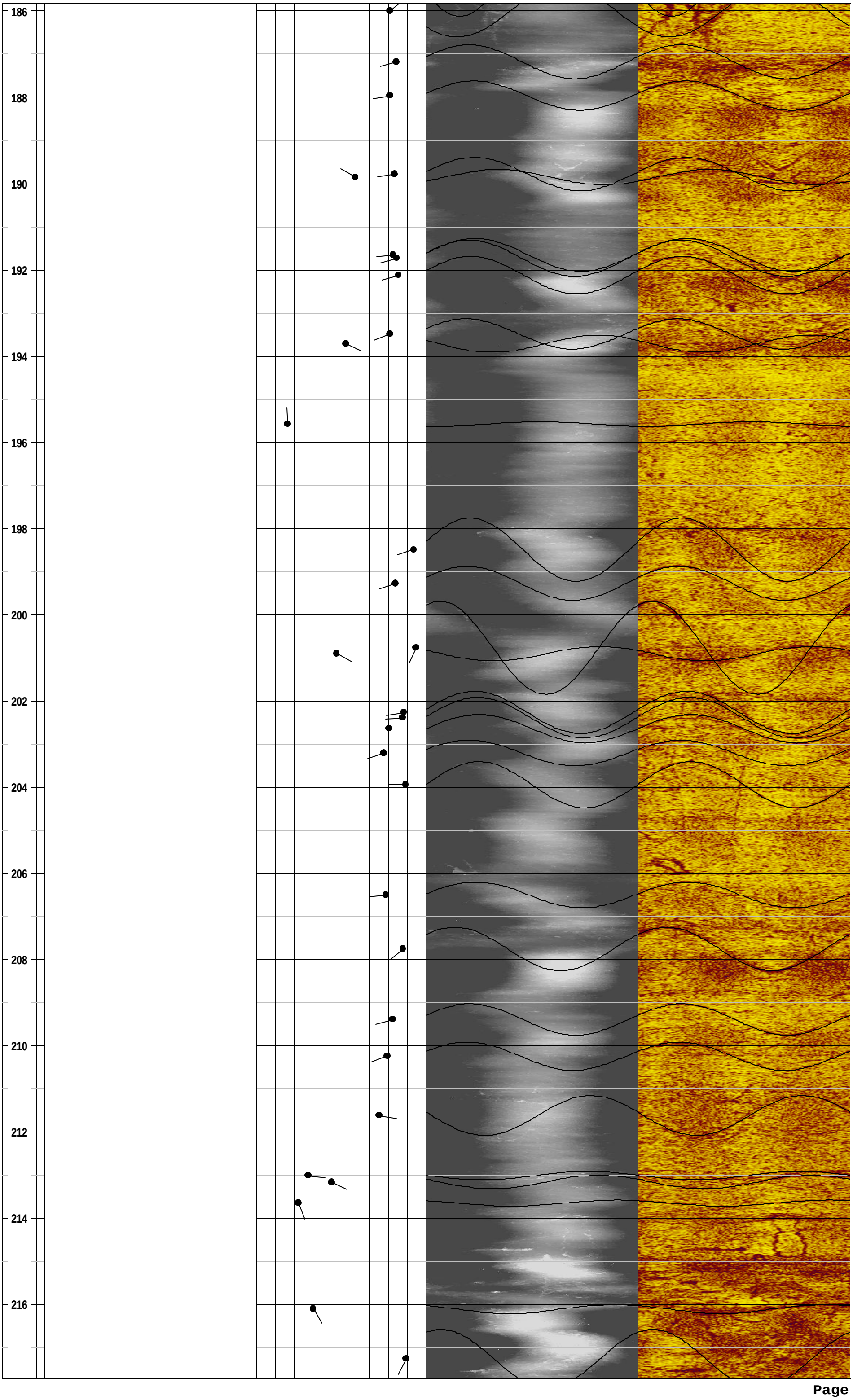
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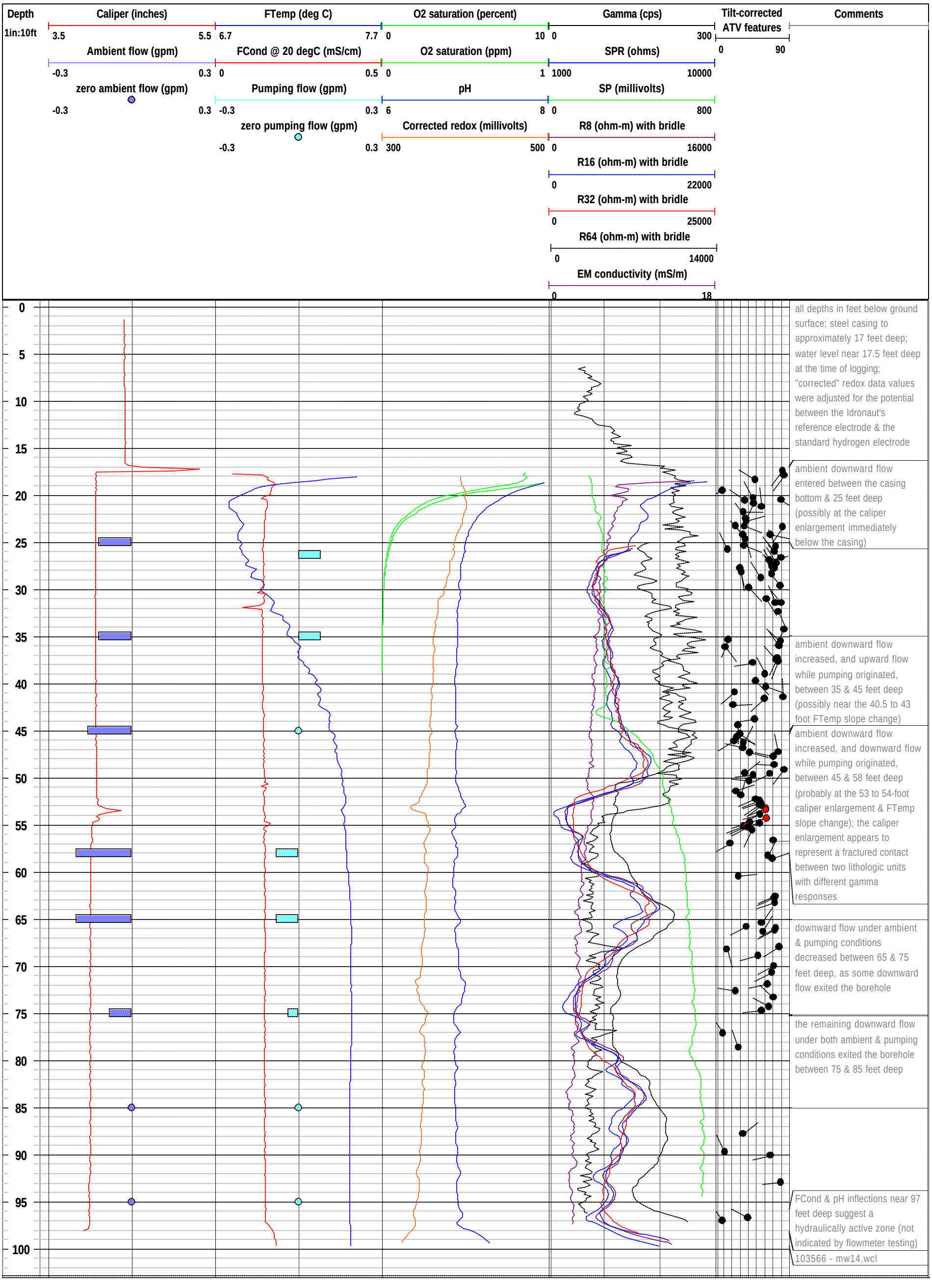
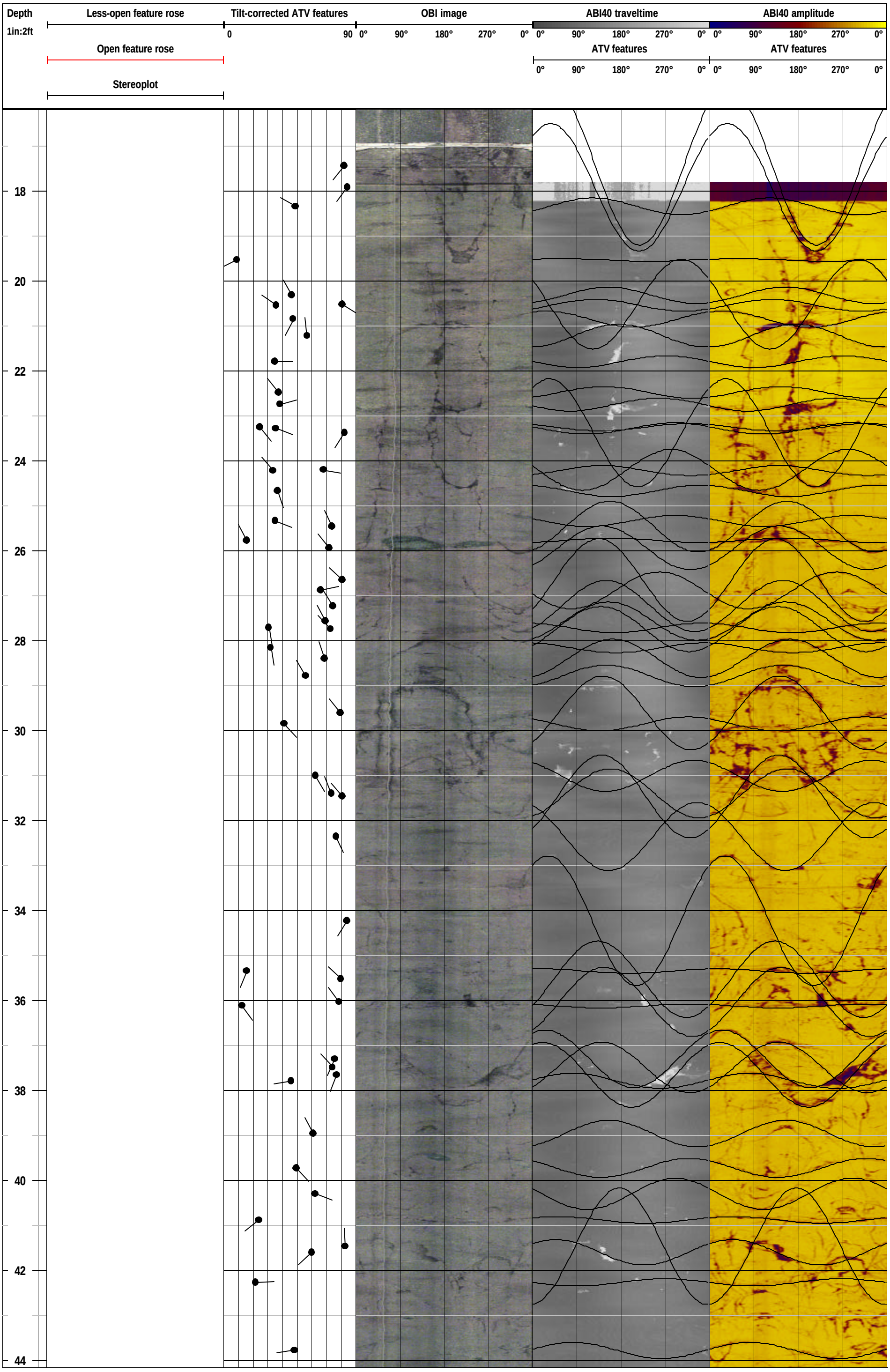
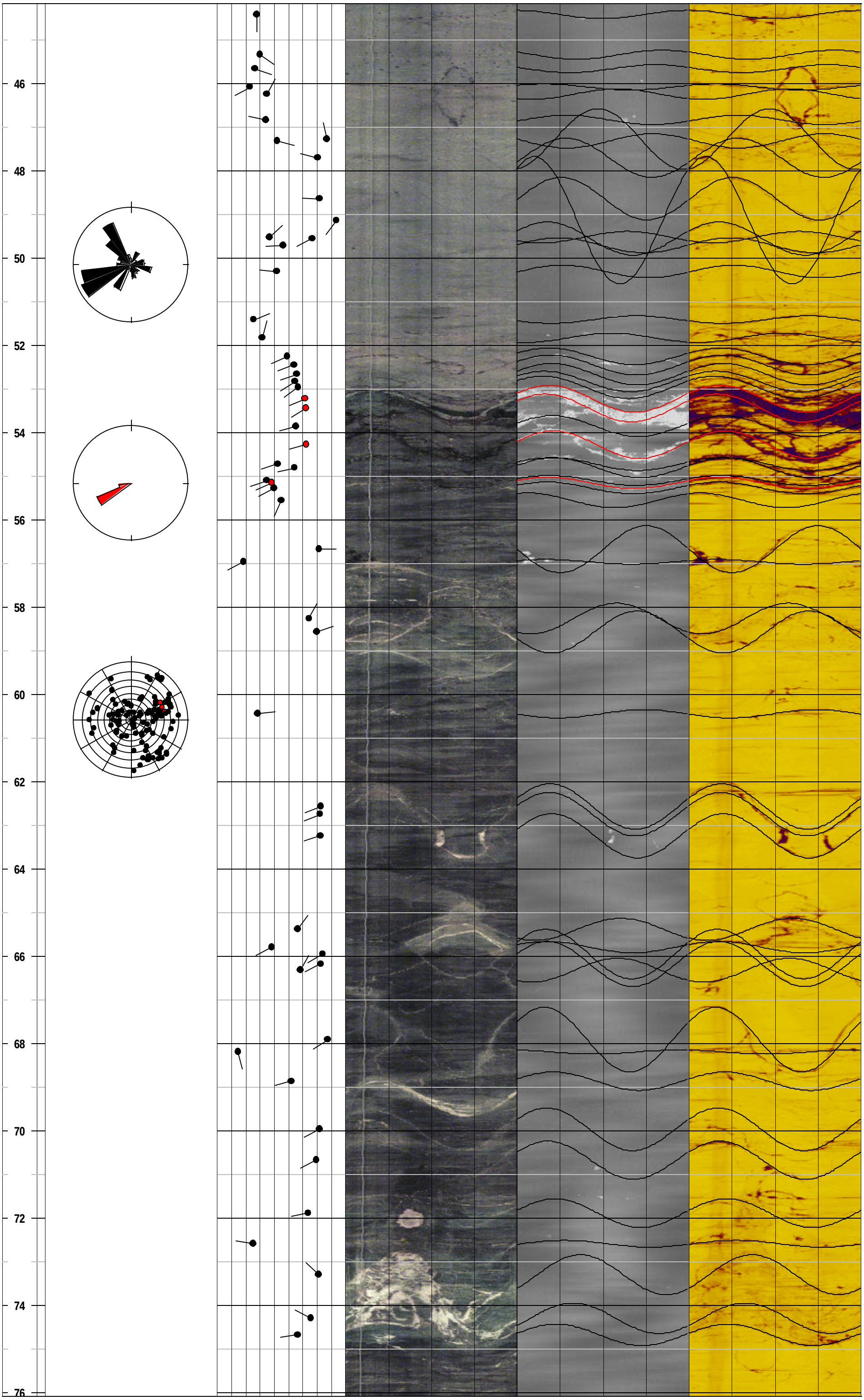
Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-14 conventional logs



Project - Well:  Weston - USACE/Bucks Harbor, ME - MW-14 optical & acoustic televiewer logs

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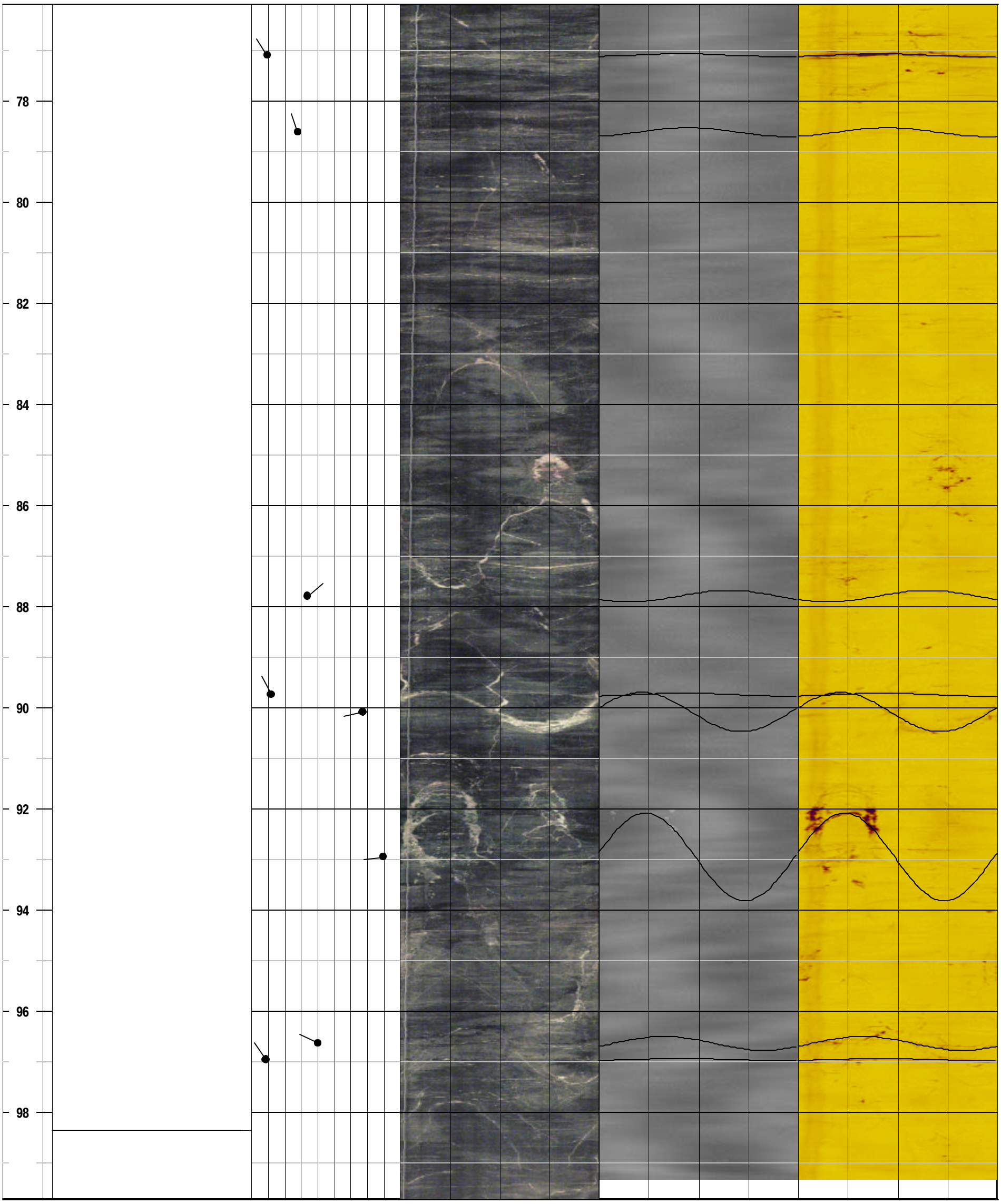
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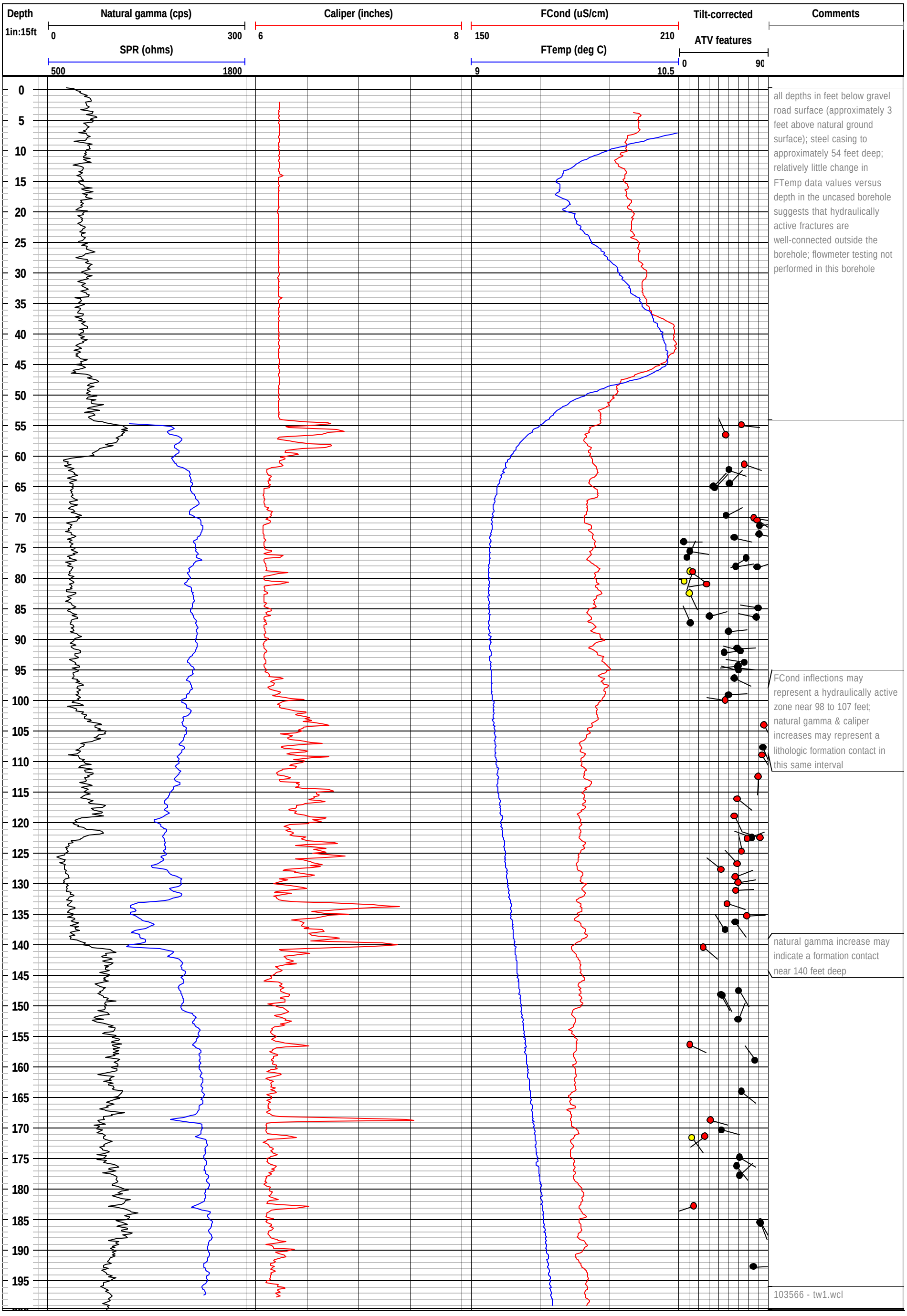
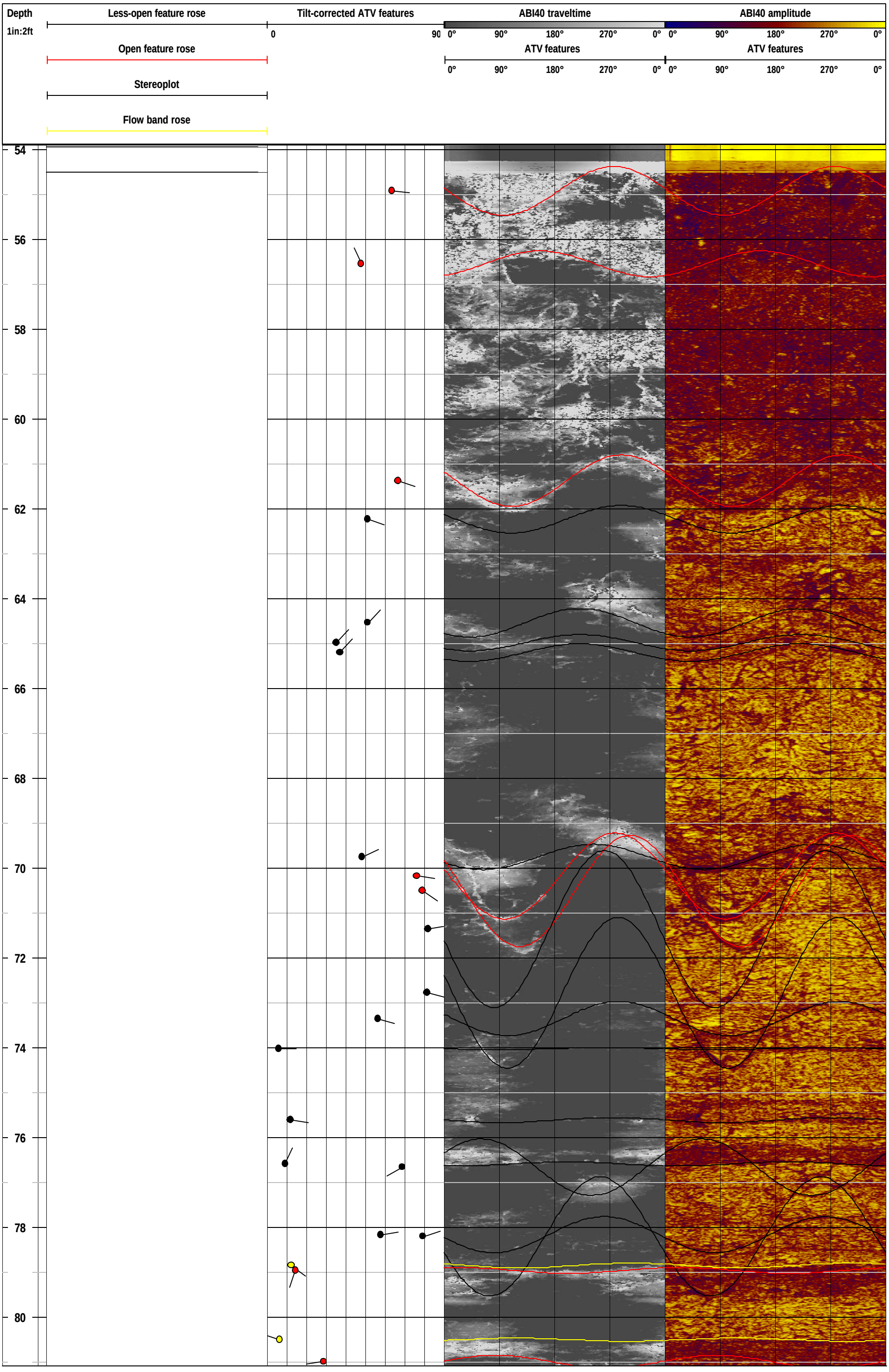
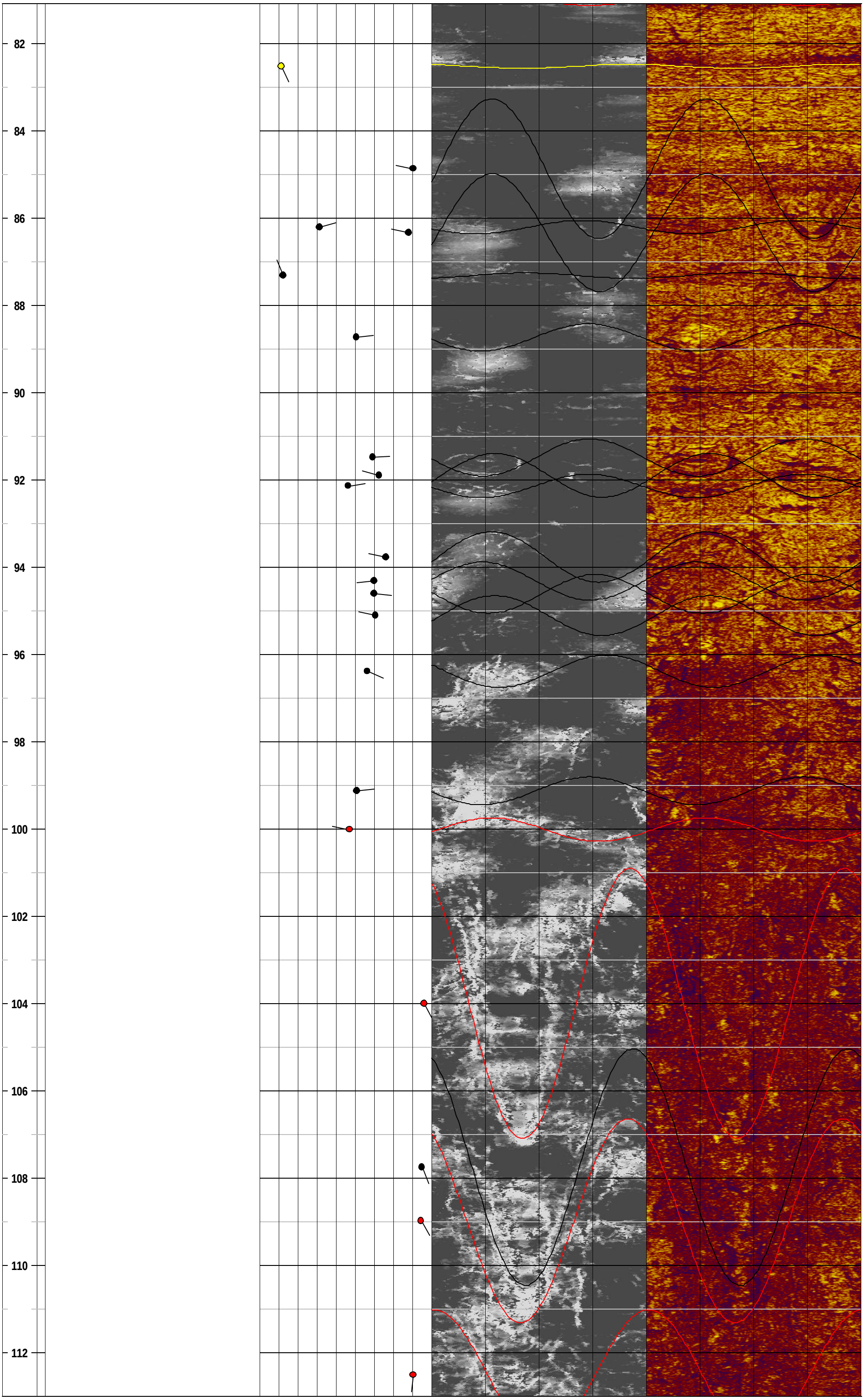
# Project - Well:  Weston - USACE/Bucks Harbor, ME - TW-1 conventional logs



# Project - Well:  Weston - USACE/Bucks Harbor, ME - TW-1 acoustic televiewer log

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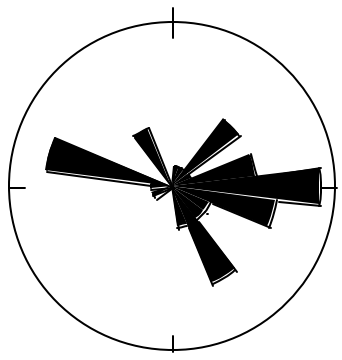

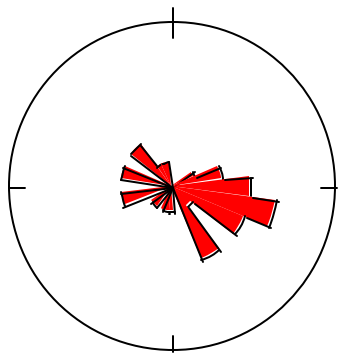

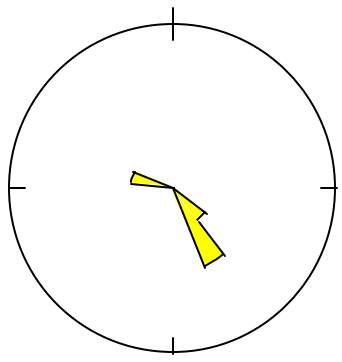

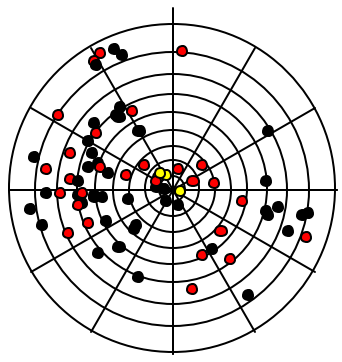

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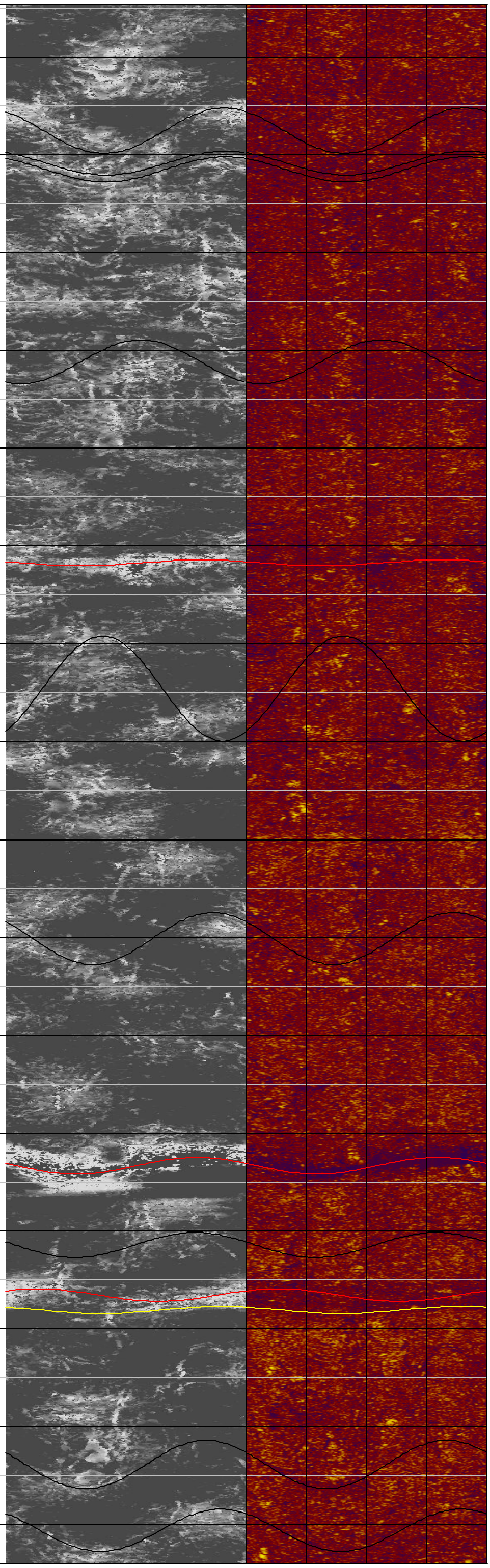

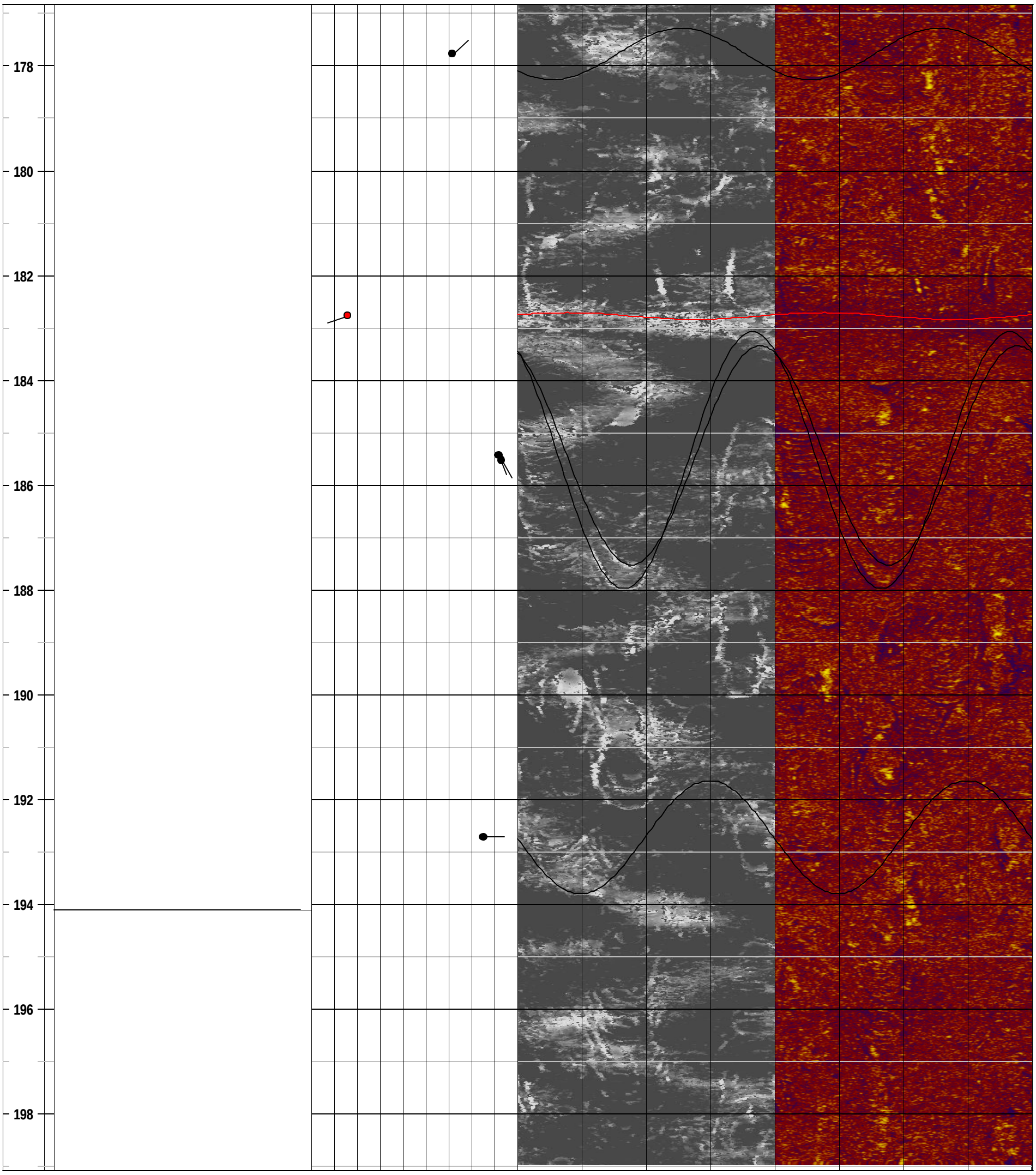
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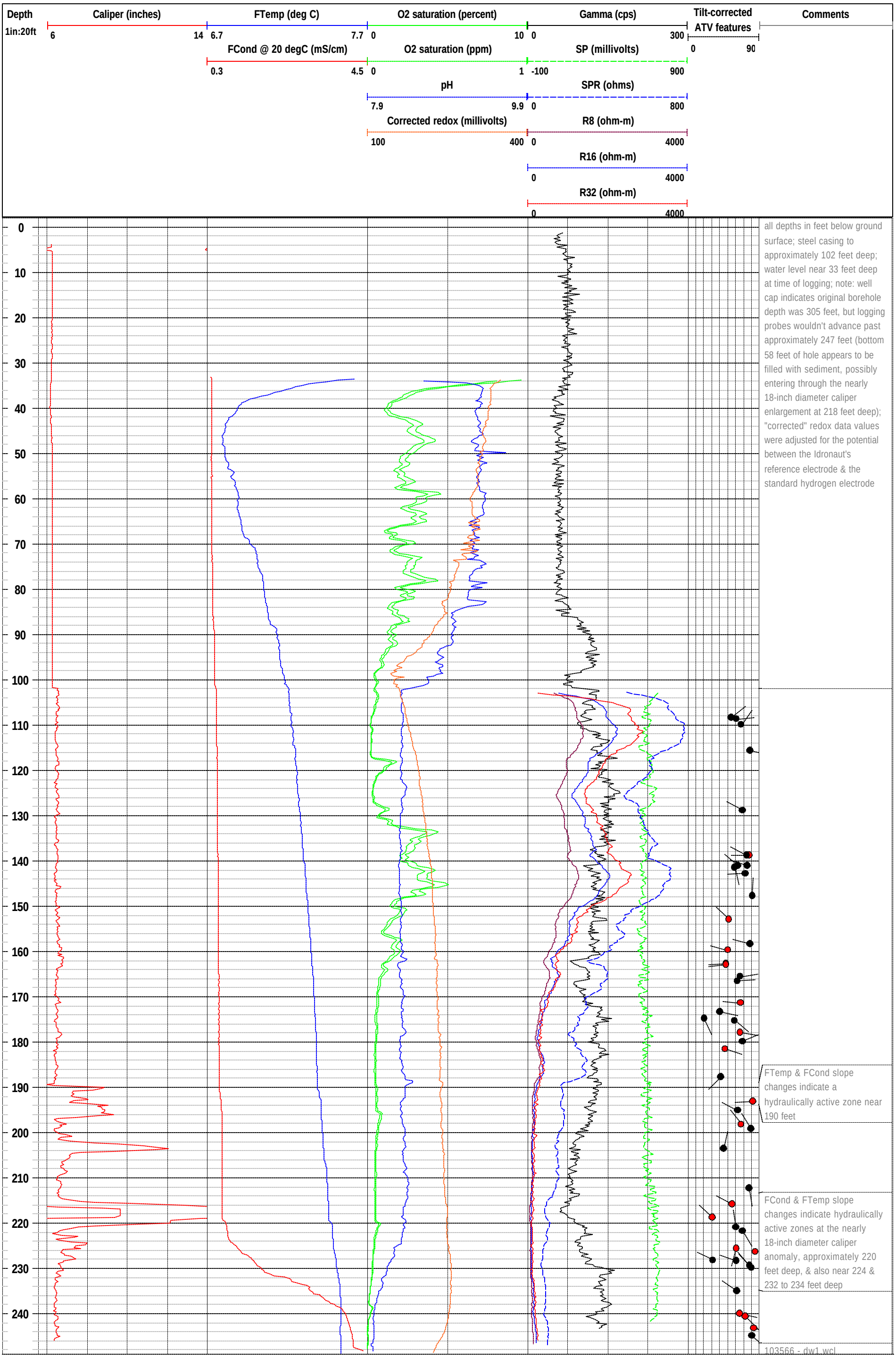
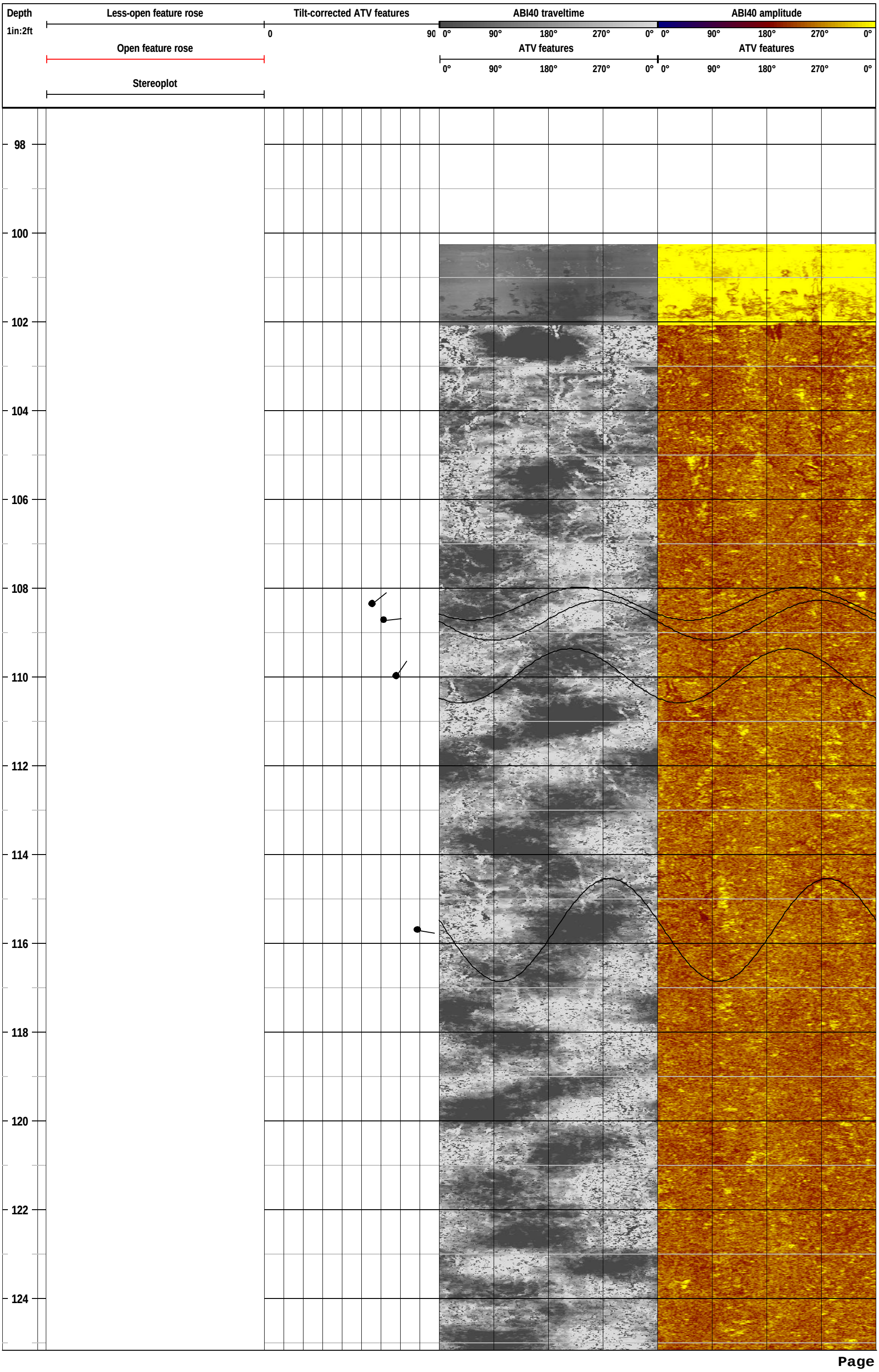
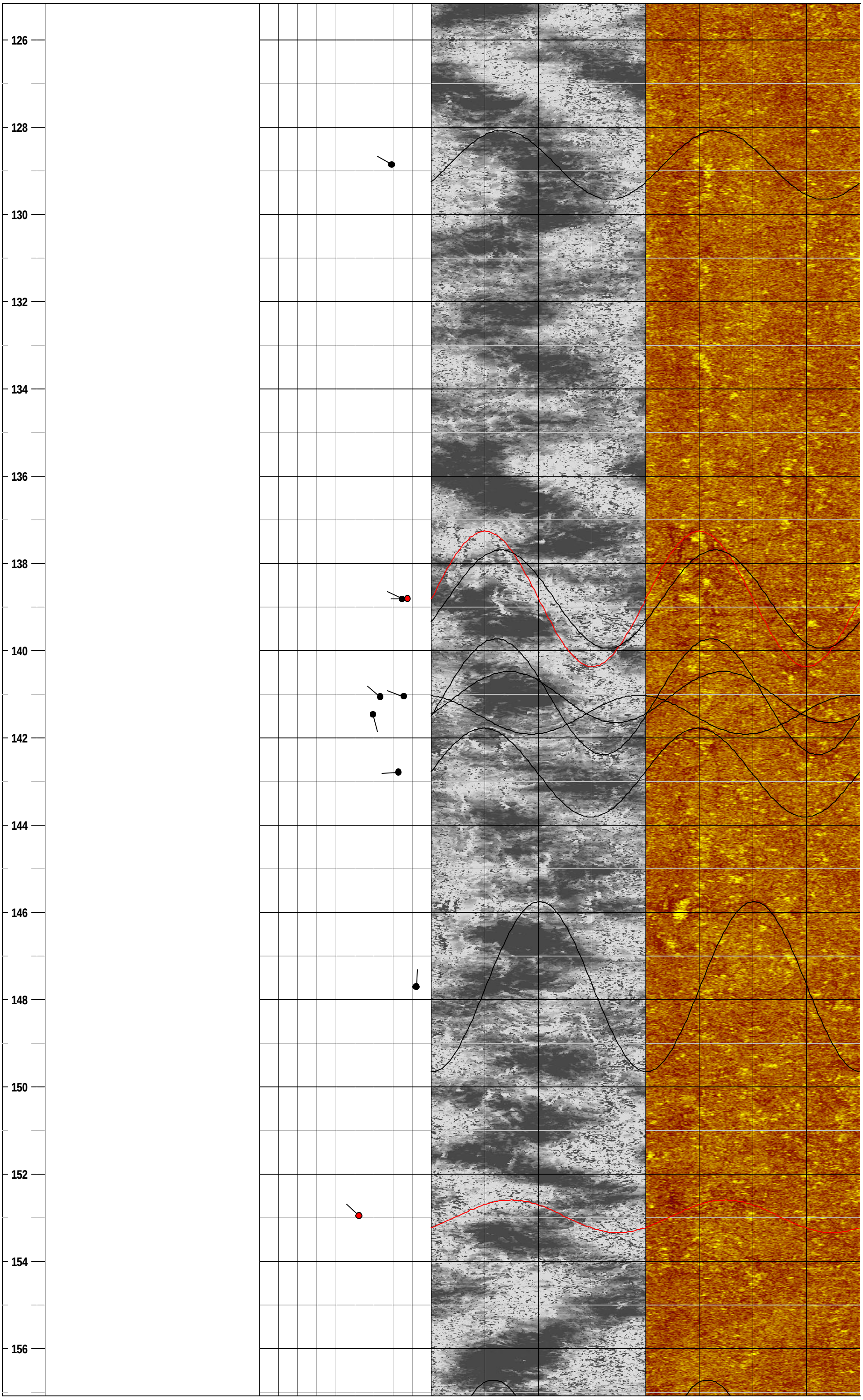
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-1 conventional logs



# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-1 acoustic televiewer log

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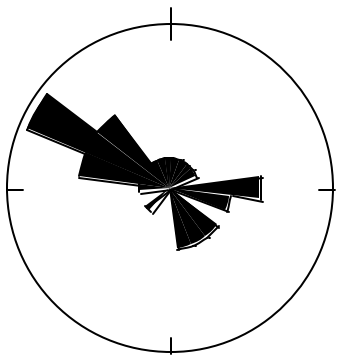

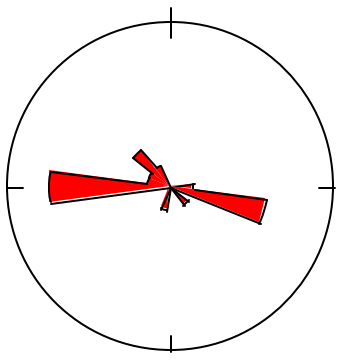

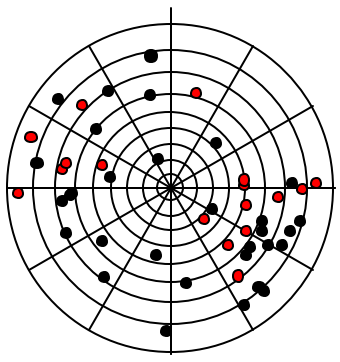

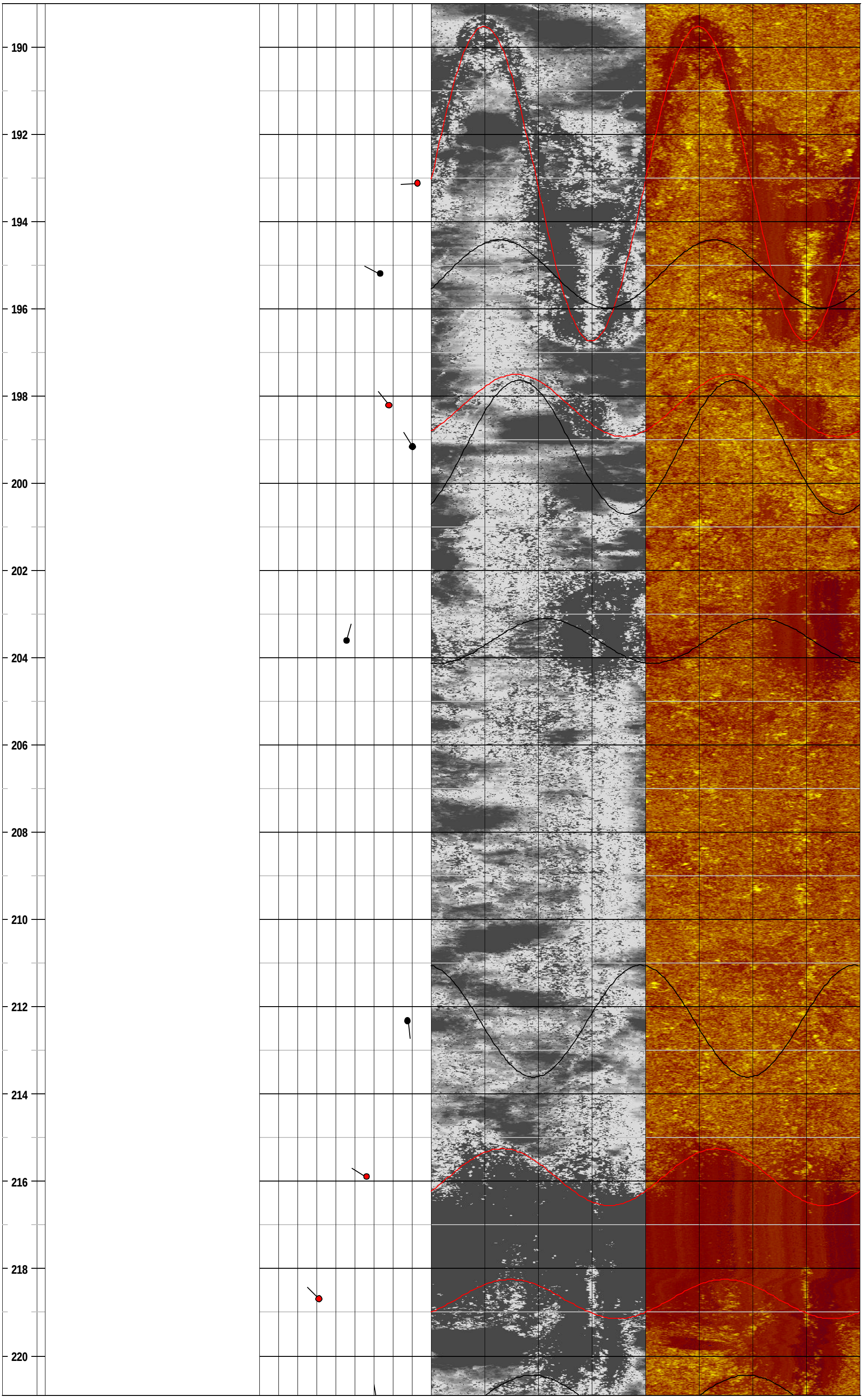
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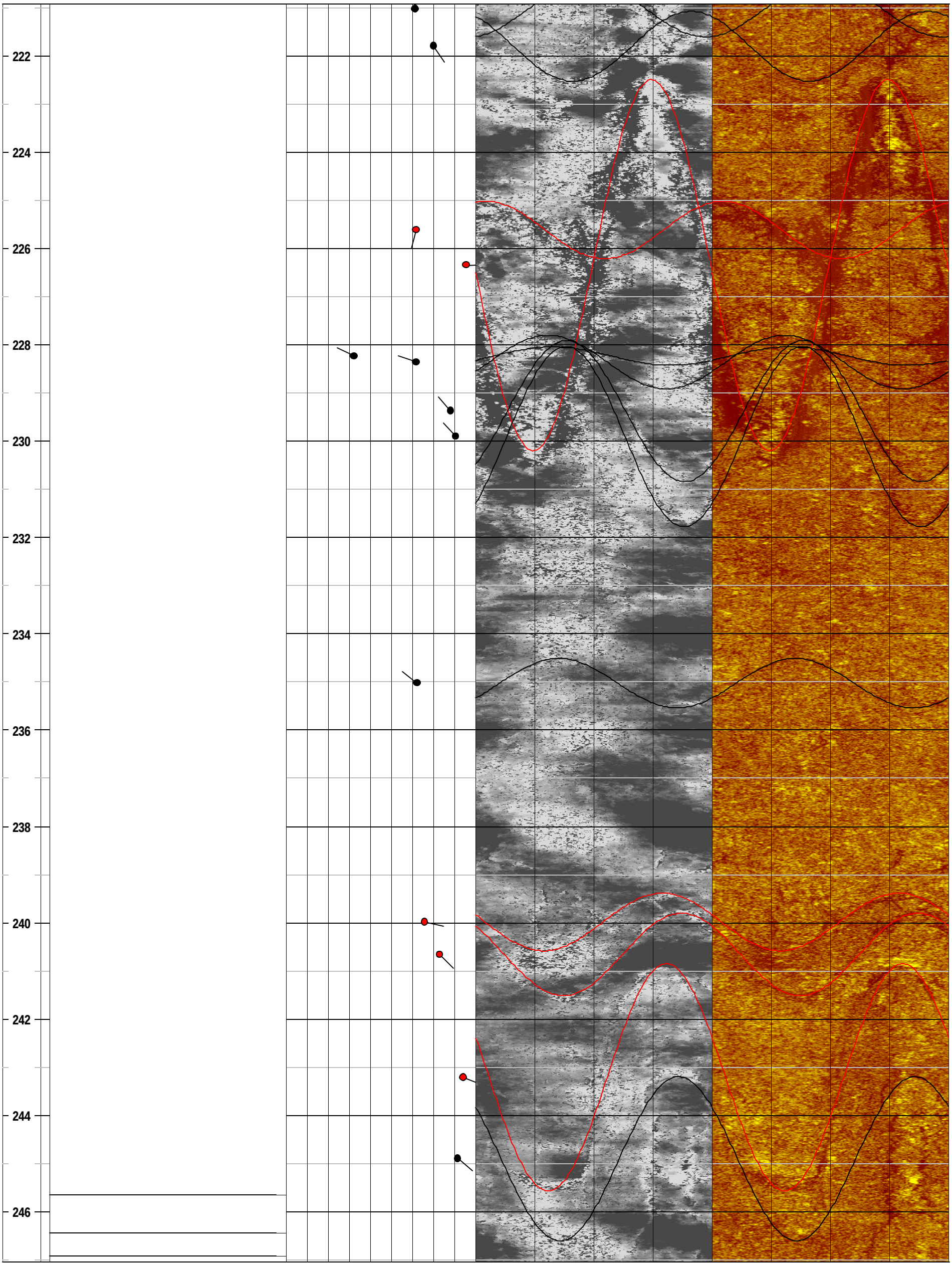
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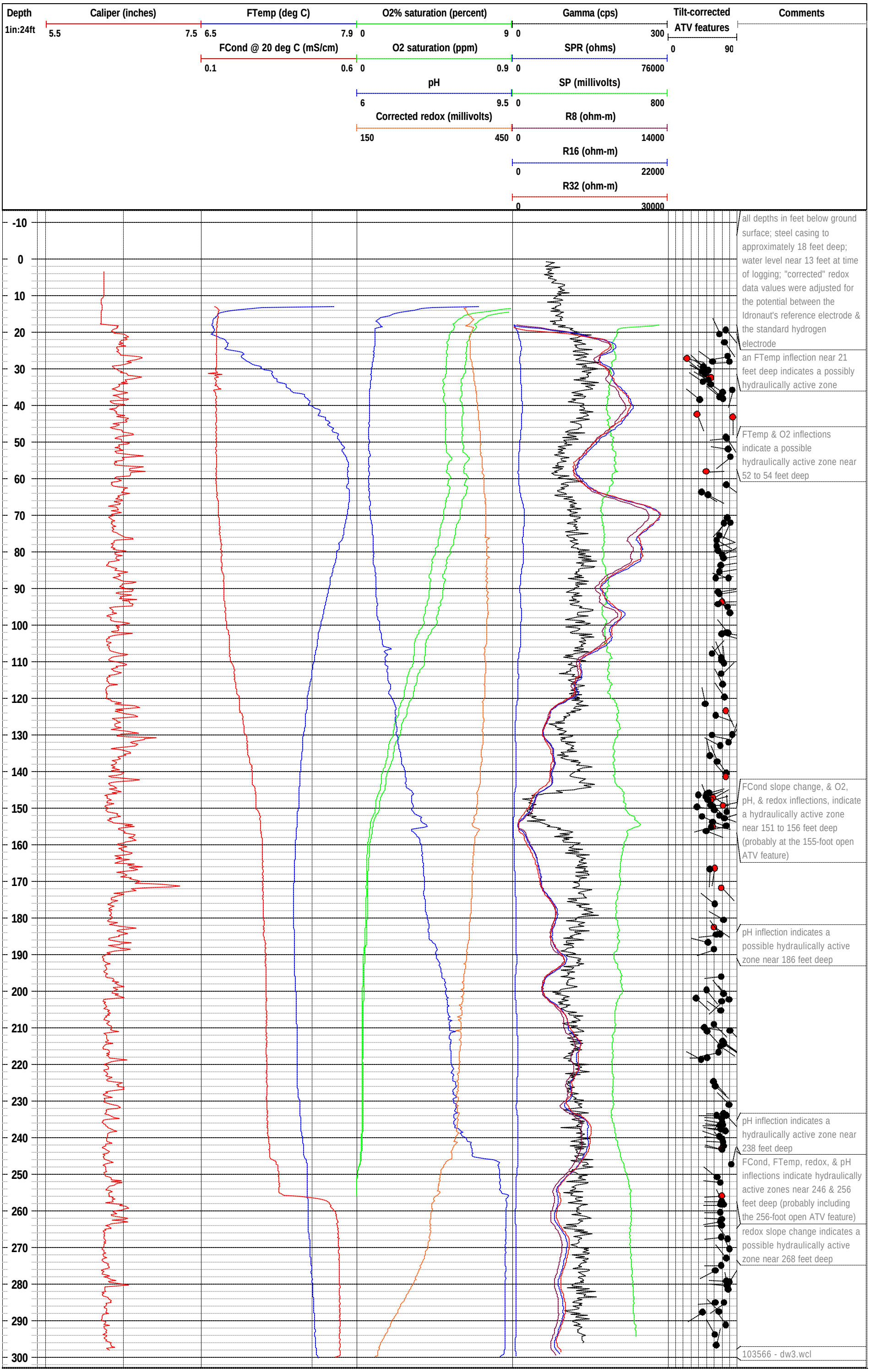
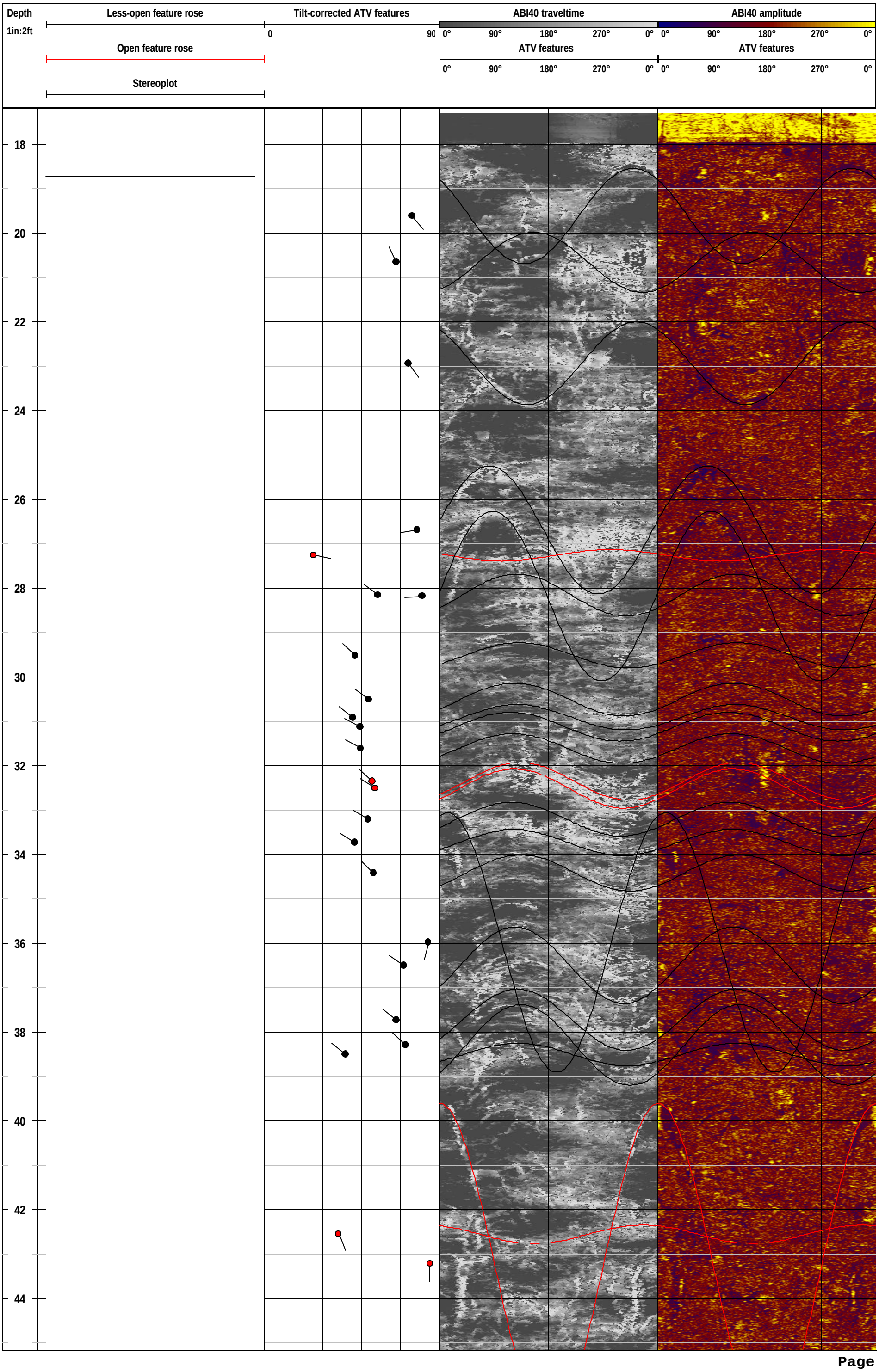
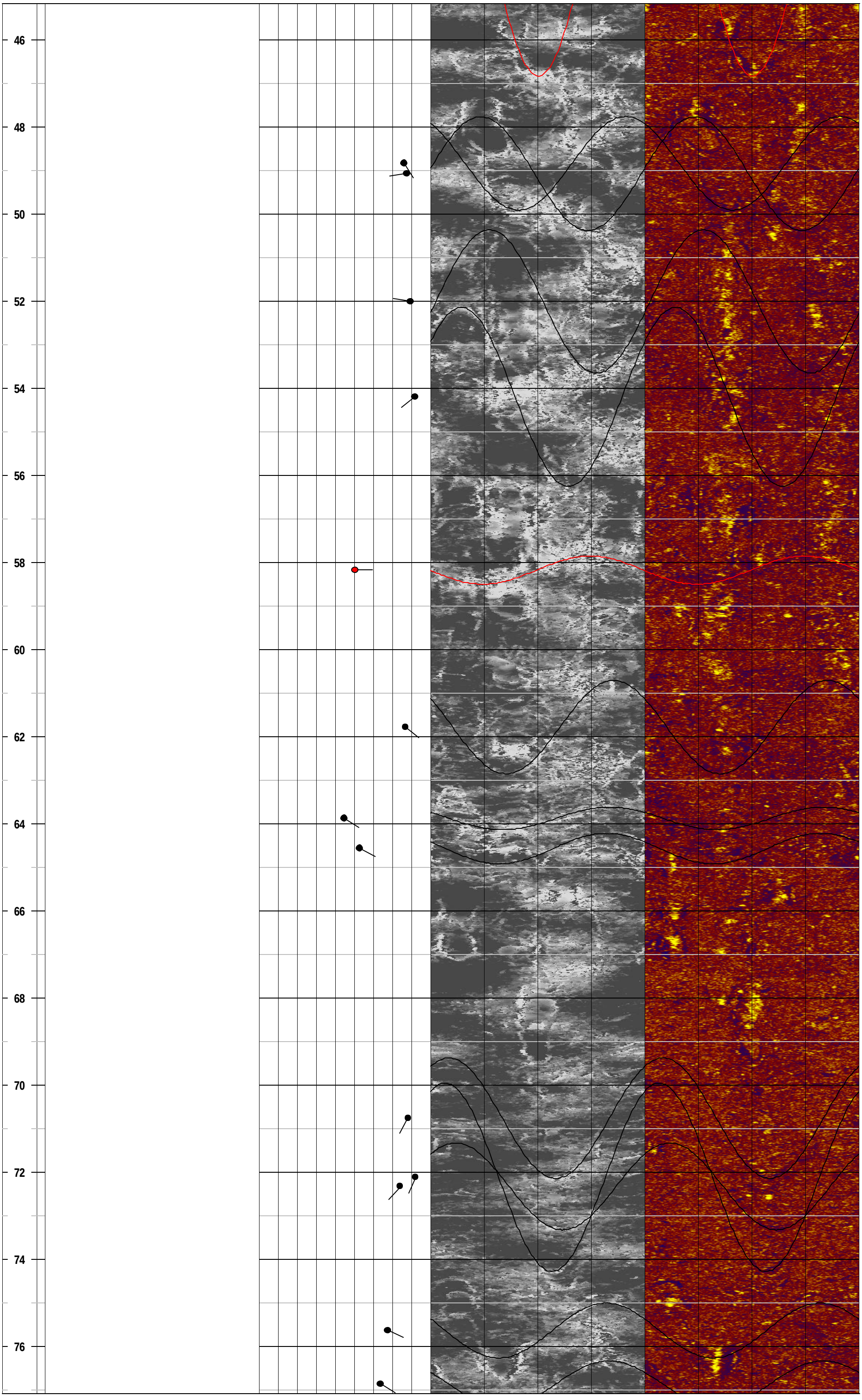
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-3 conventional logs



# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-3 acoustic televiewer log

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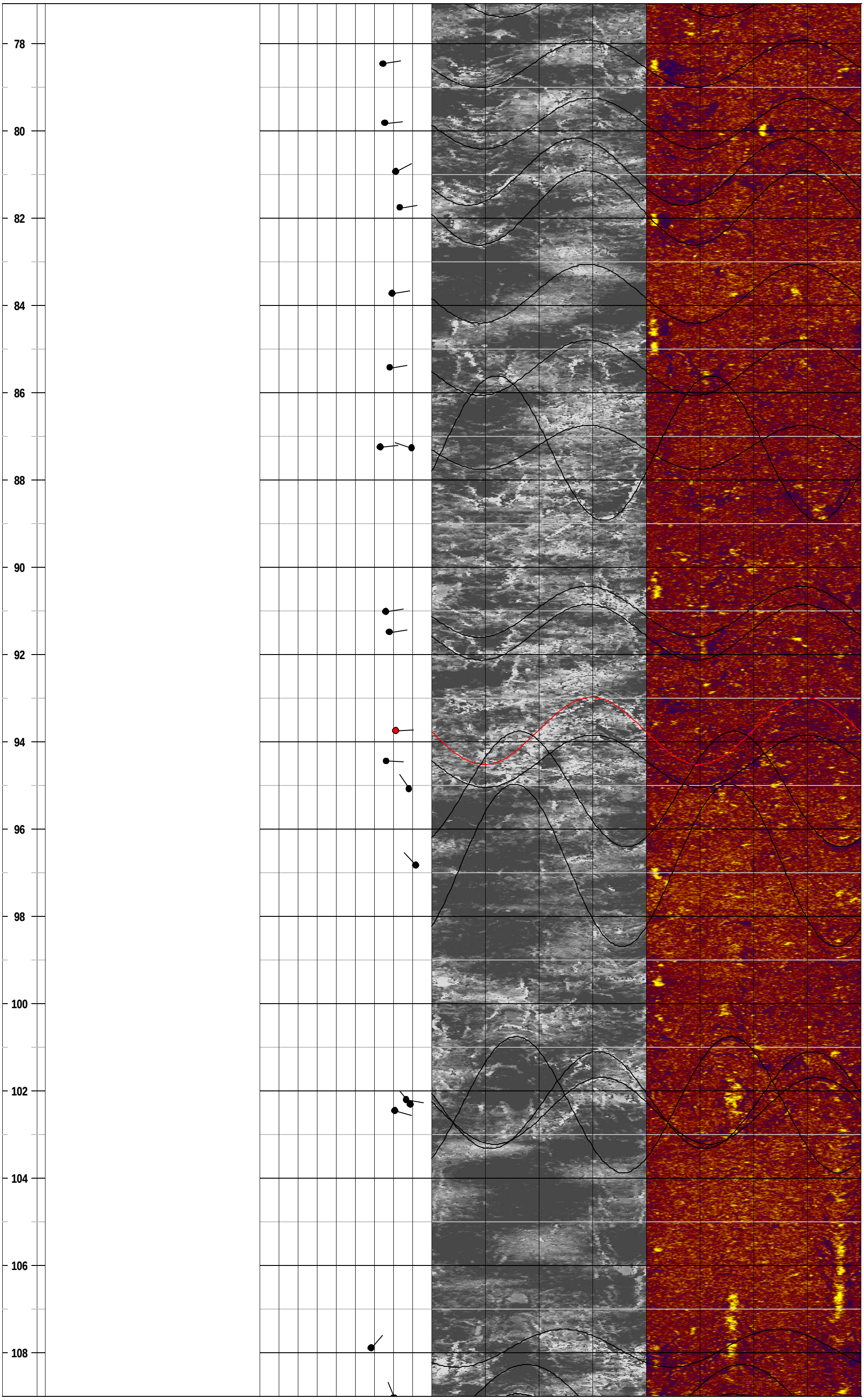
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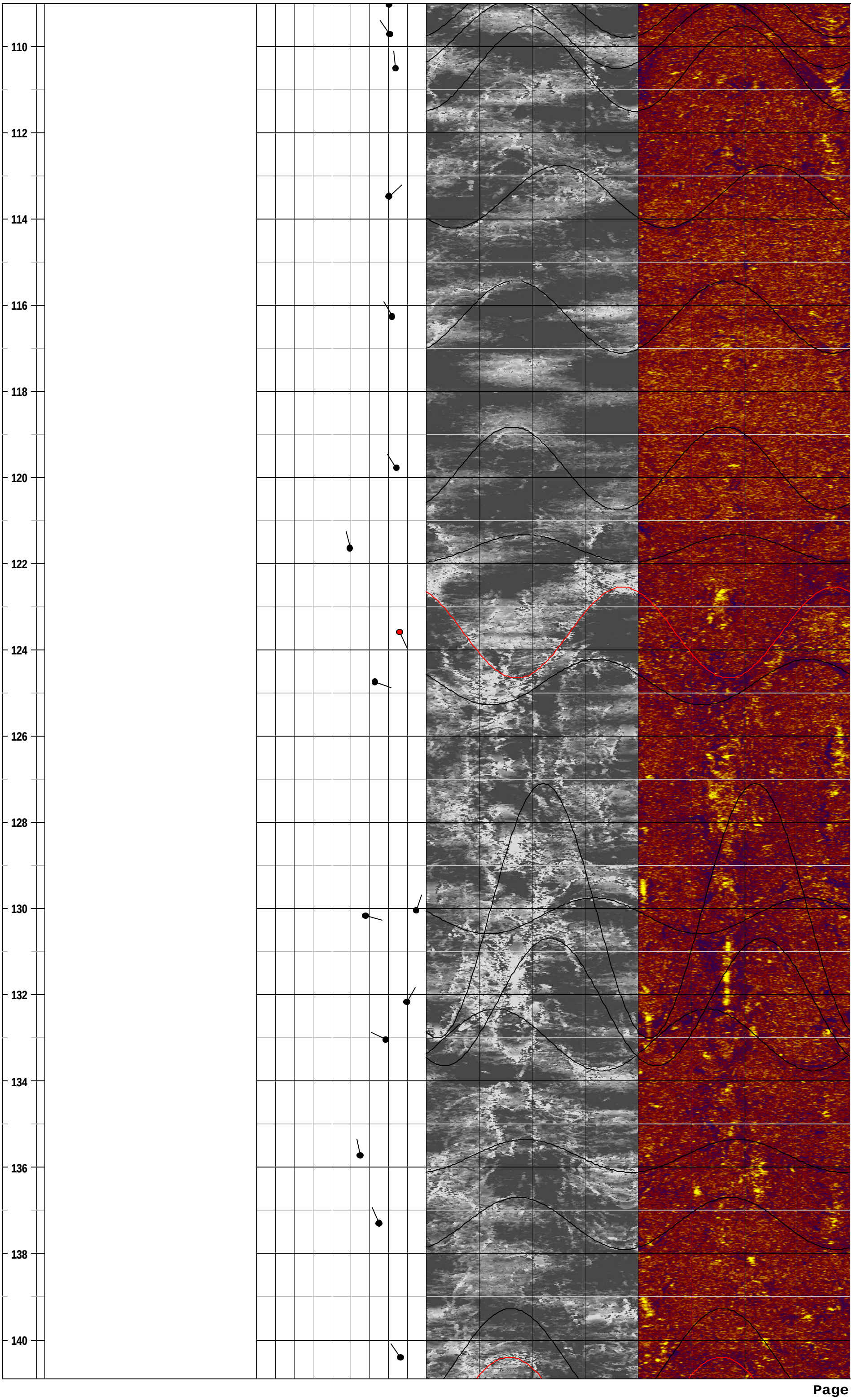
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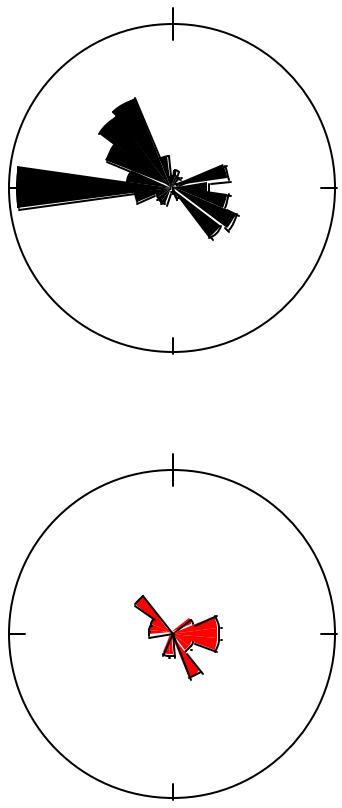



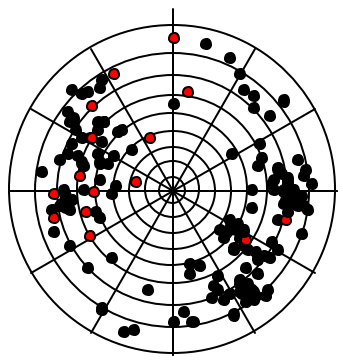

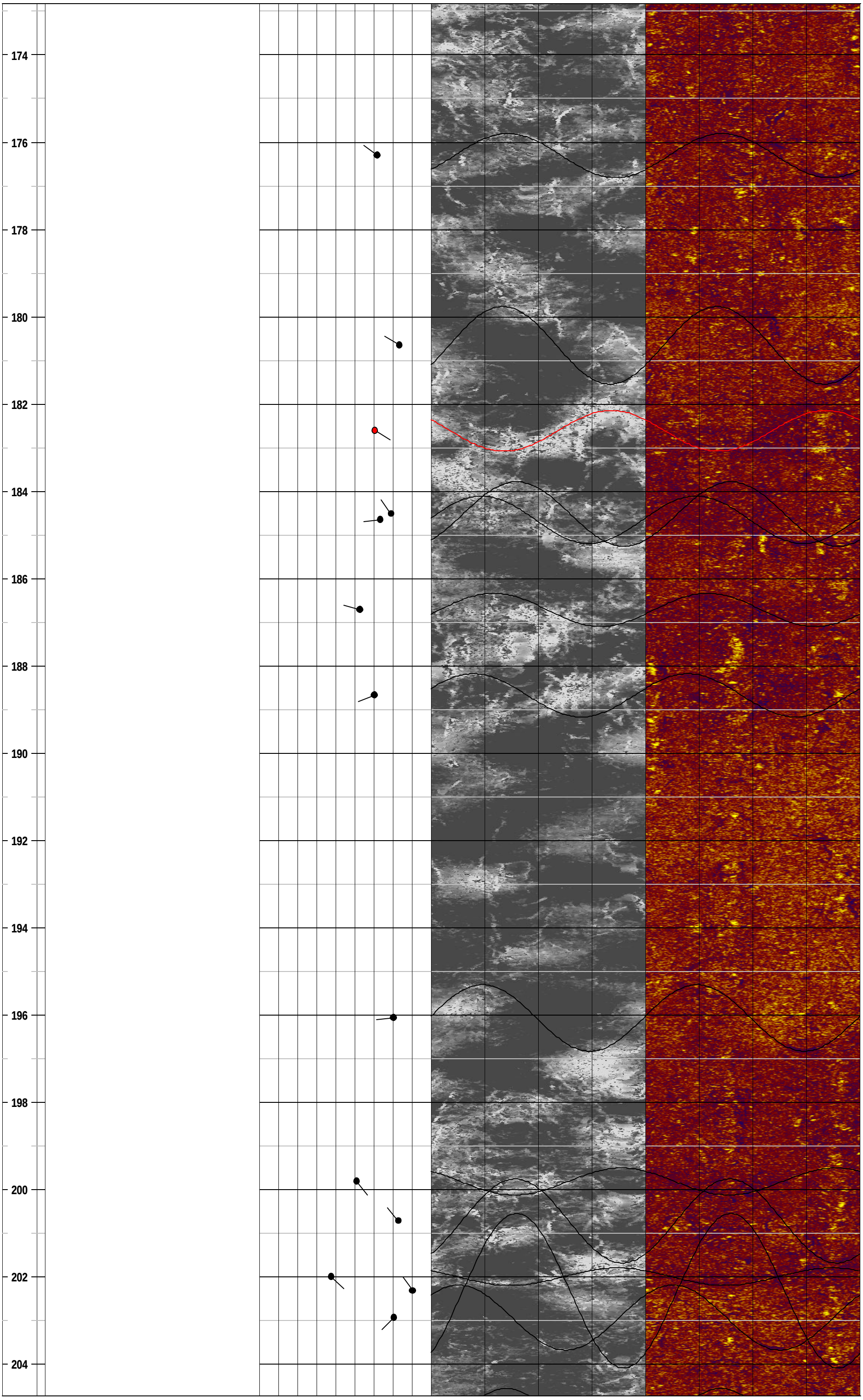
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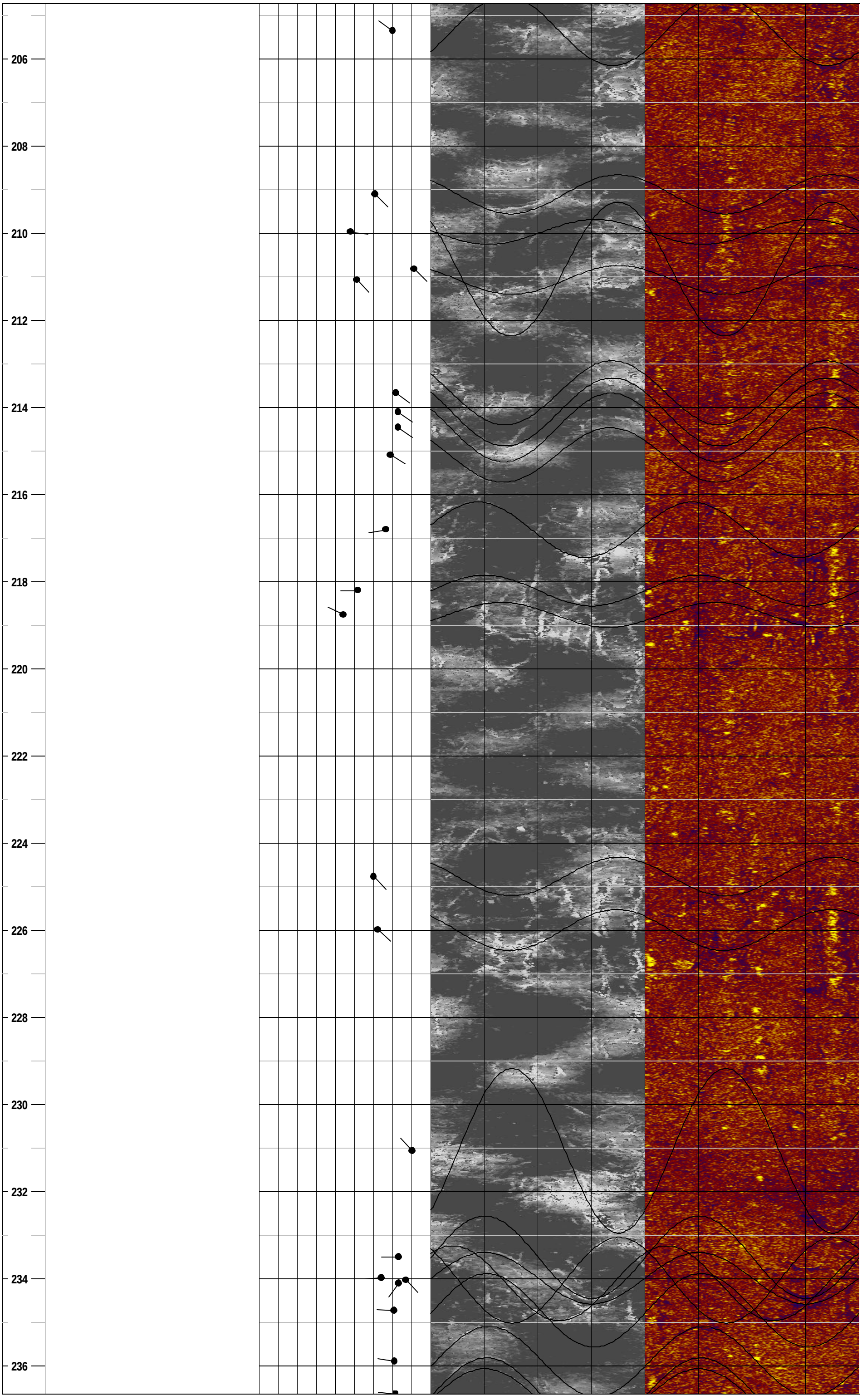
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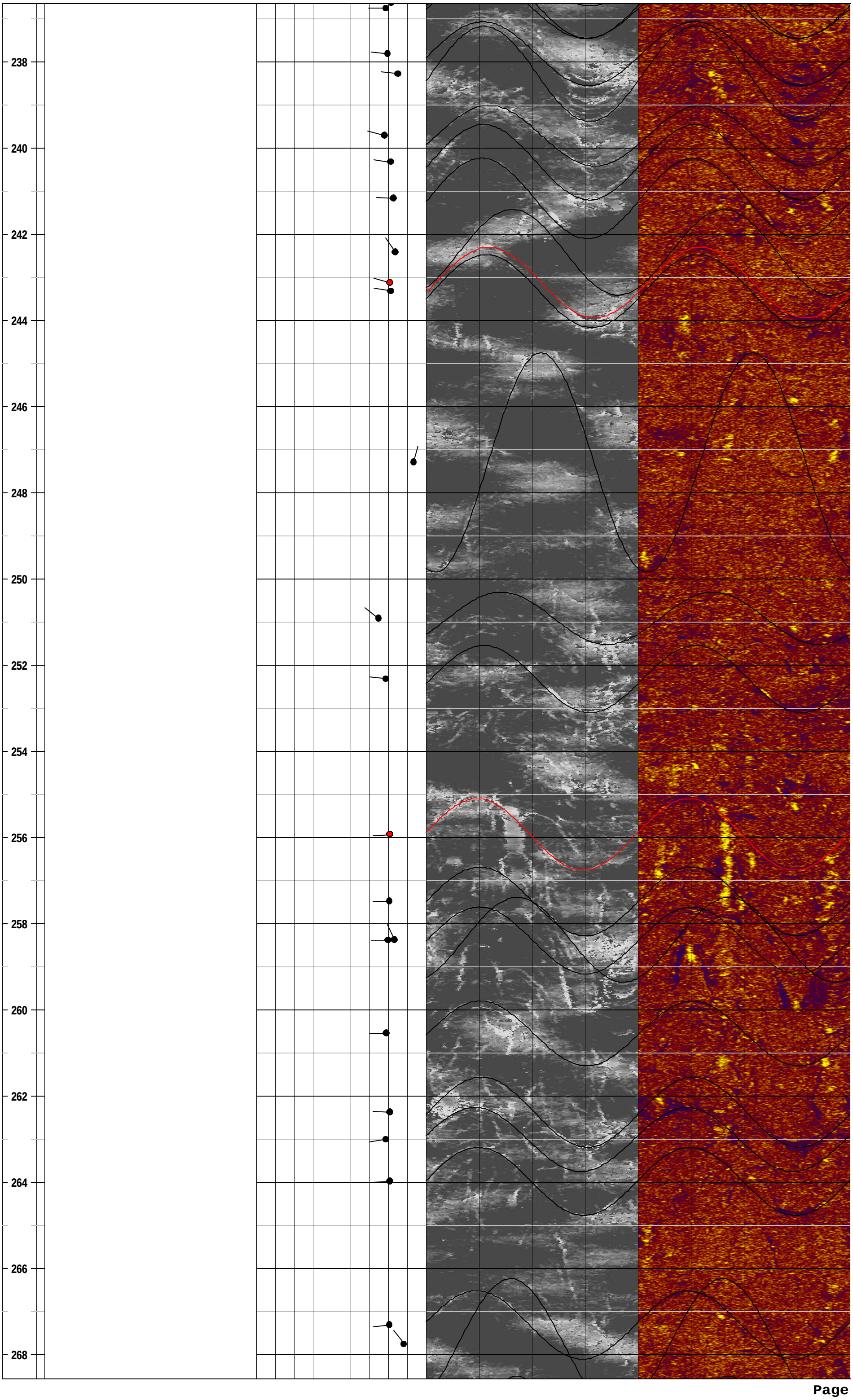
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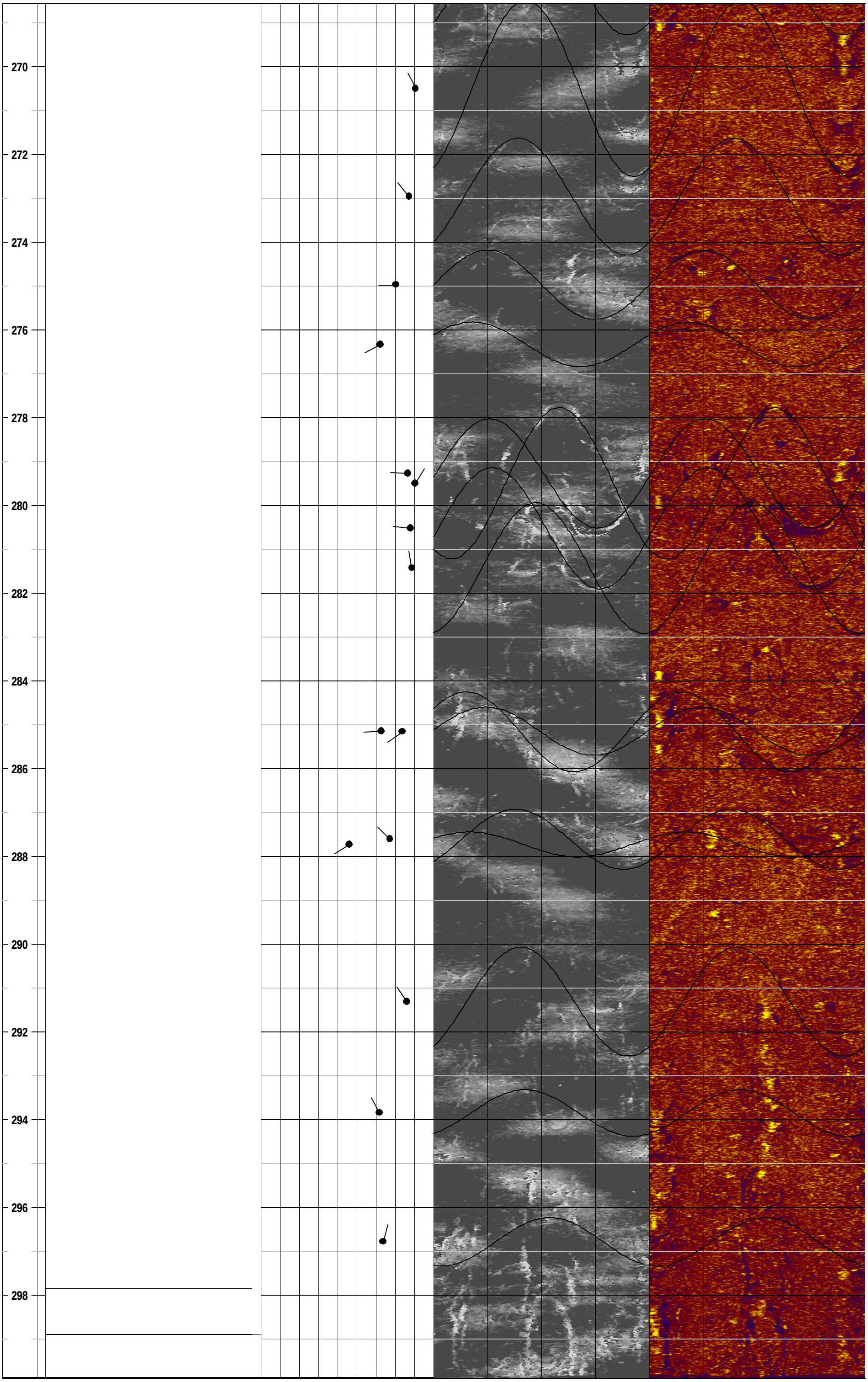
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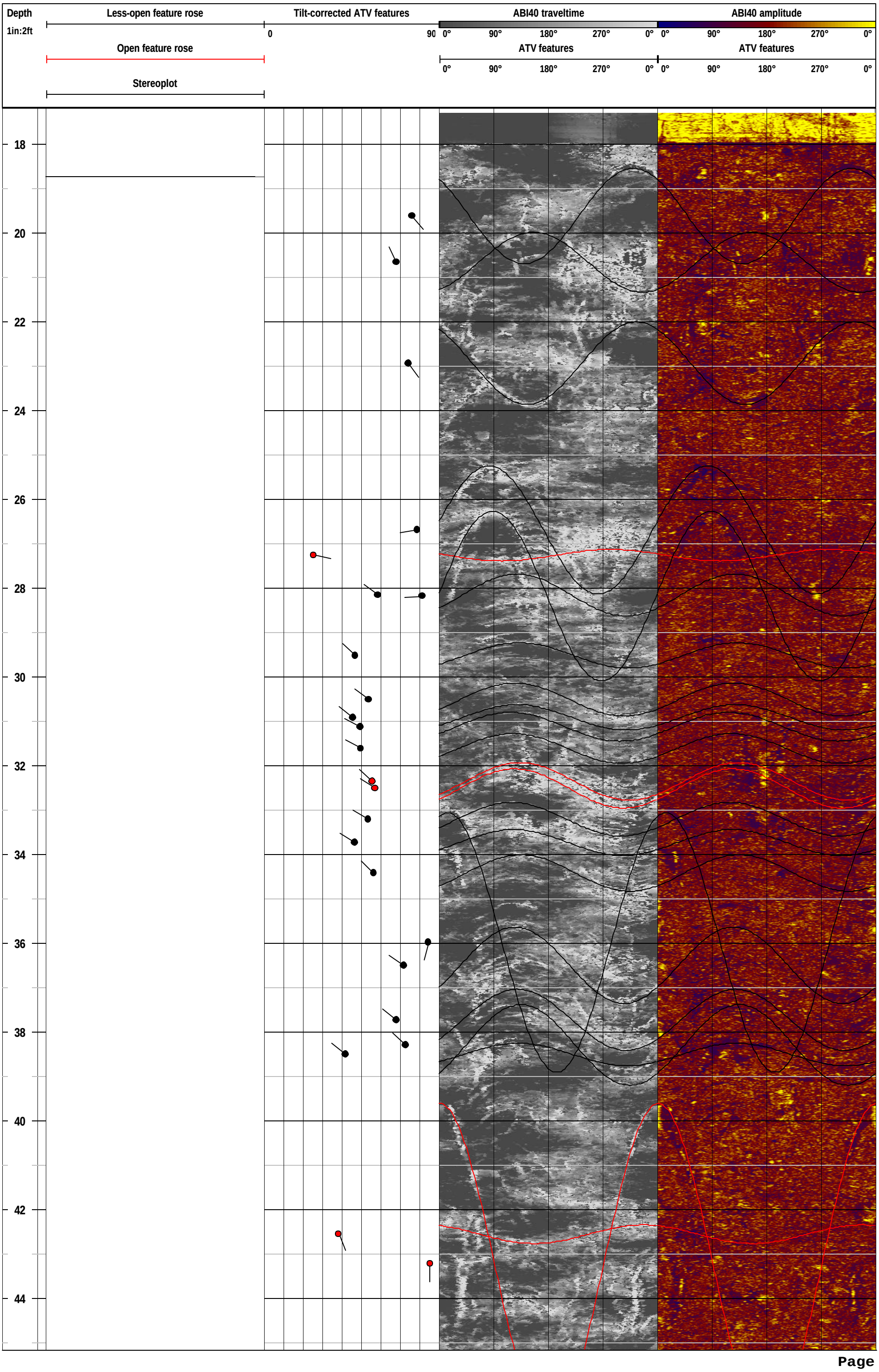
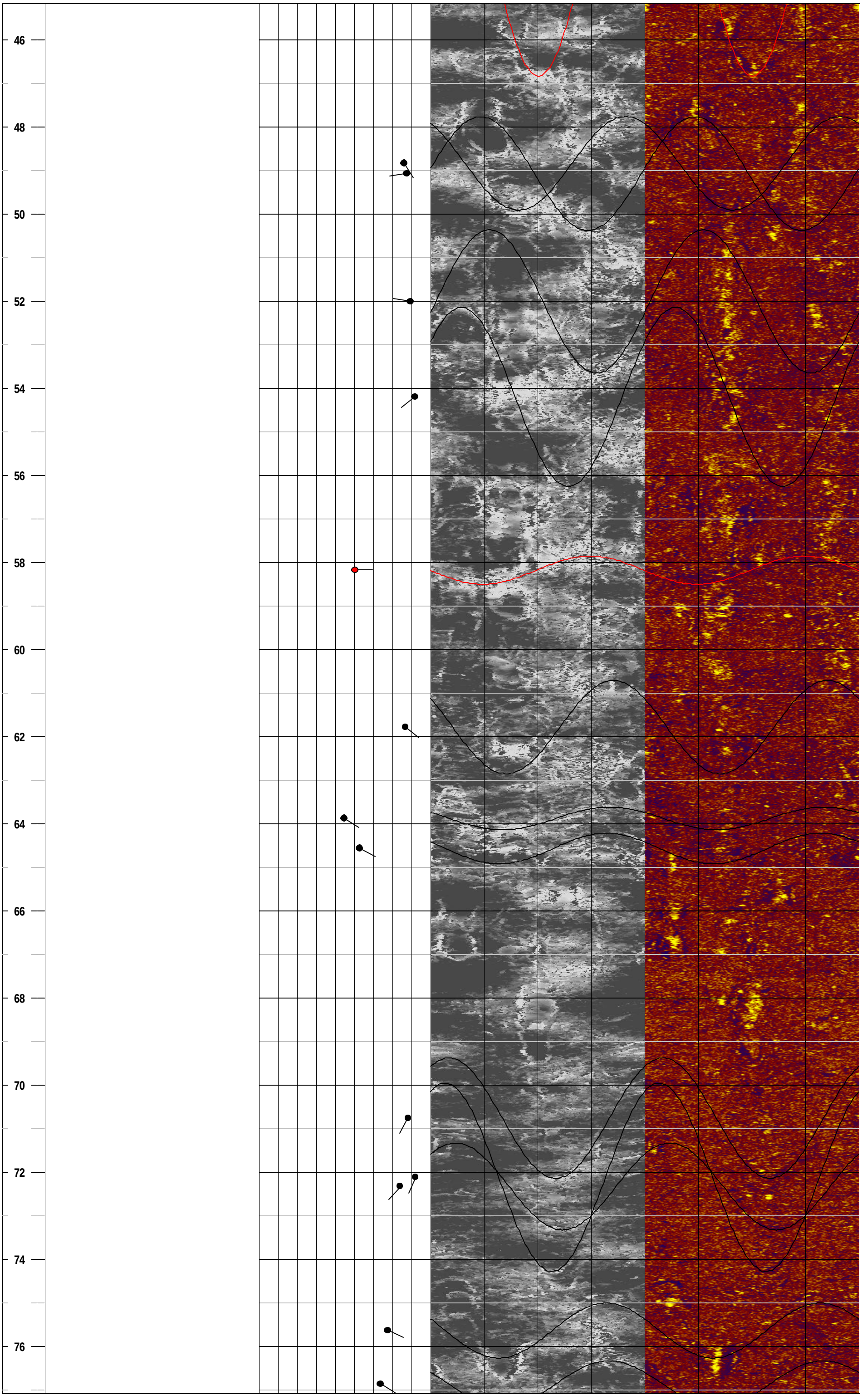
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-3 acoustic televiewer log

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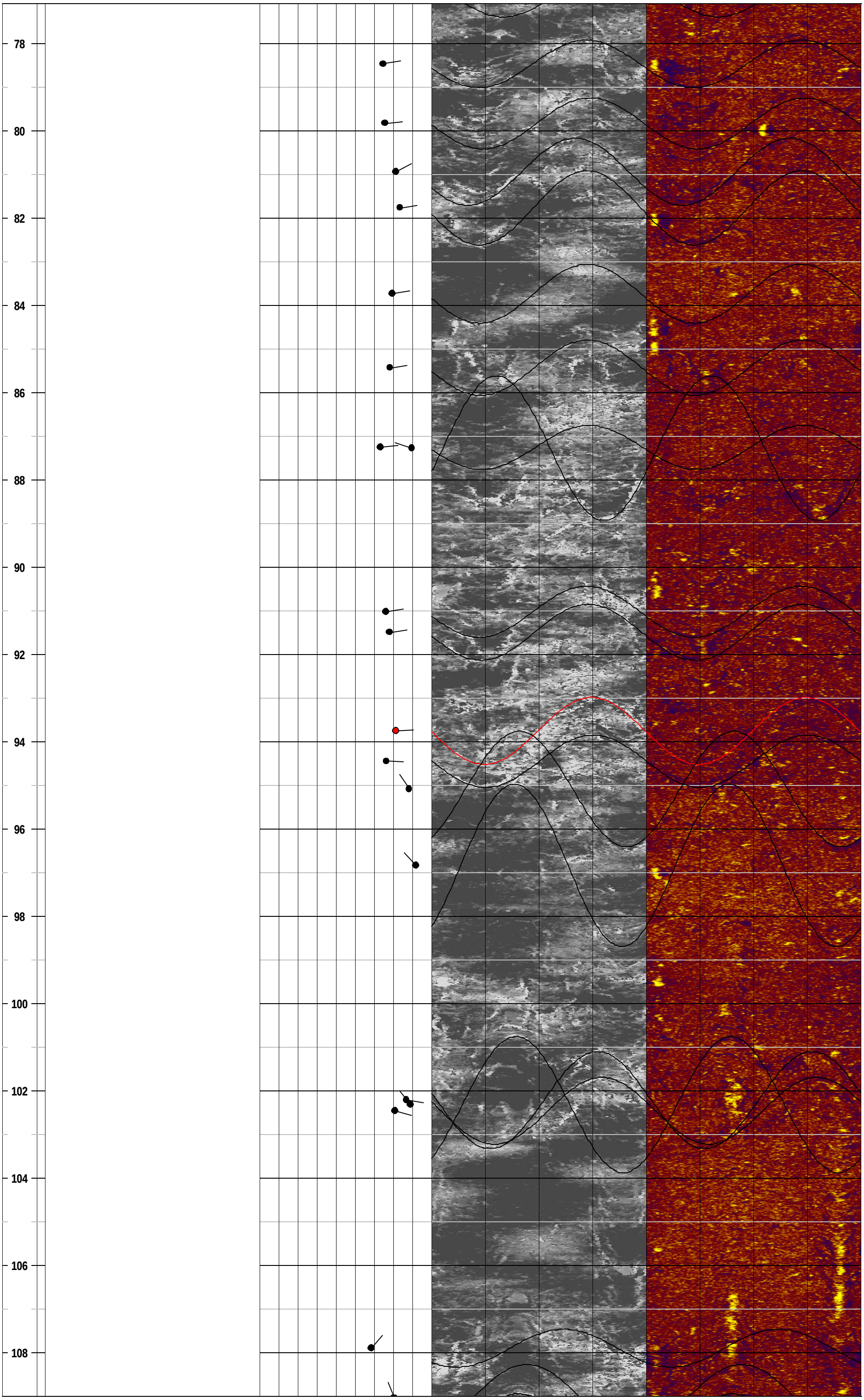
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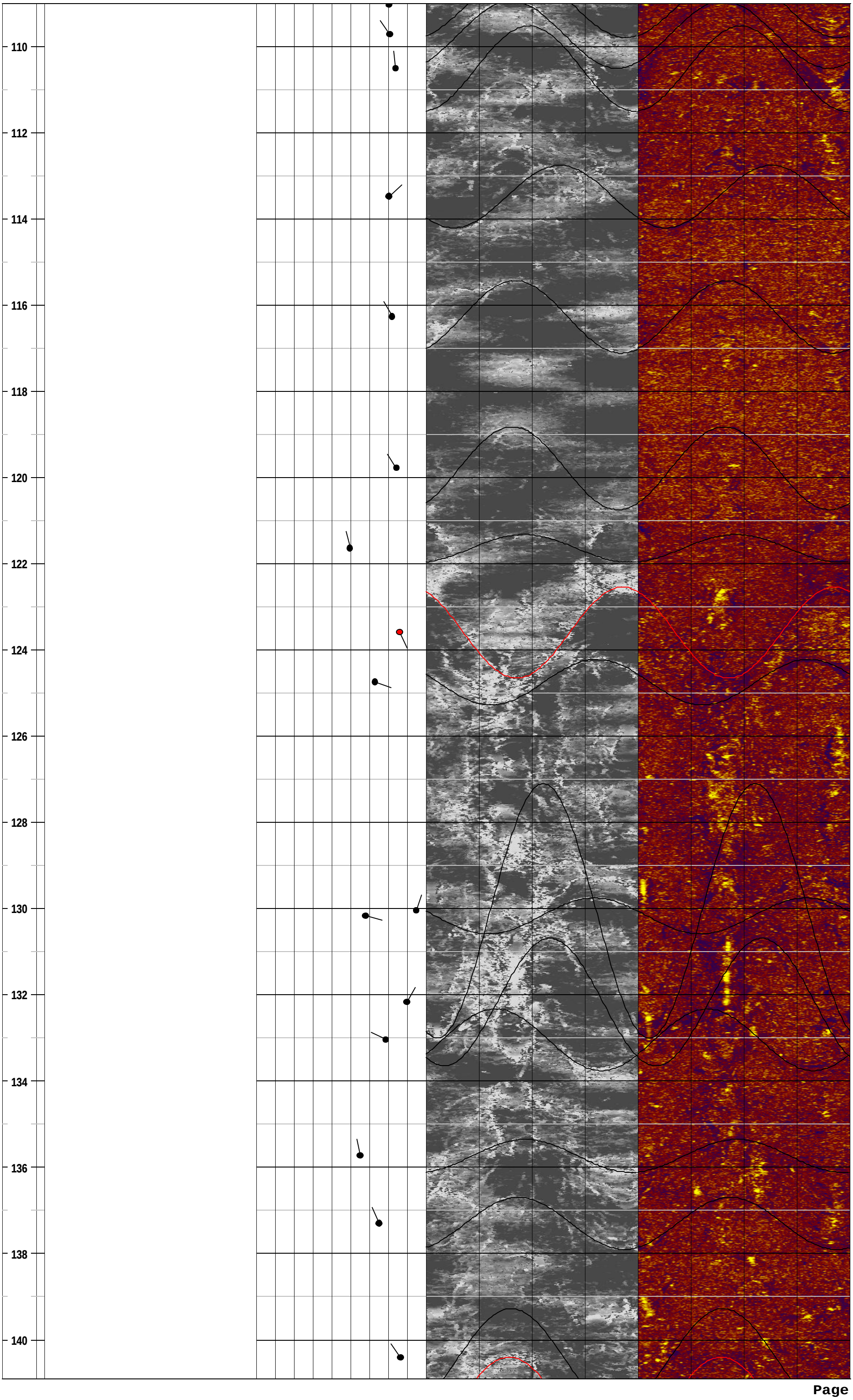
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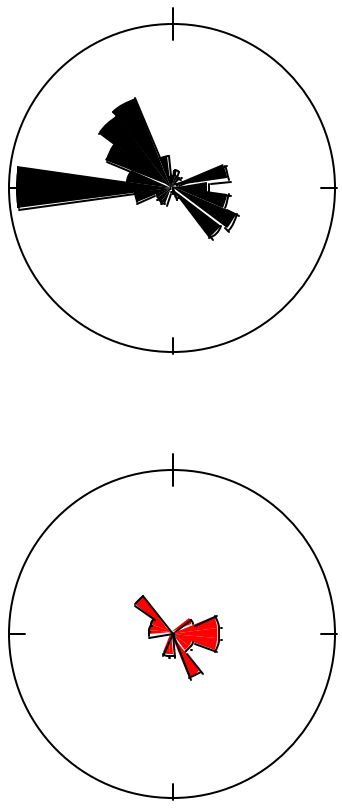



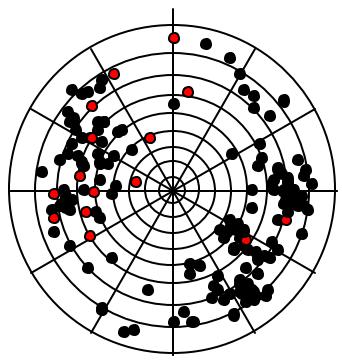

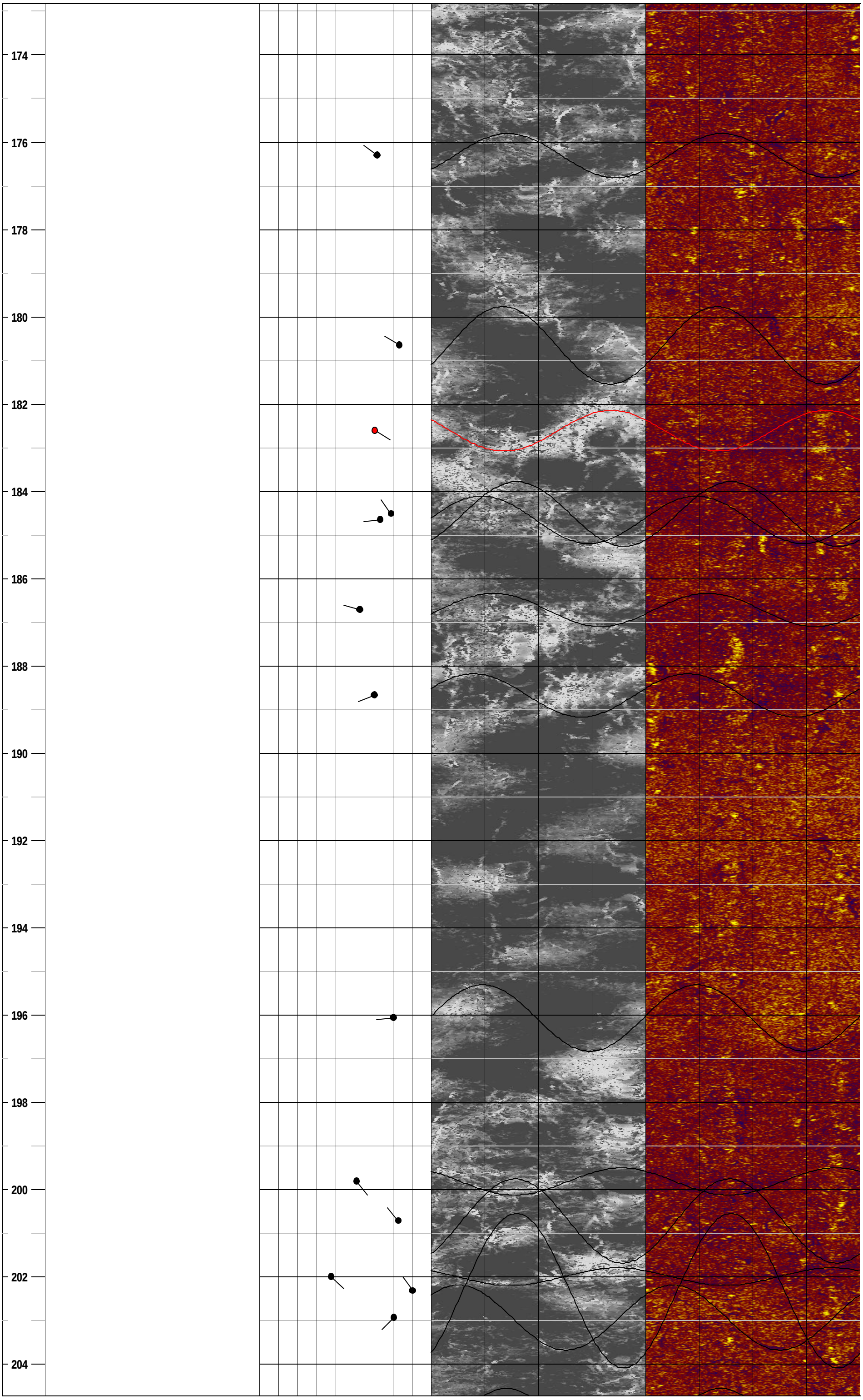
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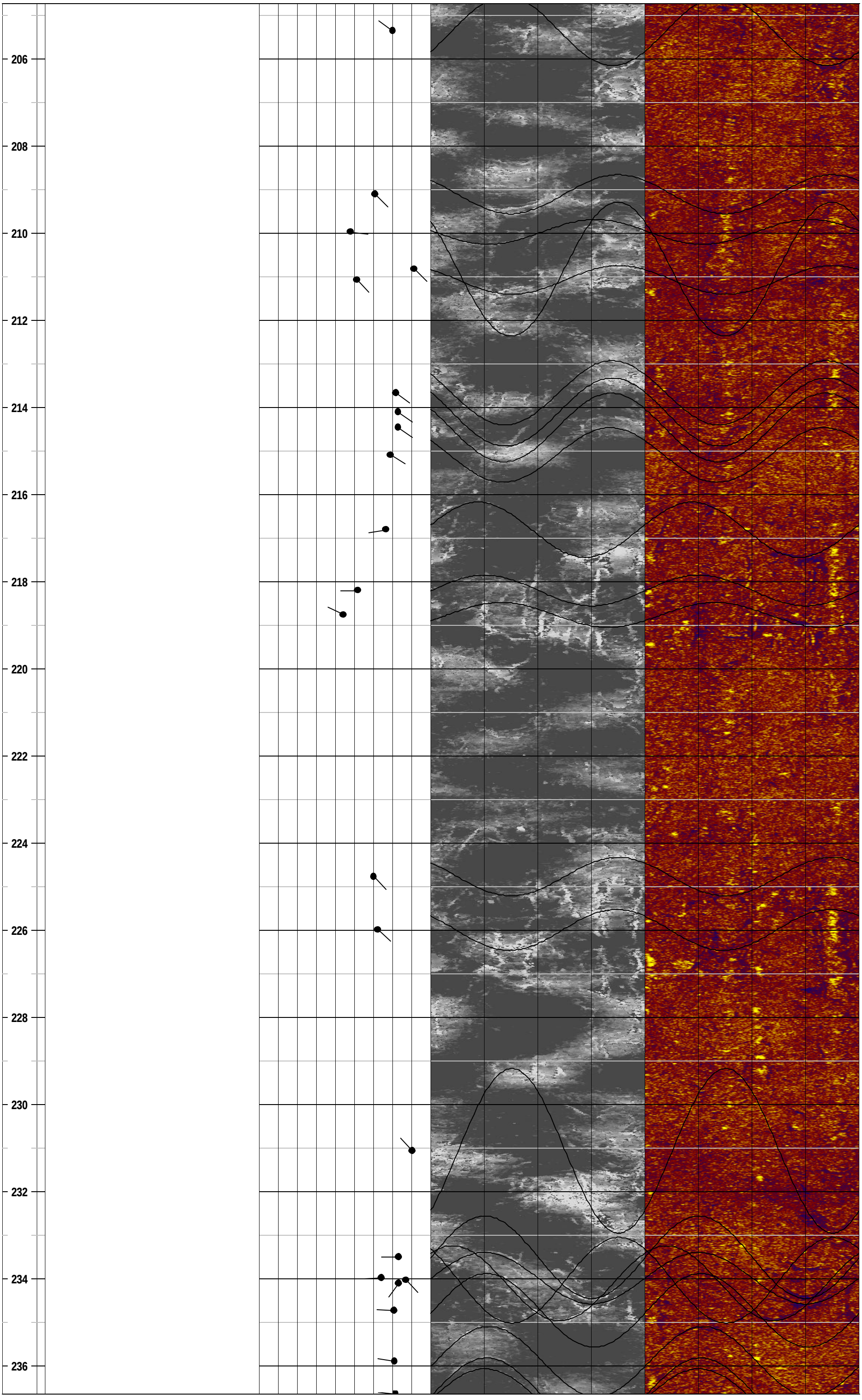
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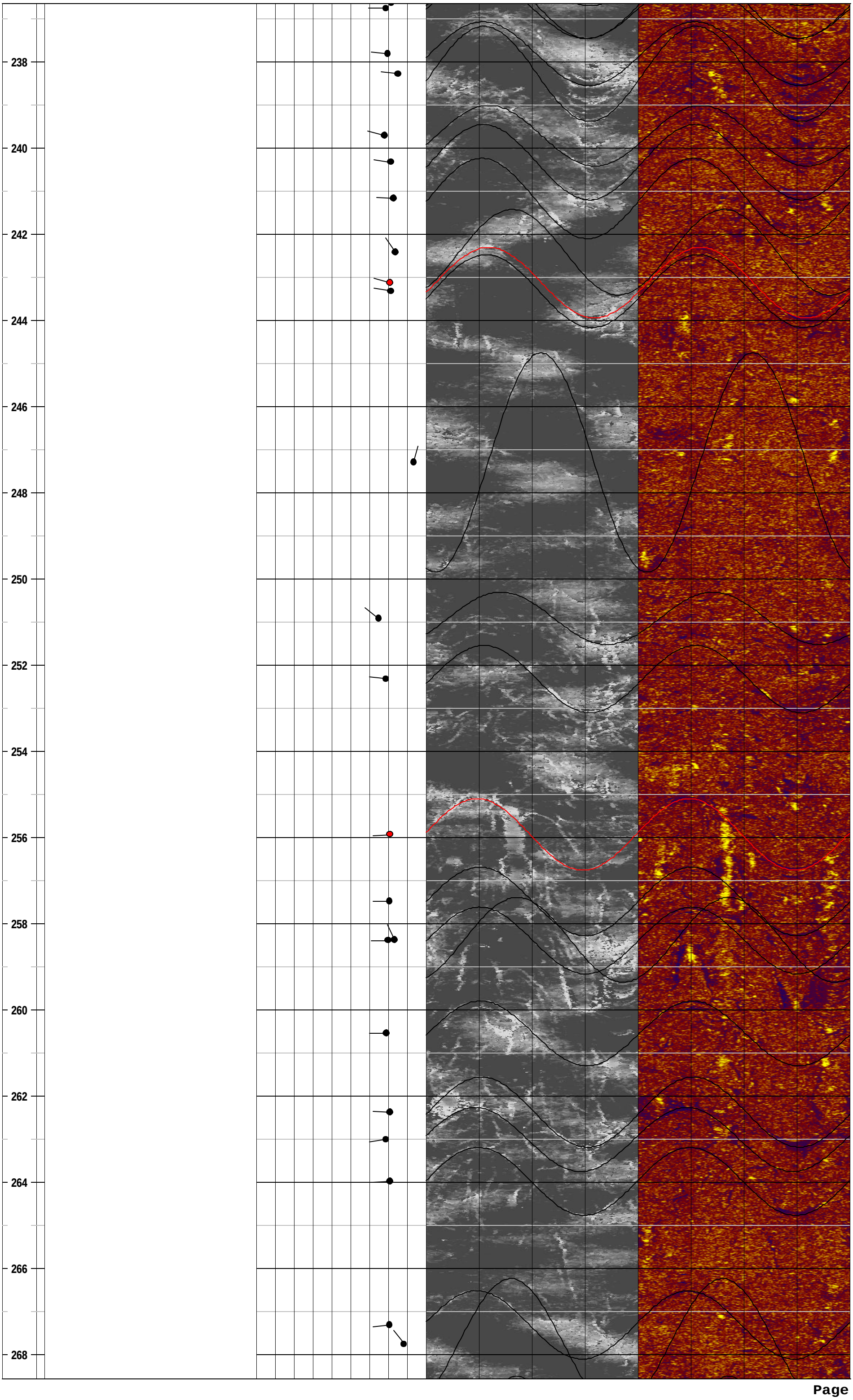
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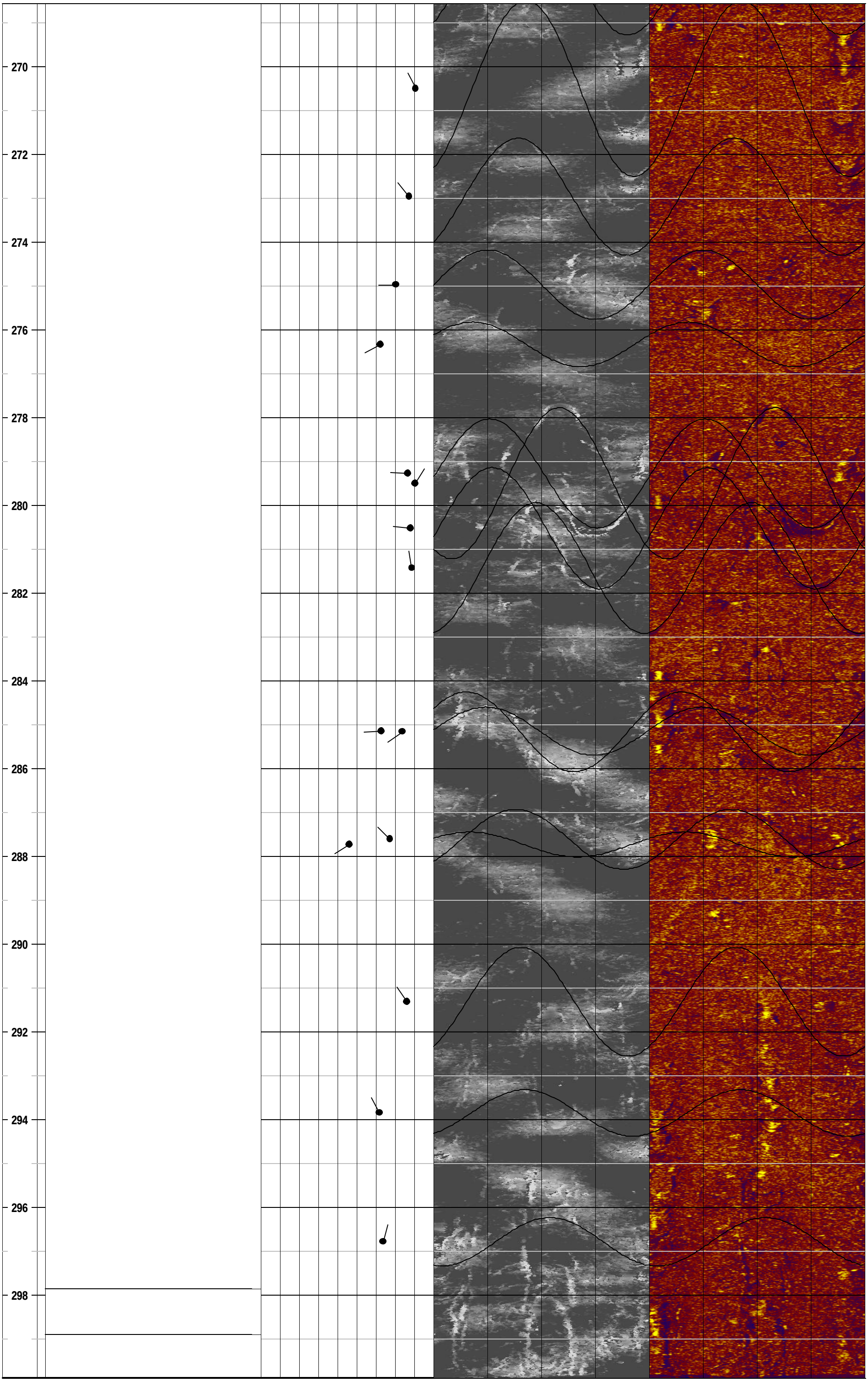
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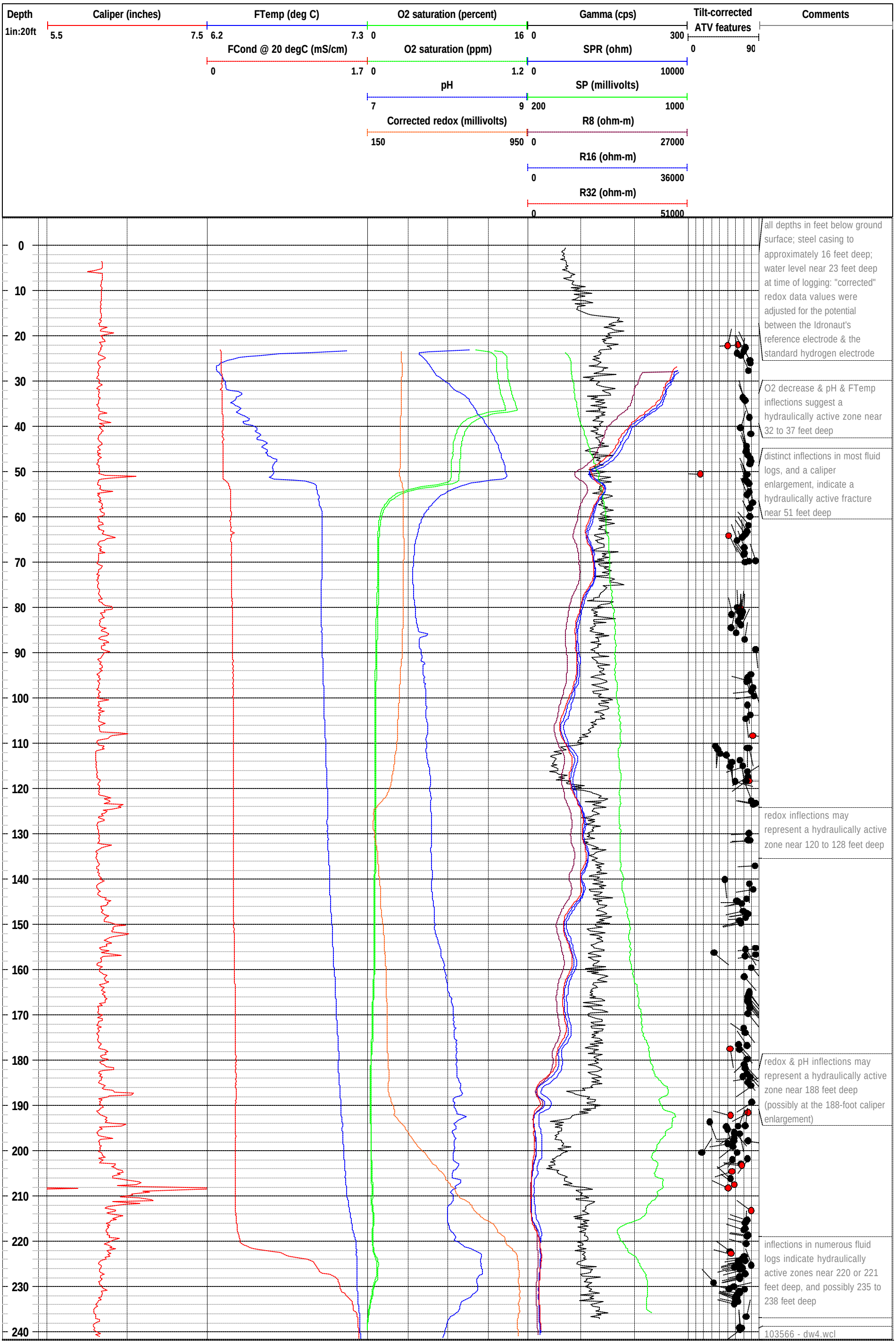
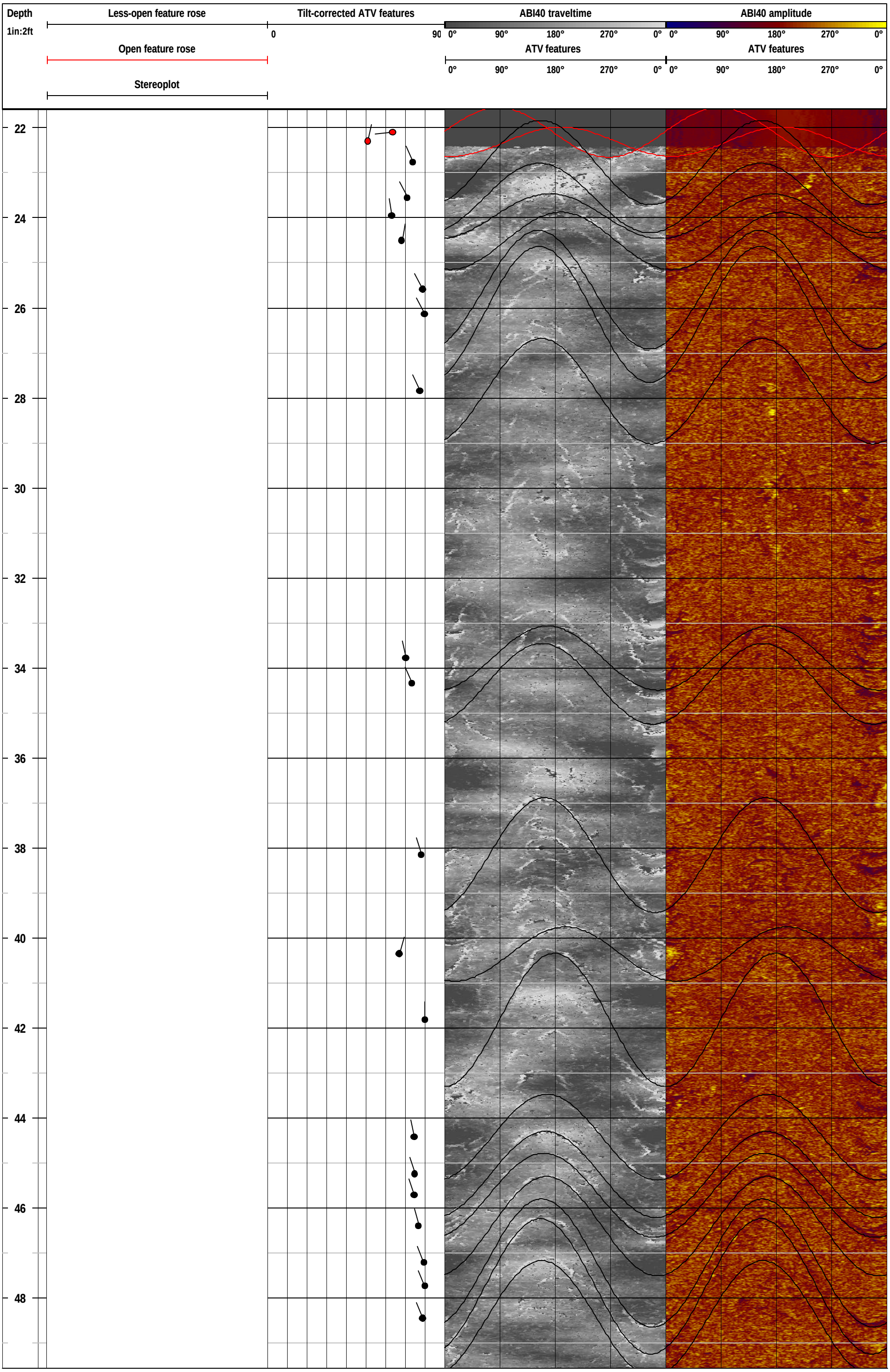
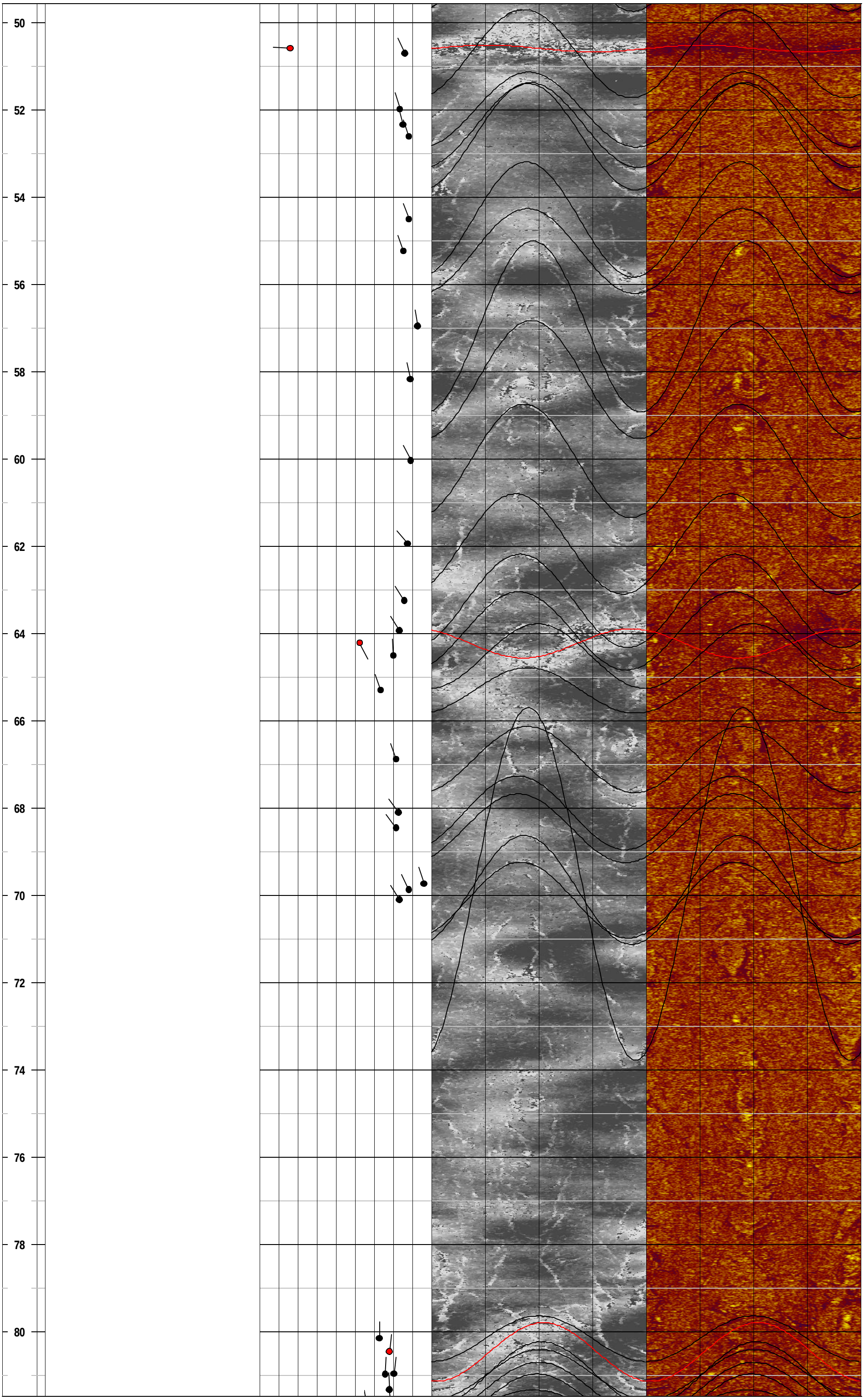
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-4 conventional logs



Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-4 acoustic televiewer log

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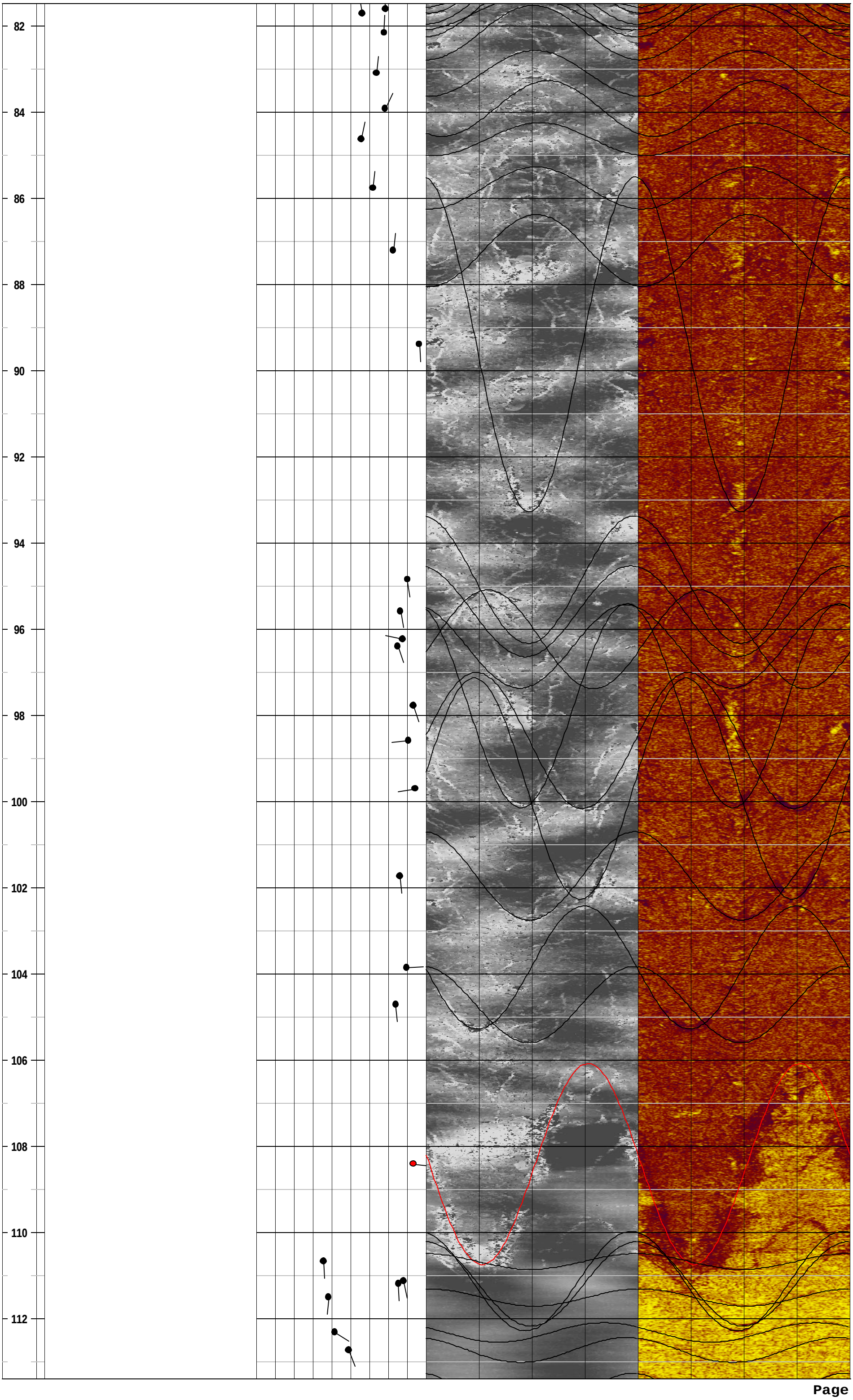
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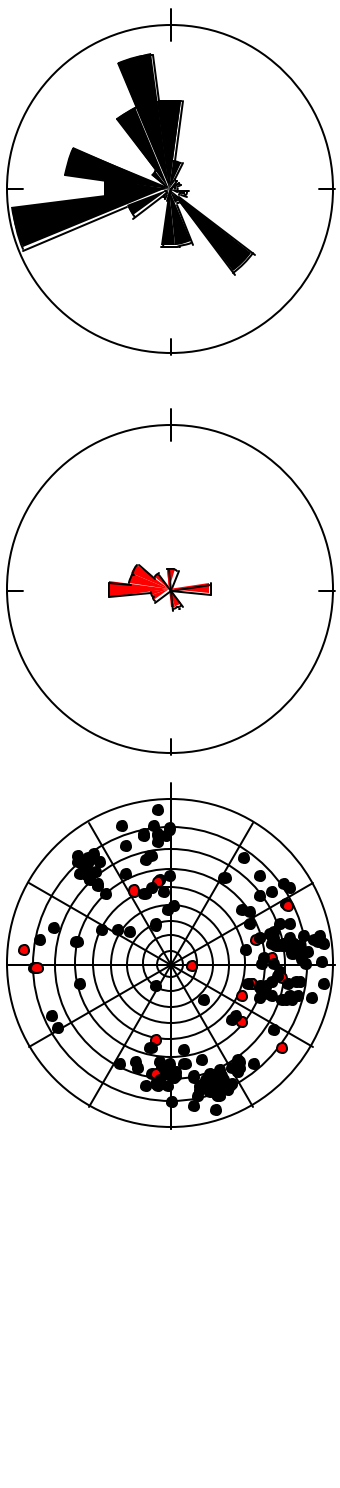

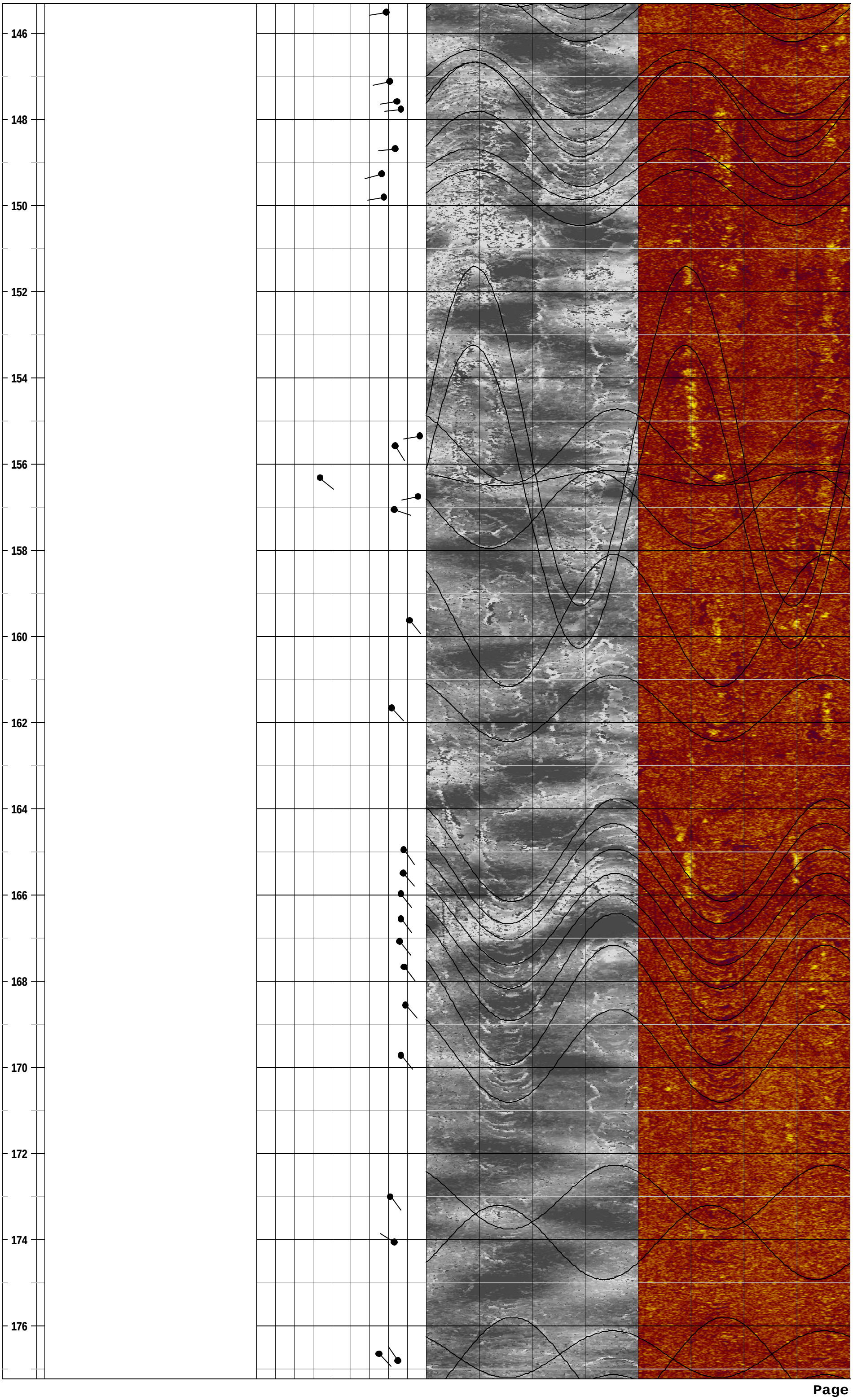
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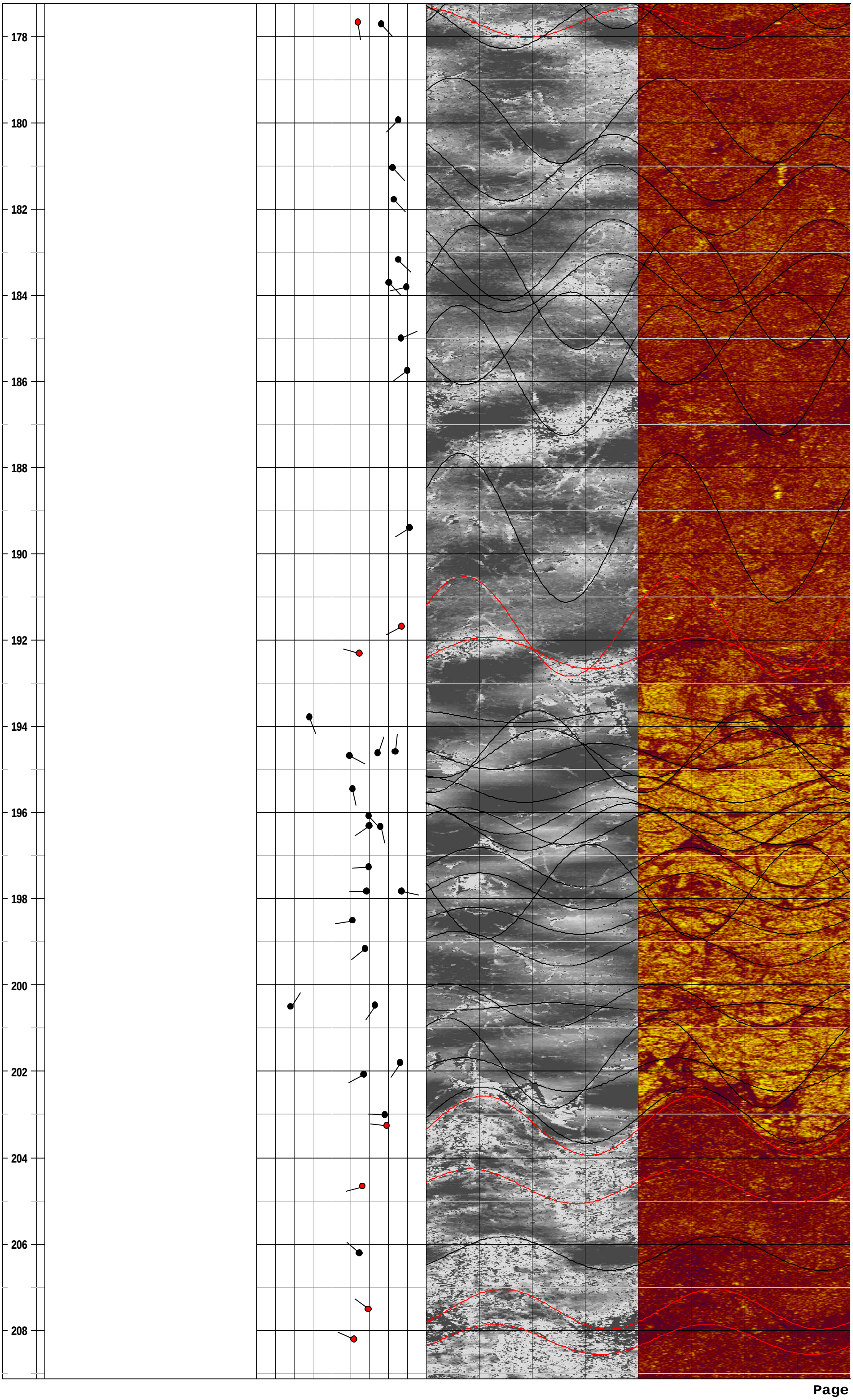
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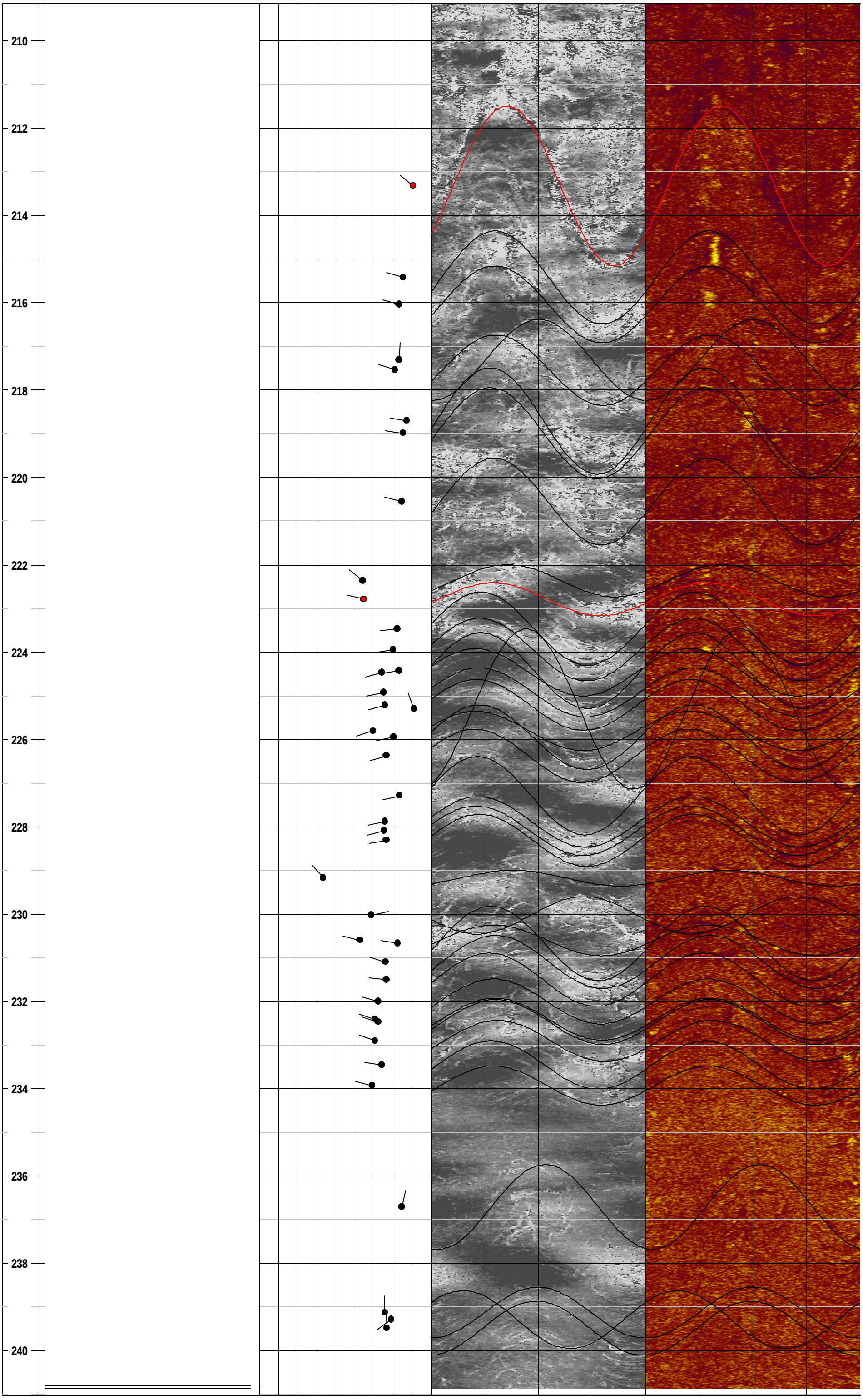
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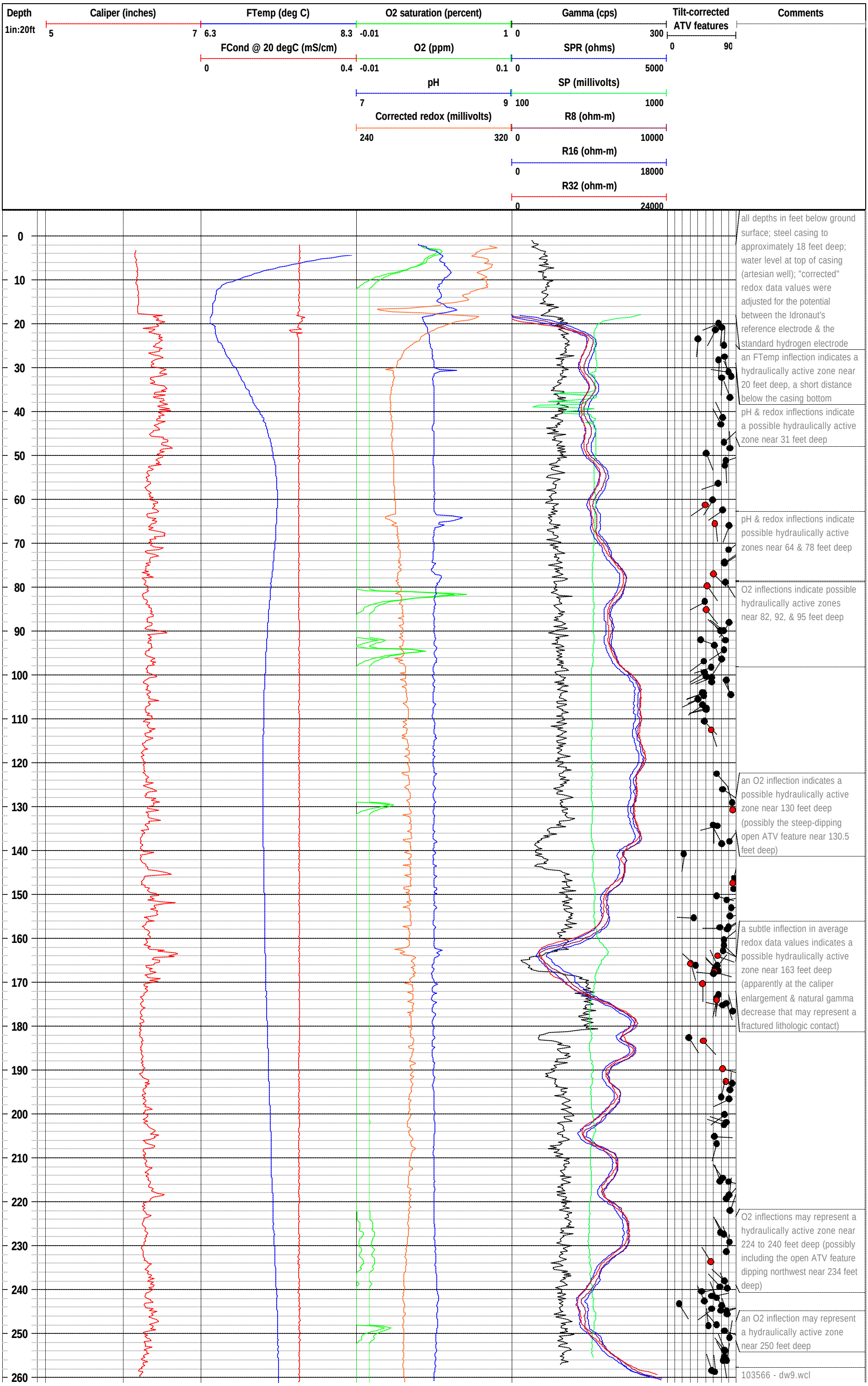
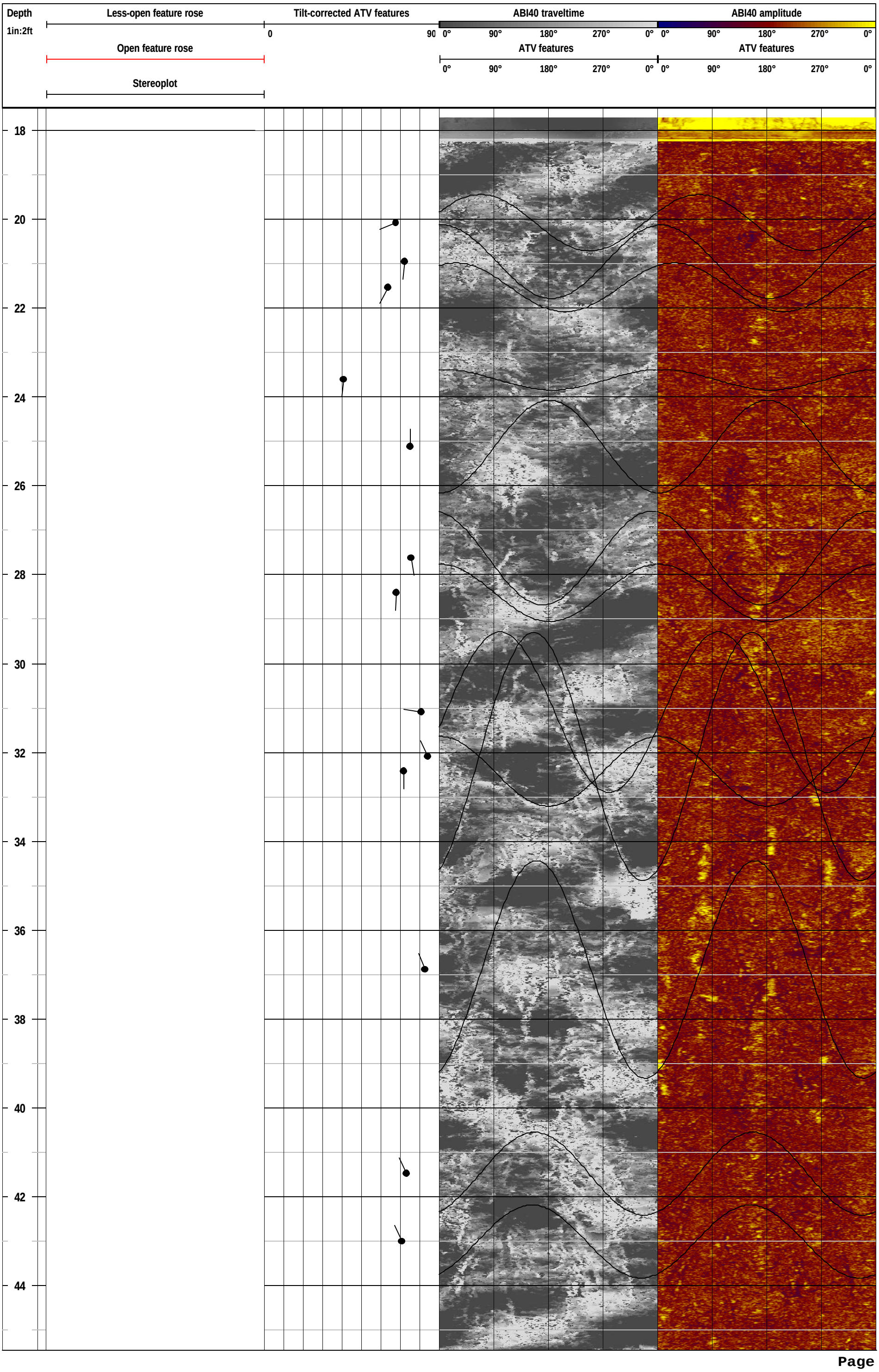
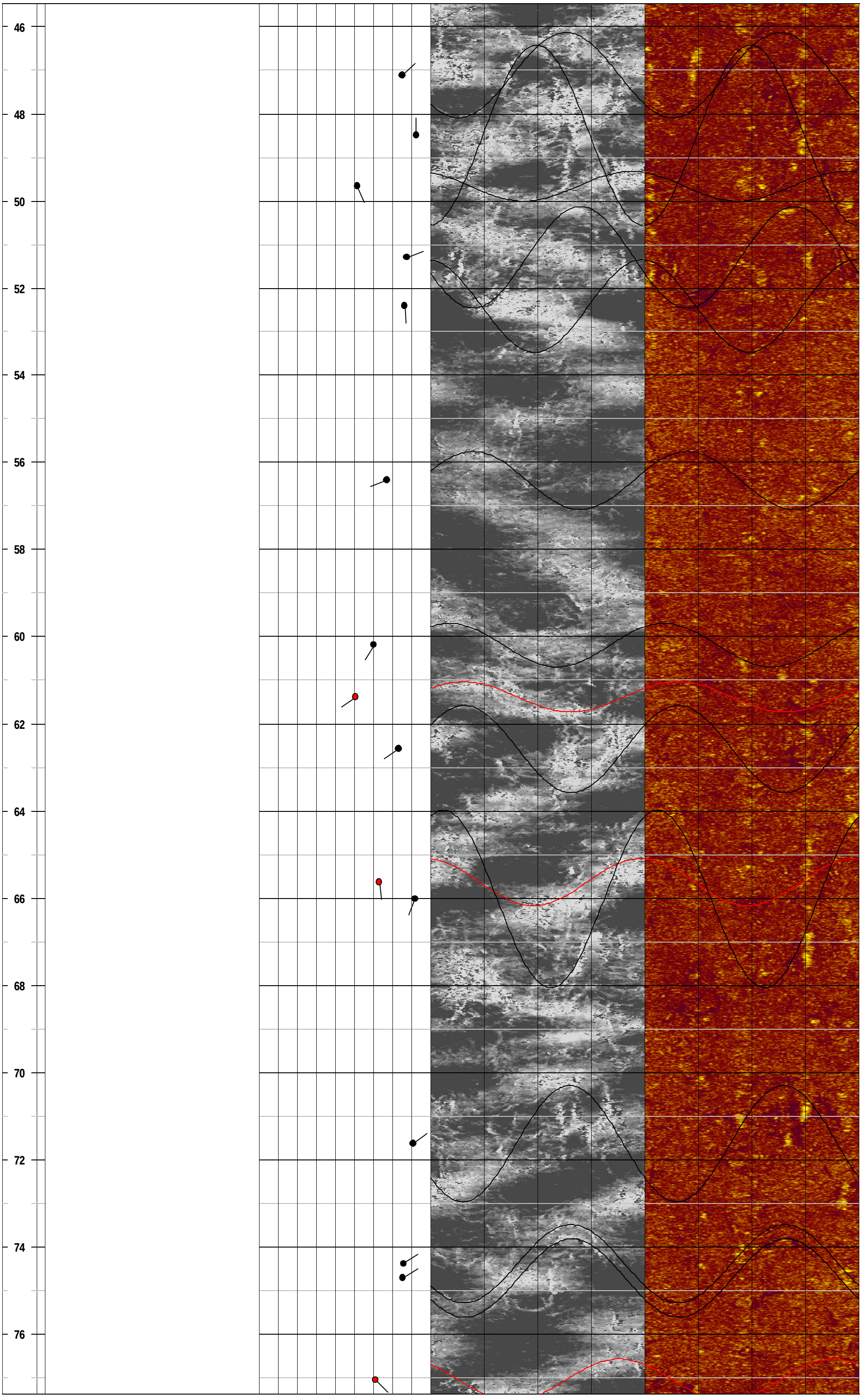
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-9 conventional logs



# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-9 acoustic televiewer log

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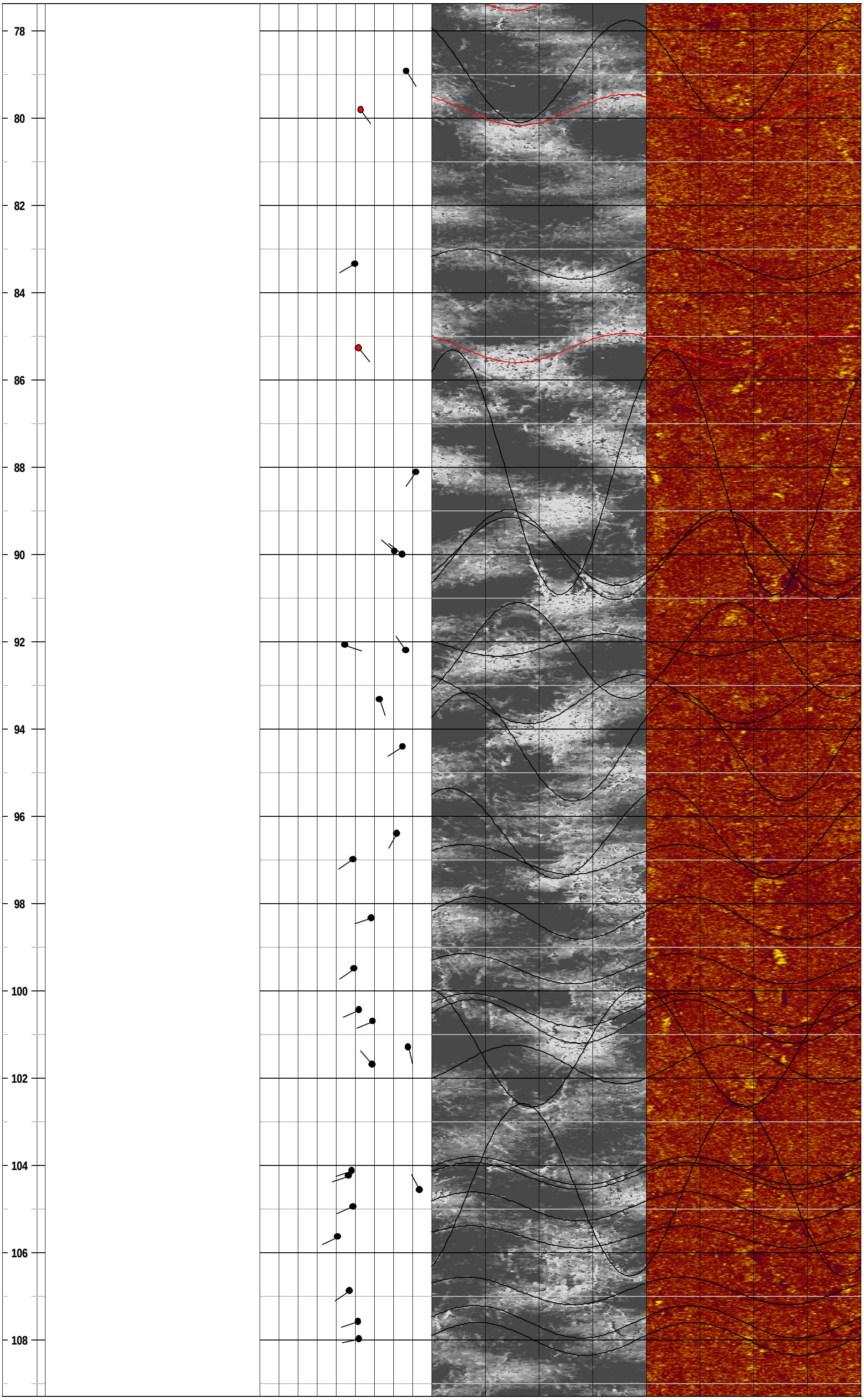
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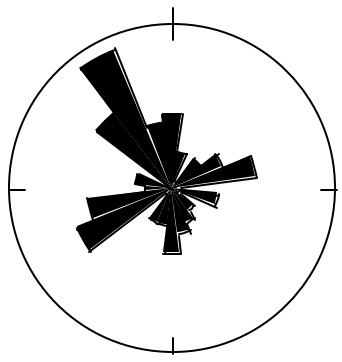

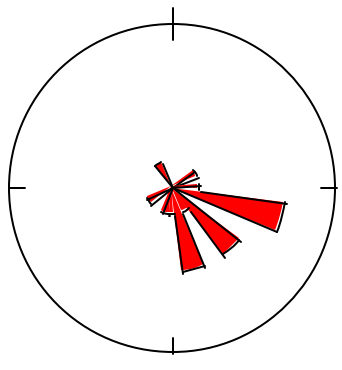

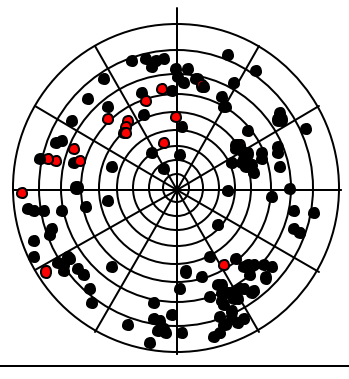

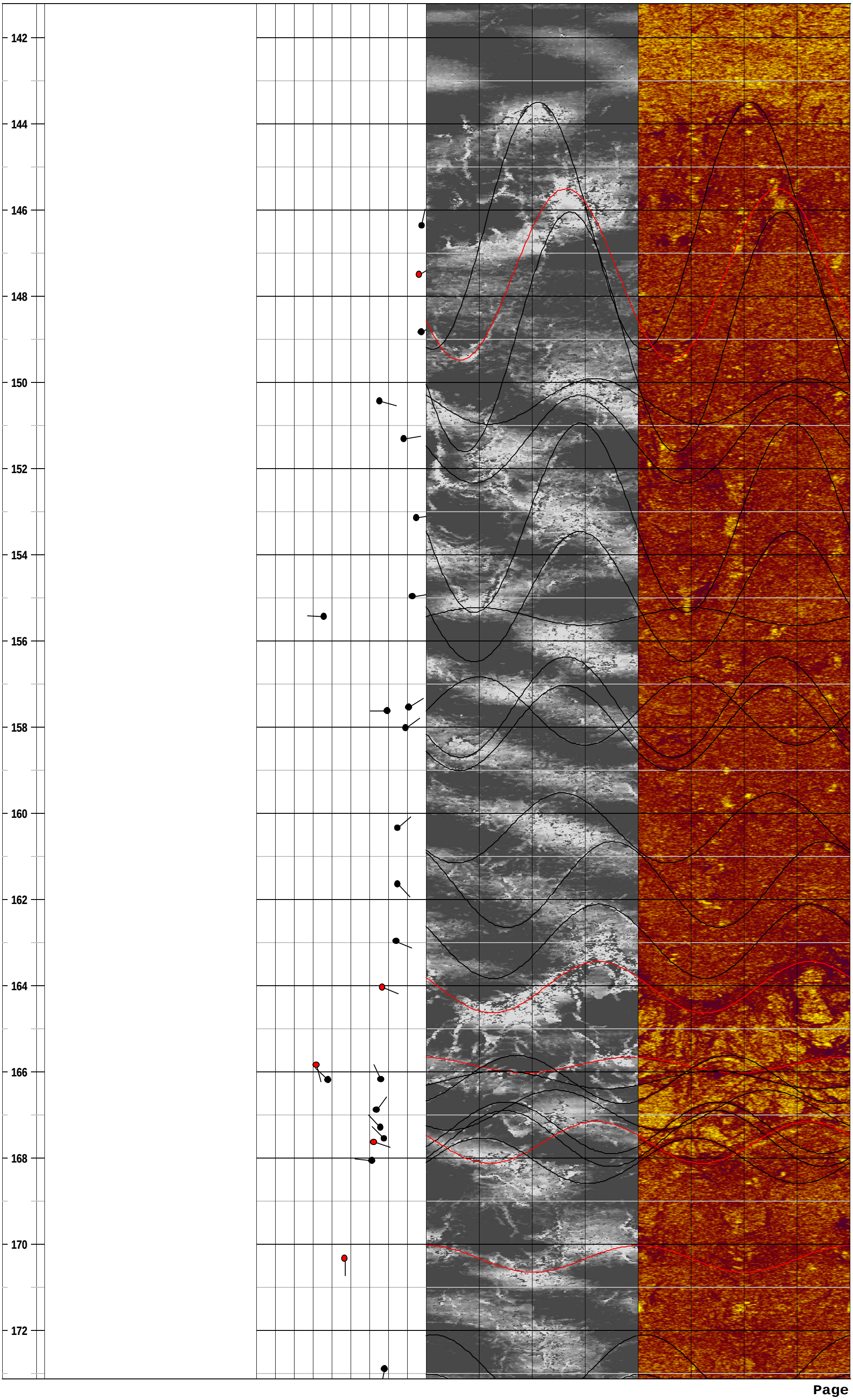
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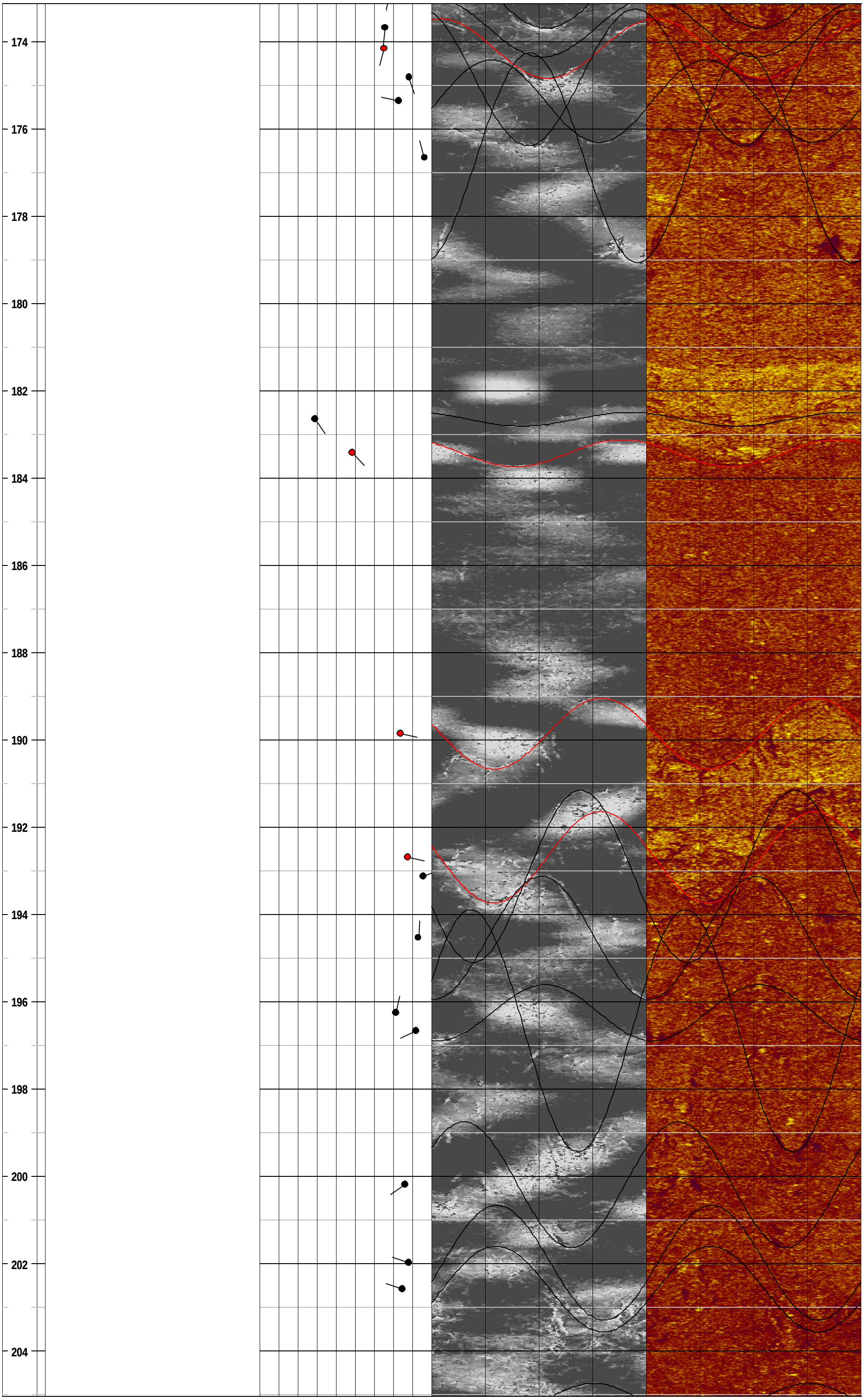
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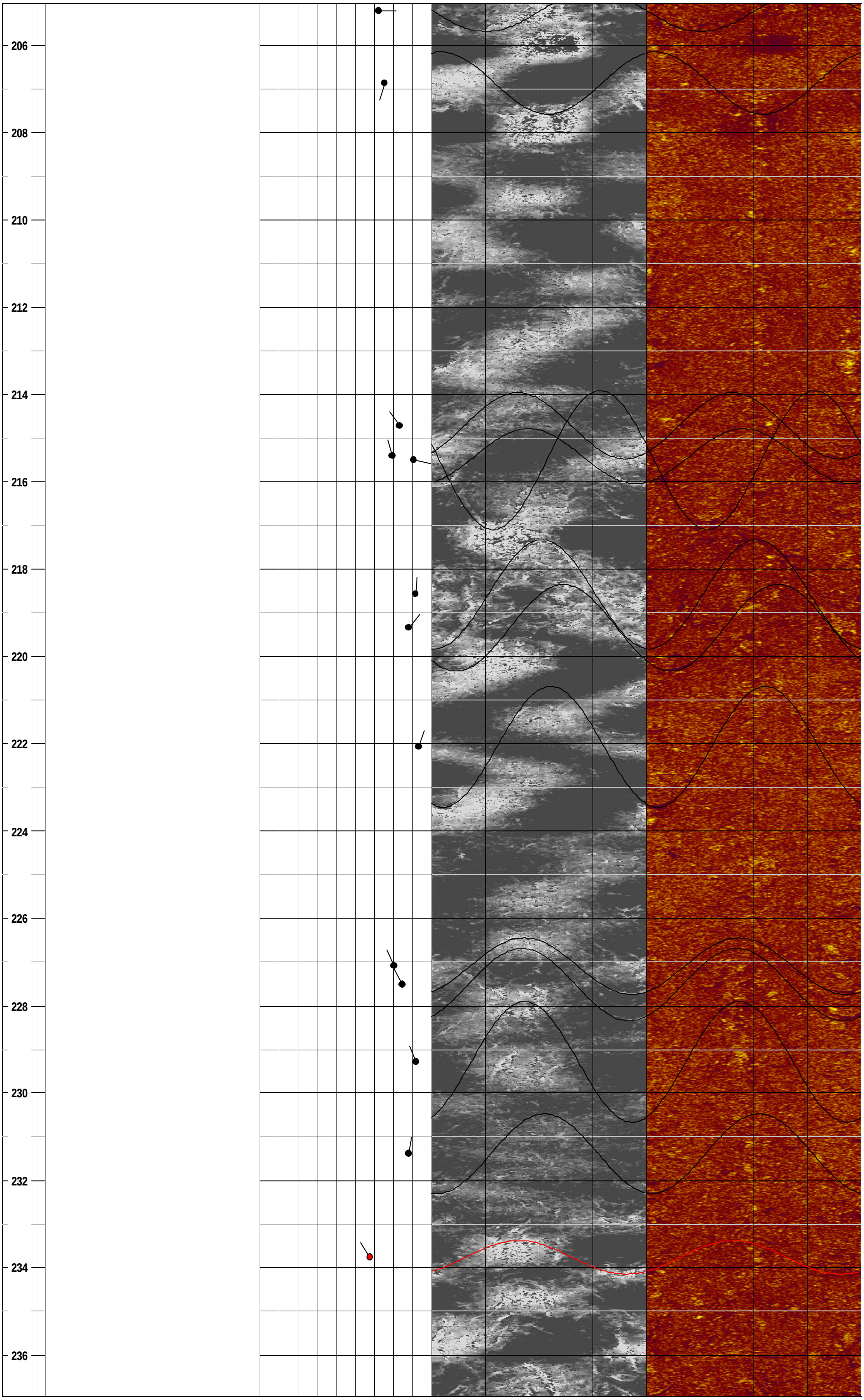
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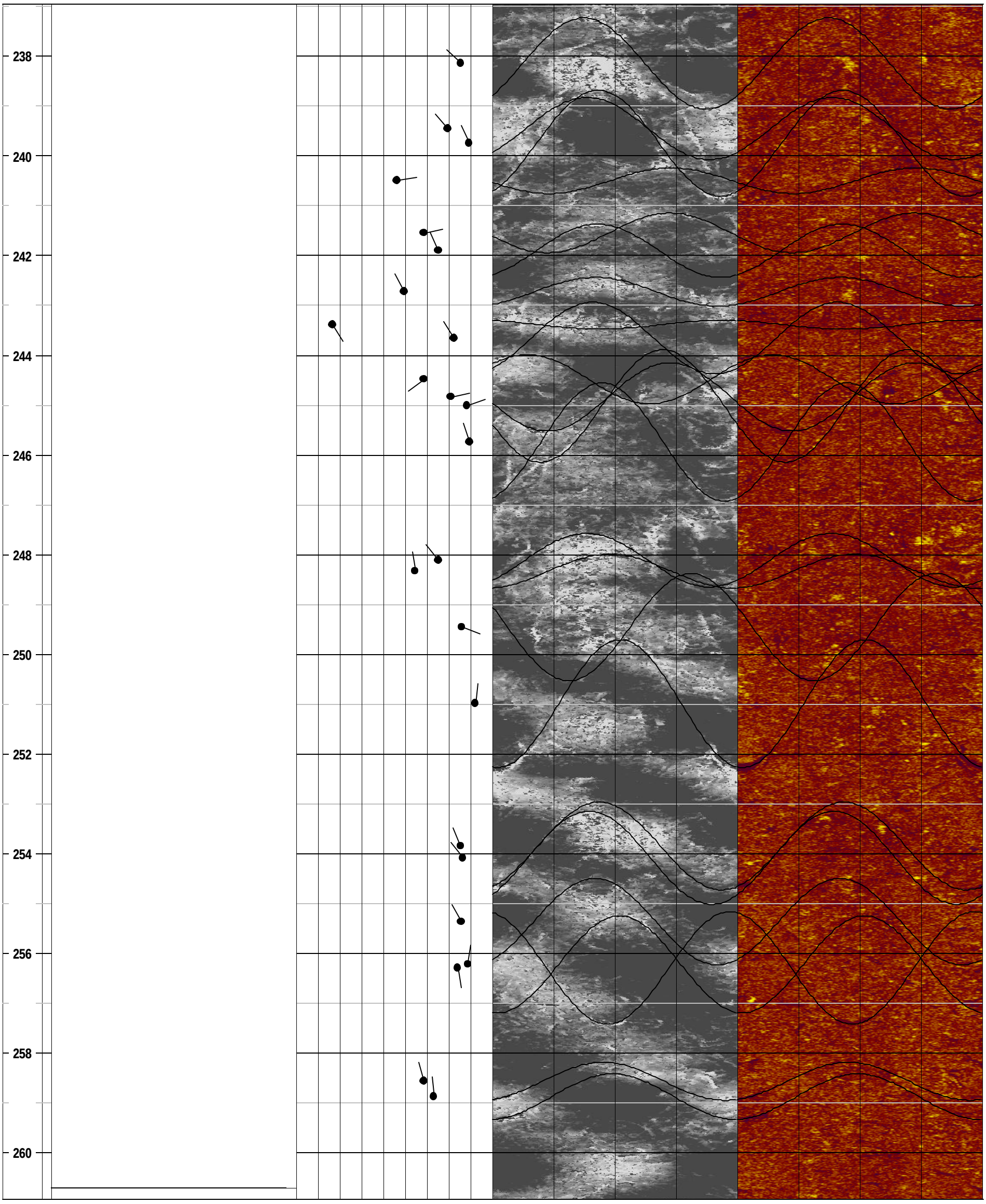
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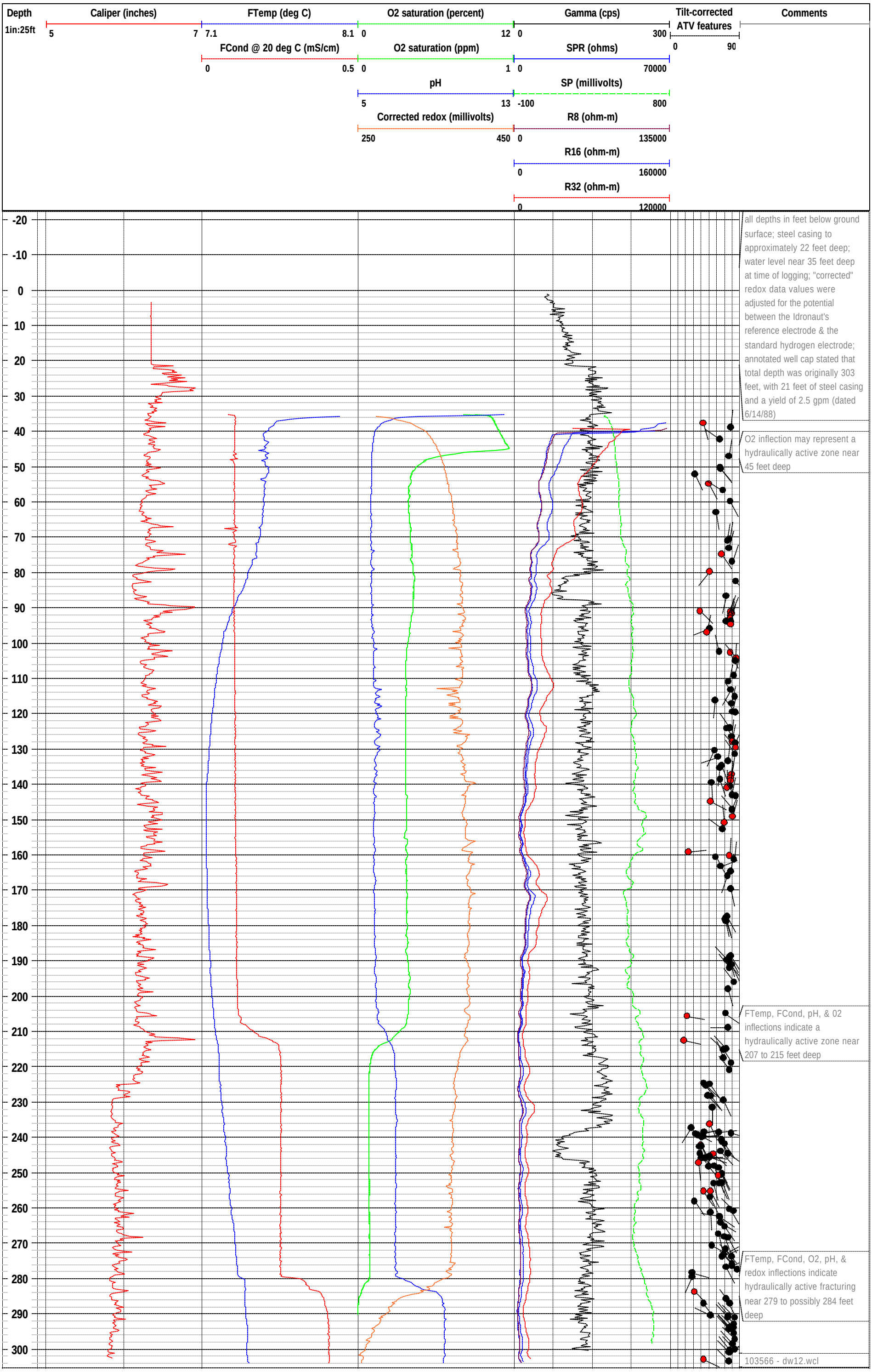
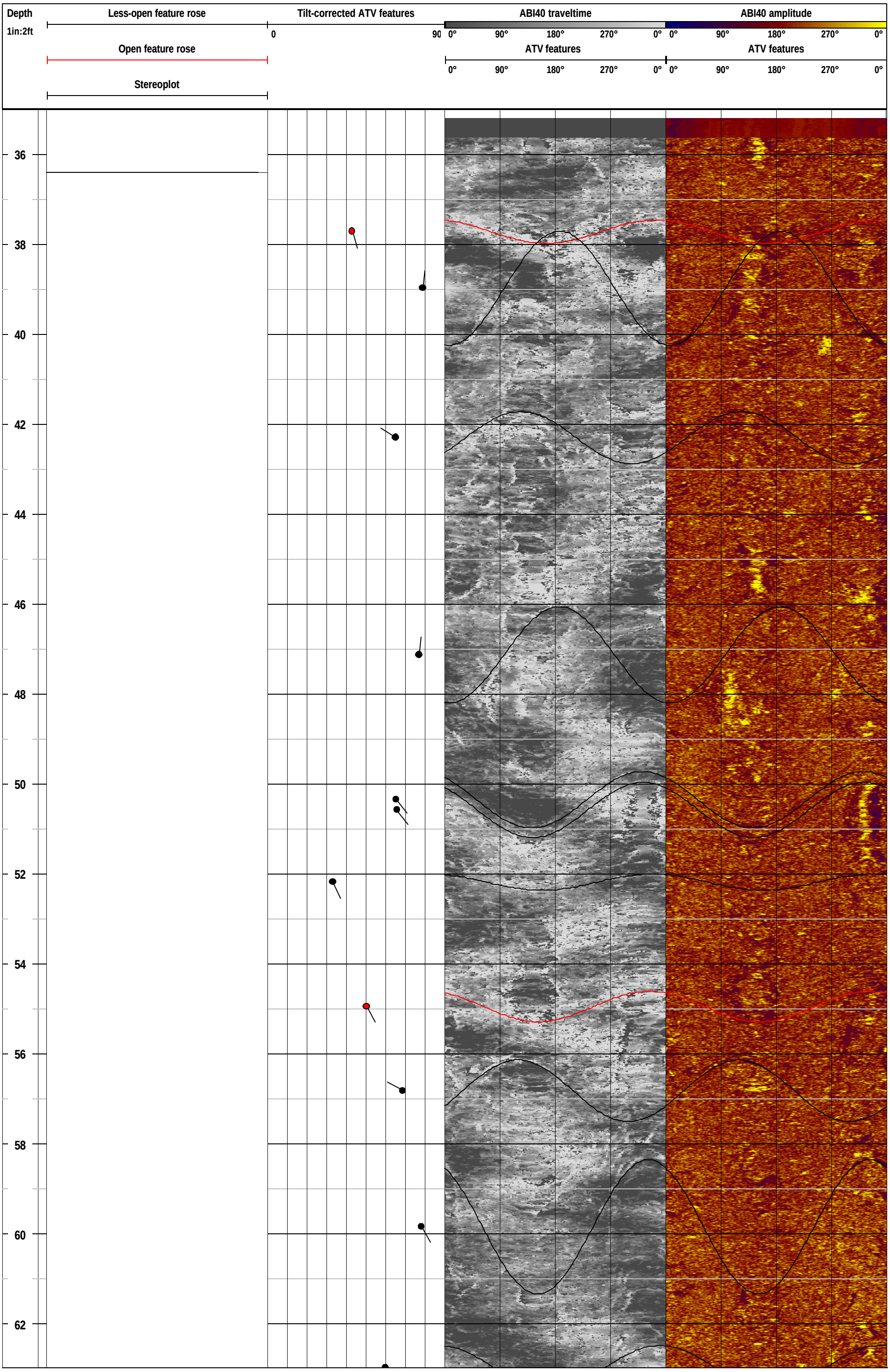
# Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-12 conventional logs



Project - Well:  Weston - USACE/Bucks Harbor, ME - DW-12 acoustic televiewer log



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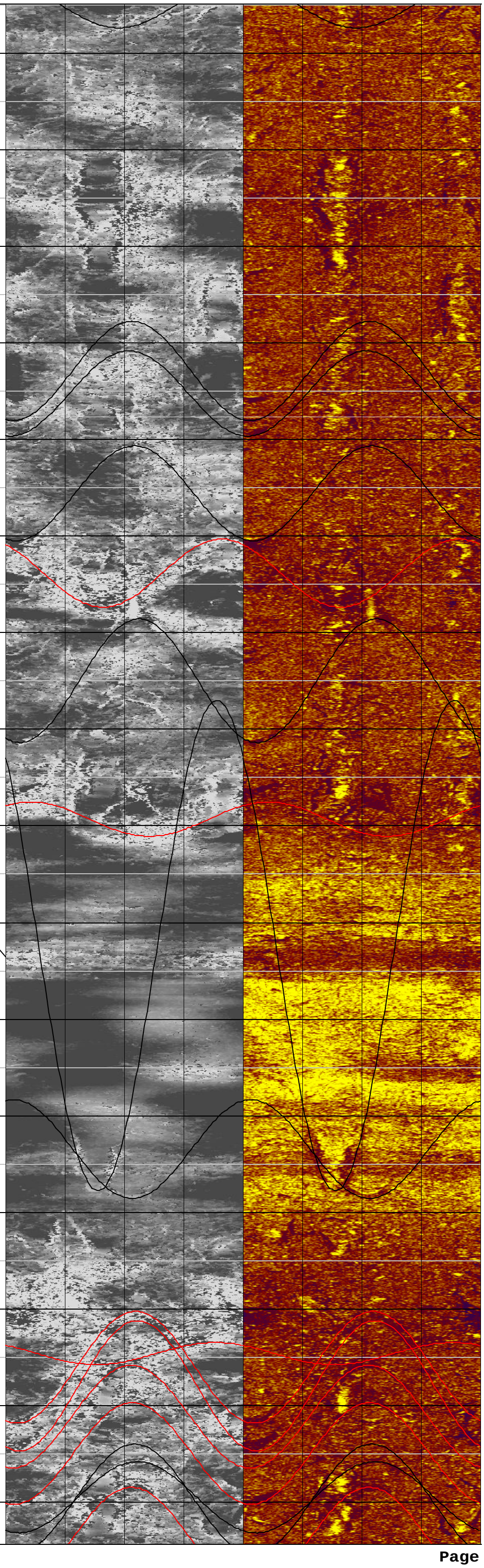

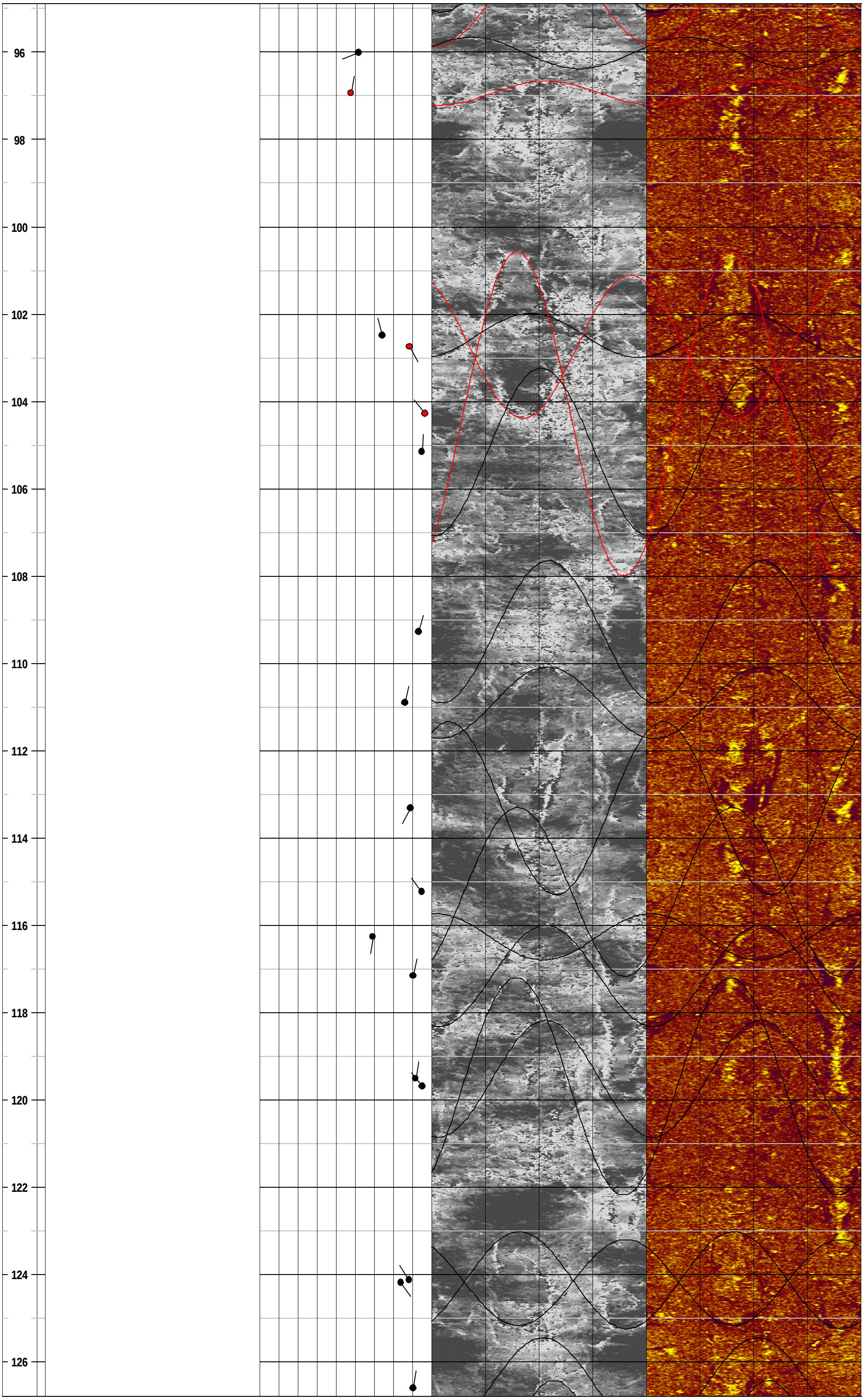
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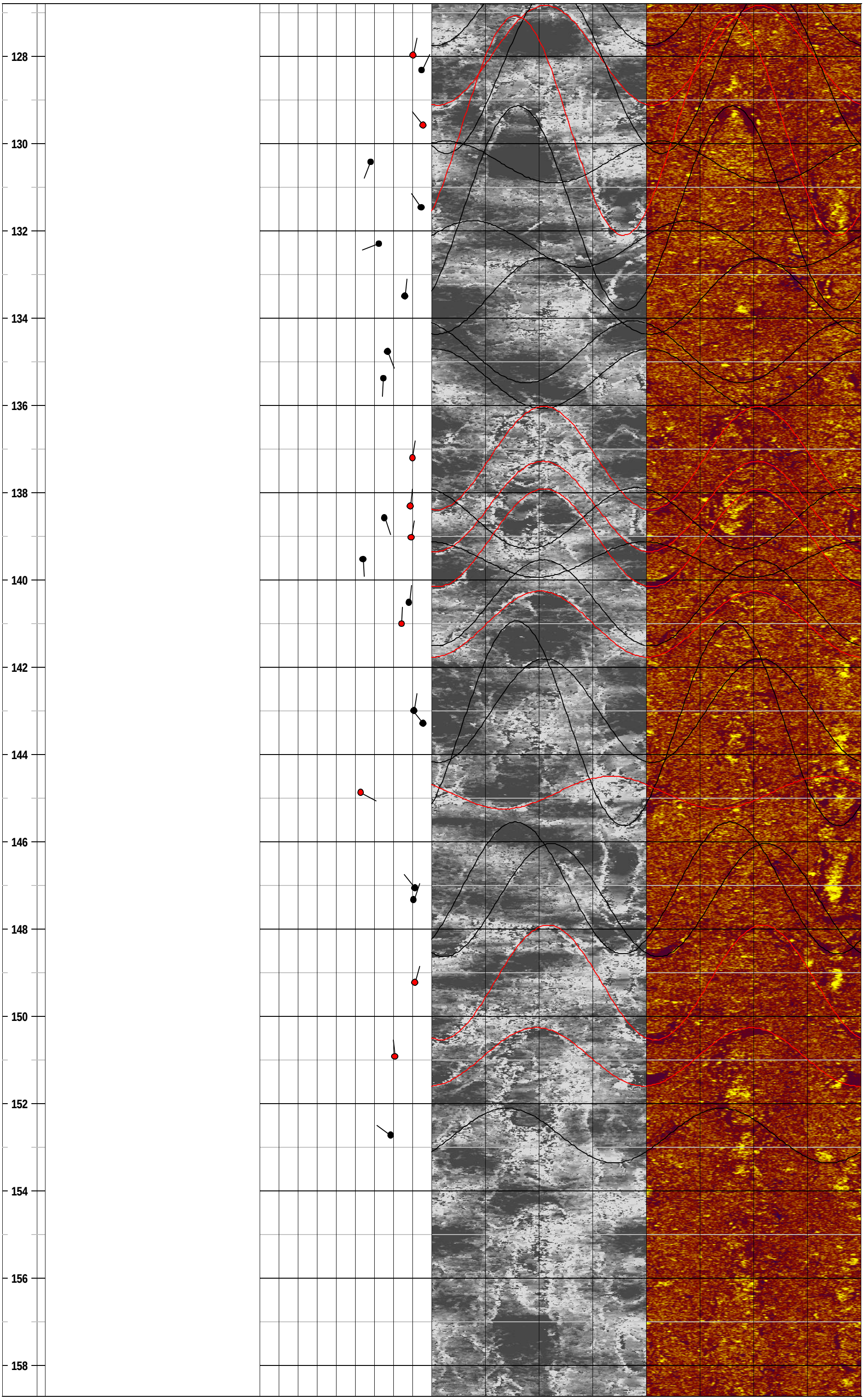
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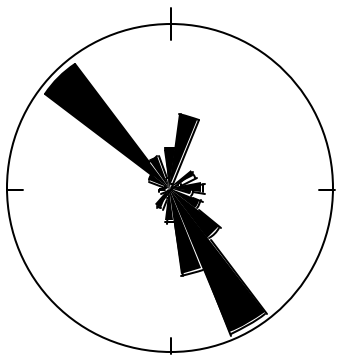

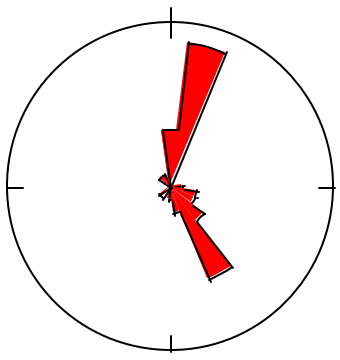

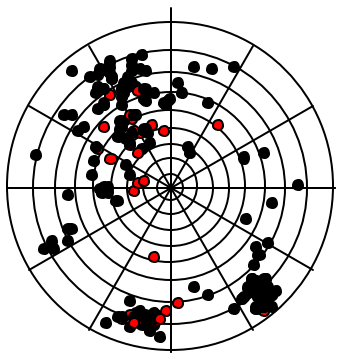

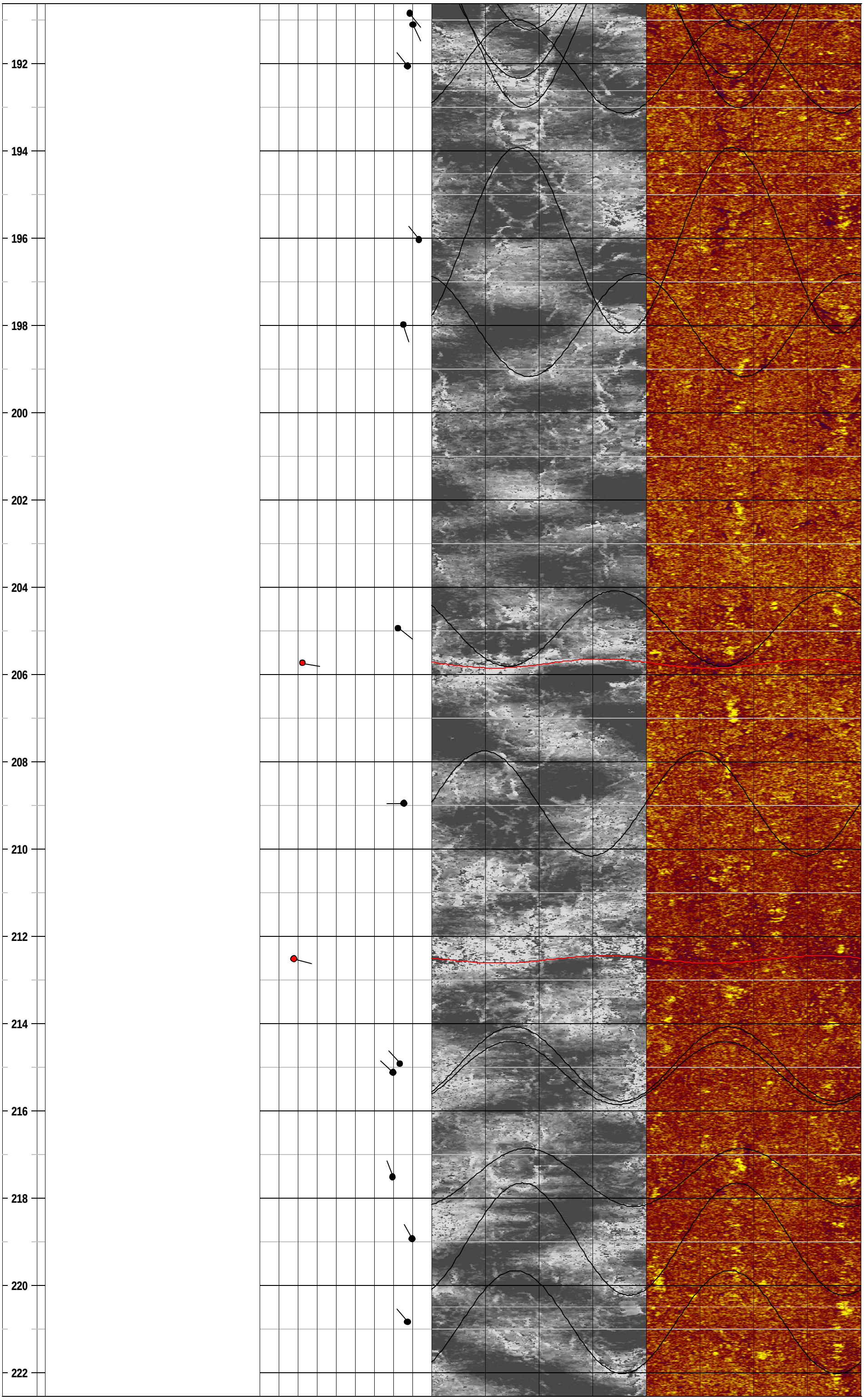
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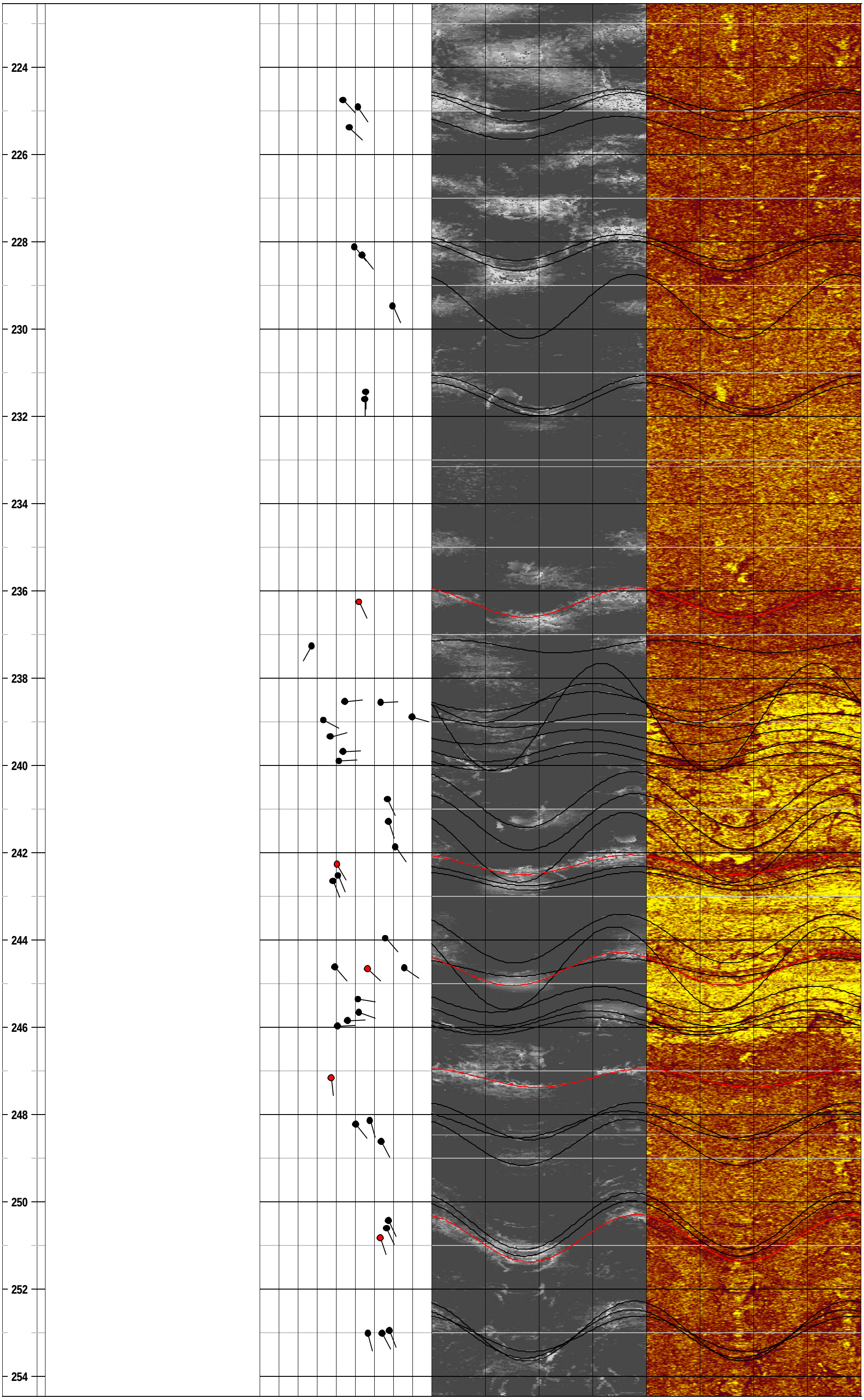
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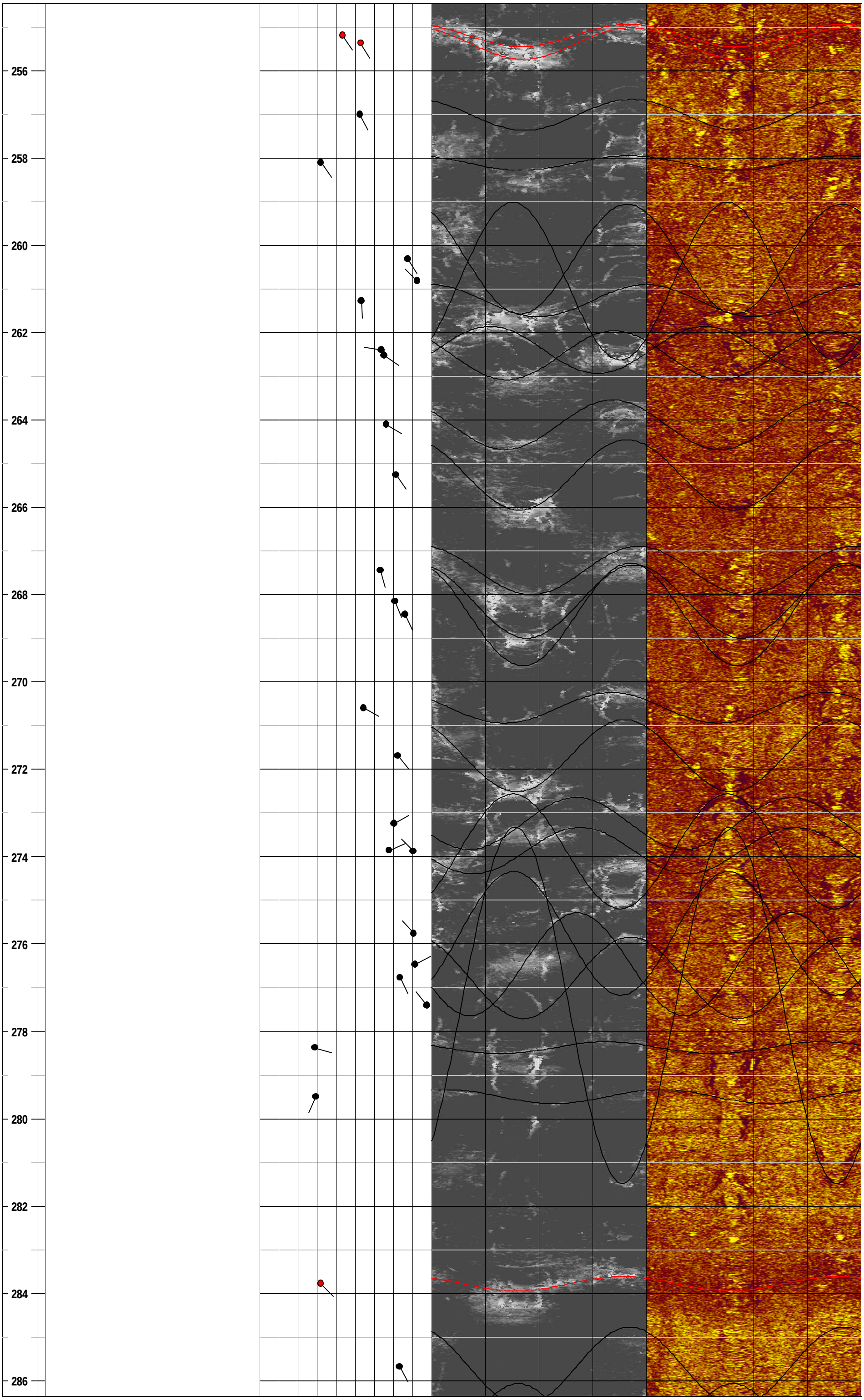
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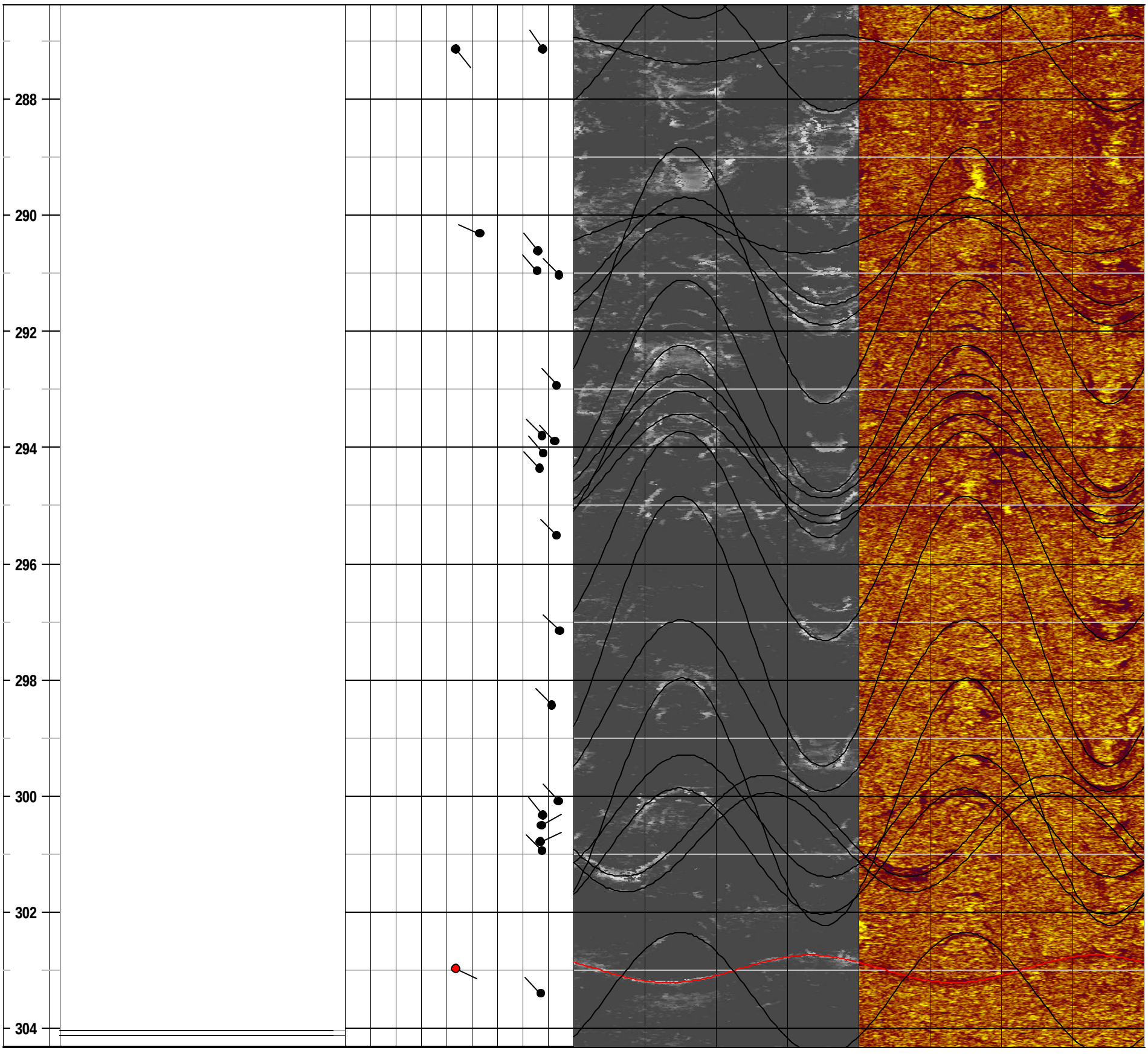
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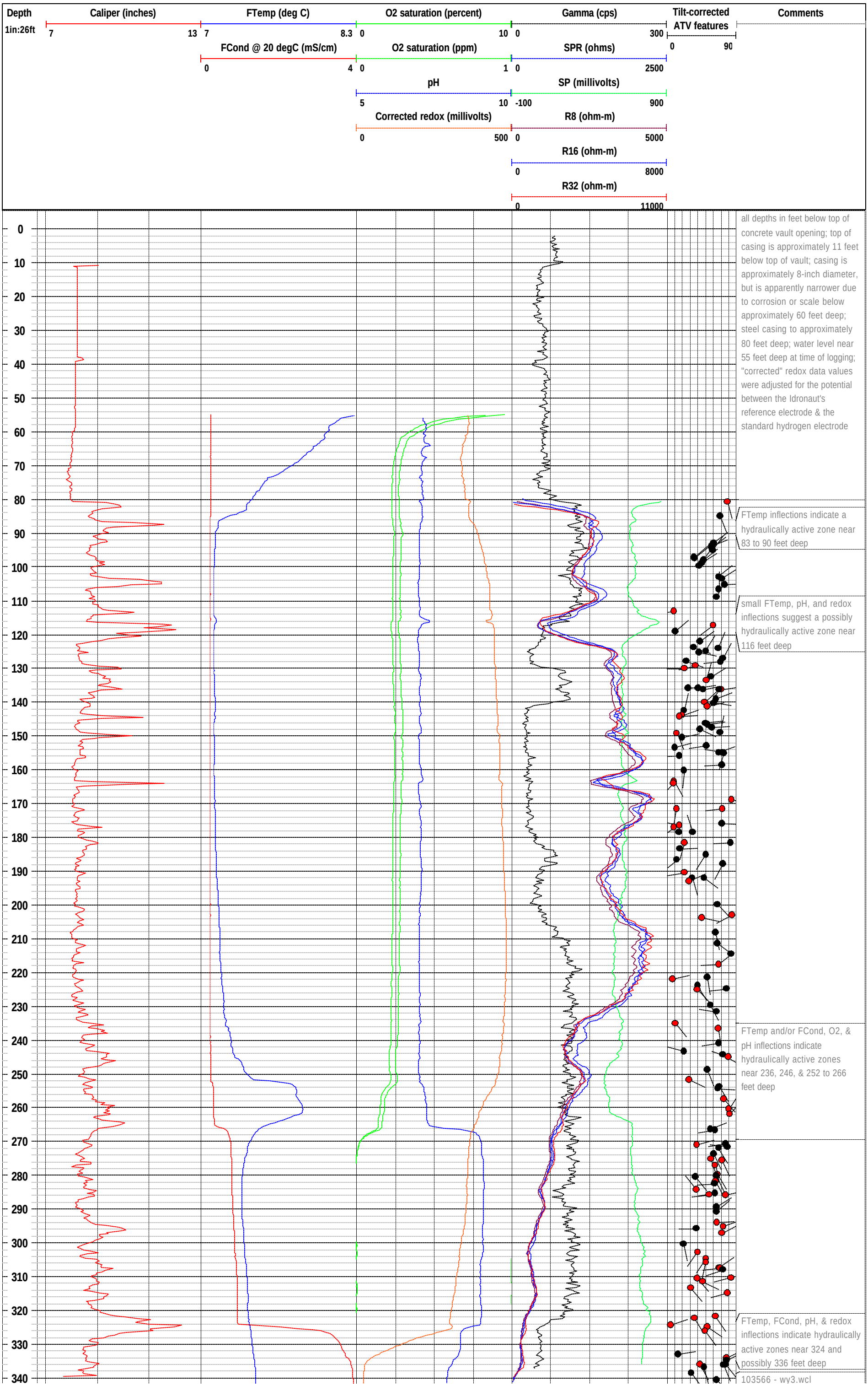
# Project - Well:  Weston - USACE/Bucks Harbor, ME - WY-3 conventional logs




all depths in feet below top of concrete vault opening; top of casing is approximately 11 feet below top of vault; casing is approximately 8-inch diameter, but is apparently narrower due to corrosion or scale below approximately 60 feet deep; steel casing to approximately 80 feet deep; water level near 55 feet deep at time of logging; "corrected" redox data values were adjusted for the potential between the Idronaut's reference electrode & the standard hydrogen electrode

FTemp inflections indicate a hydraulically active zone near 83 to 90 feet deep

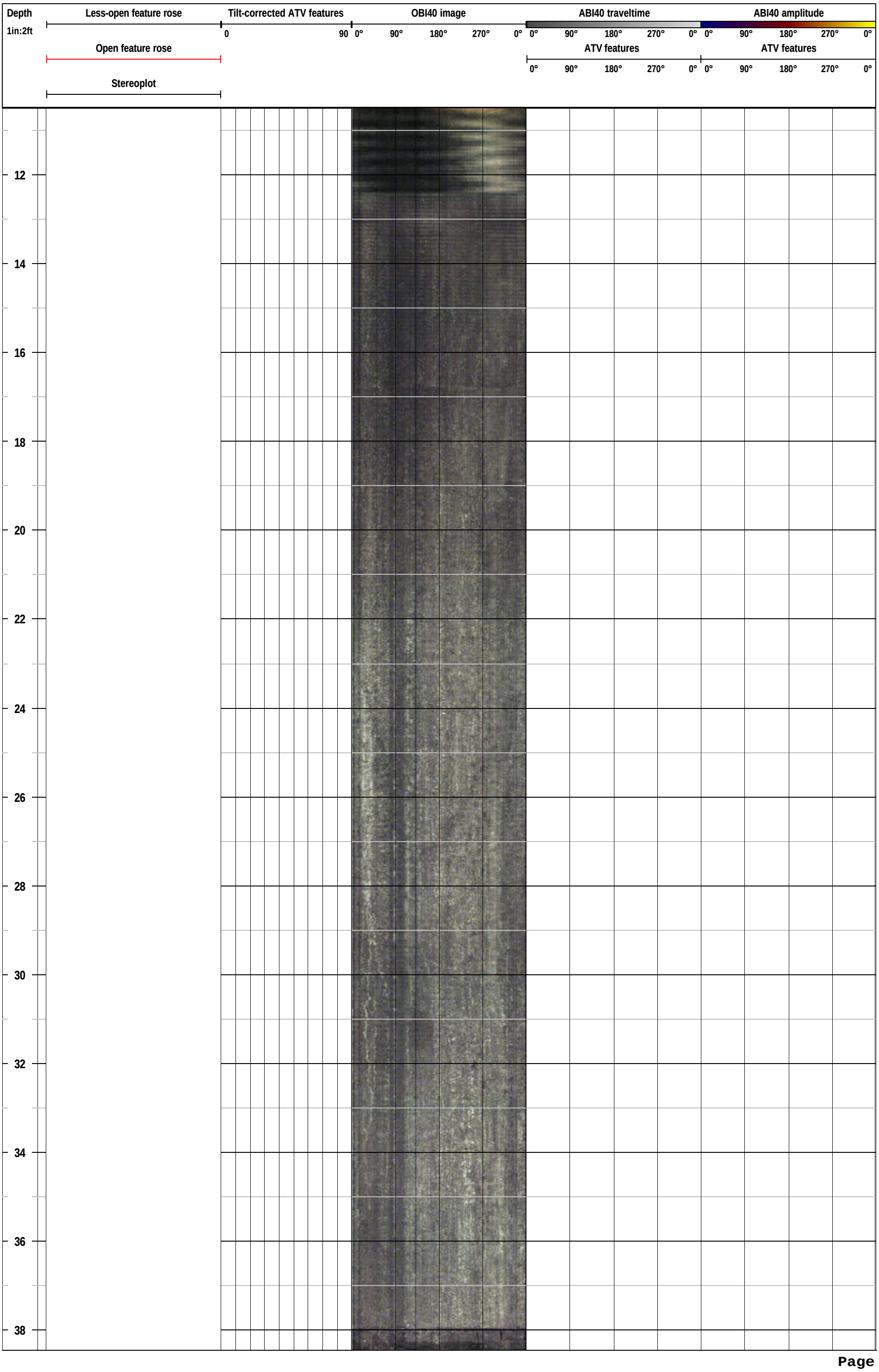
small FTemp, pH, and redox inflections suggest a possibly hydraulically active zone near 116 feet deep

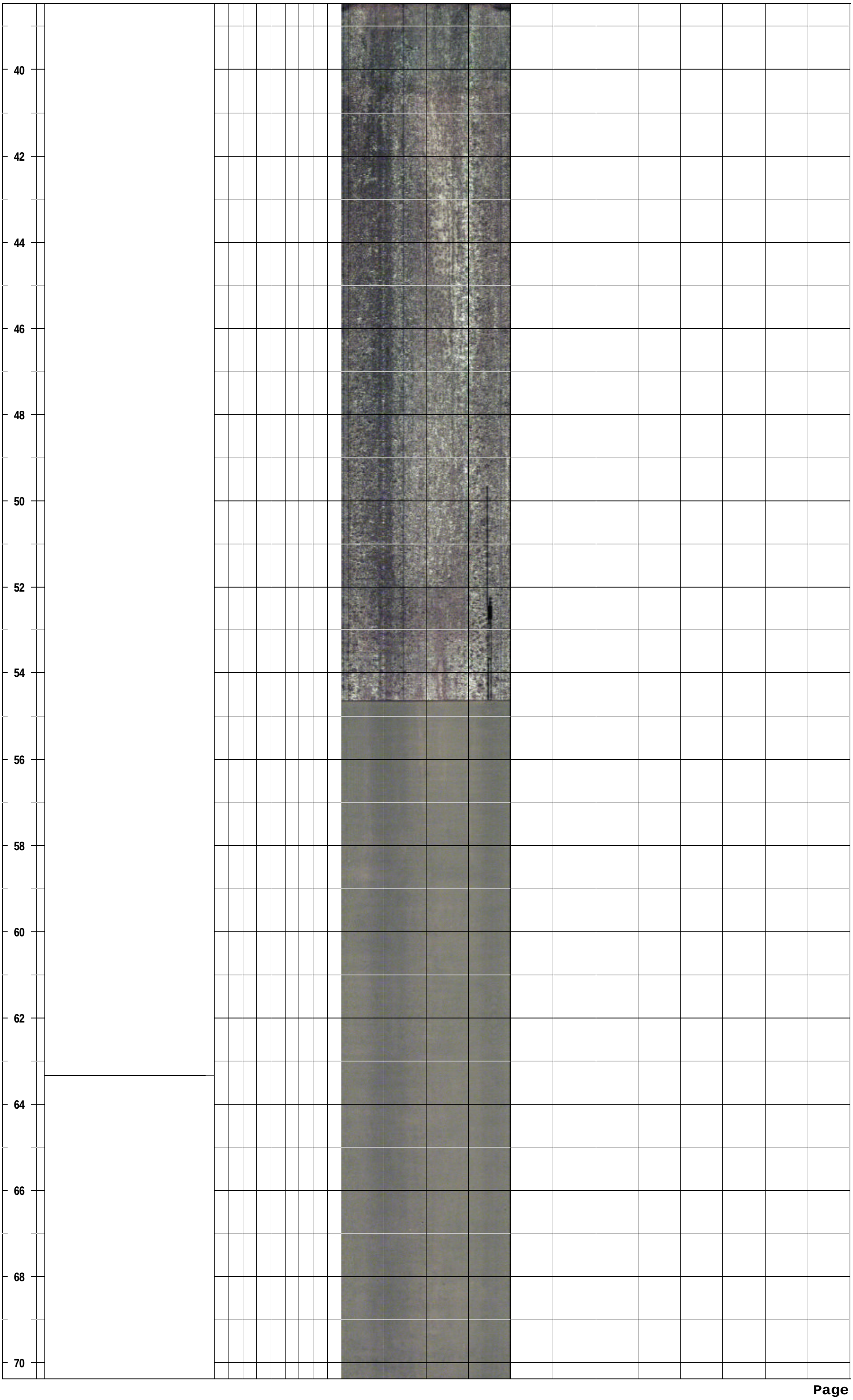
FTemp and/or FCond, O2, & pH inflections indicate hydraulically active zones near 236, 246, & 252 to 266 feet deep

FTemp, FCond, pH, & redox inflections indicate hydraulically active zones near 324 and possibly 336 feet deep

103566 - wy3.wcl

Project - Well:  Weston - USACE/Bucks Harbor, ME - WY-3 optical & acoustic televiewer logs

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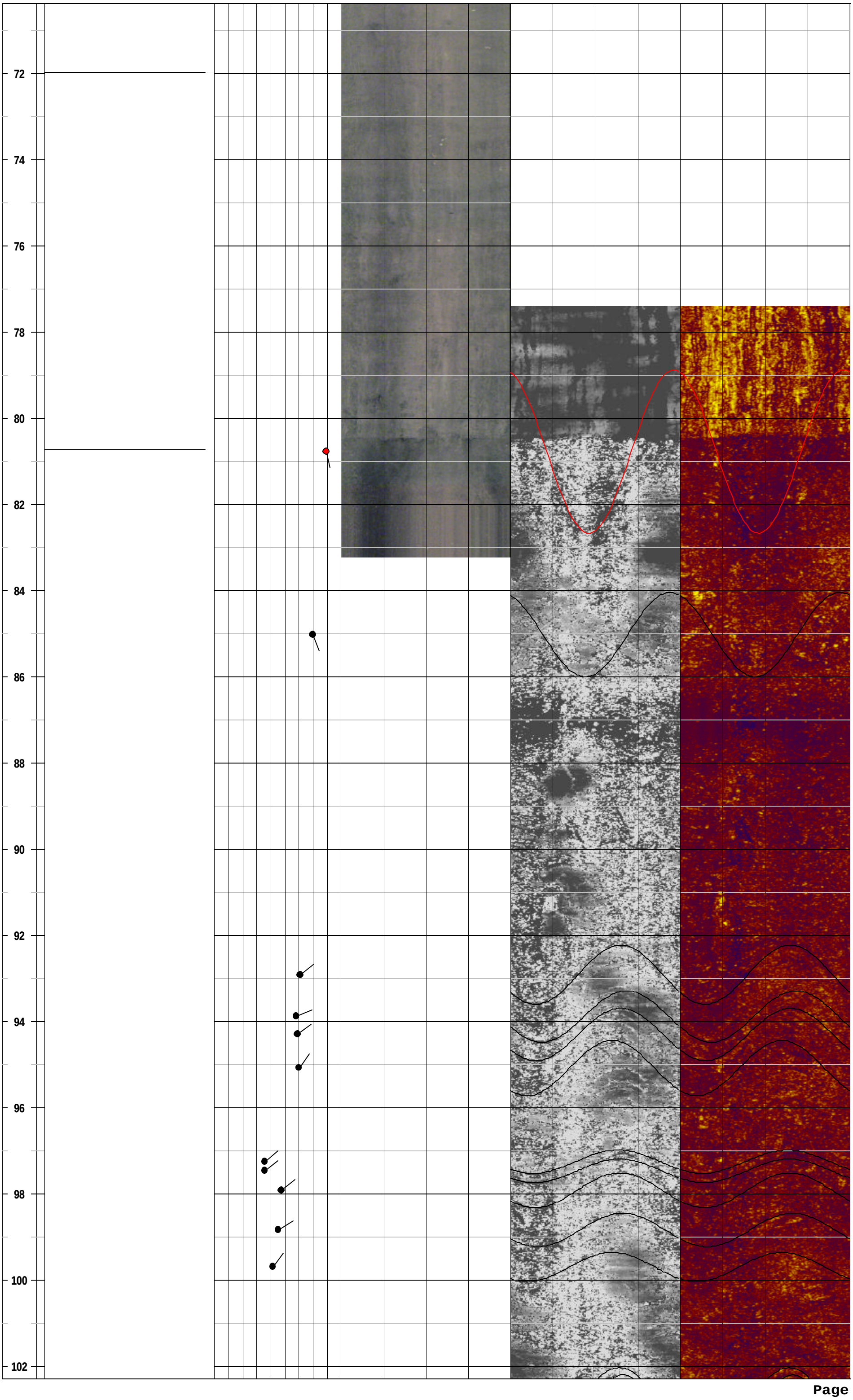
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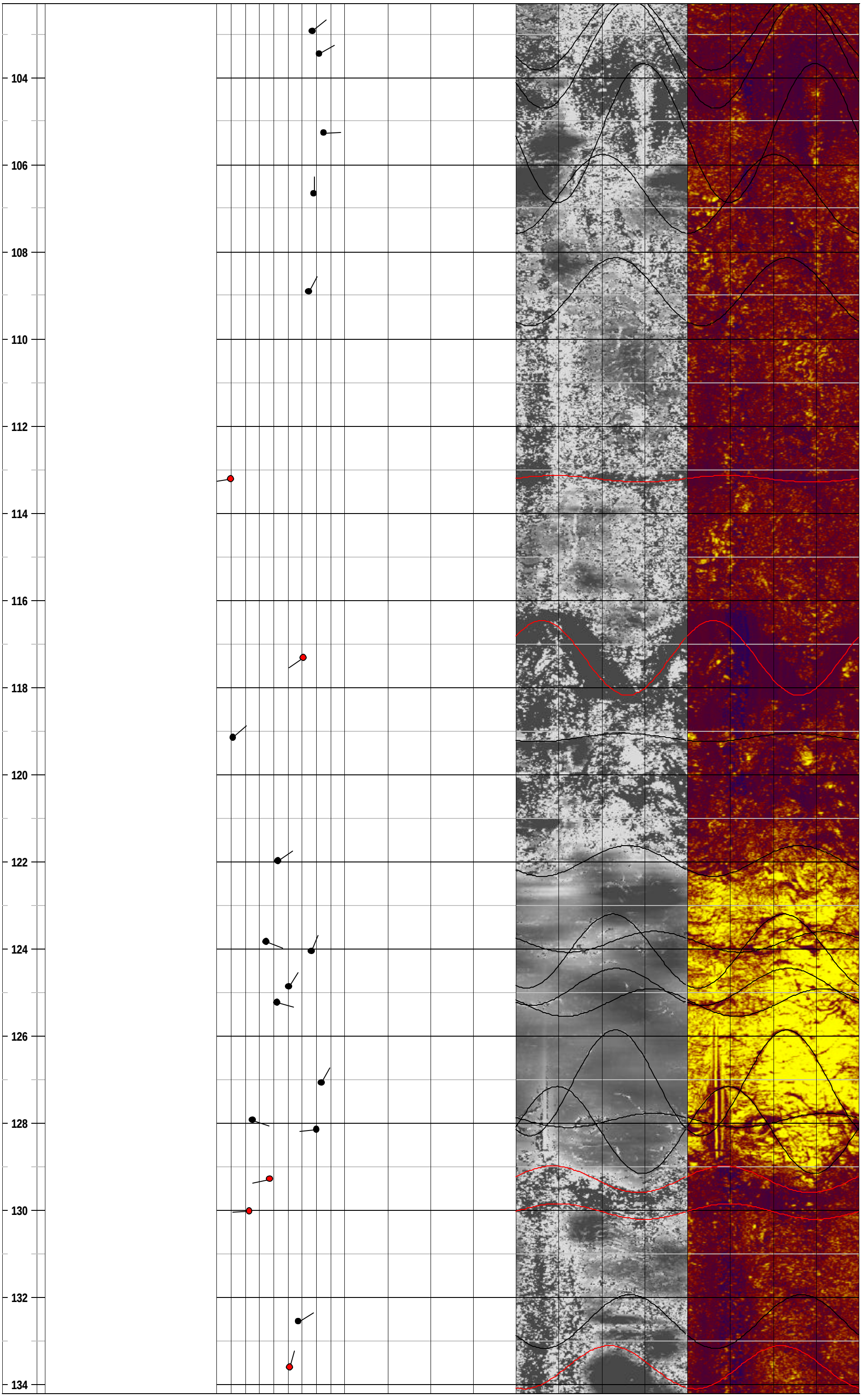
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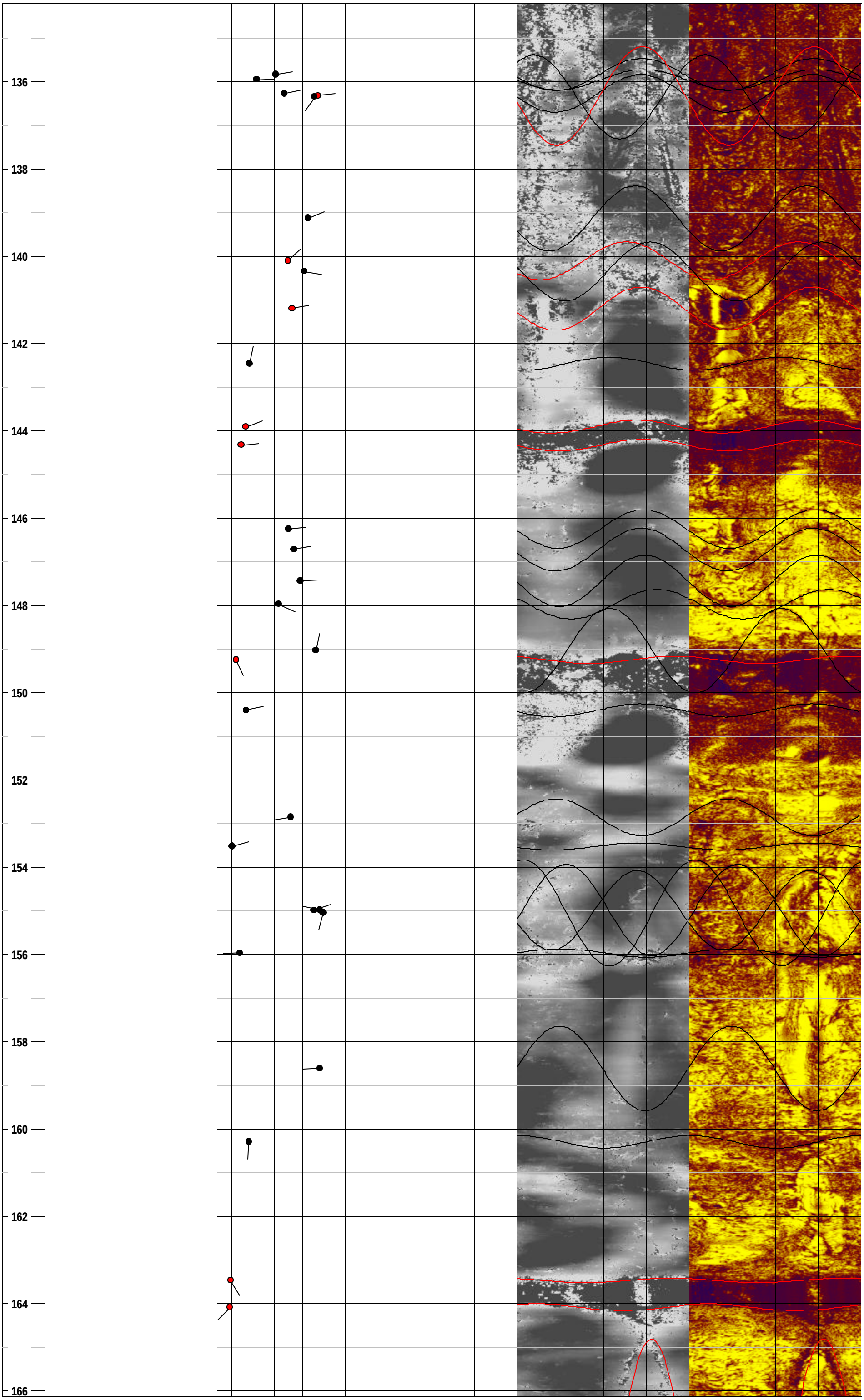
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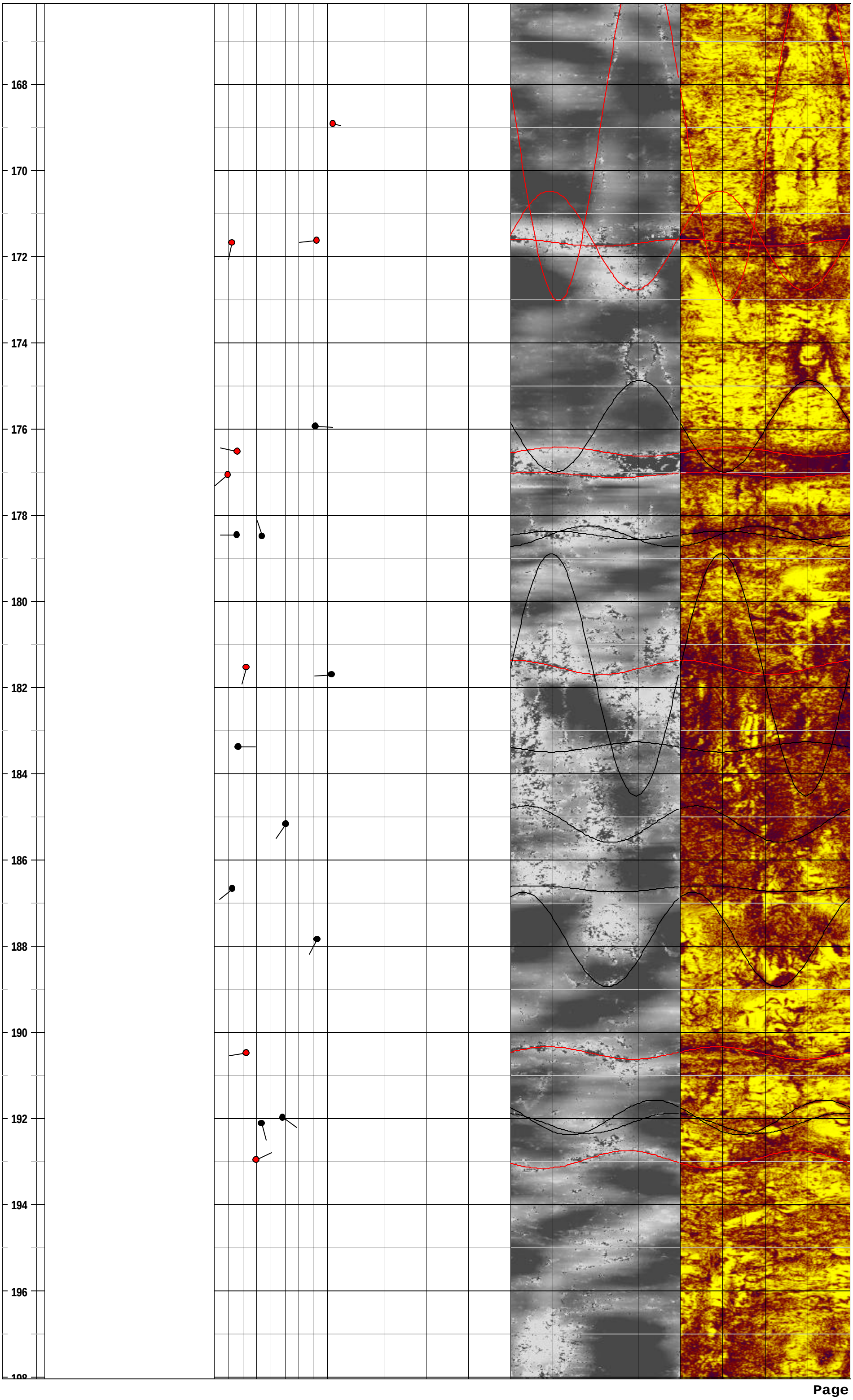
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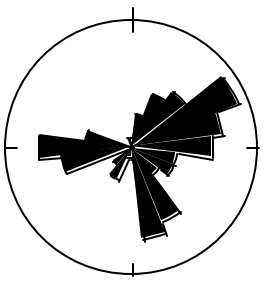

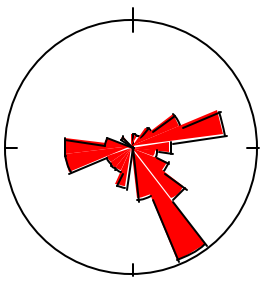

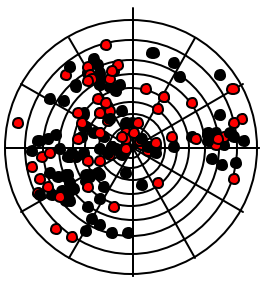

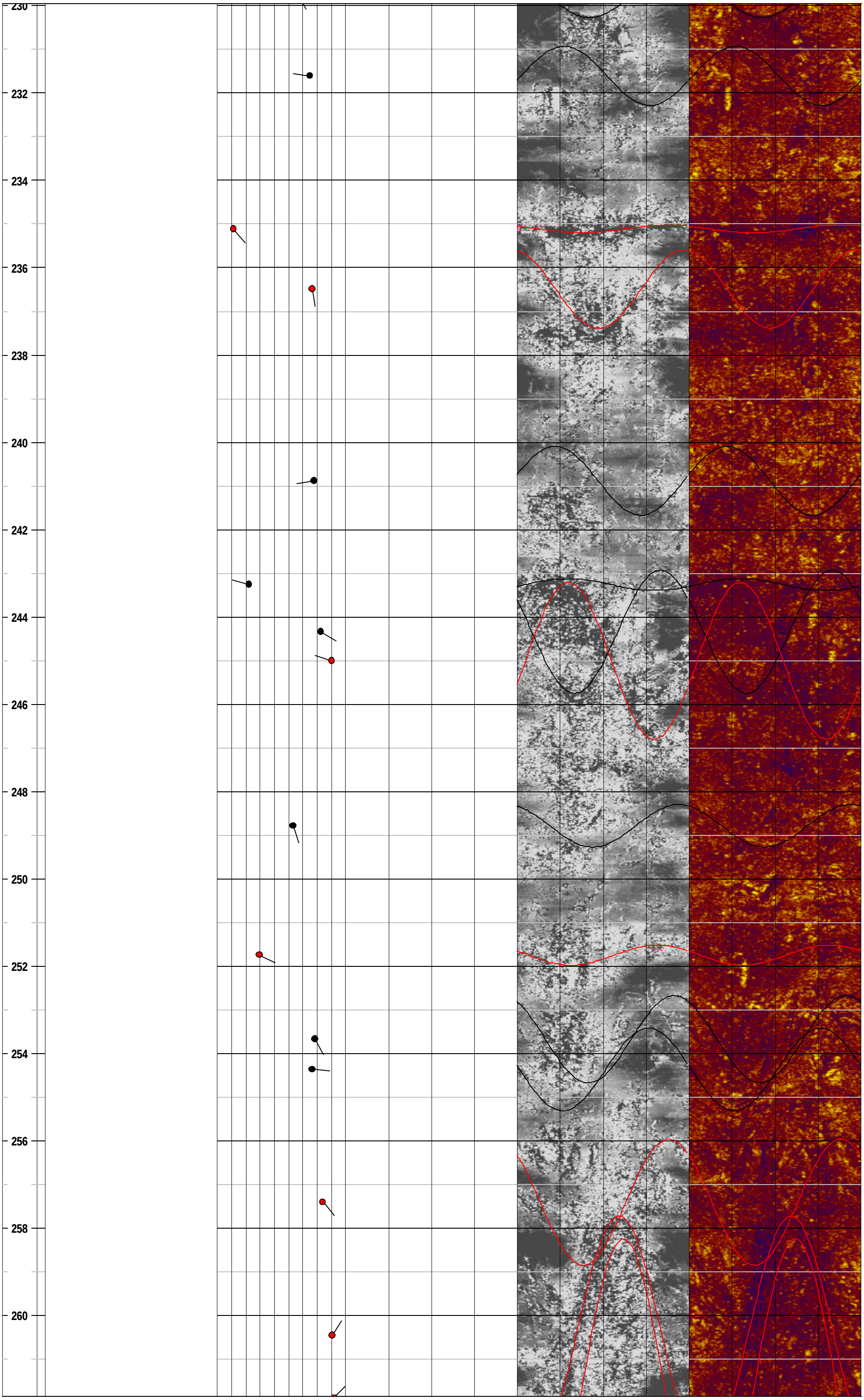
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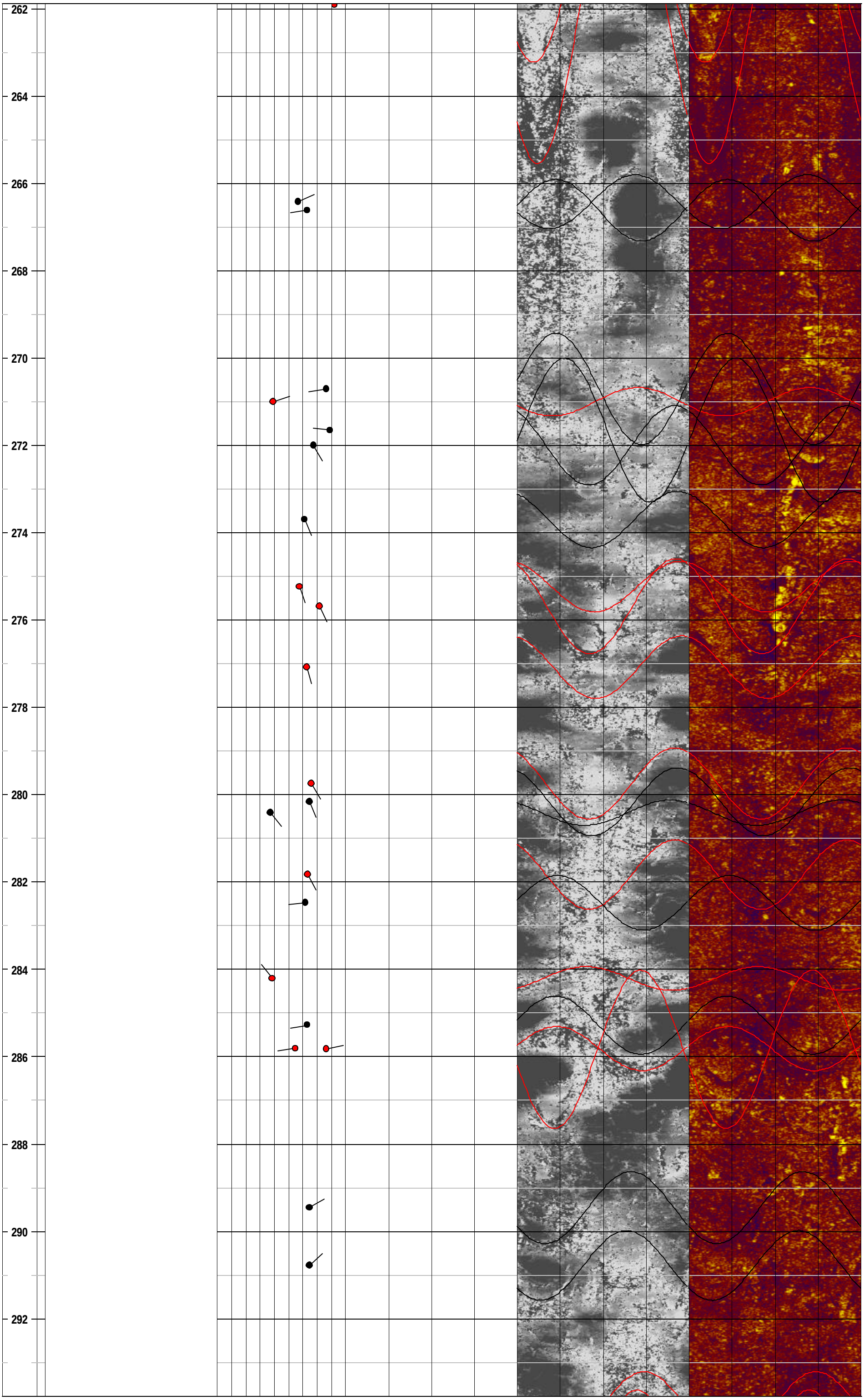
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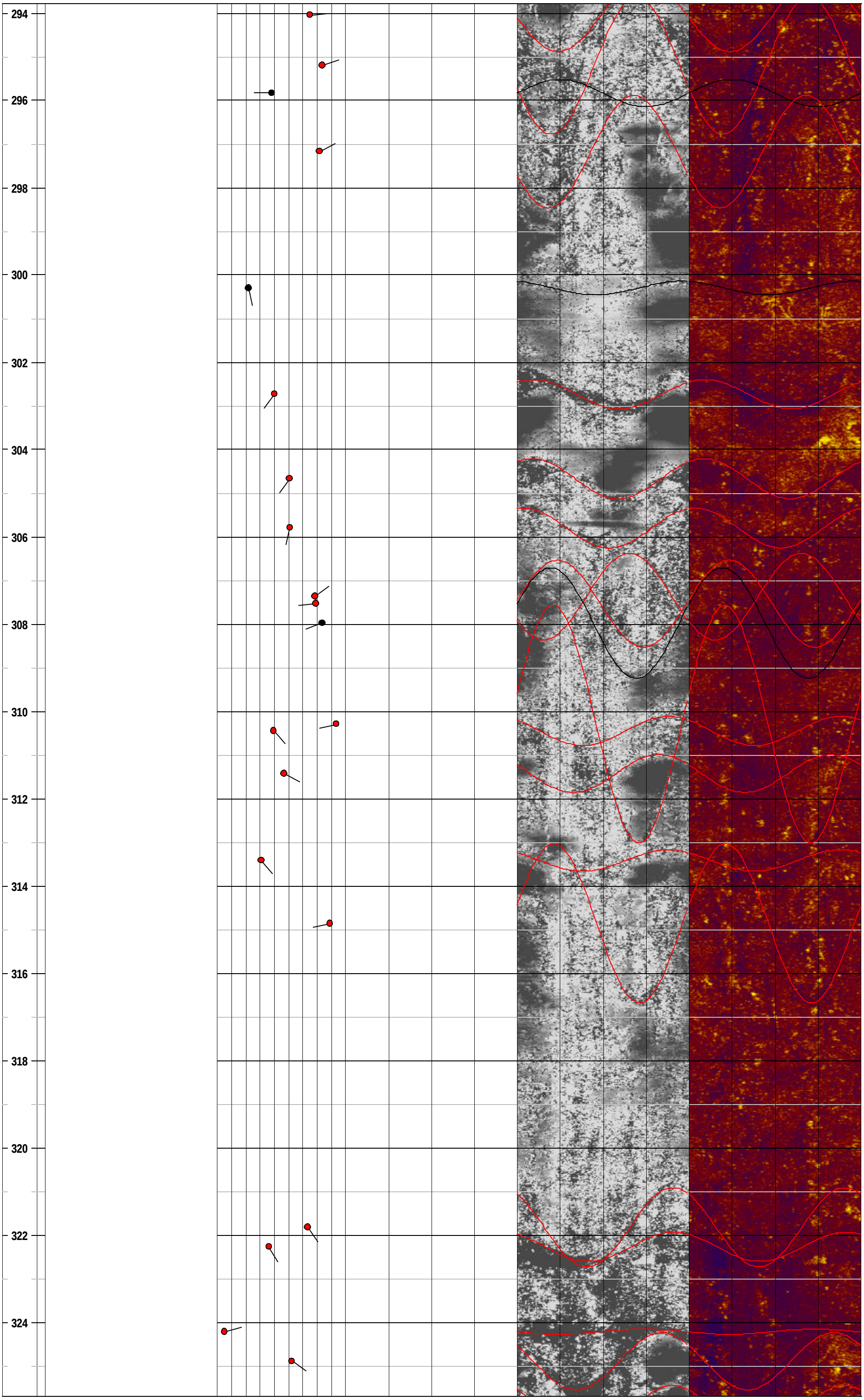
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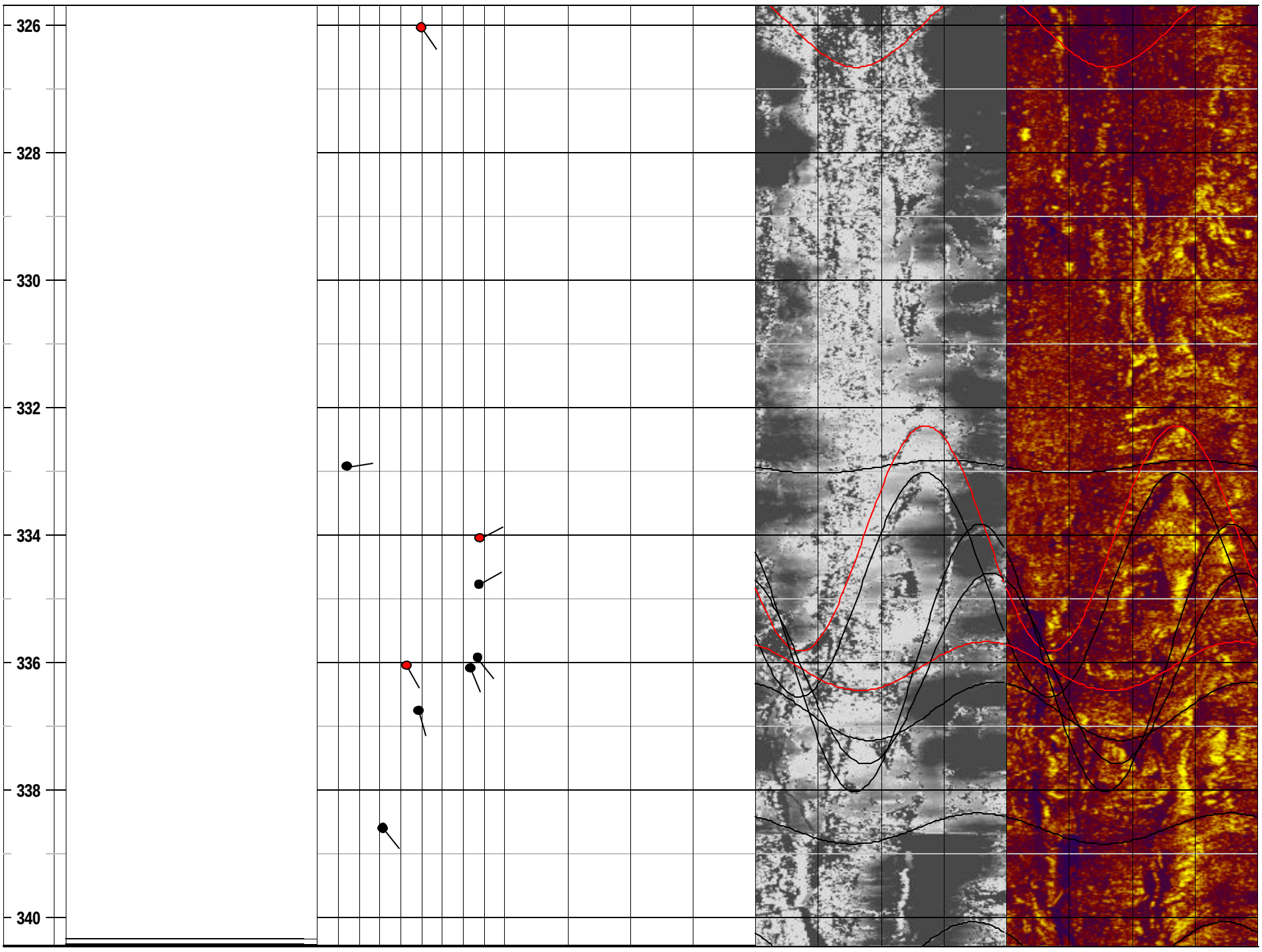
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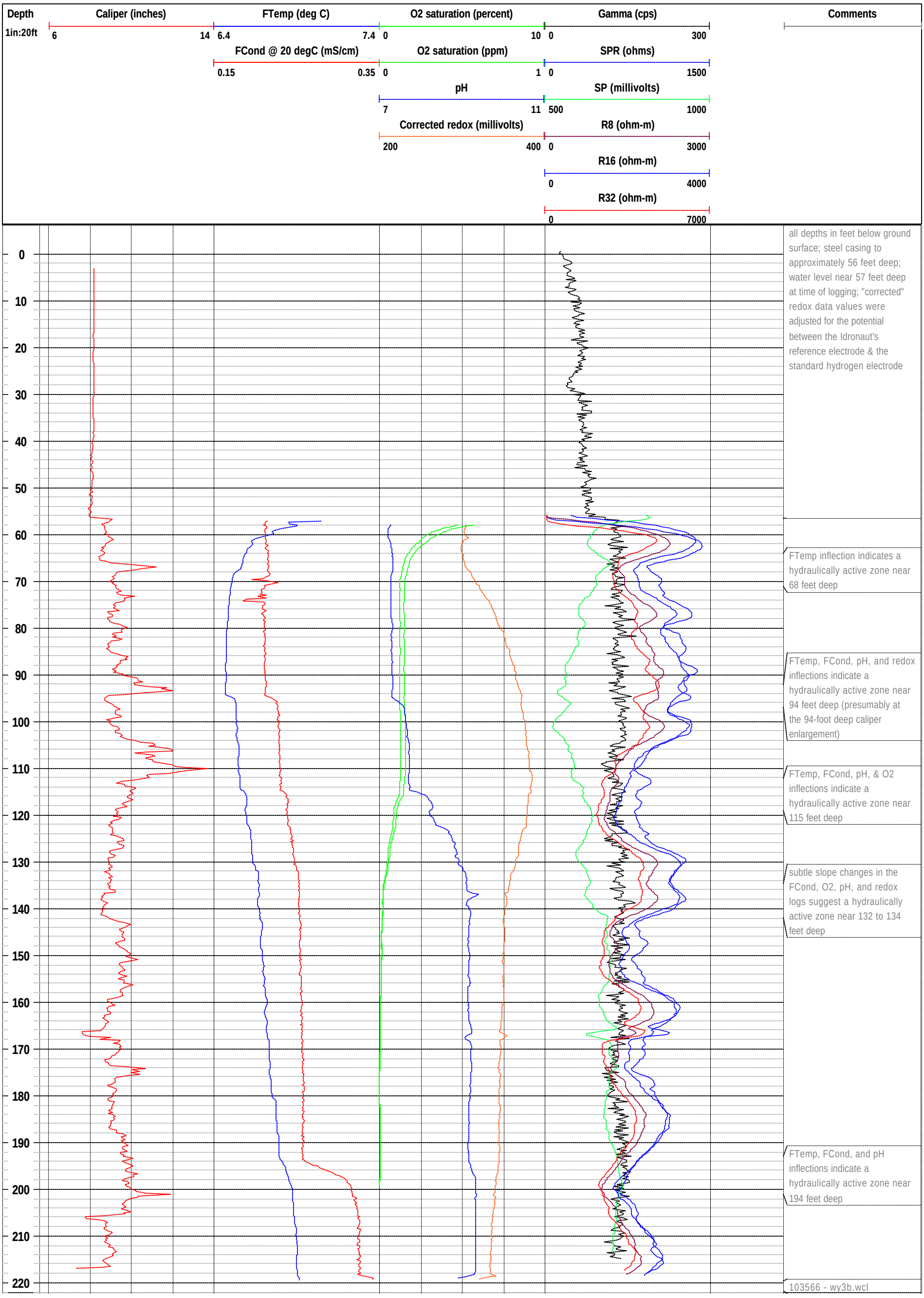
Project - Well:  Weston - USACE/Bucks Harbor, ME - WY-3b conventional logs



# APPENDIX B

# WELL CONSTRUCTION AND ROCK CORING LOGS

# WELL CONSTRUCTION LOGS

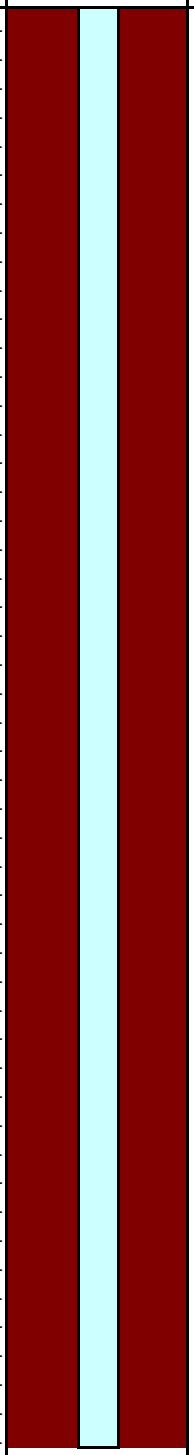
| WELL CONSTRUCTION LOG | Sheet 1 of 2 | Well ID: MW-4 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 100 ft bgs | |
| Date(s) Drilled: 13 to 17 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 15 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 15 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 3 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: ~0.75 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5 | | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 10 | | F, M | Dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Common (6-10 " apart), open, 10° low-angle fractures; common, partly open, 30-45° moderate-angle fractures, and one, open, 80-85° high-angle fracture; all fractures have hematite and limonite mineralization. | Heavily fractured thoughout. |
| 15 | | F, M | | |
| 20 | | F, M | | |
| 25 | | F, M | | |
| | | C | | |
| 30 | | F, M | Flow-banded, vitreous, dark red and black, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Rare, 0.125" pale yellow-green phenocrysts from 40 to 48 ft bgs. Unweathered. Common, partly open, 45° moderate-angle fractures, and one, open, 85° high-angle fracture; all fractures have hematite, limonite, pryolusite, and siderite mineralization. The trace of the moderate-angle fractures can be seen as a lineation on the high-angle fracture faces. | Heavily fractured throughout. |
| 35 | | F, M | | |
| 40 | | F, M | | |
| 45 | | F, M | | |
| 50 | | F, M | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

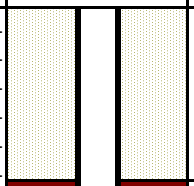
| WELL CONSTRUCTION LOG | Sheet 2 of 2 | Well ID.: MW-4 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 100 ft bgs | |
| Date(s) Drilled: 19 to 28 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | F, M | Same as above. | Heavily fractured throughout. |
| 60 | | F, M | | Coring terminated at 58 ft bgs, due to eccessive wear on bit. |
| 65 | | F, M | | |
| 70 | | F, M | | |
| 75 | | F, M | | |
| 80 | | F, M | | |
| 85 | | F, M | | |
| 90 | | F, M | | |
| 95 | | F, M | | |
| 100 | | F, M | Well bottom at 100 ft bgs. | Well yields about 0.75 gal/min. |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

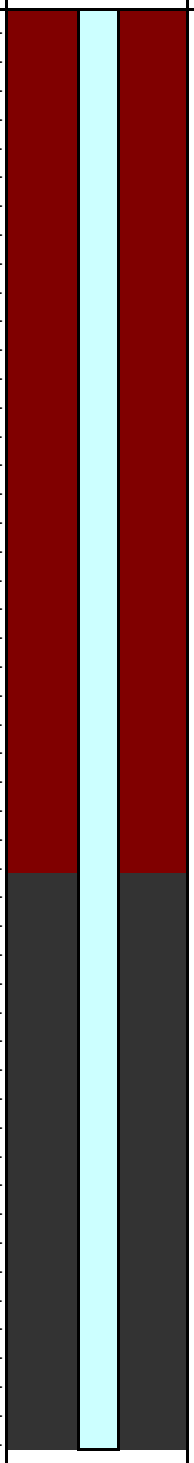
| WELL CONSTRUCTION LOG | Sheet 1 of 2 | Well ID: MW-5 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 100 ft bgs | |
| Date(s) Drilled: 3 to 18 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 6 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 11 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 6.7 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 1.5 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5 |  | C | Unconsolidated Pleistocene overburden, dry. | Not logged in detail. |
| 10 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M | Flow-banded, vitreous, dark red and black, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Unweathered. Common, partly open, fractures with hematite, limonite, pryolusite, and siderite mineralization. Epidote crystals noted. | Heavily fractured thoughout. |
| 15 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | | |
| 20 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | | |
| 25 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | Black devirtified vitrophyre predominates, epidote rare. | |
| 30 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | | |
| 35 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | Dark red devirtified vitrophyre with epidote crystals predominates. | No apparent water loss/gain. |
| 40 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | | |
| 45 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M | | |
| 50 | | F, M | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

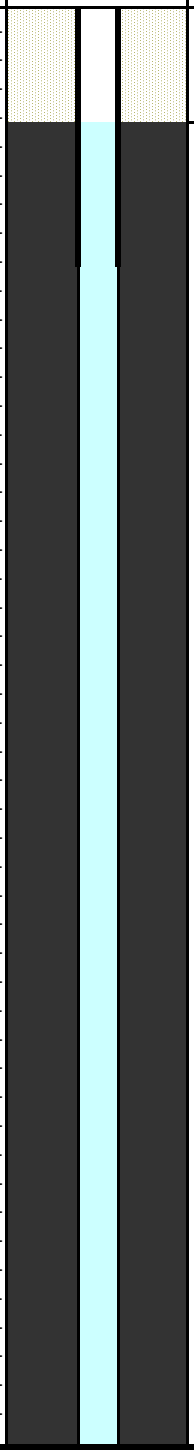
| WELL CONSTRUCTION LOG | Sheet 2 of 2 | Well ID.: MW-5 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 100 ft bgs | |
| Date(s) Drilled: 3 to 18 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | F, M | Same as above. | Heavily fractured throughout. |
| 60 | | F, M | Fracture zone 60 to 65 ft bgs. | Faster drilling rate noted, 60 to 65 ft bgs. |
| 65 | | F, M | | |
| 70 | | F, M | | Faster drilling rate noted. |
| 75 | | F, M | | |
| 80 | | F, M | Dark gray, devirtified vitrophyre predominates, epidote noted. | |
| 85 | | F, M | | |
| 90 | | F, M | | |
| 95 | | F, M | | Faster drilling rate noted. |
| 100 | | F, M | End of boring at 100 ft bgs. | |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

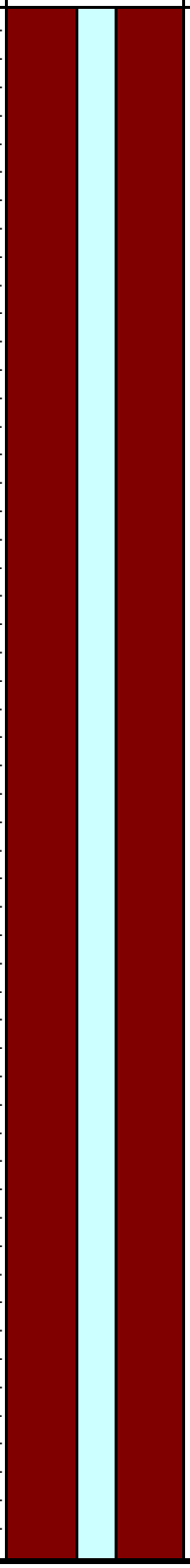
| WELL CONSTRUCTION LOG | Sheet 1 of 3 | Well ID: MW-6 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 120 ft bgs | |
| Date(s) Drilled: 1 to 18 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 4 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 9 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 4.5 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 3 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| |  | C | Unconsolidated Pleistocene overburden, coarse sand and gravel. | Not logged in detail. |
| 5 | | | Flow-banded, very dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Some fractures noted, none that provide appreciable water. |
| 10 | | | | |
| 15 | | | | |
| 20 | | | | |
| 25 | | | | |
| 30 | | | | |
| 35 | | | | |
| 40 | | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 45 | | | | |
| 50 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

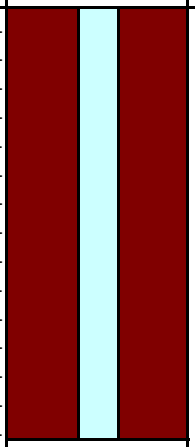
| WELL CONSTRUCTION LOG | Sheet 2 of 3 | Well ID: MW-6 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 120 ft bgs | |
| Date(s) Drilled: 1 to 18 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Some fractures noted, none that provide appreciable water. |
| 60 | | | | |
| 65 | | F, M | Fracture zone. | Choppy drilling.<br>Fracture contributes ~1L/min. |
| 70 | | | | |
| 75 | | F, M | Fracture zone. | Fracture contributes ~1L/min. |
| | | | Flow-banded, dark red and dark green, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 80 | | | | |
| 85 | | | | |
| 90 | | F, M | Fracture zone. | |
| 95 | | | | |
| 100 | | | | |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

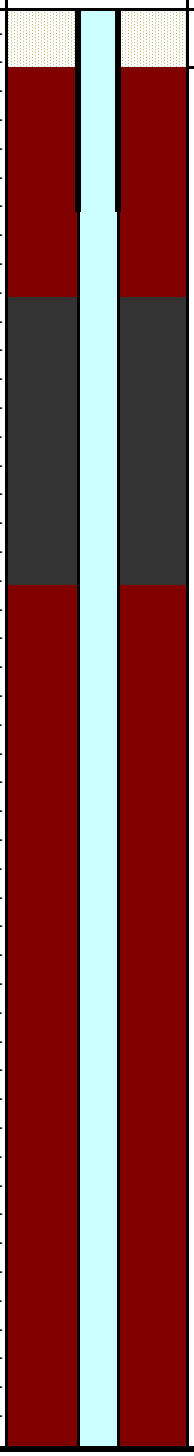
| WELL CONSTRUCTION LOG | Sheet 3 of 3 | Well ID: MW-6 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 120 ft bgs | |
| Date(s) Drilled: 1 to 18 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 115 | | | | |
| 120 | | | End of boring at 120 ft bgs. | ~ 1 gal/min total yield. |
| 125 | | | | |
| 130 | | | | |
| 135 | | | | |
| 140 | | | | |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 1 of 3 | Well ID: MW-7 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 130 ft bgs | |
| Date(s) Drilled: 21 to 24 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 2 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 7 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 0 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 3 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 0 |  | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 5 | | | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Drilling water lost to upper fractures. |
| 10 | | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Water appears. |
| 15 | | F, M<br>F, M | | Produces ~0.5 L/min water. |
| 20 | | F, M | | Produces ~1 L/min water. |
| 25 | | | Flow-banded, dark red, rhyolitic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization.<br><br>Flow-banded, dark red, rhyolitic devitrified vitrophyre member of the Devonian Eastport Formation, with pale green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 30 | | | | |
| 35 | | | | |
| 40 | | | | |
| 45 | | | | |
| 50 | | F, M | Possible fracture zone. | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

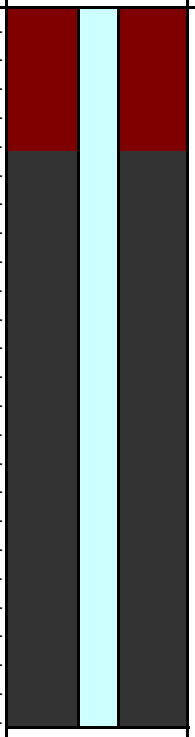
| WELL CONSTRUCTION LOG | Sheet 2 of 3 | Well ID: MW-7 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 130 ft bgs | |
| Date(s) Drilled: 21 to 24 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 | | F, M | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation, with pale green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 60 | | F, M<br>F, M<br>F, M | Fracture zone.<br>Fracture zone.<br>Fracture zone. | |
| 65 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M | Fracture zone. | |
| 70 | | | | |
| 75 | | F, M | Fracture zone. | |
| 80 | | F, M<br>F, M | Flow-banded, dark red, rhyolitic devitrified vitrophyre member of the Devonian Eastport Formation, with pale green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 85 | | | | |
| 90 | | | | |
| 95 | | F, M<br>F, M | Fracture zone.<br>Fracture zone. | |
| 100 | | F, M<br>F, M | Fracture zone.<br>Fracture zone. | |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 3 of 3 | Well ID: MW-7 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 130 ft bgs | |
| Date(s) Drilled: 21 to 24 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 115 | | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Faster drilling from 112 to 118 ft bgs. |
| 120 | | F, M | | |
| 125 | | F, M | Hydraulically-active zone. | |
| 130 | | | End of boring at 130 ft bgs. | ~ 1 gal/min total yield. |
| 135 | | | | |
| 140 | | | | |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

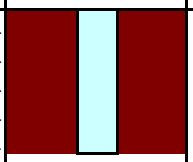
| WELL CONSTRUCTION LOG | Sheet 1 of 2 | Well ID: MW-8b |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 55 ft bgs | |
| Date(s) Drilled: 19 to 28 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 3.5 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 9 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 4.1 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 1.5 gallon/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| | | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 5 | | F, M | Flow-banded, red, rhyolitic vitrophyre member of the Devonian Eastport Formation with 0.25-2" pink, gray, and green phenocrysts, heavily intruded with dark olive gabbro (olivine imparts dominant rock color); blocks of vitrophyre evident in gabbro matrix. Slightly weathered. Three apparent fracture sets: common (2-6 " apart), open, 10-15 $^{o}$ low-angle fractures, rare, partly open, 35-40 $^{o}$ moderate-angle fractures, and uncommon, open, 75-90 $^{o}$ high-angle fractures; all fractures have heavy hematite, limonite, and trace pyrolusite mineralization. Color darkens and phenocrysts smaller below 25 ft. | Moderately fractured. |
| 10 | | F, M | | |
| 15 | | F, M | | |
| 20 | | F, M | | Uncommon fractures. |
| 25 | | F, M | | |
| 30 | | F, M | | Common fractures. |
| 35 | | F, M | | |
| 40 | | F, M | | |
| 45 | | F, M | | |
| 50 | | F, M | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 2 of 2 | Well ID.: MW-8b |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 55 ft bgs | |
| Date(s) Drilled: 19 to 28 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | F, M<br>F, M<br>F, M<br>F, M | Same as above. | |
| 60 | | | | |
| 65 | | | | |
| 70 | | | | |
| 75 | | | | |
| 80 | | | | |
| 85 | | | | |
| 90 | | | | |
| 95 | | | | |
| 100 | | | | |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

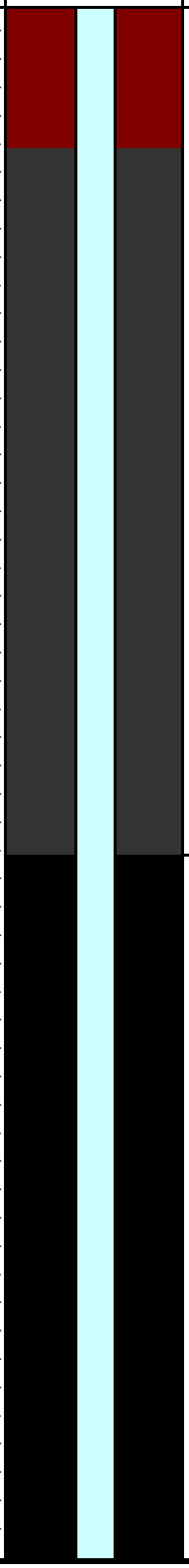
| WELL CONSTRUCTION LOG | Sheet 1 of 3 | Well ID: MW-9 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 120 ft bgs | |
| Date(s) Drilled: 19 to 25 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 3.5 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 9 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 7 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 2.5 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| | | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 5 | | | | Dry to 14 ft bgs. |
| 10 | | | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 15 | | F, M | | Water appears; ~0.25 gal/min. |
| 20 | | F, M | | |
| 25 | | F, M | | |
| 30 | | F, M<br>F, M | | |
| 35 | | | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation, with trace pale green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 40 | | F, M | | |
| 45 | | F, M | | Water flow ~0.25 gal/min. |
| 50 | | F, M<br>F, M | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

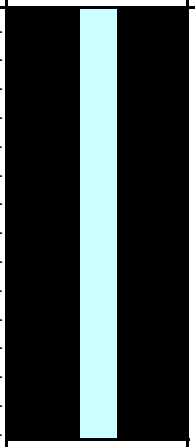
| WELL CONSTRUCTION LOG | Sheet 2 of 3 | Well ID: MW-9 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 130 ft bgs | |
| Date(s) Drilled: 19 to 25 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | F, M<br>F, M<br>F, M | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Fm., with pale green feldspathoids. Slightly weathered. Moderately fractured, partly healed with limonite and hematite mineralization.<br><br>Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation, with trace pale green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 60 | | | | |
| 65 | | | | |
| 70 | | F, M<br>F, M<br>F, M | | |
| 75 | | F, M<br>F, M | | |
| 80 | | C | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation, with trace blue-green feldspathoids. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | Drilling "choppy". |
| 85 | | | Aphanitic diabase dike of Devonian age. No phenocrysts. Unweathered. Cuttings are distinctly 'discoid'. No fractures noted. | Water flow ~0.25 gal/min. |
| 90 | | | | |
| 95 | | F | | |
| 100 | | | | Water flow ~0.25 gal/min. |
| 105 | | F | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WESTON SOLUTIONS | WELL CONSTRUCTION LOG | Sheet 3 of 3 | Well ID: MW-9 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | | Total Well Depth: 130 ft bgs | |
| Date(s) Drilled: 19 to 25 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Aphanitic diabase dike of Devonian age. No phenocrysts. Unweathered. Cuttings are distinctly 'discoid'. No fractures noted. | |
| 115 | | | | |
| 120 | | | End of boring at 120 ft bgs. | ~ 0.25 gal/min total yield. |
| 125 | | | | |
| 130 | | | | |
| 135 | | | | |
| 140 | | | | |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

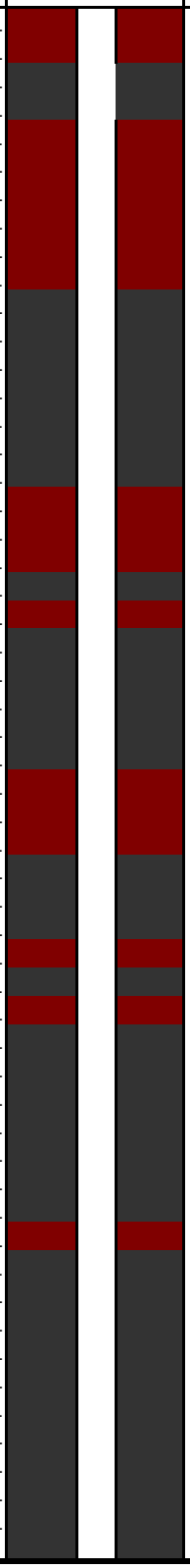
| WELL CONSTRUCTION LOG | Sheet 1 of 4 | Well ID: MW-10 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 201 ft bgs | |
| Date(s) Drilled: 6 March to 1 April 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 14 ft | |
| Drill Rig: Mobile Drill B-59 | Well Construction: 4-in steel casing to 19 ft, ~4-in open hole | |
| Drill Foreman: Wayne Macpherson | Static Water Depth: 121.5 ft bgs | |
| Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | Water Production: 0.5 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5, 10 | | | Unconsolidated Pleistocene sand and gravel overburden. | Not logged in detail. |
| 15 | | C | | |
| 15, 20, 25, 30, 35, 40, 45, 50 | | F | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, partly healed with limonite and hematite mineralization. (dark red intervals in graphic log to left) | Water loss at 15 ft bgs fracture. Rock not competent to 19 ft bgs. |
| 25, 30, 35, 40, 45, 50 | | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization.(dark gray intervals in graphic log to | |
| 45, 50 | | F, M | | |
| 50 | | F, M | | No water flow noted. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 2 of 4 | Well ID: MW-10 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 201 ft bgs | |
| Date(s) Drilled: 6 March to 1 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | F, M | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, partly healed with limonite and hematite mineralization. (dark red intervals in graphic log to left) | |
| 60 | | | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization.(dark gray intervals in graphic log to left) | |
| 65 | | | | |
| 70 | | | | |
| 75 | | | | No water flow into well noted. |
| 80 | | | | |
| 85 | | | | |
| 90 | | | | |
| 95 | | | | |
| 100 | | | | Water flow ~0.25 gal/min. |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 3 of 4 | Well ID: MW-10 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 201 ft bgs | |
| Date(s) Drilled: 6 March to 1 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization.(dark gray intervals in graphic log to left) | |
| | | F, M | | |
| 115 | | | Flow-banded, dark red and dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, partly healed with limonite and hematite mineralization. (dark red intervals in graphic log to left) | |
| | | F, M | | |
| 120 | | F, M | | |
| | | F, M | | |
| 125 | | | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 130 | | F, M | | |
| | | F, M | | |
| 135 | | F, M | | |
| | | F, M | | |
| 140 | | | | |
| 145 | | | | |
| 150 | | | | |
| | | F, M | | |
| 155 | | F, M | | Fracture produces ~0.5 gal/min water. |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 4 of 4 | Well ID: MW-10 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 201 ft bgs | |
| Date(s) Drilled: 6 March to 1 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 165 | | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 170 | | F, M | | |
| | | F, M | | |
| 175 | | | | |
| 180 | | | | |
| 185 | | | | |
| 190 | | | | |
| 195 | | | | |
| 200 | | | | Well produces ~0.75 gal/min water. |
| | | | End of Boring at 201 ft bgs. | |
| 205 | | | | |
| 210 | | | | |
| 215 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

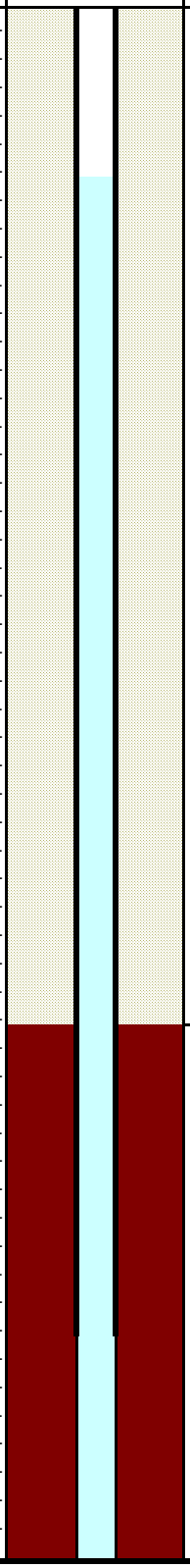
| WELL CONSTRUCTION LOG | Sheet 1 of 4 | Well ID: MW-11 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 7 to 11 May 2003 | Ground Elevation: | |
| Drilling Contractor: D.L. Maher | Overburden Thickness: 86 ft | |
| Drill Rig: Reich T-690 | Well Construction: 6.1-in steel casing to 97 ft, ~6-in open hole | |
| Drill Foreman: Bill Zamow | Static Water Depth: 53.5 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 4 to 5 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5 | | | Unconsolidated Pleistocene sand and gravel overburden. | Not logged in detail. |
| 10 | | | | |
| 15 | | | | |
| 20 | | | | |
| 25 | | | | |
| 30 | | | | |
| 35 | | | | |
| 40 | | | | |
| 45 | | C | | |
| 50 | | | Dense Pleistocene glacial till. | Based on decrease in drilling rate; not logged in detail. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

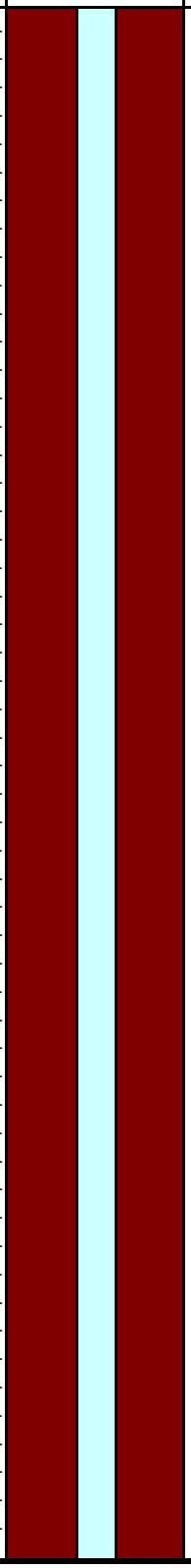
| WELL CONSTRUCTION LOG | Sheet 2 of 4 | Well ID.: MW-11 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 7 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | | Dense Pleistocene glacial till. | Not logged in detail. |
| 60 | | | | |
| 65 | | | | |
| 70 | | | | |
| 75 | | | | |
| 80 | | | | |
| 85 | | C | | |
| 90 | | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | |
| 95 | | | | |
| 100 | | F<br>F<br>F<br>F<br>F<br>F<br>F<br>F<br>F | | Water-bearing fractures. |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

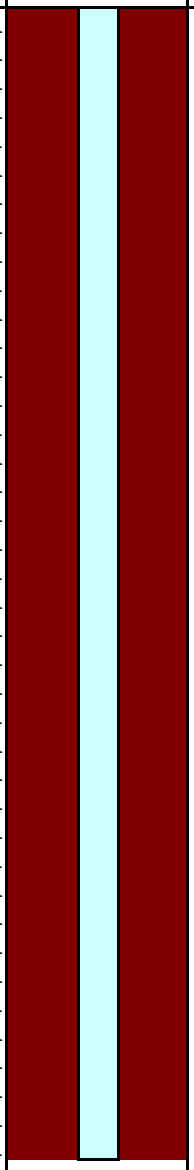
| WELL CONSTRUCTION LOG | Sheet 3 of 4 | Well ID.: MW-11 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 7 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | F<br>F | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | Water-bearing fractures. |
| 115 | | | | |
| 120 | | | | |
| 125 | | F | Fracture zone. | Increased drilling rate. |
| | | F | Fracture zone, hydraulically-active. | Increased drilling rate. |
| 130 | | F | Fracture zone. | Increased drilling rate. |
| 135 | | F | Fracture zone. | Increased drilling rate. |
| 140 | | F? | Possible fracture zone. | Increased drilling rate. |
| 145 | | | | |
| 150 | | F | Large fracture zone. | Increased drilling rate. |
| 155 | | F<br>F<br>F<br>F<br>F<br>F<br>F<br>F | Fracture zone 152 to 162 ft bgs. | Increased drilling rate.<br>1-2 gal/min yield in this zone. |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

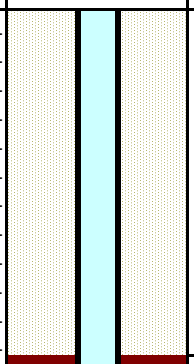
| WELL CONSTRUCTION LOG | Sheet 4 of 4 | Well ID.: MW-11 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 7 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 165 |  | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | |
| 170 | | F F F F F F F F F F | Fracture zone 168 to 178 ft bgs, hydralically-active. | about 0.5 gal/min yield. |
| 175 | | | | |
| 180 | | F F F F F F F F F F F F F F F F F F F F | Fracture zone 182 to 196 ft bgs. | Increased drilling rate.<br>1-2 gal/min yield in this zone. |
| 185 | | | | |
| 190 | | | | |
| 195 | | | | |
| 200 | | | End of boring at 200 ft bgs. | Total 4-5 gal/min yield. |
| 205 | | | | |
| 210 | | | | |
| 215 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

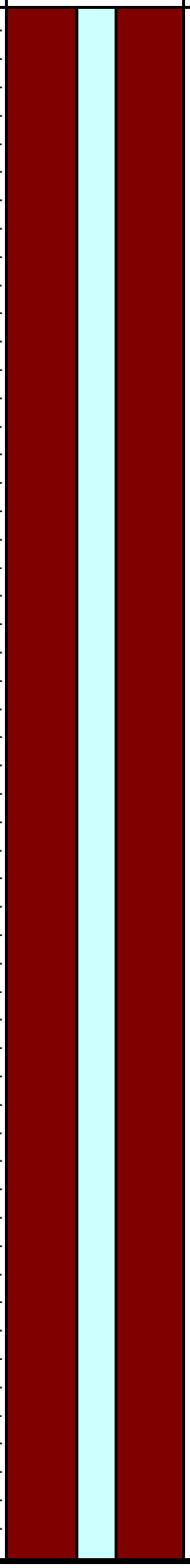
| WELL CONSTRUCTION LOG | Sheet 1 of 5 | Well ID: MW-12 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 243 ft bgs | |
| Date(s) Drilled: 6 to 12 March 2003 | Ground Elevation: | |
| Drilling Contractor: D.L. Maher | Overburden Thickness: 12 ft | |
| Drill Rig: Reich T-690 | Well Construction: 6.1-in steel casing to 18.5 ft, ~6-in open hole | |
| Drill Foreman: Bill Zamow | Static Water Depth: 0 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: ~1 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5–10 |  | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 15–50 | | F | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured.<br>Large fracture.<br>Hydraulically-active zone. | Some fractures noted, none that provide appreciable water. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

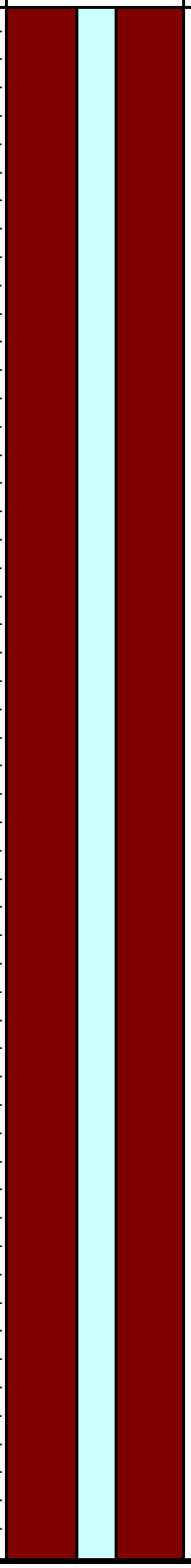
| WELL CONSTRUCTION LOG | Sheet 2 of 5 | Well ID.: MW-12 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 243 ft bgs | |
| Date(s) Drilled: 6 to 12 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55<br>60<br>65<br>70<br>75<br>80<br>85<br>90<br>95<br>100<br>105 |  | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | Some fractures noted, none that provide appreciable water. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

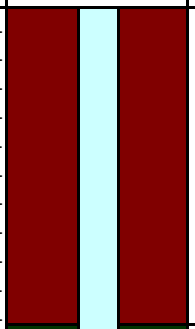
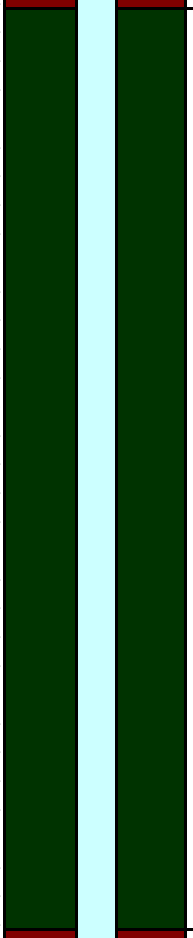
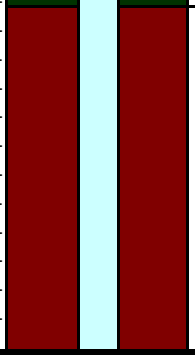
| WELL CONSTRUCTION LOG | Sheet 3 of 5 | Well ID.: MW-12 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 243 ft bgs | |
| Date(s) Drilled: 6 to 12 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | Some fractures noted, none that provide appreciable water. |
| 115 | | | | |
| 120 | | | | |
| 125 | | | | |
| 130 | | | | |
| 135 | | | | |
| 140 | | F? | Possible fracture zone. | Increased drilling rate. |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

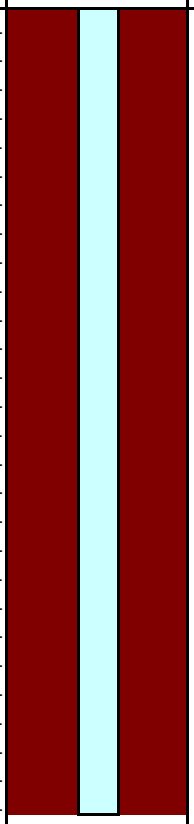
| WELL CONSTRUCTION LOG | Sheet 4 of 5 | Well ID.: MW-12 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 243 ft bgs | |
| Date(s) Drilled: 6 to 12 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 165 |  | C | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | Some fractures noted, none that provide appreciable water. |
| 170 | | | | |
| 175 |  | C | Massive, dark green, porphorytic gabbro of Siluro-Devonian age. Fractures suspected. | Some fractures noted, none that provide appreciable water. |
| 180 | | | | |
| 185 | | | | |
| 190 | | | | |
| 195 | | | | |
| 200 | | | | about 0.25 gal/min yield. |
| 205 |  | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Slightly weathered. Moderately fractured. | |
| 210 | | | | |
| 215 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 5 of 5 | Well ID.: MW-12 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 243 ft bgs | |
| Date(s) Drilled: 6 to 12 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| |  | | Same as above. | |
| 220 | | F | Fracture zone at 224 ft bgs. | |
| | | F | Fracture zone at 224 ft bgs. | |
| 225 | | | | |
| 230 | | F | Fracture zone 230 to 232 ft bgs. | |
| | | F | | |
| 235 | | | | |
| | | F | Fracture zone 236 to 237 ft bgs. | |
| | | F | | |
| 240 | | | | |
| | | | End of boring at 243 ft bgs. | about 2 gal/min yield. |
| 245 | | | | |
| 250 | | | | |
| 255 | | | | |
| 260 | | | | |
| 265 | | | | |
| 270 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

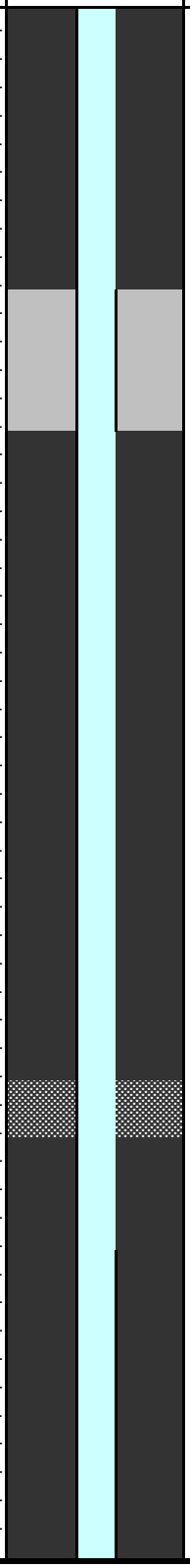
| WELL CONSTRUCTION LOG | Sheet 1 of 5 | Well ID: MW-13 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 219 ft bgs | |
| Date(s) Drilled: 5 March to 2 April 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 12 ft | |
| Drill Rig: Mobile Drill B-59 | Well Construction: 4-in steel casing to 16.5 ft, ~4-in open hole | |
| Drill Foreman: Wayne Macpherson | Static Water Depth: 25.3 ft bgs | |
| Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | Water Production: 2 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5 | | | Unconsolidated Pleistocene sand and gravel overburden. | Not logged in detail. |
| 10 | | C | | |
| 15 | | F | Dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. (dark gray intervals in graphic log to left) | Water loss at 12.5 ft bgs |
| 20 | | | | |
| 25 | | | | |
| 30 | | | | |
| 35 | | | | |
| 40 | | F, M | Pale gray, fine-grained granite likely of Devonian age. Unweathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. (pale gray intervals in graphic log to left) | Fracture produces little water. |
| 45 | | | | |
| 50 | | | | No water flow noted. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

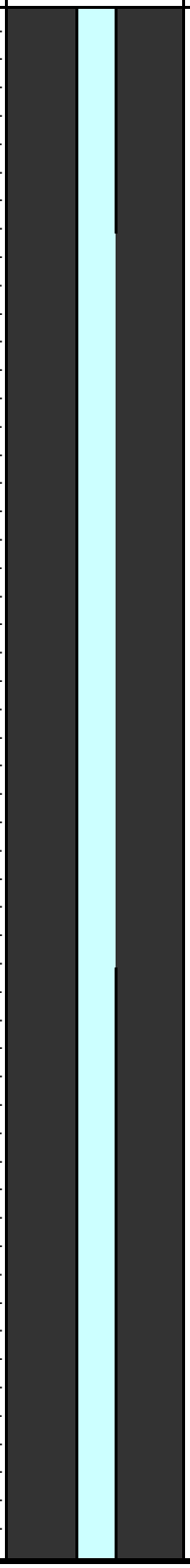
| WELL CONSTRUCTION LOG | Sheet 2 of 5 | Well ID: MW-13 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 219 ft bgs | |
| Date(s) Drilled: 5 March to 2 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 |  | | Dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. (dark gray intervals in graphic log to left) | |
| 60 | | F | Pale gray, fine-grained granite likely of Devonian age. Unweathered. Moderately fractured. (pale gray intervals in graphic log to left) | |
| 65 | | | | |
| 70 | | | | |
| 75 | | | | |
| 80 | | | | |
| 85 | | | | |
| 90 | | F, M | Dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation with pale gray, fine-grained granite likely of Devonian age. Unweathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. (dark gray stippled intervals in graphic log to left) | |
| 95 | | F | | |
| 100 | | | | |
| 105 | | F | | Fracture produces ~0.5 gal/min water. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

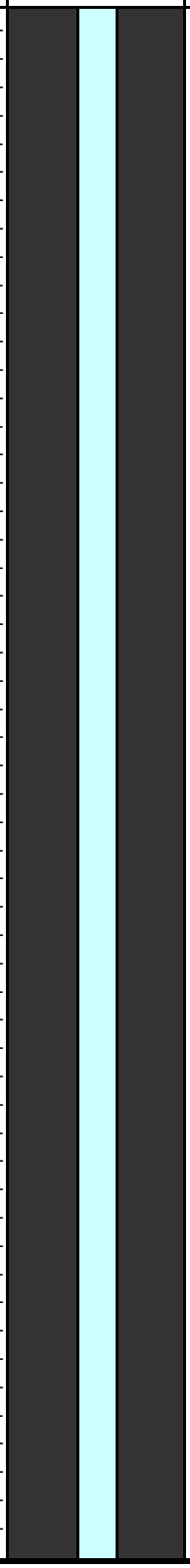
| WELL CONSTRUCTION LOG | Sheet 3 of 5 | Well ID: MW-13 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 219 ft bgs | |
| Date(s) Drilled: 5 March to 2 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. (dark gray intervals in graphic log to left) | |
| 115 | | | | |
| 120 | | | | |
| 125 | | | | |
| 130 | | | | |
| 135 | | | | |
| 140 | | | | |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

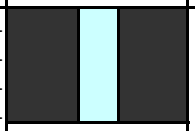
| WELL CONSTRUCTION LOG | Sheet 4 of 5 | Well ID: MW-13 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | Total Well Depth: 219 ft bgs | |
| Date(s) Drilled: 5 March to 2 April 2003 | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 165 |  | F, M | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization. | |
| 170 | | F, M | | |
| | | F, M | | |
| 175 | | | | |
| 180 | | | | |
| 185 | | | | |
| 190 | | | | |
| 195 | | | | |
| 200 | | | | Well produces minimal water. |
| 205 | | | | |
| 210 | | | | |
| 215 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

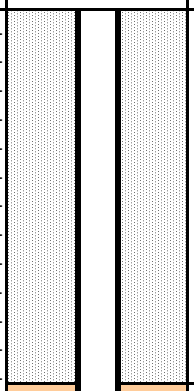
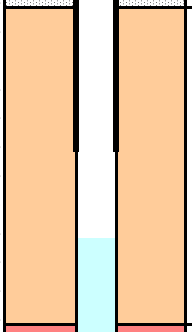
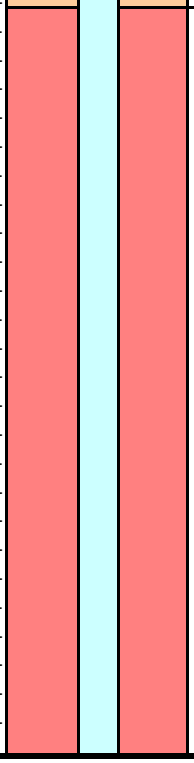
| WESTON SOLUTIONS | WELL CONSTRUCTION LOG | Sheet 5 of 5 | Well ID: MW-13 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Drilling Method: 3-7/8-in OD air hammer | |
| Client: ACOE | | Total Well Depth: 219 ft bgs | |
| Date(s) Drilled: 5 March to 2 April 2003 | | Logged by: K. Taylor-Soukup/S. Combs/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 220 |  | | Flow-banded, dark gray, basaltic devitrified vitrophyre member of the Devonian Eastport Formation. Slightly weathered. Moderately fractured, with fractures partly healed with limonite and hematite mineralization.<br><br>End of boring at 219 ft bgs. | Well produces minimal water at the end of drilling. |
| 225 | | | | |
| 230 | | | | |
| 235 | | | | |
| 240 | | | | |
| 245 | | | | |
| 250 | | | | |
| 255 | | | | Well produces minimal water. |
| 260 | | | | |
| 265 | | | | |
| 270 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 1 of 2 | Well ID: MW-14 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 101 ft bgs | |
| Date(s) Drilled: 25 to 26 March 2003 | Ground Elevation: | |
| Drilling Contractor: Great Works | Overburden Thickness: 13 ft | |
| Drill Rig: CME 850 Track-mounted | Well Construction: 4-in steel casing to 18 ft, ~4-in open hole | |
| Drill Foreman: Jeff Lee | Static Water Depth: 17.5 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: ~ 2 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5–10 |  | C | Unconsolidated Pleistocene overburden. | Not logged in detail. |
| 15–20 |  | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>C, F, M | Massive, pale red to brown, biotite granodiorite of Devonian age. Slightly to non-weathered. Few low-angle fractures; common, open, 45° fractures with limonite, hematite, and pyrolusite mineralization. | Moderately fractured throughout. |
| 25–50 |  | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M | Massive, light red, biotite granodiorite of Devonian age. Gabbroic inclusions noted at 26.8, 35.8, and 45.5 to 47 ft bgs. Slightly to non-weathered. Common, open to partly healed, 20-30° fractures mineralized with limonite and hematite; common open, 85° fractures, heavily mineralized with limonite and hematite. | Moderately fractured throughout. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

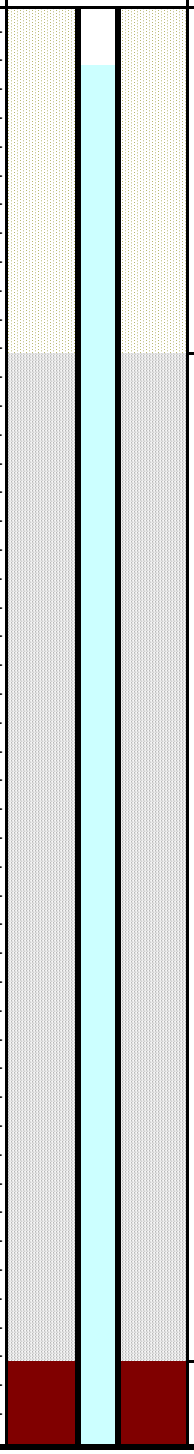
| WELL CONSTRUCTION LOG | Sheet 2 of 2 | Well ID.: MW-14 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | Total Well Depth: 101 ft bgs | |
| Date(s) Drilled: 25 to 26 March 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| | | F, M<br>F, M<br>F, M<br>C, F, M | Same as above. | Moderately fractured throughout. |
| 55 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M | Massive, dark green, porphorytic gabbro of Siluro-Devonian age. Rare, open, fractures, slightly mineralized with hematite; 60-75° fractures, healed with potassium-feldspar.<br>Hydraulically-active fractures. | Fractures uncommon to rare. |
| 60 | | | | |
| 65 | | F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>F, M<br>C, F, M | | |
| 70 | | | | |
| 75 | | F, M<br>C, F, M | Common, very dark red potassium-feldspar intrusions in gabbro of Devonian age. Weathered, with hematite mineralization on the 50° fractures . | Rare fractures. |
| 80 | | F, M<br>F, M<br>F, M | Massive, dark gray-green gabbro of Siluro-Devonian age. Uncommon, healed, 30-60° fractures, mineralized with potassium-feldspar. | Uncommon fractures. |
| 85 | | | Same as above, uncommon 75° fractures. | |
| 90 | | F, M | | |
| 95 | | F, M<br>F, M | | Unfractured. |
| 100 | | | End of boring at 101 ft bgs. | |
| 105 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 1 of 4 | Well ID: TW-1 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 8 to 11 May 2003 | Ground Elevation: | |
| Drilling Contractor: D.L. Maher | Overburden Thickness: 47.5 ft | |
| Drill Rig: Reich T-690 | Well Construction: 6.1-in steel casing to 52.5 ft, ~6-in open hole | |
| Drill Foreman: Bill Zamow | Static Water Depth: 2.1 ft bgs | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | Water Production: 50 gallons/minute | |

| Depth (ft bgs) | Graphic Log | Features | Descriptive Log | Remarks |
|---|---|---|---|---|
| 5–10 |  | C | Unconsolidated silty sand Pleistocene overburden. | Not logged in detail. |
| 15–45 | | C | Unconsolidated gray clay of the Pleistocene Presumpscot Formation. | Not logged in detail. |
| 50 | | | See next page. | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

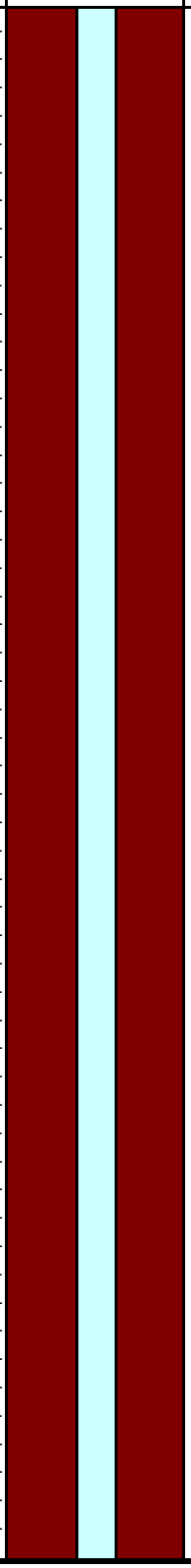
| WELL CONSTRUCTION LOG | Sheet 2 of 4 | Well ID.: TW-1 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 8 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 55 | | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Contains some pale yellow-green feldspathoids and pink feldspars. Slightly weathered. Moderately fractured. | |
| 60 | | | | |
| 65 | | | | |
| 70 | | F? | Possible fracture zone. | Increased drilling rate. |
| 75 | | F? | Possible fracture zone. | Increased drilling rate. |
| 80 | | F? | Possible fracture zone. | Increased drilling rate. |
| 85 | | | | |
| 90 | | F? | Possible fracture zone. | Increased drilling rate. |
| 95 | | F? | Possible fracture zone. | Increased drilling rate. |
| 100 | | | | |
| 105 | | F<br>F | Fracture zone 100 to 100 ft bgs.<br>Hydraulically active 97 to 105 ft bgs. | Increased drilling rate. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

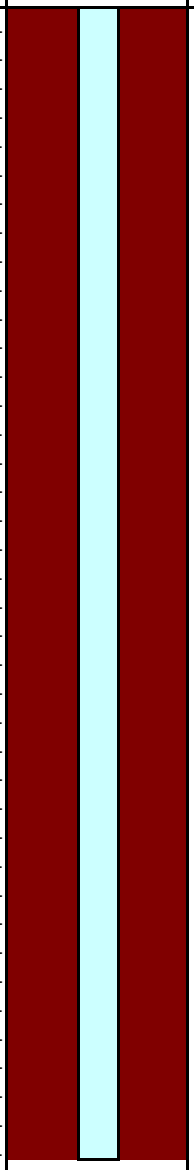
| WELL CONSTRUCTION LOG | Sheet 3 of 4 | Well ID.: TW-1 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 8 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 110 |  | | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Contains some pale yellow-green feldspathoids and pink feldspars. Slightly weathered. Moderately fractured. | |
| 115 | | | | |
| 120 | | | | |
| 125 | | | | |
| 130 | | | | |
| 135 | | F | Fracture zone, hydraulically active. | Increased drilling rate. |
| 140 | | F<br>F<br>F | Fracture zone 140 to 143 ft bgs. | Increased drilling rate. |
| 145 | | | | |
| 150 | | | | |
| 155 | | | | |
| 160 | | F | Fracture zone 152 to 162 ft bgs. | Increased drilling rate. |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

| WELL CONSTRUCTION LOG | Sheet 4 of 4 | Well ID.: TW-1 |
|---|---|---|
| Project: Bucks Harbor AFRTS | Drilling Methods: 9.75-in mud rotary/6.068-in air hammer | |
| Client: ACOE | Total Well Depth: 200 ft bgs | |
| Date(s) Drilled: 8 to 11 May 2003 | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

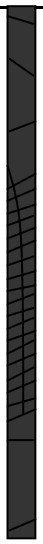
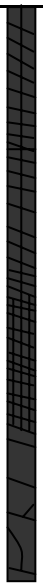
| Depth (ft bgs) | Graphic Log | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|
| 165 |  | F<br>F | Flow-banded, very dark red and very dark gray, rhyolitic and basaltic devitrified vitrophyre members of the Devonian Eastport Formation. Contains some pale yellow-green feldspathoids and pink feldspars. Slightly weathered. Moderately fractured. | |
| 170 | | F<br>F | Fracture zone 168 to 169 ft bgs, very hydraulically-active. | ~50 gal/min yield. |
| 175 | | | | |
| 180 | | | | |
| 185 | | | | |
| 190 | | | | |
| 195 | | | | |
| 200 | | | End of boring at 200 ft bgs. | Total ~50 gal/min yield. |
| 205 | | | | |
| 210 | | | | |
| 215 | | | | |

Draft

Legend: F-Fracture, C-Contact, M-Mineralized Zone, WX-Weathered Zone

# ROCK CORING LOGS

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 1 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 13 to 17 March 2003 | | Core Angle: vertical | |
| Drilling Contractor: Great Works Test Boring, Inc. | | Ground Elevation: | |
| Drill Rig: CME 850 Track-mounted | | No. of Core Boxes: 3 | |
| Drill Foreman: Jeff Lee | | Overburden Thickness: 15 ft | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | | Depth to Groundwater: | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 16 |  | Rec 75%<br>RQD 17% | 7:45<br>11:00<br>5:30<br>5:00<br>5:30 | Dark gray, vitrophyric zone of the rhyolite in the Lower Devonian Eastport Formation. Slightly weathered. Common (6-10 " apart), open, 10° low-angle fractures; common, partly open, 45° moderate-angle fractures, and one, open, 85° high-angle fracture; all fractures have hematite/limonite mineralization. No drilling breaks. | Core Run 1 15-20 ft bgs<br>Drilling action: smooth<br>Water loss: 2%<br>Box 1<br>most of recovered interval is highly fractured. |
| 17 | | FZ | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 |  | Rec 80%<br>RQD 17%<br>FZ<br>D | 7:45<br>11:00<br>5:30<br>5:00<br>5:30 | Dark gray, vitrophyric zone of the rhyolite in the Lower Devonian Eastport Formation. Slightly weathered. Common (6-10 " apart), open, 10° low-angle fractures; common, partly open, 30° moderate-angle fractures, and one, open, 80° high-angle fracture; all fractures have hematite and limonite mineralization. Rare drilling breaks. | Core Run 2 20-25 ft bgs<br>Drilling action: smooth<br>Water loss: 2%<br>Box 1<br>most of recovered interval is highly fractured. |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

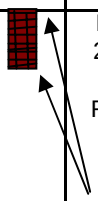
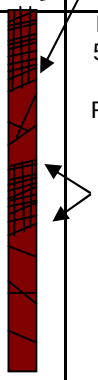
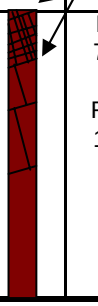
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 2 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 26 |  | Rec 65%<br>RQD 7% | 7:00<br>8:30 | Dark gray, vitrophyric zone of the rhyolite in the Lower Devonian Eastport Formation. Slightly weathered. Common (6-10 " apart), open, 10° low-angle fractures; common, partly open, 45° moderate-angle fractures, and one, open, 85° high-angle fracture; all fractures have hematite/limonite mineralization. Rare drilling breaks. | Core Run 3 25-30 ft bgs<br>Drilling action: smooth<br>Water loss: 4%<br>Box 1 |
| 27 | | D<br>D<br>C<br>D<br>D<br>D<br>D<br>D | 12:30 | Flow-banded, vitreous, dark red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation. Unweathered. Common, partly open, 45° moderate-angle fractures, and one, open, 85° high-angle fracture; all fractures have hematite/limonite mineralization. The trace of the moderate-angle fractures can be seen as a lineation on the high-angle fracture faces. Common, conchoidal drilling breaks in the highly fractured core recovered. | most of recovered interval is highly fractured. |
| 28 | | | 11:00 | | |
| 29 | | | 10:30 | | |
| 30 | | | | | |
| 31 | | Rec 50%<br>RQD 15%<br>D | 7:00<br>8:30 | Same as above.<br>Flow-banded, very dark red and very dark gray, rhyolite and vitrophyre of the Lower Devonian Eastport Formation. Unweathered. Common, partly open, 45° moderate-angle fractures, and one, open, 85° high-angle fracture; all fractures have hematite/limonite, and trace dendritic pyrolusite mineralization. The trace of the moderate-angle fractures can be seen as a lineation on the high-angle fracture faces. Uncommon drilling breaks. | Core Run 4 30-35 ft bgs<br>Drilling action: smooth<br>Water loss: 4%<br>Box 2<br>most of recovered interval is highly fractured. |
| 32 | | FZ | 12:30 | | |
| 33 | | | 11:00 | | |
| 34 | | | 10:30 | | |
| 35 | | | | | |
| 36 | | FZ | 23:00 | See below. | Core Run 5 35-40 ft bgs<br>most of recovered interval is highly fractured. |

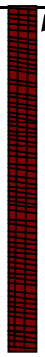
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 3 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl, CG | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 37 |  | Rec 25%<br>RQD 0%<br>FZ | 18:30<br>3:00 | Very dark red and dark gray, flow-banded rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare, 0.125" pale yellow-green phenocrysts. Slightly weathered. Common, partly open, coupled, 45° moderate-angle fractures, and rare, open, 70-80° high-angle fracture; all fractures have hematite/limonite, and trace dendritic pyrolusite mineralization. No drilling breaks. | Core Run 5 35-40 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 2<br>most of recovered interval is highly fractured. |
| 38 | | | 6:00 | | |
| 39 | | | 11:00 | | |
| 40 | | FZ | | | |
| 41 |  | Rec 50%<br>RQD 0%<br>FZ | 2:00<br>8:00 | Very dark red and dark gray, flow-banded rhyolite and dark gray vitrophyre of the Lower Devonian Eastport Formation, with rare, 0.125" pale yellow-green phenocrysts. Slightly weathered. Common (less than 1" apart), partly open to healed, coupled, 45° moderate-angle fractures; all fractures have hematite/limonite, and trace dendritic pyrolusite mineralization. No drilling breaks. | Core Run 6 40-45 ft bgs<br>Drilling action: smooth<br>Water loss: <5%<br>Box 2<br>most of recovered interval is highly fractured. |
| 42 | | | 18:00 | | |
| 43 | | | 4:00 | | bit replaced @ 43.5 ft |
| 44 | | | 6:00 | | |
| 45 | | FZ | | | |
| 46 |  | Rec 75%<br>RQD 10% | 5:00 | Very dark red and black, flow-banded rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare, 0.125" pale yellow-green phenocrysts. Slightly weathered. Common (6" apart above 49.5 ft, less than 1" apart below 49.5 ft), partly open to healed, coupled, 45° moderate-angle fractures and 90°, high-angle fractures; all fractures have heavy hematite/limonite mineralization. No drilling breaks. | Core Run 7 45-50 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 47 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 4 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 48 |  | D<br>FZ | 10:00<br>17:00 | See above. | Core Run 7 45-50 ft bgs |
| 49 | | | 6:00 | | |
| 50 | | | | | |
| 51 |  | Rec 20%<br>RQD 0%<br>FZ | 5:00<br>6:00 | Very dark red and black, flow-banded rhyolite and vitrophyre of the Lower Devonian Eastport Formation. Slightly weathered. Common (generally less than 1"), partly open to healed, coupled, 45° moderate-angle fractures and 90°, high-angle fractures; all fractures have heavy hematite/limonite mineralization. No drilling breaks. | Core Run 8 50-55 ft bgs<br><br>Drilling action: smooth<br>Water loss: 5%<br><br>Box 3<br><br>all of recovered interval is highly fractured and broken. |
| 52 | | | 5:00 | | |
| 53 | | | 7:00 | | |
| 54 | | | 11:00 | | |
| 55 | | | | | |
| 56 |  | Rec 80%<br>RQD 0%<br>FZ | 9:00<br>14:00 | Very dark red and black, flow-banded rhyolite and vitrophyre of the Lower Devonian Eastport Formation. Slightly weathered. Common (less than 1" apart), partly open to healed, coupled, 45° moderate-angle fractures and 90°, high-angle fractures; all fractures have moderate hematite/limonite mineralization. No drilling breaks. | Core Run 9 55-58 ft bgs<br><br>Drilling action: smooth<br>Water loss: 0%<br><br>Box 3<br><br>all of recovered interval is highly fractured and broken. |
| 57 | | | 22:00 | | |
| 58 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 5 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 59 | | | | Not cored. | coring abandoned at 58 ft bgs, due to excessive wear on bit.<br><br>Interval drilled using air hammer, logged based on cuttings. |
| 60 | | | 0:53 | Rock cuttings comparable to previous interval. | drilling times are not comparable to coring times for shallower intervals. |
| 61 | | | 0:50 | | |
| 62 | | | 0:50 | | |
| 63 | | | 0:50 | | |
| 64 | | | 0:50 | | |
| 65 | | | 0:50 | Rock cuttings comparable to previous interval. | |
| 66 | | | 0:50 | | |
| 67 | | | 0:50 | | |
| 68 | | | 0:50 | | |
| 69 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 6 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| | | | 0:50 | | Interval drilled using air hammer, logged based on cuttings. |
| 70 | | | 1:00 | Rock cuttings comparable to previous interval. | drilling times are not comparable to coring times for shallower intervals. |
| 71 | | | 1:00 | | |
| 72 | | | 1:00 | | |
| 73 | | | 1:10 | | |
| 74 | | | 1:10 | | fracture encountered; water flow does not increase. |
| 75 | | | 1:00 | Rock cuttings comparable to previous interval. | |
| 76 | | | 1:00 | | |
| 77 | | | 1:10 | | |
| 78 | | | 1:00 | | |
| 79 | | | 1:10 | | |
| 80 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 7 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| | | | 1:10 | Rock cuttings comparable to previous interval. | fracture encountered; water increases temporarily |
| 81 | | | 1:10 | | |
| | | | | | Interval drilled using air hammer, logged based on cuttings. |
| 82 | | | 1:10 | | |
| | | | | | drilling times are not comparable to coring times for shallower intervals. |
| 83 | | | 1:10 | | |
| 84 | | | 1:10 | | |
| 85 | | | 1:10 | Rock cuttings comparable to previous interval. | |
| 86 | | | 1:10 | | |
| 87 | | | 1:10 | | |
| 88 | | | 1:10 | | |
| 89 | | | 1:10 | | |
| 90 | | | 1:10 | Rock cuttings comparable to previous interval. | |
| 91 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 8 of 8 | Boring No.: MW-4 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 15 to 100 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| | | | 1:10 | Rock cuttings comparable to previous interval. | Interval drilled using air hammer, logged based on cuttings. |
| 92 | | | 1:10 | | drilling times are not comparable to coring times for shallower intervals. |
| 93 | | | 1:10 | | fracture encountered; water flow does not increase. |
| 94 | | | 1:10 | | fracture encountered; water flow does not increase. |
| 95 | | | 1:10 | | |
| 96 | | | 1:10 | | |
| 97 | | | 1:10 | | fracture encountered; water flow does not increase. |
| 98 | | | 1:10 | | |
| 99 | | | 1:10 | | |
| 100 | | | | | well yields about 0.75 gal/min. |
| | | | | End of boring. | |
| 101 | | | | | |
| 102 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 1 of 5 | Boring No.: MW-8b |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 10 to 55 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Core Angle: vertical | |
| Drilling Contractor: Great Works Test Boring, Inc. | | Ground Elevation: | |
| Drill Rig: CME 850 Track-mounted | | No. of Core Boxes: 4 | |
| Drill Foreman: Jeff Lee | | Overburden Thickness: 10 ft | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | | Depth to Groundwater: | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 11 | | Rec 100%<br>RQD 79% | 5:30 | Flow-banded, dark red, vitrophyric zone of the rhyolite in the Lower Devonian Eastport Formation, heavily intruded with dark olive gabbro (olivine imparts dominant rock color). Non-weathered. Few, open, 35° moderate-angle fractures and one 75° high-angle fracture. No drilling breaks. | Core Run 0 10-11 ft bgs<br>Drilling action: smooth<br>Water loss: 2%<br>Box 1 |
| 12<br>13<br>14<br>15<br>16 | | Rec 93%<br>RQD 47%<br>D<br>D<br>FZ<br>D | 7:45<br>11:00<br>5:30<br>5:00<br>5:30 | Flow-banded, dark red, vitrophyric zone of the rhyolite in the Lower Devonian Eastport Formation with 0.25-2" pink, gray, and green phenocrysts, heavily intruded with dark olive gabbro (olivine imparts dominant rock color); blocks of vitrophyre evident in gabbro matrix. Slightly weathered. Three apparent fracture sets: common (2-6 " apart), open, 15° low-angle fractures. Rare, partly open, 35° moderate-angle fractures. One, open, 75° high-angle fracture; all fractures have heavy hematite/limonite, and trace pyrolusite mineralization. Two drilling breaks. | Core Run 1 11-16 ft bgs<br>Drilling action: smooth<br>Water loss: 2%<br>Box 1 |
| 17<br>18<br>19<br>20 | | Rec 100%<br>RQD 65% | 5:30<br>7:00<br>6:45<br>6:00 | Black, vitrophyre with few 1-3 mm inclusions of red flow-banded rhyolite of the Lower Devonian Eastport Formation. Slightly weathered. Two apparent fracture sets: common, open, 10° low-angle fractures; rare, open, 35° moderate-angle fractures; neither fracture set has mineralization. No drilling breaks. | Core Run 2 16-21 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 1 |

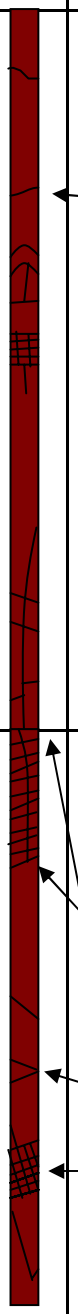
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 2 of 5 | Boring No.: MW-8b |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 10 to 55 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 21 | | | 6:00 | See above. | Core Run 2 16-21 ft bgs |
| 22 | | Rec 100%<br>RQD 81% | 7:00<br>8:30 | Flow-banded, dark red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation. Slightly weathered. common, open, 15° low-angle drilling break; uncommon, partly healed, 40° moderate-angle fractures, with heavy hematite/limonite mineralization. Color darkens and phenocrysts smaller below 25 ft. | Core Run 3 21-26 ft bgs<br>Drilling action: smooth<br>Water loss: 4%<br>Box 2 |
| 23 | | | 12:30 | | |
| 24 | | | 11:00 | | |
| 25 | | | 10:30 | | |
| 26 | | D<br>D | | | |
| 27 | | Rec 95%<br>RQD 65% | 8:30<br>8:30 | Flow-banded, dark red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with 0.125" phenocrysts. Slightly weathered. rare, 15° low-angle drilling breaks; rare, partly healed, 30° moderate-angle fractures; common, partly healed, 90° high-angle fractures, with heavy hematite/limonite, pyrolusite, and a white mineral mineralization. | Core Run 4 26-31 ft bgs<br>Drilling action: smooth<br>Water loss: 4%<br>Box 2 |
| 28 | | | 8:00 | | |
| 29 | | FZ | 10:30 | | |
| 30 | | | 23:00 | | |
| 31 | | D | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 3 of 5 | Boring No.: MW-8b |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 10 to 55 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 32 |  | Rec 100%<br>RQD 74%<br>D | 18:30<br>3:00 | Flow-banded, dark red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with 0.125" phenocrysts. Slightly weathered. Rare, 15° low-angle drilling breaks; rare, open, 30° moderate-angle fractures; common, partly healed, 90° high-angle fractures, with heavy hematite/limonite, and a white mineral mineralization, especially around 35 ft bgs, where pitting is evident on the surface. | Core Run 5 31-36 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 2 |
| 33 | | FZ | 6:00 | | |
| 34 | | | 11:00 | | |
| 35 | | | 8:30 | | |
| 36 | | | | | |
| 37 | | Rec 90%<br>RQD 57%<br>FZ | 17:30<br>11:00 | Flow-banded, red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare 0.125" phenocrysts. Slightly weathered. Rare, 15° low-angle drilling breaks; uncommon, partly healed, 30° moderate-angle fractures; common, partly healed, 90° high-angle fractures, with heavy hematite, limonite, and a white mineral mineralization. | Core Run 6 36-41 ft bgs<br>Drilling action: smooth<br>Water loss: 10%<br>Box 3 |
| 38 | | | 5:30 | | |
| 39 | | D<br>FZ | 7:00 | | |
| 40 | | | not recorded | | |
| 41 | | | | | |
| 42 | | Rec 100%<br>RQD 56% | 5:00 | See next page. | Core Run 7 41-46 ft bgs<br>Drilling action: smooth<br>Water loss: 5% |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 4 of 5 | Boring No.: MW-8b |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 10 to 55 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 43 |  | Rec 100%<br>RQD 56% | 10:00<br>17:00<br>6:00<br>6:30 | Flow-banded, dark red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare 0.125" phenocrysts. Non-weathered. Rare, 15° low-angle unmineralized fractures; uncommon, partly healed, 30° moderate-angle fractures with trace limonite and siderite? mineralization; common, partly healed, 90° high-angle fractures, with moderate hematite/limonite mineralization. | Core Run 7 41-46 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 |  | Rec 100%<br>RQD 33% | 6:00<br>5:00<br>7:00<br>11:00<br>13:00 | Flow-banded (indistinct), red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare, indistinct, 0.125" phenocrysts. Slightly weathered. Uncommon, open, 35° moderate-angle fractures and uncommon, partly healed, 85° high-angle fractures, both with moderate hematite/limonite, and a feldspar mineralization. | Core Run 8 46-51 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 48 | | | | | |
| 49 | | | | | |
| 50 | | | | | |
| 51 | | | | | |
| 52 |  | Rec 75%<br>RQD 57%<br>D<br>D | 16:30<br>9:30 | Flow-banded, red and black, rhyolite and vitrophyre of the Lower Devonian Eastport Formation, with rare 0.125" phenocrysts. Non-weathered. Rare, 15° low-angle drilling breaks; uncommon, partly healed, 30° moderate-angle fractures with trace limonite and siderite? mineralization; common, partly healed, 90° high-angle fractures, with moderate hematite/limonite mineralization. | Core Run 9 51-55 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 53 | | | | | |

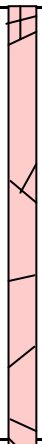
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 5 of 5 | Boring No.: MW-8b |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 10 to 55 ft bgs | |
| Date(s) Cored: 19 to 28 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 54 |  | | 18:30<br><br>22:00 | See above. | Core Run 9 51-55 ft bgs |
| 55 | | | | End of boring. | |
| 56 | | | | | |
| 57 | | | | | |
| 58 | | | | | |
| 59 | | | | | |
| 60 | | | | | |
| 61 | | | | | |
| 62 | | | | | |
| 63 | | | | | |
| 64 | | | | | |

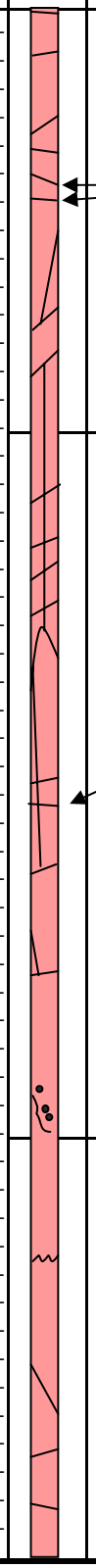
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 1 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Core Angle: vertical | |
| Drilling Contractor: Great Works Test Boring, Inc. | | Ground Elevation: | |
| Drill Rig: CME 850 Track-mounted | | No. of Core Boxes: 6 | |
| Drill Foreman: Jeff Lee | | Overburden Thickness: 18 ft | |
| Logged by: K. Taylor-Soukup/ J. Schmidl, CG | | Depth to Groundwater: | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 19 |  | Rec 100%<br>RQD 50% | 4:00<br>4:00<br>5:00 | Massive, pale red to brown, biotite granodiorite of Devonian age. Slightly to non-weathered. Few low-angle fractures; common, open, 45° fractures with hematite/limonite and pyrolusite mineralization. No drilling breaks. | Core Run 1 18-21 ft bgs<br>Drilling action: smooth<br>Water loss: none noted<br>Box 1 |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | Rec 95%<br>RQD 26% | 4:00<br>4:30 | Massive, pale red to brown, biotite granodiorite of Devonian age. Slightly to non-weathered. Few low-angle fractures; common, open, 45° fractures with hematite/limonite and pyrolusite mineralization. No drilling breaks. Gradual change in color. | Core Run 2 21-26 ft bgs<br>Drilling action: smooth<br>Water loss: 95%<br>Box 1 |
| 23 | | | 4:00 | | |
| 24 | | D | 5:00 | Massive, light red, biotite granodiorite of Devonian age. Slightly to non-weathered. Common, open, 20°-30° fractures mineralized with hematite/limonite; one open, 85° fracture, heavily mineralized with hematite/limonite. One drilling break. | |
| 25 | | | 6:30 | | |
| 26 | | | | | |
| 27 | | Rec 95%<br>RQD 39% | 4:00<br>3:30 | Massive, light red, biotite granodiorite of Devonian age. Slightly to non-weathered. Common, open, 30° fractures mineralized with hematite/limonite; open, 85° fractures, heavily mineralized with hematite/limonite. Two drilling breaks. At 26.7 to 26.9 ft, includes a portion of a 2-inch thick gabbro body, with a fine-grained margin. | Core Run 3 26-31 ft bgs<br>Drilling action: smooth<br>Water loss: 98%<br>Box 1 |
| 28 | | | | | |

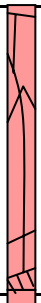
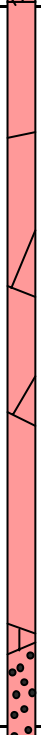
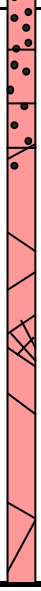
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 2 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 29 |  | D | 4:30 | See above. | Core Run 3 26-31 ft bgs |
| 30 | | | 4:30 | | |
| 31 | | | 4:30 | | |
| 32 | | Rec 100% RQD 42% | 3:15 | Massive, light red, hornblende-bearing biotite granodiorite of Devonian age. Few low-angle, 5° fractures mineralized with limonite and hematite; common, open, 30° fractures mineralized with hematite/limonite; open, 85° fractures, heavily mineralized with hematite/limonite. Rare drilling breaks. | Core Run 4 31-36 ft bgs<br><br>Drilling action: smooth<br>Water loss: 95%<br><br>Box 2 |
| 33 | | | 4:00 | | |
| 34 | | D | 4:30 | | |
| 35 | | | 5:00 | | |
| 36 | | | 6:00 | | |
| 37 | | Rec 95% RQD 61% | 5:30 | Massive, light red, hornblende-bearing biotite granodiorite of Devonian age. Common, open, 30° fractures mineralized with hematite/limonite; partly healed, 60° fractures, heavily mineralized with hematite/limonite and pyrolusite. No drilling breaks. | Core Run 5 36-41 ft bgs<br><br>Drilling action: smooth<br>Water loss: 5%<br><br>Box 2 |
| 38 | | | 6:00 | | |
| 39 | | | 5:30 | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 3 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 40 |  | | 6:00<br>6:30 | See above. | Core Run 5 36-41 ft bgs |
| 41 | | | | | |
| 42 |  | Rec 100%<br>RQD 74% | 5:15<br>5:00 | Massive, light red, hornblende-bearing biotite granodiorite of Devonian age. Common, open, 30° fractures mineralized with hematite/limonite; open, 60° fractures, heavily mineralized with hematite/limonite and pyrolusite. Black, spherical, basaltic inclusions 2-10 mm diameter common from 45.5 ft. No drilling breaks. | Core Run 6 41-46 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 2 |
| 43 | | | 5:30 | | |
| 44 | | | 6:00 | | |
| 45 | | | 7:15 | | |
| 46 | | | | | |
| 47 |  | Rec 100%<br>RQD 53% | 9:00<br>12:00 | Massive, light red, hornblende-bearing biotite granodiorite of Devonian age. Common, open, 30° fractures mineralized with hematite/limonite; open, 60° fractures, heavily mineralized with hematite/limonite and pyrolusite. Black, spherical, basaltic inclusions 2-10 mm diameter with pale areoles, common from 46 to 47 ft. Uncommon drilling breaks. | Core Run 7 46-51 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 48 | | D | 3:30 | | |
| 49 | | | 4:30 | | |
| 50 | | | | | |

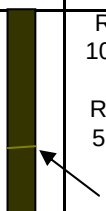
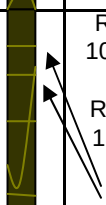
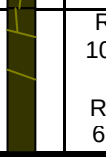
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 4 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 51 | | | 5:00 | See above. | Core Run 7 46-51 ft bgs |
| 52 | | Rec 85%<br>RQD 42%<br>D | 4:00<br>3:30 | Massive, light red, hornblende-bearing biotite granodiorite of Devonian age. Common, open, 30° fractures mineralized with hematite/limonite; open, 60° fractures, heavily mineralized with hematite/limonite and pyrolusite. One drilling break. | Core Run 8 51-56 ft bgs<br>Drilling action: smooth<br>Water loss: 10%<br>Box 3 |
| 53 | | | 3:30 | | |
| 54 | | C | 4:00 | Massive, dark green, gabbro of Devonian age. Drilling results in rubble below 54.6 ft. | |
| 55 | | FZ | 4:15 | | |
| 56 | | | | | |
| 57 | | Rec 100%<br>RQD 84%<br>D | 4:45<br>4:30 | Massive, dark green, porphorytic, gabbro of Siluro-Devonian age. Rare, open, fractures, slightly mineralized with hematite; 60° fractures, healed with potassium-feldspar at 57.75 and 58.5 to 59.8 ft. One drilling break. | Core Run 9 56-61 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 3 |
| 58 | | | 4:45 | | |
| 59 | | | 4:45 | | |
| 60 | | | 6:15 | | |
| 61 | | | | | |

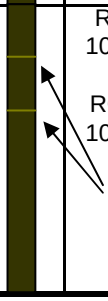
Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 5 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 62 |  | Rec 100%<br>RQD 55%<br>D | 5:45<br>5:00 | Massive, dark green, gabbro of Devonian age. Uncommon, open, fractures, slightly mineralized with hematite; 65° fractures, mineralized with potassium-feldspar . Three drilling breaks. | Core Run 10 61-66 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 4 |
| 63 | | D | 4:45 | | |
| 64 | | | 5:00 | | |
| 65 | | | 4:45 | | |
| 66 | | D | | | |
| 67 |  | Rec 100%<br>RQD 18%<br>D | 5:15<br>5:30 | Massive, dark green, gabbro of Devonian age. Uncommon, open, 75° fractures, mineralized with potassium-feldspar . Ten drilling breaks at lower angles. | Core Run 11 66-71 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 4 |
| 68 | | D | 5:00 | | |
| 69 | | | 5:30 | | |
| 70 | | D | 5:00 | | |
| 71 | | D | | | |
| 72 |  | Rec 100%<br>RQD 65% | 5:30 | Massive, dark green, gabbro of Devonian age. Uncommon, open, 75° fractures, mineralized with potassium-feldspar . No drilling breaks. | Core Run 12 71-76 ft bgs<br>Box 4 |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 6 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 73 |  | C | 5:00<br>4:30 | Massive, dark green, gabbro of Devonian age. Uncommon, open, 75° fractures, mineralized with potassium-feldspar . No drilling breaks. | Core Run 12 71-76 ft bgs<br>Drilling action:<br>Water loss:<br>Box 4 |
| 74 | | | 3:30 | Common, very dark red potassium-feldspar intrusions of Devonian age. Weathered, with hematite mineralization on the low-angle (50°) fractures . | |
| 75 | | WX | 4:30 | | |
| 76 | | | | | |
| 77 |  | Rec 100%<br>RQD 58%<br>D | 5:00<br>4:30 | Massive, dark gray-green, gabbro of Devonian age. Uncommon, healed, 30-50° fractures, mineralized with potassium-feldspar. Two drilling breaks. | Core Run 13 76-81 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 5 |
| 78 | | | 4:00 | | |
| 79 | | | 4:30 | | |
| 80 | | | 4:30 | | |
| 81 | | | | | |
| 82 |  | Rec 100%<br>RQD 100%<br>D | 5:00<br>5:30 | Massive, dark gray-green, gabbro of Devonian age. Uncommon, healed, 30-60° fractures, mineralized with potassium-feldspar, trace hematite. All breaks are drilling breaks. | Core Run 14 81-86 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 5 |
| 83 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 7 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 84 | | | 5:00 | See above. | Core Run 14 81-86 ft bgs |
| | | | 5:30 | | |
| 85 | | M | | | |
| | | D | 5:00 | | |
| 86 | | | | | |
| | | Rec 100% | 5:30 | Massive, dark gray-green, gabbro of Devonian age. Uncommon, healed, 75° fractures, mineralized with potassium-feldspar . 1 cm gash vein filled with weathered feldspar at 88 ft bgs. Five drilling breaks. The two drilling breaks at 87.6 and 90.6 ft bgs also have minor hematite mineralization. | Core Run 15 86-91 ft bgs<br><br>Drilling action: smooth<br>Water loss: 5%<br><br>Box 5 |
| 87 | | RQD 84% | | | |
| | | | 4:30 | | |
| 88 | | D | | | |
| | | | 5:00 | | |
| | | WX | | | |
| 89 | | D | | | |
| | | | 5:30 | | |
| 90 | | | | | |
| | | D | 5:00 | | |
| 91 | | D | | | |
| | | Rec 100% | 5:15 | Massive, dark gray-green, gabbro of Devonian age. Two uncommon, healed, 75° fractures, mineralized with potassium-feldspar, which appears weathered out and partly replaced by hematite mineralization . The remaining breaks are drilling breaks. | Core Run 16 91-96 ft bgs<br><br>Drilling action: smooth<br>Water loss: 5%<br><br>Box 6 |
| 92 | | RQD 77% | | | |
| | | | 4:30 | | |
| 93 | | D | | | |
| | | | 4:30 | | |
| | | WX | | | |
| 94 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

| WESTON SOLUTIONS | ROCK CORING LOG | Sheet 8 of 8 | Boring No.: MW-14 |
|---|---|---|---|
| | Project: Bucks Harbor AFRTS | Coring Method: wire-line H-size (3-5/8-in OD) barrel | |
| Client: ACOE | | Total Core Interval: 18 to 101 ft bgs | |
| Date(s) Cored: 25 to 26 March 2003 | | Logged by: K. Taylor-Soukup/J. Schmidl | |

| Depth (ft bgs) | Graphic Log | Recovery RQD | Core Time (min/ft) | Descriptive Log | Remarks |
|---|---|---|---|---|---|
| 95 |  | WX<br>D | 4:45<br>5:00 | See above. | Core Run 16 91-96 ft bgs |
| 96 | | | | | |
| 97 | | Rec 100%<br>RQD 100%<br>D | 4:15<br>4:45 | Massive, dark gray-green, gabbro of Devonian age. Uncommon, healed, 75° fractures, mineralized with potassium-feldspar . All breaks are drilling breaks. | Core Run 17 96-101 ft bgs<br>Drilling action: smooth<br>Water loss: 5%<br>Box 6 |
| 98 | | | 4:30 | | |
| 99 | | D | 4:30 | | |
| 100 | | D | 4:30 | | |
| 101 | | D | | | |
| 102 | | | | End of Boring | |
| 103 | | | | | |
| 104 | | | | | |
| 105 | | | | | |

Legend: J-Joint, F-Fault, B-Bedding, C-Contact, D-Drilling Break, M-Mineralized Zone, WX-Weathering Zone, FZ-Densely-fractured Zone

# APPENDIX C

# PACKER PERMEABILITY LOGS

# PACKER PERMEABILITY TEST

| | | |
|---|---|---|
| Project: *Bucks Harbor, Maine* | Job No.: *10971.217.002.2003* | |
| Boring No.: *MW-7* | Test No.: *4* | Sheet ___1___ of ___1____ |
| Location: *Transmitter Site* | | |
| Coordinates: *1270134.0 E, 351677.4 N (see site plan)* | | Test Date: *8/15/03* |
| Drilling Contractor: *D. L. Maher* | | Driller: *Kevin Regan* |
| Drilling Fluid: *Water* | | Supervisor: *A. Harris (WESTON)* |

| | | | |
|---|---|---|---|
| Type of Test: *Packer Permeability Injection Test* | | | Water Meter Type: *Neptune (dial)* |
| Hole Size: *4.25" diameter* | | | Packer Type: *Aardvark - Rubber* |
| Rock Description: | Vitrophyre | | Pressure Gauge Type: *Precision (dial)* |
| | (see Well Construction Log | | Height of Pressure Gauge: *4.67 feet* |
| | for more detailed description) | | Type of Surface Casing: *4" diameter steel* |
| | | | Length of Surface Casing (ft): *7' (2.75' ags)* |

| | | | |
|---|---|---|---|
| Top of Test: | 15 | FT BGS | Packer Config.: *Double* |
| Bottom of Test: | 25 | FT BGS | Packer Pressure (PSI): *140 psi* |
| Static Water Level: | 0.26 | FT BGS | Packer Inflation: *Nitrogen* |
| | 3.01 | FT BMP | |

## *Field Measurements*

| ELAPSED TIME (MIN) | GAUGE PRESSURE (PSI) | METER READING (GALLONS) | WATER LEVEL (FT BMP) |
|---|---|---|---|
| 0 | 12 | 1765.20 | 5.45 |
| 0.5 | 12 | 1765.40 | |
| 1 | 12 | 1765.53 | 5.15 |
| 1.5 | 12 | 1765.72 | |
| 2 | 12 | 1765.83 | 4.90 |
| 2.5 | 12 | 1766.00 | |
| 3 | 12 | 1766.12 | 4.70 |
| 3.5 | 12 | 1766.30 | |
| 4 | 12 | 1766.40 | 4.43 |
| 4.5 | 12 | 1766.51 | |
| 5 | 12 | 1766.68 | 4.30 |
| 5.5 | 12 | 1766.81 | |
| 6 | 12 | 1766.95 | 4.15 |
| 6.5 | 12 | 1767.08 | |
| 7 | 12 | 1767.20 | 3.98 |
| 7.5 | 12 | 1767.30 | |
| 8 | 12 | 1767.43 | 3.82 |
| 8.5 | 12 | 1767.58 | |
| 9 | 12 | 1767.68 | 3.70 |
| 9.5 | 12 | 1767.81 | |
| 10 | 12 | 1767.91 | 3.55 |

## *RESULTS:*

Calculated Permeabiltiy = 0.096 ft/day

*** "Best" Estimate of Permeabiltiy based on Test Conditions = 0.096 ft/day**

(Refer to RI Report for description of test, equations used, factors affecting calculations)

# PACKER PERMEABILITY TEST

| | | |
|---|---|---|
| Project: *Bucks Harbor, Maine* | Job No.: *10971.217.002.2003* | |
| Boring No.: *MW-10* | Test No.: *3* | Sheet ___1___ of ___1____ |
| Location: *Transmitter Site* | | |
| Coordinates: *1271989.1 E, 352746.9 N (see site plan)* | | Test Date: *8/16/03* |
| Drilling Contractor: *D. L. Maher* | | Driller: *Kevin Regan* |
| Drilling Fluid: *Water* | | Supervisor: *A. Harris (WESTON)* |

| | | | |
|---|---|---|---|
| Type of Test: *Packer Permeability Injection Test* | | | Water Meter Type: *Neptune (dial)* |
| Hole Size: *4.1" diameter* | | | Packer Type: *Aardvark - Rubber* |
| Rock Description: | Vitrophyre | | Pressure Gauge Type: *Precision (dial)* |
| | (see Well Construction Log | | Height of Pressure Gauge: *2.08 feet* |
| | for more detailed description) | | Type of Surface Casing: *4" diameter steel* |
| | | | Length of Surface Casing (ft): 13*' (3.68' ags)* |
| Top of Test: | 130 | FT BGS | Packer Config.: *Double* |
| Bottom of Test: | 140 | FT BGS | Packer Pressure (PSI): *140 psi* |
| Static Water Level: | 121.91 | FT BGS | Packer Inflation: *Nitrogen* |
| | 125.59 | FT BMP | |

## *Field Measurements*

| ELAPSED TIME (MIN) | GAUGE PRESSURE (PSI) | METER READING (GALLONS) | WATER LEVEL (FT BMP) |
|---|---|---|---|
| 0 | 10 | 1903.00 | 108.95 |
| 0.5 | 10 | 1905.20 | |
| 1 | 10 | 1903.00 | 108.30 |
| 1.5 | 13 | 1903.00 | |
| 2 | 13 | 1903.80 | 108.10 |
| 2.5 | 13 | 1904.20 | |
| 3 | 13 | 1904.70 | 107.83 |
| 3.5 | 13 | 1905.10 | |
| 4 | 13 | 1905.40 | 107.92 |
| 4.5 | 13 | 1905.70 | |
| 5 | 13 | 1906.00 | 107.21 |
| 5.5 | 13 | 1906.40 | |
| 6 | 13 | 1906.70 | 106.98 |
| 6.5 | 13 | 1907.00 | |
| 7 | 13 | 1907.30 | 106.70 |
| 7.5 | 13 | 1907.70 | |
| 8 | 13 | 1908.00 | 106.38 |
| 8.5 | 13 | 1908.30 | |
| 9 | 13 | 1908.70 | 106.15 |
| 9.5 | 13 | 1909.00 | |
| 10 | 13 | 1909.40 | 105.93 |

## *RESULTS:*

Calculated Permeability = 0.057 ft/day

*** "Best" Estimate of Permeability based on Test Conditions = 0.057 ft/day**

(Refer to RI Report for description of test, equations used, and factors affecting calculations)

# PACKER PERMEABILITY TEST

Project: *Bucks Harbor, Maine* Job No.: *10971.217.002.2003*
Boring No.: *MW-11* Test No.: *4* Sheet ___1___ of ___1____
Location: *Transmitter Site*
Coordinates: *1272528.0 E, 352645.2 N (see site plan)* Test Date: *8/14/03*
Drilling Contractor: *D. L. Maher* Driller: *Kevin Regan*
Drilling Fluid: *Water* Supervisor: *K. Soukup (WESTON)*

Type of Test: *Packer Permeability Injection Test* Water Meter Type: *Neptune (dial)*
Hole Size: *6.5" diameter* Packer Type: *Aardvark - Rubber*
Rock Description: Vitrophyre Pressure Gauge Type: *Precision (dial)*
(see Well Construction Log Height of Pressure Gauge: *1.13 feet*
for more detailed description) Type of Surface Casing: 6.1*" diameter steel*
Length of Surface Casing (ft): 97*' (2.4' ags)*

| | | | |
|---|---|---|---|
| Top of Test: | 97 | FT BGS | Packer Config.: *Double* |
| Bottom of Test: | 107 | FT BGS | Packer Pressure (PSI): *180 psi* |
| Static Water Level: | 54.7 | FT BGS | Packer Inflation: *Nitrogen* |
| | 57.1 | FT BMP | |

## *Field Measurements*

| ELAPSED TIME (MIN) | GAUGE PRESSURE (PSI) | METER READING (GALLONS) | WATER LEVEL (FT BMP) |
|---|---|---|---|
| 0 | 15 | 1704.00 | 39.30 |
| 0.5 | 15 | 1704.80 | 39.30 |
| 1 | 16 | 1705.70 | 39.30 |
| 1.5 | 16 | 1706.40 | 39.30 |
| 2 | 16 | 1707.20 | 39.30 |
| 2.5 | 16 | 1708.00 | 39.30 |
| 3 | 16 | 1708.90 | 39.30 |
| 3.5 | 16 | 1709.70 | 39.30 |
| 4 | 17 | 1710.50 | 39.30 |
| 4.5 | 17 | 1711.30 | 39.30 |
| 5 | 17 | 1712.20 | 39.30 |
| 5.5 | 17 | 1713.00 | 39.30 |
| 6 | 17 | 1713.80 | 39.30 |
| 6.5 | 17 | 1714.60 | 39.30 |
| 7 | 18 | 1715.40 | 39.30 |
| 7.5 | 18 | 1716.20 | 39.30 |
| 8 | 18 | 1717.00 | 39.30 |
| 8.5 | 18 | 1717.90 | 39.30 |
| 9 | 18 | 1718.70 | 39.30 |
| 9.5 | 18 | 1719.60 | 39.30 |
| 10 | 18 | 1720.50 | 39.30 |

## *RESULTS:*

Calculated Permeability = 0.235 ft/day
*** "Best" Estimate of Permeability based on Test Conditions = 0.235 ft/day**

(Refer to RI Report for description of test, equations used, and factors affecting calculations)

# PACKER PERMEABILITY TEST

| | | |
|---|---|---|
| Project: *Bucks Harbor, Maine* | Job No.: *10971.217.002.2003* | |
| Boring No.: *MW-12* | Test No.: *4* | Sheet ___1___ of ___1____ |
| Location: *Transmitter Site* | | |
| Coordinates: *1272315.0 E, 352971.6 N (see site plan)* | | Test Date: *8/15/03* |
| Drilling Contractor: *D. L. Maher* | | Driller: *Kevin Regan* |
| Drilling Fluid: *Water* | | Supervisor: *K. Soukup (WESTON)* |

| | |
|---|---|
| Type of Test: *Packer Permeability Injection Test* | Water Meter Type: *Neptune (dial)* |
| Hole Size: *6.25" diameter* | Packer Type: *Aardvark - Rubber* |
| Rock Description: Vitrophyre | Pressure Gauge Type: *Precision (dial)* |
| (see Well Construction Log | Height of Pressure Gauge: *0.83 feet* |
| for more detailed description) | Type of Surface Casing: 6.1*" diameter steel* |
| | Length of Surface Casing (ft): 18.5*' (1.5' ags)* |

| | | | |
|---|---|---|---|
| Top of Test: | 40 | FT BGS | Packer Config.: *Double* |
| Bottom of Test: | 55 | FT BGS | Packer Pressure (PSI): *180 psi* |
| Static Water Level: | 2.5 | FT BGS | Packer Inflation: *Nitrogen* |
| | 4.0 | FT BMP | |

## *Field Measurements*

| ELAPSED TIME (MIN) | GAUGE PRESSURE (PSI) | METER READING (GALLONS) | WATER LEVEL (FT BMP) |
|---|---|---|---|
| 0 | 12 | 1747.00 | 7.70 |
| 0.5 | 13 | 1747.20 | |
| 1 | 13 | 1747.50 | 7.30 |
| 1.5 | 14 | 1747.70 | |
| 2 | 14 | 1748.00 | 7.00 |
| 2.5 | 14 | 1748.20 | |
| 3 | 14 | 1748.50 | 6.75 |
| 3.5 | 14 | 1748.80 | |
| 4 | 14 | 1749.00 | 6.50 |
| 4.5 | 14 | 1749.30 | |
| 5 | 14 | 1749.50 | 6.18 |
| 5.5 | 14 | 1749.80 | |
| 6 | 14 | 1750.00 | 5.92 |
| 6.5 | 14 | 1750.20 | |
| 7 | 14 | 1750.50 | 5.58 |
| 7.5 | 14 | 1750.70 | |
| 8 | 15 | 1751.00 | 5.30 |
| 8.5 | 15 | 1751.20 | |
| 9 | 15 | 1751.50 | 5.02 |
| 9.5 | 15 | 1751.70 | |
| 10 | 15 | 1752.00 | 4.72 |

## *RESULTS:*

Calculated Permeability = 0.141 ft/day

*** "Best" Estimate of Permeability based on Test Conditions = 0.088 ft/day**

(Refer to RI Report for description of test, equations used, and factors affecting calculations)

# PACKER PERMEABILITY TEST

| | | |
|---|---|---|
| Project: *Bucks Harbor, Maine* | Job No.: *10971.217.002.2003* | |
| Boring No.: *MW-14* | Test No.: 4 | Sheet ___1___ of ___1____ |
| Location: *Transmitter Site* | | |
| Coordinates: *1273854.0 E, 359872.2 N (see site plan)* | | Test Date: *8/13/03* |
| Drilling Contractor: *D. L. Maher* | | Driller: *Kevin Regan* |
| Drilling Fluid: *Water* | | Supervisor: *K. Soukup (WESTON)* |

| | | | |
|---|---|---|---|
| Type of Test: *Packer Permeability Injection Test* | | | Water Meter Type: *Neptune (dial)* |
| Hole Size: *4.1" diameter* | | | Packer Type: *Aardvark - Rubber* |
| Rock Description: | Granodiorite | | Pressure Gauge Type: *Precision (dial)* |
| | (see Well Construction Log | | Height of Pressure Gauge: *2.0 feet* |
| | for more detailed description) | | Type of Surface Casing: *4" diameter steel* |
| | | | Length of Surface Casing (ft): 18*' (4.21' ags)* |
| Top of Test: | 38 | FT BGS | Packer Config.: *Double* |
| Bottom of Test: | 48 | FT BGS | Packer Pressure (PSI): *160 psi* |
| Static Water Level: | 18.73 | FT BGS | Packer Inflation: *Nitrogen* |
| | 20.33 | FT BMP | |

## *Field Measurements*

| ELAPSED TIME (MIN) | GAUGE PRESSURE (PSI) | METER READING (GALLONS) | WATER LEVEL (FT BMP) |
|---|---|---|---|
| 0 | 10 | 1570.50 | 15.02 |
| 0.5 | 10 | 1570.70 | |
| 1 | 10 | 1570.80 | 14.95 |
| 1.5 | 10 | 1571.00 | |
| 2 | 11 | 1571.15 | 14.82 |
| 2.5 | 11 | 1571.30 | |
| 3 | 11 | 1571.45 | 14.70 |
| 3.5 | 11 | 1571.60 | |
| 4 | 11 | 1571.75 | 14.62 |
| 4.5 | 12 | 1571.90 | |
| 5 | 12 | 1572.10 | 14.50 |
| 5.5 | 12 | 1572.25 | |
| 6 | 12 | 1572.40 | 14.40 |
| 6.5 | 12 | 1572.55 | |
| 7 | 12 | 1572.70 | 14.29 |
| 7.5 | 12 | 1572.90 | |
| 8 | 13 | 1573.05 | 14.12 |
| 8.5 | 14 | 1573.20 | |
| 9 | 14 | 1573.40 | 14.02 |
| 9.5 | 14 | 1573.60 | |
| 10 | 14 | 1573.75 | 13.90 |

## *RESULTS:*

Calculated Permeability = 0.094 ft/day

*** "Best" Estimate of Permeability based on Test Conditions = 0.094 ft/day**

(Refer to RI Report for description of test, equations used, and factors affecting calculations)

# APPENDIX D

# LABORATORY ANALYTICAL DATA

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
The matrix spike (MS) analyzed on 06/04/03 49784-10 (DW-04-060301-A) had a recovery of 131% which is above the acceptance criteria of 130%. The MS was reanalyzed with a MSD with all recoveries and RPDs in control. (See Form III).

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49768**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 03 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49768-1 | 06/02/03 | DW32-0603-01-A | Alkalinity | |
| | 06/02/03 | DW32-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW32-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW32-0603-01-A | Metals | |
| | 06/02/03 | DW32-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW32-0603-01-A | Nitrate | |
| | 06/02/03 | DW32-0603-01-A | Nitrite | |
| | 06/02/03 | DW32-0603-01-A | Sulfate | |
| | 06/02/03 | DW32-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-2 | | DW12-0603-01-A | Alkalinity | |
| | | DW12-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW12-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | | DW12-0603-01-A | Metals | |
| | | DW12-0603-01-A | Metals Digestion | |
| | | DW12-0603-01-A | Nitrate | |
| | | DW12-0603-01-A | Nitrite | |

**Sample Receipt Exceptions:** None

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- have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/19/2003

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | | DW12-0603-01-A | Sulfate | |
| | | DW12-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-3 | 06/02/03 | DW40-0603-01-A | Alkalinity | |
| | 06/02/03 | DW40-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW40-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW40-0603-01-A | Metals | |
| | 06/02/03 | DW40-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW40-0603-01-A | Nitrate | |
| | 06/02/03 | DW40-0603-01-A | Nitrite | |
| | 06/02/03 | DW40-0603-01-A | Sulfate | |
| | 06/02/03 | DW40-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-4 | 06/02/03 | DW33-0603-01-A | Alkalinity | |
| | 06/02/03 | DW33-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW33-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW33-0603-01-A | Metals | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/02/03 | DW33-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW33-0603-01-A | Nitrate | |
| | 06/02/03 | DW33-0603-01-A | Nitrite | |
| | 06/02/03 | DW33-0603-01-A | Sulfate | |
| | 06/02/03 | DW33-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-5 | 06/02/03 | DW28-0603-01-A | Alkalinity | |
| | 06/02/03 | DW28-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW28-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW28-0603-01-A | Metals | |
| | 06/02/03 | DW28-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW28-0603-01-A | Nitrate | |
| | 06/02/03 | DW28-0603-01-A | Nitrite | |
| | 06/02/03 | DW28-0603-01-A | Sulfate | |
| | 06/02/03 | DW28-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-6 | 06/02/03 | DW25-0603-01-A | Alkalinity | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/02/03 | DW25-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW25-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW25-0603-01-A | Metals | |
| | 06/02/03 | DW25-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW25-0603-01-A | Nitrate | |
| | 06/02/03 | DW25-0603-01-A | Nitrite | |
| | 06/02/03 | DW25-0603-01-A | Sulfate | |
| | 06/02/03 | DW25-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-7 | 06/02/03 | DW31-0603-01-A | Alkalinity | |
| | 06/02/03 | DW31-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW31-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW31-0603-01-A | Metals | |
| | 06/02/03 | DW31-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW31-0603-01-A | Nitrate | |
| | 06/02/03 | DW31-0603-01-A | Nitrite | |
| | 06/02/03 | DW31-0603-01-A | Sulfate | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/02/03 | DW31-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-8 | 06/02/03 | DW29-0603-01-A | Alkalinity | |
| | 06/02/03 | DW29-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW29-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW29-0603-01-A | Metals | |
| | 06/02/03 | DW29-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW29-0603-01-A | Nitrate | |
| | 06/02/03 | DW29-0603-01-A | Nitrite | |
| | 06/02/03 | DW29-0603-01-A | Sulfate | |
| | 06/02/03 | DW29-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-9 | 06/02/03 | DW36-0603-01-A | Alkalinity | |
| | 06/02/03 | DW36-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW36-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW36-0603-01-A | Metals | |
| | 06/02/03 | DW36-0603-01-A | Metals Digestion | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/02/03 | DW36-0603-01-A | Nitrate | |
| | 06/02/03 | DW36-0603-01-A | Nitrite | |
| | 06/02/03 | DW36-0603-01-A | Sulfate | |
| | 06/02/03 | DW36-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-10 | 06/02/03 | DW39-0603-01-A | Alkalinity | |
| | 06/02/03 | DW39-0603-01-A | Chemical Oxygen Demand | |
| | 06/02/03 | DW39-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW39-0603-01-A | Metals | |
| | 06/02/03 | DW39-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW39-0603-01-A | Nitrate | |
| | 06/02/03 | DW39-0603-01-A | Nitrite | |
| | 06/02/03 | DW39-0603-01-A | Sulfate | |
| | 06/02/03 | DW39-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49768-11 | 06/02/03 | DW06-0603-01-A | Alkalinity | |
| | 06/02/03 | DW06-0603-01-A | Chemical Oxygen Demand | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/02/03 | DW06-0603-01-A | Electronic Data Deliverable | |
| | 06/02/03 | DW06-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/02/03 | DW06-0603-01-A | Metals | |
| | 06/02/03 | DW06-0603-01-A | Metals Digestion | |
| | 06/02/03 | DW06-0603-01-A | Nitrate | |
| | 06/02/03 | DW06-0603-01-A | Nitrite | |
| | 06/02/03 | DW06-0603-01-A | Sulfate | |
| | 06/02/03 | DW06-0603-01-A | Total Organic Carbon in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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Date 6/19/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 19, 2003

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

## ANALYTICAL RESULTS FERROUS IRON
### CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| B06033F | LABQC | N/A | N/A | 06/03/03 | Aqueous | 1 | 0.1 | U |
| L06033F | LABQC | N/A | N/A | 06/03/03 | Aqueous | 1 | 0.1 | **99** |
| LD06033F | LABQC | N/A | N/A | 06/03/03 | Aqueous | 1 | 0.1 | **101** |
| 49768-1 | DW32-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-2 | DW12-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-3 | DW40-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-4 | DW33-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-5 | DW28-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-6 | DW25-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-7 | DW31-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-8 | DW29-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | **0.20** |
| 49768-9 | DW36-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | **0.26** |
| 49768-10 | DW39-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| 49768-11 | DW06-0603-01- | 06/02/03 | 06/03/03 | 06/03/03 | Aqueous | 1 | 0.1 | U |
| B06043F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | U |
| L060403F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | **98** |
| LD06043F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | **100** |
| 49784-10 | DW04-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | **0.14** |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/3/03
Analyst: AMB
Reviewed: MJG 6.19.03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

| | |
|---|---|
| Curve Date: | 6/2/03 |
| Corr Coef. ('r) | 0.9985 |
| Y-int | 0.000976 |
| slope | 0.109 |

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L060303F/CC 1mg/L | 0.107 | 0.991 | 1 | 99% |
| 2 | B06033F | 0.003 | 0.036 | 1 | U |
| 3 | 49768-1 | 0.006 | 0.064 | 1 | U |
| 4 | 49768-2 | 0.005 | 0.055 | 1 | U |
| 5 | 49768-3 | 0.006 | 0.064 | 1 | U |
| 6 | 49768-4 | 0.005 | 0.055 | 1 | U |
| 7 | 49768-5 | 0.008 | 0.082 | 1 | U |
| 8 | 49768-6 | 0.006 | 0.064 | 1 | U |
| 9 | 49768-7 | 0.006 | 0.064 | 1 | U |
| 10 | 49768-8 | 0.021 | 0.202 | 1 | **0.20** |
| 11 | 49768-9 | 0.027 | 0.257 | 1 | **0.26** |
| 12 | 49768-10 | 0.006 | 0.064 | 1 | U |
| 13 | 49768-11 | 0.006 | 0.064 | 1 | U |
| 14 | 49768-3 dup | 0.006 | 0.064 | 1 | U |
| 15 | LD06033F/ CC 1mg/L | 0.109 | 1.009 | 1 | 101% |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

011/058

C:\AnlayticsLLC\Login\AEL documents\logbooks\Ferrous Iron Summary

6·3·03 Ferrous Iron

F031
200mg/L
STOCK

- 0.1455(g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
- 2mL Conc $H_2SO_4$
- 5mL $DiH_2O$
- Dilute to 100mL

F032
1mg/L

0.25mL F031 → 50mL $DiH_2O$

B060033F (method blank) 12.5ml $DiH_2O$ + 5ml Oph + 2ml Ammonium Acetate
L060033F (CC) 12.5ml F032 + 5ml O-ph + 2ml Ammonium Acetate
1mg/L
LD060033F (CCC) 12.5ml F032 + 5ml O-ph + 2ml Ammonium Acetate

| | | | Calculate Value |
|---|---|---|---|
| Method Blank | Absorbance | = 0.002 | <0.1mg/L |
| L060033F(CC) | | = 0.107 | .991 99% |
| B060033F | | = 0.003 | U |
| 49768-1 | | = 0.006 | U |
| -2 | | = 0.005 | U |
| -3 | | = 0.006 | U |
| -4 | | = 0.005 | U |
| -5 | | = 0.008 | U |
| -6 | | = 0.006 | U |
| -7 | | = 0.006 | U |
| -8 | | = 0.021 | ~~0.18~~ 0.20 |
| -9 | | = 0.027 | ~~0.23~~ 0.26 |
| -10 | | = 0.006 | U |
| -11 | | = 0.006 | U |
| -3DUP | | = 0.006 | U |
| LD060033F | | = 0.109 | 101% |

AB 6·4·03

Reagent Page for pg 65 6-3-03

Ferrous Ammonium Sulfate Hexahydrate LOT# 42207238

O-Phenanthroline - LOT# 2343

Ammonium Acetate Buffer (LOT# 223)

6-4-03 Ferrous Iron P-P-060403-1-AB

F033
200mg/L
STOCK

0.1445 (g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2ml CONC $H_2SO_4$ LOT# 032815
5ml $DiH_2O$
→ Dilute to 100ml

F034
1mg/L

0.25ml F033 → 50ml $DiH_2O$

B0604BF (method Blank) 12.5ml $DiH_2O$ + 5ml O-PH + 2ml Ammon. Acetate
L0604BF (CC) 12.5ml F034 + 5ml O-PH + 2ml Ammon. Acetate
.1mg/L
LD0604BF (CCC) 12.5ml F034 + 5ml O-PH + 2ml Ammon. Acetate

L0604BF (CC)
B0604BF (method Blank)
49781-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-10 MS
-10 MSD
LD0604BF (CC)
-10 MSD #3
LD0604BF (CC)
* SPIKED w/ 62.5ul F033

Absorbance =

| Absorbance = | CAL. VALUE |
|---|---|
| =0.106 | .981 |
| =0.000 | <0.1mg/L |
| =-0.002 | |
| =-0.003 | |
| =-0.001 | |
| =0.000 | |
| =0.000 AB 6-4-03 | |
| =-0.0030 | |
| =-0.003 | |
| =-0.003 | |
| =0.007 | |
| =0.016 AB 6-4-03 | |
| =-0.001 | |
| =0.000 | |
| =0.003 | |
| =0.000 | |
| =0.157 | |
| =0.135 | |
| =0.129 AB 6-4-03 | |
| =0.129 | |
| =0.108 | |

Reagent Page for pg 67 6-4-08

Ferrous Ammonium Sulfate Hexahydrate LOT # 4220T238

O-Phenanthroline LOT# 2343

Ammonium Acetate Buffer LOT# 2231

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 19, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** L06033F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/03/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 0.991 | 99.1 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1.009 | 100.9 | 2 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 19, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** L060403F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/04/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 0.981 | 98.1 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1 | 100 | 2 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa A Kelli

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 19, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** 49784-10
**Matrix:** Aqueous
**Field Sample ID:** DW04-0603-01-B
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/04/03

## FERROUS IRON SPIKE RESULTS

**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | **0.14** | 1.247 | 111 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1.192 | 105 | 5 | 30 | 70-130 |

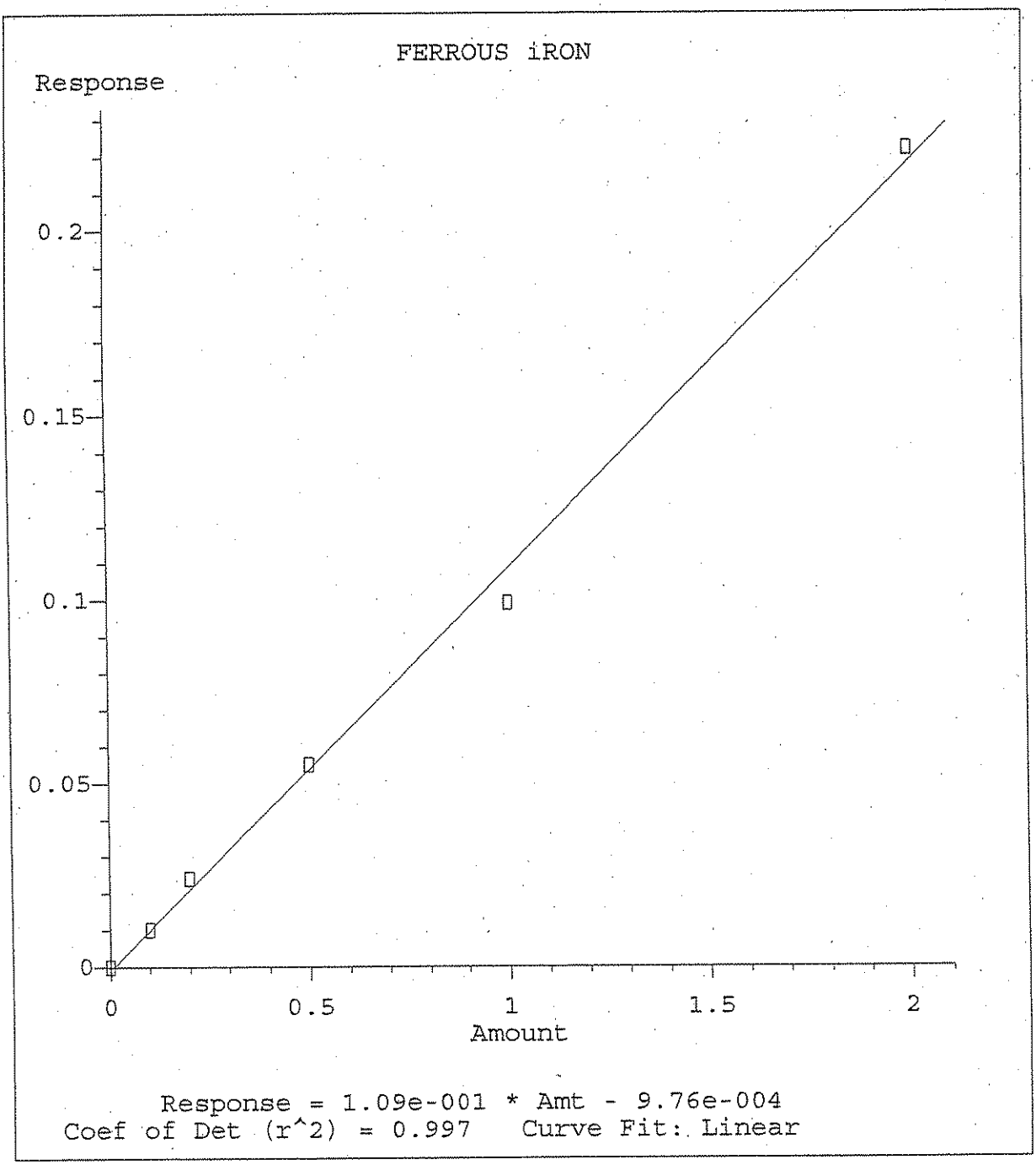
Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa C. Hall

Form III




$r = 0.998$

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

6.2.03 mg/AB Ferrous Iron

F020
200 mg/L
MG 6-2-03
Stock
MG 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

F026
5mg/L
2.5mL F020 → 100mL DI $H_2O$

F021
2mg/L
1mL F020 → 100mL DI $H_2O$

F022
1mg/L
0.25mL F020 → 50mL DI $H_2O$

F023
0.5mg/L
0.125mL F020 → 50mL DI $H_2O$

F024
0.20mg/L
0.025mL F020 → 25mL DI $H_2O$

F025
0.1mg/L
0.0125mL F020 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L = 0.099 AB 6-02-03

2mg/L = 0.222

020/058

## Reagents

Ferrous Ammonium Sulfate - EM Science Lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Conc $H_2SO_4$ ~~J.T. Baker~~ Fisher Lot # 032815
06-12-03

Ammonium Acetate Buffer VWR Lot # 2231

O-phenanthroline VWR Lot # 2343
0.1% w/v

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

June 20, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49768**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 217944

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 06/17/2003

Bonnie Stadelmann
Signature

06/17/03
Date

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

# STL Chicago
# Wet Chemistry Case Narrative

Client: **Analytics Environmental Laboratory, LLC**
Job #: **217944** Date Rec'd: 06/03/03

1. This narrative covers the analysis of the samples in the above Job # for alkalinity, COD, nitrite-nitrogen, sulfate, and TOC by the methods referenced on the Laboratory Test Results pages.

2. All EPA holding times were met.

3. The initial and continuing calibration verification standards and blanks that bracketed these samples were in control.

4. The method blanks were below the detection limits.

5. The LCS recoveries were within control limits. Please see the Quality Control Results pages of this report for additional details.

6. The matrix QC done on these samples was within acceptance limits. See the Quality Control Results pages of this report for additional details.

Diane L. Harper
Wet Chemistry Section Manager

6-17-03
Date

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor
STL Job #: 217944

Date Recd: 06/03/03

1. This narrative covers the Metals analysis of sample in the above Job # 217944.

   Method Ref: USEPA,SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

7. Matrix QC was performed on an alternate Job.

Jodi L. Wojcik
Metals Unit Leader

6-13-03
Date

STL Chicago is part of Severn Trent Laboratories, Inc.

S A M P L E  I N F O R M A T I O N
Date: 06/17/2003

Job Number.: 217944
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49768
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 217944-1 | DW32-0603-01-A | Water | 06/02/2003 | 07:05 | 06/03/2003 | 10:00 |
| 217944-2 | DW12-0603-01-A | Water | 06/02/2003 | 08:20 | 06/03/2003 | 10:00 |
| 217944-3 | DW40-0603-01-A | Water | 06/02/2003 | 09:00 | 06/03/2003 | 10:00 |
| 217944-4 | DW33-0603-01-A | Water | 06/02/2003 | 09:20 | 06/03/2003 | 10:00 |
| 217944-5 | DW28-0603-01-A | Water | 06/02/2003 | 10:00 | 06/03/2003 | 10:00 |
| 217944-6 | DW25-0603-01-A | Water | 06/02/2003 | 09:50 | 06/03/2003 | 10:00 |
| 217944-7 | DW31-0603-01-A | Water | 06/02/2003 | 10:35 | 06/03/2003 | 10:00 |
| 217944-8 | DW29-0603-01-A | Water | 06/02/2003 | 11:00 | 06/03/2003 | 10:00 |
| 217944-9 | DW36-0603-01-A | Water | 06/02/2003 | 12:45 | 06/03/2003 | 10:00 |
| 217944-10 | DW39-0603-01-A | Water | 06/02/2003 | 13:15 | 06/03/2003 | 10:00 |
| 217944-11 | DW06-0603-01-A | Water | 06/02/2003 | 12:15 | 06/03/2003 | 10:00 |

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# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW32-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 07:05
Sample Matrix.....: Water

Laboratory Sample ID: 217944-1
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 24 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 0949 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.7 | | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1628 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.27 | | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1204 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 5.3 | | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1458 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.83 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0059 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0025 | B | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0052 | tds |

* In Description = Dry Wgt.



850/020

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Customer Sample ID: DW12-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 08:20
Sample Matrix.....: Water

Laboratory Sample ID: 217944-2
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 100 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1005 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 4.7 | B | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1629 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.46 | | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1208 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 5.4 | | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1459 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.78 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0128 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.013 | | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0058 | tds |

027/058

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Customer Sample ID: DW40-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 09:00
Sample Matrix.....: Water

Laboratory Sample ID: 217944-3
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 62 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1020 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1631 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1209 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 4.4 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1459 | rnm |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.50 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0141 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0105 | tds |

* In Description = Dry Wgt.



028/068

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW33-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 09:20
Sample Matrix.....: Water

Laboratory Sample ID: 217944-4
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 83 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1036 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 4.2 | B | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1632 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.056 | B | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1210 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 4.6 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1500 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.47 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0155 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0029 | B | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0111 | tds |

029/058

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Customer Sample ID: DW28-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 217944-5
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 81 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1052 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1634 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.046 | B | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1211 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.5 | | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1501 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.41 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0208 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0117 | tds |

030/058

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW25-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 09:50
Sample Matrix.....: Water

Laboratory Sample ID: 217944-6
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 63 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1108 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 12 | | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1635 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.17 | | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1212 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.6 | | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1516 | rnm |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.47 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0221 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0123 | tds |

* In Description = Dry Wgt.



081058

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# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Customer Sample ID: DW31-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 10:35
Sample Matrix.....: Water

Laboratory Sample ID: 217944-7
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 67 | | | 4.7 | 5.0 | 1 | mg/L | 86808 | | 06/12/03 1124 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 4.2 | B | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1637 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.039 | B | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1216 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 3.7 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1516 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.5 | | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0235 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0028 | B | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0129 | tds |

032/058

* In Description = Dry Wgt.

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L A B O R A T O R Y  T E S T  R E S U L T S

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW29-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 11:00
Sample Matrix.....: Water

Laboratory Sample ID: 217944-8
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 5.0 | U | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 0922 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 3.6 | B | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1638 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1217 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 4.8 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1517 | rnm |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.0 | | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0303 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.016 | | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0135 | tds |

* In Description = Dry Wgt.



033/058

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# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW36-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 12:45
Sample Matrix.....: Water

Laboratory Sample ID: 217944-9
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 71 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 0931 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 9.3 | | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1640 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1218 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 15 | | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1517 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.45 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0317 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.12 | | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0203 | tds |

034/058

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49768 | ATTN: Steve Knollmeyer

Customer Sample ID: DW39-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 13:15
Sample Matrix.....: Water

Laboratory Sample ID: 217944-10
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 9.4 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 0940 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 6.2 | | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1641 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.099 | B | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1219 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 3.8 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1517 | rnm |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.84 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0330 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0072 | B | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0209 | tds |

* In Description = Dry Wgt.



035/058

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LABORATORY TEST RESULTS

Job Number: 217944

Date:06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

Customer Sample ID: DW06-0603-01-A
Date Sampled.....: 06/02/2003
Time Sampled.....: 12:15
Sample Matrix.....: Water

Laboratory Sample ID: 217944-11
Date Received.....: 06/03/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 57 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 0948 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 87106 | | 06/14/03 1643 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.042 | B | | 0.035 | 0.10 | 1 | mg/L | 86857 | | 06/12/03 1220 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 3.1 | B | | 2.1 | 5.0 | 1 | mg/L | 86487 | | 06/09/03 1518 | rnm |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.60 | B | | 0.15 | 1.0 | 1 | mg/L | 86883 | | 06/13/03 0344 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.014 | | | 0.00071 | 0.010 | 1 | mg/L | 86749 | | 06/12/03 0215 | tds |

* In Description = Dry Wgt.



0850/980

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# LABORATORY CHRONICLE

Job Number: 217944 Date: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

Lab ID: 217944-1 Client ID: DW32-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 0949 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1628 | |
| EDD | Electronic Data Deliverable | 1 | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0052 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2016 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1204 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0059 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1458 | |

Lab ID: 217944-2 Client ID: DW12-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1005 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1629 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0058 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2017 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1208 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0128 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1459 | |

Lab ID: 217944-3 Client ID: DW40-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1020 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1631 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0105 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2017 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1209 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0141 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1459 | |

Lab ID: 217944-4 Client ID: DW33-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1036 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1632 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0111 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2018 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1210 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0155 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1500 | |

Lab ID: 217944-5 Client ID: DW28-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1052 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1634 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0117 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2018 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1211 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0208 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1501 | |

Lab ID: 217944-6 Client ID: DW25-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1108 | |

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# LABORATORY CHRONICLE

Job Number: 217944 Date: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

Lab ID: 217944-6 Client ID: DW25-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1635 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0123 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2018 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1212 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0221 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1516 | |

Lab ID: 217944-7 Client ID: DW31-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 86808 | 86808 | 06/12/2003 1124 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1637 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0129 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2020 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1216 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0235 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1516 | |

Lab ID: 217944-8 Client ID: DW29-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 0922 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1638 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0135 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2020 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1217 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0303 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1517 | |

Lab ID: 217944-9 Client ID: DW36-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 0931 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1640 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0203 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2020 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1218 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0317 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1517 | |

Lab ID: 217944-10 Client ID: DW39-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 0940 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1641 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0209 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2021 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1219 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0330 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1517 | |

Lab ID: 217944-11 Client ID: DW06-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 0948 | |

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L A B O R A T O R Y  C H R O N I C L E

Job Number: 217944 Date: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Kohlmeyer

Lab ID: 217944-11 Client ID: DW06-0603-01-A Date Recvd: 06/03/2003 Sample Date: 06/02/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87106 | 87106 | 06/14/2003 1643 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86749 | 86653 | 06/12/2003 0215 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 85855 | 85855 | 06/03/2003 2021 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86857 | 86857 | 06/12/2003 1220 | 1 |
| 415.1 | Organic Carbon | 1 | 86883 | 86883 | 06/13/2003 0344 | |
| Method | Soluble Non-Digestion Batch | 1 | 86653 | | 06/11/2003 1245 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 86487 | 86487 | 06/09/2003 1518 | |

QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86749

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-016 | | 06/12/2003 | 0034 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-028 | | 06/12/2003 | 0157 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-040 | | 06/12/2003 | 0320 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-049 | | 06/12/2003 | 0427 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-061 | | 06/12/2003 | 0550 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-073 | | 06/12/2003 | 0714 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86749-079 | | 06/12/2003 | 0804 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86749

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-015 | | 06/12/2003 | 0021 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.93772 | | 5.00000 | | 99 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-027 | | 06/12/2003 | 0144 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.14130 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-039 | | 06/12/2003 | 0307 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.07280 | | 5.00000 | | 101 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-048 | | 06/12/2003 | 0414 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.15646 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-060 | | 06/12/2003 | 0537 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.17152 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-072 | | 06/12/2003 | 0701 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.12748 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86749-078 | | 06/12/2003 | 0749 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.94854 | | 5.00000 | | 99 | % | 90-110 | |

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86749

Analyst...: tds

| CRI | Contract Required Detection Limits | M03FCRI001 | 86749-012 | | 06/12/2003 | 0000 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02045 | | 0.02000 | | 102 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86749-045 | | 06/12/2003 | 0353 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02058 | | 0.02000 | | 103 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86749-075 | | 06/12/2003 | 0728 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02032 | | 0.02000 | | 102 | % | 50-150 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 4976B ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 86749-011 | | 06/11/2003 | 2354 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86749

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICV | Initial Calibration Verification | M03FICV001 | 86749-010 | | 06/11/2003 | 2341 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86749

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.05431 | | 4.00000 | | 101 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86749

| ISB | Interference Check Sample B | M03FISB001 | 86749-014 | | 06/12/2003 | 0012 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.47950 | | 0.50000 | | 96 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86749-047 | | 06/12/2003 | 0406 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.50360 | | 0.50000 | | 101 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86749-077 | | 06/12/2003 | 0741 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.49994 | | 0.50000 | | 100 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86749

| LCS | Laboratory Control Sample | M03ESPK002 | 86653 -002 | | 06/12/2003 | 0046 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.49482 | | 0.50000 | 0.00071 U | 99 | % | 80-120 | |

| LCS | Laboratory Control Sample | M03ESPK002 | 86654 -002 | | 06/12/2003 | 0439 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.50003 | | 0.50000 | 0.00071 U | 100 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86749

| MB | Method Blank | 86653 | 86653 -001 | | 06/12/2003 | 0040 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |

| MB | Method Blank | 86654 | 86654 -001 | | 06/12/2003 | 0433 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03DINT002 | 86749-009 | | 06/11/2003 | 2330 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86749

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.82626 | | 10.00000 | | 98 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217944 Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768 ATTN: Steve Knollmeyer

Test Method.....: 310.1 Batch.....: 86808 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 86808 -002 | | mg/L | 4.70000 U | | | | | | | | 06/12/2003 | 0606 |
| LCS | 86808 -003 | I03ASTAK2 | mg/L | 102.30000 | | 100.00000 | | 102 | | % | 80-120 | 06/12/2003 | 0622 |

Test Method.....: 310.1 Batch.....: 87112 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87112 -002 | | mg/L | 4.70000 U | | | | | | | | 06/16/2003 | 0839 |
| LCS | 87112 -003 | I03ASTAK2 | mg/L | 101.20000 | | 100.00000 | 4.70000 U | 101 | | % | 80-120 | 06/16/2003 | 0847 |
| LCD | 87112 -004 | I03ASTAK2 | mg/L | 100.90000 | 101.20000 | 100.00000 | | 101 | | % | 80-120 | 06/16/2003 | 0856 |
| | | | | | | | | 0 | | R | 20 | | |

Test Method.....: HACH 8000 Batch.....: 87106 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87106 -001 | | mg/L | 3.40000 U | | | | | | | | 06/14/2003 | 1625 |
| LCS | 87106 -002 | I03DSTCD1 | mg/L | 47.67000 | | 50.00000 | | 95 | | % | 80-120 | 06/14/2003 | 1626 |
| MS | 217944-5 | I03DSTCD1 | mg/L | 51.30000 | | 50.00000 | 3.40000 U | 103 | | % | 75-125 | 06/14/2003 | 1649 |
| MSD | 217944-5 | I03DSTCD1 | mg/L | 50.26000 | 51.30000 | 50.00000 | 3.40000 U | 101 | | % | 75-125 | 06/14/2003 | 1650 |
| | | | | | | | | 2.0 | | R | 20 | | |

Test Method.....: 354.1 Batch.....: 85855 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 85855 -002 | I03DSTNI2 | mg/L | 0.09960 | | 0.10000 | | 100 | | % | 90-110 | 06/03/2003 | 2014 |
| ICB | 85855 -003 | | mg/L | 0.00520 U | | | | | | | | 06/03/2003 | 2014 |
| LCS | 85855 -005 | I03DSTNI2 | mg/L | 0.09700 | | 0.10000 | 0.00520 U | 97 | | % | 80-120 | 06/03/2003 | 2015 |
| MB | 85855 -004 | | mg/L | 0.00520 U | | | | | | | | 06/03/2003 | 2015 |
| MS | 217944-1 | I03DSTNI2 | mg/L | 0.09650 | | 0.10000 | 0.00520 U | 96 | | % | 75-125 | 06/03/2003 | 2016 |
| MSD | 217944-1 | I03DSTNI2 | mg/L | 0.09600 | 0.09650 | 0.10000 | 0.00520 U | 96 | | % | 75-125 | 06/03/2003 | 2016 |
| | | | | | | | | 0.0 | | R | 20 | | |
| CCV | 85855 -014 | I03DSTNI2 | mg/L | 0.09920 | | 0.10000 | | 99 | | % | 90-110 | 06/03/2003 | 2019 |
| CCB | 85855 -015 | | mg/L | 0.00520 U | | | | | | | | 06/03/2003 | 2019 |
| CCV | 85855 -014 | I03DSTNI2 | mg/L | 0.09960 | | 0.10000 | | 100 | | % | 90-110 | 06/03/2003 | 2022 |
| CCB | 85855 -015 | | mg/L | 0.00520 U | | | | | | | | 06/03/2003 | 2022 |

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Test Method.....: 353.2
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.)
Parameter.....: Nitrate + Nitrite as N

Batch.....: 86857
Equipment Code....: LACHAT1

Analyst...: kd
Test Code.: NO3NO2

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 86857 -002 | I02GSTIC31 | mg/L | 0.99400 | | 1.00000 | | 99 | | % | 90-110 | 06/12/2003 | 1200 |
| ICB | 86857 -003 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1201 |
| MB | 86857 -004 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1202 |
| LCS | 86857 -005 | I02GSTIC31 | mg/L | 1.07300 | | 1.00000 | | 107 | | % | 80-120 | 06/12/2003 | 1203 |
| CCV | 86857 -014 | I02GSTIC31 | mg/L | 0.95300 | | 1.00000 | | 95 | | % | 90-110 | 06/12/2003 | 1213 |
| CCB | 86857 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1214 |
| CCV | 86857 -014 | I02GSTIC31 | mg/L | 0.99300 | | 1.00000 | | 99 | | % | 90-110 | 06/12/2003 | 1227 |
| CCB | 86857 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1228 |
| CCV | 86857 -014 | I02GSTIC31 | mg/L | 1.02400 | | 1.00000 | | 102 | | % | 90-110 | 06/12/2003 | 1231 |
| CCB | 86857 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1232 |
| CCV | 86857 -014 | I02GSTIC31 | mg/L | 0.95400 | | 1.00000 | | 95 | | % | 90-110 | 06/12/2003 | 1233 |
| CCB | 86857 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1234 |
| CCV | 86857 -014 | I02GSTIC31 | mg/L | 0.97300 | | 1.00000 | | 97 | | % | 90-110 | 06/12/2003 | 1240 |
| CCB | 86857 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1241 |

Test Method.....: 353.2
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.)
Parameter.....: Nitrate as N (NO3-N)

Batch.....: 86857
Equipment Code....: LACHAT1

Analyst...: kd
Test Code.: NO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 217944-1 | I02GSTIC31 | mg/L | 1.26800 | | 1.00000 | 0.26700 | 100 | | % | 75-125 | 06/12/2003 | 1206 |
| MSD | 217944-1 | I02GSTIC31 | mg/L | 1.24600 | 1.26800 | 1.00000 | 0.26700 | 98 | | % | 75-125 | 06/12/2003 | 1207 |
| | | | | | | | | 2.0 | | R | 20 | | |

Test Method.....: 375.4
Method Description.: Sulfate, Turbidimetric
Parameter.....: Sulfate

Batch.....: 86487
Equipment Code....: SPEC3

Analyst...: rnm
Test Code.: SO4

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 86487 -002 | I03FSTSA2A | mg/L | 18.89000 | | 20.00000 | | 94 | | % | 90-110 | 06/09/2003 | 1419 |
| ICB | 86487 -003 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1420 |
| MB | 86487 -004 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1421 |
| LCS | 86487 -005 | I03FSTSA2A | mg/L | 19.51000 | | 20.00000 | 2.10000 U | 98 | | % | 80-120 | 06/09/2003 | 1422 |
| CCV | 86487 -014 | I03FSTSA2A | mg/L | 38.00000 | | 40.00000 | | 95 | | % | 90-110 | 06/09/2003 | 1433 |
| CCB | 86487 -015 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1435 |
| CCB | 86487 -015 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1455 |
| CCV | 86487 -014 | I03FSTSA2A | mg/L | 36.35000 | | 40.00000 | | 91 | | % | 90-110 | 06/09/2003 | 1455 |
| CCV | 86487 -014 | I03FSTSA2A | mg/L | 18.99000 | | 20.00000 | | 95 | | % | 90-110 | 06/09/2003 | 1507 |
| CCB | 86487 -015 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1508 |
| CCV | 86487 -014 | I03FSTSA2A | mg/L | 20.44000 | | 20.00000 | | 102 | | % | 90-110 | 06/09/2003 | 1515 |
| CCB | 86487 -015 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1515 |
| MS | 217944-11 | I03FSTSA2A | mg/L | 22.92000 | | 20.00000 | 3.09200 B | 115 | | % | 75-125 | 06/09/2003 | 1518 |
| MSD | 217944-11 | I03FSTSA2A | mg/L | 21.99000 | 22.92000 | 20.00000 | 3.09200 B | 110 | | % | 75-125 | 06/09/2003 | 1519 |
| | | | | | | | | 4.4 | | R | 20 | | |
| CCV | 86487 -014 | I03FSTSA2A | mg/L | 35.83000 | | 40.00000 | | 90 | | % | 90-110 | 06/09/2003 | 1527 |
| CCB | 86487 -015 | | mg/L | 2.10000 U | | | | | | | | 06/09/2003 | 1528 |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217944

Report Date.: 06/17/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49768

ATTN: Steve Knollmeyer

Test Method.....: 415.1
Method Description.: Organic Carbon
Parameter.....: Organic Carbon, Tot. (TOC)

Batch.....: 86883
Equipment Code....: TOC3

Analyst...: kd
Test Code.: TOC

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV | 86883 -007 | I03ESTTC2 | mg/L | 22.54060 | | 20.00000 | | 113 | | % | 85-115 | 06/13/2003 | 0016 |
| CCB | 86883 -008 | | mg/L | 0.46230 B | | | | | | | | 06/13/2003 | 0023 |
| CCV | 86883 -007 | I03ESTTC2 | mg/L | 10.47500 | | 10.00000 | | 105 | | % | 85-115 | 06/13/2003 | 0250 |
| CCB | 86883 -008 | | mg/L | 0.15130 B | | | | | | | | 06/13/2003 | 0256 |
| CCV | 86883 -007 | I03ESTTC2 | mg/L | 21.82390 | | 20.00000 | | 109 | | % | 85-115 | 06/13/2003 | 0459 |
| CCB | 86883 -008 | | mg/L | 0.39120 B | | | | | | | | 06/13/2003 | 0506 |

Test Method.....: 415.1
Method Description.: Organic Carbon
Parameter.....: TOC Average Duplicates

Batch.....: 86883
Equipment Code....: TOC3

Analyst...: kd
Test Code.: TOCAV2

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 86883 -004 | | mg/L | 0.24500 B | | | | | | | | 06/13/2003 | 0030 |
| LCS | 86883 -005 | I03ESTTC2 | mg/L | 10.93100 | | 10.00000 | | 109 | | % | 80-120 | 06/13/2003 | 0044 |
| MS | 217944-1 | I03ESTTC2 | mg/L | 10.80560 | | 10.00000 | 0.41000 B | 108 | | % | 75-125 | 06/13/2003 | 0113 |
| MSD | 217944-1 | I03ESTTC2 | mg/L | 10.81880 | 0.46900 B | 10.00000 | 0.41000 B | 108 | | % | 75-125 | 06/13/2003 | 0121 |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ' | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ' | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

SEVERN TRENT SERVICES

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Stevenollmeyer
Company: Analytics
Address: 195 Commerce Way
Portsmouth, NH
Phone: 603 ~~to~~ 436-5111
Fax: 603 430 2151
E-Mail:

**Bill To:**
Contact:
Company:
Address: Analytics
Phone:
Fax:
PO#: Quote:

**Shaded Areas For Internal Use Only** 1 of 1

**Lab Lot#** 217944

| | |
|---|---|
| Package Sealed: Yes No | Samples Sealed: Yes No |
| Received on Ice: Yes No | Samples Intact: Yes No |
| Temperature °C of Cooler: (3.2) (2.9) | |
| Within Hold Time: Yes No | Preserv. Indicated: Yes No NA |
| pH Check OK: Yes No NA | Res $Cl_2$ Check OK: Yes No NA |
| Sample Labels and COC Agree: Yes No | COC not present |

**Sampler Name:** Kathleen Soukup
**Signature:** [signature]
**Project Name:** Blacks Harbor
**Project Number:** 10971.217.002
**Project Location:** Machiasport ME
**Date Required** Hard Copy: __/__/__ Fax: __/__/__
**Lab PM:**

| Refrg # | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| # / Cont. | 1P | 1P | 1P | 2V | | | | | | | | | | | | |
| Volume | 1L | 1L | 1L | 40ml | | | | | | | | | | | | |
| Preserv | $HNO_3$ | $HNO_3$ | $H_2SO_4$ | $H_2SO_4$ | | | | | | | | | | | | |
| Matrix | Comp/Grab | ~~TOC~~ Diss Manganese | Sulfate, alkalinity, nitrite | COD + nitrate | TOC 415.1 or 9060 | | | | | | | | | | | |
| 1 | DW32-0603-01-A | 6/2/03 | 705 | W | X | X | X | X | X | | | | | | | Diss Mang. samples |
| 2 | DW12-0603-01-A | | 0820 | | X | X | X | X | X | | | | | | | were field filtered |
| 3 | DW40-0603-01-A | | 0900 | | X | X | X | X | X | | | | | | | |
| 4 | DW33-0603-01-A | | 0920 | | X | X | X | X | X | | | | | | | |
| 5 | DW28-0603-01-A | | 1000 | | X | X | X | X | X | | | | | | | ★ Note nitrite short |
| 6 | DW25-0603-01-A | | 0950 | | X | X | X | X | X | | | | | | | Hold time |
| 7 | DW31-0603-01-A | | 1035 | | X | X | X | X | X | | | | | | | |
| 8 | DW29-0603-01-A | | 1100 | | X | X | X | X | X | | | | | | | |
| 9 | DW36-0603-01-A | | 1245 | | X | X | X | X | X | | | | | | | |
| | ~~DW37-0603-01-A~~ | | | | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | (17) | No sample | | | | | |
| 10 | DW39-0603-01-A | | 1315 | | X | X | X | X | X | | | | | | | ★ 2 coolers |
| 11 | DW06-0603-01-A | 6/2/03 | 1215 | | X | X | X | X | X | | | | | | | |

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| [signature] | Weston | 6/2/03 | 1730 | FEDEX | | | |
| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
| | | | | [signature] | STL | 6/3/03 | 1000 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
Dissolved manganese via 6010B
sulfate (375.1) alkalinity (310.1)
nitrite/nitrate (352.1) COD (HACH 8000)
TOC (415.1 or 9060)

**Date Received** 6 / 3 / 03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading** see attach

STL Chicago is a part of Severn Trent Laboratories, Inc. STL 8208 (0600)

055/058

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 10/02

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 5.8
3) Received in good condition Y or N
4) pH checked by: AMB 6.3.03
5) Labels checked by: MG 6303

Project#: 10971.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Soukup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: (603)626-5574 PO# 0037759 Quote #
Sampler (Signature): [signature]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCl | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW32-0603-01-A | 6/2/03 | 0705 | Ferrous Iron via SM3500D | | | X | | X | | | GW | 1 | P | 1.5 | 49768-1 |
| DW12-0603-01-A | | 0820 | | | | X | | X | | | | | | 1.5 | 2 |
| DW40-0603-01-A | | 0900 | | | | X | | X | | | | | | 1.5 | 3 |
| DW33-0603-01-A | | 0920 | | | | X | | X | | | | | | 1.5 | 4 |
| DW28-0603-01-A | | 1000 | | | | X | | X | | | | | | 1.5 | 5 |
| DW25-0603-01-A | | 0950 | | | | X | | X | | | | | | 1.5 | 6 |
| DW31-0603-01-A | | 1035 | | | | X | | X | | | | | | 1.5 | 7 |
| DW29-0603-01-A | | 1100 | | | | X | | X | | | | | | 1.5 | 8 |
| DW36-0603-01-A | | 1245 | | | | X | | X | | | | | | 1.5 | 9 |
| DW37-0603-01-A | | | | | | X | | X | | | ICP | | | | |
| DW39-0603-01-A | | 1315 | | | | X | | X | | | | | | 1.5 | 10 |
| DW06-0603-01-A | 6/2/03 | 1215 | Ferrous Iron | | | (X) | | X | | | GW | 1 | P | 1.5 | 11 |

FAX RESULTS? YES NO
Fax # x 5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:

Client Code: WESTONM

Page 1 of 1

| Relinquished By: | Received By: | Date: | Time: |
|---|---|---|---|
| Sampler: | FEDEX | 6/2/03 | 1730 |
| Relinquished By: | Received By: | Date: | Time: |
| FedEx | [signature] | 6.3.03 | 1000 |
| Relinquished By: | Received By: | Date: | Time: |

890/990

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 49768 COOLER NUMBER: n/a

CLIENT: Weston Solutions NUMBER OF COOLERS: 1

PROJECT: Bucks Harbor DATE RECEIVED: 6.3.03

**A: PRELIMINARY EXAMINATION:** DATE COOLER OPENED: 6.3.03

1. Cooler received by(initials) amb Date Received: 6.3.03
2. Did cooler come with a shipping slip? (Y) N

If YES, enter carrier name and airbill number here: 886975930 56 FedEx

3. Were custody seals on the outside of cooler? (Y) N
How many & where: 1 on front lid Seal Date: 6.2.03 Seal Name: K Soukup
4. Did the custody seals arrive unbroken and intact upon arrival? (Y) N
5. COC#: n/a
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? (Y) N
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 5.8°C

**B. Log-In:** Date samples were logged in: 6.2.03 By: amb

11. Type of packing in cooler(bubble wrap, popcorn) Y (N)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? (Y) N
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y N/a

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): MJ Date: 6.3.03

FedEx Express **USA Airbill** FedEx Tracking Number 8366 9259 3056

Form I.D. No. 0200

**1 From**

Date 6/2/03

Sender's Name Kathleen Soukup Phone (603) 315-4516-3

Company Weston solutions

Address 1 Wall St

Dept./Floor/Suite/Room

City Manchester State NH ZIP 03101

**2 Your Internal Billing Reference** 10971.217.002.2009

**3 To**

Recipient's Name Melissa Gulli Phone (603) 430-5111

Company Apeiybes

Address 195 Commerce Way

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Suite E

Dept./Room/Suite/Room

City Portsmouth State NH ZIP 03801

8366 9259 3056

**4a Express Package Service** *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

**4b Express Freight Service** *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

**5 Packaging** * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other

**6 Special Handling** Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

| Total Packages | Total Weight | Total Declared Value† | Total Charges |
|---|---|---|---|
| 1 | | $ .00 | |

†Our liability is limited to $100 unless you declare a higher value. See back for details.

Credit Card Auth.

**8 Release Signature** *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

**Questions? Visit our Web site at fedex.com** or call 1.800.Go.FedEx® 800.463.3339.

Rev. Date 10/01 • Part #157612 • ©1994–2001 FedEx • PRINTED IN U.S.A. WCSL 02

446

[redacted]

Custody Seal 6/2/03

DATE

SIGNATURE [redacted]

058/058

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

June 20, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49784**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
The matrix spike (MS) analyzed on 06/04/03 49784-10 (DW-04-060301-A) had a recovery of 131% which is above the acceptance criteria of 130%. The MS was reanalyzed with a MSD with all recoveries and RPDs in control. (See Form III).

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Krollmeyer
Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49784**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49784-1 | 06/03/03 | DW01-0603-01-A | Alkalinity | |
| | 06/03/03 | DW01-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW01-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW01-0603-01-A | Nitrate | |
| | 06/03/03 | DW01-0603-01-A | Nitrite | |
| | 06/03/03 | DW01-0603-01-A | Sulfate | |
| | 06/03/03 | DW01-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-2 | 06/03/03 | WY03-0603-01-A | Alkalinity | |
| | 06/03/03 | WY03-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | WY03-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | WY03-0603-01-A | Metals | |
| | 06/03/03 | WY03-0603-01-A | Metals Digestion | |
| | 06/03/03 | WY03-0603-01-A | Nitrate | |
| | 06/03/03 | WY03-0603-01-A | Nitrite | |
| | 06/03/03 | WY03-0603-01-A | Sulfate | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 2003

**This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.**

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
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www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49784**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | WY03-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-3 | 06/03/03 | DW13-0603-01-A | Alkalinity | |
| | 06/03/03 | DW13-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW13-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW13-0603-01-A | Metals | |
| | 06/03/03 | DW13-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW13-0603-01-A | Nitrate | |
| | 06/03/03 | DW13-0603-01-A | Nitrite | |
| | 06/03/03 | DW13-0603-01-A | Sulfate | |
| | 06/03/03 | DW13-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-4 | 06/03/03 | DW22-0603-01-A | Alkalinity | |
| | 06/03/03 | DW22-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW22-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW22-0603-01-A | Metals | |
| | 06/03/03 | DW22-0603-01-A | Metals Digestion | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW22-0603-01-A | Nitrate | |
| | 06/03/03 | DW22-0603-01-A | Nitrite | |
| | 06/03/03 | DW22-0603-01-A | Sulfate | |
| | 06/03/03 | DW22-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-5 | 06/03/03 | DW23-0603-01-A | Alkalinity | |
| | 06/03/03 | DW23-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW23-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW23-0603-01-A | Metals | |
| | 06/03/03 | DW23-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW23-0603-01-A | Nitrate | |
| | 06/03/03 | DW23-0603-01-A | Nitrite | |
| | 06/03/03 | DW23-0603-01-A | Sulfate | |
| | 06/03/03 | DW23-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-6 | 06/03/03 | DW23-0603-01-B | Alkalinity | |
| | 06/03/03 | DW23-0603-01-B | Chemical Oxygen Demand | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW23-0603-01-B | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW23-0603-01-B | Metals | |
| | 06/03/03 | DW23-0603-01-B | Metals Digestion | |
| | 06/03/03 | DW23-0603-01-B | Nitrate | |
| | 06/03/03 | DW23-0603-01-B | Nitrite | |
| | 06/03/03 | DW23-0603-01-B | Sulfate | |
| | 06/03/03 | DW23-0603-01-B | Total Organic Carbon in Aqueous Matrices | |
| 49784-7 | 06/03/03 | DW24-0603-01-A | Alkalinity | |
| | 06/03/03 | DW24-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW24-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW24-0603-01-A | Metals | |
| | 06/03/03 | DW24-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW24-0603-01-A | Nitrate | |
| | 06/03/03 | DW24-0603-01-A | Nitrite | |
| | 06/03/03 | DW24-0603-01-A | Sulfate | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW24-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-8 | 06/03/03 | DW30-0603-01-A | Alkalinity | |
| | 06/03/03 | DW30-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW30-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW30-0603-01-A | Metals | |
| | 06/03/03 | DW30-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW30-0603-01-A | Nitrate | |
| | 06/03/03 | DW30-0603-01-A | Nitrite | |
| | 06/03/03 | DW30-0603-01-A | Sulfate | |
| | 06/03/03 | DW30-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-9 | 06/03/03 | DW04-0603-01-A | Alkalinity | |
| | 06/03/03 | DW04-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW04-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW04-0603-01-A | Metals | |
| | 06/03/03 | DW04-0603-01-A | Metals Digestion | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW04-0603-01-A | Nitrate | |
| | 06/03/03 | DW04-0603-01-A | Nitrite | |
| | 06/03/03 | DW04-0603-01-A | Sulfate | |
| | 06/03/03 | DW04-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-10 | 06/03/03 | DW04-0603-01-B | Alkalinity | |
| | 06/03/03 | DW04-0603-01-B | Chemical Oxygen Demand | |
| | 06/03/03 | DW04-0603-01-B | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW04-0603-01-B | Metals | |
| | 06/03/03 | DW04-0603-01-B | Metals Digestion | |
| | 06/03/03 | DW04-0603-01-B | Nitrate | |
| | 06/03/03 | DW04-0603-01-B | Nitrite | |
| | 06/03/03 | DW04-0603-01-B | Sulfate | |
| | 06/03/03 | DW04-0603-01-B | Total Organic Carbon in Aqueous Matrices | |
| 49784-11 | 06/03/03 | DW09-0603-01-A | Alkalinity | |
| | 06/03/03 | DW09-0603-01-A | Chemical Oxygen Demand | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW09-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW09-0603-01-A | Metals | |
| | 06/03/03 | DW09-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW09-0603-01-A | Nitrate | |
| | 06/03/03 | DW09-0603-01-A | Nitrite | |
| | 06/03/03 | DW09-0603-01-A | Sulfate | |
| | 06/03/03 | DW09-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-12 | 06/03/03 | DW08-0603-01-A | Alkalinity | |
| | 06/03/03 | DW08-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW08-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW08-0603-01-A | Metals | |
| | 06/03/03 | DW08-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW08-0603-01-A | Nitrate | |
| | 06/03/03 | DW08-0603-01-A | Nitrite | |
| | 06/03/03 | DW08-0603-01-A | Sulfate | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW08-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-13 | 06/03/03 | DW07-0603-01-A | Alkalinity | |
| | 06/03/03 | DW07-0603-01-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW07-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW07-0603-01-A | Metals | |
| | 06/03/03 | DW07-0603-01-A | Metals Digestion | |
| | 06/03/03 | DW07-0603-01-A | Nitrate | |
| | 06/03/03 | DW07-0603-01-A | Nitrite | |
| | 06/03/03 | DW07-0603-01-A | Sulfate | |
| | 06/03/03 | DW07-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49784-14 | 06/03/03 | DW13-0603-02-A | Alkalinity | |
| | 06/03/03 | DW13-0603-02-A | Chemical Oxygen Demand | |
| | 06/03/03 | DW13-0603-02-A | Electronic Data Deliverable | |
| | 06/03/03 | DW13-0603-02-A | Ferrous Iron in Aqueous Matrices | |
| | 06/03/03 | DW13-0603-02-A | Metals | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW13-0603-02-A | Metals Digestion | |
| | 06/03/03 | DW13-0603-02-A | Nitrate | |
| | 06/03/03 | DW13-0603-02-A | Nitrite | |
| | 06/03/03 | DW13-0603-02-A | Sulfate | |
| | 06/03/03 | DW13-0603-02-A | Total Organic Carbon in Aqueous Matrices | |

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 19, 2003

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

## ANALYTICAL RESULTS FERROUS IRON
## CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| B06043F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | U |
| L060403F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | **98** |
| LD06043F | LABQC | N/A | N/A | 06/04/03 | Aqueous | 1 | 0.1 | **100** |
| 49784-1 | DW01-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-2 | WY03-0603-01-A | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-3 | DW13-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-4 | DW22-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-5 | DW23-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-6 | DW23-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-7 | DW24-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-8 | DW30-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-9 | DW04-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-10 | DW04-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | **0.14** |
| 49784-11 | DW09-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-12 | DW08-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-13 | DW07-0603-01- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |
| 49784-14 | DW13-0603-02- | 06/03/03 | 06/04/03 | 06/04/03 | Aqueous | 1 | 0.1 | U |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/4/03
Analyst: AB
Reviewed: mj 6.19.03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

| | |
|---|---|
| Curve Date: | 6/2/03 |
| Corr Coef. ('r) | 0.9985 |
| Y-int | 0.000976 |
| slope | 0.109 |

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L060403F/CC 1MG/L | 0.106 | 0.981 | 1 | 98% |
| 2 | B060403F/METH.BL. | 0.000 | 0.009 | 1 | U |
| 3 | 49784-1 | 0.002 | 0.027 | 1 | U |
| 4 | 49784-2 | 0.003 | 0.036 | 1 | U |
| 5 | 49784-3 | 0.001 | 0.018 | 1 | U |
| 6 | 49784-4 | 0.000 | 0.009 | 1 | U |
| 7 | 49784-5 | 0.000 | 0.009 | 1 | U |
| 8 | 49784-6 | 0.000 | 0.009 | 1 | U |
| 9 | 49784-7 | 0.003 | 0.036 | 1 | U |
| 10 | 49784-8 | 0.003 | 0.036 | 1 | U |
| 11 | 49784-9 | 0.007 | 0.073 | 1 | U |
| 12 | 49784-10 | 0.014 | 0.137 | 1 | **0.14** |
| 13 | 49784-11 | 0.001 | 0.018 | 1 | U |
| 14 | 49784-12 | 0.000 | 0.009 | 1 | U |
| 15 | 49784-13 | 0.003 | 0.036 | 1 | U |
| 16 | 49784-14 | 0.000 | 0.009 | 1 | U |
| 17 | 49784-10,MS | 0.157 | 1.449 | 1 | 131% |
| 18 | 49784-10,MSD | 0.135 | 1.247 | 1 | 111% |
| 19 | 49784-10,MSD3 | 0.129 | 1.192 | 1 | 106% |
| 20 | LD06043F/CC 1MG/L | 0.108 | 1.000 | 1 | 100% |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

6·4·03 Ferrous Iron P-P-060403-1-AB

F033
200mg/L
STOCK

0.1445 (g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2ml CONC $H_2SO_4$ LOT# 032815
5ml $DI H_2O$
→ Dilute to 100ml

F034
1mg/L

0.25ml F033 → 50ml $DI H_2O$

B060403F (method Blank) 12.5ml $DI H_2O$ + 5ml OPH + 2ml Ammon. Acetate.
L060403F (CC) 12.5ml F034 + 5ml O-PH + 2ml Ammon. Acetate
* 1mg/L
LD060403F (CCC) 12.5ml F034 + 5ml O-PH + 2ml Ammon. Acetate

| | Absorbance = | CAL. VALUE |
|---|---|---|
| L060403F (CC) | =0.106 | .981 |
| B060403F (method Blank) | =0.000 | <0.1mg/L |
| 49781-1 | =-0.002 | |
| -2 | =-0.003 | |
| -3 | =-0.001 | |
| -4 | =0.000 | |
| -5 | =0.000 AB 6-4-03 | |
| -6 | =-0.003 | |
| -7 | =-0.003 | |
| -8 | =0.007 | |
| -9 | =0.016 AB 6-4-03 | |
| -10 | =-0.001 | |
| -11 | =0.000 | |
| -12 | =0.003 | |
| -13 | =0.000 | |
| -14 | =0.157 | |
| -10 MS * 4 | =0.135 | |
| -10 MSD | =0.129 AB 6-4-03 | |
| LD060403F (CC) | =0.129 | |
| * SPIKED W/ 62.5ul F033 | =0.108 | |

AB 6-4-03

Reagent Page for pg 67 6-4-08

Ferrous Ammonium Sulfate Hexahydrate LOT# 4220T238

O-Phenanthroline LOT# Z343

Ammonium Acetate Buffer LOT# Z231

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 19, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** L060403F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/04/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 0.981 | 98.1 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1 | 100 | 2 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 19, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002

**Lab Sample ID:** 49784-10
**Matrix:** Aqueous
**Field Sample ID:** DW04-0603-01-B
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/04/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|
| 1.0 | **0.14** | 1.247 | 110.7 | | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| 1.0 | 1.192 | 105.2 | | 5 | | 30 | 70-130 |

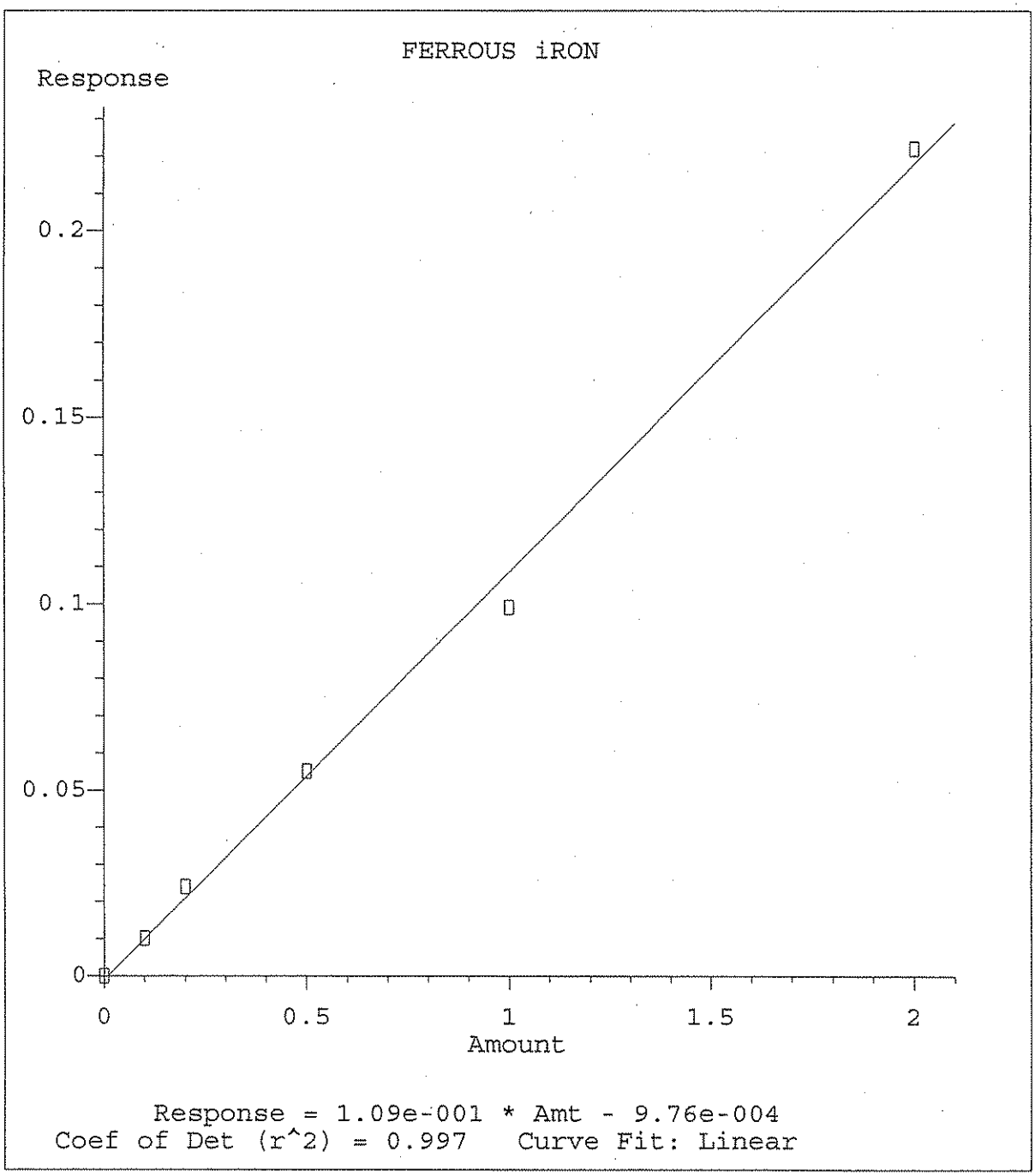
Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III




$r = 0.998$

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

6-2-03 mg/AB Ferrous Iron

F020
200 mg/L
MG 6-2-03
STOCK
MG 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

F026
5mg/L
2.5mL F020 → 100mL DI $H_2O$

F021
2mg/L
1mL F020 → 100mL DI $H_2O$

F022
1mg/L
0.25mL F020 → 50mL DI $H_2O$

F023
0.5mg/L
0.125mL F020 → 50mL DI $H_2O$

F024
0.20mg/L
0.025mL F020 → 25mL DI $H_2O$

F025
0.1mg/L
0.0125mL F020 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L = 0.099 AB 6-02-03

2mg/L = 0.222

# Reagents

Ferrous Ammonium Sulfate - EM Science Lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Conc $H_2SO_4$ ~~J T Baker~~ Fisher Lot # 032815
~~30-2-03~~

Ammonium Acetate Buffer VWR Lot # 2231

O-phenanthroline VWR Lot # 2343
0.1% w/v

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 217978

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 06/18/2003

Bonnie Stadelmann
Signature

06/18/03
Date


Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

# STL Chicago
# Wet Chemistry Case Narrative

Client: **Analytics Environmental Laboratory, LLC**
Job #: **217978** Date Rec'd: 06/04/03

1. This narrative covers the analysis of the samples in the above Job # for alkalinity, COD, nitrite-nitrogen, sulfate, and TOC by the methods referenced on the Laboratory Test Results pages.

2. All EPA holding times were met.

3. The initial and continuing calibration verification standards and blanks that bracketed these samples were in control.

4. The method blanks were below the detection limits.

5. The LCS recoveries were within control limits. Please see the Quality Control Results pages of this report for additional details.

6. The matrix QC done on these samples was within acceptance limits. See the Quality Control Results pages of this report for additional details.

Diane L. Harper
Wet Chemistry Section Manager

6-18-03
Date

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor 49784
STL Job #: 217978

Date Recd: 06/04/03

1. This narrative covers the Metals analysis of sample in the above Job # 217978.

   Method Ref: USEPA,SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

7. Matrix Spike (MS/MSD) recovery and Duplicate analysis was performed on sample 1.

   All Matrix spike (MS/MSD) recoveries were within the 75-125% (control limits are not applicable when the sample concentration exceed the spike added concentration by a factor of 4 or more).

   The Duplicate analysis was within the 20% Relative Percent Difference (RPD) control limits.

Jodi L. Wojcik
Metals Unit Leader

6-16-03
Date

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## SAMPLE INFORMATION
Date: 06/18/2003

Job Number.: 217978
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49784
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 217978-1 | DW01-0603-01-A | Water | 06/03/2003 | 07:20 | 06/04/2003 | 10:30 |
| 217978-2 | WY03-0603-01-A | Water | 06/03/2003 | 08:00 | 06/04/2003 | 10:30 |
| 217978-3 | DW13-0603-01-A | Water | 06/03/2003 | 13:30 | 06/04/2003 | 10:30 |
| 217978-4 | DW22-0603-01-A | Water | 06/03/2003 | 08:45 | 06/04/2003 | 10:30 |
| 217978-5 | DW23-0603-01-A | Water | 06/03/2003 | 08:50 | 06/04/2003 | 10:30 |
| 217978-6 | DW23-0603-01-B | Water | 06/03/2003 | 08:50 | 06/04/2003 | 10:30 |
| 217978-7 | DW24-0603-01-A | Water | 06/03/2003 | 10:15 | 06/04/2003 | 10:30 |
| 217978-8 | DW30-0603-01-A | Water | 06/03/2003 | 10:00 | 06/04/2003 | 10:30 |
| 217978-9 | DW04-0603-01-A | Water | 06/03/2003 | 10:55 | 06/04/2003 | 10:30 |
| 217978-10 | DW04-0603-01-B | Water | 06/03/2003 | 10:55 | 06/04/2003 | 10:30 |
| 217978-11 | DW09-0603-01-A | Water | 06/03/2003 | 11:40 | 06/04/2003 | 10:30 |
| 217978-12 | DW08-0603-01-A | Water | 06/03/2003 | 13:15 | 06/04/2003 | 10:30 |
| 217978-13 | DW07-0603-01-A | Water | 06/03/2003 | 12:10 | 06/04/2003 | 10:30 |
| 217978-14 | DW13-0603-02-A | Water | 06/03/2003 | 13:25 | 06/04/2003 | 10:30 |

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: DW01-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 07:20
Sample Matrix.....: Water

Laboratory Sample ID: 217978-1
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1006 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.6 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1024 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.12 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1502 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 24 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1343 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.49 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 0907 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2215 | tds |

025/065

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: WY03-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 08:00
Sample Matrix.....: Water

Laboratory Sample ID: 217978-2
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 100 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1014 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.2 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1025 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.53 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1504 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 25 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1344 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.69 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 0940 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0012 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2240 | tds |

026/065

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49784

ATTN: Steve Knollmeyer

Customer Sample ID: DW13-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 13:30
Sample Matrix.....: Water

Laboratory Sample ID: 217978-3
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 27 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1023 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 6.2 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1027 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.48 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1504 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 7.2 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1345 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.5 | | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 0955 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.050 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2246 | tds |

* In Description = Dry Wgt.



027/095

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LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Customer Sample ID: DW22-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 217978-4
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 22 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1032 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.6 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1029 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 1.6 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1505 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 13 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1347 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.0 | | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1011 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.089 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2253 | tds |

028/065

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49784

ATTN: Steve Knollmeyer

Customer Sample ID: DW23-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 217978-5
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 71 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1041 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 9.2 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1031 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.11 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1505 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 10 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1348 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.49 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1027 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2259 | tds |

029/065

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: DW23-0603-01-B
Date Sampled.....: 06/03/2003
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 217978-6
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 86 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1049 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.7 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1032 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.13 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1506 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 10 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1349 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.48 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1041 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2326 | tds |

* In Description = Dry Wgt.



590/090

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: DW24-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 10:15
Sample Matrix.....: Water

Laboratory Sample ID: 217978-7
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 81 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1058 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.6 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1034 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1507 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 22 | | | 2.1 | 5.0 | 1 | mg/L | 87258 | | 06/17/03 1350 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.24 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1054 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2332 | tds |

* In Description = Dry Wgt.



031/065

TL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: DW30-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 217978-8
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 5.6 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1107 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 9.7 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1036 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.059 | B | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1508 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 4.8 | B | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1431 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.76 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1122 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0025 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2339 | tds |

032/065

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 217978 Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Customer Sample ID: DW04-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 10:55
Sample Matrix.....: Water

Laboratory Sample ID: 217978-9
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 130 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1115 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 11 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1038 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.34 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1508 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 20 | | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1432 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.48 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1136 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2345 | tds |

033/065

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49784

ATTN: Steve Knollmeyer

Customer Sample ID: DW04-0603-01-B
Date Sampled.....: 06/03/2003
Time Sampled.....: 10:55
Sample Matrix.....: Water

Laboratory Sample ID: 217978-10
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 120 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1124 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.1 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1039 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.34 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1509 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 12 | | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1433 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.46 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1149 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2351 | tds |

034/065

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49784

ATTN: Steve Knollmeyer

Customer Sample ID: DW09-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 11:40
Sample Matrix.....: Water

Laboratory Sample ID: 217978-11
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 120 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1141 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 5.6 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1041 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.11 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1509 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 11 | | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1434 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.58 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1203 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0025 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/12/03 2357 | tds |

035/065

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 217978 Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Customer Sample ID: DW08-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 13:15
Sample Matrix.....: Water

Laboratory Sample ID: 217978-12
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 85 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1150 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.7 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1043 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.19 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1510 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.4 | | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1435 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.52 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1217 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.17 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0003 | tds |

* In Description = Dry Wgt.



590/590

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49784

ATTN: Steve Knollmeyer

Customer Sample ID: DW07-0603-01-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 12:10
Sample Matrix.....: Water

Laboratory Sample ID: 217978-13
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 140 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1159 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 9.2 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1045 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.041 | B | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1510 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 27 | | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1436 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.93 | B | | 0.15 | 1.0 | 1 | mg/L | 87401 | | 06/18/03 0852 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.018 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0010 | tds |

* In Description = Dry Wgt.



037/065

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# LABORATORY TEST RESULTS

Job Number: 217978

Date:06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49784 | ATTN: Steve Knollmeyer

Customer Sample ID: DW13-0603-02-A
Date Sampled.....: 06/03/2003
Time Sampled.....: 13:25
Sample Matrix.....: Water

Laboratory Sample ID: 217978-14
Date Received.....: 06/04/2003
Time Received.....: 10:30

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 170 | | | 4.7 | 5.0 | 1 | mg/L | 87112 | | 06/16/03 1208 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 10 | | | 3.4 | 5.0 | 1 | mg/L | 87330 | | 06/18/03 1046 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1511 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.0 | U | | 2.1 | 5.0 | 1 | mg/L | 87263 | | 06/17/03 1437 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.51 | B | | 0.15 | 1.0 | 1 | mg/L | 87401 | | 06/18/03 0907 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.036 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0016 | tds |

088/065

* In Description = Dry Wgt.

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# LABORATORY CHRONICLE

Job Number: 217978 Date: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Lab ID: 217978-1 Client ID: DW01-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1006 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 1024 | |
| EDD | Electronic Data Deliverable | 1 | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 2215 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 1752 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1502 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 0907 | |
| PKG INO (WC) | PKG INO (WET CHEMISTRY) | 1 | | | | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 1343 | |

Lab ID: 217978-2 Client ID: WY03-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1014 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 1025 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 2240 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 1753 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1504 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 0940 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 1344 | |

Lab ID: 217978-3 Client ID: DW13-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1023 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 1027 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 2246 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 1753 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1504 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 0955 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 1345 | |

Lab ID: 217978-4 Client ID: DW22-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1032 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 1029 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 2253 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 1754 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1505 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1011 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 1347 | |

Lab ID: 217978-5 Client ID: DW23-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1041 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 1031 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 2259 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 1754 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1505 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1027 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 1348 | |

Lab ID: 217978-6 Client ID: DW23-0603-01-B Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 1049 | |

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# LABORATORY CHRONICLE

Job Number: 217978

Date: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Lab ID: 217978-6 Client ID: DW23-0603-01-B
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1032 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2326 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1755 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1506 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1041 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 | 1349 | |

Lab ID: 217978-7 Client ID: DW24-0603-01-A
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1058 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1034 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2332 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1756 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1507 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1054 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87258 | 87258 | 06/17/2003 | 1350 | |

Lab ID: 217978-8 Client ID: DW30-0603-01-A
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1107 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1036 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2339 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1757 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1508 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1122 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1431 | |

Lab ID: 217978-9 Client ID: DW04-0603-01-A
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1115 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1038 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2345 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1757 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1508 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1136 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1432 | |

Lab ID: 217978-10 Client ID: DW04-0603-01-B
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1124 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1039 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2351 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1757 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1509 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1149 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1433 | |

Lab ID: 217978-11 Client ID: DW09-0603-01-A
Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1141 | |

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# LABORATORY CHRONICLE

Job Number: 217978 Date: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Lab ID: 217978-11 Client ID: DW09-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1041 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/12/2003 | 2357 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1758 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1509 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1203 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1434 | |

Lab ID: 217978-12 Client ID: DW08-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1150 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1043 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 | 0003 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1758 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1510 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 | 1217 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1435 | |

Lab ID: 217978-13 Client ID: DW07-0603-01-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1159 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1045 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 | 0010 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1759 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1510 | 1 |
| 415.1 | Organic Carbon | 1 | 87401 | 87401 | 06/18/2003 | 0852 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1436 | |

Lab ID: 217978-14 Client ID: DW13-0603-02-A Date Recvd: 06/04/2003 Sample Date: 06/03/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87112 | 87112 | 06/16/2003 | 1208 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87330 | 87330 | 06/18/2003 | 1046 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 | 0016 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86050 | 86050 | 06/04/2003 | 1759 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 | 1511 | 1 |
| 415.1 | Organic Carbon | 1 | 87401 | 87401 | 06/18/2003 | 0907 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 | 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87263 | 87263 | 06/17/2003 | 1437 | |

Q U A L I T Y  C O N T R O L  R E S U L T S

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| CCB | Continuing Calibration Blank | | 86913-016 | | 06/12/2003 | 2157 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-028 | | 06/12/2003 | 2320 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-040 | | 06/13/2003 | 0043 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-049 | | 06/13/2003 | 0150 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-061 | | 06/13/2003 | 0314 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-073 | | 06/13/2003 | 0437 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 86913-079 | | 06/13/2003 | 0528 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 497B4 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-015 | | 06/12/2003 | 2144 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.93837 | | 5.00000 | | 99 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-027 | | 06/12/2003 | 2307 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.85584 | | 5.00000 | | 97 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-039 | | 06/13/2003 | 0030 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.01410 | | 5.00000 | | 100 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-048 | | 06/13/2003 | 0137 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.03160 | | 5.00000 | | 101 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-060 | | 06/13/2003 | 0301 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.16479 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-072 | | 06/13/2003 | 0424 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.15872 | | 5.00000 | | 103 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-078 | | 06/13/2003 | 0512 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.12151 | | 5.00000 | | 102 | % | 90-110 | |

Q U A L I T Y  C O N T R O L  R E S U L T S

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-012 | | 06/12/2003 | 2123 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02030 | | 0.02000 | | 102 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-045 | | 06/13/2003 | 0117 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.01981 | | 0.02000 | | 99 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-075 | | 06/13/2003 | 0452 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02043 | | 0.02000 | | 102 | % | 50-150 | |

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 86913-011 | | 06/12/2003 | 2117 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICV | Initial Calibration Verification | M03FICV001 | 86913-010 | | 06/12/2003 | 2104 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 3.88224 | | 4.00000 | | 97 | % | 90-110 | |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| ISB | Interference Check Sample B | M03FISB001 | 86913-014 | | 06/12/2003 | 2136 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48524 | | 0.50000 | | 97 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86913-047 | | 06/13/2003 | 0129 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.49390 | | 0.50000 | | 99 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86913-077 | | 06/13/2003 | 0504 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.50211 | | 0.50000 | | 100 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| LCS | Laboratory Control Sample | M03ESPK002 | 86655 -002 | | 06/12/2003 2209 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.49730 | | 0.50000 | 0.00071 U | 99 | % | 80-120 | |

| LCS | Laboratory Control Sample | M03ESPK002 | 86899 -002 | | 06/13/2003 0203 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48724 | | 0.50000 | 0.00071 U | 97 | % | 80-120 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| MB | Method Blank | 86655 | 86655 -001 | | 06/12/2003 | 2203 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |

| MB | Method Blank | 86899 | 86899 -001 | | 06/13/2003 | 0157 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MD | Method Duplicate | | 217978-1 | | 06/12/2003 | 2228 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)
Equipment Code....: ICP4
Batch.....: 86913
Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | 0.00071 U | 0.00020 | A | 0.01000 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MS | Matrix Spike | M03ESPK002 | 217978-1 | | 06/12/2003 | 2234 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48007 | | 0.50000 | 0.00071 U | 96 | % | 75-125 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03DINT002 | 86913-009 | | 06/12/2003 | 2054 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.80304 | | 10.00000 | | 98 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978

Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| SD | Serial Dilution | | 217978-1 | | 06/12/2003 | 2222 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | 0.00071 U | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Test Method.....: 310.1 Batch.....: 87112 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87112 -002 | | mg/L | 4.70000 U | | | | | | | | 06/16/2003 | 0839 |
| LCS | 87112 -003 | I03ASTAK2 | mg/L | 101.20000 | | 100.00000 | 4.70000 U | 101 | | % | 80-120 | 06/16/2003 | 0847 |
| LCD | 87112 -004 | I03ASTAK2 | mg/L | 100.90000 | 101.20000 | 100.00000 | | 101 | | % | 80-120 | 06/16/2003 | 0856 |
| | | | | | | | | 0 | | R | 20 | | |
| MD | 217978-14 | | mg/L | 178.90000 | | | 171.90000 | 4.0 | | R | 20.0 | 06/16/2003 | 1216 |

Test Method.....: HACH 8000 Batch.....: 87330 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87330 -002 | | mg/L | 3.40000 U | | | | | | | | 06/18/2003 | 1020 |
| LCS | 87330 -003 | I03FSTCD1 | mg/L | 50.77000 | | 50.00000 | 3.40000 U | 102 | | % | 80-120 | 06/18/2003 | 1022 |
| MS | 217978-8 | I03FSTCD1 | mg/L | 57.95000 | | 50.00000 | 9.74000 | 96 | | % | 75-125 | 06/18/2003 | 1048 |
| MSD | 217978-8 | I03FSTCD1 | mg/L | 58.46000 | 57:95000 | 50.00000 | 9.74000 | 97 | | % | 75-125 | 06/18/2003 | 1050 |
| | | | | | | | | 1.0 | | R | 20 | | |

Test Method.....: 354.1 Batch.....: 86050 Analyst...: cvw
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 86050 -002 | I03DSTNI2 | mg/L | 0.09680 | | 0.10000 | | 97 | | % | 90-110 | 06/04/2003 | 1750 |
| ICB | 86050 -003 | | mg/L | 0.00520 U | | | | | | | | 06/04/2003 | 1750 |
| MB | 86050 -004 | | mg/L | 0.00520 U | | | | | | | | 06/04/2003 | 1751 |
| LCS | 86050 -005 | I03DSTNI2 | mg/L | 0.09610 | | 0.10000 | 0.00520 U | 96 | | % | 80-120 | 06/04/2003 | 1751 |
| MS | 217978-1 | I03DSTNI2 | mg/L | 0.08640 | | 0.10000 | 0.00520 U | 86 | | % | 75-125 | 06/04/2003 | 1752 |
| MSD | 217978-1 | I03DSTNI2 | mg/L | 0.08850 | 0.08640 | 0.10000 | 0.00520 U | 88 | | % | 75-125 | 06/04/2003 | 1753 |
| | | | | | | | | 2.3 | | R | 20 | | |
| CCV | 86050 -014 | I03DSTNI2 | mg/L | 0.09750 | | 0.10000 | | 98 | | % | 90-110 | 06/04/2003 | 1755 |
| CCB | 86050 -015 | | mg/L | 0.00520 U | | | | | | | | 06/04/2003 | 1756 |
| CCB | 86050 -015 | | mg/L | 0.00520 U | | | | | | | | 06/04/2003 | 1800 |
| CCV | 86050 -014 | I03DSTNI2 | mg/L | 0.09770 | | 0.10000 | | 98 | | % | 90-110 | 06/04/2003 | 1800 |

Test Method.....: 353.2 Batch.....: 86910 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 86910 -002 | I02GSTIC31 | mg/L | 0.93500 | | 1.00000 | | 94 | | % | 90-110 | 06/12/2003 | 1500 |
| ICB | 86910 -003 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1501 |
| MB | 86910 -004 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1501 |
| LCS | 86910 -005 | I02GSTIC31 | mg/L | 0.99400 | | 1.00000 | | 99 | | % | 80-120 | 06/12/2003 | 1502 |
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.93100 | | 1.00000 | | 93 | | % | 90-110 | 06/12/2003 | 1506 |
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1507 |
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.96400 | | 1.00000 | | 96 | | % | 90-110 | 06/12/2003 | 1512 |
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1513 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Test Method.....: 353.2 Batch.....: 86910 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.94000 | | 1.00000 | | 94 | | % | 90-110 | 06/12/2003 | 1515 |
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1516 |

Test Method.....: 353.2 Batch.....: 86910 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3
Parameter.....: Nitrate as N (NO3-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 217978-1 | I02GSTIC31 | mg/L | 1.21800 | | 1.00000 | 0.12400 | 109 | | % | 75-125 | 06/12/2003 | 1503 |
| MSD | 217978-1 | I02GSTIC31 | mg/L | 1.20300 | 1.21800 | 1.00000 | 0.12400 | 108 | | % | 75-125 | 06/12/2003 | 1503 |
| | | | | | | | | 0.9 | | R | 20 | | |

Test Method.....: 375.4 Batch.....: 87258 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: SPEC3 Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87258 -002 | I03FSTSA2A | mg/L | 20.54000 | | 20.00000 | | 103 | | % | 90-110 | 06/17/2003 | 1323 |
| ICB | 87258 -003 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1324 |
| MB | 87258 -004 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1325 |
| LCS | 87258 -005 | I03FSTSA2A | mg/L | 20.44000 | | 20.00000 | 2.10000 U | 102 | | % | 80-120 | 06/17/2003 | 1326 |
| CCV | 87258 -014 | I03FSTSA2A | mg/L | 9.80600 | | 10.00000 | | 98 | | % | 90-110 | 06/17/2003 | 1334 |
| CCB | 87258 -015 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1335 |
| CCV | 87258 -014 | I03FSTSA2A | mg/L | 18.27000 | | 20.00000 | | 91 | | % | 90-110 | 06/17/2003 | 1345 |
| CCB | 87258 -015 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1346 |
| CCV | 87258 -014 | I03FSTSA2A | mg/L | 9.39300 | | 10.00000 | | 94 | | % | 90-110 | 06/17/2003 | 1351 |
| CCB | 87258 -015 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1352 |

Test Method.....: 375.4 Batch.....: 87263 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: SPEC3 Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87263 -002 | I03FSTSA2A | mg/L | 20.85000 | | 20.00000 | | 104 | | % | 90-110 | 06/17/2003 | 1427 |
| ICB | 87263 -003 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1428 |
| MB | 87263 -004 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1429 |
| LCS | 87263 -005 | I03FSTSA2A | mg/L | 20.65000 | | 20.00000 | 2.10000 U | 103 | | % | 80-120 | 06/17/2003 | 1430 |
| CCV | 87263 -014 | I03FSTSA2A | mg/L | 10.42000 | | 10.00000 | | 104 | | % | 90-110 | 06/17/2003 | 1438 |
| CCB | 87263 -015 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1439 |
| CCV | 87263 -014 | I03FSTSA2A | mg/L | 19.92000 | | 20.00000 | | 100 | | % | 90-110 | 06/17/2003 | 1449 |
| CCB | 87263 -015 | | mg/L | 2.10000 U | | | | | | | | 06/17/2003 | 1450 |

# QUALITY CONTROL RESULTS

Job Number.: 217978 Report Date.: 06/18/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49784 ATTN: Steve Knollmeyer

Test Method.....: 415.1 Batch.....: 87241 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOC
Parameter.....: Organic Carbon, Tot. (TOC)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87241 -002 | I03ESTTC2 | mg/L | 21.24110 | | 20.00000 | | 106 | | % | 85-115 | 06/17/2003 | 0824 |
| ICB | 87241 -003 | | mg/L | 0.45340 B | | | | | | | | 06/17/2003 | 0830 |
| CCV | 87241 -015 | I03ESTTC2 | mg/L | 10.38660 | | 10.00000 | | 104 | | % | 85-115 | 06/17/2003 | 1109 |
| CCB | 87241 -016 | | mg/L | 0.30670 B | | | | | | | | 06/17/2003 | 1115 |
| CCV | 87241 -015 | I03ESTTC2 | mg/L | 20.79900 | | 20.00000 | | 104 | | % | 85-115 | 06/17/2003 | 1341 |
| CCB | 87241 -016 | | mg/L | 0.38900 B | | | | | | | | 06/17/2003 | 1347 |

Test Method.....: 415.1 Batch.....: 87401 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOC
Parameter.....: Organic Carbon, Tot. (TOC)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87401 -002 | I03ESTTC2 | mg/L | 20.88860 | | 20.00000 | | 104 | | % | 85-115 | 06/18/2003 | 0809 |
| ICB | 87401 -003 | | mg/L | 0.44330 B | | | | | | | | 06/18/2003 | 0816 |
| CCV | 87401 -014 | I03ESTTC2 | mg/L | 10.29310 | | 10.00000 | | 103 | | % | 85-115 | 06/18/2003 | 1055 |
| CCB | 87401 -015 | | mg/L | 0.33730 B | | | | | | | | 06/18/2003 | 1101 |
| CCV | 87401 -014 | I03ESTTC2 | mg/L | 10.35230 | | 10.00000 | | 104 | | % | 85-115 | 06/18/2003 | 1235 |
| CCB | 87401 -015 | | mg/L | 0.36180 B | | | | | | | | 06/18/2003 | 1241 |
| CCV | 87401 -014 | I03ESTTC2 | mg/L | 21.19520 | | 20.00000 | | 106 | | % | 85-115 | 06/18/2003 | 1615 |
| CCB | 87401 -015 | | mg/L | 0.45590 B | | | | | | | | 06/18/2003 | 1621 |

Test Method.....: 415.1 Batch.....: 87241 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOCAV2
Parameter.....: TOC Average Duplicates

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87241 -004 | | mg/L | 0.23100 B | | | | | | | | 06/17/2003 | 0837 |
| LCS | 87241 -005 | I03ESTTC2 | mg/L | 10.44100 | | 10.00000 | | 104 | | % | 80-120 | 06/17/2003 | 0851 |
| MS | 217978-1 | I03ESTTC2 | mg/L | 10.75350 | | 10.00000 | 0.49400 B | 108 | | % | 75-125 | 06/17/2003 | 0924 |
| MSD | 217978-1 | I03ESTTC2 | mg/L | 10.86250 | 10.75350 | 10.00000 | 0.49400 B | 109 | | % | 75-125 | 06/17/2003 | 0933 |
| | | | | | | | | 0.9 | | R | 20 | | |

Test Method.....: 415.1 Batch.....: 87401 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOCAV2
Parameter.....: TOC Average Duplicates

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87401 -004 | | mg/L | 0.20000 B | | | | | | | | 06/18/2003 | 0822 |
| LCS | 87401 -005 | I03ESTTC2 | mg/L | 10.21300 | | 10.00000 | | 102 | | % | 80-120 | 06/18/2003 | 0837 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ' | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ' | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calibration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

**SEVERN TRENT STL**

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Steve Knollmeyer
Company: Analytics
Address: 195 Commerce Way
Portsmouth, NH
Phone: 603 436-5111
Fax: 603 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address:
Phone: analytics
Fax:
PO#: Quote:

**Shaded Areas For Internal Use Only** 1 of 2

**Lab Lot#** 217978

| | |
|---|---|
| Package Sealed (Yes) No | Samples Sealed Yes (No) |
| Received on Ice (Yes) No | Samples Intact (Yes) No |
| Temperature °C of Cooler (3.4) (2.6) (3.1) | |
| Within Hold Time (Yes) No | Preserv. Indicated (Yes) No NA |
| pH Check OK (Yes) No NA | Res $Cl_2$ Check OK Yes No (NA) |
| Sample Labels and COC Agree (Yes) No | COC not present |

**Sampler Name:** Kathleen Saulkup
**Signature:** [signature]
**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Project Location:** Maine
**Lab PM:**
**Date Required**
**Hard Copy:** STD
**Fax:**

| Refrg # | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| # / Cont. | 1P | 1P | 1P | 2V | | | | | | | | | | | | |
| Volume | 1L | 1L | 1L | 40ml | | | | | | | | | | | | |
| Preserv | $HNO_3$ | — | $H_2SO_4$ | $H_2SO_4$ | | | | | | | | | | | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Dissolved Manganese | Sulfate alkalinity nitrite | COD + nitrate | TOC | | | | | | | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | DW01-0603-01-A | 6/3/03 | 0720 | W | G | X | X | X | X | | | | | | | Dissolved Mang - 6010B |
| 2 | | WY03-0603-01-A | | 0800 | | | X | X | X | X | | | | | | | sulfate 375.1 |
| 3 | | DW13-0603-01-A | | 1330 | | | X | X | X | X | | | | | | | alkalinity 310.1 |
| 4 | | DW22-0603-01-A | | 0845 | | | X | X | X | X | | | | | | | nitrite/nitrate : 352.1 |
| 5 | | DW23-0603-01-A | | 0850 | | | X | X | X | X | | | | | | | COD HACH 8000 |
| 6 | | DW23-0603-01-B | | 0850 | | | X | X | X | X | | | | | | | TOC 415.1 or 9060 |
| 7 | | DW24-0603-01-A | | 1015 | | | X | X | X | X | | | | | | | |
| 8 | | DW30-0603-01-A | | 1000 | | | X | X | X | X | | | | | | | metals samples were |
| 9 | | DW04-0603-01-A | | 1055 | | | X | X | X | X | | | | | | | Field filtered |
| 10 | | DW04-0603-01-B | | 1055 | | | X | X | X | X | | | | | | | |
| 11 | | DW09-0603-01-A | | 1140 | | | X | X | X | X | | | | | | | 3 |
| 12 | | DW08-0603-01-A | | 1315 | | | X | X | X | X | | | | | | | (*) ~~X~~ (1cr) coolers |

Methods for all samples

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| [signature] | Weston | 6/3/03 | 1730 | FEDEX | | | |
| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY [signature] | COMPANY SR | DATE 6/4/03 | TIME 1030 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

**Container Key.**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
* note nitrate
Short HT

**Date Received** 6/4/03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading** See attach

STL Chicago is a part of Severn Trent Laboratories, Inc.
STL-8208 (0600)
060/065

SEVERN TRENT SERVICES

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

Shaded Areas For Internal Use Only 2 of 4

**Report To:**
Contact: Sterknameyer
Company: analytics
Address: 195 Commerce Way
Portsmouth, NH
Phone: (603) 436-5111
Fax: (603) 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address:
Phone: analytics
Fax:
PO#: Quote:

**Lab Lot#** 217978

| Package Sealed Yes No | Samples Sealed Yes No |
|---|---|
| Received on Ice Yes No | Samples Intact Yes No |
| Temperature °C of Cooler | |

| Within Hold Time Yes No | Preserv. Indicated Yes No NA |
|---|---|
| pH Check OK Yes No NA | Res Cl2 Check OK Yes No NA |
| Sample Labels and COC Agree Yes No | COC not present |

**Sampler Name:** Kathleen Soukup
**Signature:**
**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Project Location:** Maine
**Lab PM:**
**Date Required**
Hard Copy: ___/___/___
Fax: ___/___/___

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Refrg # | # / Cont. | Volume | Preserv | Dissolved Manganese | Sulfate Calcium Nitrate | COD Nitrate | TOC | | | | | | | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 1 P | 1 P | 1 P | 2 V | | | | | | | | | | |
| | | | | | | | | 1 L | 1 L | 1 L | 40 ml | | | | | | | | | | |
| | | | | | | | | HNO3 | — | H2SO4 | H2SO4 | | | | | | | | | | |
| 13 | | DW07-0603-01-A | 6/3/03 | 1210 | GW | G | | X | X | X | X | | | | | | | | | | |
| | | ~~DW38-0603-01-A~~ | ↓ | | ↓ | G | | X | X | X | X | KT | | | | | | | | | |
| 14 | | DW13-0603-02-A | 6/3/03 | 1325 | GW | G | | X | X | X | X | | | | | | | | | | |

| RELINQUISHED BY | COMPANY | DATE | TIME |
|---|---|---|---|
| | Weston | 6/3/03 | 1730 |
| RELINQUISHED BY | COMPANY | DATE | TIME |

| RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|
| FEDEX | | | |
| RECEIVED BY | COMPANY | DATE | TIME |
| | STL | 6/4/03 | 1030 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
See page 1 for methods

**Date Received** 6/4/03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading** see attach

STL 8208 (0600)

061/065

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 10/02

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 3.7
3) Received in good condition (Y) or N
4) pH checked by: AMB 6.4.03
5) Labels checked by: MJG 6.4.03

Project#: 10471.217.002 Project: Bucksharbor
Company: Weston Solutions
Contact: Kathleen Sackup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 626-5574 PO# 0037759 Quote #
Sampler (Signature): CTS-P

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCl | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW01-0603-01-A | 6/3/03 | 0720 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49784-1 |
| W403-0603-01-A | | 0800 | | | | | | X | | | | | | 2 | 2 |
| DW13-0603-01-A | | 1330 | | | | | | X | | | | | | 1.5 | 3 |
| DW22-0603-01-A | | 0845 | | | | | | X | | | | | | 1.5 | 4 |
| DW23-0603-01-A | | 0850 | | | | | | X | | | | | | 1.5 | 5 |
| DW23-0603-01-B | | 0850 | | | | | | X | | | | | | 1.5 | 6 |
| DW24-0603-01-A | | 1015 | | | | | | X | | | | | | 1.5 | 7 |
| DW30-0603-01-A | | 1000 | | | | | | X | | | | | | 1.5 | 8 |
| DW04-0603-01-A | | 1055 | | | | | | X | | | | | | 2 | 9 |
| DW04-0603-01-B | | 1055 | | | | | | X | | | | | | 2 | 10 |
| DW09-0603-01-A | | 1140 | | | | | | X | | | | | | 2 | 11 |
| DW08-0603-01-A | | 1315 | | | | | | X | | | | | | 2 | 12 |

Received By: FedEx Time: 1730 Date: 6/3/03
Received By: MJG Time: 1000 Date: 6.4.03
Received By: Time: Date:

FAX RESULTS? (YES) NO
Fax # x540

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
Ferrous Iron via SM 3500D

Client Code: WESTONM

Page 1 of 2

Relinquished By: Sampler: CTS-P
Relinquished By: FedEx
Relinquished By:

990/390

Analytics\AEL Documents\AEL COC

# Chain Of Custody Form

**analytics** environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 3.7
3) Received in good condition Y or N
4) pH checked by: amb 6.4.03
5) Labels checked by: mj 6-4-03

Project#: 10471.217.002 Project: Bucks Harbor
Company: **Weston Solutions**
Contact: Kathleen Soukup
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 656-5574 PO# 0037759 Quote #
Sampler (Signature): KTZ

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW07-0603-01-A | 6/3/03 | 1210 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49784-13 |
| ~~DW38-0603-01-A~~ | ~~6/30/03~~ | | ↓ | | | | | X | | | ↓ | 1 | P | | (a) |
| DW13-0603-02-A | 6/3/03 | 1325 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | -14 |

FAX RESULTS? YES NO
Fax # x549

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
Ferrous Iron via SM3500D

Client Code: WESTONM

Page 2 of 2

| Relinquished By Sampler: | Relinquished By: | Relinquished By: |
|---|---|---|
| | FedEx | |
| Date: 6/3/03 | Date: 6.4.03 | Date: |
| Time: 1730 | Time: 1000 | Time: |
| Received By: FEDEX | Received By: | Received By: |

Analytics\AEL Documents\AEL COC

063/065

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: _____ COOLER NUMBER: n/a

CLIENT: WESTON SOLUTIONS NUMBER OF COOLERS: 1

PROJECT: BUCKS HARBOR DATE RECEIVED: 6.4.03

**A: PRELIMINARY EXAMINATION:** DATE COOLER OPENED: 6.4.03

1. Cooler received by(initials) Date Received: 6.4.03
2. Did cooler come with a shipping slip? (Y) N

If YES, enter carrier name and airbill number here: 836687593045 FedEx

3. Were custody seals on the outside of cooler? (Y) N
How many & where: 1 on front lid Seal Date: 6.3.03 Seal Name: ADV
4. Did the custody seals arrive unbroken and intact upon arrival? (Y) N
5. COC#: n/a
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? (Y) N
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 3.7 °C

**B. Log-In:** Date samples were logged in: _____ By: _____

11. Type of packing in cooler(bubble wrap, popcorn) Y (N)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? Y N
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y N/a

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): MJ Date: 6.4.03

[redacted]

**Custody Seal**

DATE 10/3/03

SIGNATURE ADV

FedEx Express **USA Airbill** FedEx Tracking Number 8366 7259 3045

Form I.D. No. 0200

**1 From**

Date 10/3/03

Sender's Name Kathleen Soukup Phone (603) 315-4516

Company Weston Solutions

Address 1 Wall St

Dept./Floor/Suite/Room

City Manchester State NH ZIP 03101

**2 Your Internal Billing Reference** 10971.217.002.2002

**3 To**

Recipient's Name Melissa Gulli Phone (603) 436-5114

Company Analytics

Address 195 Commerce Way

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Suite E

Dept./Floor/Suite/Room

City Portsmouth State NH ZIP 03801

8366 9259 3045

**4a Express Package Service** — *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

**4b Express Freight Service** — *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation: * Declared value limit $500

**5 Packaging**

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

**6 Special Handling** — Include FedEx address in Section 3

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

**7 Payment** *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

| Total Packages | Total Weight | Total Declared Value† | Total Charges |
|---|---|---|---|
| 1 | | $ .00 | Credit Card Auth. |

†Our liability is limited to $100 unless you declare a higher value. See back for details.

**8 Release Signature** *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

**Questions? Visit our Web site at fedex.com** or call 1.800.Go.FedEx® 800.463.3339.

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446

990/990

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

RECEIVED
JUN 27 2003

June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49793**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49793**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49793-1 | 06/04/03 | DW34-0603-01-A | Alkalinity | |
| | 06/04/03 | DW34-0603-01-A | Chemical Oxygen Demand | |
| | 06/04/03 | DW34-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/04/03 | DW34-0603-01-A | Metals | |
| | 06/04/03 | DW34-0603-01-A | Metals Digestion | |
| | 06/04/03 | DW34-0603-01-A | Nitrate | |
| | 06/04/03 | DW34-0603-01-A | Nitrite | |
| | 06/04/03 | DW34-0603-01-A | Sulfate | |
| | 06/04/03 | DW34-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49793-2 | 06/04/03 | DW03-0603-01-A | Alkalinity | |
| | 06/04/03 | DW03-0603-01-A | Chemical Oxygen Demand | |
| | 06/04/03 | DW03-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/04/03 | DW03-0603-01-A | Metals | |
| | 06/04/03 | DW03-0603-01-A | Metals Digestion | |
| | 06/04/03 | DW03-0603-01-A | Nitrate | |
| | 06/04/03 | DW03-0603-01-A | Nitrite | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/25/2003

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analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/04/03 | DW03-0603-01-A | Sulfate | |
| | 06/04/03 | DW03-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49793-3 | 06/04/03 | DW03-0603-01-B | Alkalinity | |
| | 06/04/03 | DW03-0603-01-B | Chemical Oxygen Demand | |
| | 06/04/03 | DW03-0603-01-B | Ferrous Iron in Aqueous Matrices | |
| | 06/04/03 | DW03-0603-01-B | Metals | |
| | 06/04/03 | DW03-0603-01-B | Metals Digestion | |
| | 06/04/03 | DW03-0603-01-B | Nitrate | |
| | 06/04/03 | DW03-0603-01-B | Nitrite | |
| | 06/04/03 | DW03-0603-01-B | Sulfate | |
| | 06/04/03 | DW03-0603-01-B | Total Organic Carbon in Aqueous Matrices | |
| 49793-4 | 06/04/03 | DW05-0603-01-A | Alkalinity | |
| | 06/04/03 | DW05-0603-01-A | Chemical Oxygen Demand | |
| | 06/04/03 | DW05-0603-01-A | Ferrous Iron in Aqueous Matrices | |
| | 06/04/03 | DW05-0603-01-A | Metals | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

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Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/25/2003

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Portsmouth, New Hampshire 03801
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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49793**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/04/03 | DW05-0603-01-A | Metals Digestion | |
| | 06/04/03 | DW05-0603-01-A | Nitrate | |
| | 06/04/03 | DW05-0603-01-A | Nitrite | |
| | 06/04/03 | DW05-0603-01-A | Sulfate | |
| | 06/04/03 | DW05-0603-01-A | Total Organic Carbon in Aqueous Matrices | |
| 49793-5 | 06/04/03 | DW38-0603-02-A | Alkalinity | |
| | 06/04/03 | DW38-0603-02-A | Chemical Oxygen Demand | |
| | 06/04/03 | DW38-0603-02-A | Electronic Data Deliverable | |
| | 06/04/03 | DW38-0603-02-A | Ferrous Iron in Aqueous Matrices | |
| | 06/04/03 | DW38-0603-02-A | Metals | |
| | 06/04/03 | DW38-0603-02-A | Metals Digestion | |
| | 06/04/03 | DW38-0603-02-A | Nitrate | |
| | 06/04/03 | DW38-0603-02-A | Nitrite | |
| | 06/04/03 | DW38-0603-02-A | Sulfate | |
| | 06/04/03 | DW38-0603-02-A | Total Organic Carbon in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/25/2003

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analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 24, 2003

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

## ANALYTICAL RESULTS FERROUS IRON
## CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| L060503F | LABQC | N/A | N/A | 06/05/03 | Aqueous | 1 | 0.1 | 93 |
| B060503F | LABQC | N/A | N/A | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-1 | DW34-0603-01- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-2 | DW03-0603-01- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-3 | DW03-0603-01- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-4 | DW05-0603-01- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-5 | DW38-0603-02- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| 49793-1, DUP | DW34-0603-01- | 06/04/03 | 06/04/03 | 06/05/03 | Aqueous | 1 | 0.1 | U |
| LD06053F | LABQC | N/A | N/A | 06/05/03 | Aqueous | 1 | 0.1 | 93 |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/5/03
Analyst: AB
Reviewed: mgo 6/24/03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

| | |
|---|---|
| Curve Date: | 6/2/03 |
| Corr Coef. ('r) | 0.9985 |
| Y-int | 0.000976 |
| slope | 0.109 |

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L060503F/CC 1MG/L | 0.100 | 0.926 | 1 | 98% |
| 2 | B060503F/METH.BL. | -0.004 | -0.028 | 1 | U |
| 3 | 49793-1 | -0.006 | -0.046 | 1 | U |
| 4 | 49793-2 | -0.006 | -0.046 | 1 | U |
| 5 | 49793-3 | -0.008 | -0.064 | 1 | U |
| 6 | 49793-4 | -0.006 | -0.046 | 1 | U |
| 7 | 49793-5 | 0.006 | 0.064 | 1 | U |
| 8 | 49793-5,MS | 0.128 | 1.183 | 1 | 118% |
| 9 | 49793-5,MSD | 0.127 | 1.174 | 1 | 117% |
| 10 | 49793-1 DUP | -0.007 | -0.055 | 1 | U |
| 11 | LD06053F/CC 1MG/L | 0.100 | 0.926 | 1 | 93% |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

Q-P-060503-1-AB
P-P-060503-1-AB

60.5.03 Ferrous Iron

F035
200mg/L
AB
6 16 5 FEB 03

0.1443(g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2ml Conc $H_2SO_4$ LOT# 032815
5ml $DiH_2O$ → Diluted to 100ml
= 200mg/L STOCK

F036
1mg/L

0.25ml F035 → 50ml $DiH_2O$

B060503F 12.5ml $DiH_2O$ + 5ml O-Ph + 2ml Ammonium Acetate
L060503F(c) 12.5ml F036 + 5ml O-Ph + 2ml Ammonium Acetate
LD060503F(c) 12.5ml F036 + 5ml O-Ph + 2ml Ammonium Acetate

| SAMPLE# | Absorbance | = |
|---|---|---|
| L060503F(c) | | 0.100 |
| B060503F(method blank) | | -0.004 |
| 49793-1 | | -0.006 |
| -2 | | -0.006 |
| -3 | | -0.008 |
| -4 | | -0.006 |
| -5 | | 0.006 |
| -5MS | | 0.128 |
| -5MSD | | 0.127 |
| 49793-1 DUP | | -0.007 |
| LD060503F | | 0.100 |

SPIKED w/ 62.5 ul F035
LD

AB 6/5/03

6.5.03 Reagent Page for pg 69

Ferrous Ammonium Sulfate Hexahydrate LOT# 42207238

O-phenanthroline LOT# 2343

Ammonium acetate buffer LOT# 2231

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** L060503F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/05/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 0.926 | 92.6 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 0.926 | 92.6 | 0 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** 49793-5
**Matrix:** Aqueous
**Field Sample ID:** DW38-0603-02-A
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 1.18 | 118 | 70-130 |

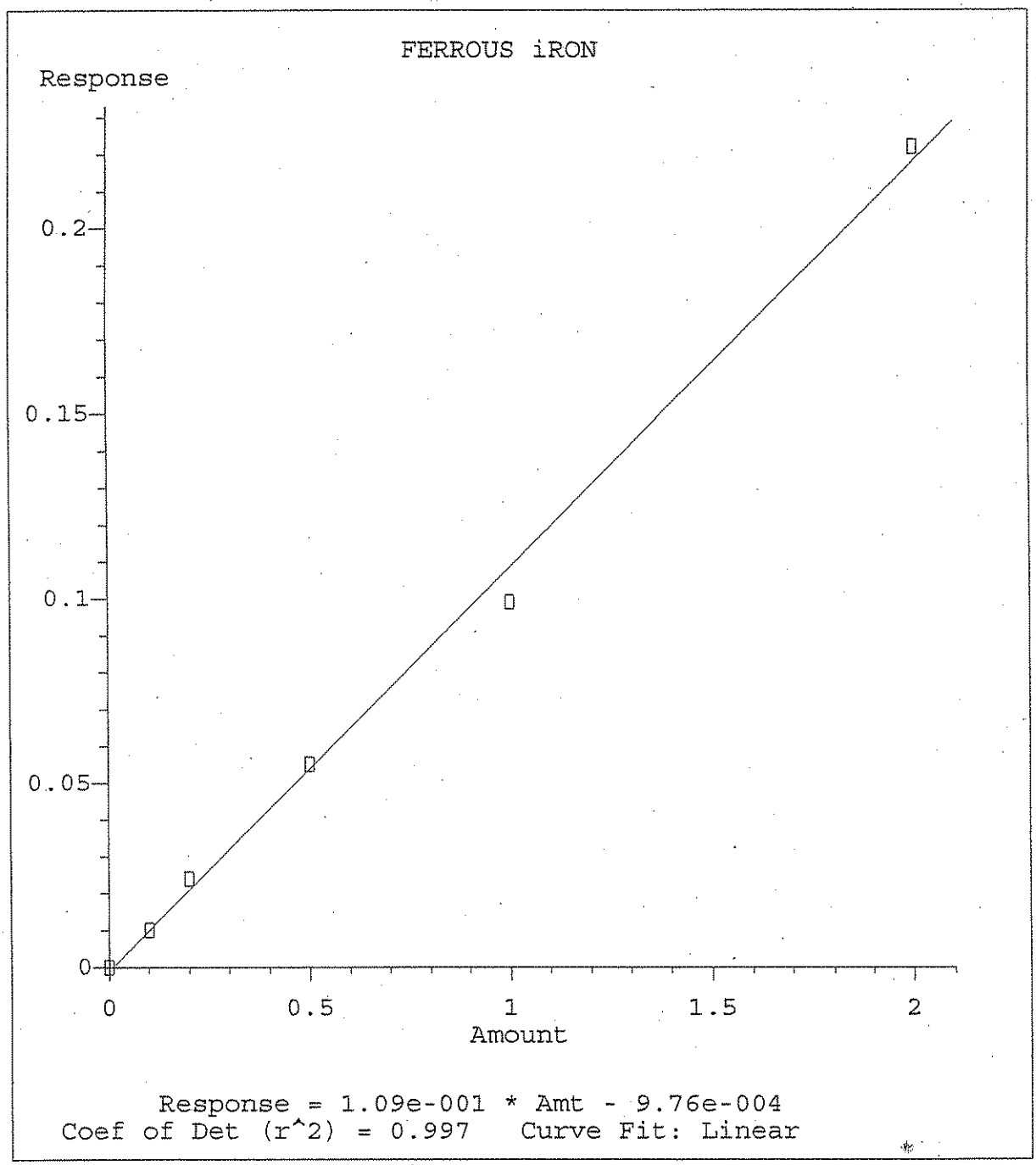
| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1.17 | 117 | 1 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa A Kelli




r = 0.998

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

6.2.03 mg/AB Ferrous Iron

F020
200 mg/L
MG-203
STOCK
mg 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

F026
5mg/L
2.5mL F020 → 100mL DI $H_2O$

F021
2mg/L
1mL F020 → 100mL $DH_2O$

F022
1mg/L
0.25mL F020 → 50mL DI $H_2O$

F023
0.5mg/L
0.125mL F020 → 50mL DI $H_2O$

F024
0.20mg/L
0.025mL F020 → 25mL DI $H_2O$

F025
0.1mg/L
0.0125mL F020 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L = 0.099 AB 6-02-03

2mg/L = 0.222

## Reagents

Ferrous Ammonium Sulfate – EM Science Lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Conc $H_2SO_4$ ~~J.T. Baker~~ Fisher Lot # 032815
~~06-2-03~~

Ammonium Acetate Buffer VWR Lot # 2231

O-phenanthroline VWR Lot # 2343
0.1% w/v

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 218019

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 06/20/2003

Bonnie Stadelmann
Signature

06/20/03
Date


Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

# STL Chicago
# Wet Chemistry Case Narrative

Client: **Analytics Environmental Laboratory, LLC**
Job #: **218019** Date Rec'd: 06/05/03

1. This narrative covers the analysis of the samples in the above Job # for alkalinity, COD, nitrite-nitrogen, nitrate-nitrogen, sulfate, and TOC by the methods referenced on the Laboratory Test Results pages.

2. All EPA holding times were met, except for the nitrite analysis of sample 218019-1. While the color reagent was added within hold time, the sample preparation was read approximately 15 minutes after the expiration of the 48-hour holding time.

3. The initial and continuing calibration verification standards and blanks that bracketed these samples were in control.

4. The method blanks were below the detection limits.

5. The LCS recoveries were within control limits. Please see the Quality Control Results pages of this report for additional details.

6. The matrix QC done on these samples was within acceptance limits. See the Quality Control Results pages of this report for additional details.

Diane L. Harper
Wet Chemistry Section Manager

6-20-03
Date

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor 49793
STL Job #: 218019

Date Recd: 06/05/03

1. This narrative covers the Metals analysis of sample in the above Job # 218019.

   Method Ref: USEPA, SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

7. Matrix QC was performed on an alternate Job.

Jodi L. Wojcik
Metals Unit Leader

6-16-03
Date

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## SAMPLE INFORMATION
Date: 06/20/2003

Job Number.: 218019
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49793
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 218019-1 | DW34-0603-01-A | Water | 06/04/2003 | 08:15 | 06/05/2003 | 10:00 |
| 218019-2 | DW03-0603-01-A | Water | 06/04/2003 | 08:50 | 06/05/2003 | 10:00 |
| 218019-3 | DW03-0603-01-B | Water | 06/04/2003 | 08:50 | 06/05/2003 | 10:00 |
| 218019-4 | DW05-0603-01-A | Water | 06/04/2003 | 09:40 | 06/05/2003 | 10:00 |
| 218019-5 | DW38-0603-01-A | Water | 06/04/2003 | 10:25 | 06/05/2003 | 10:00 |

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 218019

Date:06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49793 | ATTN: Steve Knollmeyer

Customer Sample ID: DW34-0603-01-A
Date Sampled.....: 06/04/2003
Time Sampled.....: 08:15
Sample Matrix.....: Water

Laboratory Sample ID: 218019-1
Date Received.....: 06/05/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 51 | | | 4.7 | 5.0 | 1 | mg/L | 87230 | | 06/17/03 0654 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 6.7 | | | 3.4 | 5.0 | 1 | mg/L | 87654 | | 06/20/03 1125 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.72 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1511 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.0 | | | 2.1 | 5.0 | 1 | mg/L | 87377 | | 06/18/03 1134 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.41 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1230 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.00073 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0022 | tds |

* In Description = Dry Wgt.



019/041

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# LABORATORY TEST RESULTS

Job Number: 218019

Date:06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49793 | ATTN: Steve Knollmeyer

Customer Sample ID: DW03-0603-01-A
Date Sampled.....: 06/04/2003
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 218019-2
Date Received.....: 06/05/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 87230 | | 06/17/03 0706 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.8 | | | 3.4 | 5.0 | 1 | mg/L | 87654 | | 06/20/03 1127 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.25 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1512 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 8.6 | | | 2.1 | 5.0 | 1 | mg/L | 87377 | | 06/18/03 1135 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.66 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1244 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0051 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0050 | tds |

020/041

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218019

Date:06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49793 | ATTN: Steve Knollmeyer

Customer Sample ID: DW03-0603-01-B
Date Sampled.....: 06/04/2003
Time Sampled.....: 08:50
Sample Matrix.....: Water

Laboratory Sample ID: 218019-3
Date Received.....: 06/05/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 87230 | | 06/17/03 0717 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 8.3 | | | 3.4 | 5.0 | 1 | mg/L | 87654 | | 06/20/03 1129 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.23 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1513 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 8.8 | | | 2.1 | 5.0 | 1 | mg/L | 87377 | | 06/18/03 1136 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.65 | B | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1258 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0050 | B | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0056 | tds |

021/041

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218019

Date:06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49793 | ATTN: Steve Knollmeyer

Customer Sample ID: DW05-0603-01-A
Date Sampled.....: 06/04/2003
Time Sampled.....: 09:40
Sample Matrix.....: Water

Laboratory Sample ID: 218019-4
Date Received.....: 06/05/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 26 | | | 4.7 | 5.0 | 1 | mg/L | 87230 | | 06/17/03 0729 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 87654 | | 06/20/03 1131 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.88 | | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1514 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.0 | | | 2.1 | 5.0 | 1 | mg/L | 87377 | | 06/18/03 1137 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.8 | | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1311 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.038 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0102 | tds |

022/041

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218019

Date:06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49793 | ATTN: Steve Knollmeyer

Customer Sample ID: DW38-0603-01-A
Date Sampled.....: 06/04/2003
Time Sampled.....: 10:25
Sample Matrix.....: Water

Laboratory Sample ID: 218019-5
Date Received.....: 06/05/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 87230 | | 06/17/03 0740 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 6.2 | | | 3.4 | 5.0 | 1 | mg/L | 87654 | | 06/20/03 1134 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 86910 | | 06/12/03 1514 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 4.7 | B | | 2.1 | 5.0 | 1 | mg/L | 87377 | | 06/18/03 1138 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.1 | | | 0.15 | 1.0 | 1 | mg/L | 87241 | | 06/17/03 1325 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.013 | | | 0.00071 | 0.010 | 1 | mg/L | 86913 | | 06/13/03 0108 | tds |

023/041

* In Description = Dry Wgt.

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# LABORATORY CHRONICLE

Job Number: 218019 Date: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

Lab ID: 218019-1 Client ID: DW34-0603-01-A Date Recvd: 06/05/2003 Sample Date: 06/04/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87230 | 87230 | 06/17/2003 0654 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87654 | 87654 | 06/20/2003 1125 | |
| EDD | Electronic Data Deliverable | 1 | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 0022 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86180 | 86180 | 06/06/2003 0829 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1511 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1230 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87377 | 87377 | 06/18/2003 1134 | |

Lab ID: 218019-2 Client ID: DW03-0603-01-A Date Recvd: 06/05/2003 Sample Date: 06/04/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87230 | 87230 | 06/17/2003 0706 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87654 | 87654 | 06/20/2003 1127 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 0050 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86180 | 86180 | 06/06/2003 0830 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1512 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1244 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87377 | 87377 | 06/18/2003 1135 | |

Lab ID: 218019-3 Client ID: DW03-0603-01-B Date Recvd: 06/05/2003 Sample Date: 06/04/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87230 | 87230 | 06/17/2003 0717 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87654 | 87654 | 06/20/2003 1129 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 0056 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86180 | 86180 | 06/06/2003 0830 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1513 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1258 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87377 | 87377 | 06/18/2003 1136 | |

Lab ID: 218019-4 Client ID: DW05-0603-01-A Date Recvd: 06/05/2003 Sample Date: 06/04/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87230 | 87230 | 06/17/2003 0729 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87654 | 87654 | 06/20/2003 1131 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 0102 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86180 | 86180 | 06/06/2003 0830 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1514 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1311 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87377 | 87377 | 06/18/2003 1137 | |

Lab ID: 218019-5 Client ID: DW38-0603-01-A Date Recvd: 06/05/2003 Sample Date: 06/04/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87230 | 87230 | 06/17/2003 0740 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 87654 | 87654 | 06/20/2003 1134 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 86913 | 86655 | 06/13/2003 0108 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 86180 | 86180 | 06/06/2003 0831 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 86910 | 86910 | 06/12/2003 1514 | 1 |
| 415.1 | Organic Carbon | 1 | 87241 | 87241 | 06/17/2003 1325 | |
| Method | Soluble Non-Digestion Batch | 1 | 86655 | | 06/11/2003 1250 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 87377 | 87377 | 06/18/2003 1138 | |

# QUALITY CONTROL RESULTS

Job Number.: 218019

Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-016 | | 06/12/2003 | 2157 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-028 | | 06/12/2003 | 2320 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-040 | | 06/13/2003 | 0043 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-049 | | 06/13/2003 | 0150 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-061 | | 06/13/2003 | 0314 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-073 | | 06/13/2003 | 0437 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 86913-079 | | 06/13/2003 | 0528 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-015 | | 06/12/2003 | 2144 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.93837 | | 5.00000 | | 99 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-027 | | 06/12/2003 | 2307 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.85584 | | 5.00000 | | 97 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-039 | | 06/13/2003 | 0030 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.01410 | | 5.00000 | | 100 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-048 | | 06/13/2003 | 0137 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.03160 | | 5.00000 | | 101 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-060 | | 06/13/2003 | 0301 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.16479 | | 5.00000 | | 103 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-072 | | 06/13/2003 | 0424 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.15872 | | 5.00000 | | 103 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV002 | 86913-078 | | 06/13/2003 | 0512 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.12151 | | 5.00000 | | 102 | % | 90-110 | |

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-012 | | 06/12/2003 | 2123 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02030 | | 0.02000 | | 102 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-045 | | 06/13/2003 | 0117 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.01981 | | 0.02000 | | 99 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI001 | 86913-075 | | 06/13/2003 | 0452 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02043 | | 0.02000 | | 102 | % | 50-150 | |

# QUALITY CONTROL RESULTS

Job Number.: 218019

Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 86913-011 | | 06/12/2003 | 2117 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218019

Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICV | Initial Calibration Verification | M03FICV001 | 86913-010 | | 06/12/2003 | 2104 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 3.88224 | | 4.00000 | | 97 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| ISB | Interference Check Sample B | M03FISB001 | 86913-014 | | 06/12/2003 | 2136 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48524 | | 0.50000 | | 97 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86913-047 | | 06/13/2003 | 0129 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.49390 | | 0.50000 | | 99 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB001 | 86913-077 | | 06/13/2003 | 0504 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.50211 | | 0.50000 | | 100 | % | 80-120 | |

QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| LCS | Laboratory Control Sample | M03ESPK002 | 86655 -002 | | 06/12/2003 2209 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.49730 | | 0.50000 | 0.00071 U | 99 | % | 80-120 | |

| LCS | Laboratory Control Sample | M03ESPK002 | 86899 -002 | | 06/13/2003 0203 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48724 | | 0.50000 | 0.00071 U | 97 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 86913

| MB | Method Blank | 86655 | 86655 -001 | | 06/12/2003 | 2203 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |

| MB | Method Blank | 86899 | 86899 -001 | | 06/13/2003 | 0157 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 218019

Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 86913

Analyst...: tds

| | | | | | | |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03D1NT002 | 86913-009 | | 06/12/2003 | 2054 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.80304 | | 10.00000 | | 98 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

Test Method.....: 310.1 Batch.....: 87230 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87230 -002 | | mg/L | 4.70000 U | | | | | | | | 06/17/2003 | 0631 |
| LCS | 87230 -003 | I03ASTAK2 | mg/L | 101.60000 | | 100.00000 | 4.70000 U | 102 | | % | 80-120 | 06/17/2003 | 0643 |

Test Method.....: HACH 8000 Batch.....: 87654 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87654 -003 | | mg/L | 3.40000 U | | | | | | | | 06/20/2003 | 1120 |
| LCS | 87654 -004 | I03FSTCD1 | mg/L | 49.61000 | | 50.00000 | 3.40000 U | 99 | | % | 80-120 | 06/20/2003 | 1122 |
| MS | 218019-5 | I03FSTCD1 | mg/L | 60.47000 | | 50.00000 | 6.20000 | 109 | | % | 75-125 | 06/20/2003 | 1136 |
| MSD | 218019-5 | I03FSTCD1 | mg/L | 57.88000 | 60.47000 | 50.00000 | 6.20000 | 103 | | % | 75-125 | 06/20/2003 | 1138 |
| | | | | | | | | 5.7 | | R | 20 | | |

Test Method.....: HACH 8000 Batch.....: 87654 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: CODH
Parameter.....: Chemical Oxygen Demand (COD-High)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCS | 87654 -012 | I03FSTCD2 | mg/L | 436.60000 | | 500.00000 | | 87 | | % | 80-120 | 06/20/2003 | 1140 |

Test Method.....: 354.1 Batch.....: 86180 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICB | 86180 -003 | | mg/L | 0.00520 U | | | | | | | | 06/06/2003 | 0828 |
| ICV | 86180 -002 | I03DSTNI2 | mg/L | 0.09790 | | 0.10000 | | 98 | | % | 90-110 | 06/06/2003 | 0828 |
| LCS | 86180 -005 | I03DSTNI2 | mg/L | 0.09890 | | 0.10000 | 0.00520 U | 99 | | % | 80-120 | 06/06/2003 | 0829 |
| MB | 86180 -004 | | mg/L | 0.00520 U | | | | | | | | 06/06/2003 | 0829 |
| CCV | 86180 -014 | I03DSTNI2 | mg/L | 0.09820 | | 0.10000 | | 98 | | % | 90-110 | 06/06/2003 | 0832 |
| CCB | 86180 -015 | | mg/L | 0.00520 U | | | | | | | | 06/06/2003 | 0832 |
| CCB | 86180 -015 | | mg/L | 0.00520 U | | | | | | | | 06/06/2003 | 0834 |
| CCV | 86180 -014 | I03DSTNI2 | mg/L | 0.09760 | | 0.10000 | | 98 | | % | 90-110 | 06/06/2003 | 0834 |

Test Method.....: 353.2 Batch.....: 86910 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 86910 -002 | I02GSTIC31 | mg/L | 0.93500 | | 1.00000 | | 94 | | % | 90-110 | 06/12/2003 | 1500 |
| MB | 86910 -004 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1501 |
| ICB | 86910 -003 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1501 |
| LCS | 86910 -005 | I02GSTIC31 | mg/L | 0.99400 | | 1.00000 | | 99 | | % | 80-120 | 06/12/2003 | 1502 |
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.93100 | | 1.00000 | | 93 | | % | 90-110 | 06/12/2003 | 1506 |

# QUALITY CONTROL RESULTS

Job Number.: 218019 Report Date.: 06/20/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49793 ATTN: Steve Knollmeyer

Test Method.....: 353.2 Batch.....: 86910 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1507 |
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.96400 | | 1.00000 | | 96 | | % | 90-110 | 06/12/2003 | 1512 |
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1513 |
| CCV | 86910 -014 | I02GSTIC31 | mg/L | 0.94000 | | 1.00000 | | 94 | | % | 90-110 | 06/12/2003 | 1515 |
| CCB | 86910 -015 | | mg/L | 0.03500 U | | | | | | | | 06/12/2003 | 1516 |

Test Method.....: 375.4 Batch.....: 87377 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87377 -002 | I03FSTSA2A | mg/L | 20.23000 | | 20.00000 | | 101 | | % | 90-110 | 06/18/2003 | 1130 |
| ICB | 87377 -003 | | mg/L | 2.10000 U | | | | | | | | 06/18/2003 | 1131 |
| MB | 87377 -004 | | mg/L | 2.10000 U | | | | | | | | 06/18/2003 | 1132 |
| LCS | 87377 -005 | I03FSTSA2A | mg/L | 20.13000 | | 20.00000 | | 101 | | % | 80-120 | 06/18/2003 | 1133 |
| CCV | 87377 -014 | I03FSTSA2A | mg/L | 9.80600 | | 10.00000 | | 98 | | % | 90-110 | 06/18/2003 | 1142 |
| CCB | 87377 -015 | | mg/L | 2.10000 U | | | | | | | | 06/18/2003 | 1143 |
| CCV | 87377 -014 | I03FSTSA2A | mg/L | 19.51000 | | 20.00000 | | 98 | | % | 90-110 | 06/18/2003 | 1155 |
| CCB | 87377 -015 | | mg/L | 2.10000 U | | | | | | | | 06/18/2003 | 1156 |
| CCV | 87377 -014 | I03FSTSA2A | mg/L | 9.80600 | | 10.00000 | | 98 | | % | 90-110 | 06/18/2003 | 1201 |
| CCB | 87377 -015 | | mg/L | 2.10000 U | | | | | | | | 06/18/2003 | 1202 |

Test Method.....: 415.1 Batch.....: 87241 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOC
Parameter.....: Organic Carbon, Tot. (TOC)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87241 -002 | I03ESTTC2 | mg/L | 21.24110 | | 20.00000 | | 106 | | % | 85-115 | 06/17/2003 | 0824 |
| ICB | 87241 -003 | | mg/L | 0.45340 B | | | | | | | | 06/17/2003 | 0830 |
| CCV | 87241 -015 | I03ESTTC2 | mg/L | 10.38660 | | 10.00000 | | 104 | | % | 85-115 | 06/17/2003 | 1109 |
| CCB | 87241 -016 | | mg/L | 0.30670 B | | | | | | | | 06/17/2003 | 1115 |
| CCV | 87241 -015 | I03ESTTC2 | mg/L | 20.79900 | | 20.00000 | | 104 | | % | 85-115 | 06/17/2003 | 1341 |
| CCB | 87241 -016 | | mg/L | 0.38900 B | | | | | | | | 06/17/2003 | 1347 |

Test Method.....: 415.1 Batch.....: 87241 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOCAV2
Parameter.....: TOC Average Duplicates

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87241 -004 | | mg/L | 0.23100 B | | | | | | | | 06/17/2003 | 0837 |
| LCS | 87241 -005 | I03ESTTC2 | mg/L | 10.44100 | | 10.00000 | | 104 | | % | 80-120 | 06/17/2003 | 0851 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ' | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ' | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group |
| | Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

Shaded Areas For Internal Use Only 1 of 1

**SEVERN TRENT SERVICES**

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Steve Knollmeyer
Company: Analytics
Address: 195 Commerce Way
Portsmouth NH
Phone: 603 436-5111
Fax: 603 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address:
Phone: Analytics
Fax:
PO#: Quote:

**Lab Lot#** 218019

| | |
|---|---|
| Package Sealed: Yes No | Samples Sealed: Yes No |
| Received on Ice: Yes No | Samples Intact: Yes No |
| Temperature °C of Cooler: 3.3 | |
| Within Hold Time: Yes No | Preserv. Indicated: Yes No NA |
| pH Check OK: Yes No NA | Res $Cl_2$ Check OK: Yes No NA |
| Sample Labels and COC Agree: Yes No | COC not present |

**Sampler Name:** Kathleen Soukup
**Signature:** [signature]
**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Project Location:** Maine
**Date Required** Hard Copy: __/__/__ Fax: __/__/__
**Lab PM:**

| Refrg # | | | | |
|---|---|---|---|---|
| # / Cont. | 1 P | 1 P | 1 P | 2 V |
| Volume | 1 L | 1 L | 1 L | 40 ml |
| Preserv. | $HNO_3$ | — | $H_2SO_4$ | $H_2SO_4$ |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Dissolved Manganese | Sulfate alkalinity nitrite | COD + nitrate | TOC | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | DW34-0603-01-A | 6/4/03 | 0815 | GW | G | X | X | X | X | Dissolved Manganese |
| 2 | | DW03-0603-01-A | ↓ | 0850 | ↓ | ↓ | X | X | X | X | Samples were field filtered |
| 3 | | DW03-0603-01-B | ↓ | 0850 | ↓ | ↓ | X | X | X | X | |
| 4 | | DW05-0603-01-A | ↓ | 0940 | ↓ | ↓ | X | X | X | X | |
| 5 | | DW38-0603-02-A | 6/4/03 | 1025 | GW | G | X | X | X | X | |

☆ note short HT w/ nitrates

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| [signature] | Weston Solutions | 6/4/03 | 1200 | FEDEX | | | |
| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY [signature] | COMPANY STL | DATE 6/5/03 | TIME 1000 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS Dissolved Mang. (6010B)
Sulfate (375.1) alkalinity (310.1)
nitrate/nitrite (352.1)
COD (HACH 8000)
TOC (415.1 or 9060)

**Date Received** 6/5/03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading** see attach

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 6.0c
3) Received in good condition (Y) or N
4) pH checked by: JB 6/4/03
5) Labels checked by: MC 6/4/03

Project#: BUCKS Project: 10971.217.002
Company: Weston Solutions
Contact: Richard Sonkup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 656-5574 PO# 0037759 Quote #
Sampler (Signature): CTS&P

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW34-0603-01-A | 6/4/03 | 0915 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49793-1 |
| DW03-0603-01-A | " | 0850 | " | | | | | X | | | " | " | " | 1.5 | -2 |
| DW03-0603-01-B | " | 0850 | " | | | | | X | | | " | " | " | 2 | -3 |
| DW05-0603-01-A | " | 0940 | " | | | | | X | | | " | " | " | 2 | -4 |
| DW38-0603-02-A | 6/4/03 | 1025 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | -5 |

Received By: Time: 1050 Date: 6/4/03
Received By: Time: Date:
Received By: Time: Date:

Relinquished By Sampler:
Relinquished By:
Relinquished By:

FAX RESULTS? YES NO
Fax # x5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
Ferrous Iron via SM3500D

Client Code: WESTONM

Page 1 of 1

040/041

Analytics\AEL Documents\AEL COC

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 41993

CLIENT: Weston

PROJECT: Bucks

COOLER NUMBER: 1

NUMBER OF COOLERS: 1

DATE RECEIVED: 6/4/03

**A: PRELIMINARY EXAMINATION:**

DATE COOLER OPENED: 6/4/03

1. Cooler received by(initials) JB — Date Received: 6/4/03
2. Did cooler come with a shipping slip? Y (N)

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? Y (N)
How many & where: _____ Seal Date: _____ Seal Name: _____
4. Did the custody seals arrive unbroken and intact upon arrival? Y (N/A)
5. COC#: _____
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? Y (N)
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 6°C

**B. Log-In:** Date samples were logged in: 6/4/03 By: JB

11. Type of packing in cooler(bubble wrap, popcorn) Y (N/A)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? (Y) N
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y (N/A)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): MM Date: 6/4/03

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

June 25, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49794**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 524.2, Ethane, Ethene (EE) by EPA Method 8015B.
Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
EE Form 1 Sample Data Results
Chromatograms
EE Form 2 Surrogate Recoveries
EE Form 3 MS/MSD and LCS Recoveries
EE Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
EE Form 6 Initial Calibration Data (equiv..) Response Factor Report
EE Form 7 Continuing Calibration Check (equiv.)
EE Form 8 Retention Time Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

analytics environmental laboratory LLC

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## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Volatile Organics:**
2,2-Dichloropropane was above the 70-130 % R limits in the MS/MSD analyzed on sample 49794-10 (DW-39-0603-01-A) on 06/05/03. This MS/MSD also had two RPDs above the acceptance criteria. (See Form III) These compounds were not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506053B2)had high recovery for Acetone and Tetrahydrofuran at 158% and 133% respectively. The LFB/CC (L506053B3) was reanalyzed with Acetone recovery still high at 163%, Tetrahydrofuran was in control. These analytes were not detected in any samples associated with this QC.

The matrix spike/matrix spike duplicate analyzed on sample 49794-30 (DW05-0603-01-A) had an RPD above the acceptance criteria of 15% for t-Butyl alcohol (TBA). (See Form III) t-Butyl alcohol was not detected in this SDG and results were reported without qualification.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506053I2) had high recovery for three compounds. (See Form III) The LFB/CC (L506053I3) was reanalyzed with similar results. These analytes were not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506063I) had high recovery for three compounds. (See Form III). The matrix spike/matrix spike duplicate analyzed on sample 49794-11 (DW06-0603-01-A) had low recoveries for methylene chloride. (See Form III) These analytes were not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506063I2) had high recovery for three compounds. (See Form III) The LFB/CC (L506063I3) was reanalyzed with similar results. These analytes were not detected in any samples associated with this QC.

**Ethane and Ethene:**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

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www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49794**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49794-1 | 06/02/03 | DW32-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW32-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-2 | 06/02/03 | DW12-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW12-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-3 | 06/02/03 | DW40-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW40-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-4 | 06/02/03 | DW33-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW33-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-5 | 06/02/03 | DW28-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW28-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-6 | 06/02/03 | DW25-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW25-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer, Lab. Director

Date 6/20/2003

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analytics environmental laboratory LLC

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Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49794**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49794-7 | 06/02/03 | DW31-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW31-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-8 | 06/02/03 | DW29-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW29-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-9 | 06/02/03 | DW36-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW36-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-10 | 06/02/03 | DW39-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW39-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-11 | 06/02/03 | DW06-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/02/03 | DW06-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-12 | 06/02/03 | DW12-0603-01-B | EPA 524.2 Volatile Organics | |
| 49794-13 | 06/02/03 | DW12-0603-02-A | EPA 524.2 Volatile Organics | |
| 49794-14 | 06/03/03 | DW01-0603-01-A | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

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Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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1 Wall Street
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**Report Number: 49794**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW01-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-15 | 06/03/03 | WY03-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | WY03-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-16 | 06/03/03 | DW13-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW13-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-17 | 06/03/03 | DW22-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW22-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-18 | 06/03/03 | DW23-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW23-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-19 | 06/03/03 | DW23-0603-01-B | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW23-0603-01-B | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-20 | 06/03/03 | DW23-0603-02-A | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
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**Report Number: 49794**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49794-21 | 06/03/03 | DW24-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW24-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-22 | 06/03/03 | DW30-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW30-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-23 | 06/03/03 | DW09-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW09-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-24 | 06/03/03 | DW04-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW04-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-25 | 06/03/03 | DW04-0603-01-B | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW04-0603-01-B | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-26 | 06/03/03 | DW04-0603-02-A | EPA 524.2 Volatile Organics | |
| 49794-27 | 06/03/03 | DW08-0603-01-A | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49794**

**Revision: Rev. 0**

**Re: Bucks Harbor**

**10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/03/03 | DW08-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-28 | 06/03/03 | DW07-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW07-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-29 | 06/04/03 | DW34-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/04/03 | DW34-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-30 | 06/04/03 | DW05-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/04/03 | DW05-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-31 | 06/04/03 | DW03-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/04/03 | DW03-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-32 | 06/04/03 | DW03-0603-01-B | EPA 524.2 Volatile Organics | |
| | 06/04/03 | DW03-0603-01-B | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-33 | 06/04/03 | DW03-0603-02-A | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

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Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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**Report Number: 49794**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 04 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49794-34 | 06/04/03 | DW03-0603-03-A | EPA 524.2 Volatile Organics | |
| 49794-35 | 06/03/03 | DW13-0603-02-A | EPA 524.2 Volatile Organics | |
| | 06/03/03 | DW13-0603-02-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-36 | 06/04/03 | DW38-0603-01-A | EPA 524.2 Volatile Organics | |
| | 06/04/03 | DW38-0603-01-A | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49794-37 | 06/02/03 | DW15-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-38 | 06/02/03 | DW16-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-39 | 06/02/03 | DW17-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-40 | 06/02/03 | DW19-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-41 | 06/02/03 | DW20-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-42 | 06/02/03 | DW21-0603-01-A | EPA 524.2 Volatile Organics | |
| 49794-43 | 06/02/03 | TB060203-01 | Electronic Data Deliverable | |
| | 06/02/03 | TB060203-01 | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

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Stephen L. Knollmeyer Lab. Director

Date 6/20/2003

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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506053B
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 100 % | 1,2-Dichlorobenzene-d4 | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature

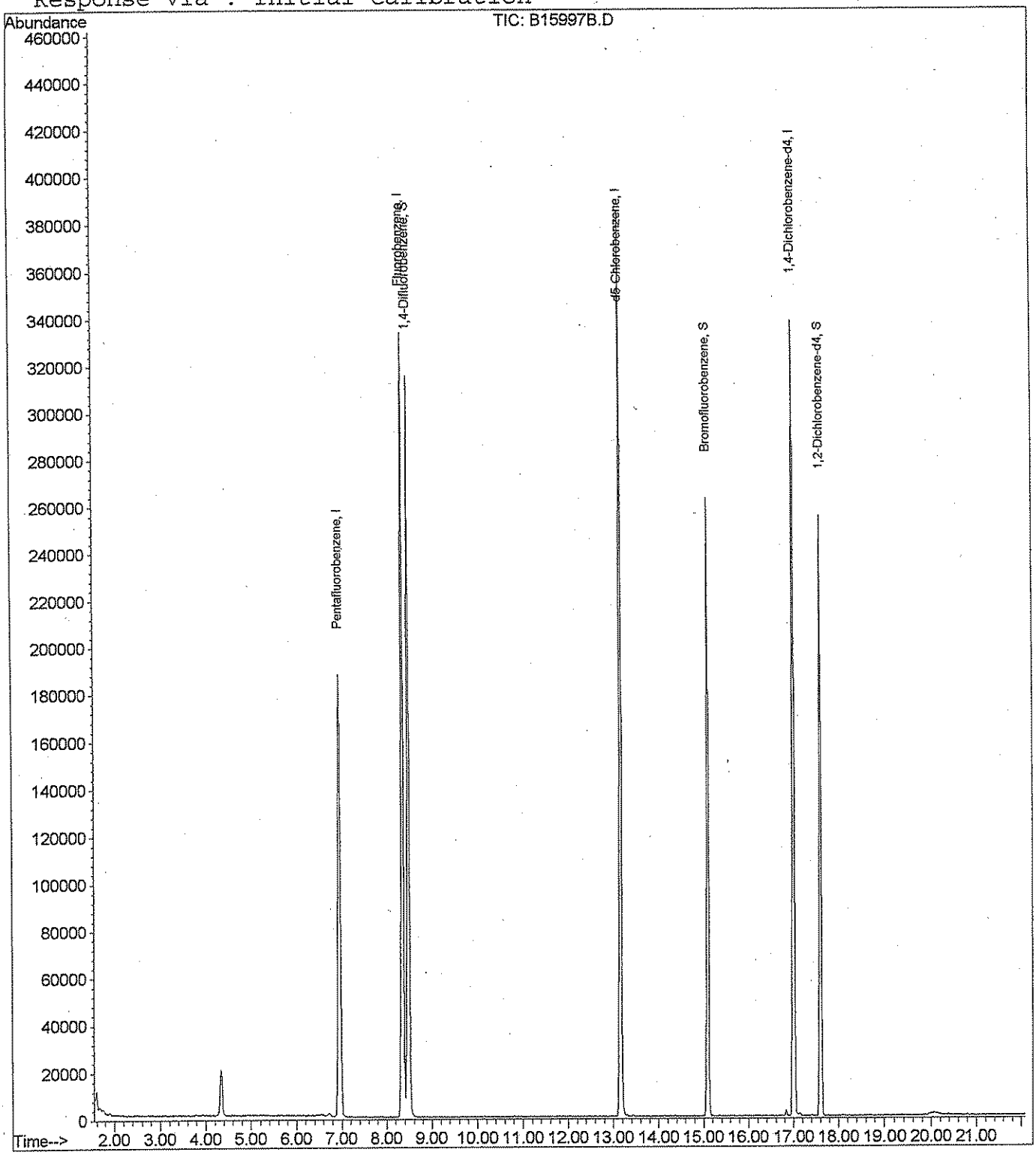
Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B15997B.D
Acq On : 5 Jun 2003 10:09 am
Sample : B506053B
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 5 10:31 2003

Vial: 4
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506053B2
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 103 % | 1,2-Dichlorobenzene-d4 | 102 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

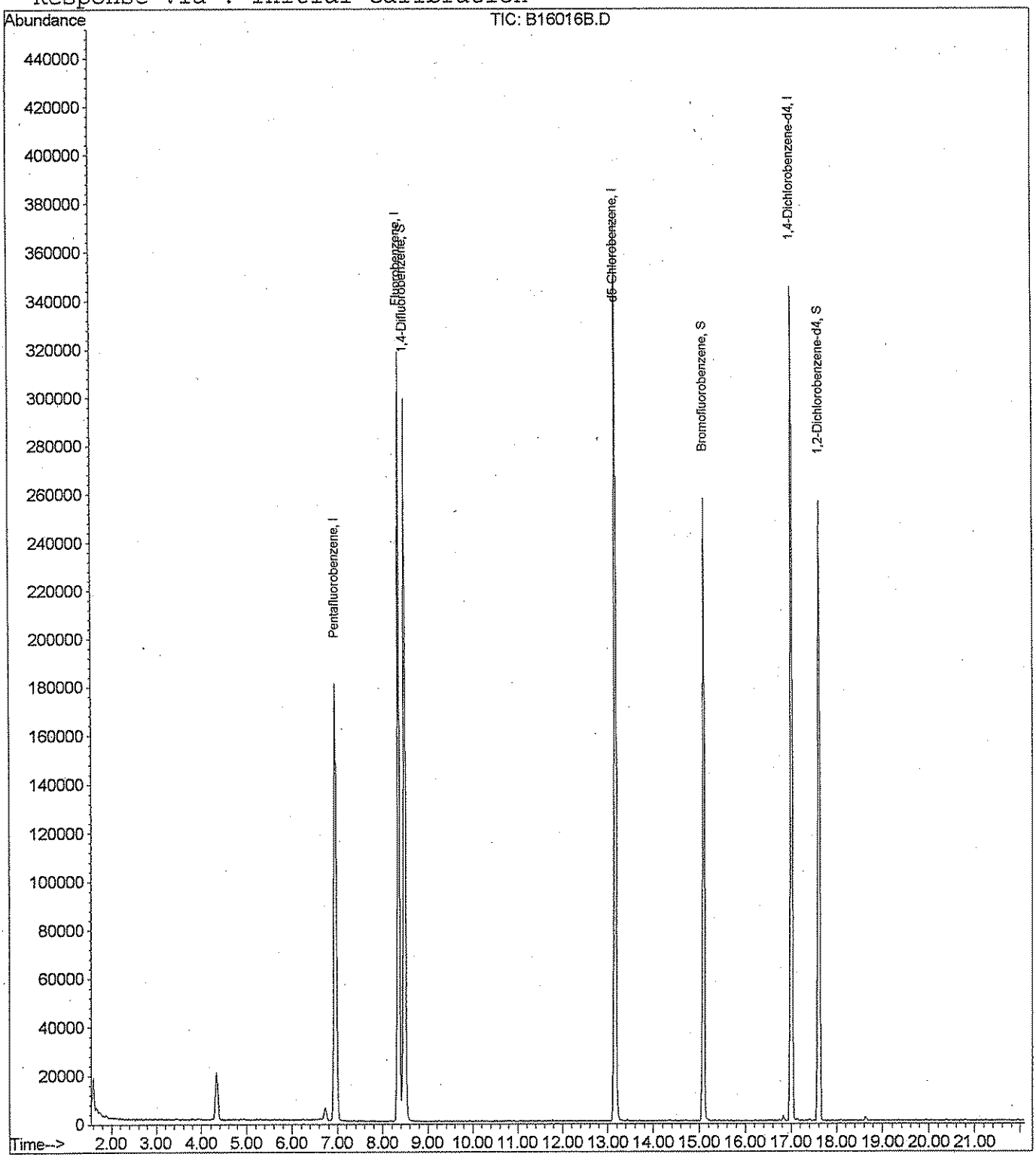
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16016B.D Vial: 23
Acq On : 5 Jun 2003 11:55 pm Operator: JR
Sample : B506053B2 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 0:18 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:**

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506053I
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 100 % | 1,2-Dichlorobenzene-d4 | 94 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

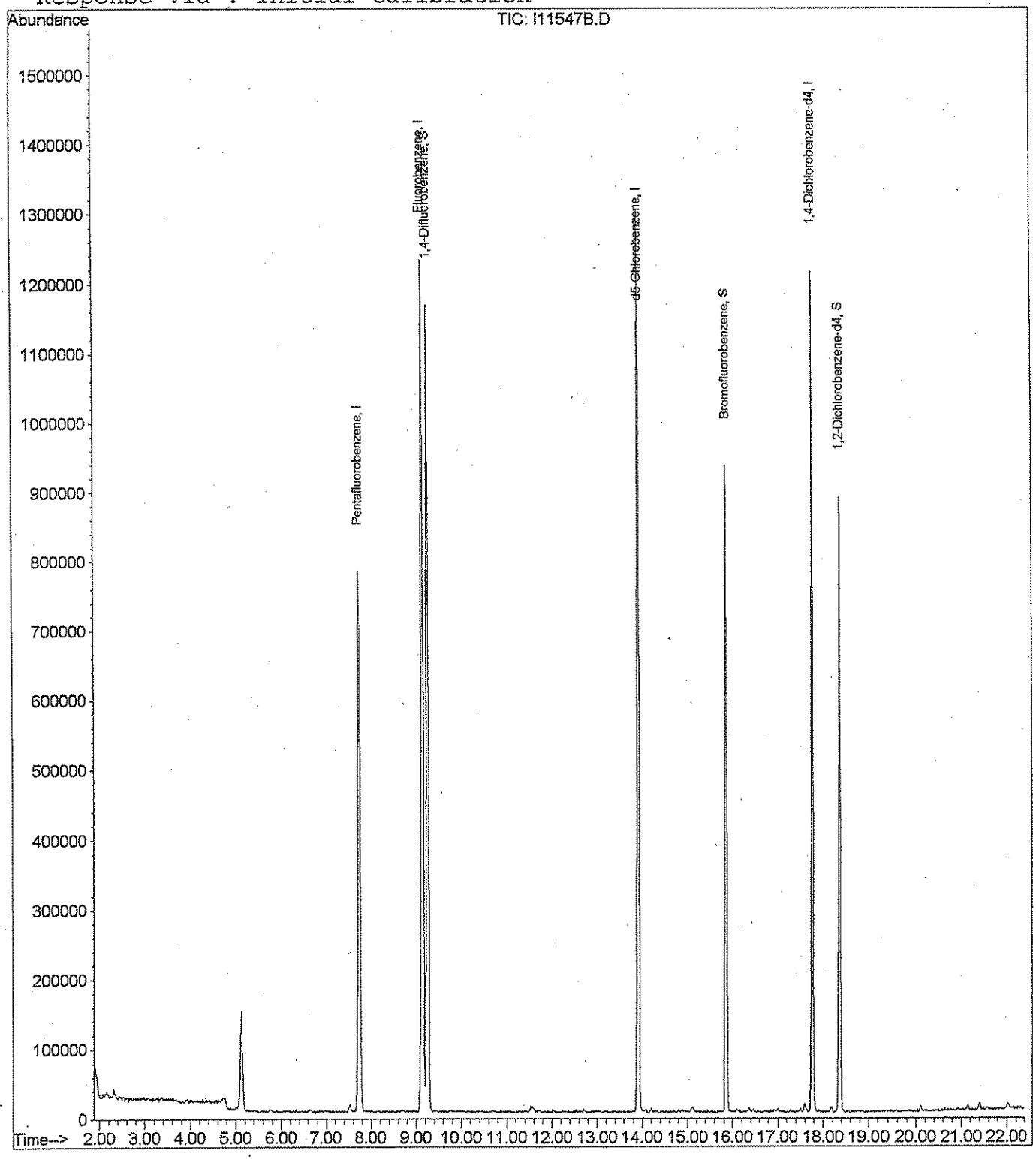
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11547B.D Vial: 4
Acq On : 5 Jun 2003 10:12 am Operator: JMR
Sample : B506053I Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 11:13 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:**

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506053I2
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 106 % | 1,2-Dichlorobenzene-d4 | 101 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

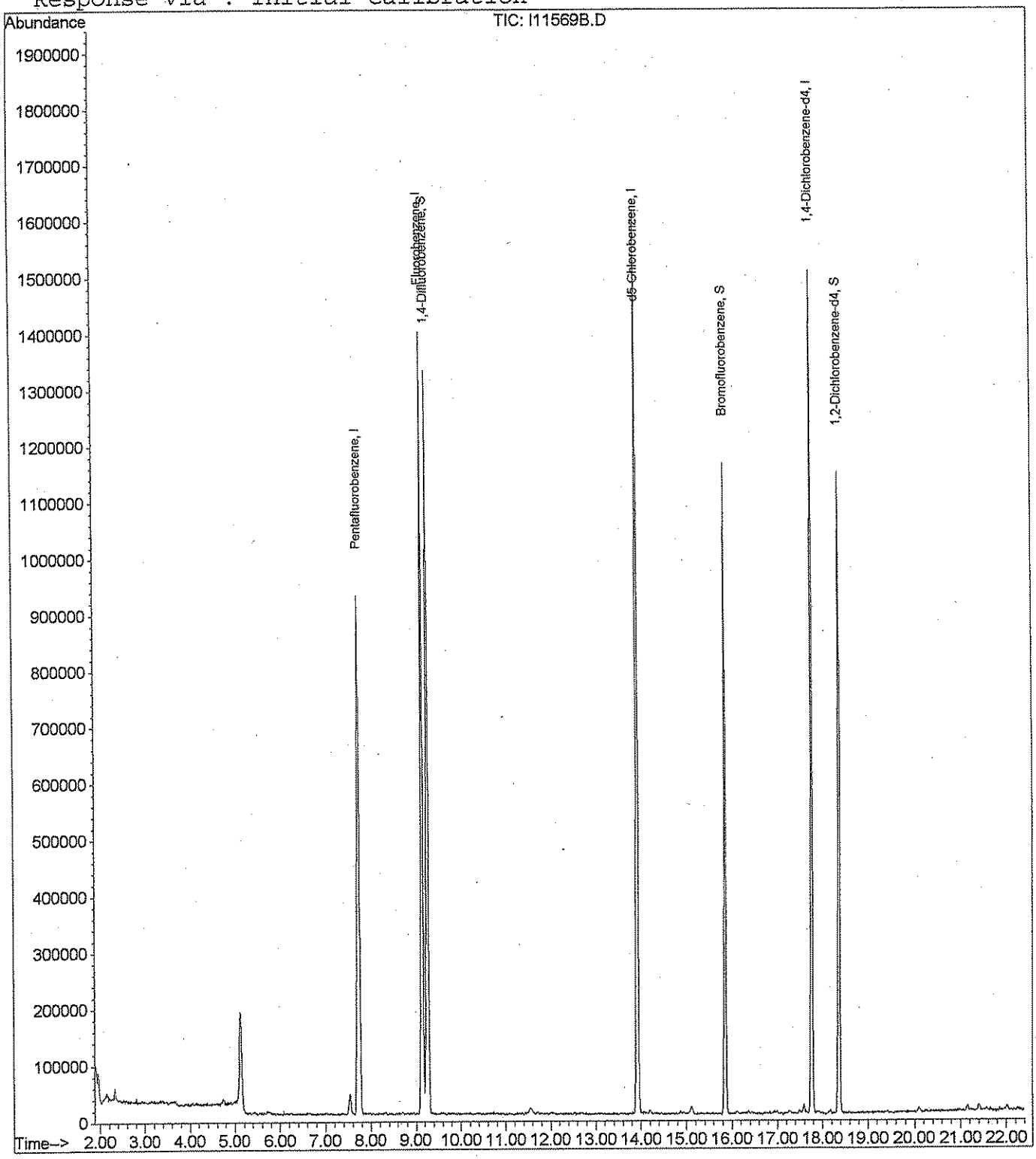
Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11569B.D
Acq On : 5 Jun 2003 11:55 pm
Sample : B506053I2
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 6 0:18 2003

Vial: 26
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:**

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506063I
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 103 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

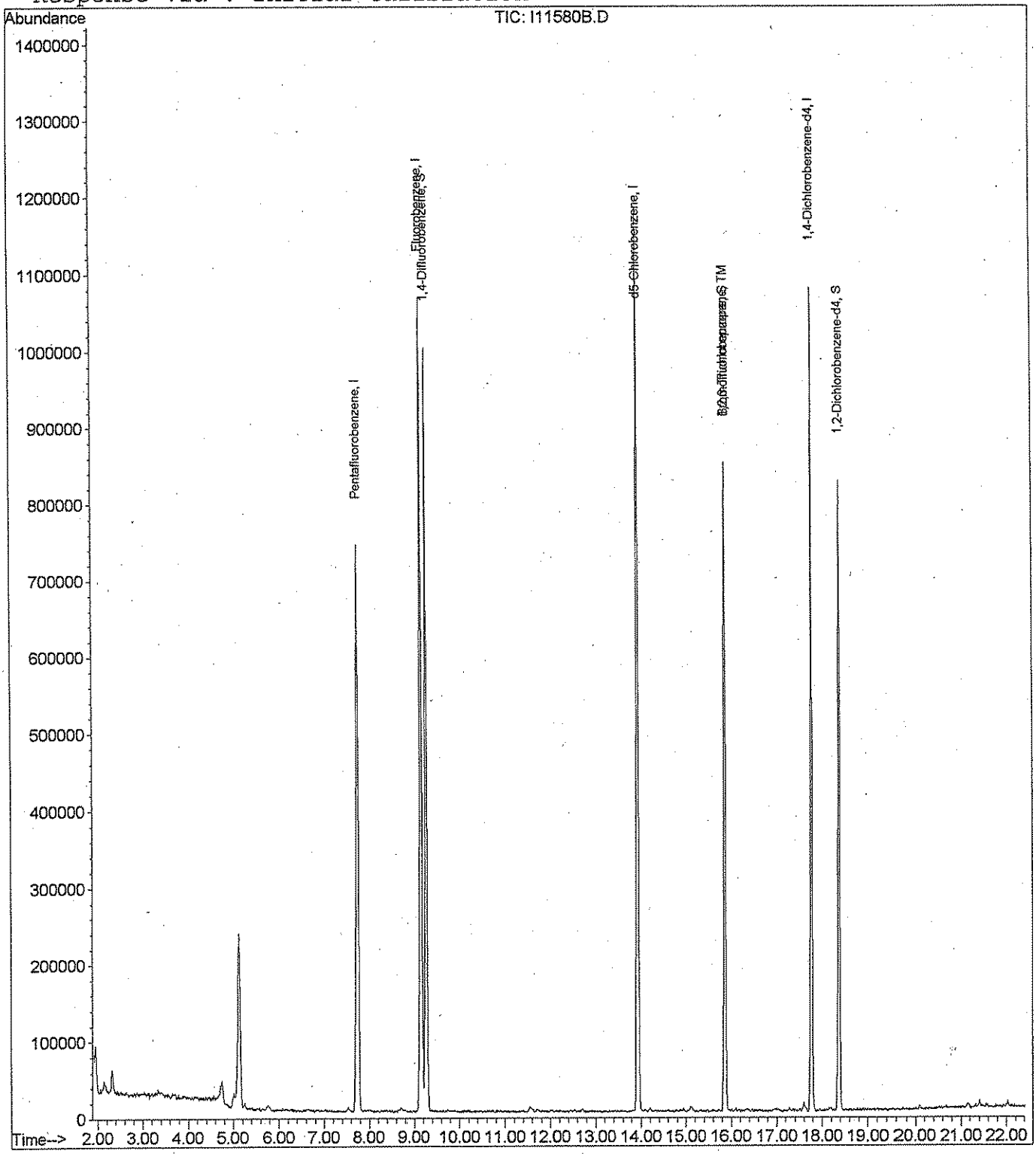
NH 524 full

Authorized signature Melissa A Kelly

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11580B.D Vial: 4
Acq On : 6 Jun 2003 10:12 am Operator: JMR
Sample : B506063I Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 10:35 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:**

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B506063I2
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | **1.1** |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 106 % | Bromofluorobenzene | 90 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature Melissa A. Hall

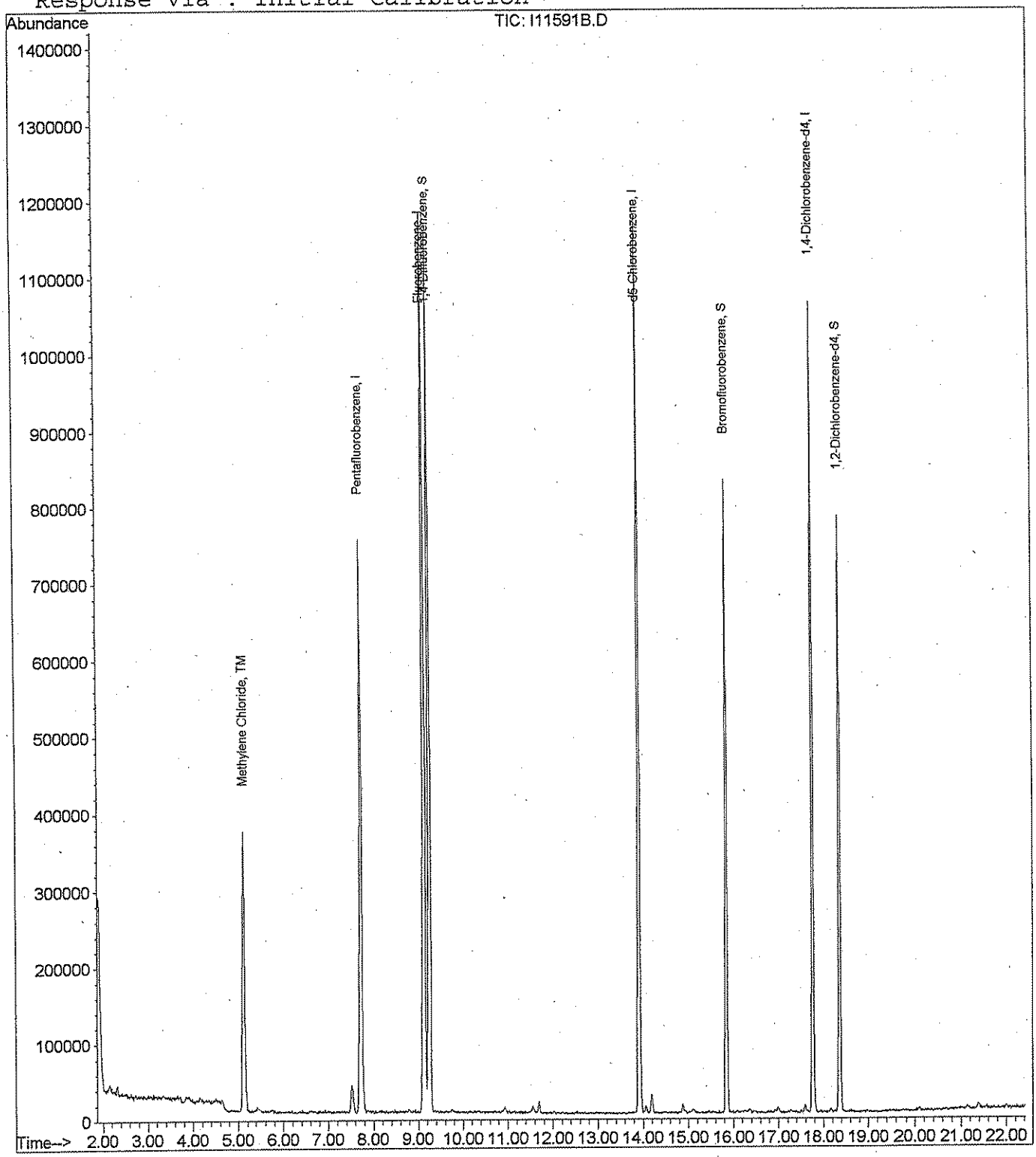
Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11591B.D
Acq On : 6 Jun 2003 10:38 pm
Sample : B506063I2
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 6 23:00 2003

Vial: 11
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW32-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-1
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 109 % | 1,2-Dichlorobenzene-d4 | 105 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

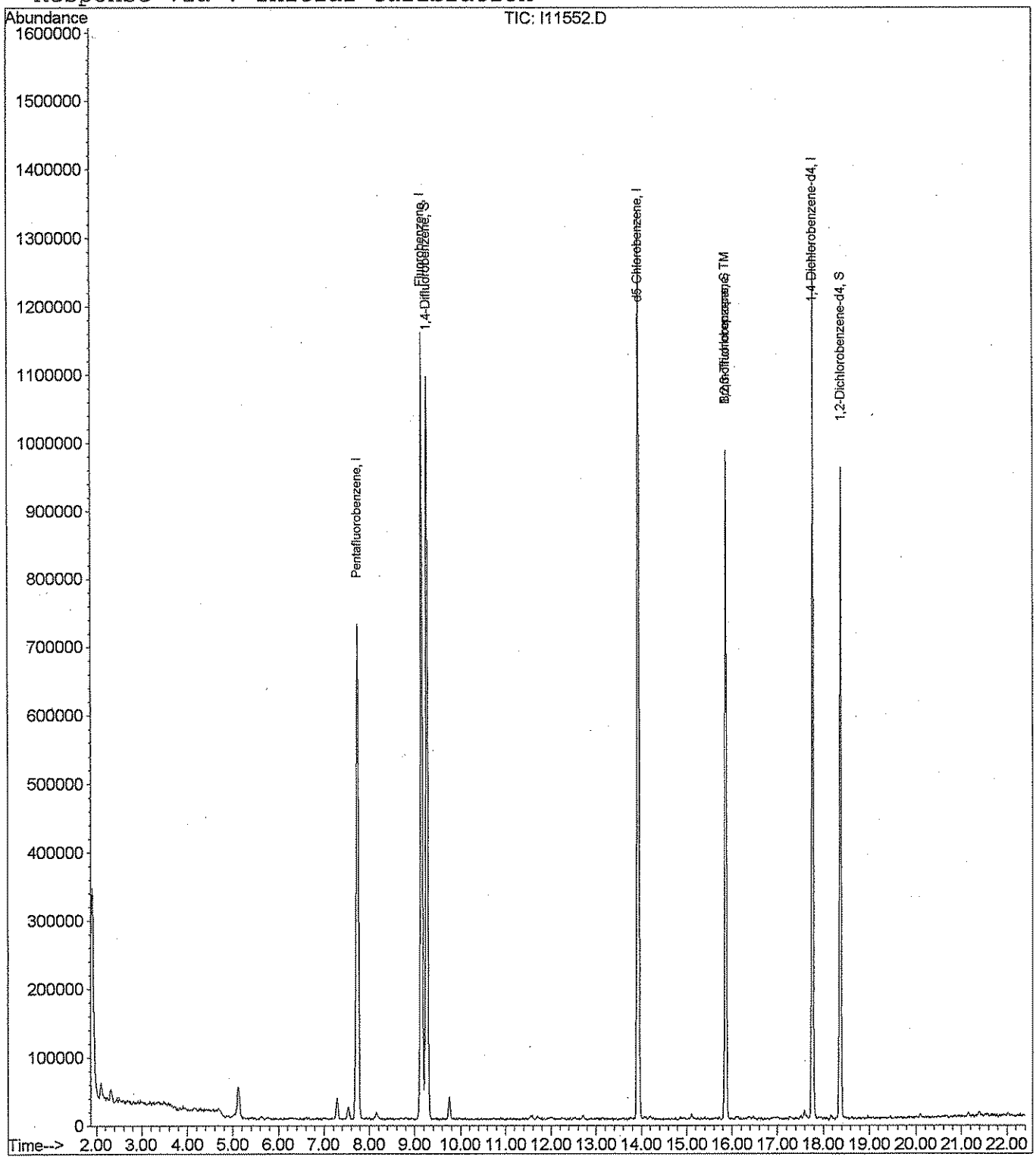
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11552.D Vial: 9
Acq On : 5 Jun 2003 1:06 pm Operator: JMR
Sample : 49794-1 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 13:29 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW12-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-2
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | **0.36 J** |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **2.6** |
| Dichlorodifluoromethane | 0.5 | **0.56** | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **0.44 J** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 104 % | 1,2-Dichlorobenzene-d4 | 106 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

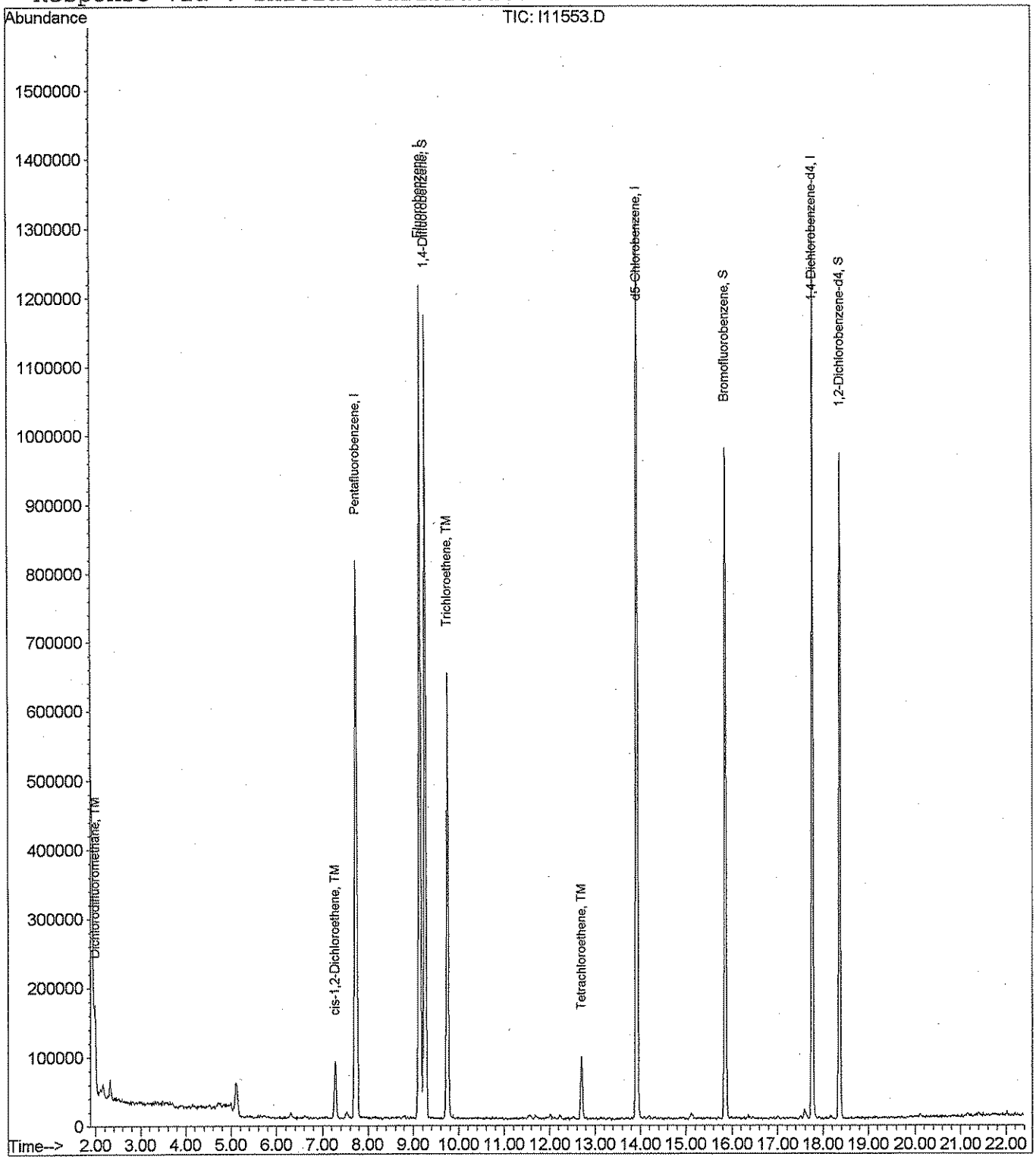
NH 524 full

Authorized signature Melissa Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11553.D Vial: 10
Acq On : 5 Jun 2003 1:42 pm Operator: JMR
Sample : 49794-2 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 14:04 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW40-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-3
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.42 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 106 % | 1,2-Dichlorobenzene-d4 | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

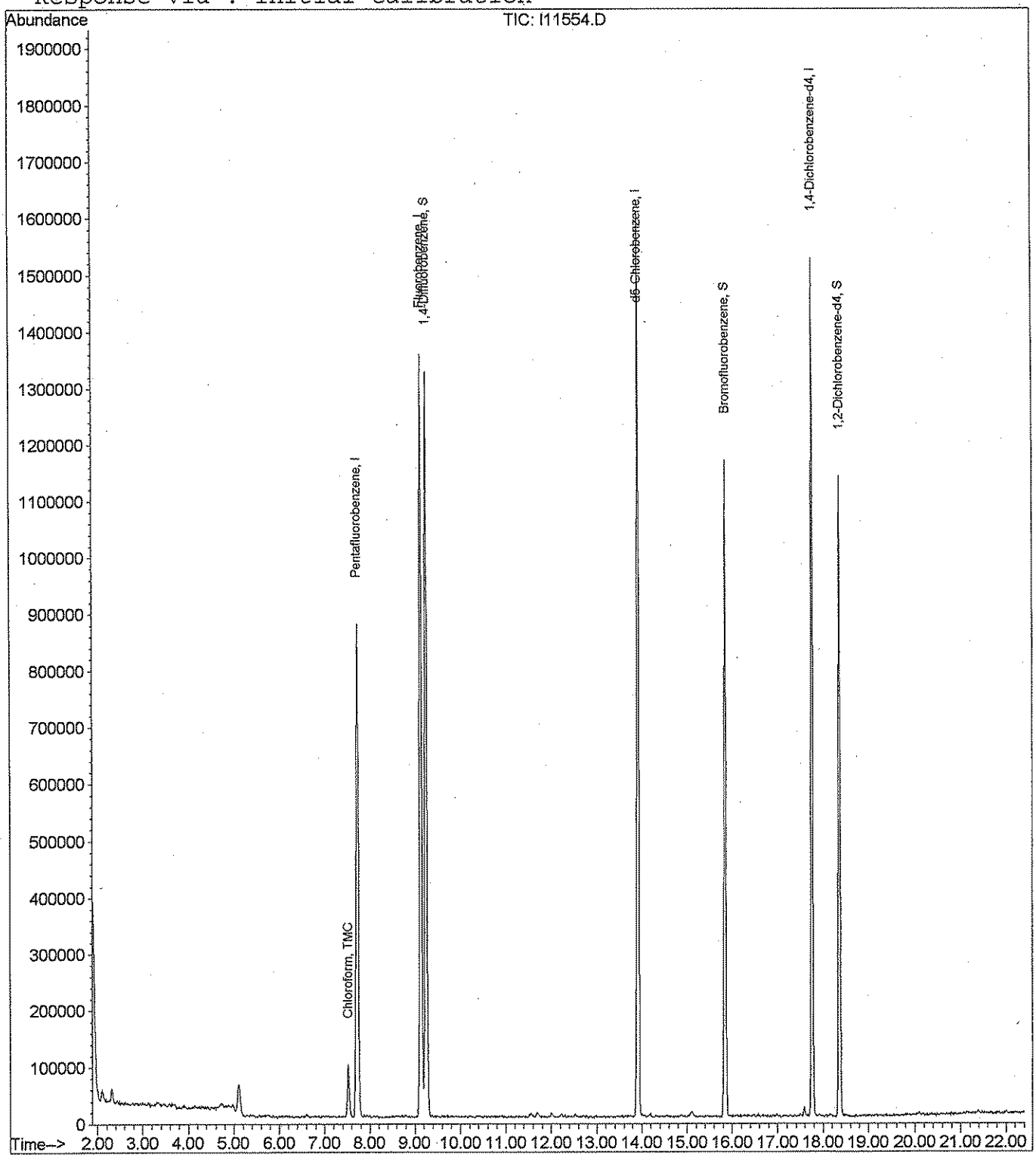
NH 524 full

Authorized signature Melissa Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11554.D Vial: 11
Acq On : 5 Jun 2003 2:17 pm Operator: JMR
Sample : 49794-3 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 14:39 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW33-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-4
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.46 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | **0.27 J** |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.55** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **0.89** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 110 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

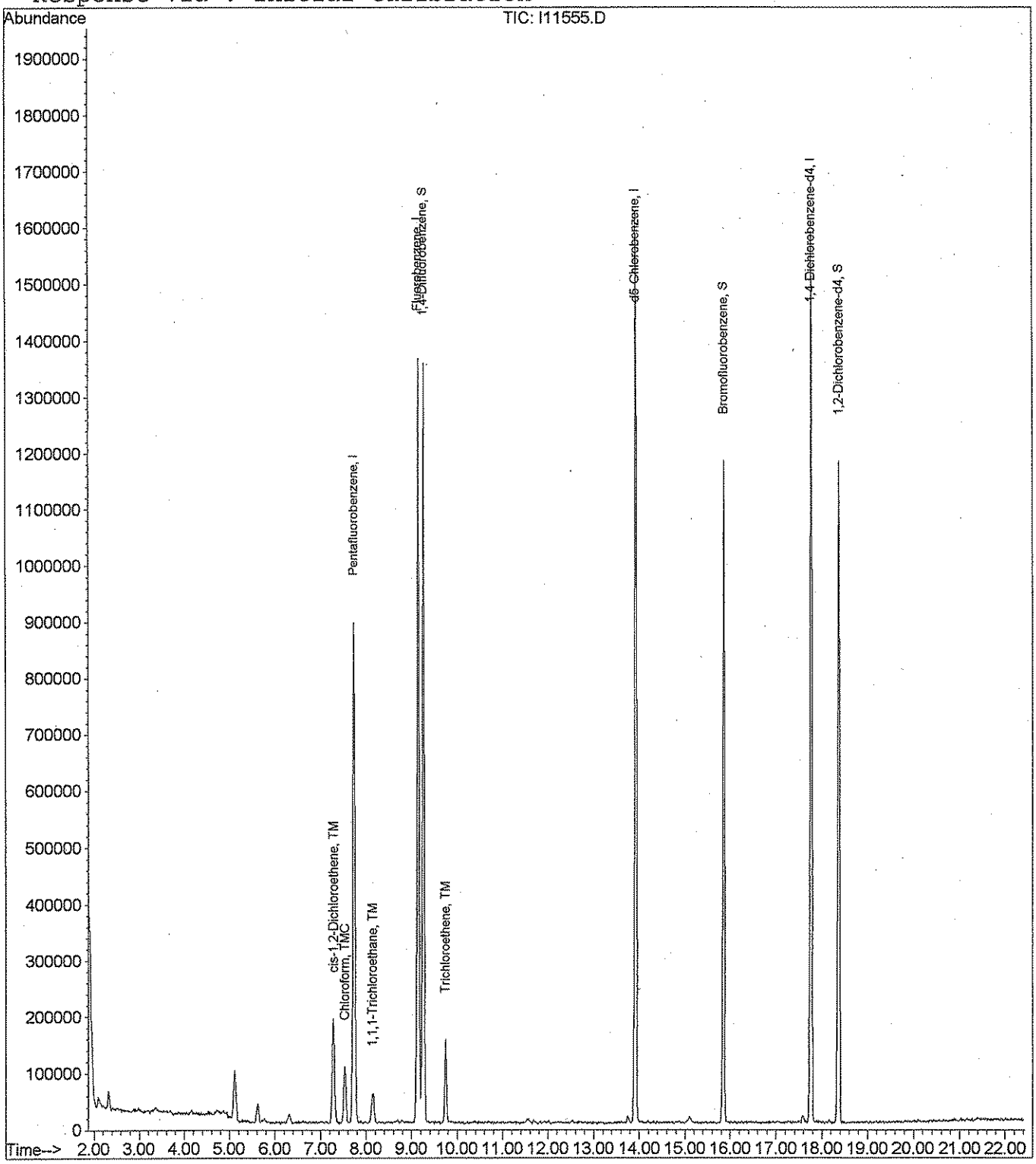
NH 524 full

Authorized signature Melissa A. Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11555.D Vial: 12
Acq On : 5 Jun 2003 2:52 pm Operator: JMR
Sample : 49794-4 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 15:15 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW28-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-5
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 111 % | 1,2-Dichlorobenzene-d4 | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

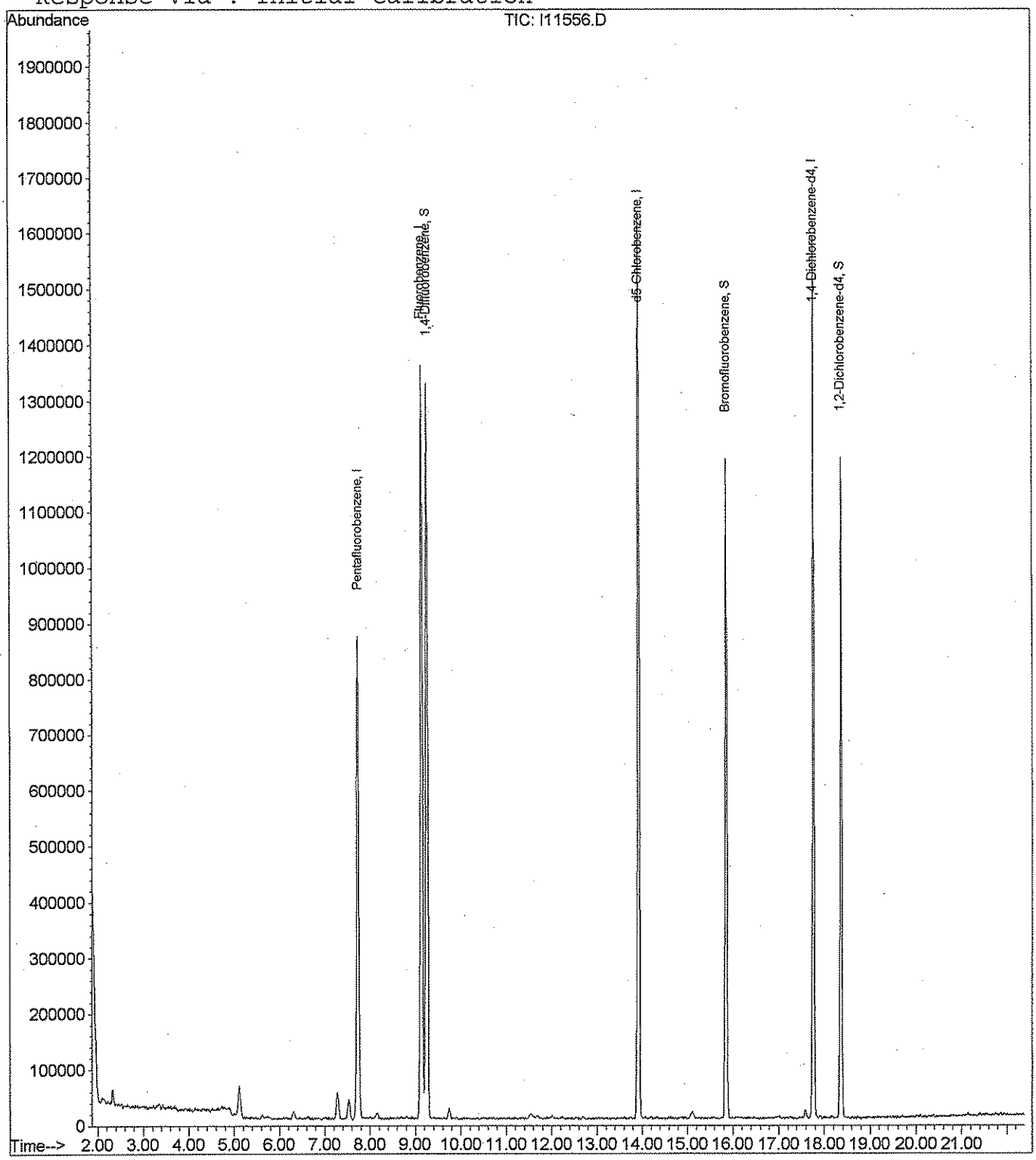
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11556.D Vial: 13
Acq On : 5 Jun 2003 3:28 pm Operator: JMR
Sample : 49794-5 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 15:51 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration




I11556.D V506043I.M Thu Jun 05 15:51:08 2003 Page 29

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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW25-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-6
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.51** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 104 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

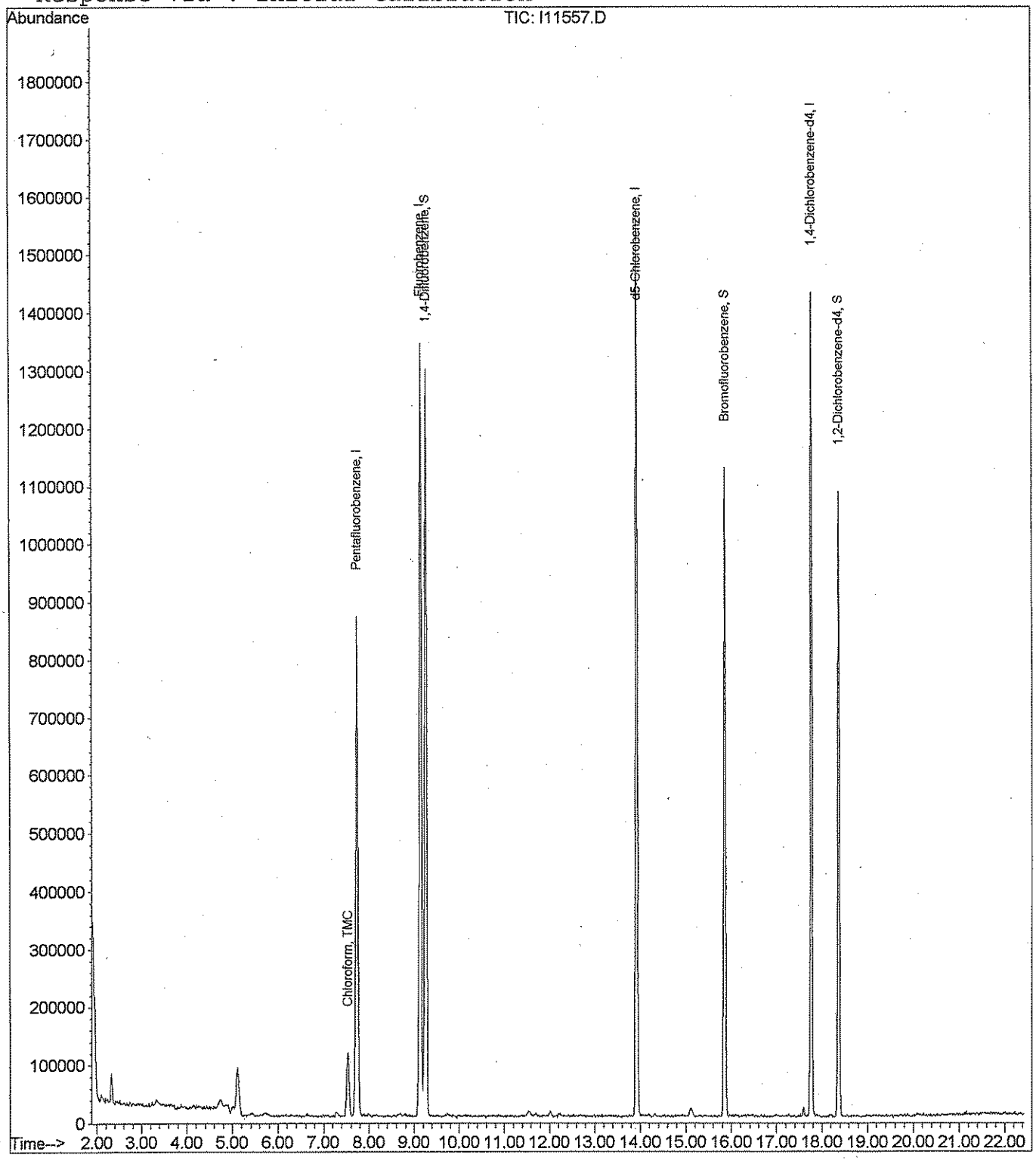
NH 524 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11557.D Vial: 14
Acq On : 5 Jun 2003 4:17 pm Operator: JMR
Sample : 49794-6 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 16:40 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW31-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-7
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | **0.29 J** |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.88** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **1.3** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 109 % | 1,2-Dichlorobenzene-d4 | 101 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

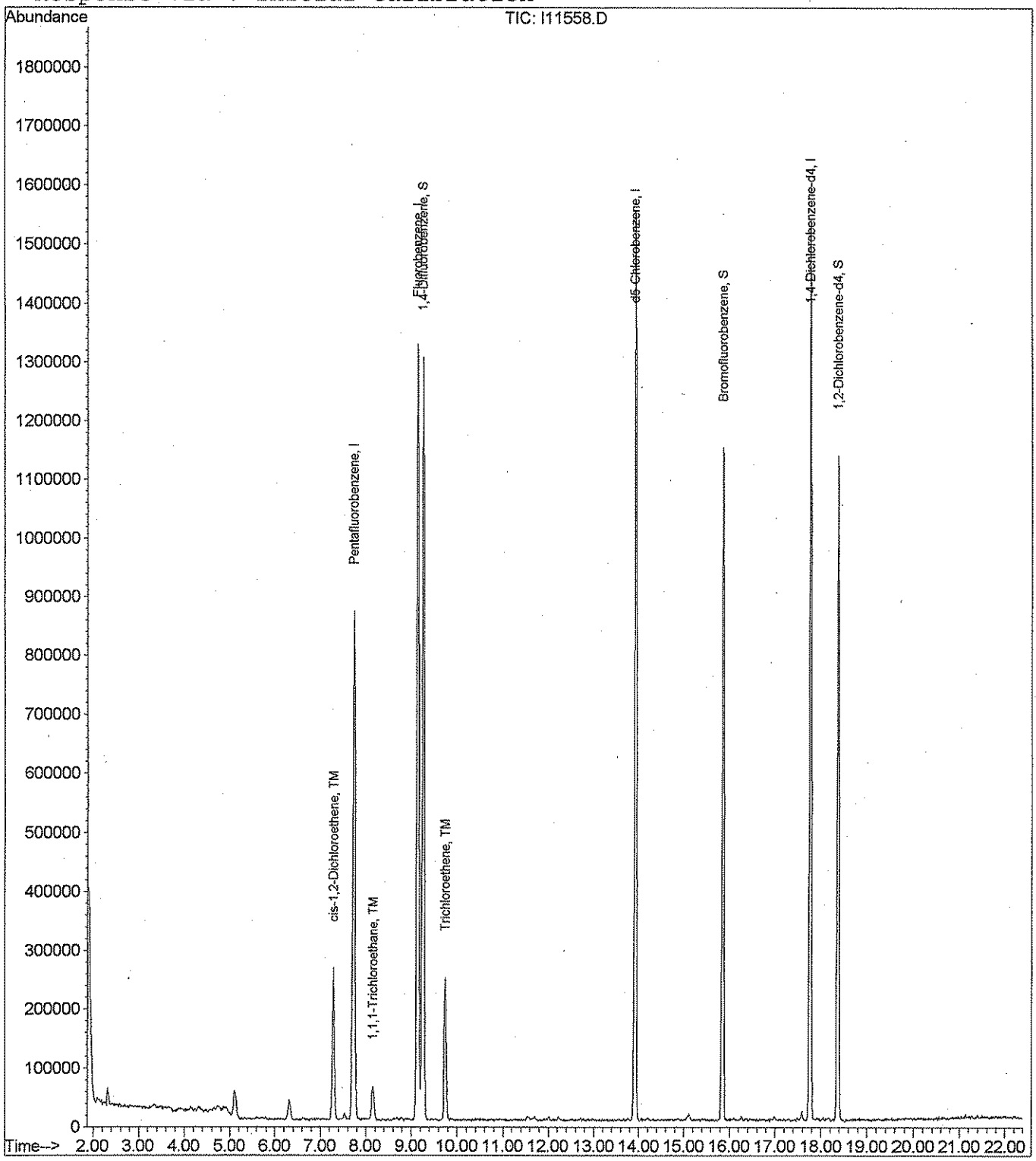
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11558.D Vial: 15
Acq On : 5 Jun 2003 4:52 pm Operator: JMR
Sample : 49794-7 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 17:15 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration

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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW29-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-8
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.36 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 110 % | 1,2-Dichlorobenzene-d4 | 107 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

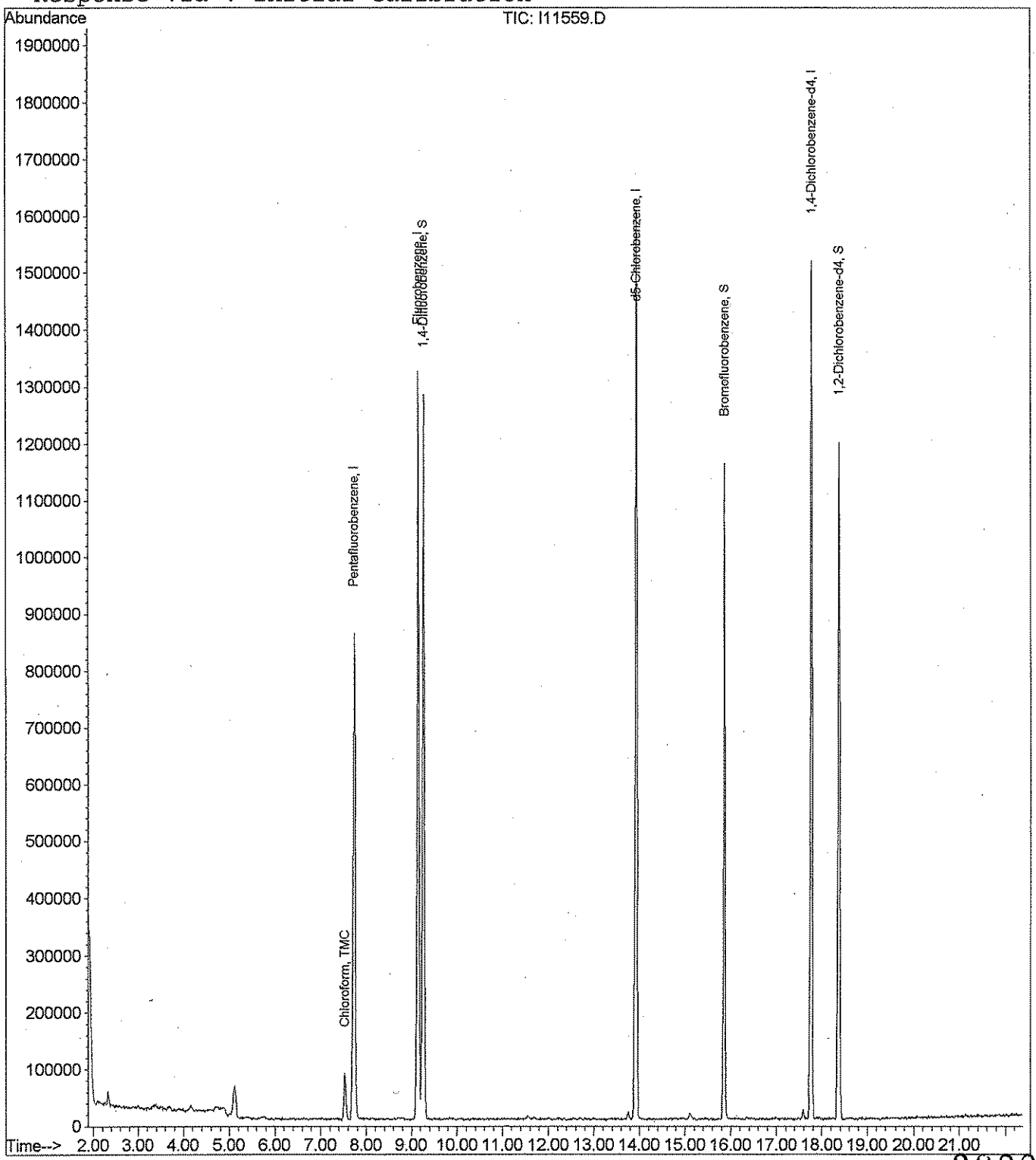
NH 524 full

Authorized signature Melissa A Hall

# Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11559.D Vial: 16
Acq On : 5 Jun 2003 5:28 pm Operator: JMR
Sample : 49794-8 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 17:50 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW36-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-9
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 117 % | 1,2-Dichlorobenzene-d4 | 109 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

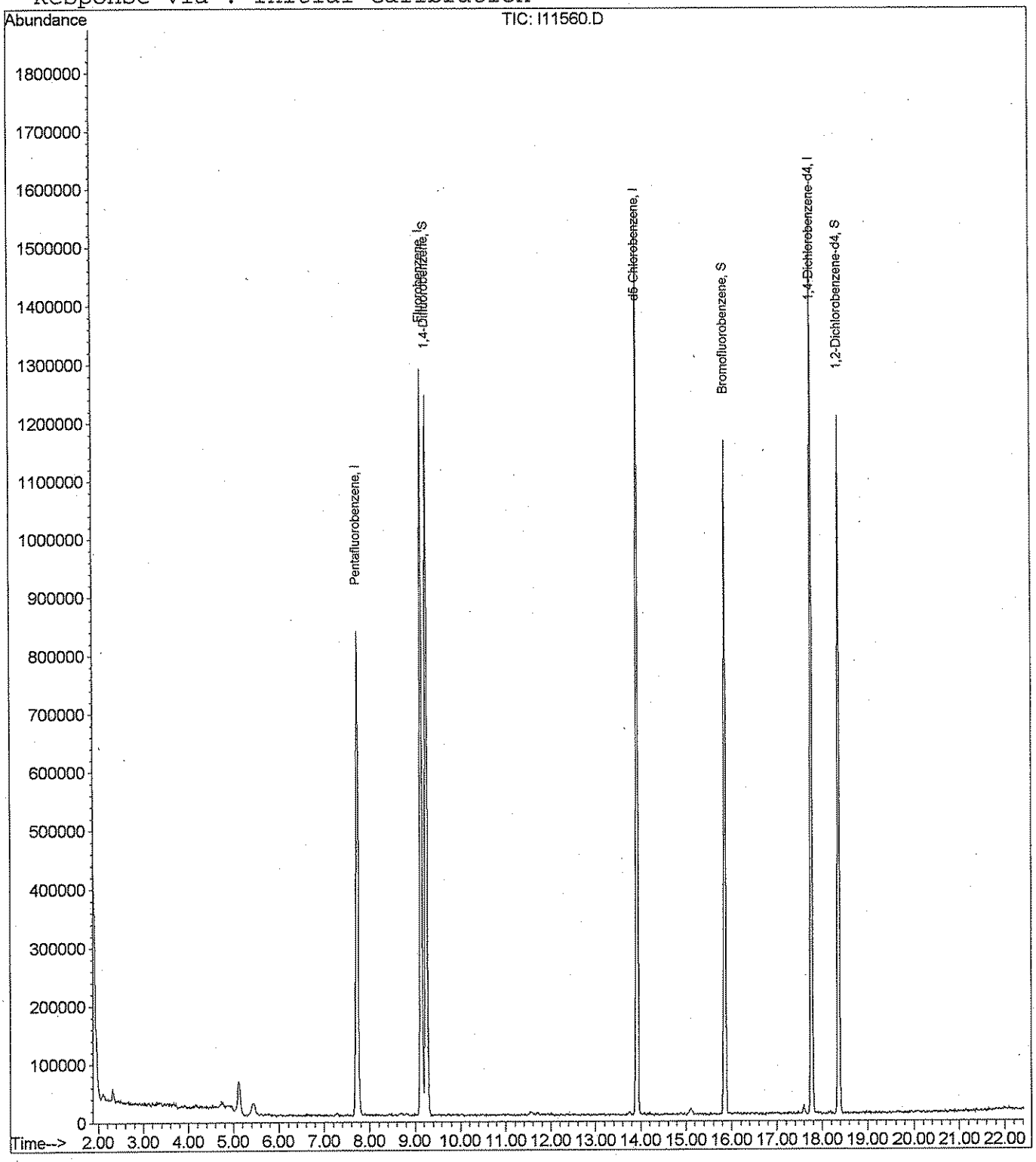
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11560.D Vial: 17
Acq On : 5 Jun 2003 6:03 pm Operator: JMR
Sample : 49794-9 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 18:26 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration




I11560.D V506043I.M Thu Jun 05 18:26:40 2003 Page 37

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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW39-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-10
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 98 % | 1,2-Dichlorobenzene-d4 | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

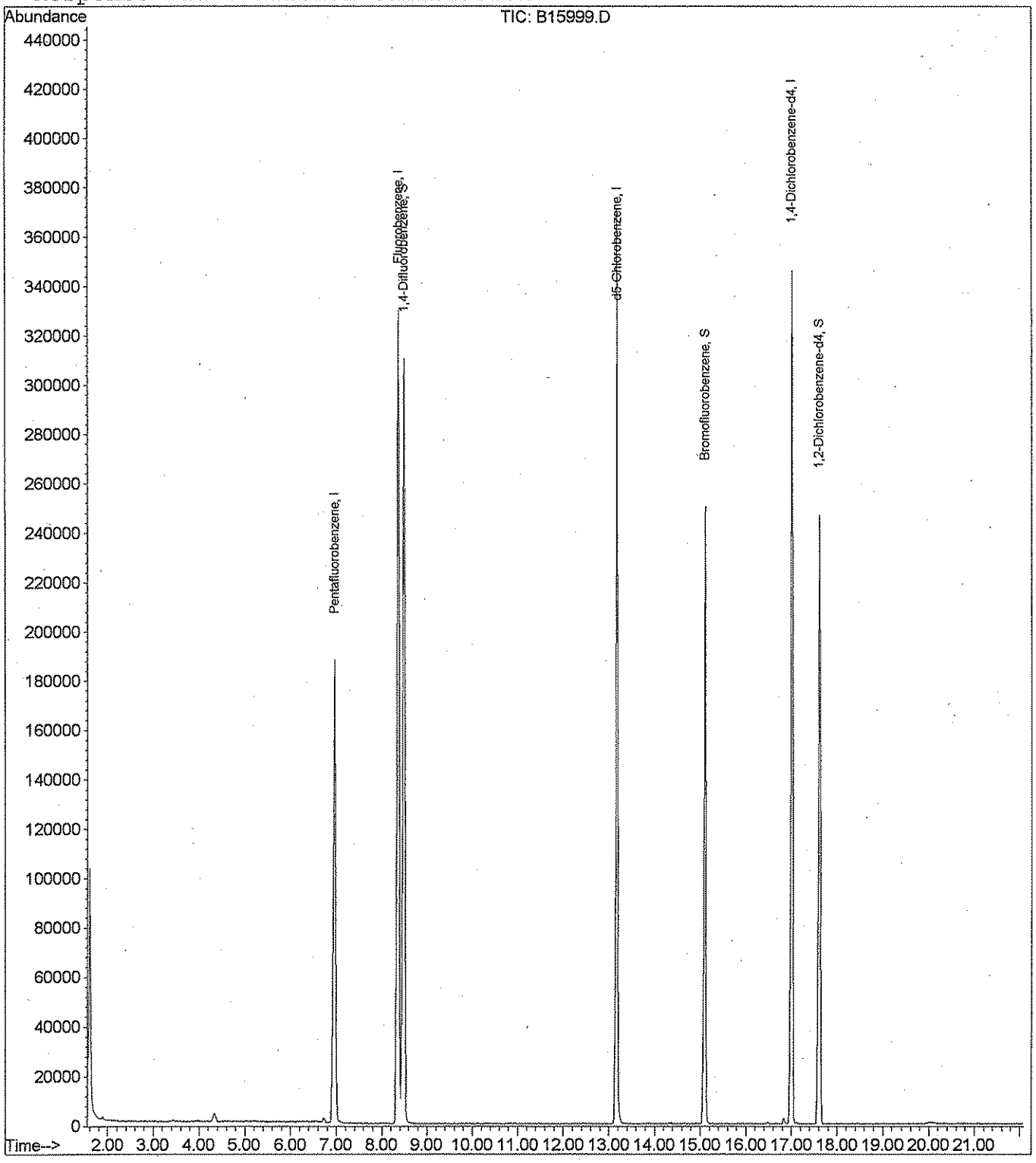
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B15999.D Vial: 6
Acq On : 5 Jun 2003 11:29 am Operator: JR
Sample : 49794-10 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 11:51 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration






000939

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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW06-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-11
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 100 % | 1,2-Dichlorobenzene-d4 | 101 % |

U=Undetected J=Estimated' E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

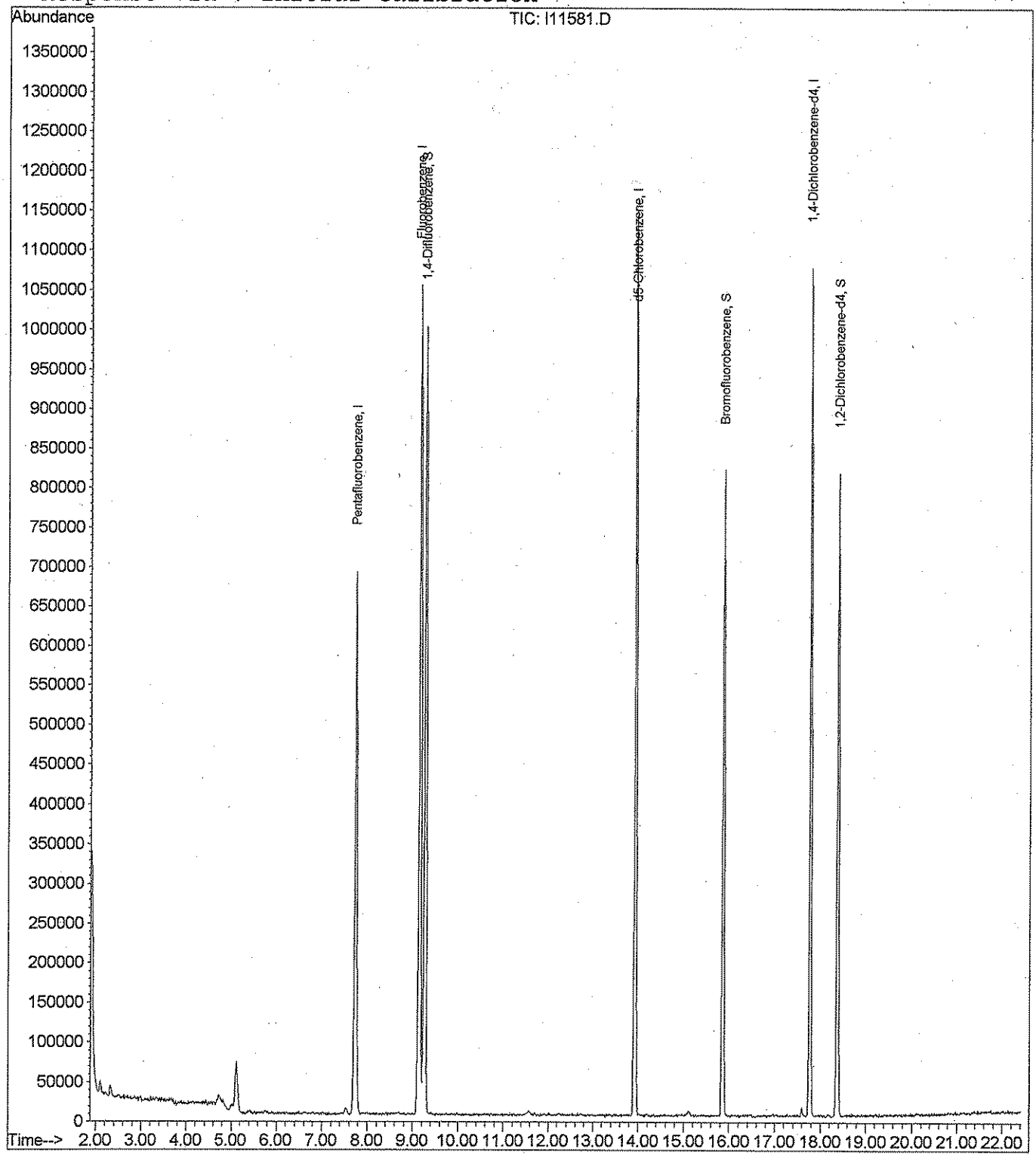
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11581.D Vial: 5
Acq On : 6 Jun 2003 10:47 am Operator: JMR
Sample : 49794-11 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 11:10 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration





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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW12-0603-01-B

**SAMPLE DATA**

**Lab Sample ID:** 49794-12
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | **0.39 J** |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **2.5** |
| Dichlorodifluoromethane | 0.5 | **0.63** | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **0.44 J** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 97 % | Bromofluorobenzene | 114 % | 1,2-Dichlorobenzene-d4 | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

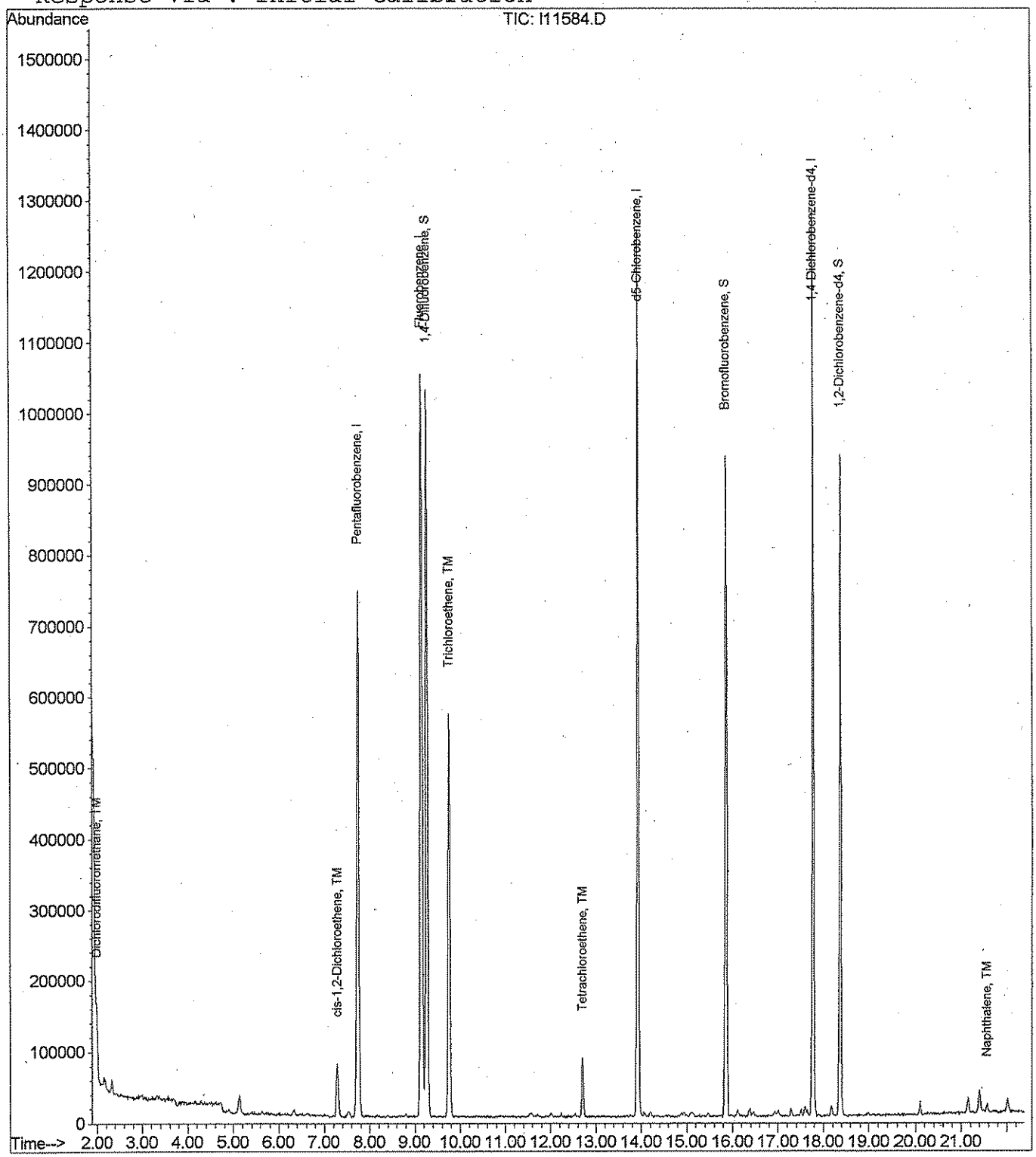
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11584.D Vial: 8
Acq On : 6 Jun 2003 12:32 pm Operator: JMR
Sample : 49794-12 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 12:55 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration





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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW12-0603-02-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-13
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 102 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

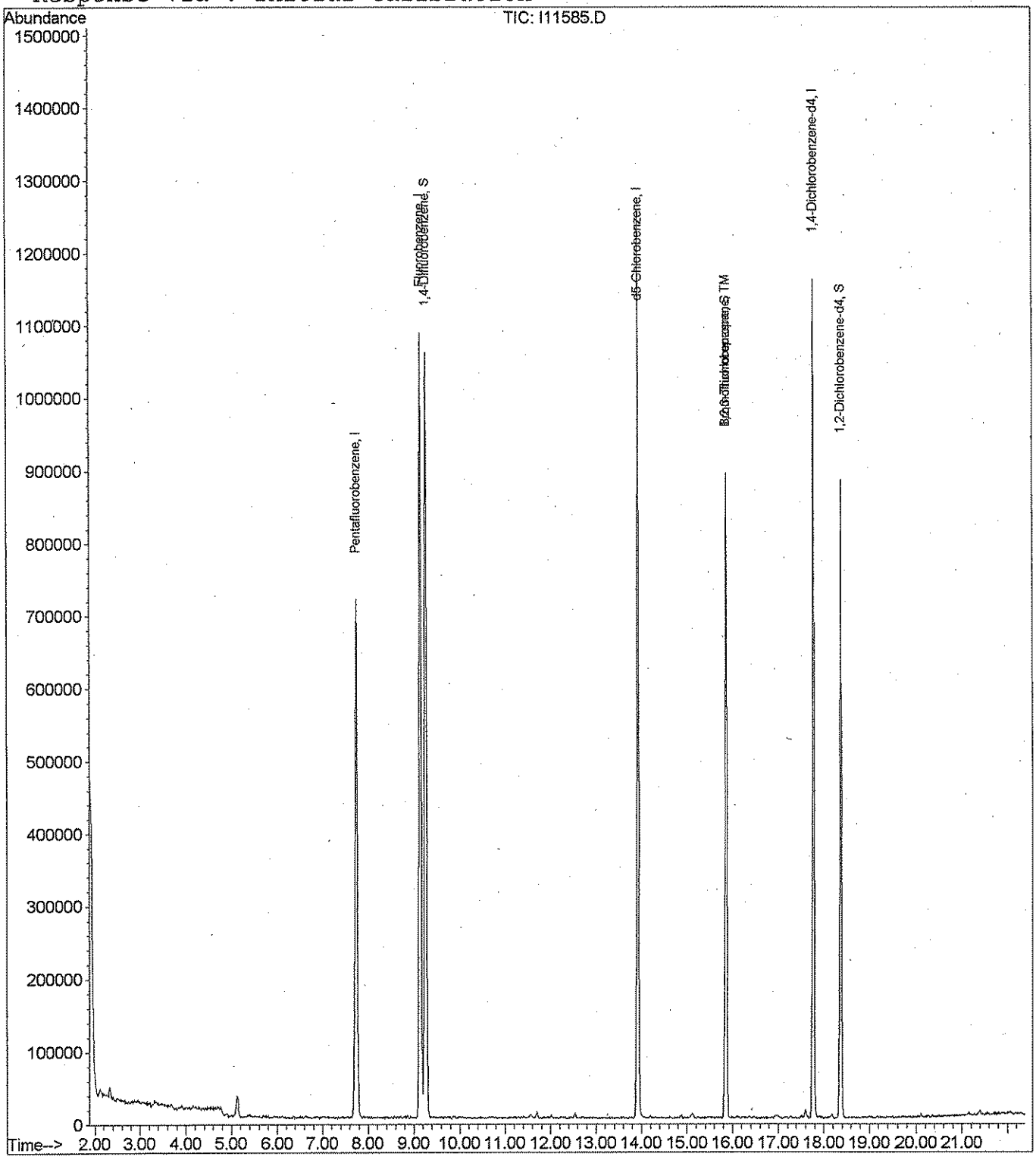
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11585.D Vial: 9
Acq On : 6 Jun 2003 1:07 pm Operator: JMR
Sample : 49794-13 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 13:30 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW01-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-14
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.92** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 102 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

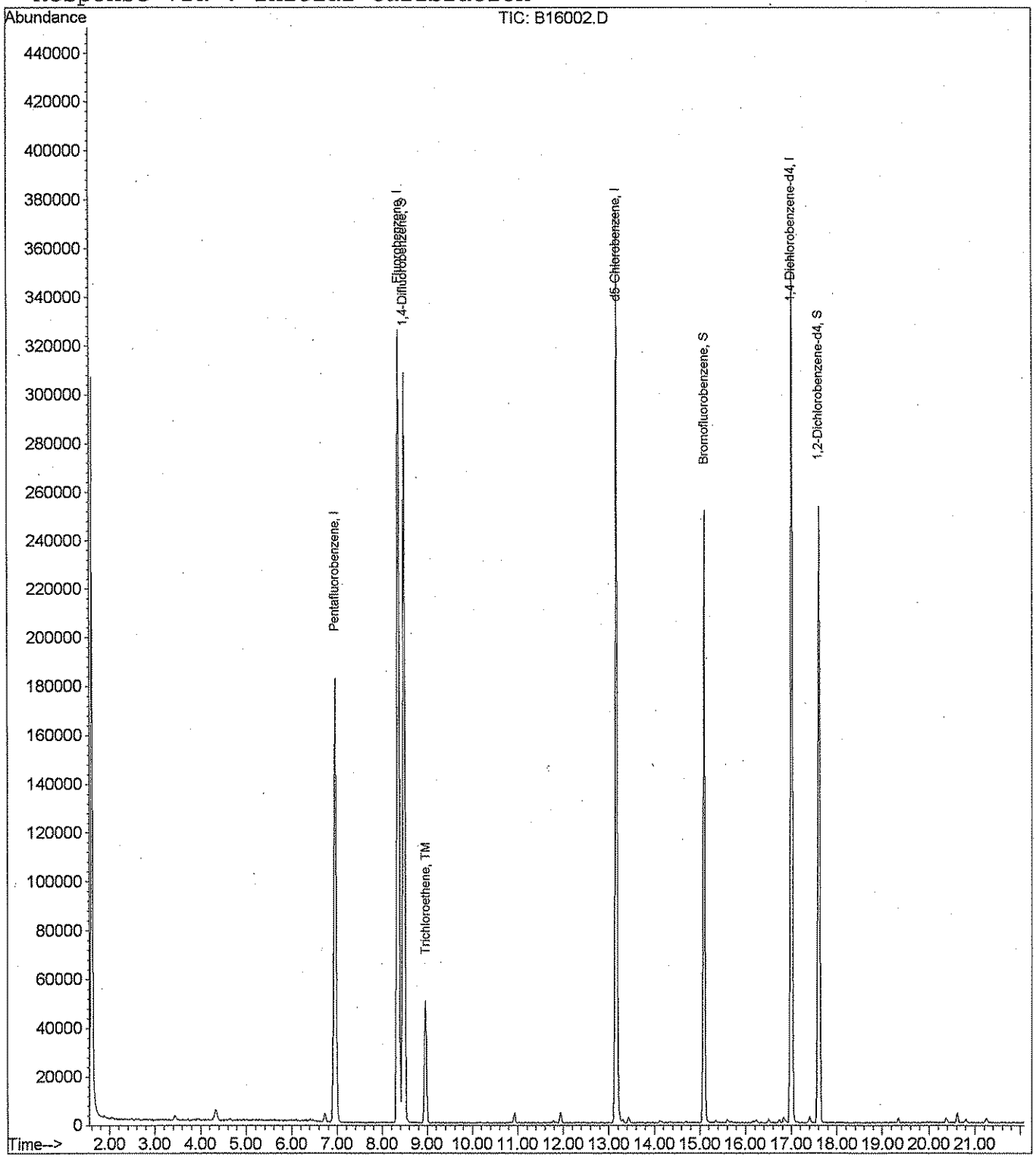
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16002.D Vial: 9
Acq On : 5 Jun 2003 1:29 pm Operator: JR
Sample : 49794-14 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 13:52 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** WY03-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-15
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.69** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 102 % | 1,2-Dichlorobenzene-d4 | 101 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

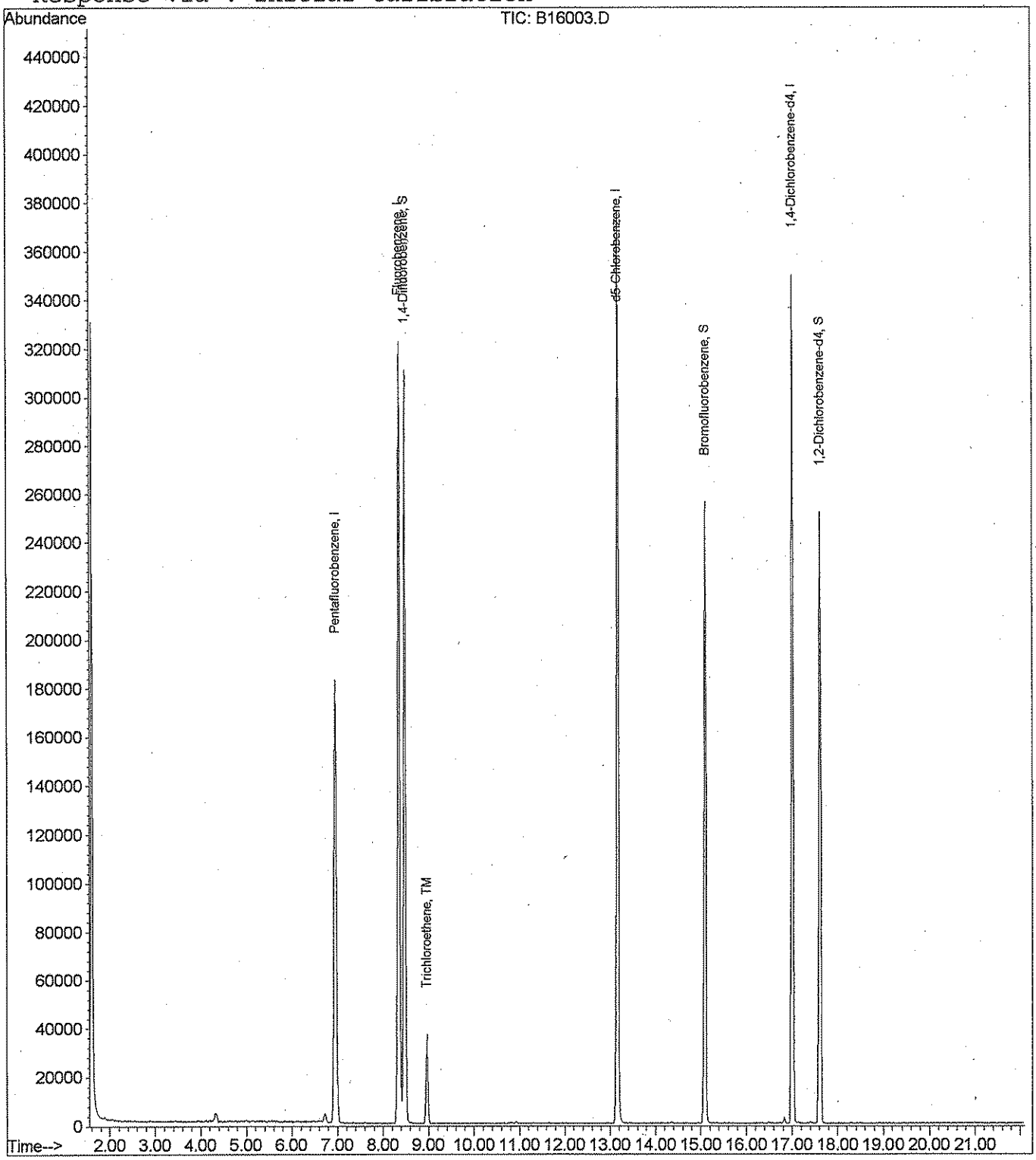
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16003.D Vial: 10
Acq On : 5 Jun 2003 2:10 pm Operator: JR
Sample : 49794-15 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 14:32 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration





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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW13-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-16
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 103 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

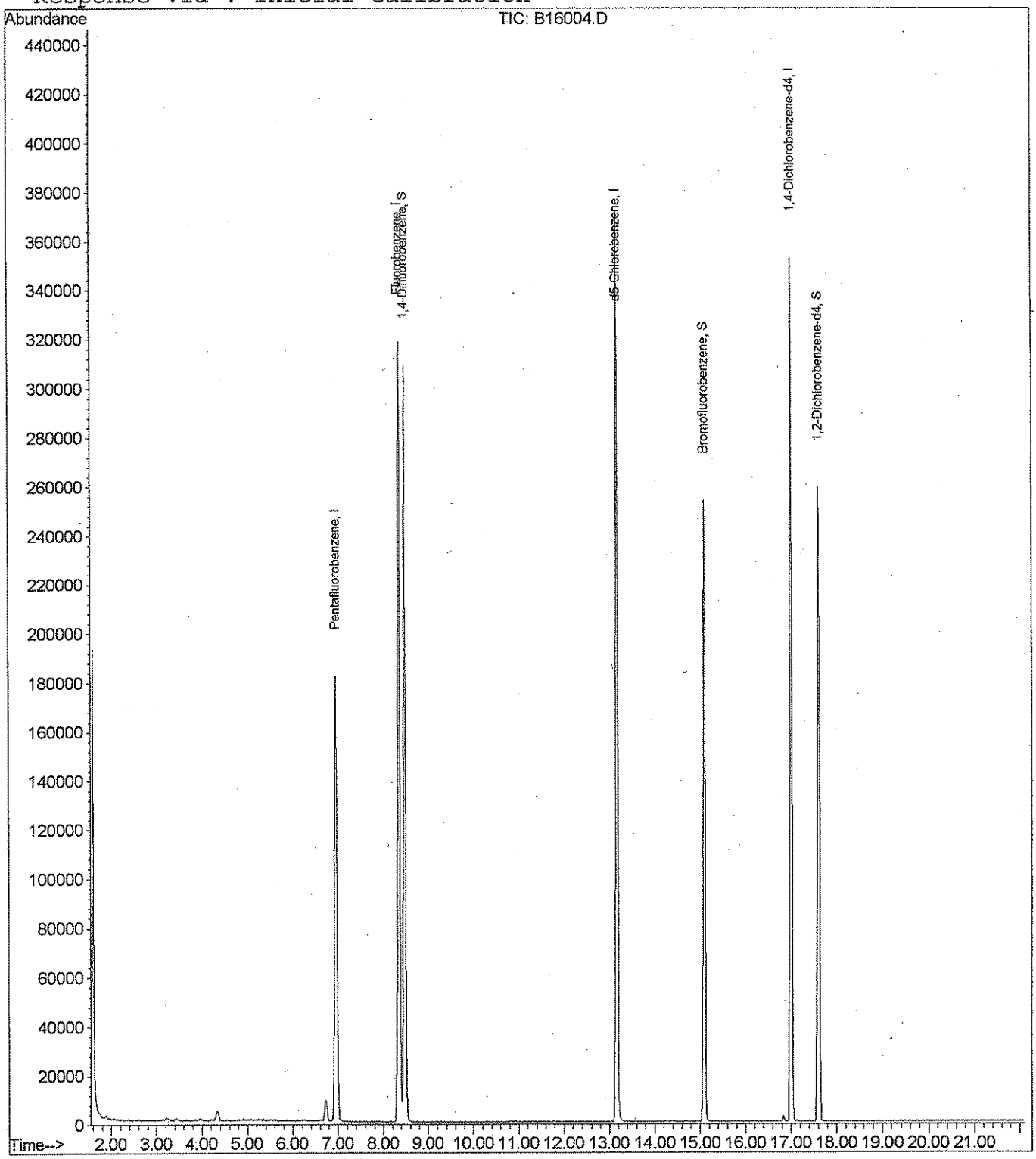
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16004.D Vial: 11
Acq On : 5 Jun 2003 2:50 pm Operator: JR
Sample : 49794-16 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 15:13 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration





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Ms. Kathleen Soukup
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1 Wall Street
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW22-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-17
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 104 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

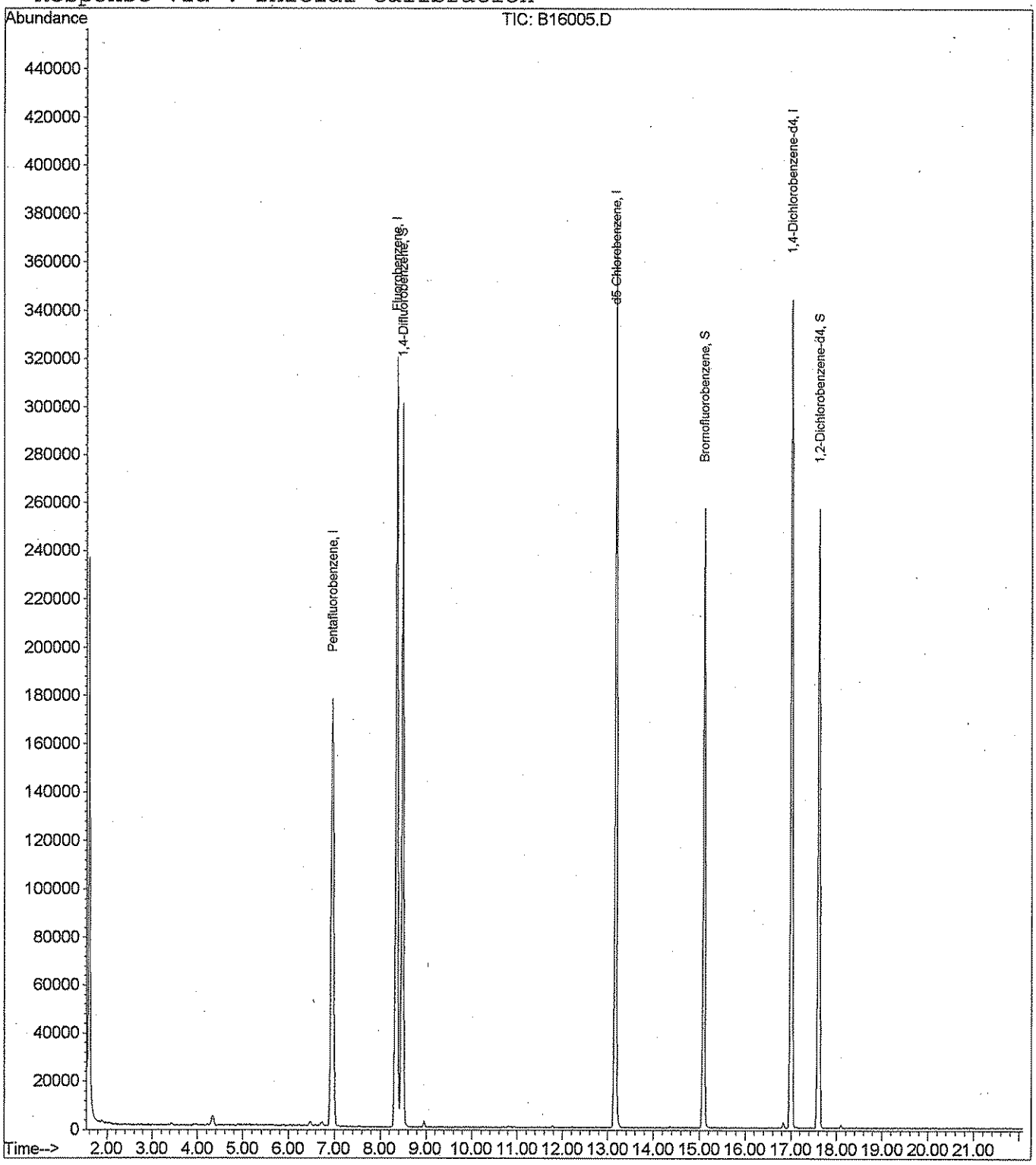
NH 524 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16005.D Vial: 12
Acq On : 5 Jun 2003 3:31 pm Operator: JR
Sample : 49794-17 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 15:53 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW23-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-18
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | **0.74** |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **2.3** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | **0.36 J** | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **5.1** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | **0.28 J** | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 103 % | 1,2-Dichlorobenzene-d4 | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

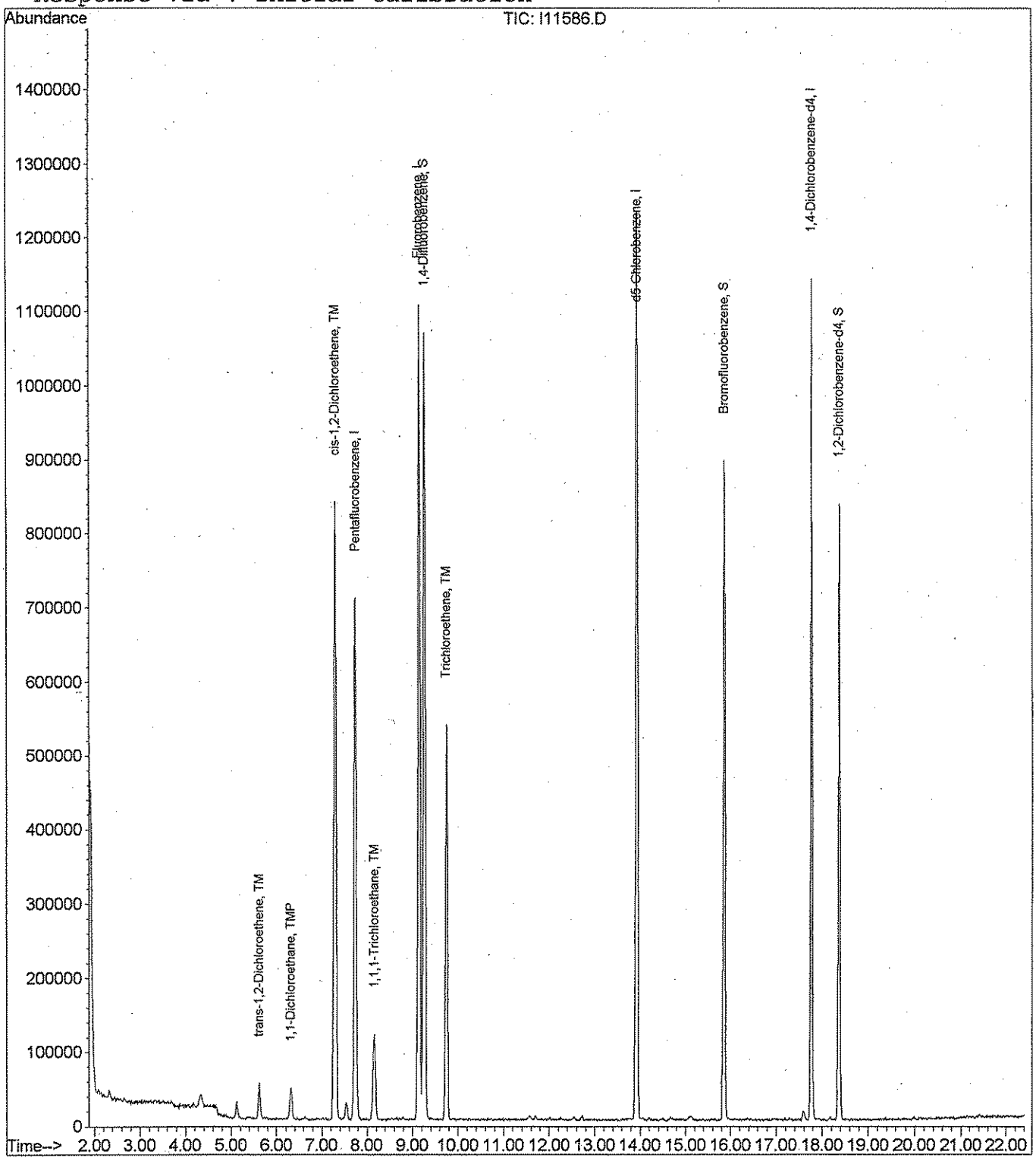
NH 524 full

Authorized signature Melissa A Kelly

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11586.D Vial: 10
Acq On : 6 Jun 2003 1:42 pm Operator: JMR
Sample : 49794-18 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 14:05 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW23-0603-01-B

**SAMPLE DATA**

**Lab Sample ID:** 49794-19
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | **0.75** |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **2.3** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | **0.38 J** | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **5.2** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | **0.31 J** | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 102 % | 1,2-Dichlorobenzene-d4 | 91 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

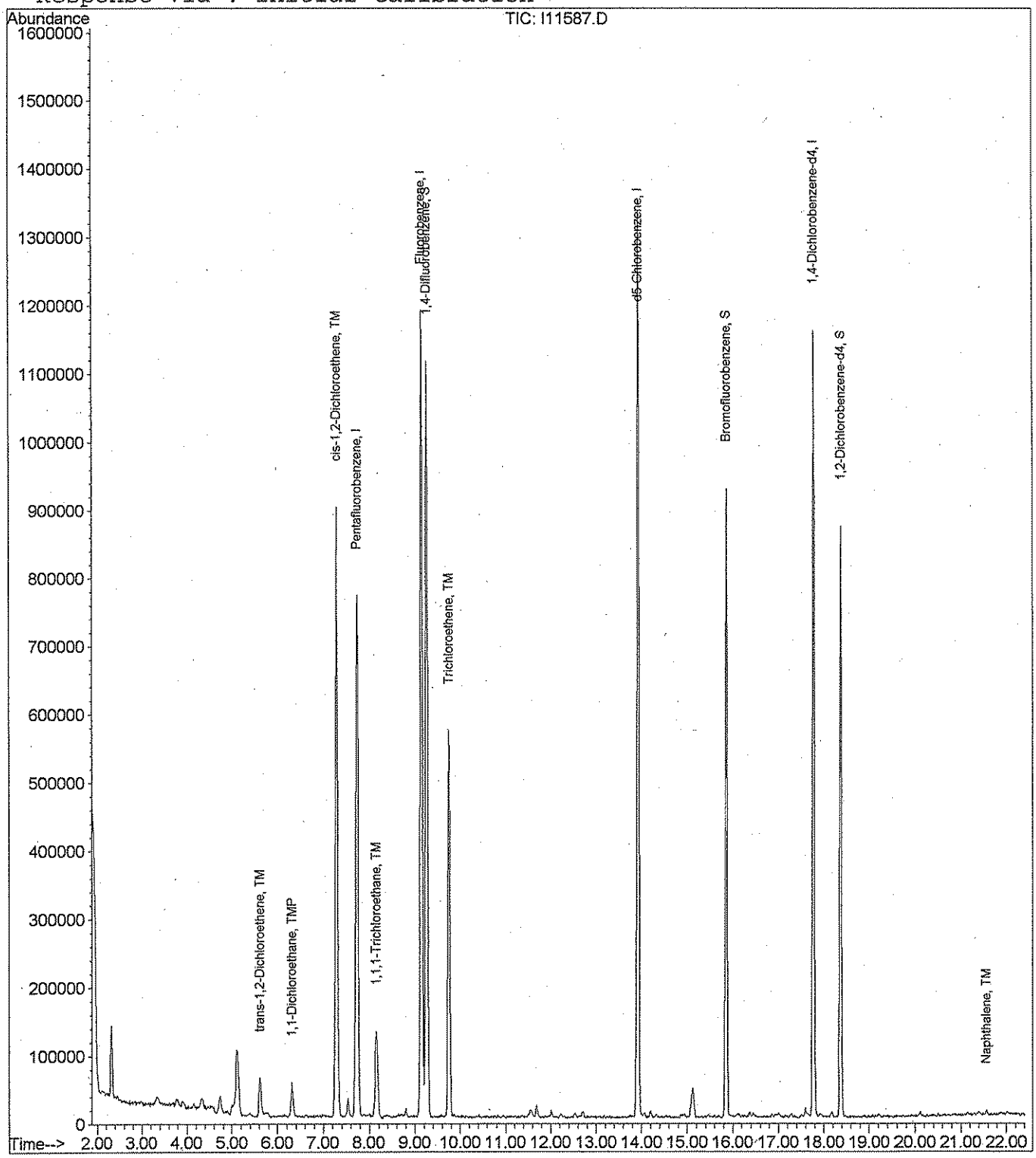
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11587.D Vial: 11
Acq On : 6 Jun 2003 7:49 pm Operator: JMR
Sample : 49794-19 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 20:12 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW23-0603-02-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-20
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | **0.70** |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **2.2** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | **0.33 J** | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **4.4** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 103 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

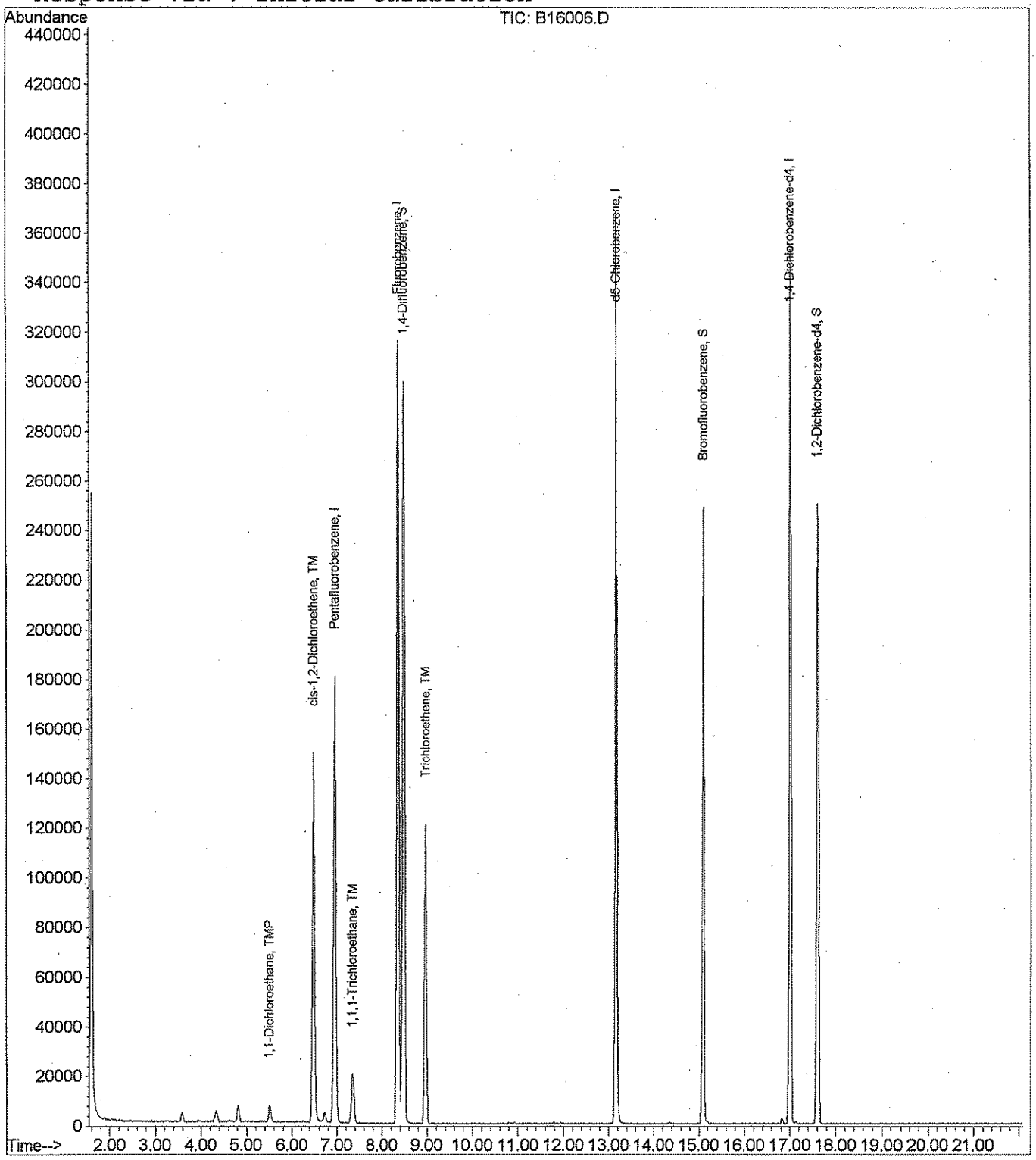
NH 524 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16006.D Vial: 13
Acq On : 5 Jun 2003 4:11 pm Operator: JR
Sample : 49794-20 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 16:33 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
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Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW24-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-21
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 104 % | 1,2-Dichlorobenzene-d4 | 102 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

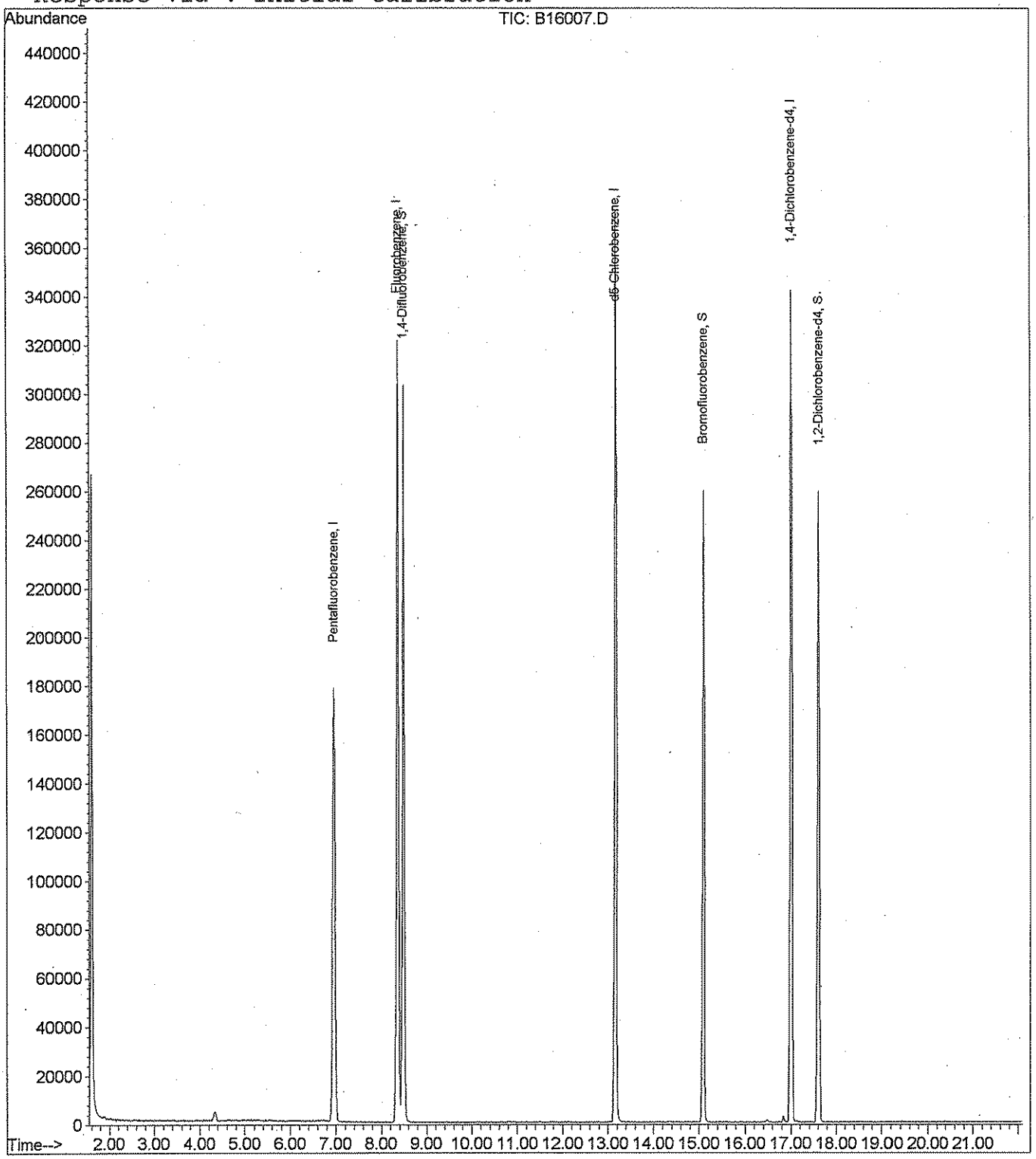
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16007.D Vial: 14
Acq On : 5 Jun 2003 4:51 pm Operator: JR
Sample : 49794-21 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 17:14 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW30-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-22
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **1.2** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 105 % | 1,2-Dichlorobenzene-d4 | 102 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

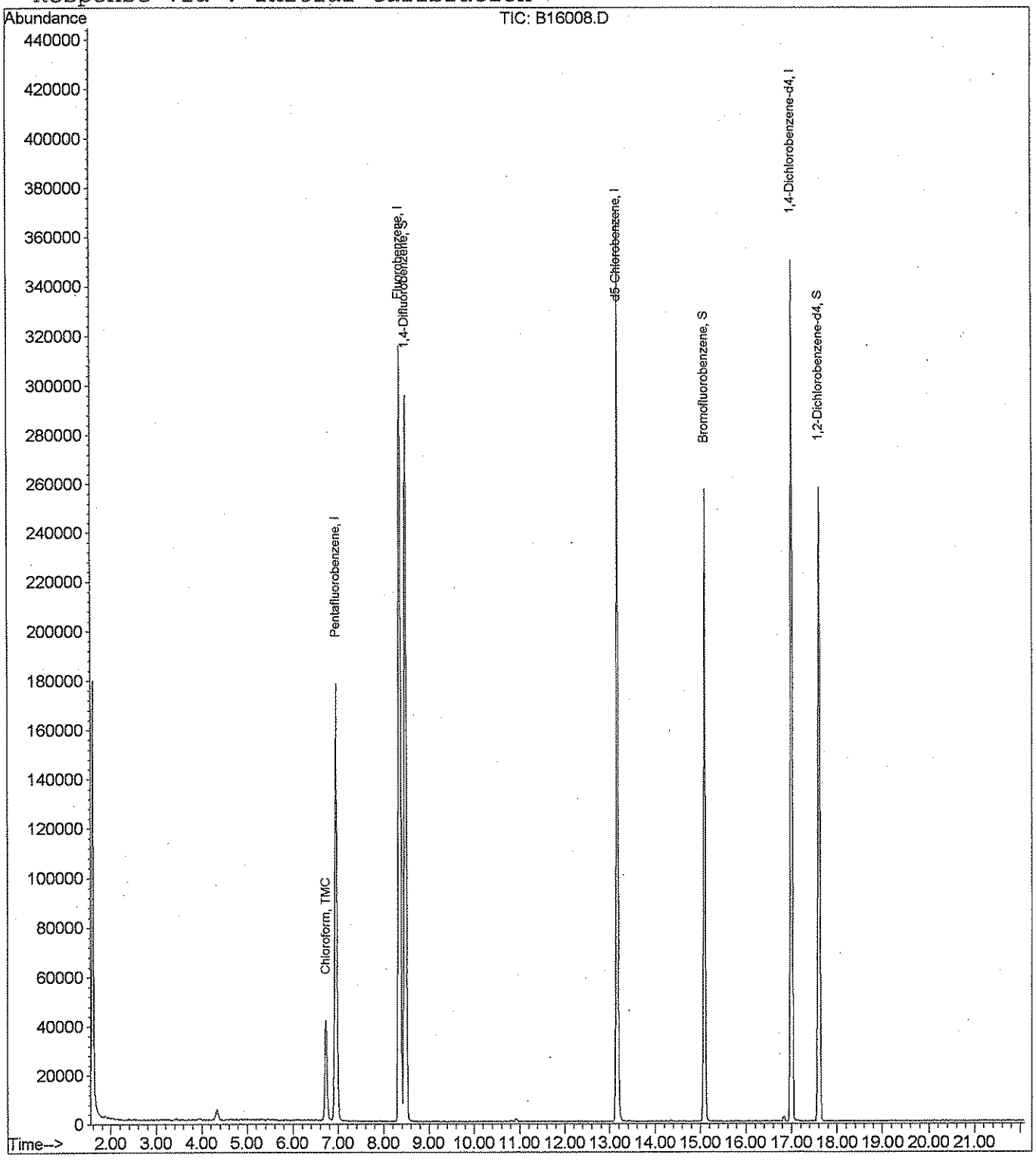
NH 524 full

Authorized signature

# Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16008.D Vial: 15
Acq On : 5 Jun 2003 5:32 pm Operator: JR
Sample : 49794-22 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 17:54 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW09-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-23
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.71** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 96 % | Bromofluorobenzene | 96 % | 1,2-Dichlorobenzene-d4 | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

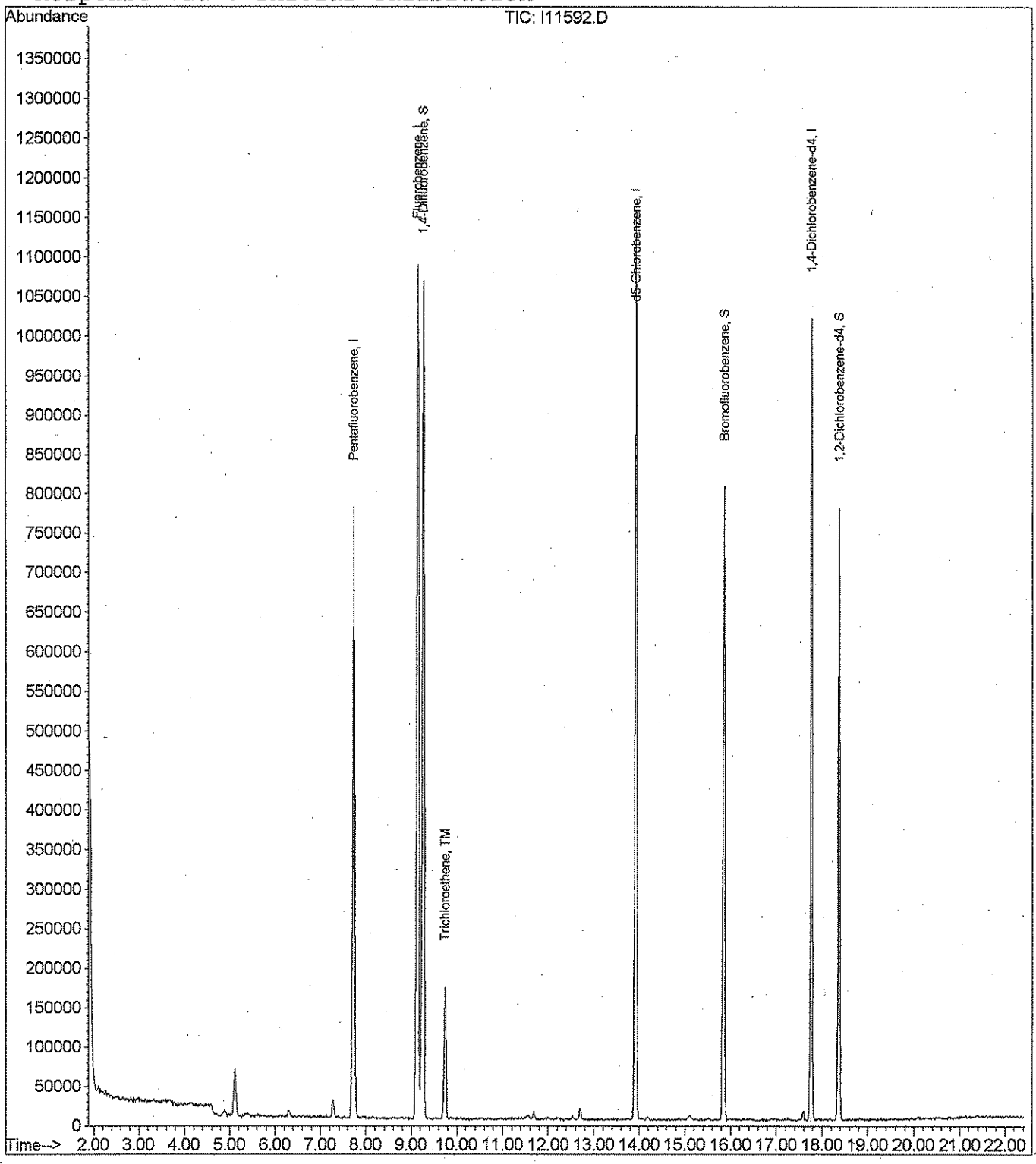
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11592.D Vial: 12
Acq On : 6 Jun 2003 11:13 pm Operator: JMR
Sample : 49794-23 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 23:35 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-24
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | **0.99** | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.45 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | **0.34 J** | Tetrachloroethene | 0.5 | **0.88** |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **54 E** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **3.2** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | **0.50** | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 112 % | 1,2-Dichlorobenzene-d4 | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

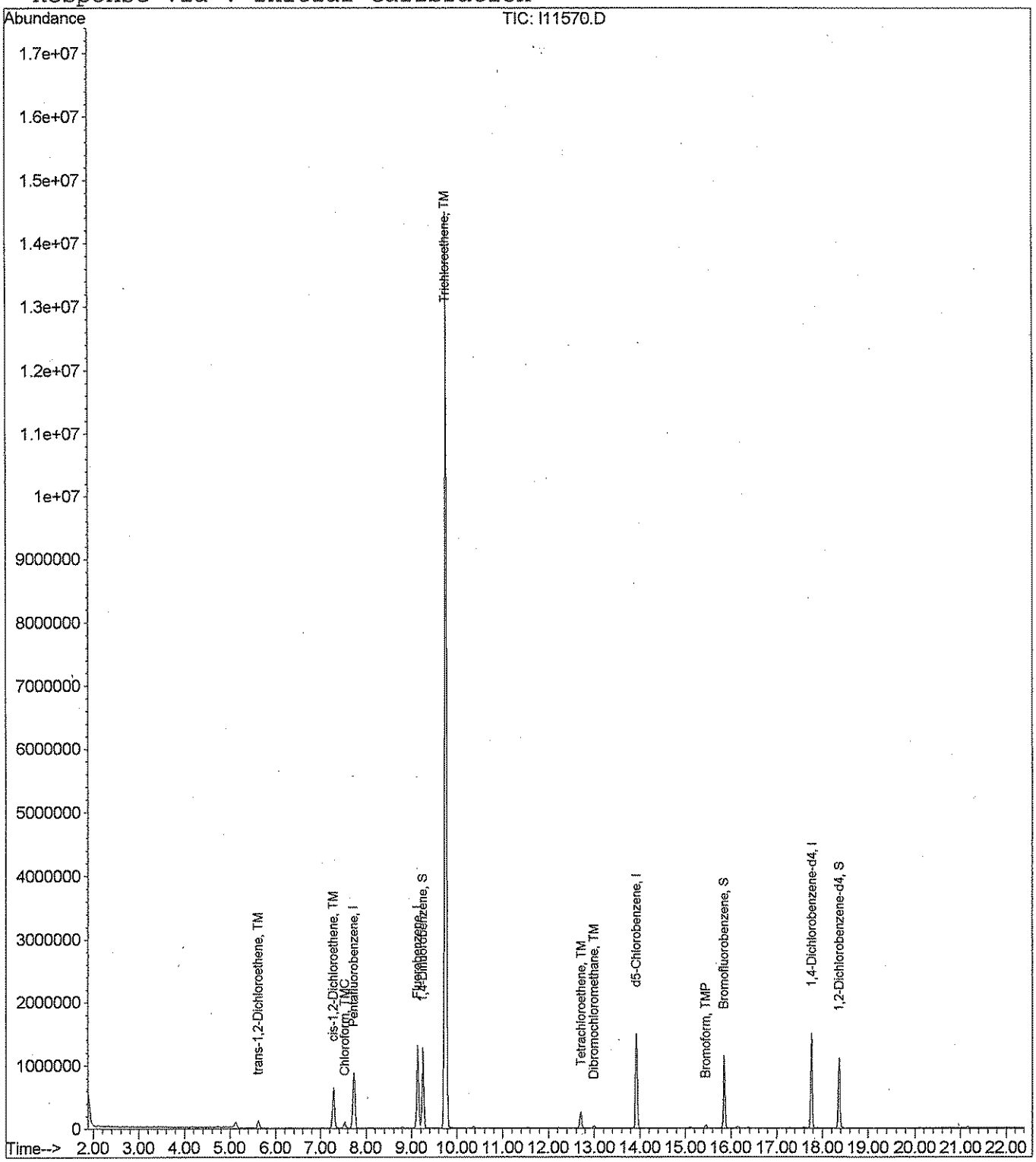
**COMMENTS:**

NH 524 full

Authorized signature

Data File : C:\HPCHEM\1\data\060503-i\I11570.D Vial: 27
Acq On : 6 Jun 2003 12:30 am Operator: JMR
Sample : 49794-24 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 0:53 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-24 DL
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 10
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 5 | U | 1,3-Dichloropropane | 5 | U |
| Bromobenzene | 5 | U | cis-1,3-Dichloropropene | 5 | U |
| Bromochloromethane | 5 | U | trans-1,3-Dichloropropene | 5 | U |
| Bromodichloromethane | 5 | U | 2,2-Dichloropropane | 5 | U |
| Bromoform | 5 | U | 1,1-Dichloropropene | 5 | U |
| Bromomethane | 5 | U | Ethylbenzene | 5 | U |
| n-butylbenzene | 5 | U | Hexachlorobutadiene | 5 | U |
| sec-butylbenzene | 5 | U | Isopropylbenzene | 5 | U |
| tert-butylbenzene | 5 | U | p-isopropyltoluene | 5 | U |
| Carbon Tetrachloride | 5 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 5 | U | Methyl-tert-butyl ether | 5 | U |
| Chloroethane | 5 | U | Naphthalene | 5 | U |
| Chloroform | 5 | U | n-Propylbenzene | 5 | U |
| Chloromethane | 5 | U | Styrene | 5 | U |
| 2-Chlorotoluene | 5 | U | 1,1,1,2-Tetrachloroethane | 5 | U |
| 4-Chlorotoluene | 5 | U | 1,1,2,2-Tetrachloroethane | 5 | U |
| Dibromochloromethane | 5 | U | Tetrachloroethene | 5 | U |
| 1,2-Dibromo-3-chloropropane | 5 | U | Toluene | 5 | U |
| 1,2-Dibromoethane | 5 | U | 1,2,3-Trichlorobenzene | 5 | U |
| Dibromomethane | 5 | U | 1,2,4-Trichlorobenzene | 5 | U |
| 1,2-Dichlorobenzene | 5 | U | 1,1,1-Trichloroethane | 5 | U |
| 1,3-Dichlorobenzene | 5 | U | 1,1,2-Trichloroethane | 5 | U |
| 1,4-Dichlorobenzene | 5 | U | Trichloroethene | 5 | **60** |
| Dichlorodifluoromethane | 5 | U | Trichlorofluoromethane | 5 | U |
| 1,1-Dichloroethane | 5 | U | 1,2,3-Trichloropropane | 5 | U |
| 1,2-Dichloroethane | 5 | U | 1,2,4-Trimethylbenzene | 5 | U |
| 1,1-Dichloroethene | 5 | U | 1,3,5-Trimethylbenzene | 5 | U |
| cis-1,2-Dichloroethene | 5 | **3.1 J** | Vinyl Chloride | 1 | U |
| trans-1,2-Dichloroethene | 5 | U | o-Xylene | 5 | U |
| 1,2-Dichloropropane | 5 | U | m,p-Xylene | 5 | U |
| Acetone | 50 | U | Diethyl ether | 5 | U |
| Carbon Disulfide | 5 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether | 5 | U |
| t-Butyl alcohol | 100 | U | Ethyl t-butyl ether | 5 | U |
| t-Amyl methyl ether | 5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 89 % | 1,2-Dichlorobenzene-d4 | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

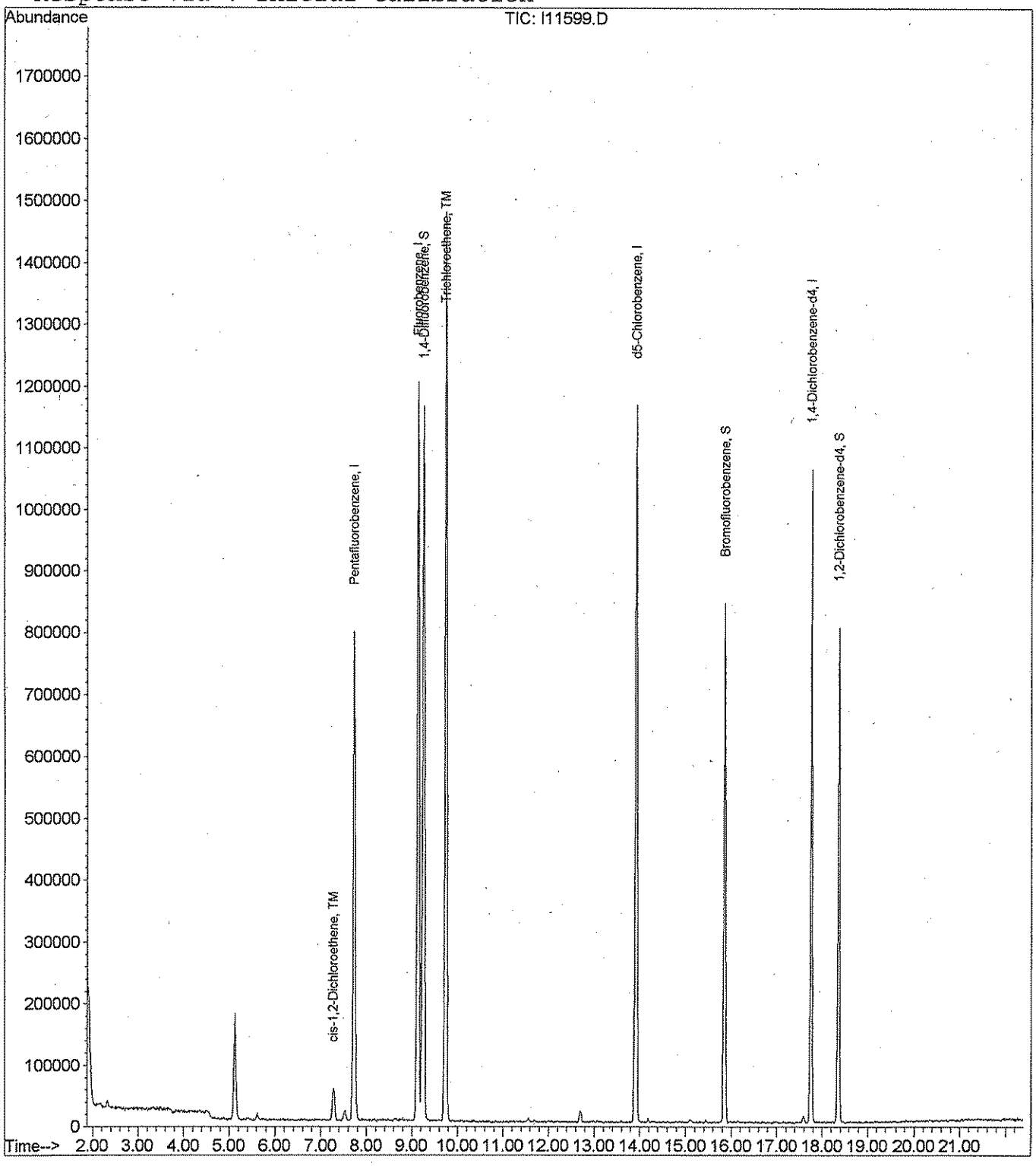
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11599.D Vial: 19
Acq On : 7 Jun 2003 3:16 am Operator: JMR
Sample : 49794-24,DL Inst : Instrumen
Misc : 2500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 7 3:39 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-B

**SAMPLE DATA**

**Lab Sample ID:** 49794-25
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | **0.86** | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.44 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | **0.29 J** | Tetrachloroethene | 0.5 | **0.81** |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **57 E** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **3.4** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | **0.57** | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 100 % | 1,2-Dichlorobenzene-d4 | 108 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

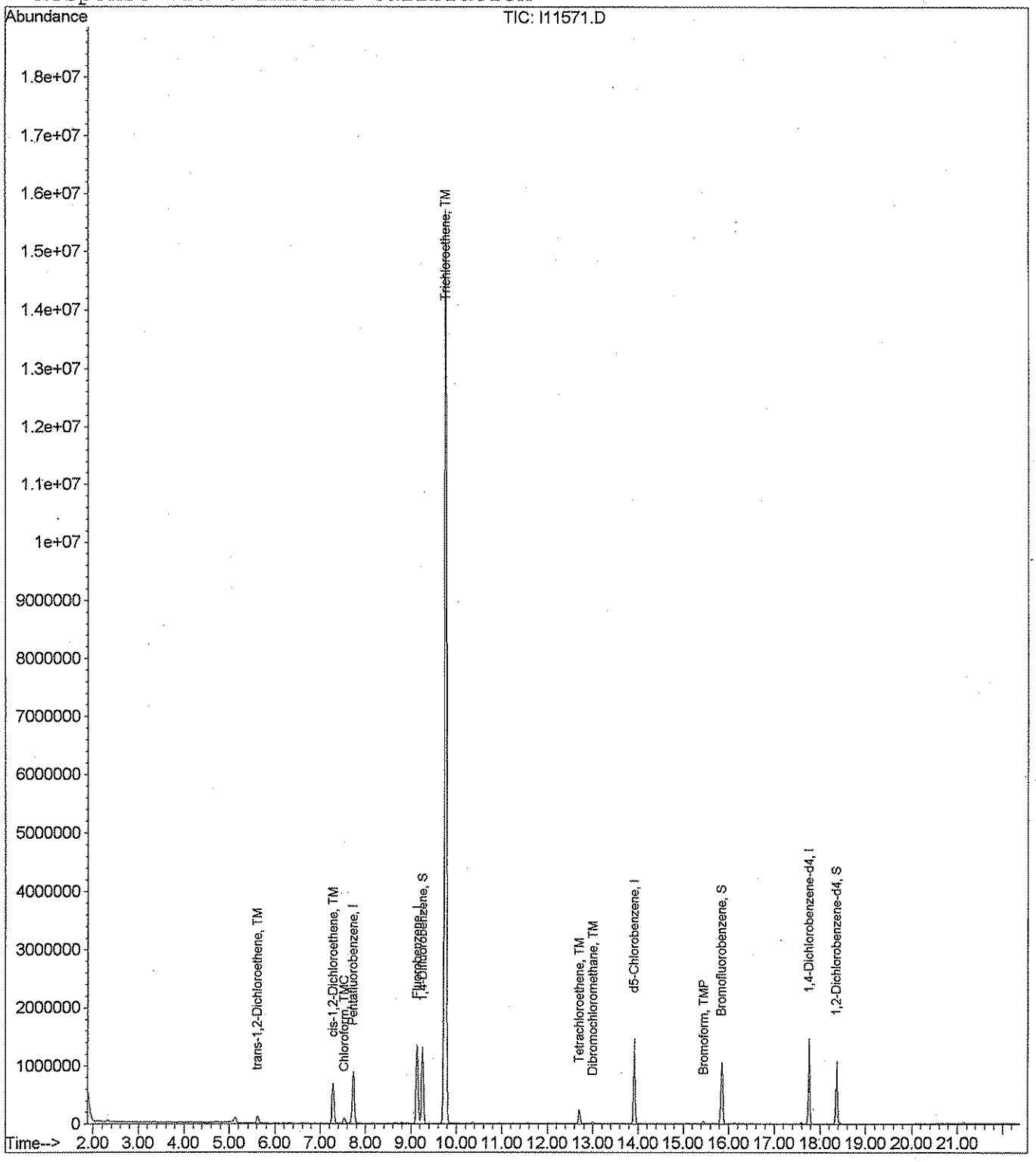
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11571.D Vial: 28
Acq On : 6 Jun 2003 1:06 am Operator: JMR
Sample : 49794-25 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 1:29 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-B

**SAMPLE DATA**

**Lab Sample ID:** 49794-25 DL
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 10
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 5 | U | 1,3-Dichloropropane | 5 | U |
| Bromobenzene | 5 | U | cis-1,3-Dichloropropene | 5 | U |
| Bromochloromethane | 5 | U | trans-1,3-Dichloropropene | 5 | U |
| Bromodichloromethane | 5 | U | 2,2-Dichloropropane | 5 | U |
| Bromoform | 5 | U | 1,1-Dichloropropene | 5 | U |
| Bromomethane | 5 | U | Ethylbenzene | 5 | U |
| n-butylbenzene | 5 | U | Hexachlorobutadiene | 5 | U |
| sec-butylbenzene | 5 | U | Isopropylbenzene | 5 | U |
| tert-butylbenzene | 5 | U | p-isopropyltoluene | 5 | U |
| Carbon Tetrachloride | 5 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 5 | U | Methyl-tert-butyl ether | 5 | U |
| Chloroethane | 5 | U | Naphthalene | 5 | U |
| Chloroform | 5 | U | n-Propylbenzene | 5 | U |
| Chloromethane | 5 | U | Styrene | 5 | U |
| 2-Chlorotoluene | 5 | U | 1,1,1,2-Tetrachloroethane | 5 | U |
| 4-Chlorotoluene | 5 | U | 1,1,2,2-Tetrachloroethane | 5 | U |
| Dibromochloromethane | 5 | U | Tetrachloroethene | 5 | U |
| 1,2-Dibromo-3-chloropropane | 5 | U | Toluene | 5 | U |
| 1,2-Dibromoethane | 5 | U | 1,2,3-Trichlorobenzene | 5 | U |
| Dibromomethane | 5 | U | 1,2,4-Trichlorobenzene | 5 | U |
| 1,2-Dichlorobenzene | 5 | U | 1,1,1-Trichloroethane | 5 | U |
| 1,3-Dichlorobenzene | 5 | U | 1,1,2-Trichloroethane | 5 | U |
| 1,4-Dichlorobenzene | 5 | U | Trichloroethene | 5 | **59** |
| Dichlorodifluoromethane | 5 | U | Trichlorofluoromethane | 5 | U |
| 1,1-Dichloroethane | 5 | U | 1,2,3-Trichloropropane | 5 | U |
| 1,2-Dichloroethane | 5 | U | 1,2,4-Trimethylbenzene | 5 | U |
| 1,1-Dichloroethene | 5 | U | 1,3,5-Trimethylbenzene | 5 | U |
| cis-1,2-Dichloroethene | 5 | **3.0 J** | Vinyl Chloride | 1 | U |
| trans-1,2-Dichloroethene | 5 | U | o-Xylene | 5 | U |
| 1,2-Dichloropropane | 5 | U | m,p-Xylene | 5 | U |
| Acetone | 50 | U | Diethyl ether | 5 | U |
| Carbon Disulfide | 5 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether | 5 | U |
| t-Butyl alcohol | 100 | U | Ethyl t-butyl ether | 5 | U |
| t-Amyl methyl ether | 5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 88 % | 1,2-Dichlorobenzene-d4 | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

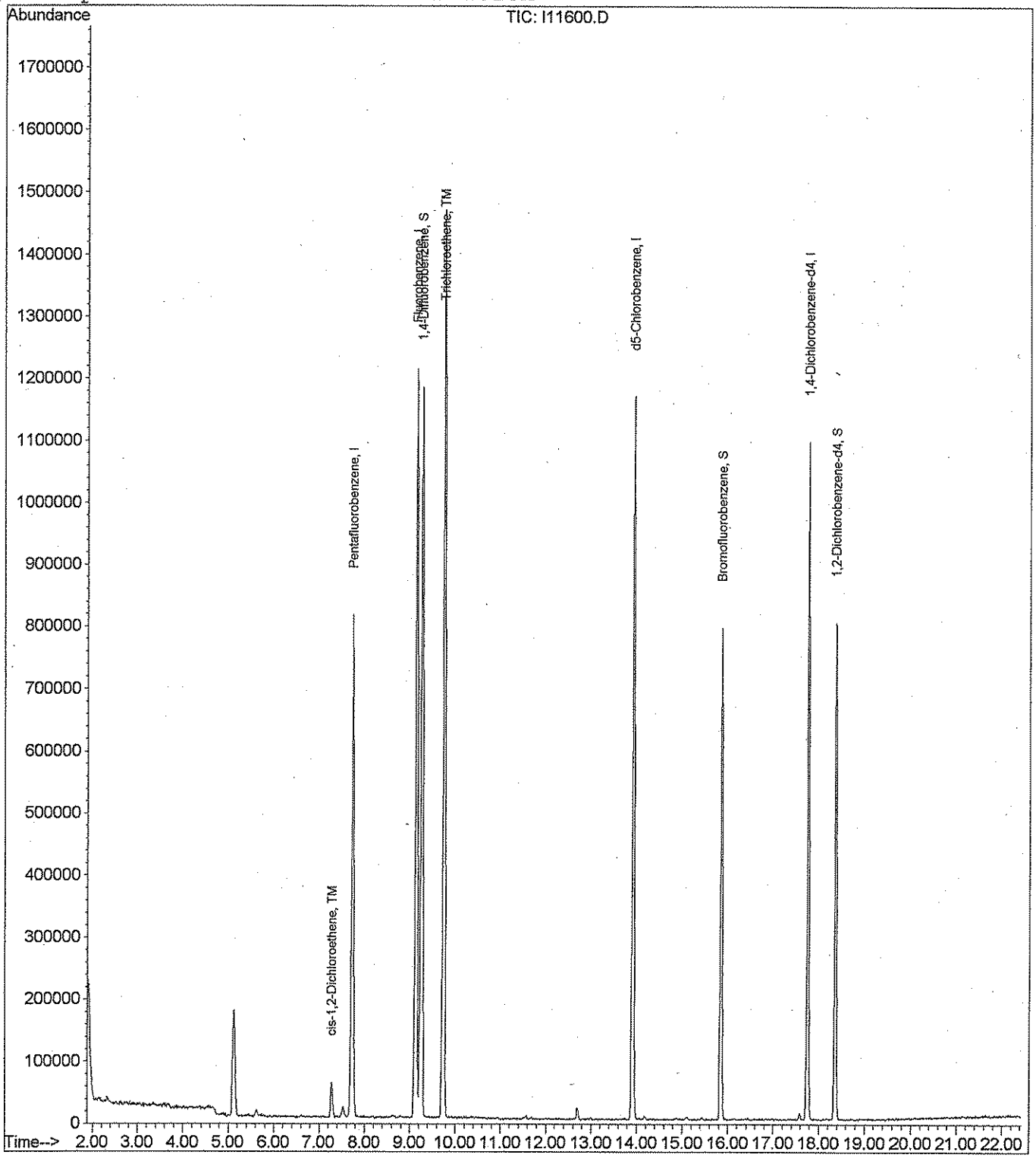
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11600.D Vial: 20
Acq On : 7 Jun 2003 3:51 am Operator: JMR
Sample : 49794-25,DL Inst : Instrumen
Misc : 2500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 7 4:14 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration





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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-02-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-26
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 110 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

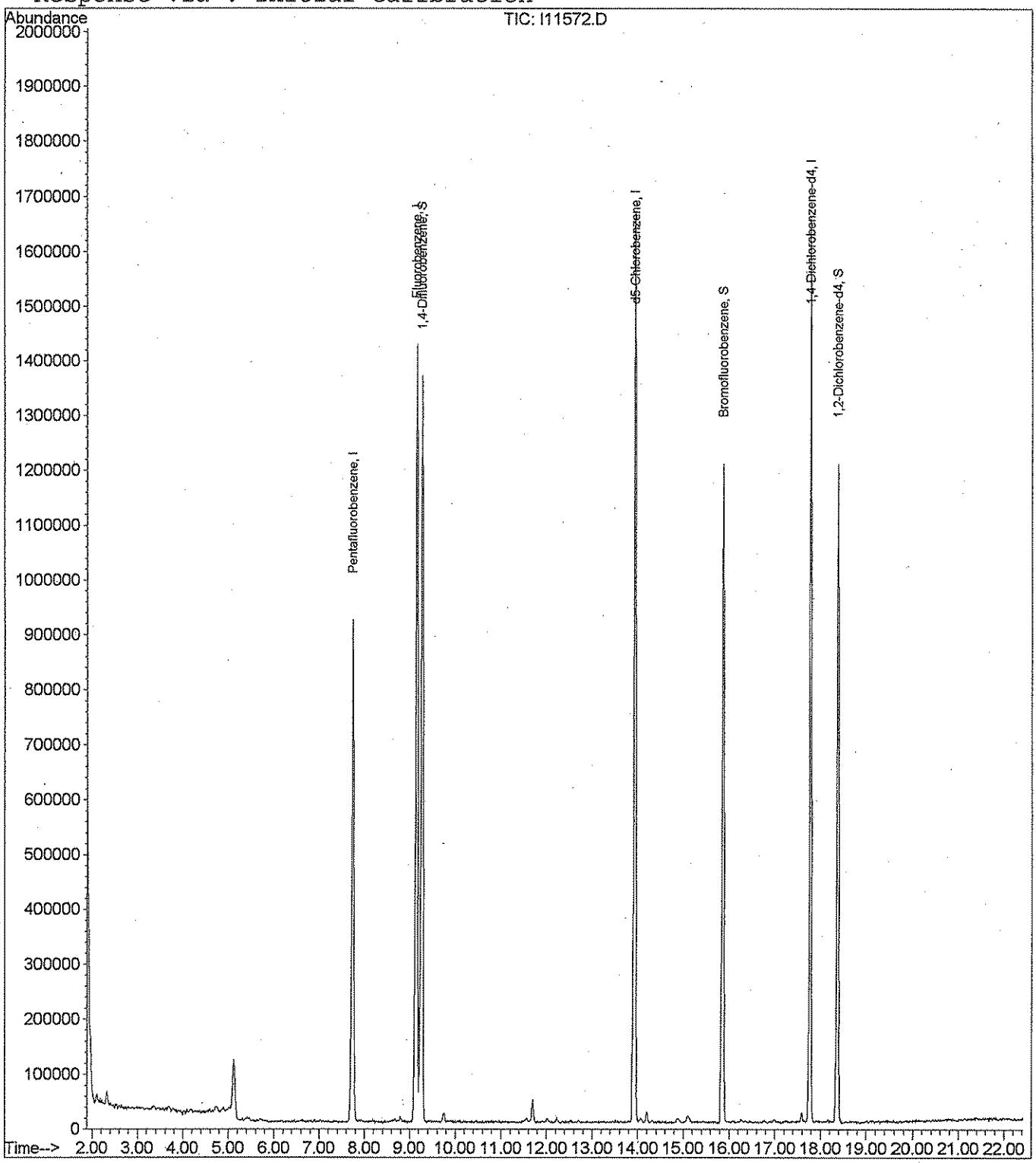
NH 524 full

Authorized signature Melissa A Hill

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11572.D Vial: 29
Acq On : 6 Jun 2003 1:41 am Operator: JMR
Sample : 49794-26 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 2:04 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW08-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-27
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 104 % | Bromofluorobenzene | 95 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature Melissa A Hall

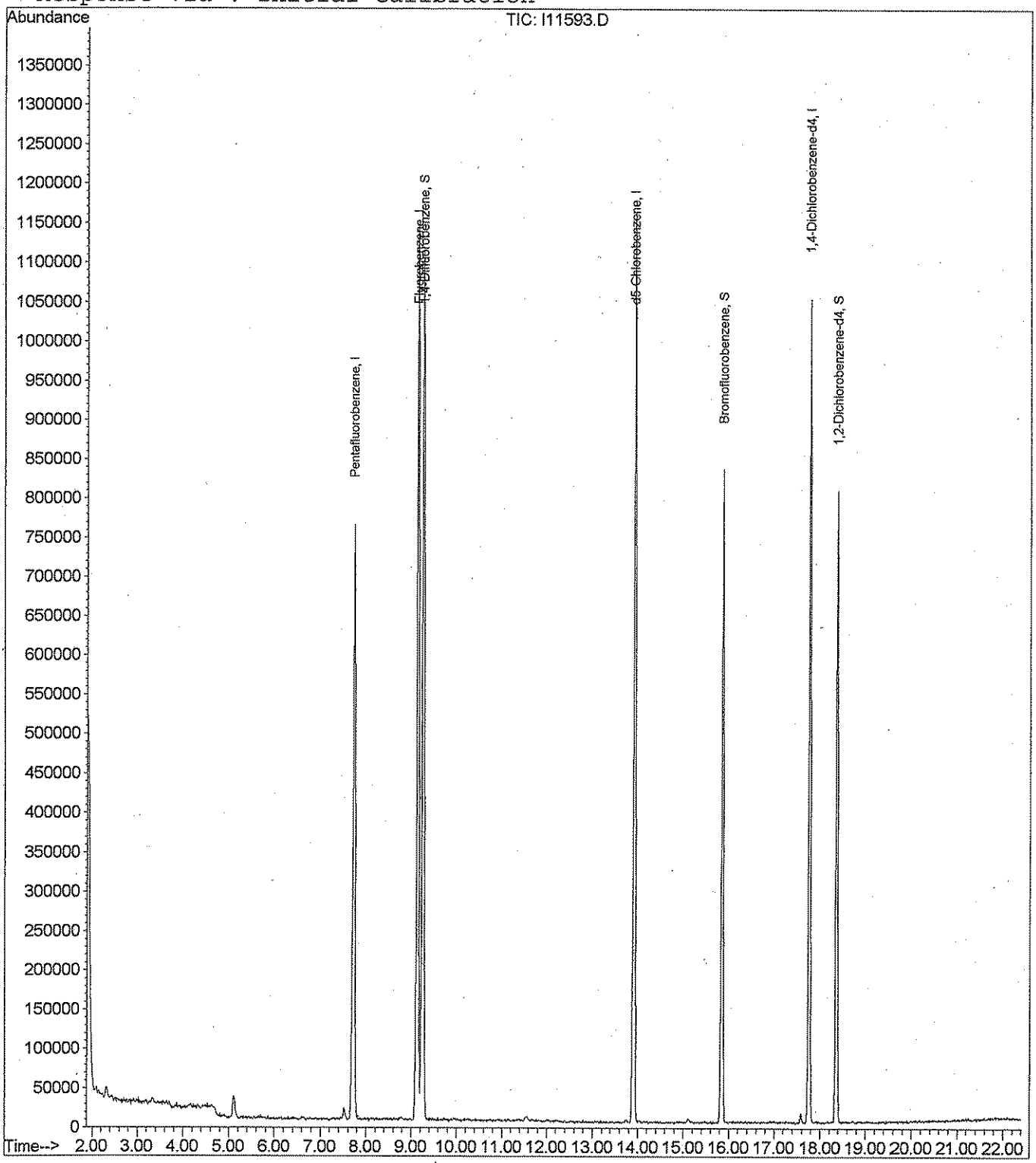
Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11593.D
Acq On : 6 Jun 2003 11:47 pm
Sample : 49794-27
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 7 0:10 2003

Vial: 13
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW07-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-28
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | **0.82** | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 95 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

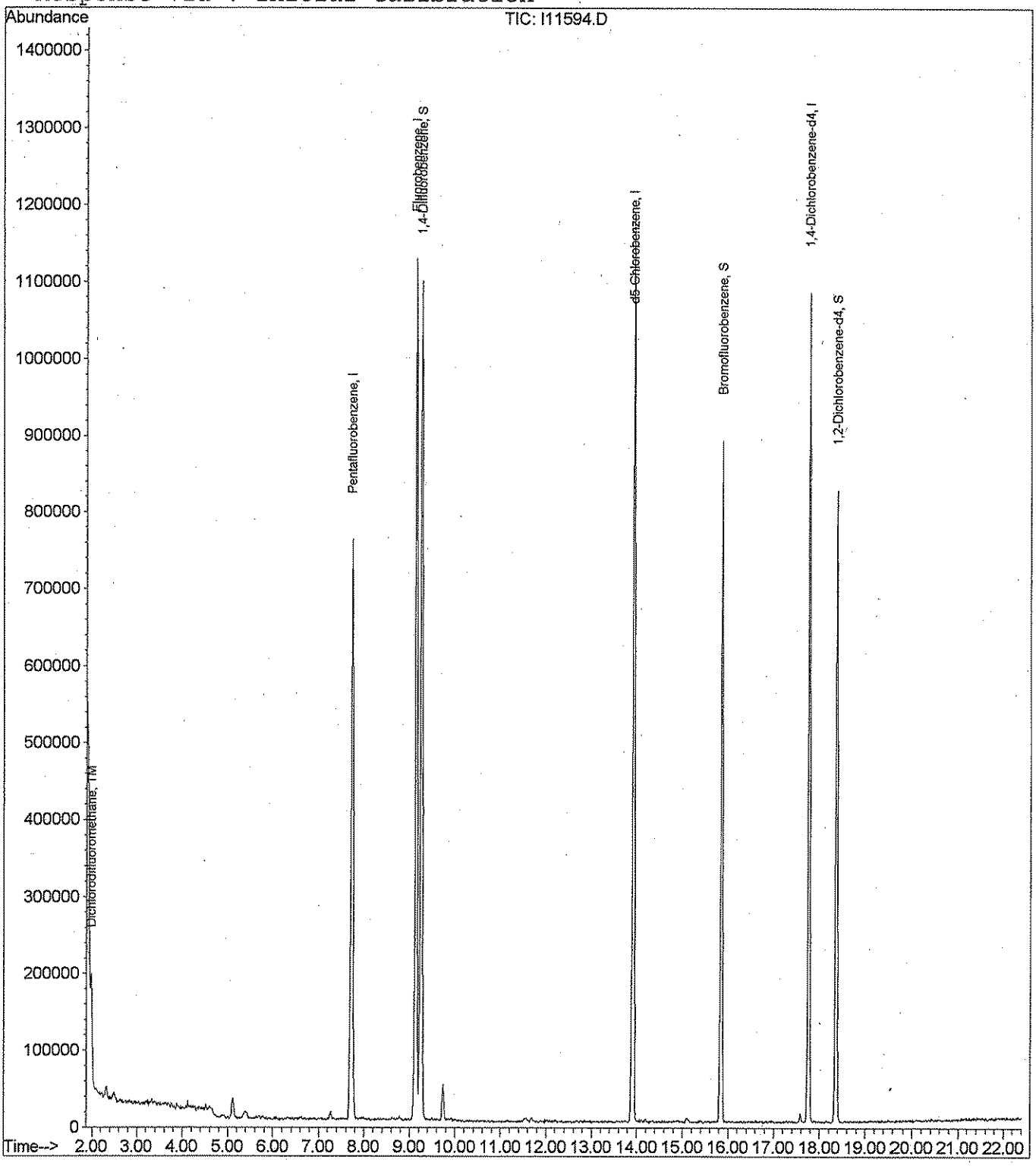
NH 524 full

Authorized signature Milena A Kalli

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11594.D Vial: 14
Acq On : 7 Jun 2003 12:22 am Operator: JMR
Sample : 49794-28 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 7 0:45 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW34-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-29
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 92 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

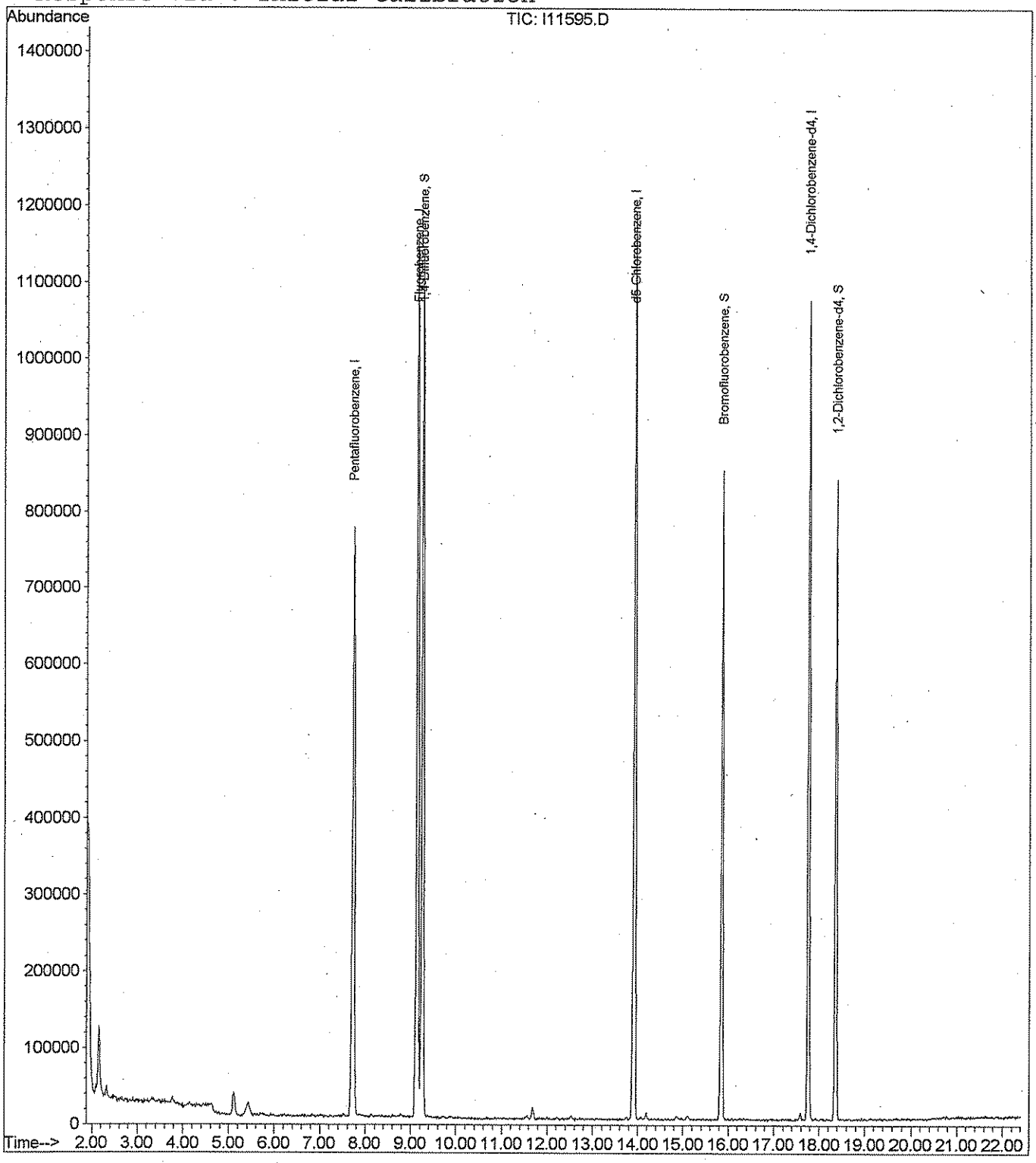
Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11595.D
Acq On : 7 Jun 2003 12:57 am
Sample : 49794-29
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 7 1:20 2003

Vial: 15
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW05-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-30
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 99 % | 1,2-Dichlorobenzene-d4 | 94 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

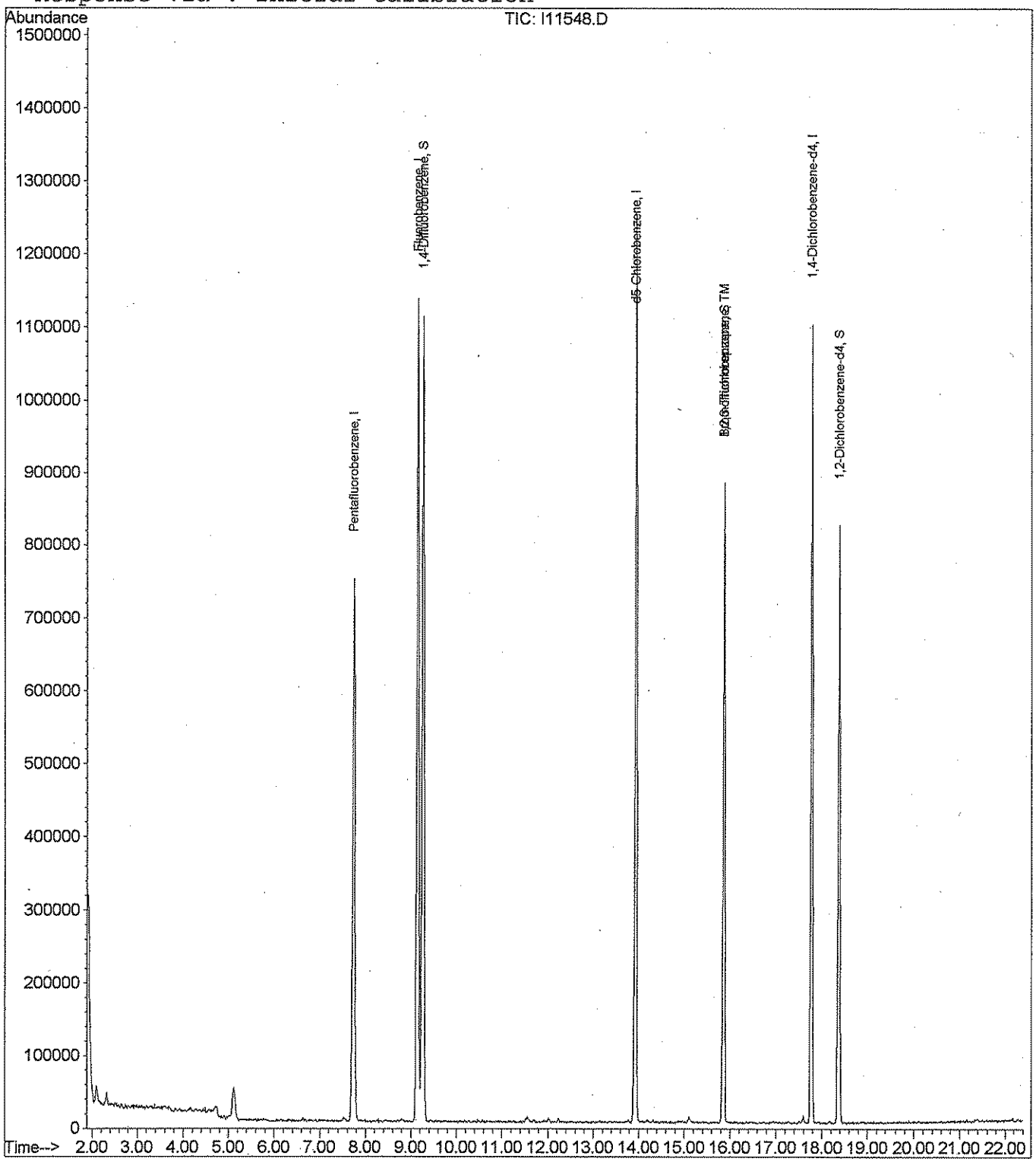
NH 524 full

Authorized signature Melissa Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11548.D Vial: 5
Acq On : 5 Jun 2003 10:47 am Operator: JMR
Sample : 49794-30 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 11:10 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW03-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-31
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **6.1** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **0.34 J** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 113 % | 1,2-Dichlorobenzene-d4 | 109 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

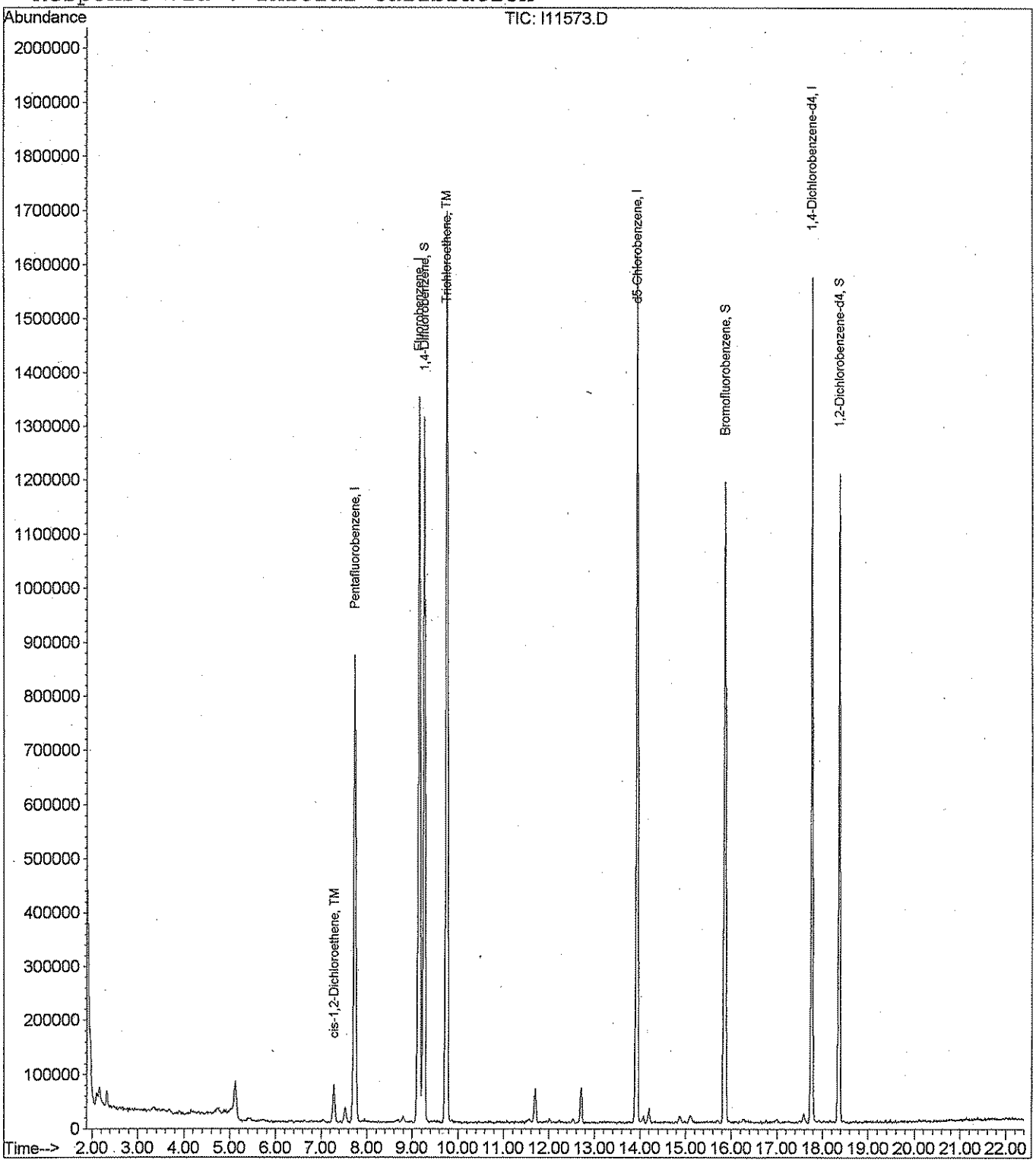
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11573.D Vial: 30
Acq On : 6 Jun 2003 2:17 am Operator: JMR
Sample : 49794-31 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 2:40 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration





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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW03-0603-01-B

**SAMPLE DATA**

**Lab Sample ID:** 49794-32
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **6.2** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | **0.33 J** | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 114 % | 1,2-Dichlorobenzene-d4 | 106 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

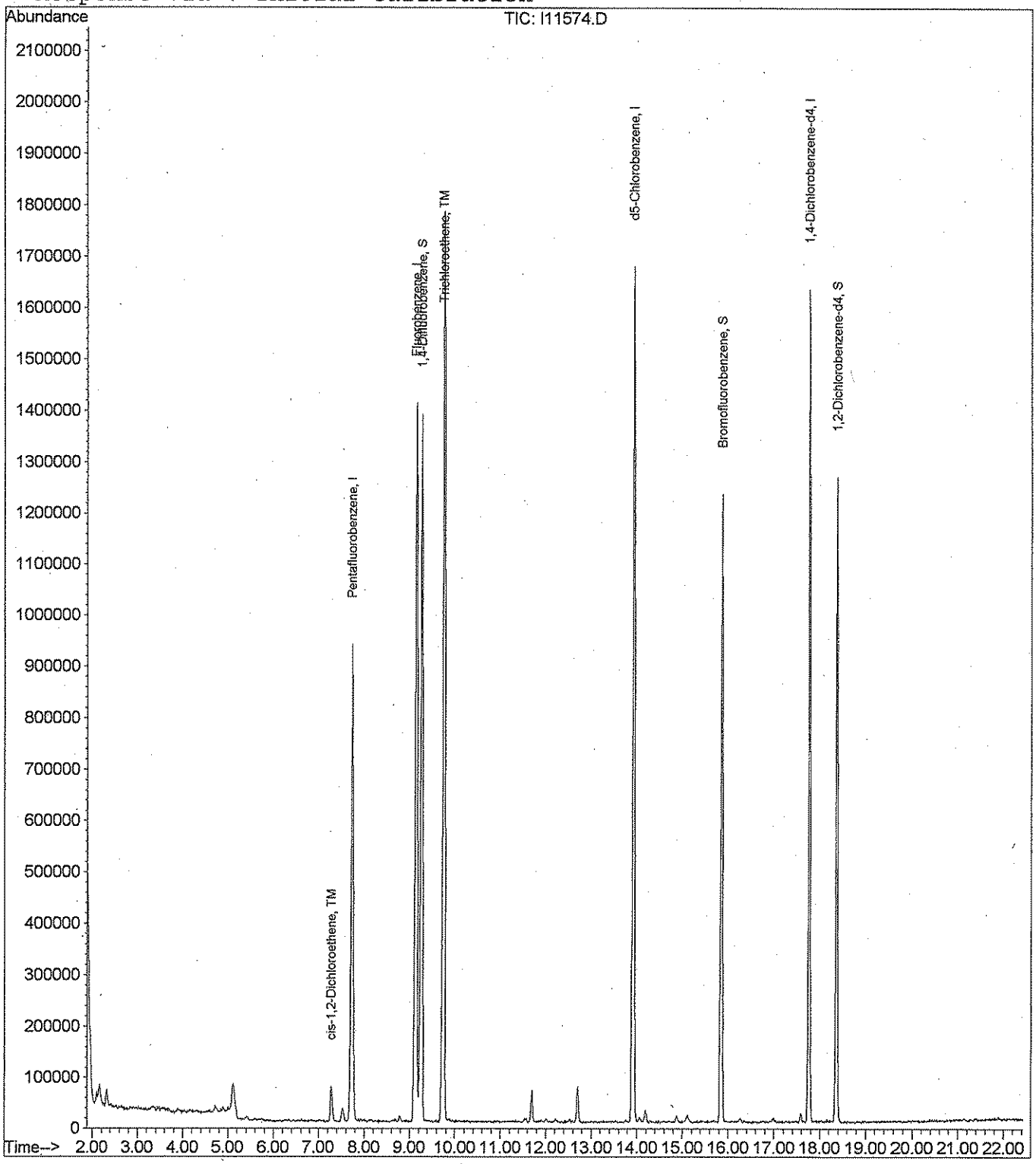
**COMMENTS:**

NH 524 full

Authorized signature Melissa A Hall

Data File : C:\HPCHEM\1\data\060503-i\I11574.D Vial: 31
Acq On : 6 Jun 2003 2:53 am Operator: JMR
Sample : 49794-32 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 3:15 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW03-0603-02-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-33
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 112 % | 1,2-Dichlorobenzene-d4 | 106 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

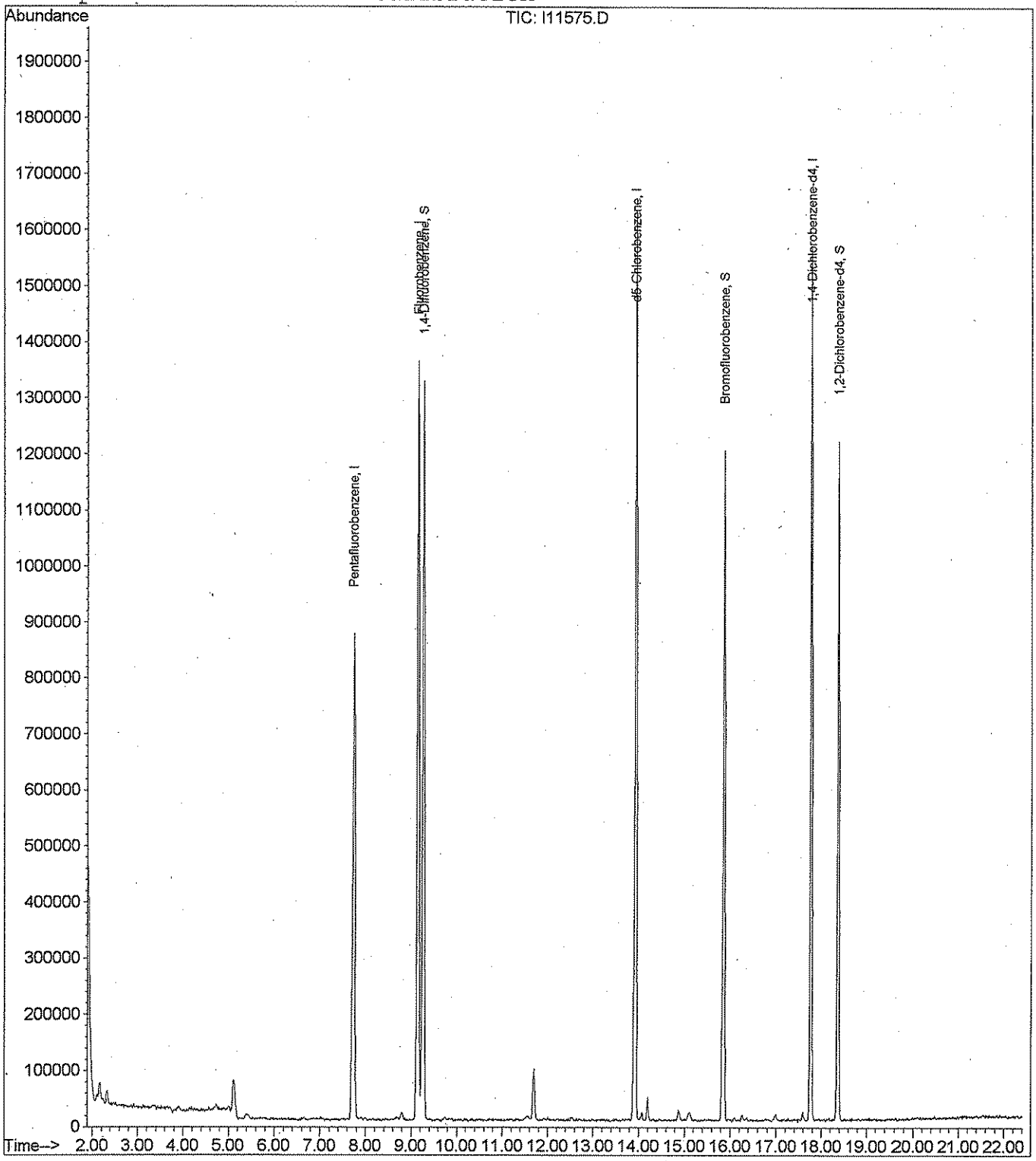
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11575.D Vial: 32
Acq On : 6 Jun 2003 3:29 am Operator: JMR
Sample : 49794-33 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 3:51 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW03-0603-03-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-34
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 101 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

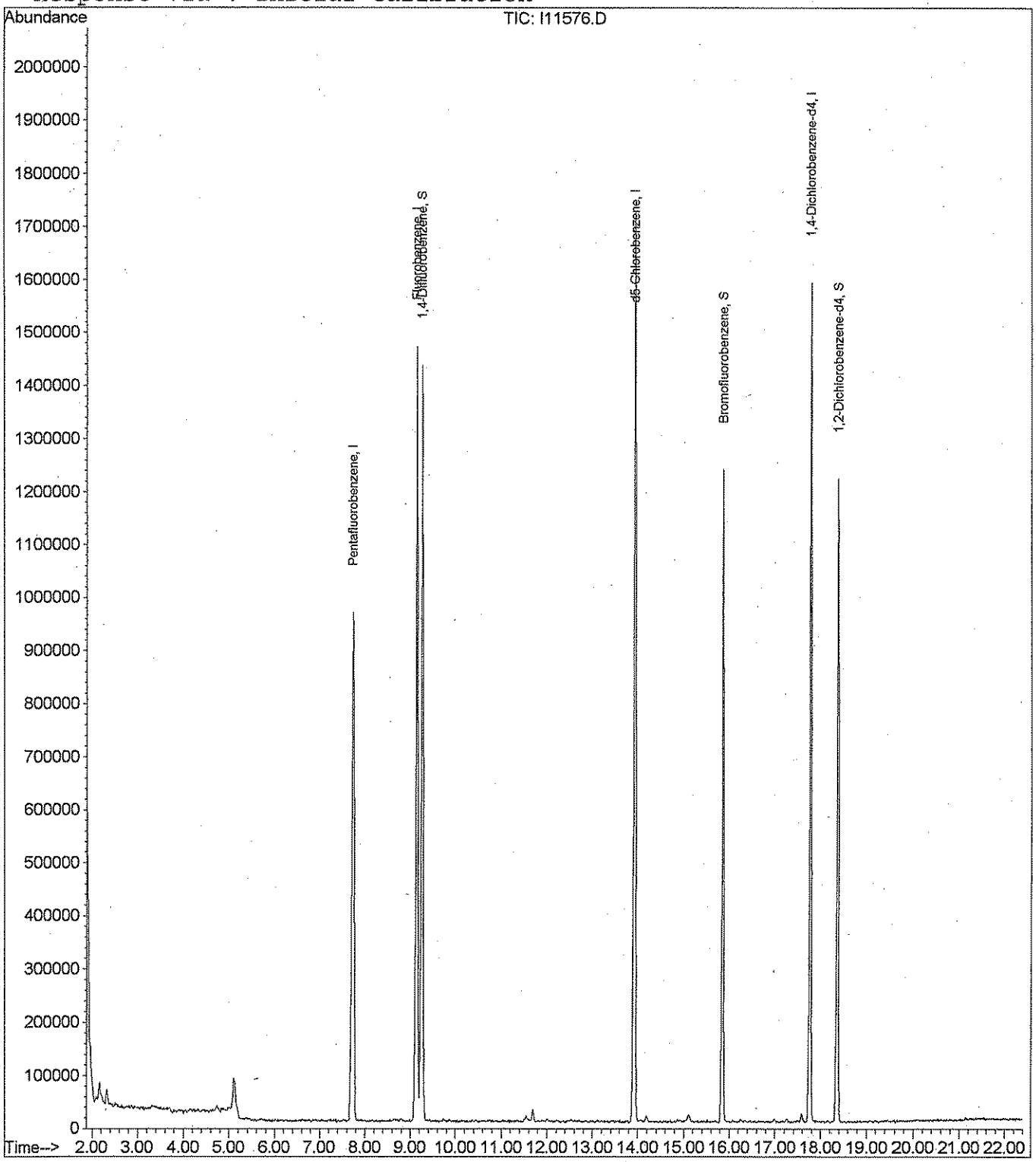
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-i\I11576.D Vial: 33
Acq On : 6 Jun 2003 4:04 am Operator: JMR
Sample : 49794-34 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 4:27 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW13-0603-02-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-35
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | **0.26 J** |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 105 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

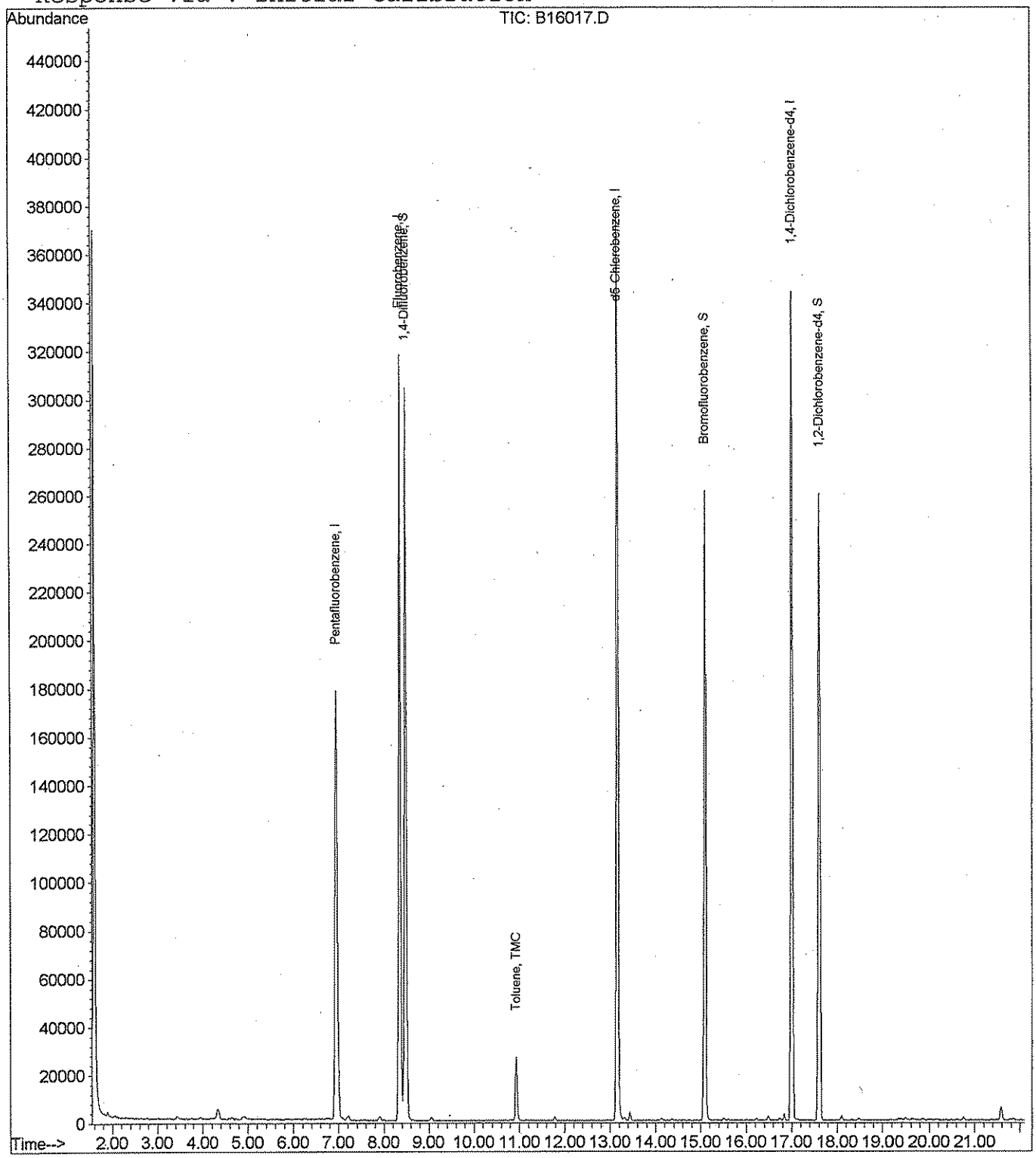
NH 524 full

Authorized signature Melissa A Kalb

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16017.D Vial: 24
Acq On : 6 Jun 2003 12:36 am Operator: JR
Sample : 49794-35 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 0:58 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW38-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-36
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | **0.36 J** |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 104 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

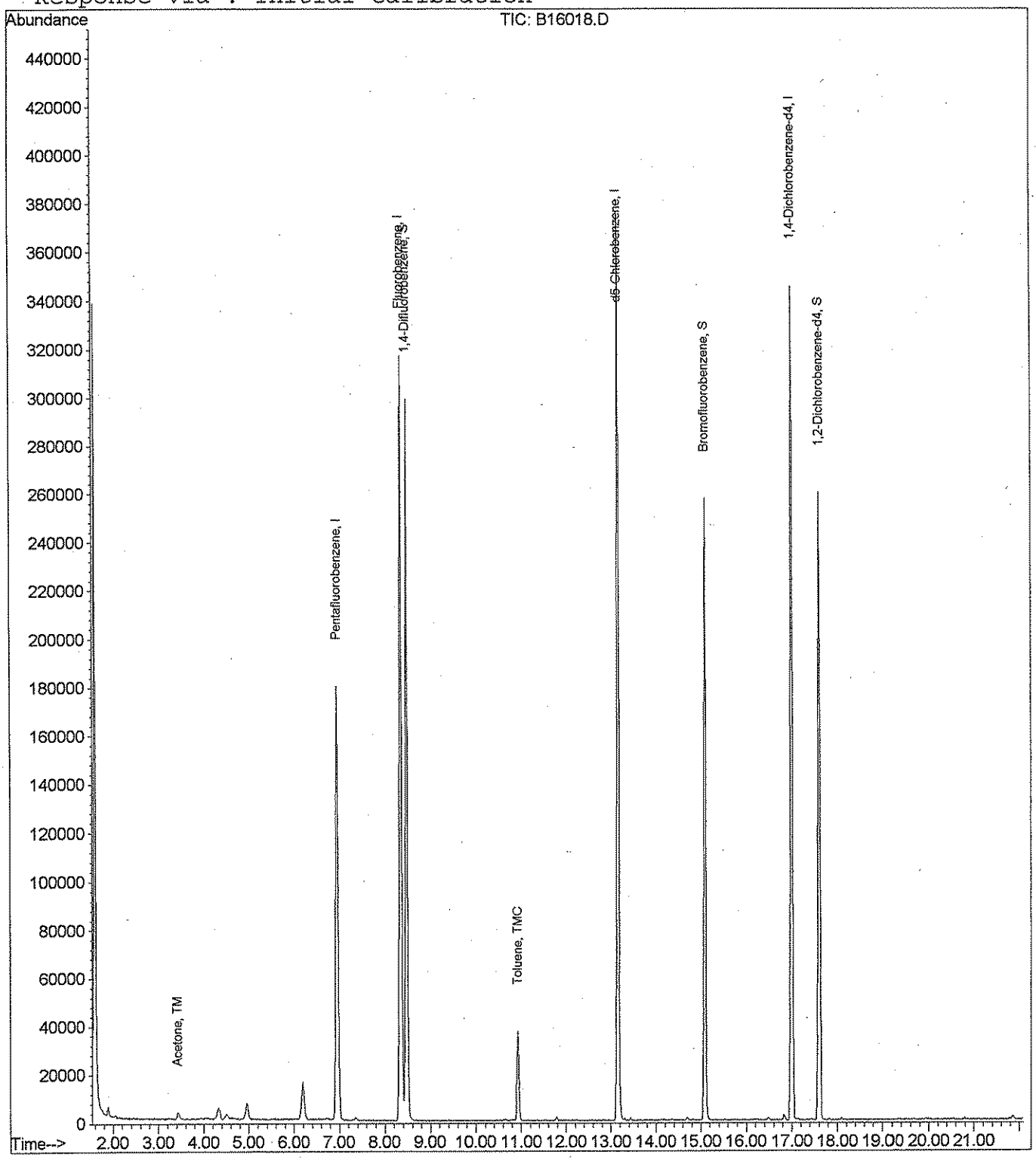
NH 524 full

Authorized signature Melissa G Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16018.D Vial: 25
Acq On : 6 Jun 2003 1:16 am Operator: JR
Sample : 49794-36 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 1:38 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration





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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW15-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-37
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | **15** |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 % | Bromofluorobenzene | 106 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

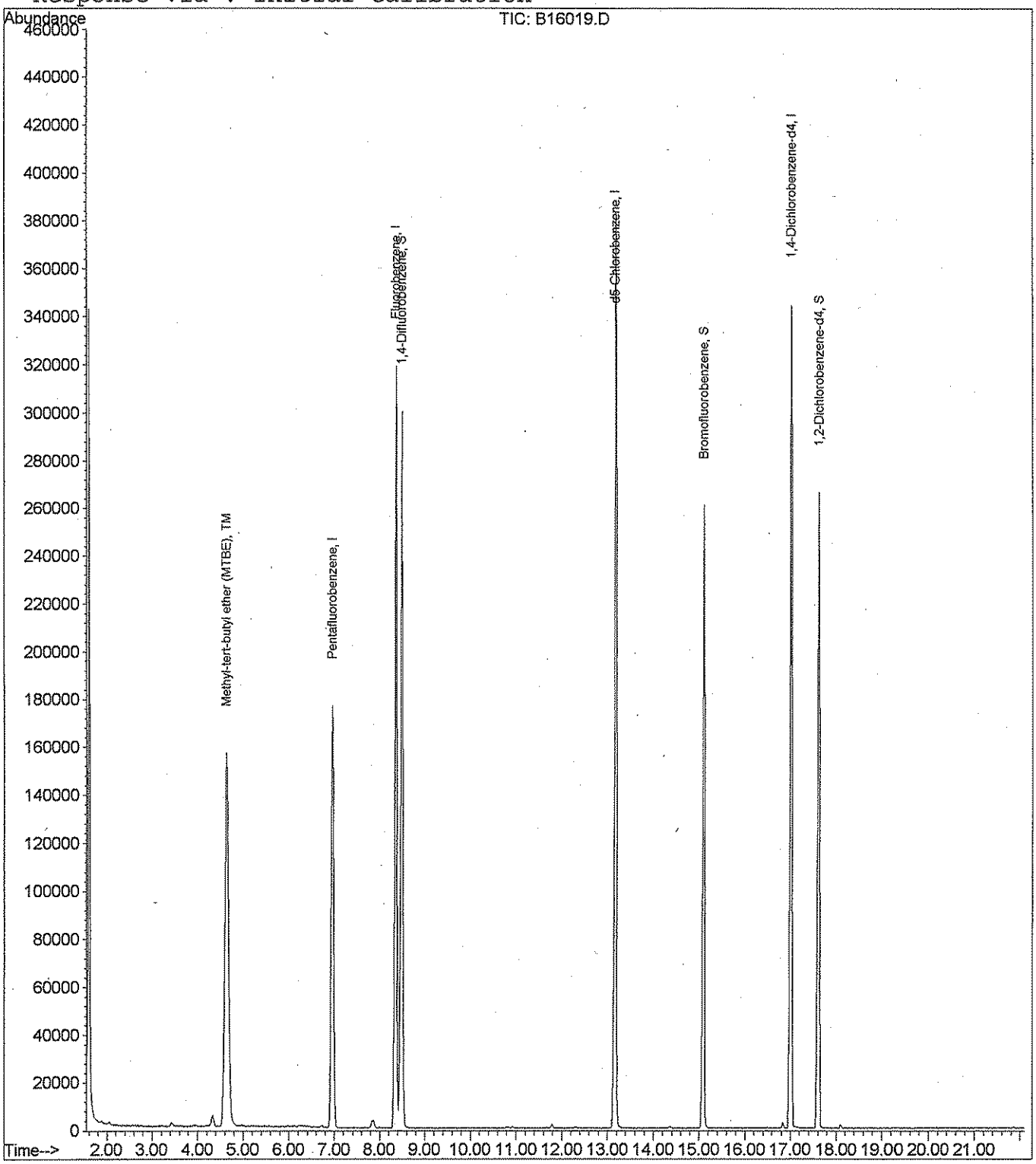
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16019.D Vial: 26
Acq On : 6 Jun 2003 1:56 am Operator: JR
Sample : 49794-37 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 2:19 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW16-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-38
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 110 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

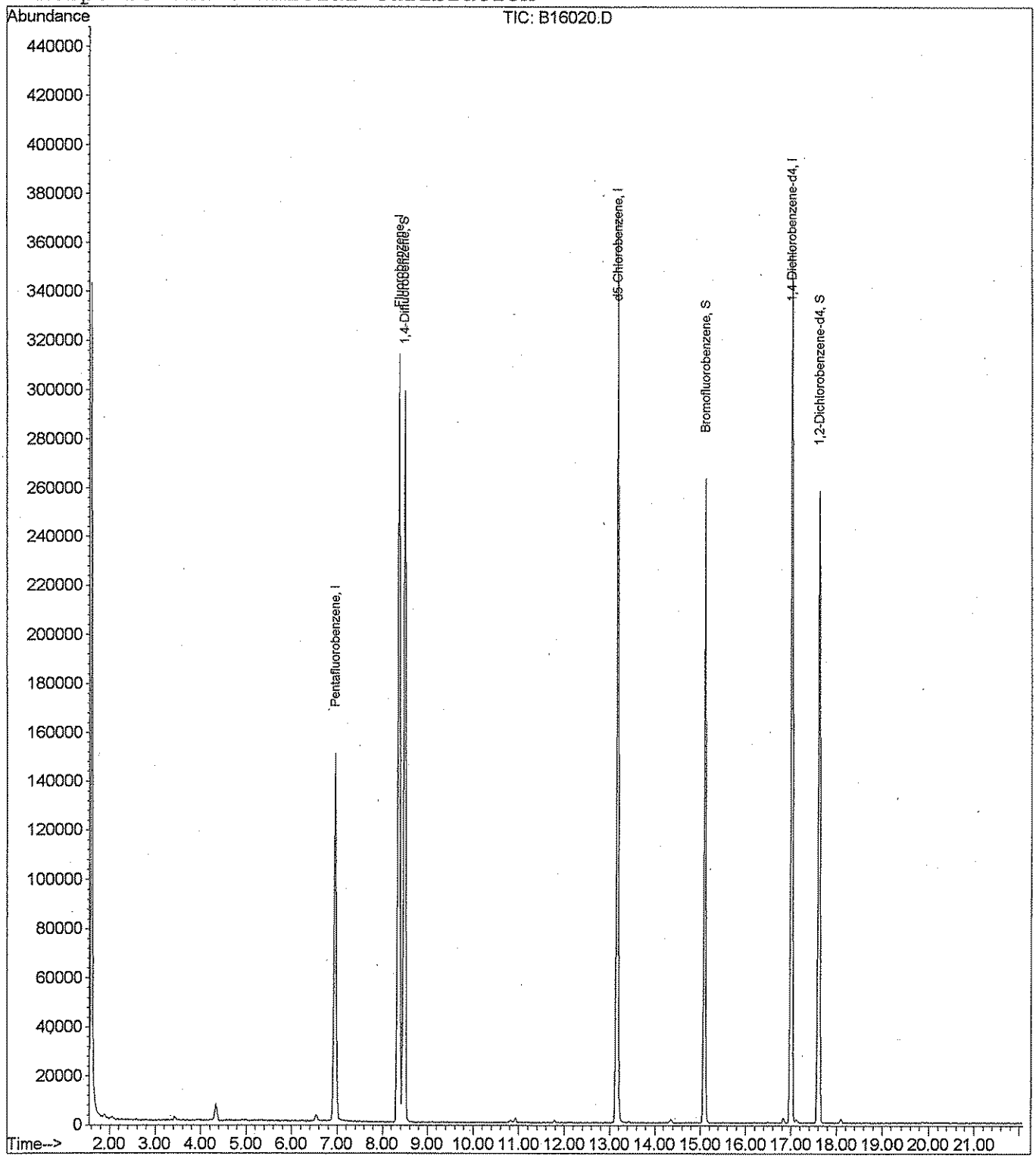
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16020.D Vial: 27
Acq On : 6 Jun 2003 2:37 am Operator: JR
Sample : 49794-38 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 2:59 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW17-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-39
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

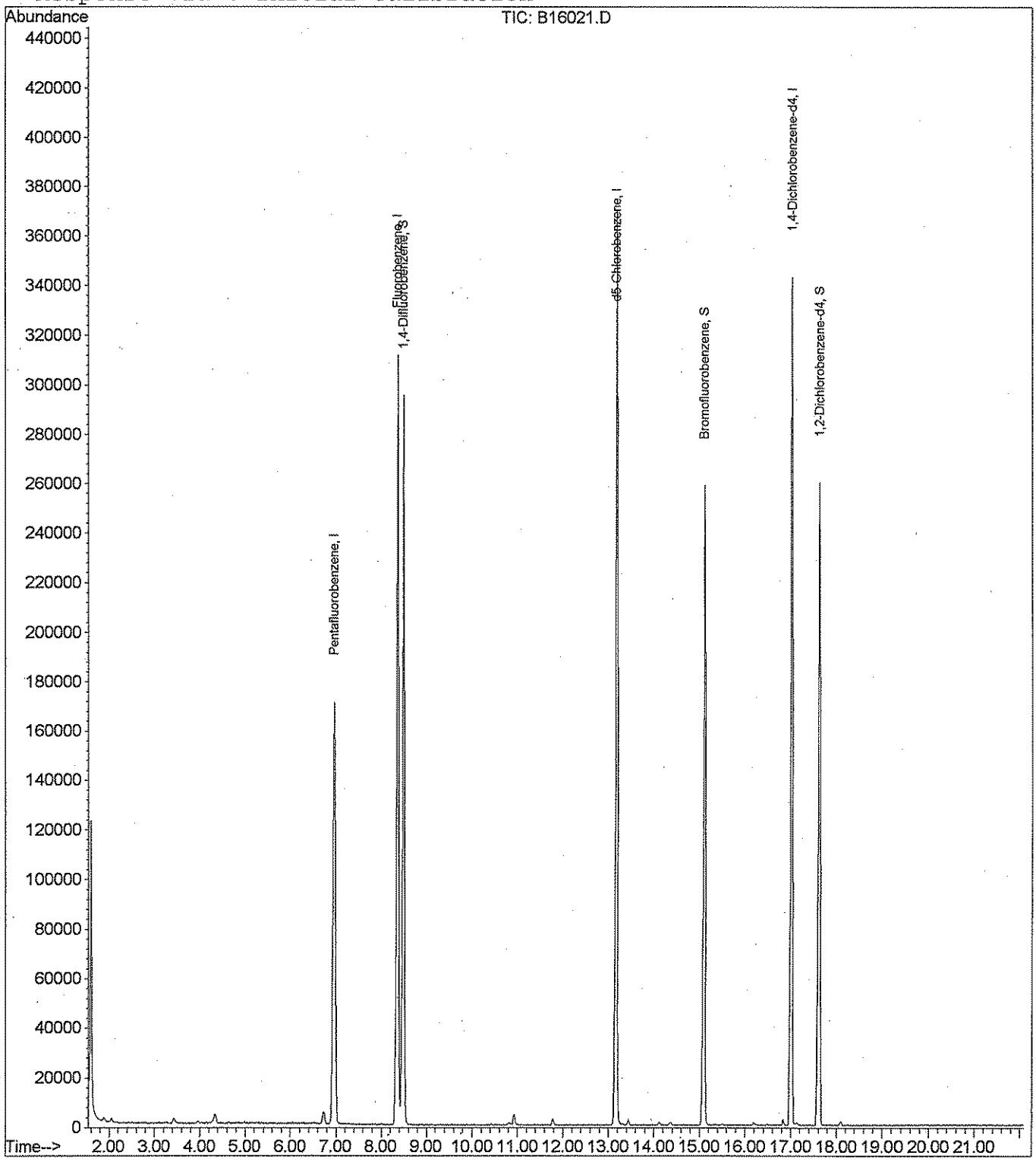
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16021.D Vial: 28
Acq On : 6 Jun 2003 3:17 am Operator: JR
Sample : 49794-39 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 3:40 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW19-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-40
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

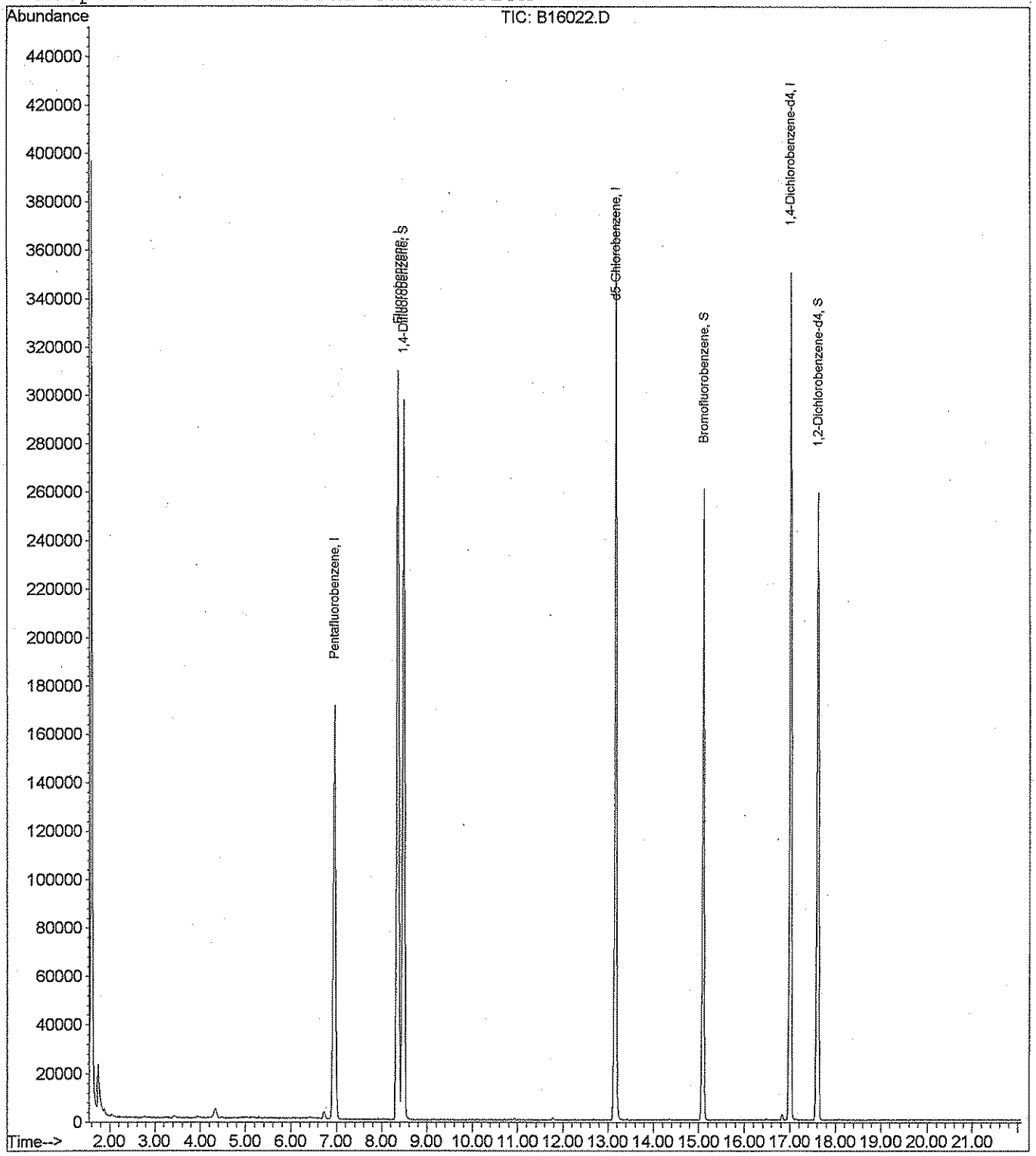
NH 524 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16022.D Vial: 29
Acq On : 6 Jun 2003 3:58 am Operator: JR
Sample : 49794-40 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 4:20 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration





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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW20-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-41
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | **0.38 J** | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 99 % | Bromofluorobenzene | 105 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

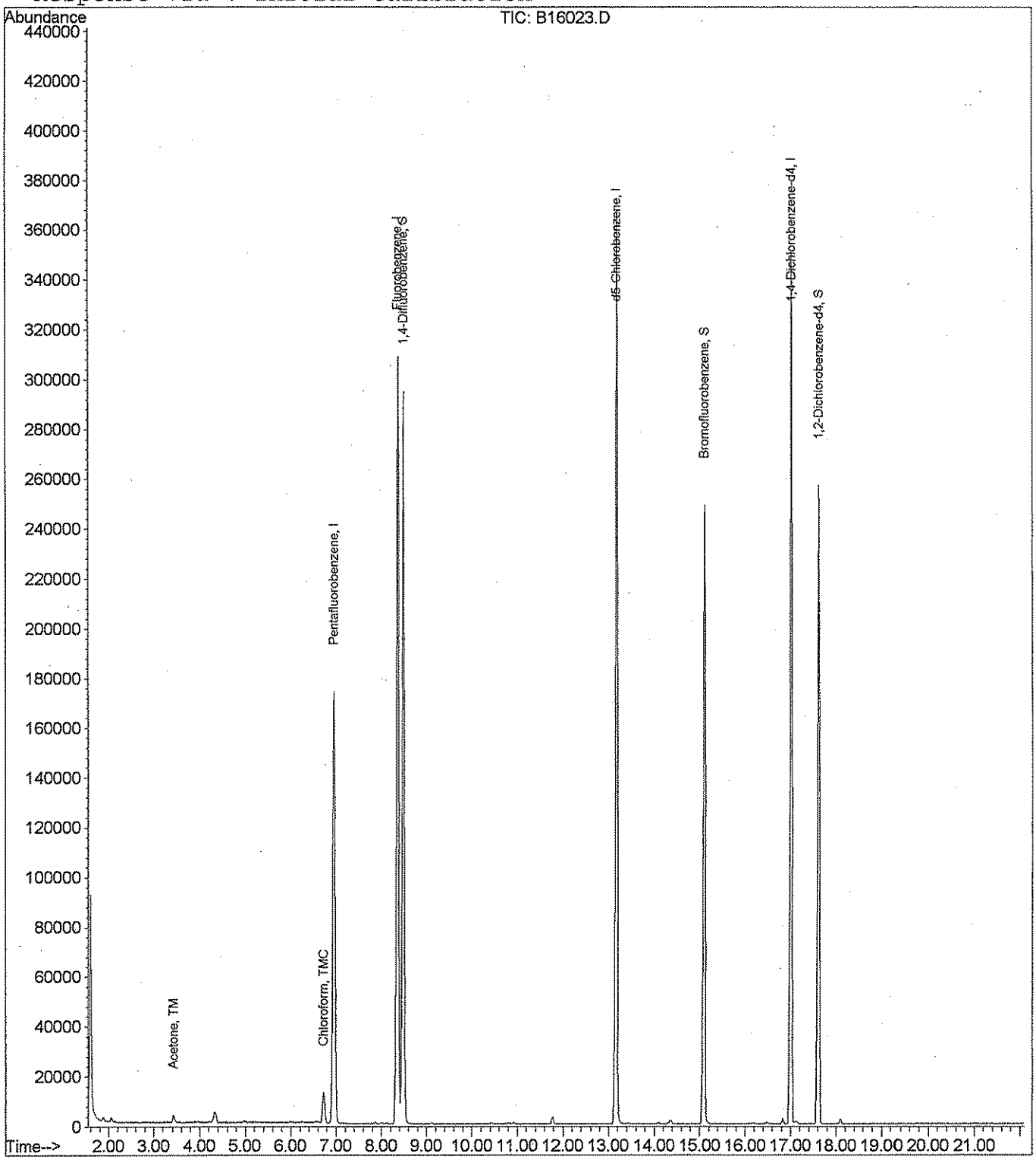
NH 524 full

Authorized signature Melissa A Valli

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16023.D Vial: 30
Acq On : 6 Jun 2003 4:38 am Operator: JR
Sample : 49794-41 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 5:01 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration






000103

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Ms. Kathleen Soukup
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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW21-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-42
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | **17 E** |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 109 % | Bromofluorobenzene | 107 % | 1,2-Dichlorobenzene-d4 | 103 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

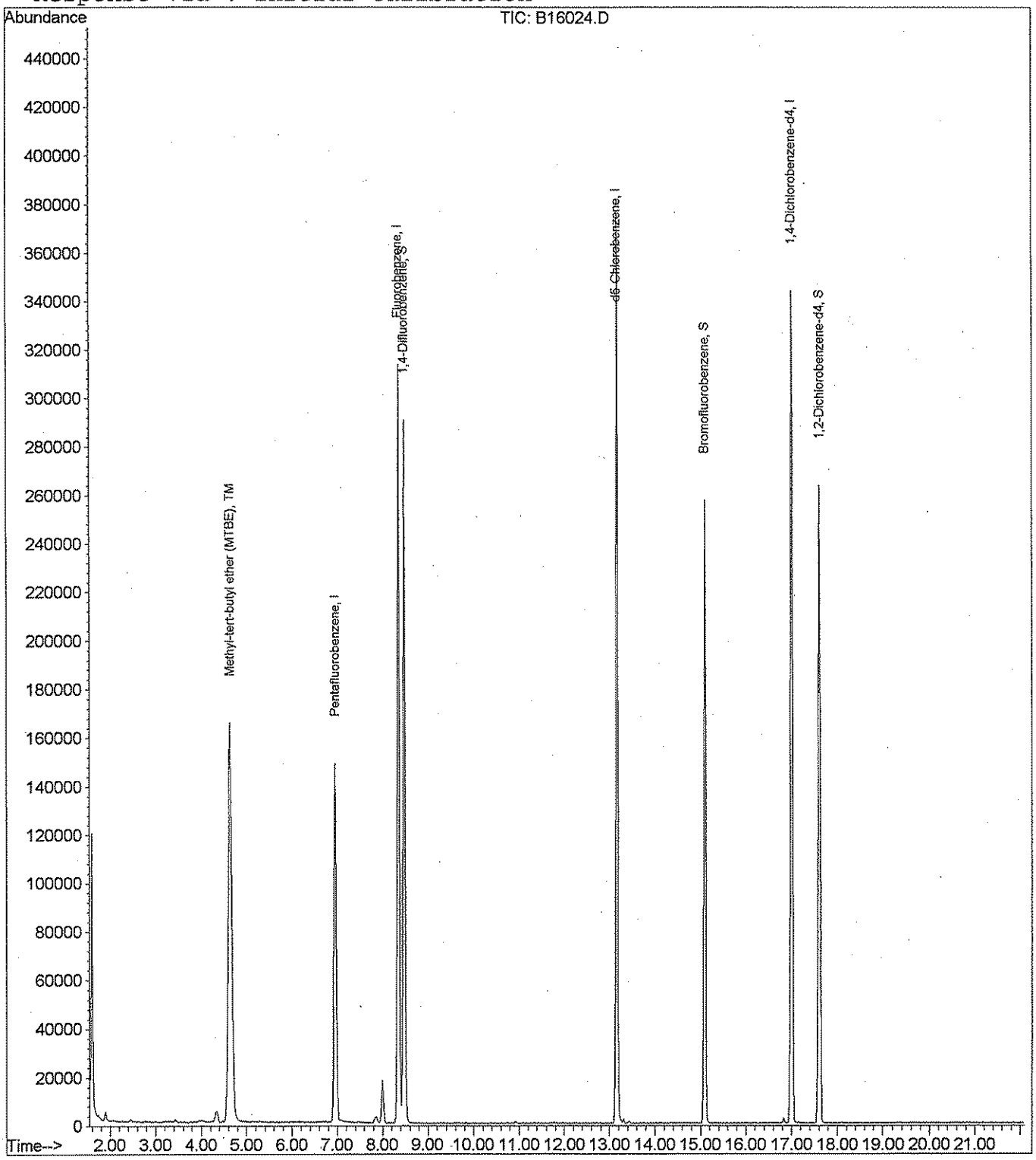
NH 524 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B16024.D Vial: 31
Acq On : 6 Jun 2003 5:19 am Operator: JR
Sample : 49794-42 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 6 5:41 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration



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Manchester NH 03101-1501

June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW21-0603-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49794-42 DL
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 5.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 3 | U | 1,3-Dichloropropane | 3 | U |
| Bromobenzene | 3 | U | cis-1,3-Dichloropropene | 3 | U |
| Bromochloromethane | 3 | U | trans-1,3-Dichloropropene | 3 | U |
| Bromodichloromethane | 3 | U | 2,2-Dichloropropane | 3 | U |
| Bromoform | 3 | U | 1,1-Dichloropropene | 3 | U |
| Bromomethane | 3 | U | Ethylbenzene | 3 | U |
| n-butylbenzene | 3 | U | Hexachlorobutadiene | 3 | U |
| sec-butylbenzene | 3 | U | Isopropylbenzene | 3 | U |
| tert-butylbenzene | 3 | U | p-isopropyltoluene | 3 | U |
| Carbon Tetrachloride | 3 | U | Methylene Chloride | 3 | U |
| Chlorobenzene | 3 | U | Methyl-tert-butyl ether | 3 | **13** |
| Chloroethane | 3 | U | Naphthalene | 3 | U |
| Chloroform | 3 | U | n-Propylbenzene | 3 | U |
| Chloromethane | 3 | U | Styrene | 3 | U |
| 2-Chlorotoluene | 3 | U | 1,1,1,2-Tetrachloroethane | 3 | U |
| 4-Chlorotoluene | 3 | U | 1,1,2,2-Tetrachloroethane | 3 | U |
| Dibromochloromethane | 3 | U | Tetrachloroethene | 3 | U |
| 1,2-Dibromo-3-chloropropane | 3 | U | Toluene | 3 | U |
| 1,2-Dibromoethane | 3 | U | 1,2,3-Trichlorobenzene | 3 | U |
| Dibromomethane | 3 | U | 1,2,4-Trichlorobenzene | 3 | U |
| 1,2-Dichlorobenzene | 3 | U | 1,1,1-Trichloroethane | 3 | U |
| 1,3-Dichlorobenzene | 3 | U | 1,1,2-Trichloroethane | 3 | U |
| 1,4-Dichlorobenzene | 3 | U | Trichloroethene | 3 | U |
| Dichlorodifluoromethane | 3 | U | Trichlorofluoromethane | 3 | U |
| 1,1-Dichloroethane | 3 | U | 1,2,3-Trichloropropane | 3 | U |
| 1,2-Dichloroethane | 3 | U | 1,2,4-Trimethylbenzene | 3 | U |
| 1,1-Dichloroethene | 3 | U | 1,3,5-Trimethylbenzene | 3 | U |
| cis-1,2-Dichloroethene | 3 | U | Vinyl Chloride | 0.5 | U |
| trans-1,2-Dichloroethene | 3 | U | o-Xylene | 3 | U |
| 1,2-Dichloropropane | 3 | U | m,p-Xylene | 3 | U |
| Acetone | 25 | U | Diethyl ether | 3 | U |
| Carbon Disulfide | 3 | U | 2-Hexanone | 25 | U |
| Tetrahydrofuran | 13 | U | Methyl isobutyl ketone | 25 | U |
| Methyl ethyl ketone | 25 | U | Di-isopropyl ether | 3 | U |
| t-Butyl alcohol | 50 | U | Ethyl t-butyl ether | 3 | U |
| t-Amyl methyl ether | 3 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 105 % | Bromofluorobenzene | 104 % | 1,2-Dichlorobenzene-d4 | 91 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

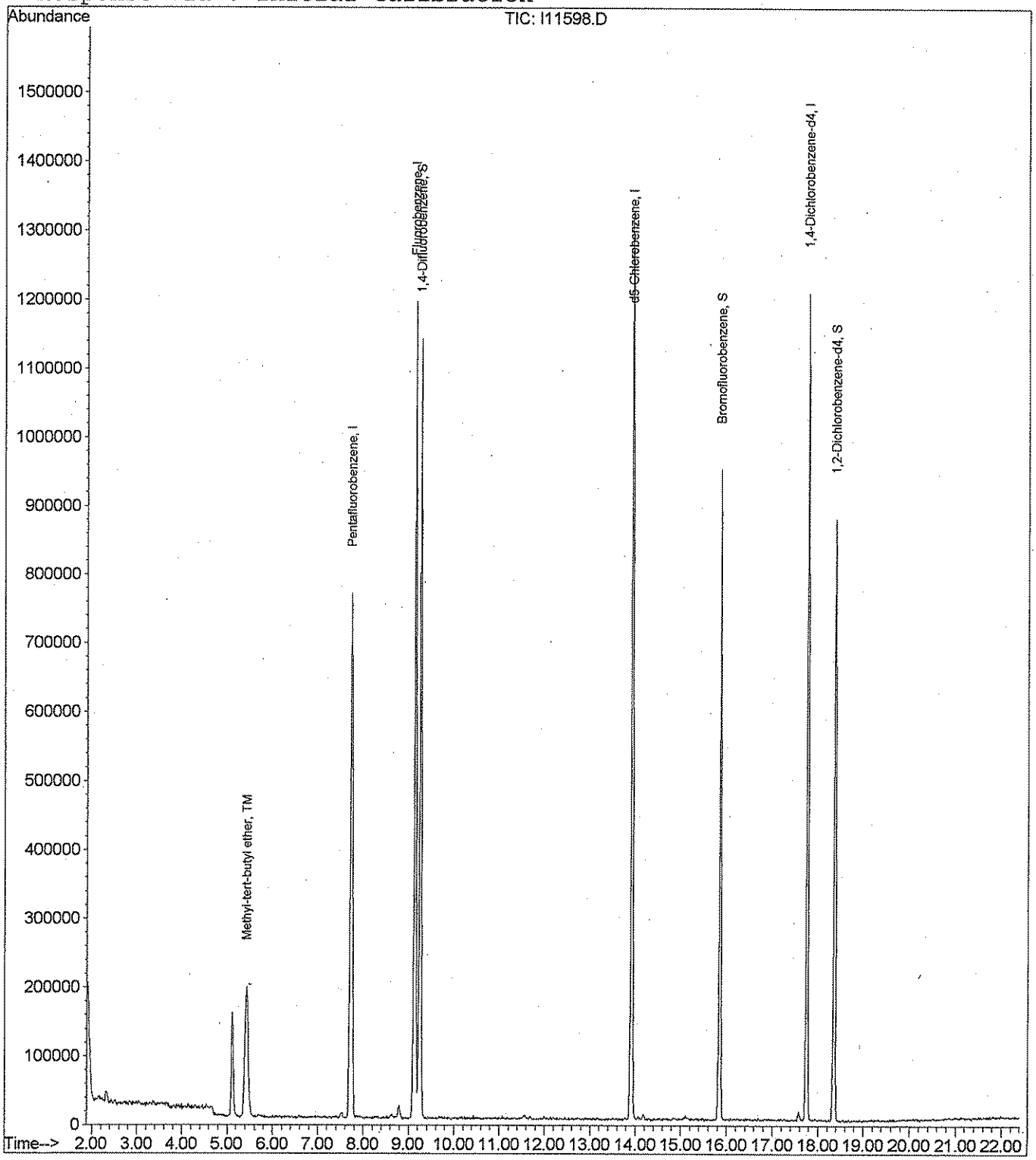
NH 524 full

Authorized signature Melissa A Mullen

Quantitation Report

Data File : C:\HPCHEM\1\data\060603-i\I11598.D Vial: 18
Acq On : 7 Jun 2003 2:41 am Operator: JMR
Sample : 49794-42,DL Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 7 3:04 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Initial Calibration






000107

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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TB060203-01

**SAMPLE DATA**

**Lab Sample ID:** 49794-43
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/05/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether (DIPE) | 0.5 | U |
| t-Butyl alcohol (TBA) | 10 | U | Ethyl t-butyl ether (ETBE) | 0.5 | U |
| t-Amyl methyl ether (TAME) | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 98 % | 1,2-Dichlorobenzene-d4 | 95 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

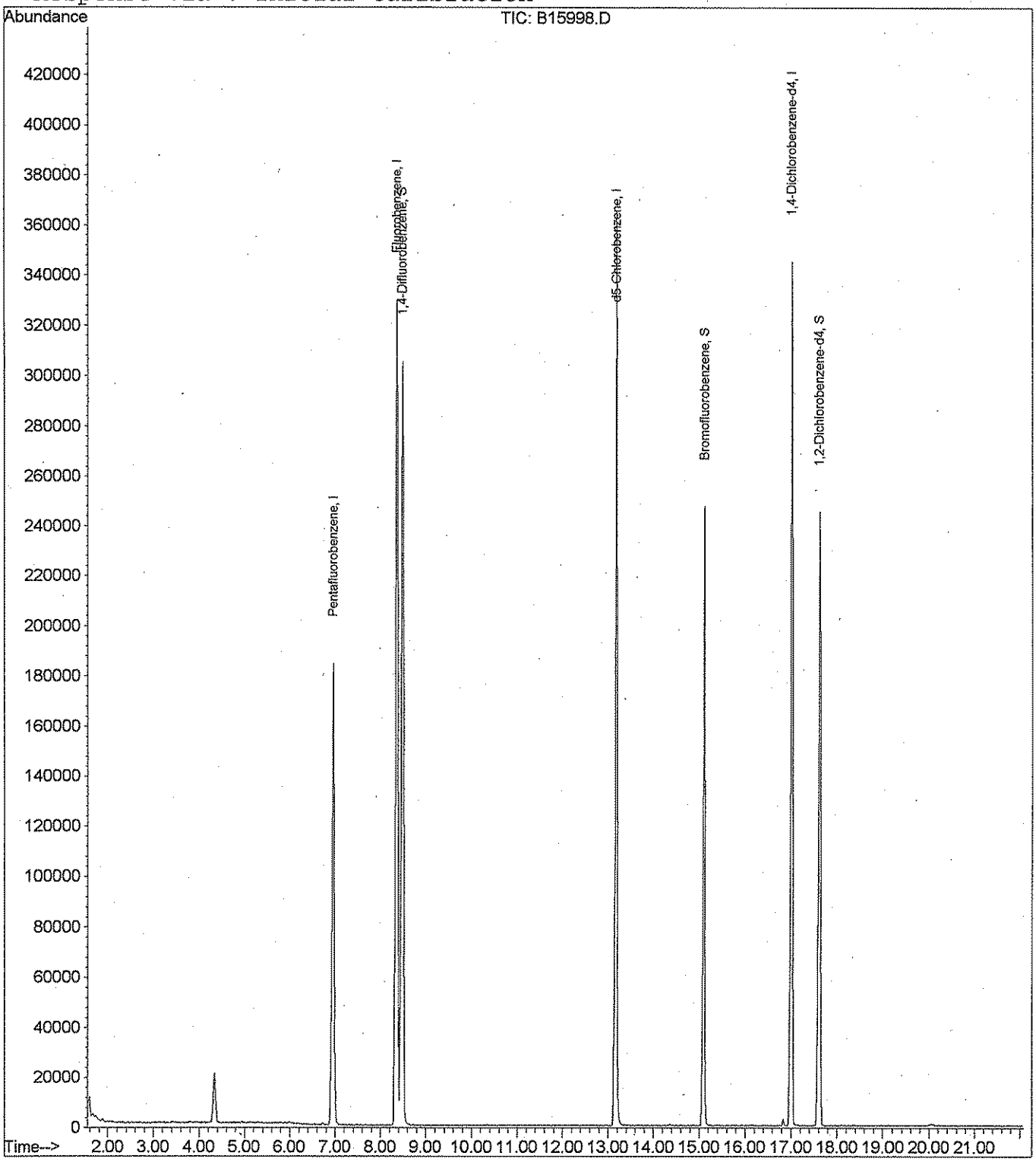
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\060503-B\B15998.D Vial: 5
Acq On : 5 Jun 2003 10:49 am Operator: JR
Sample : 49794-43 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 5 11:11 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration






000109

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15940T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 5/28/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1649

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 110% | 81% | 85% | 0 |
| 02 | 0.5PPB STD | 111% | 83% | 87% | 0 |
| 03 | 1.2PPB STD | 112% | 83% | 86% | 0 |
| 04 | 4.8PPB STD | 110% | 84% | 88% | 0 |
| 05 | 8PPB STD | 111% | 84% | 88% | 0 |
| 06 | 16PPB STD | 110% | 85% | 88% | 0 |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
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| 17 | | | | | |
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| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15995T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L506053B | 99% | 100% | 98% | 0 |
| 02 | B506053B | 98% | 100% | 97% | 0 |
| 03 | 49794-43 | 100% | 98% | 95% | 0 |
| 04 | 49794-10 | 99% | 98% | 97% | 0 |
| 05 | 49794-10,MS | 100% | 100% | 99% | 0 |
| 06 | 49794-10,MSD | 101% | 101% | 99% | 0 |
| 07 | 49794-14 | 99% | 102% | 99% | 0 |
| 08 | 49794-15 | 99% | 102% | 101% | 0 |
| 09 | 49794-16 | 99% | 103% | 100% | 0 |
| 10 | 49794-17 | 98% | 104% | 100% | 0 |
| 11 | 49794-20 | 99% | 103% | 100% | 0 |
| 12 | 49794-21 | 99% | 104% | 102% | 0 |
| 13 | 49794-22 | 100% | 105% | 102% | 0 |
| 14 | ZZZZZ | 97% | 113% | 106% | 0 |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2154

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L506053B2 | 98% | 105% | 103% | 0 |
| 02 | L506053B3 | 98% | 106% | 103% | 0 |
| 03 | B506053B2 | 98% | 103% | 102% | 0 |
| 04 | 49794-35 | 99% | 105% | 103% | 0 |
| 05 | 49794-36 | 98% | 104% | 103% | 0 |
| 06 | 49794-37 | 101% | 106% | 103% | 0 |
| 07 | 49794-38 | 110% | 107% | 103% | 0 |
| 08 | 49794-39 | 99% | 107% | 103% | 0 |
| 09 | 49794-40 | 100% | 107% | 104% | 0 |
| 10 | 49794-41 | 99% | 105% | 103% | 0 |
| 11 | 49794-42 | 109% | 107% | 103% | 0 |
| 12 | ZZZZZ | 107% | 107% | 104% | 0 |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: B15995T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.1 | 89 | | 70-130 |
| Chloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.5 | 126 | | 70-130 |
| Bromomethane | 1.2 | 1.1 | 89 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 4.8 | 81 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Acetone | 1.2 | 1.6 | 129 | | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 103 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.2 | 101 | | 70-130 |
| Methylene Chloride | 1.2 | 1.2 | 96 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.4 | 99 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.2 | 99 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.1 | 92 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.3 | 106 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.1 | 89 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.1 | 93 | | 70-130 |
| Chloroform | 1.2 | 1.2 | 102 | | 70-130 |
| Bromochloromethane | 1.2 | 1.2 | 100 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.3 | 106 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 99 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.2 | 102 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.2 | 102 | | 70-130 |
| Benzene | 1.2 | 1.2 | 101 | | 70-130 |
| Trichloroethene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.2 | 103 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.2 | 99 | | 70-130 |
| Dibromomethane | 1.2 | 1.2 | 98 | | 70-130 |
| 2-Hexanone | 1.2 | 1.0 | 81 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.0 | 82 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.2 | 101 | | 70-130 |
| Toluene | 1.2 | 1.2 | 100 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.2 | 102 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.2 | 99 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.1 | 90 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.2 | 98 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 | Quote #: | SDG: 49794

BFB File ID: B15995T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: B | BFB Injection Date: 6/5/03

GC Column: RTX-502.2 | ID: 0.25 (mm) | BFB Injection Time: 0848

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.2 | 99 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| Ethylbenzene | 1.2 | 1.2 | 100 | | 70-130 |
| m,p-Xylene | 2.4 | 2.4 | 100 | | 70-130 |
| o-Xylene | 1.2 | 1.2 | 99 | | 70-130 |
| Styrene | 1.2 | 1.2 | 98 | | 70-130 |
| Bromoform | 1.2 | 1.0 | 84 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.1 | 93 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.1 | 95 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.1 | 93 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| Bromobenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.2 | 101 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.1 | 95 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.2 | 100 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.2 | 99 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.1 | 95 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.2 | 97 | | 70-130 |
| n-butylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 97 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 108 | | 70-130 |
| Naphthalene | 1.2 | 1.1 | 88 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.1 | 95 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: B15995T Site ID: Buck Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-10

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | U | 4.7 | 97 | | 4.7 | 97 | | 0 | | 15 | 70-130 |
| Chloromethane | 4.8 | U | 5.7 | 118 | | 5.6 | 117 | | 0 | | 15 | 70-130 |
| Vinyl Chloride | 4.8 | U | 5.6 | 117 | | 5.5 | 114 | | 3 | | 15 | 70-130 |
| Bromomethane | 4.8 | U | 4.7 | 98 | | 5.0 | 105 | | 7 | | 15 | 70-130 |
| Chloroethane | 4.8 | U | 5.4 | 113 | | 5.4 | 111 | | 1 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 24.0 | U | 20.9 | 87 | | 22.6 | 94 | | 8 | | 15 | 70-130 |
| Trichlorofluoromethane | 4.8 | U | 5.4 | 112 | | 5.3 | 111 | | 1 | | 15 | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | U | 5.6 | 116 | | 5.6 | 116 | | 0 | | 15 | 70-130 |
| Acetone | 4.8 | U | 6.1 | 128 | | 5.3 | 111 | | 14 | | 15 | 70-130 |
| 1,1-Dichloroethene | 4.8 | U | 5.5 | 114 | | 5.5 | 114 | | 0 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 4.8 | U | 4.82 | 100 | | 4.8 | 100 | | 0 | | 15 | 70-130 |
| Methylene Chloride | 4.8 | U | 3.9 | 76 | | 3.8 | 74 | | 3 | | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 9.6 | U | 9.3 | 97 | | 9.3 | 97 | | 1 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 4.8 | U | 5.4 | 112 | | 5.4 | 112 | | 0 | | 15 | 70-130 |
| 1,1-Dichloroethane | 4.8 | U | 5.2 | 109 | | 5.2 | 109 | | 0 | | 15 | 70-130 |
| Methyl ethyl ketone | 4.8 | U | 3.9 | 80 | | 5.6 | 116 | | 36 | * | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 4.8 | U | 4.5 | 93 | | 4.7 | 99 | | 6 | | 15 | 70-130 |
| 2,2-Dichloropropane | 4.8 | U | 5.7 | 118 | | 6.7 | 139 | * | 17 | * | 15 | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | U | 5.6 | 116 | | 6.1 | 128 | | 10 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 4.8 | U | 4.6 | 96 | | 4.8 | 99 | | 3 | | 15 | 70-130 |
| Chloroform | 4.8 | U | 5.4 | 112 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Bromochloromethane | 4.8 | U | 5.0 | 105 | | 5.2 | 109 | | 4 | | 15 | 70-130 |
| Tetrahydrofuran | 4.8 | U | 5.7 | 118 | | 6.0 | 126 | | 6 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | U | 5.4 | 113 | | 5.6 | 117 | | 3 | | 15 | 70-130 |
| 1,1-Dichloropropene | 4.8 | U | 5.5 | 114 | | 5.6 | 118 | | 3 | | 15 | 70-130 |
| Carbon Tetrachloride | 4.8 | U | 5.6 | 117 | | 5.8 | 120 | | 3 | | 15 | 70-130 |
| 1,2-Dichloroethane | 4.8 | U | 4.9 | 103 | | 5.2 | 108 | | 5 | | 15 | 70-130 |
| Benzene | 4.8 | U | 5.1 | 107 | | 5.3 | 110 | | 2 | | 15 | 70-130 |
| Trichloroethene | 4.8 | U | 5.8 | 121 | | 6.0 | 124 | | 3 | | 15 | 70-130 |
| 1,2-Dichloropropane | 4.8 | U | 5.2 | 108 | | 5.3 | 111 | | 3 | | 15 | 70-130 |
| Bromodichloromethane | 4.8 | U | 5.3 | 109 | | 5.4 | 113 | | 3 | | 15 | 70-130 |
| Dibromomethane | 4.8 | U | 4.9 | 101 | | 5.0 | 104 | | 3 | | 15 | 70-130 |
| 2-Hexanone | 4.8 | U | 4.3 | 89 | | 4.4 | 92 | | 3 | | 15 | 70-130 |
| Methyl isobutyl ketone | 4.8 | U | 4.3 | 89 | | 4.5 | 93 | | 4 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | U | 5.4 | 112 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Toluene | 4.8 | U | 5.3 | 109 | | 5.3 | 111 | | 1 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | U | 5.3 | 111 | | 5.5 | 115 | | 3 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | U | 5.0 | 105 | | 5.1 | 106 | | 1 | | 15 | 70-130 |
| 1,3-Dichloropropane | 4.8 | U | 4.9 | 102 | | 5.0 | 105 | | 3 | | 15 | 70-130 |
| Tetrachloroethene | 4.8 | U | 5.6 | 116 | | 5.7 | 118 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: B15995T Site ID: Buck Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-10

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 4.8 | U | 5.0 | 104 | | 5.2 | 108 | | 4 | | 15 | 70-130 |
| 1,2-Dibromoethane | 4.8 | U | 5.0 | 105 | | 5.2 | 108 | | 3 | | 15 | 70-130 |
| Chlorobenzene | 4.8 | U | 5.1 | 106 | | 5.2 | 107 | | 1 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | U | 5.4 | 112 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Ethylbenzene | 4.8 | U | 5.2 | 108 | | 5.3 | 110 | | 1 | | 15 | 70-130 |
| m,p-Xylene | 9.6 | U | 10.4 | 108 | | 10.4 | 108 | | 0 | | 15 | 70-130 |
| o-Xylene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| Styrene | 4.8 | U | 5.1 | 107 | | 5.2 | 108 | | 1 | | 15 | 70-130 |
| Bromoform | 4.8 | U | 4.9 | 102 | | 5.1 | 107 | | 5 | | 15 | 70-130 |
| Isopropylbenzene | 4.8 | U | 5.0 | 104 | | 5.1 | 106 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | U | 4.6 | 95 | | 4.7 | 97 | | 2 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | U | 4.5 | 94 | | 4.6 | 96 | | 3 | | 15 | 70-130 |
| n-Propylbenzene | 4.8 | U | 5.2 | 109 | | 5.3 | 109 | | 1 | | 15 | 70-130 |
| Bromobenzene | 4.8 | U | 4.9 | 103 | | 5.1 | 106 | | 3 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| 2-Chlorotoluene | 4.8 | U | 5.2 | 109 | | 5.1 | 107 | | 2 | | 15 | 70-130 |
| 4-Chlorotoluene | 4.8 | U | 4.9 | 103 | | 5.2 | 108 | | 5 | | 15 | 70-130 |
| tert-butylbenzene | 4.8 | U | 5.3 | 110 | | 5.5 | 114 | | 3 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | U | 5.2 | 109 | | 5.3 | 111 | | 2 | | 15 | 70-130 |
| sec-butylbenzene | 4.8 | U | 5.4 | 113 | | 5.5 | 114 | | 1 | | 15 | 70-130 |
| p-isopropyltoluene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | U | 5.1 | 106 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | U | 5.0 | 103 | | 5.0 | 104 | | 1 | | 15 | 70-130 |
| n-butylbenzene | 4.8 | U | 5.2 | 109 | | 5.3 | 110 | | 1 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | U | 4.9 | 102 | | 5.0 | 105 | | 2 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | U | 5.1 | 105 | | 4.9 | 102 | | 3 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | U | 5.0 | 103 | | 5.1 | 107 | | 4 | | 15 | 70-130 |
| Hexachlorobutadiene | 4.8 | U | 5.9 | 123 | | 6.1 | 127 | | 3 | | 15 | 70-130 |
| Naphthalene | 4.8 | U | 4.6 | 96 | | 4.8 | 100 | | 4 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 4.7 | U | 4.8 | 104 | | 5.1 | 109 | | 4 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 2 out of 70 outside limits
Spike Recovery: 1 out of 140 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2154

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 80 | | 70-130 |
| Chloromethane | 1.2 | 1.3 | 104 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.4 | 119 | | 70-130 |
| Bromomethane | 1.2 | 0.9 | 78 | | 70-130 |
| Chloroethane | 1.2 | 1.1 | 90 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.1 | 102 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.1 | 95 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 98 | | 70-130 |
| Acetone | 1.2 | 1.9 | 158 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 98 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.2 | 101 | | 70-130 |
| Methylene Chloride | 1.2 | 1.2 | 98 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.5 | 106 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.2 | 101 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.3 | 109 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.2 | 97 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 0.9 | 78 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.1 | 90 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.2 | 101 | | 70-130 |
| Chloroform | 1.2 | 1.4 | 113 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 110 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.6 | 133 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 100 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.2 | 100 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 110 | | 70-130 |
| Benzene | 1.2 | 1.2 | 102 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 114 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 110 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 107 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 110 | | 70-130 |
| 2-Hexanone | 1.2 | 1.2 | 98 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.1 | 95 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 107 | | 70-130 |
| Toluene | 1.2 | 1.3 | 106 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.3 | 109 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.3 | 111 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 100 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.3 | 110 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 | Quote #: | SDG: 49794

BFB File ID: B16013T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: B | BFB Injection Date: 6/5/03

GC Column: RTX-502.2 | ID: 0.25 (mm) | BFB Injection Time: 2154

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| Ethylbenzene | 1.2 | 1.2 | 99 | | 70-130 |
| m,p-Xylene | 2.4 | 2.4 | 100 | | 70-130 |
| o-Xylene | 1.2 | 1.2 | 102 | | 70-130 |
| Styrene | 1.2 | 1.2 | 103 | | 70-130 |
| Bromoform | 1.2 | 1.1 | 90 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.1 | 93 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.2 | 101 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| Bromobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.2 | 99 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.2 | 99 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.2 | 101 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.2 | 99 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.1 | 95 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.2 | 99 | | 70-130 |
| n-butylbenzene | 1.2 | 1.1 | 93 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.1 | 93 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 100 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.2 | 103 | | 70-130 |
| Naphthalene | 1.2 | 1.1 | 95 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.2 | 103 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2154

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 79 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 103 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.4 | 114 | | 70-130 |
| Bromomethane | 1.2 | 0.8 | 69 | * | 70-130 |
| Chloroethane | 1.2 | 1.1 | 93 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.5 | 108 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.1 | 92 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.1 | 94 | | 70-130 |
| Acetone | 1.2 | 2.0 | 163 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.1 | 95 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.2 | 101 | | 70-130 |
| Methylene Chloride | 1.2 | 1.3 | 105 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.6 | 108 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.2 | 99 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.2 | 99 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.3 | 106 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.2 | 98 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 0.9 | 73 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.1 | 88 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.3 | 105 | | 70-130 |
| Chloroform | 1.2 | 1.3 | 110 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 107 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.5 | 126 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 96 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Benzene | 1.2 | 1.2 | 99 | | 70-130 |
| Trichloroethene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 109 | | 70-130 |
| 2-Hexanone | 1.2 | 1.2 | 98 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 98 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 105 | | 70-130 |
| Toluene | 1.2 | 1.2 | 103 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 115 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.3 | 111 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 102 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.4 | 113 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2154

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053B3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.2 | 100 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.3 | 104 | | 70-130 |
| Ethylbenzene | 1.2 | 1.2 | 96 | | 70-130 |
| m,p-Xylene | 2.4 | 2.4 | 98 | | 70-130 |
| o-Xylene | 1.2 | 1.2 | 98 | | 70-130 |
| Styrene | 1.2 | 1.2 | 100 | | 70-130 |
| Bromoform | 1.2 | 1.2 | 96 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.1 | 90 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 105 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.1 | 94 | | 70-130 |
| Bromobenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.1 | 95 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.2 | 99 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.2 | 96 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.1 | 94 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.1 | 95 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.1 | 90 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.2 | 98 | | 70-130 |
| n-butylbenzene | 1.2 | 1.1 | 90 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 101 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.2 | 102 | | 70-130 |
| Naphthalene | 1.2 | 1.2 | 100 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.2 | 103 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 70 outside limits

Comments: _____

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4483 Exp: 6-12-03

**Voltage** 1875

**Threshold** 100

052803-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-052803-1-JR | | | | | | | |
| 1 | V5052803B | Blank | 25mL | | | B15939 | | |
| 2 | | BFB 25ng/mL V4483 | | ✓ | | 40 | T | |
| 3 | | 0.1 ppb 0.125mL V4477 V4479 | | ✓ | VC only | 41 | SI | |
| 4 | | 0.5 ppb 0.625mL | | ✓ | | 42 | SI | |
| 5 | | 1.2 ppb 1.5mL | | ✓ | | 43 | SI | |
| 6 | | 4.8 ppb 6mL | | ✓ | | 44 | SI | |
| 7 | | 8 ppb 10mL | | ✓ | | 45 | SI | |
| 8 | | 16 ppb 20mL | | ✓ | | 46 | SI | |
| 9 | | Blank | 0 | | | 47 | | |
| 10 | | | | | | | | |

5.29.03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4487 Exp: 6.12.03

**Voltage** 1835

**Threshold** 100

Sm 060503-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| W-B-060503-1-JR | | | | | | | | |
| 1 | V505283B | Blank | 25mL | | | B15994 | Sm | |
| 2 | | BFB 25ug/mL V4487 | | ✓ | | 95 | T | |
| 3 | Sm 6.5.03 | ~~L505~~ L506053B V4485 V4493 | | ✓ | All ok | 96 | Q | |
| 4 | | B506053B | | ✓ | | 97 | B | |
| 5 | | 49794-43 | 25mL | ✓ | | 98 | | <2 |
| 6 | | -10 | | ✓ | | 99 | | <2 |
| 7 | | -10, MS | | | RPD MEK @ 76% | B16000 | SP | <2 |
| 8 | | -10, MSD | | | 2.2DCP MSD @ 139% RPD 17% | 1 | SP | <2 |
| 9 | | -14 | | ✓ | | 2 | | <2 |
| 10 | | -15 | | ✓ | | 3 | | <2 |
| 11 | | -16 | | ✓ | | 4 | | <2 |
| 12 | | -17 | | ✓ | | 5 | | <2 |
| 13 | | -20 | | ✓ | | 6 | | <2 |
| 14 | | -21 | | ✓ | | 7 | | <2 |
| 15 | | -22 | | ✓ | | 8 | | <2 |
| 16 | | -23 | | RR | error-Runstopped | 9 | | |
| 17 | | -27 | | | | 10 | | |
| 18 | | -28 | | | | 11 | | |
| 19 | | -29 | | | | 12 | | |
| 20 | | BFB 25ug/mL V4487 | 25mL | ✓ | | 13 | T | |
| 21 | | L506053B2 V4485 V4493 | | | Acetone ↑, THF ↑ | 14 | Q | |
| 22 | | L506053B3 | | | | 15 | Q | |
| 23 | | B506053B2 | | ✓ | | 16 | B | |
| 24 | | 49794-35 | 25mL | ✓ | | 17 | | <2 |
| 25 | | -36 | | ✓ | | 18 | | <2 |
| 26 | | -37 | | ✓ | | 19 | | <2 |
| 27 | | -38 | | ✓ | | 20 | | <2 |
| 28 | | -39 | | ✓ | | 21 | | <2 |
| 29 | | -40 | | ✓ | | 22 | | <2 |
| 30 | | -41 | | ✓ | | 23 | | <2 |

848

(CONT.)

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS 14483 Exp: 6.12.03

**Voltage** 1835

**Threshold** 100

060503-B (CONT.)

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V5052831B | 49794-42 | 25mL | ✓ | RR 5mL | B16024 | | <2 |
| 32 | | 49790-5 | ↓ | ✓ | | 25 | | <2 |

6.6.03

Revision: 04/30/02

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15940T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 5/28/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1649

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 21.4 |
| 75 | 30.0 - 60.0% of mass 95 | 44.4 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 62.4 |
| 175 | 5.0 - 9.0% of mass 174 | 4.7 ( 7.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 61.6 ( 98.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 3.9 ( 6.3 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 0.1PPB STD | B15941SI.D | 05/28/03 | 17:30 |
| 02 | 0.5PPB STD | 0.5PPB STD | B15942SI.D | 05/28/03 | 18:12 |
| 03 | 1.2PPB STD | 1.2PPB STD | B15943SI.D | 05/28/03 | 18:53 |
| 04 | 4.8PPB STD | 4.8PPB STD | B15944SI.D | 05/28/03 | 19:34 |
| 05 | 8PPB STD | 8PPB STD | B15945SI.D | 05/28/03 | 20:15 |
| 06 | 16PPB STD | 16PPB STD | B15946SI.D | 05/28/03 | 20:56 |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15995T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.6 |
| 75 | 30.0 - 60.0% of mass 95 | 43.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.7 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 68.8 |
| 175 | 5.0 - 9.0% of mass 174 | 4.4 ( 6.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 66.5 ( 96.6 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 ( 7.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506053B | L506053B | B15996Q.D | 06/05/03 | 9:29 |
| 02 | B506053B | B506053B | B15997B.D | 06/05/03 | 10:09 |
| 03 | 49794-43 | 49794-43 | B15998.D | 06/05/03 | 10:49 |
| 04 | 49794-10 | 49794-10 | B15999.D | 06/05/03 | 11:29 |
| 05 | 49794-10,MS | 49794-10,MS | B16000SP.D | 06/05/03 | 12:09 |
| 06 | 49794-10,MSD | 49794-10,MSD | B16001SP.D | 06/05/03 | 12:49 |
| 07 | 49794-14 | 49794-14 | B16002.D | 06/05/03 | 13:29 |
| 08 | 49794-15 | 49794-15 | B16003.D | 06/05/03 | 14:10 |
| 09 | 49794-16 | 49794-16 | B16004.D | 06/05/03 | 14:50 |
| 10 | 49794-17 | 49794-17 | B16005.D | 06/05/03 | 15:31 |
| 11 | 49794-20 | 49794-20 | B16006.D | 06/05/03 | 16:11 |
| 12 | 49794-21 | 49794-21 | B16007.D | 06/05/03 | 16:51 |
| 13 | 49794-22 | 49794-22 | B16008.D | 06/05/03 | 17:32 |
| 14 | ZZZZZ | ZZZZZ | B16010.D | 06/05/03 | 21:14 |
| 15 | | | | | |
| 16 | | | | | |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2154

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.8 |
| 75 | 30.0 - 60.0% of mass 95 | 40.8 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 5.8 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 77.8 |
| 175 | 5.0 - 9.0% of mass 174 | 4.0 ( 5.2 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 74.0 ( 95.1 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 6.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506053B2 | L506053B2 | B16014Q.D | 06/05/03 | 22:34 |
| 02 | L506053B3 | L506053B3 | B16015Q.D | 06/05/03 | 23:15 |
| 03 | B506053B2 | B506053B2 | B16016B.D | 06/05/03 | 23:55 |
| 04 | 49794-35 | 49794-35 | B16017.D | 06/06/03 | 0:36 |
| 05 | 49794-36 | 49794-36 | B16018.D | 06/06/03 | 1:16 |
| 06 | 49794-37 | 49794-37 | B16019.D | 06/06/03 | 1:56 |
| 07 | 49794-38 | 49794-38 | B16020.D | 06/06/03 | 2:37 |
| 08 | 49794-39 | 49794-39 | B16021.D | 06/06/03 | 3:17 |
| 09 | 49794-40 | 49794-40 | B16022.D | 06/06/03 | 3:58 |
| 10 | 49794-41 | 49794-41 | B16023.D | 06/06/03 | 4:38 |
| 11 | 49794-42 | 49794-42 | B16024.D | 06/06/03 | 5:19 |
| 12 | ZZZZZ | ZZZZZ | B16025.D | 06/06/03 | 6:00 |
| 13 | | | | | |
| 14 | | | | | |
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| 23 | | | | | |

Response Factor Report  Instrumen

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration

6-13-03

VMT 6/13/03

Calibration Files
0.1 =B15941SI.D 0.5 =B15942SI.D 1.2 =B15943SI.D
4.8 =B15944SI.D 8 =B15945SI.D 16 =B15946SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | | 0.727 | 0.721 | 0.722 | 0.724 | 0.710 | 0.721 | 0.8 |
| 3) | TMP | Chloromethane | | 0.664 | 0.633 | 0.607 | 0.593 | 0.554 | 0.610 | 6.7 |
| 4) | TMC | Vinyl Chloride | 0.440 | 0.395 | 0.438 | 0.358 | 0.317 | 0.268 | 0.369 | 18.5 |
| 5) | TM | Bromomethane | | 0.133 | 0.148 | 0.167 | 0.186 | 0.216 | 0.170 | 19.2 |
| 6) | TM | Chloroethane | | 0.260 | 0.254 | 0.248 | 0.245 | 0.238 | 0.249 | 3.4 |
| 7) | TM | t-Butyl alcohol (TB | | 0.008 | 0.010 | 0.010 | 0.010 | 0.010 | 0.009# | 8.1 |
| 8) | TM | Trichlorofluorometh | | 0.603 | 0.590 | 0.589 | 0.578 | 0.584 | 0.589 | 1.5 |
| 9) | TM | Diethyl ether | | 0.102 | 0.106 | 0.108 | 0.101 | 0.109 | 0.105 | 3.7 |
| 10) | T | 1,1,2-Trichlorotrif | | 0.379 | 0.377 | 0.374 | 0.353 | 0.369 | 0.371 | 2.8 |
| 11) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 12) | TM | Acetone | | 0.045 | 0.038 | 0.036 | 0.034 | 0.035 | 0.038# | 11.9 |
| 13) | TMC | 1,1-Dichloroethene | | 0.317 | 0.325 | 0.323 | 0.312 | 0.328 | 0.321 | 2.0 |
| 14) | T | Methyl iodide | | 0.266 | 0.384 | 0.489 | 0.522 | 0.561 | 0.444 | 26.8 NT |
| 15) | TM | Di-isopropyl ether | | 1.161 | 1.152 | 1.151 | 1.083 | 1.135 | 1.137 | 2.7 |
| 16) | TM | Methylene Chloride | | 0.928 | 0.547 | 0.387 | 0.338 | 0.338 | 0.508 | 49.3 LR |
| 17) | TM | Carbon Disulfide | | 0.938 | 0.977 | 1.031 | 0.996 | 1.051 | 0.999 | 4.4 |
| 18) | T | Acrylonitrile | | 0.040 | 0.042 | 0.045 | 0.041 | 0.043 | 0.042# | 4.5 |
| 19) | TM | Methyl-tert-butyl e | | 0.507 | 0.490 | 0.498 | 0.475 | 0.504 | 0.495 | 2.6 |
| 20) | TM | trans-1,2-Dichloroe | | 0.352 | 0.356 | 0.361 | 0.343 | 0.358 | 0.354 | 2.0 |
| 21) | TMP | 1,1-Dichloroethane | | 0.681 | 0.702 | 0.688 | 0.654 | 0.679 | 0.681 | 2.6 |
| 22) | T | Vinyl acetate | | 0.008 | 0.013 | 0.017 | 0.016 | 0.017 | 0.014# | 28.7 NT |
| 23) | TM | Methyl ethyl ketone | | 0.069 | 0.071 | 0.061 | 0.094 | 0.060 | 0.071# | 19.4 |
| 24) | TM | Ethyl t-butyl ether | | 0.856 | 0.844 | 0.871 | 1.162 | 0.866 | 0.920 | 14.7 |
| 25) | TM | 2,2-Dichloropropane | | 0.465 | 0.563 | 0.485 | 0.563 | 0.465 | 0.508 | 9.9 |
| 26) | TM | cis-1,2-Dichloroeth | | 0.386 | 0.533 | 0.432 | 0.520 | 0.383 | 0.451 | 15.9 |
| 27) | TM | t-Amyl methyl ether | | 0.808 | 0.836 | 0.856 | 0.867 | 0.860 | 0.845 | 2.8 |
| 28) | T | No Compound | | | | | | | 0.000# | -1.0 |
| 29) | TMC | Chloroform | | 0.710 | 0.904 | 0.876 | 0.873 | 0.812 | 0.835 | 9.2 |
| 30) | TM | Bromochloromethane | | 0.171 | 0.184 | 0.183 | 0.181 | 0.180 | 0.180 | 2.8 |
| 31) | TM | Tetrahydrofuran | | 0.011 | 0.016 | 0.017 | 0.017 | 0.018 | 0.016# | 16.8 |
| 32) | TM | 1,1,1-Trichloroetha | | 0.625 | 0.687 | 0.688 | 0.697 | 0.695 | 0.679 | 4.4 |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 34) | TM | 1,1-Dichloropropene | | 0.752 | 0.803 | 0.797 | 0.801 | 0.775 | 0.785 | 2.7 |
| 35) | TM | Carbon Tetrachlorid | | 0.452 | 0.515 | 0.535 | 0.554 | 0.560 | 0.523 | 8.3 |
| 36) | S | 1,4-Difluorobenzene | 1.807 | 1.812 | 1.830 | 1.804 | 1.818 | 1.808 | 1.813 | 0.5 |
| 37) | TM | 1,2-Dichloroethane | | 0.440 | 0.457 | 0.438 | 0.436 | 0.431 | 0.440 | 2.2 |
| 38) | TM | Benzene | | 2.263 | 2.351 | 2.289 | 2.285 | 2.189 | 2.275 | 2.5 |
| 39) | I | Fluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | | 0.239 | 0.252 | 0.248 | 0.250 | 0.244 | 0.247 | 2.1 |
| 41) | TMC | 1,2-Dichloropropane | | 0.242 | 0.262 | 0.256 | 0.258 | 0.251 | 0.254 | 3.0 |
| 42) | T | Methylmethacrylate | | 0.062 | 0.070 | 0.074 | 0.076 | 0.077 | 0.072# | 8.3 |

(#) = Out of Range



000127

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration

Calibration Files
0.1 =B15941SI.D 0.5 =B15942SI.D 1.2 =B15943SI.D
4.8 =B15944SI.D 8 =B15945SI.D 16 =B15946SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 45) | TM | Bromodichloromethan | | 0.188 | 0.217 | 0.225 | 0.231 | 0.232 | 0.219 | 8.2 |
| 46) | TM | Dibromomethane | | 0.087 | 0.091 | 0.095 | 0.095 | 0.094 | 0.092# | 3.5 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 50) | T | 2-Chloroethylvinyl | | | | | 0.000 | 0.001 | 0.001# | 6.7 |
| 51) | TM | 2-Hexanone | | 0.035 | 0.036 | 0.038 | 0.038 | 0.038 | 0.037# | 4.4 |
| 52) | TM | Methyl isobutyl ket | | 0.036 | 0.038 | 0.039 | 0.040 | 0.040 | 0.039# | 4.3 |
| 53) | TM | cis-1,3-Dichloropro | | 0.254 | 0.281 | 0.300 | 0.305 | 0.307 | 0.289 | 7.6 |
| 54) | S | Bromofluorobenzene | 0.306 | 0.314 | 0.311 | 0.317 | 0.317 | 0.320 | 0.314 | 1.5 |
| 55) | TMC | Toluene | | 0.561 | 0.606 | 0.596 | 0.598 | 0.586 | 0.589 | 2.9 |
| 56) | TM | trans-1,3-Dichlorop | | 0.145 | 0.170 | 0.194 | 0.202 | 0.207 | 0.184 | 13.9 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | | 0.100 | 0.108 | 0.106 | 0.105 | 0.103 | 0.105 | 2.6 |
| 59) | TM | 1,3-Dichloropropane | | 0.217 | 0.227 | 0.229 | 0.228 | 0.225 | 0.225 | 2.0 |
| 60) | TM | Tetrachloroethene | | 0.210 | 0.224 | 0.222 | 0.225 | 0.222 | 0.221 | 2.8 |
| 61) | TM | Dibromochloromethan | | 0.098 | 0.106 | 0.121 | 0.126 | 0.131 | 0.116 | 12.0 |
| 62) | TM | 1,2-Dibromoethane | | 0.097 | 0.108 | 0.108 | 0.110 | 0.110 | 0.107 | 5.0 |
| 63) | I | d5-Chlorobenzene | ---------- | ISTD | ---------- | | | | | |
| 64) | TMP | Chlorobenzene | | 0.880 | 0.927 | 0.918 | 0.913 | 0.893 | 0.906 | 2.1 |
| 65) | TM | 1,1,1,2-Tetrachloro | | 0.216 | 0.239 | 0.254 | 0.258 | 0.258 | 0.245 | 7.3 |
| 66) | TMC | Ethylbenzene | | 1.742 | 1.865 | 1.824 | 1.826 | 1.747 | 1.801 | 3.0 |
| 67) | TM | m,p-Xylene | | 0.616 | 0.657 | 0.636 | 0.636 | 0.611 | 0.631 | 2.9 |
| 68) | TM | o-Xylene | | 0.553 | 0.592 | 0.601 | 0.598 | 0.585 | 0.586 | 3.2 |
| 69) | TM | Styrene | | 0.898 | 0.949 | 0.961 | 0.964 | 0.942 | 0.943 | 2.8 |
| 70) | TMP | Bromoform | | 0.054 | 0.067 | 0.079 | 0.084 | 0.089 | 0.074# | 19.2 |
| 71) | TM | Isopropylbenzene | | 1.556 | 1.682 | 1.662 | 1.653 | 1.608 | 1.632 | 3.0 |
| 72) | TMP | 1,1,2,2-Tetrachloro | | 0.184 | 0.197 | 0.196 | 0.196 | 0.198 | 0.194 | 3.0 |
| 73) | S | 1,2-Dichlorobenzene | 0.329 | 0.337 | 0.336 | 0.340 | 0.342 | 0.342 | 0.338 | 1.4 |
| 74) | TM | 1,2,3-Trichloroprop | | 0.150 | 0.147 | 0.140 | 0.138 | 0.138 | 0.143 | 4.0 |
| 75) | T | trans-1,4-Dichloro- | | 0.053 | 0.060 | 0.062 | 0.063 | 0.062 | 0.060# | 6.4 |
| 76) | TM | n-Propylbenzene | | 2.080 | 2.213 | 2.199 | 2.208 | 2.123 | 2.164 | 2.7 |
| 77) | TM | Bromobenzene | | 0.284 | 0.302 | 0.296 | 0.296 | 0.294 | 0.294 | 2.2 |
| 78) | TM | 1,3,5-Trimethylbenz | | 1.207 | 1.297 | 1.293 | 1.295 | 1.253 | 1.269 | 3.0 |
| 79) | TM | 2-Chlorotoluene | | 1.307 | 1.397 | 1.330 | 1.375 | 1.323 | 1.347 | 2.8 |
| 80) | TM | 4-Chlorotoluene | | 1.164 | 1.201 | 1.224 | 1.174 | 1.141 | 1.181 | 2.7 |
| 81) | TM | tert-butylbenzene | | 1.022 | 1.091 | 1.102 | 1.097 | 1.080 | 1.079 | 3.0 |
| 82) | TM | 1,2,4-Trimethylbenz | | 1.232 | 1.321 | 1.307 | 1.314 | 1.277 | 1.290 | 2.8 |
| 83) | TM | Pentachloroethane | | 0.108 | 0.129 | 0.147 | 0.153 | 0.159 | 0.139 | 14.8 |
| 84) | TM | sec-butylbenzene | | 1.607 | 1.742 | 1.734 | 1.745 | 1.701 | 1.706 | 3.4 |
| 85) | TM | p-isopropyltoluene | | 1.250 | 1.329 | 1.359 | 1.369 | 1.340 | 1.329 | 3.5 |

(#) = Out of Range



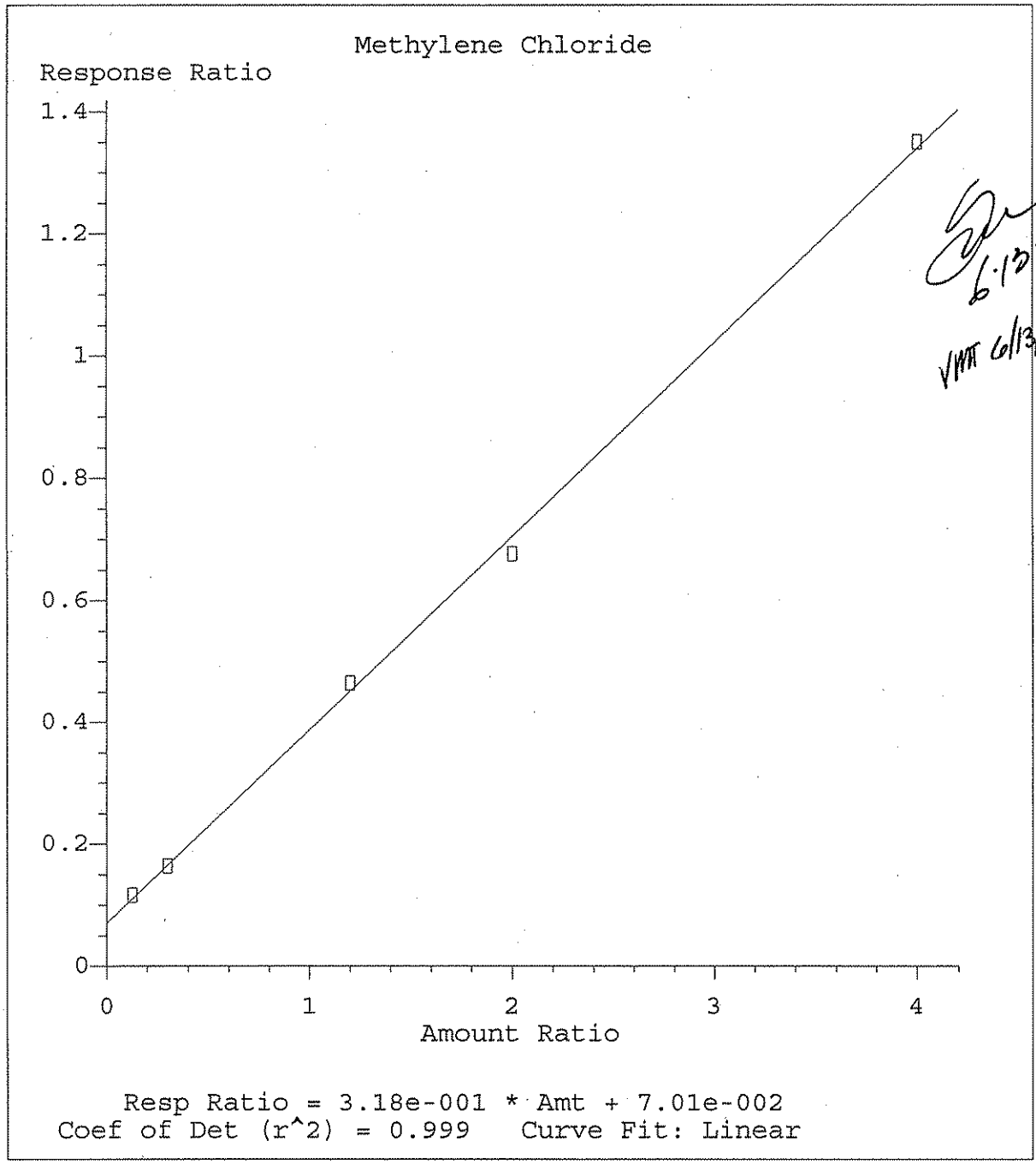
000128

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Initial Calibration

Calibration Files
0.1 =B15941SI.D 0.5 =B15942SI.D 1.2 =B15943SI.D
4.8 =B15944SI.D 8 =B15945SI.D 16 =B15946SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.599 | 0.633 | 0.632 | 0.636 | 0.631 | | 0.626 | 2.4 |
| 87) | I | 1,4-Dichlorobenzene-d | ISTD | | | | | | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.363 | 1.431 | 1.380 | 1.395 | 1.365 | | 1.387 | 2.0 |
| 89) | TM | n-butylbenzene | 3.133 | 3.366 | 3.285 | 3.316 | 3.194 | | 3.259 | 2.8 |
| 90) | TM | 1,2-Dichlorobenzene | 1.092 | 1.140 | 1.127 | 1.128 | 1.105 | | 1.118 | 1.7 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.037 | 0.042 | 0.048 | 0.050 | 0.053 | | 0.046# | 14.1 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.621 | 0.668 | 0.681 | 0.685 | 0.682 | | 0.667 | 3.9 |
| 95) | TM | Hexachlorobutadiene | 0.241 | 0.257 | 0.258 | 0.263 | 0.261 | | 0.256 | 3.4 |
| 96) | TM | Naphthalene | 0.934 | 1.016 | 1.057 | 1.080 | 1.086 | | 1.035 | 6.0 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.471 | 0.516 | 0.516 | 0.527 | 0.520 | | 0.510 | 4.4 |
| 98) | TM | 1,3,5-Trichlorobenz | 0.898 | 0.977 | 0.964 | 0.974 | 0.971 | | 0.957 | 3.4 |

(#) = Out of Range




6-13-03

VMH 6/13/03

Method Name: C:\HPCHEM\1\METHODS\V505283B.M
Calibration Table Last Updated: Thu May 29 12:57:59 2003

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15941SI.D Vial: 3
Acq On : 28 May 2003 5:30 pm Operator: JR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:55 2003 Quant Results File: V505283B.

VC only

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03
VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 216477 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.35 | 96 | 494297 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 315487 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 137666 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.48 | 114 | 391112 | 4.42 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 110.50% | | | |
| 54) Bromofluorobenzene | 15.08 | 95 | 151373 | 3.25 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 81.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.61 | 152 | 103902 | 3.39 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 84.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 4) Vinyl Chloride | 1.94 | 62 | 2380 | 0.15 | ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

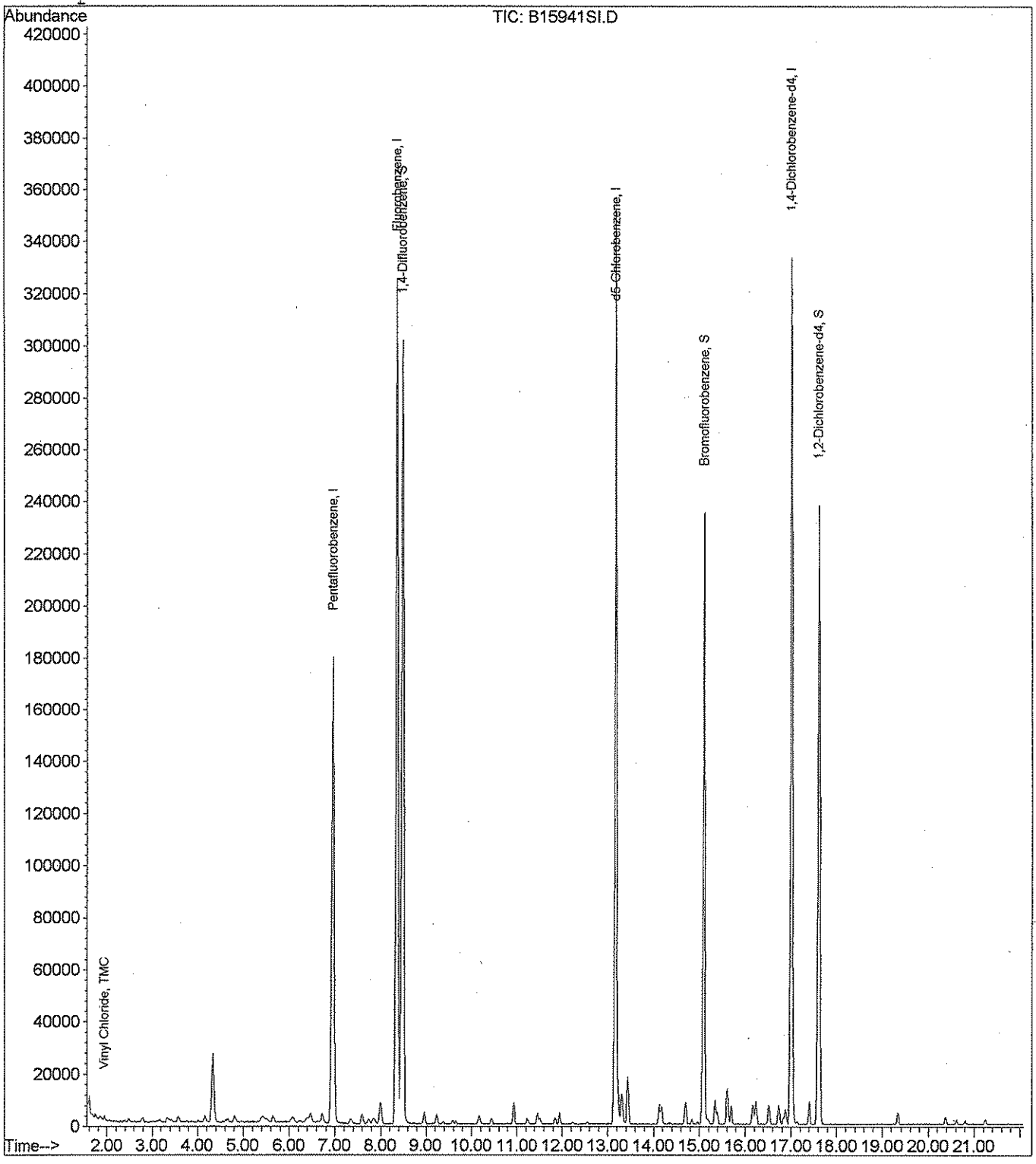


000131

Quantitation Report

Data File : C:\HPCHEM\1\DATA\052803-B\B15941SI.D Vial: 3
Acq On : 28 May 2003 5:30 pm Operator: JR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:55 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






009132

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15942SI.D Vial: 4
Acq On : 28 May 2003 6:12 pm Operator: JR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:59 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03 VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 216437 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.35 | 96 | 491779 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 317353 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 16.99 | 152 | 140136 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.47 | 114 | 392221 | 4.43 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 110.75% | | | |
| 54) Bromofluorobenzene | 15.09 | 95 | 154189 | 3.33 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 83.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.61 | 152 | 106887 | 3.47 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 86.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 19663 | 0.62 | ug/L | 99 |
| 3) Chloromethane | 1.84 | 50 | 17958 | 0.74 | ug/L | 87 |
| 4) Vinyl Chloride | 1.94 | 62 | 10683m | 0.68 | ug/L | |
| 5) Bromomethane | 2.39 | 94 | 3586 | 0.48 | ug/L | 94 |
| 6) Chloroethane | 2.49 | 64 | 7028 | 0.67 | ug/L | 94 |
| 7) t-Butyl alcohol (TBA) | 3.78 | 59 | 1094 | 2.44 | ug/L # | 96 |
| 8) Trichlorofluoromethane | 2.79 | 101 | 16302 | 0.61 | ug/L | 92 |
| 9) Diethyl ether | 3.18 | 74 | 2752 | 0.60 | ug/L # | 80 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 10248 | 0.64 | ug/L | 92 |
| 12) Acetone | 3.43 | 43 | 6092 | 3.32 | ug/L | 94 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 8585 | 0.62 | ug/L | 96 |
| 14) Methyl iodide | 4.03 | 142 | 7191 | 0.34 | ug/L | 97 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 31400 | 0.66 | ug/L | 97 |
| 16) Methylene Chloride | 4.33 | 84 | 25116 | 0.94 | ug/L | 91 |
| 17) Carbon Disulfide | 4.30 | 76 | 25389 | 0.63 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 1079 | 0.62 | ug/L # | 82 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 13708 | 0.61 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 9515 | 0.61 | ug/L | 91 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 18421 | 0.65 | ug/L | 97 |
| 22) Vinyl acetate | 5.57 | 86 | 210 | 0.36 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 6.25 | 43 | 9372 | 2.95 | ug/L # | 97 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 23160 | 0.65 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 12586 | 0.48 | ug/L | 95 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 10443 | 0.50 | ug/L # | 87 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 21866 | 0.59 | ug/L | 95 |
| 29) Chloroform | 6.73 | 83 | 19208 | 0.48 | ug/L | 96 |
| 30) Bromochloromethane | 6.97 | 128 | 4631 | 0.51 | ug/L # | 66 |

(#) = qualifier out of range (m) = manual integration



090133

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15942SI.D Vial: 4
Acq On : 28 May 2003 6:12 pm Operator: JR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:59 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.07 | 71 | 305 | 0.45 ug/L | # | 1 |
| 32) 1,1,1-Trichloroethane | 7.34 | 97 | 16909 | 0.53 ug/L | | 99 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 20339 | 0.61 ug/L | | 92 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 12227 | 0.47 ug/L | | 93 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 11893 | 0.60 ug/L | | 100 |
| 38) Benzene | 7.99 | 78 | 61226 | 0.63 ug/L | | 100 |
| 40) Trichloroethene | 8.96 | 95 | 14700 | 0.48 ug/L | | 88 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 14862 | 0.56 ug/L | | 97 |
| 42) Methylmethacrylate | 9.37 | 69 | 3826 | 0.48 ug/L | # | 86 |
| 45) Bromodichloromethane | 9.58 | 83 | 11570 | 0.44 ug/L | | 95 |
| 46) Dibromomethane | 9.66 | 93 | 5362 | 0.47 ug/L | | 88 |
| 51) 2-Hexanone | 11.51 | 58 | 10660 | 2.58 ug/L | | 96 |
| 52) Methyl isobutyl ketone | 10.17 | 58 | 11002 | 2.59 ug/L | # | 89 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 15625 | 0.46 ug/L | | 91 |
| 55) Toluene | 10.93 | 92 | 34490 | 0.47 ug/L | | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 8938 | 0.40 ug/L | | 96 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 6170 | 0.49 ug/L | | 96 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 13362 | 0.50 ug/L | | 97 |
| 60) Tetrachloroethene | 11.94 | 166 | 12880 | 0.37 ug/L | | 97 |
| 61) Dibromochloromethane | 12.23 | 129 | 6002 | 0.38 ug/L | | 100 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 5990 | 0.42 ug/L | | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 34927 | 0.53 ug/L | | 95 |
| 65) 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 8577 | 0.47 ug/L | | 95 |
| 66) Ethylbenzene | 13.31 | 91 | 69100 | 0.57 ug/L | | 95 |
| 67) m,p-Xylene | 13.43 | 106 | 48833 | 1.09 ug/L | | 94 |
| 68) o-Xylene | 14.13 | 106 | 21930 | 0.52 ug/L | | 93 |
| 69) Styrene | 14.17 | 104 | 35604 | 0.53 ug/L | | 93 |
| 70) Bromoform | 14.69 | 173 | 2133 | 0.33 ug/L | | 94 |
| 71) Isopropylbenzene | 14.70 | 105 | 61735 | 0.54 ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 14.96 | 83 | 7293 | 0.56 ug/L | | 90 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 5960 | 0.61 ug/L | | 95 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 2122 | 0.59 ug/L | # | 66 |
| 76) n-Propylbenzene | 15.34 | 91 | 82498 | 0.56 ug/L | | 99 |
| 77) Bromobenzene | 15.39 | 156 | 11260 | 0.47 ug/L | # | 80 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 47892 | 0.53 ug/L | | 99 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 51843 | 0.56 ug/L | | 97 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 46188 | 0.55 ug/L | | 94 |
| 81) tert-butylbenzene | 16.17 | 119 | 40552 | 0.50 ug/L | | 94 |
| 82) 1,2,4-Trimethylbenzene | 16.24 | 105 | 48864 | 0.53 ug/L | | 94 |
| 83) Pentachloroethane | 16.26 | 167 | 4288 | 0.39 ug/L | # | 71 |
| 84) sec-butylbenzene | 16.51 | 105 | 63753 | 0.52 ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15942SI.D Vial: 4
Acq On : 28 May 2003 6:12 pm Operator: JR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:59 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

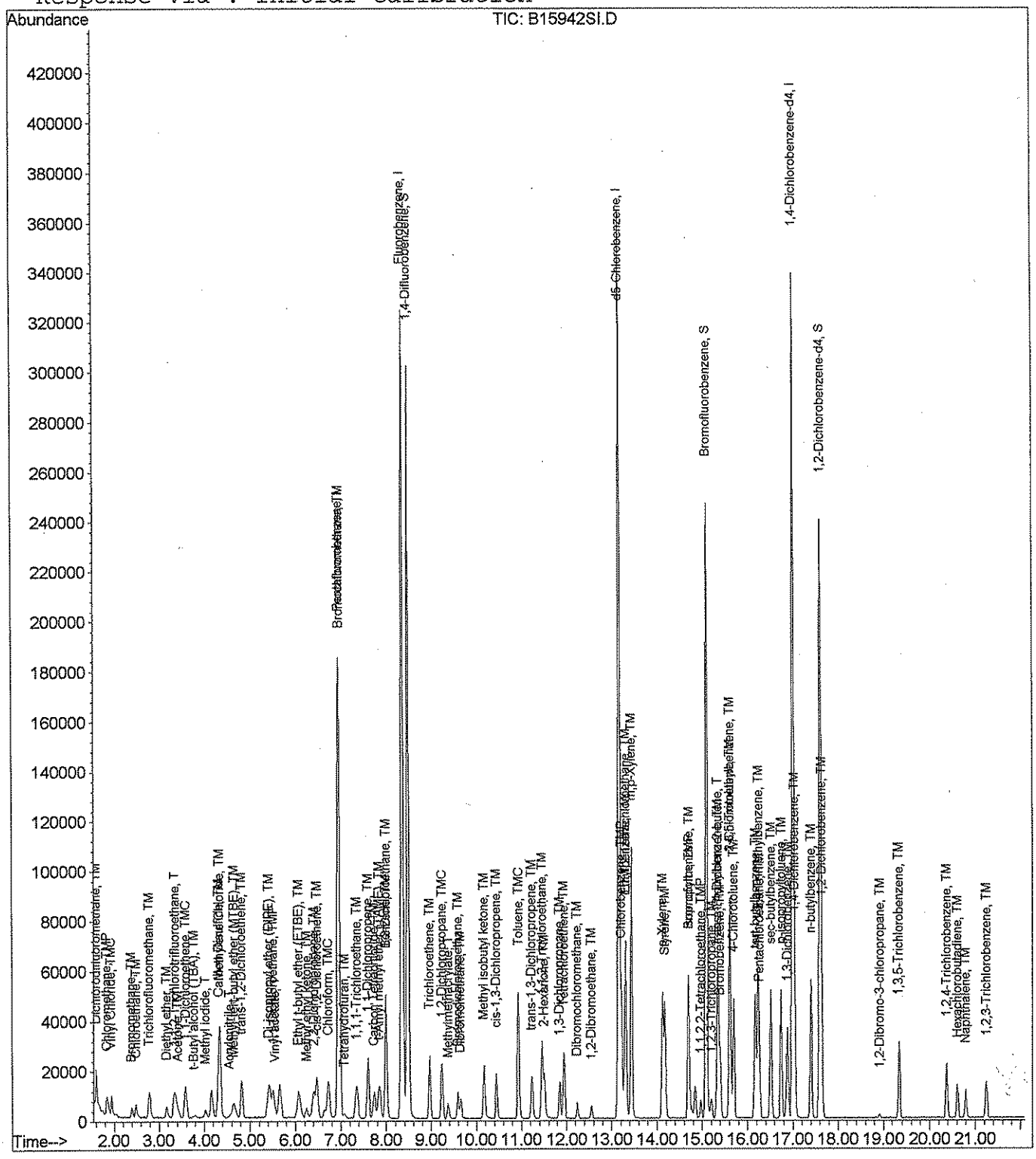
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 85) | p-isopropyltoluene | 16.74 | 119 | 49573 | 0.50 | ug/L | | 96 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 23759 | 0.47 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.04 | 146 | 23867 | 0.54 | ug/L | | 98 |
| 89) | n-butylbenzene | 17.40 | 91 | 54885 | 0.61 | ug/L | | 91 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 19136 | 0.53 | ug/L | | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 641 | 0.56 | ug/L | # | 74 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 10883 | 0.47 | ug/L | | 96 |
| 95) | Hexachlorobutadiene | 20.61 | 225 | 4213 | 0.43 | ug/L | | 96 |
| 96) | Naphthalene | 20.80 | 128 | 16366 | 0.51 | ug/L | | 97 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 8246 | 0.47 | ug/L | | 89 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 15729 | 0.47 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\052803-B\B15942SI.D Vial: 4
Acq On : 28 May 2003 6:12 pm Operator: JR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:59 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






000136

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15943SI.D Vial: 5
Acq On : 28 May 2003 6:53 pm Operator: JR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:39 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03
VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 216173 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.34 | 96 | 491181 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 315461 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 138403 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.47 | 114 | 395577 | 4.47 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 111.75% | | | |
| 54) Bromofluorobenzene | 15.09 | 95 | 152946 | 3.31 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 82.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.60 | 152 | 105896 | 3.45 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 86.25% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 46742 | 1.47 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 41039 | 1.68 | ug/L | 96 |
| 4) Vinyl Chloride | 1.93 | 62 | 28387 | 1.81 | ug/L | 100 |
| 5) Bromomethane | 2.40 | 94 | 9588 | 1.29 | ug/L | 96 |
| 6) Chloroethane | 2.49 | 64 | 16498 | 1.57 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 38258 | 1.43 | ug/L | 100 |
| 9) Diethyl ether | 3.17 | 74 | 6874 | 1.50 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 24473 | 1.52 | ug/L | 95 |
| 12) Acetone | 3.42 | 43 | 12345 | 6.74 | ug/L # | 90 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 21069 | 1.53 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.40 | 45 | 74717 | 1.58 | ug/L | 97 |
| 16) Methylene Chloride | 4.33 | 84 | 35496 | 1.70 | ug/L | 93 |
| 17) Carbon Disulfide | 4.30 | 76 | 63329 | 1.57 | ug/L | 100 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 31751 | 1.41 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 23119 | 1.48 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 45558 | 1.60 | ug/L | 98 |
| 23) Methyl ethyl ketone | 6.24 | 43 | 22928 | 7.23 | ug/L | 96 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 54728 | 1.54 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 36520 | 1.38 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 34581 | 1.47 | ug/L # | 84 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 54197 | 1.47 | ug/L | 96 |
| 29) Chloroform | 6.73 | 83 | 58624 | 1.46 | ug/L | 99 |
| 30) Bromochloromethane | 6.97 | 128 | 11928 | 1.31 | ug/L # | 82 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 44564 | 1.40 | ug/L | 96 |
| 34) 1,1-Dichloropropene | 7.59 | 75 | 52052 | 1.56 | ug/L | 96 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 33392 | 1.28 | ug/L | 97 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 29631 | 1.50 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15943SI.D Vial: 5
Acq On : 28 May 2003 6:53 pm Operator: JR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:39 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 38) | Benzene | 8.00 | 78 | 152475 | 1.57 | ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 37187 | 1.21 | ug/L | | 97 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 38584 | 1.45 | ug/L | | 98 |
| 45) | Bromodichloromethane | 9.59 | 83 | 31909 | 1.21 | ug/L | | 92 |
| 46) | Dibromomethane | 9.65 | 93 | 13386 | 1.18 | ug/L | | 89 |
| 51) | 2-Hexanone | 11.51 | 58 | 26540 | 6.43 | ug/L | | 95 |
| 52) | Methyl isobutyl ketone | 10.17 | 58 | 28062 | 6.61 | ug/L | | 90 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 41413 | 1.23 | ug/L | | 97 |
| 55) | Toluene | 10.93 | 92 | 89306 | 1.21 | ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 25092 | 1.13 | ug/L | | 94 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 15847 | 1.26 | ug/L | | 96 |
| 59) | 1,3-Dichloropropane | 11.84 | 76 | 33503 | 1.26 | ug/L | | 97 |
| 60) | Tetrachloroethene | 11.94 | 166 | 32988 | 0.95 | ug/L | | 97 |
| 61) | Dibromochloromethane | 12.24 | 129 | 15665 | 1.00 | ug/L | | 88 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 15907 | 1.12 | ug/L | | 96 |
| 64) | Chlorobenzene | 13.21 | 112 | 87692 | 1.34 | ug/L | | 92 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 22607 | 1.24 | ug/L | | 97 |
| 66) | Ethylbenzene | 13.31 | 91 | 176494 | 1.45 | ug/L | | 95 |
| 67) | m,p-Xylene | 13.44 | 106 | 124428 | 2.79 | ug/L | | 94 |
| 68) | o-Xylene | 14.12 | 106 | 56009 | 1.35 | ug/L | | 91 |
| 69) | Styrene | 14.18 | 104 | 89858 | 1.34 | ug/L | | 95 |
| 70) | Bromoform | 14.69 | 173 | 6294 | 0.99 | ug/L | | 93 |
| 71) | Isopropylbenzene | 14.69 | 105 | 159176 | 1.39 | ug/L | | 97 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 18643 | 1.43 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 13937 | 1.45 | ug/L | | 96 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 5644 | 1.58 | ug/L | # | 85 |
| 76) | n-Propylbenzene | 15.34 | 91 | 209479 | 1.43 | ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 28548 | 1.21 | ug/L | # | 83 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 122790 | 1.37 | ug/L | | 100 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 132233 | 1.44 | ug/L | | 95 |
| 80) | 4-Chlorotoluene | 15.69 | 91 | 113695 | 1.37 | ug/L | | 94 |
| 81) | tert-butylbenzene | 16.16 | 119 | 103289 | 1.28 | ug/L | | 90 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 124999 | 1.36 | ug/L | | 96 |
| 83) | Pentachloroethane | 16.26 | 167 | 12214 | 1.12 | ug/L | # | 89 |
| 84) | sec-butylbenzene | 16.52 | 105 | 164882 | 1.36 | ug/L | | 97 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 125761 | 1.27 | ug/L | | 95 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 59900 | 1.20 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 59425 | 1.35 | ug/L | | 98 |
| 89) | n-butylbenzene | 17.41 | 91 | 139754 | 1.57 | ug/L | | 94 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 47315 | 1.33 | ug/L | | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 1754 | 1.39 | ug/L | | 86 |

(#) = qualifier out of range (m) = manual integration



000138

Data File : C:\HPCHEM\1\DATA\052803-B\B15943SI.D Vial: 5
Acq On : 28 May 2003 6:53 pm Operator: JR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:39 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

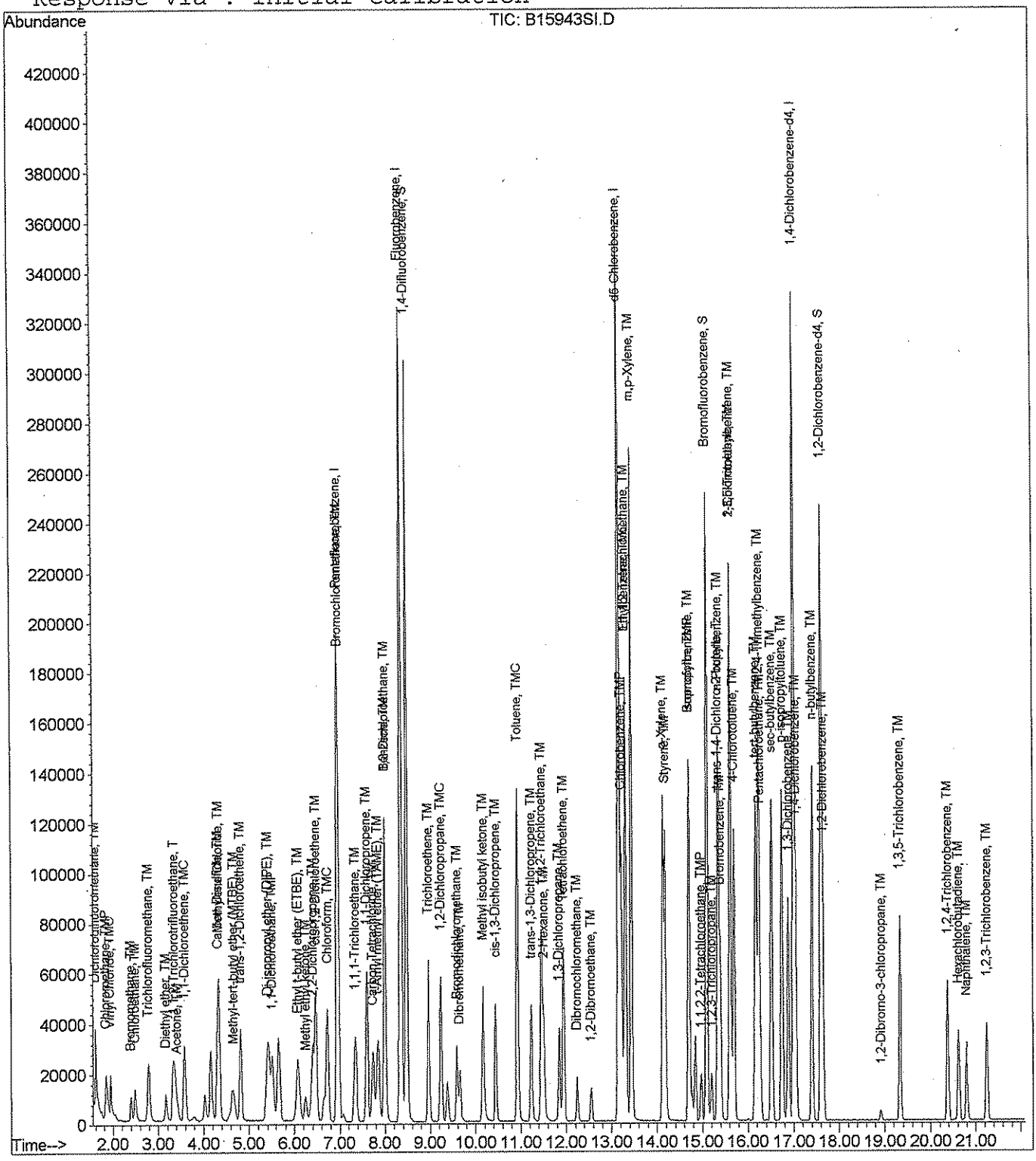
| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 27737 | 1.21 ug/L | 100 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 10664 | 1.11 ug/L | 97 |
| 96) | Naphthalene | 20.80 | 128 | 42176 | 1.32 ug/L | 98 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 21414 | 1.23 ug/L | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 40549 | 1.24 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\052803-B\B15943SI.D Vial: 5
Acq On : 28 May 2003 6:53 pm Operator: JR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:39 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






000140

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15944SI.D Vial: 6
Acq On : 28 May 2003 7:34 pm Operator: JR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03
VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 217614 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.34 | 96 | 491924 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 317920 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 141911 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.47 | 114 | 392560 | 4.41 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 110.25% | | | |
| 54) Bromofluorobenzene | 15.09 | 95 | 155948 | 3.37 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 84.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.60 | 152 | 108209 | 3.50 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 87.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 188422 | 5.89 | ug/L | 96 |
| 3) Chloromethane | 1.84 | 50 | 158547 | 6.45 | ug/L | 97 |
| 4) Vinyl Chloride | 1.93 | 62 | 93540 | 5.94 | ug/L | 99 |
| 5) Bromomethane | 2.40 | 94 | 43710 | 5.86 | ug/L | 98 |
| 6) Chloroethane | 2.49 | 64 | 64651 | 6.12 | ug/L | 95 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 12889 | 28.58 | ug/L # | 90 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 153931 | 5.73 | ug/L | 97 |
| 9) Diethyl ether | 3.17 | 74 | 28306 | 6.12 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 97792 | 6.03 | ug/L | 95 |
| 12) Acetone | 3.42 | 43 | 46369 | 25.13 | ug/L # | 88 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 84276 | 6.06 | ug/L | 93 |
| 14) Methyl iodide | 4.03 | 142 | 127628 | 6.06 | ug/L | 97 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 300647 | 6.32 | ug/L | 97 |
| 16) Methylene Chloride | 4.33 | 84 | 101140 | 6.44 | ug/L | 92 |
| 17) Carbon Disulfide | 4.30 | 76 | 269111 | 6.61 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 11692 | 6.65 | ug/L # | 88 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 130008 | 5.74 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 94377 | 6.01 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 179680 | 6.28 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 4476 | 7.69 | ug/L # | 29 |
| 23) Methyl ethyl ketone | 6.23 | 43 | 79577 | 24.94 | ug/L | 95 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 227539 | 6.34 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 126756 | 4.77 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 112713 | 4.56 | ug/L # | 84 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 223491 | 6.00 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 228748 | 5.66 | ug/L | 96 |
| 30) Bromochloromethane | 6.96 | 128 | 47679 | 5.19 | ug/L # | 74 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\052803-B\B15944SI.D Vial: 6
Acq On : 28 May 2003 7:34 pm Operator: JR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.08 | 71 | 4318 | 6.27 ug/L | 91 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 179660 | 5.59 ug/L | 98 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 208217 | 6.18 ug/L | 95 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 139588 | 5.33 ug/L | 100 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 114388 | 5.74 ug/L | 97 |
| 38) Benzene | 8.00 | 78 | 597712 | 6.12 ug/L | 99 |
| 40) Trichloroethene | 8.96 | 95 | 146264 | 4.74 ug/L | 95 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 151165 | 5.67 ug/L | 97 |
| 42) Methylmethacrylate | 9.37 | 69 | 43667 | 5.44 ug/L | 94 |
| 45) Bromodichloromethane | 9.59 | 83 | 132902 | 5.03 ug/L | 93 |
| 46) Dibromomethane | 9.65 | 93 | 56133 | 4.94 ug/L # | 86 |
| 51) 2-Hexanone | 11.50 | 58 | 112475 | 27.22 ug/L | 100 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 115951 | 27.25 ug/L | 92 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 177263 | 5.25 ug/L | 93 |
| 55) Toluene | 10.93 | 92 | 351591 | 4.76 ug/L | 99 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 114587 | 5.15 ug/L | 97 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 62643 | 4.98 ug/L | 98 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 135375 | 5.09 ug/L | 97 |
| 60) Tetrachloroethene | 11.94 | 166 | 131131 | 3.79 ug/L | 97 |
| 61) Dibromochloromethane | 12.24 | 129 | 71709 | 4.55 ug/L | 96 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 64035 | 4.51 ug/L | 98 |
| 64) Chlorobenzene | 13.22 | 112 | 350182 | 5.29 ug/L | 92 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 96832 | 5.27 ug/L | 99 |
| 66) Ethylbenzene | 13.31 | 91 | 695957 | 5.69 ug/L | 97 |
| 67) m,p-Xylene | 13.43 | 106 | 485640 | 10.79 ug/L | 92 |
| 68) o-Xylene | 14.12 | 106 | 229162 | 5.47 ug/L | 95 |
| 69) Styrene | 14.17 | 104 | 366680 | 5.44 ug/L | 95 |
| 70) Bromoform | 14.70 | 173 | 29997 | 4.69 ug/L | 96 |
| 71) Isopropylbenzene | 14.70 | 105 | 634022 | 5.50 ug/L | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 74928 | 5.71 ug/L | 97 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 53540 | 5.51 ug/L | 99 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 23710 | 6.57 ug/L | 97 |
| 76) n-Propylbenzene | 15.34 | 91 | 838767 | 5.66 ug/L | 97 |
| 77) Bromobenzene | 15.40 | 156 | 112978 | 4.75 ug/L # | 87 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 493398 | 5.45 ug/L | 99 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 507376 | 5.49 ug/L | 95 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 466871 | 5.56 ug/L | 93 |
| 81) tert-butylbenzene | 16.16 | 119 | 420593 | 5.18 ug/L | 94 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 498654 | 5.37 ug/L | 96 |
| 83) Pentachloroethane | 16.25 | 167 | 56015 | 5.11 ug/L # | 87 |
| 84) sec-butylbenzene | 16.51 | 105 | 661449 | 5.42 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\052803-B\B15944SI.D Vial: 6
Acq On : 28 May 2003 7:34 pm Operator: JR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

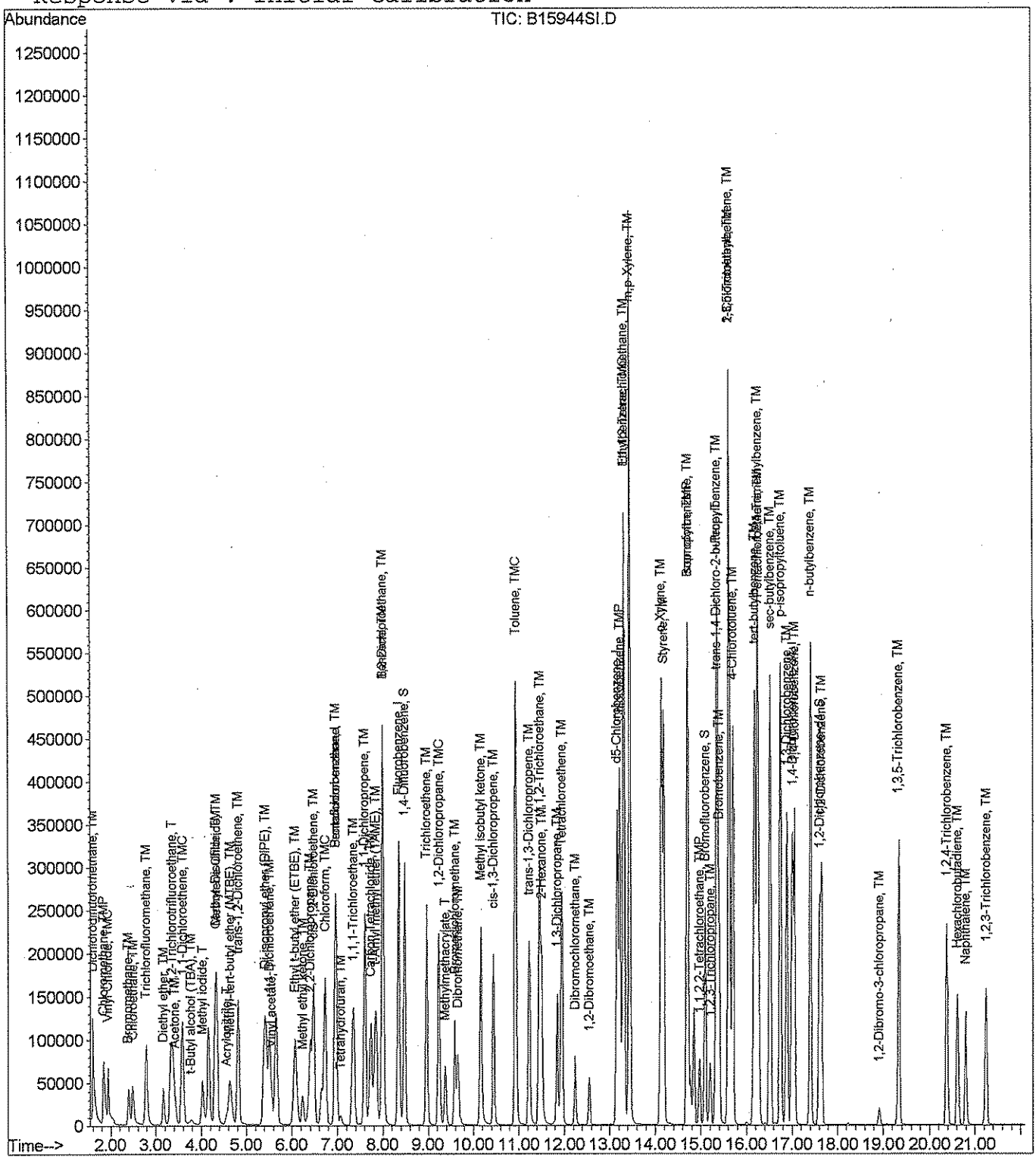
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 16.74 | 119 | 518278 | 5.20 ug/L | 96 |
| 86) 1,3-Dichlorobenzene | 16.87 | 146 | 241005 | 4.79 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 234920 | 5.21 ug/L | 97 |
| 89) n-butylbenzene | 17.40 | 91 | 559445 | 6.15 ug/L | 94 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 191858 | 5.25 ug/L | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 8151 | 5.84 ug/L | 95 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 115901 | 4.93 ug/L | 98 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 43943 | 4.48 ug/L | 99 |
| 96) Naphthalene | 20.80 | 128 | 180054 | 5.51 ug/L | 98 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 87870 | 4.93 ug/L | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 164177 | 4.89 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\052803-B\B15944SI.D Vial: 6
Acq On : 28 May 2003 7:34 pm Operator: JR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






000144

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15945SI.D Vial: 7
Acq On : 28 May 2003 8:15 pm Operator: JR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03
VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 217260 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.34 | 96 | 490391 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 317213 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 142411 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.47 | 114 | 394963 | 4.44 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 111.00% | | | |
| 54) Bromofluorobenzene | 15.09 | 95 | 155473 | 3.37 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 84.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.60 | 152 | 108373 | 3.51 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 87.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 314388 | 9.84 | ug/L | 97 |
| 3) Chloromethane | 1.83 | 50 | 257802 | 10.51 | ug/L | 96 |
| 4) Vinyl Chloride | 1.93 | 62 | 137600 | 8.75 | ug/L | 98 |
| 5) Bromomethane | 2.39 | 94 | 80747 | 10.84 | ug/L | 99 |
| 6) Chloroethane | 2.49 | 64 | 106613 | 10.10 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 20838 | 46.28 | ug/L # | 81 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 251218 | 9.37 | ug/L | 97 |
| 9) Diethyl ether | 3.17 | 74 | 43678 | 9.46 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 153384 | 9.47 | ug/L | 95 |
| 12) Acetone | 3.42 | 43 | 73267 | 39.78 | ug/L # | 87 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 135448 | 9.76 | ug/L | 97 |
| 14) Methyl iodide | 4.02 | 142 | 226842 | 10.80 | ug/L | 97 |
| 15) Di-isopropyl ether (DIPE) | 5.40 | 45 | 470735 | 9.91 | ug/L | 98 |
| 16) Methylene Chloride | 4.33 | 84 | 146915 | 9.77 | ug/L | 91 |
| 17) Carbon Disulfide | 4.30 | 76 | 432973 | 10.65 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 17819 | 10.15 | ug/L | 93 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 206192 | 9.12 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 149054 | 9.51 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 284014 | 9.95 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 7138 | 12.28 | ug/L # | 22 |
| 23) Methyl ethyl ketone | 6.23 | 43 | 205175 | 64.41 | ug/L | 96 |
| 24) Ethyl t-butyl ether (ETBE) | 6.06 | 59 | 504761 | 14.09 | ug/L | 95 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 244462 | 9.21 | ug/L | 96 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 225804 | 9.07 | ug/L # | 86 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 376515 | 10.13 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 379297 | 9.41 | ug/L | 98 |
| 30) Bromochloromethane | 6.97 | 128 | 78713 | 8.59 | ug/L # | 80 |

(#) = qualifier out of range (m) = manual integration



000145

Data File : C:\HPCHEM\1\DATA\052803-B\B15945SI.D Vial: 7
Acq On : 28 May 2003 8:15 pm Operator: JR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.08 | 71 | 7569 | 11.01 ug/L | | 93 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 303066 | 9.45 ug/L | | 97 |
| 34) 1,1-Dichloropropene | 7.59 | 75 | 347844 | 10.34 ug/L | | 95 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 240557 | 9.21 ug/L | | 100 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 189248 | 9.51 ug/L | | 96 |
| 38) Benzene | 8.00 | 78 | 992707 | 10.19 ug/L | | 100 |
| 40) Trichloroethene | 8.95 | 95 | 245495 | 7.98 ug/L | | 93 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 253207 | 9.53 ug/L | | 98 |
| 42) Methylmethacrylate | 9.38 | 69 | 74059 | 9.25 ug/L | | 94 |
| 45) Bromodichloromethane | 9.59 | 83 | 226569 | 8.60 ug/L | | 93 |
| 46) Dibromomethane | 9.65 | 93 | 92777 | 8.20 ug/L | # | 88 |
| 51) 2-Hexanone | 11.50 | 58 | 187303 | 45.47 ug/L | | 99 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 193767 | 45.68 ug/L | | 92 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 298920 | 8.88 ug/L | | 95 |
| 55) Toluene | 10.93 | 92 | 586021 | 7.95 ug/L | | 99 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 197723 | 8.92 ug/L | | 96 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 103292 | 8.23 ug/L | | 98 |
| 59) 1,3-Dichloropropane | 11.84 | 76 | 223253 | 8.43 ug/L | | 98 |
| 60) Tetrachloroethene | 11.94 | 166 | 220905 | 6.40 ug/L | | 98 |
| 61) Dibromochloromethane | 12.24 | 129 | 123970 | 7.89 ug/L | | 96 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 107883 | 7.62 ug/L | | 97 |
| 64) Chlorobenzene | 13.21 | 112 | 579299 | 8.77 ug/L | | 91 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 163742 | 8.93 ug/L | | 99 |
| 66) Ethylbenzene | 13.31 | 91 | 1158274 | 9.49 ug/L | | 96 |
| 67) m,p-Xylene | 13.44 | 106 | 807531 | 17.98 ug/L | | 95 |
| 68) o-Xylene | 14.12 | 106 | 379116 | 9.08 ug/L | | 92 |
| 69) Styrene | 14.18 | 104 | 611528 | 9.10 ug/L | | 97 |
| 70) Bromoform | 14.69 | 173 | 53456 | 8.38 ug/L | | 97 |
| 71) Isopropylbenzene | 14.69 | 105 | 1048790 | 9.12 ug/L | | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 124631 | 9.52 ug/L | | 96 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 87381 | 9.02 ug/L | | 98 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 39794 | 11.05 ug/L | | 98 |
| 76) n-Propylbenzene | 15.34 | 91 | 1400583 | 9.48 ug/L | | 98 |
| 77) Bromobenzene | 15.39 | 156 | 187605 | 7.91 ug/L | # | 86 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 821832 | 9.10 ug/L | | 100 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 872404 | 9.46 ug/L | | 95 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 744729 | 8.89 ug/L | | 94 |
| 81) tert-butylbenzene | 16.17 | 119 | 696073 | 8.59 ug/L | | 95 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 833332 | 9.00 ug/L | | 94 |
| 83) Pentachloroethane | 16.26 | 167 | 97212 | 8.88 ug/L | # | 82 |
| 84) sec-butylbenzene | 16.52 | 105 | 1107331 | 9.10 ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15945SI.D Vial: 7
Acq On : 28 May 2003 8:15 pm Operator: JR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

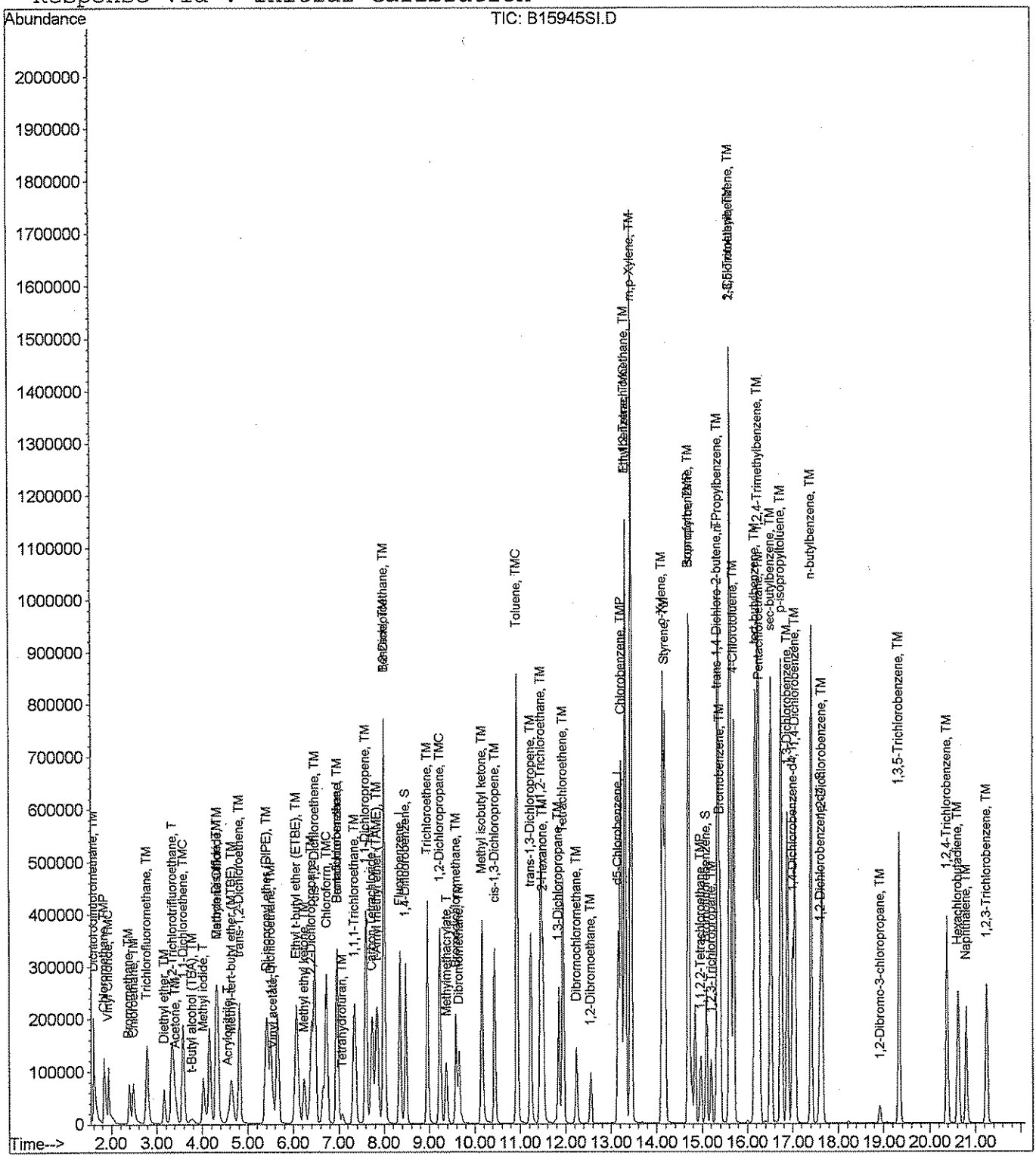
Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 16.73 | 119 | 868450 | 8.74 | ug/L | 96 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 403493 | 8.03 | ug/L | 99 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 397397 | 8.79 | ug/L | 98 |
| 89) n-butylbenzene | 17.41 | 91 | 944453 | 10.34 | ug/L | 96 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 321147 | 8.75 | ug/L | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 14256 | 9.87 | ug/L | 94 |
| 94) 1,2,4-Trichlorobenzene | 20.37 | 180 | 195150 | 8.28 | ug/L | 99 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 74858 | 7.60 | ug/L | 99 |
| 96) Naphthalene | 20.80 | 128 | 307579 | 9.38 | ug/L | 99 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 150200 | 8.39 | ug/L | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 277321 | 8.23 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\052803-B\B15945SI.D Vial: 7
Acq On : 28 May 2003 8:15 pm Operator: JR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






000148

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15946SI.D Vial: 8
Acq On : 28 May 2003 8:56 pm Operator: JR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

5.29.03
VMT 5/29/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 221466 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 8.34 | 96 | 499090 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.16 | 117 | 325937 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 147595 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 8.47 | 114 | 400300 | 4.42 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 110.50% | | | |
| 54) Bromofluorobenzene | 15.09 | 95 | 159621 | 3.39 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 84.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 17.60 | 152 | 111550 | 3.52 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 88.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 629314 | 19.32 | ug/L | 98 |
| 3) Chloromethane | 1.84 | 50 | 490799 | 19.63 | ug/L | 95 |
| 4) Vinyl Chloride | 1.92 | 62 | 237587 | 14.82 | ug/L | 98 |
| 5) Bromomethane | 2.39 | 94 | 191439 | 25.21 | ug/L | 98 |
| 6) Chloroethane | 2.48 | 64 | 210508 | 19.57 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 43846 | 95.52 | ug/L # | 77 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 517102 | 18.92 | ug/L | 98 |
| 9) Diethyl ether | 3.17 | 74 | 96922 | 20.60 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 327119 | 19.82 | ug/L | 94 |
| 12) Acetone | 3.42 | 43 | 155879 | 83.02 | ug/L # | 85 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 290430 | 20.52 | ug/L | 99 |
| 14) Methyl iodide | 4.03 | 142 | 497189 | 23.21 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 1005620 | 20.76 | ug/L | 97 |
| 16) Methylene Chloride | 4.33 | 84 | 299168 | 20.41 | ug/L | 93 |
| 17) Carbon Disulfide | 4.30 | 76 | 931043 | 22.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 38308 | 21.41 | ug/L | 93 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 446386 | 19.37 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 316835 | 19.83 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 601150 | 20.65 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 15361 | 25.92 | ug/L # | 23 |
| 23) Methyl ethyl ketone | 6.23 | 43 | 267761 | 82.46 | ug/L | 95 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 767105 | 21.00 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 411858 | 15.23 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 338971 | 13.31 | ug/L | 90 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 761605 | 20.10 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 719716 | 17.51 | ug/L | 98 |
| 30) Bromochloromethane | 6.96 | 128 | 159689 | 17.09 | ug/L # | 76 |

(#) = qualifier out of range (m) = manual integration



000149

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15946SI.D Vial: 8
Acq On : 28 May 2003 8:56 pm Operator: JR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.07 | 71 | 15971 | 22.79 ug/L | | 99 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 615575 | 18.83 ug/L | | 99 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 686312 | 20.02 ug/L | | 96 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 495891 | 18.62 ug/L | | 100 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 382203 | 18.83 ug/L | | 97 |
| 38) Benzene | 8.00 | 78 | 1939253 | 19.52 ug/L | | 99 |
| 40) Trichloroethene | 8.96 | 95 | 486926 | 15.54 ug/L | | 95 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 500842 | 18.52 ug/L | | 97 |
| 42) Methylmethacrylate | 9.37 | 69 | 154201 | 18.92 ug/L | | 94 |
| 45) Bromodichloromethane | 9.59 | 83 | 463474 | 17.28 ug/L | | 93 |
| 46) Dibromomethane | 9.65 | 93 | 187698 | 16.29 ug/L | # | 87 |
| 50) 2-Chloroethylvinyl ether | 10.15 | 63 | 1071 | 8.24 ug/L | # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 383103 | 91.38 ug/L | | 98 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 397881 | 92.17 ug/L | | 92 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 612868 | 17.89 ug/L | | 94 |
| 55) Toluene | 10.93 | 92 | 1169106 | 15.59 ug/L | | 100 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 412952 | 18.31 ug/L | | 97 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 206500 | 16.17 ug/L | | 99 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 449718 | 16.68 ug/L | | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 444074 | 12.64 ug/L | | 98 |
| 61) Dibromochloromethane | 12.24 | 129 | 260863 | 16.32 ug/L | | 94 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 220140 | 15.27 ug/L | | 96 |
| 64) Chlorobenzene | 13.22 | 112 | 1163988 | 17.16 ug/L | | 92 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 336379 | 17.84 ug/L | | 99 |
| 66) Ethylbenzene | 13.31 | 91 | 2277675 | 18.16 ug/L | | 97 |
| 67) m,p-Xylene | 13.44 | 106 | 1592866 | 34.51 ug/L | | 95 |
| 68) o-Xylene | 14.12 | 106 | 762501 | 17.77 ug/L | | 96 |
| 69) Styrene | 14.17 | 104 | 1228475 | 17.79 ug/L | | 95 |
| 70) Bromoform | 14.70 | 173 | 116333 | 17.74 ug/L | | 97 |
| 71) Isopropylbenzene | 14.70 | 105 | 2097035 | 17.75 ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 257768 | 19.17 ug/L | | 96 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 179459 | 18.02 ug/L | | 98 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 81272 | 21.96 ug/L | | 96 |
| 76) n-Propylbenzene | 15.35 | 91 | 2767377 | 18.23 ug/L | | 99 |
| 77) Bromobenzene | 15.40 | 156 | 382950 | 15.71 ug/L | | 93 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 1634230 | 17.61 ug/L | | 99 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 1725397 | 18.20 ug/L | | 97 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 1487416 | 17.29 ug/L | | 95 |
| 81) tert-butylbenzene | 16.16 | 119 | 1407636 | 16.90 ug/L | | 92 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 1664555 | 17.49 ug/L | | 96 |
| 83) Pentachloroethane | 16.25 | 167 | 206698 | 18.38 ug/L | # | 79 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\052803-B\B15946SI.D Vial: 8
Acq On : 28 May 2003 8:56 pm Operator: JR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Quant Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Tue May 27 16:04:50 2003
Response via : Initial Calibration
DataAcq Meth : V505283B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 84) sec-butylbenzene | 16.51 | 105 | 2218046 | 17.74 ug/L | 97 |
| 85) p-isopropyltoluene | 16.74 | 119 | 1747040 | 17.11 ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 822274 | 15.93 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 805862 | 17.19 ug/L | 98 |
| 89) n-butylbenzene | 17.41 | 91 | 1885477 | 19.92 ug/L | 97 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 652247 | 17.15 ug/L | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 31181 | 19.64 ug/L | 88 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 402778 | 16.49 ug/L | 100 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 154028 | 15.09 ug/L | 99 |
| 96) Naphthalene | 20.80 | 128 | 640873 | 18.86 ug/L | 99 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 307168 | 16.55 ug/L | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 573404 | 16.42 ug/L | 100 |

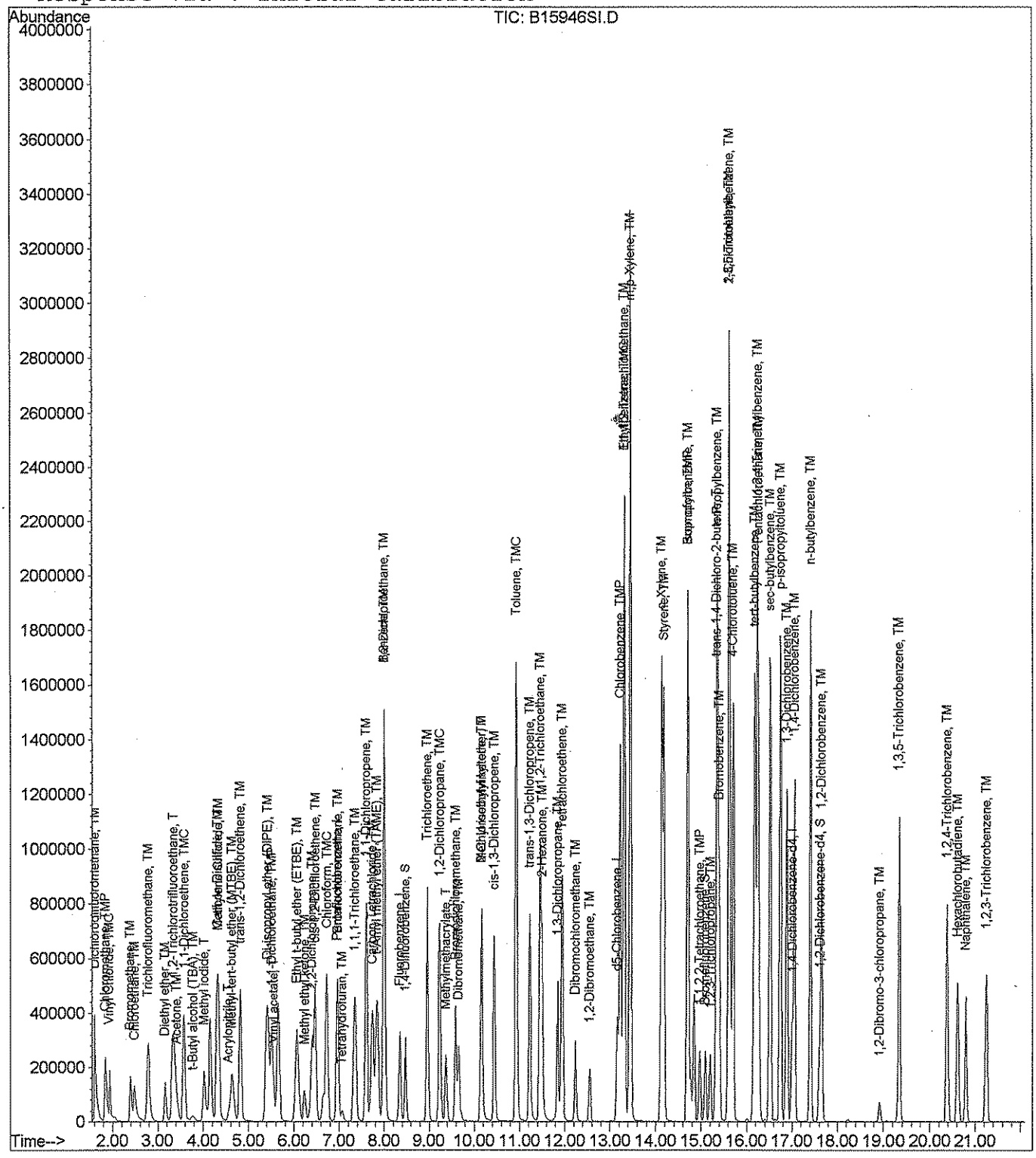
(#) = qualifier out of range (m) = manual integration



000151

Data File : C:\HPCHEM\1\DATA\052803-B\B15946SI.D Vial: 8
Acq On : 28 May 2003 8:56 pm Operator: JR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 29 12:40 2003 Quant Results File: V505283B.

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:57:59 2003
Response via : Initial Calibration






000152

## 524 RECOVERY

| | |
|---|---|
| Data File Name | B15996Q.D |
| Sample Name | L506053B |
| Date | 5 Jun 2003 9:29 am |

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.07 | 1.2 | 89% | OK |
| Chloromethane | 1.30 | 1.2 | 108% | OK |
| Vinyl Chloride | 1.51 | 1.2 | 126% | OK |
| Bromomethane | 1.07 | 1.2 | 89% | OK |
| Chloroethane | 1.24 | 1.2 | 104% | OK |
| t-Butyl alcohol (TBA) | 4.83 | 6.0 | 80% | OK |
| Trichlorofluoromethane | 1.23 | 1.2 | 102% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.31 | 1.2 | 109% | OK |
| Acetone | 1.55 | 1.2 | 129% | OK |
| 1,1-Dichloroethene | 1.23 | 1.2 | 103% | OK |
| Di-isopropyl ether (DIPE) | 1.21 | 1.2 | 101% | OK |
| Methylene Chloride | 1.15 | 1.2 | 96% | OK |
| Methyl-tert-butyl ether (MTBE) | 2.37 | 2.4 | 99% | OK |
| trans-1,2-Dichloroethene | 1.26 | 1.2 | 105% | OK |
| 1,1-Dichloroethane | 1.24 | 1.2 | 103% | OK |
| Methyl ethyl ketone | 1.19 | 1.2 | 99% | OK |
| Ethyl t-butyl ether (ETBE) | 1.10 | 1.2 | 92% | OK |
| 2,2-Dichloropropane | 1.27 | 1.2 | 106% | OK |
| cis-1,2-Dichloroethene | 1.07 | 1.2 | 89% | OK |
| t-Amyl methyl ether (TAME) | 1.12 | 1.2 | 94% | OK |
| Chloroform | 1.22 | 1.2 | 101% | OK |
| Bromochloromethane | 1.20 | 1.2 | 100% | OK |
| Tetrahydrofuran | 1.27 | 1.2 | 106% | OK |
| 1,1,1-Trichloroethane | 1.19 | 1.2 | 99% | OK |
| 1,1-Dichloropropene | 1.22 | 1.2 | 102% | OK |
| Carbon Tetrachloride | 1.18 | 1.2 | 98% | OK |
| 1,2-Dichloroethane | 1.22 | 1.2 | 101% | OK |
| Benzene | 1.21 | 1.2 | 101% | OK |
| Trichloroethene | 1.33 | 1.2 | 111% | OK |
| 1,2-Dichloropropane | 1.24 | 1.2 | 104% | OK |
| Bromodichloromethane | 1.19 | 1.2 | 99% | OK |
| Dibromomethane | 1.17 | 1.2 | 97% | OK |
| 2-Hexanone | 0.97 | 1.2 | 81% | OK |
| Methyl isobutyl ketone | 0.98 | 1.2 | 82% | OK |
| cis-1,3-Dichloropropene | 1.21 | 1.2 | 101% | OK |
| Toluene | 1.20 | 1.2 | 100% | OK |
| trans-1,3-Dichloropropene | 1.18 | 1.2 | 98% | OK |
| 1,1,2-Trichloroethane | 1.22 | 1.2 | 101% | OK |
| 1,3-Dichloropropane | 1.19 | 1.2 | 99% | OK |
| Tetrachloroethene | 1.29 | 1.2 | 108% | OK |
| Dibromochloromethane | 1.08 | 1.2 | 90% | OK |
| 1,2-Dibromoethane | 1.18 | 1.2 | 98% | OK |
| Chlorobenzene | 1.19 | 1.2 | 100% | OK |
| 1,1,1,2-Tetrachloroethane | 1.23 | 1.2 | 102% | OK |
| Ethylbenzene | 1.20 | 1.2 | 100% | OK |
| m,p-Xylene | 2.40 | 2.4 | 100% | OK |
| o-Xylene | 1.19 | 1.2 | 99% | OK |
| Styrene | 1.18 | 1.2 | 98% | OK |

6.6.03

VMTI 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.01 | 1.2 | 84% | OK |
| Isopropylbenzene | 1.12 | 1.2 | 93% | OK |
| 1,1,2,2-Tetrachloroethane | 1.14 | 1.2 | 95% | OK |
| 1,2,3-Trichloropropane | 1.12 | 1.2 | 93% | OK |
| n-Propylbenzene | 1.17 | 1.2 | 98% | OK |
| Bromobenzene | 1.17 | 1.2 | 98% | OK |
| 1,3,5-Trimethylbenzene | 1.17 | 1.2 | 98% | OK |
| 2-Chlorotoluene | 1.21 | 1.2 | 101% | OK |
| 4-Chlorotoluene | 1.14 | 1.2 | 95% | OK |
| tert-butylbenzene | 1.17 | 1.2 | 98% | OK |
| 1,2,4-Trimethylbenzene | 1.20 | 1.2 | 100% | OK |
| sec-butylbenzene | 1.19 | 1.2 | 99% | OK |
| p-isopropyltoluene | 1.14 | 1.2 | 95% | OK |
| 1,3-Dichlorobenzene | 1.17 | 1.2 | 98% | OK |
| 1,4-Dichlorobenzene | 1.16 | 1.2 | 97% | OK |
| n-butylbenzene | 1.17 | 1.2 | 97% | OK |
| 1,2-Dichlorobenzene | 1.18 | 1.2 | 99% | OK |
| 1,2-Dibromo-3-chloropropane | 1.17 | 1.2 | 97% | OK |
| 1,2,4-Trichlorobenzene | 1.16 | 1.2 | 97% | OK |
| Hexachlorobutadiene | 1.30 | 1.2 | 108% | OK |
| Naphthalene | 1.06 | 1.2 | 89% | OK |
| 1,2,3-Trichlorobenzene | 1.14 | 1.2 | 95% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B15996Q.D  Vial: 3
Acq On : 5 Jun 2003 9:29 am  Operator: JR
Sample : L506053B  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

6.6.03 VMT 6/6/03

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 107 | 0.00 | |
| 2 | TM | Dichlorodifluoromethane | 0.721 | 0.644 | 10.7 | 96 | 0.00 | |
| 3 | TMP | Chloromethane | 0.610 | 0.659 | -8.0 | 112 | 0.00 | |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.464 | -25.7# | 114 | 0.00 | |
| 5 | TM | Bromomethane | 0.170 | 0.151 | 11.2 | 109 | 0.00 | |
| 6 | TM | Chloroethane | 0.249 | 0.258 | -3.6 | 109 | 0.00 | |
| 7 | TM | t-Butyl alcohol (TBA) | 0.009 | 0.008# | 11.1 | 83 | 0.01 | |
| 8 | TM | Trichlorofluoromethane | 0.589 | 0.603 | -2.4 | 109 | 0.00 | |
| 9 | TM | Diethyl ether | 0.105 | 0.108 | -2.9 | 109 | 0.01 | |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.371 | 0.404 | -8.9 | 115 | 0.00 | |
| 11 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.10~~ | MJG 6-20 |
| 12 | TM | Acetone | 0.038 | 0.010# see RPT | 73.7# | 27# | 0.01 | |
| 13 | TMC | 1,1-Dichloroethene | 0.321 | 0.330 | -2.8 | 109 | 0.00 | |
| 14 | T | Methyl iodide | 0.444 | 0.316 | 28.8# | 88 | 0.00 | |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.137 | 1.145 | -0.7 | 107 | 0.01 | |
| 16 | TM | Methylene Chloride | 0.508 | 0.538 | -5.9 | 105 | 0.00 | |
| 17 | TM | Carbon Disulfide | 0.999 | 0.894 | 10.5 | 98 | 0.00 | |
| 18 | T | Acrylonitrile | ~~0.042~~ | ~~0.040#~~ | ~~4.8~~ | ~~101~~ | ~~0.01~~ | NT |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.495 | 0.977 see RPT | -97.4# | 214# | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.354 | 0.370 | -4.5 | 111 | 0.00 | |
| 21 | TMP | 1,1-Dichloroethane | 0.681 | 0.703 | -3.2 | 107 | 0.00 | |
| 22 | T | Vinyl acetate | ~~0.014~~ | ~~0.028#~~ | ~~-100.0#~~ | ~~241#~~ | ~~0.00~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.071 | 0.014# see RPT | 80.3# | 21# | 0.01 | |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 0.920 | 0.846 | 8.0 | 107 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.508 | 0.537 | -5.7 | 102 | 0.00 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.451 | 0.400 | 11.3 | 80 | 0.00 | |
| 27 | TM | t-Amyl methyl ether (TAME) | 0.845 | 0.792 | 6.3 | 102 | 0.00 | |
| 28 | T | No Compound | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | MJG 6-20 |
| 29 | TMC | Chloroform | 0.835 | 0.847 | -1.4 | 100 | 0.00 | |
| 30 | TM | Bromochloromethane | 0.180 | 0.180 | 0.0 | 105 | 0.00 | |
| 31 | TM | Tetrahydrofuran | 0.016 | 0.017# | -6.3 | 112 | 0.00 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.679 | 0.672 | 1.0 | 105 | 0.00 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ | MJG 6-20 |
| 34 | TM | 1,1-Dichloropropene | 0.785 | 0.801 | -2.0 | 107 | 0.00 | |
| 35 | TM | Carbon Tetrachloride | 0.523 | 0.514 | 1.7 | 107 | 0.00 | |
| 36 | S | 1,4-Difluorobenzene | 1.813 | 1.791 | 1.2 | 105 | 0.00 | |
| 37 | TM | 1,2-Dichloroethane | 0.440 | 0.446 | -1.4 | 105 | 0.00 | |
| 38 | TM | Benzene | 2.275 | 2.288 | -0.6 | 104 | 0.00 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 105 | 0.00 | |
| 40 | TM | Trichloroethene | 0.247 | 0.274 | -10.9 | 114 | 0.00 | |

(#) = Out of Range



000155

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B15996Q.D  Vial: 3
Acq On : 5 Jun 2003 9:29 am  Operator: JR
Sample : L506053B  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.254 | 0.263 | -3.5 | 105 | 0.00 |
| 42 | T | Methylmethacrylate | 0.072 | 0.064# | 11.1 | 96 | 0.00 |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ |
| 45 | TM | Bromodichloromethane | 0.219 | 0.217 | 0.9 | 105 | 0.00 |
| 46 | TM | Dibromomethane | 0.092 | 0.090# | 2.2 | 104 | 0.00 |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.43 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.43 |
| 50 | T | 2-Chloroethylvinyl ether | ~~0.001~~ | ~~0.000#~~ | ~~100.0#~~ | ~~0#~~ | ~~-10.16#~~ |
| 51 | TM | 2-Hexanone | 0.037 | 0.006# | 83.8# | 17# | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.039 | 0.006# | 84.6# | 17# | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.289 | 0.292 | -1.0 | 109 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.314 | 0.315 | -0.3 | 106 | 0.00 |
| 55 | TMC | Toluene | 0.589 | 0.590 | -0.2 | 102 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.184 | 0.181 | 1.6 | 111 | 0.00 |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ |
| 58 | TM | 1,1,2-Trichloroethane | 0.105 | 0.106 | -1.0 | 103 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.225 | 0.224 | 0.4 | 103 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.221 | 0.237 | -7.2 | 111 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.116 | 0.105 | 9.5 | 103 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.107 | 0.105 | 1.9 | 102 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 108 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.906 | 0.902 | 0.4 | 105 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.245 | 0.250 | -2.0 | 113 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.801 | 1.795 | 0.3 | 104 | 0.00 |
| 67 | TM | m,p-Xylene | 0.631 | 0.631 | 0.0 | 104 | 0.00 |
| 68 | TM | o-Xylene | 0.586 | 0.580 | 1.0 | 106 | 0.00 |
| 69 | TM | Styrene | 0.943 | 0.928 | 1.6 | 106 | 0.00 |
| 70 | TMP | Bromoform | 0.074 | 0.063# | 14.9 | 102 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.632 | 1.523 | 6.7 | 98 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.194 | 0.185 | 4.6 | 102 | 0.00 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.338 | 0.331 | 2.1 | 107 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.143 | 0.133 | 7.0 | 98 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.060 | 0.055# | 8.3 | 100 | 0.00 |
| 76 | TM | n-Propylbenzene | 2.164 | 2.119 | 2.1 | 103 | 0.00 |
| 77 | TM | Bromobenzene | 0.294 | 0.288 | 2.0 | 103 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.269 | 1.241 | 2.2 | 103 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.347 | 1.361 | -1.0 | 105 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.181 | 1.121 | 5.1 | 101 | 0.00 |

(#) = Out of Range



000156

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B15996Q.D  Vial: 3
Acq On : 5 Jun 2003 9:29 am  Operator: JR
Sample : L506053B  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.079 | 1.053 | 2.4 | 104 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.290 | 1.293 | -0.2 | 106 | 0.00 |
| 83 | TM | Pentachloroethane | 0.139 | 0.127 | 8.6 | 106 | 0.00 |
| 84 | TM | sec-butylbenzene | 1.706 | 1.695 | 0.6 | 105 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.329 | 1.262 | 5.0 | 103 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.626 | 0.610 | 2.6 | 104 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 108 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.387 | 1.341 | 3.3 | 101 | 0.00 |
| 89 | TM | n-butylbenzene | 3.259 | 3.167 | 2.8 | 102 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.118 | 1.103 | 1.3 | 105 | 0.00 |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ 5/6/03 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.046 | 0.045# | 2.2 | 114 | 0.00 |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ 5/6/03 |
| 1 | TM | 1,2,4-Trichlorobenzene | 0.667 | 0.648 | 2.8 | 105 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.256 | 0.277 | -8.2 | 117 | 0.00 |
| 96 | TM | Naphthalene | 1.035 | 0.917 | 11.4 | 98 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.510 | 0.485 | 4.9 | 102 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.957 | 0.868 | 9.3 | 96 | 0.00 |

## 524 RECOVERY

Data File Name **B16014Q.D**
Sample Name **L506053B2**
Date **5 Jun 2003 10:34 pm**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.96 | 1.2 | 80% | OK |
| Chloromethane | 1.25 | 1.2 | 104% | OK |
| Vinyl Chloride | 1.43 | 1.2 | 119% | OK |
| Bromomethane | 0.93 | 1.2 | 77% | OK |
| Chloroethane | 1.08 | 1.2 | 90% | OK |
| t-Butyl alcohol (TBA) | 6.13 | 6.0 | 102% | OK |
| Trichlorofluoromethane | 1.14 | 1.2 | 95% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.18 | 1.2 | 99% | OK |
| Acetone | 1.90 | 1.2 | 158% | * |
| 1,1-Dichloroethene | 1.17 | 1.2 | 97% | OK |
| Di-isopropyl ether (DIPE) | 1.21 | 1.2 | 101% | OK |
| Methylene Chloride | 1.17 | 1.2 | 98% | OK |
| Methyl-tert-butyl ether (MTBE) | 2.54 | 2.4 | 106% | OK |
| trans-1,2-Dichloroethene | 1.21 | 1.2 | 101% | OK |
| 1,1-Dichloroethane | 1.21 | 1.2 | 101% | OK |
| Methyl ethyl ketone | 1.31 | 1.2 | 109% | OK |
| Ethyl t-butyl ether (ETBE) | 1.16 | 1.2 | 97% | OK |
| 2,2-Dichloropropane | 0.93 | 1.2 | 77% | OK |
| cis-1,2-Dichloroethene | 1.08 | 1.2 | 90% | OK |
| t-Amyl methyl ether (TAME) | 1.21 | 1.2 | 101% | OK |
| Chloroform | 1.35 | 1.2 | 113% | OK |
| romochloromethane | 1.32 | 1.2 | 110% | OK |
| etrahydrofuran | 1.59 | 1.2 | 133% | * |
| 1,1,1-Trichloroethane | 1.20 | 1.2 | 100% | OK |
| 1,1-Dichloropropene | 1.20 | 1.2 | 100% | OK |
| Carbon Tetrachloride | 1.18 | 1.2 | 98% | OK |
| 1,2-Dichloroethane | 1.32 | 1.2 | 110% | OK |
| Benzene | 1.22 | 1.2 | 101% | OK |
| Trichloroethene | 1.37 | 1.2 | 114% | OK |
| 1,2-Dichloropropane | 1.32 | 1.2 | 110% | OK |
| Bromodichloromethane | 1.28 | 1.2 | 107% | OK |
| Dibromomethane | 1.32 | 1.2 | 110% | OK |
| 2-Hexanone | 1.17 | 1.2 | 98% | OK |
| Methyl isobutyl ketone | 1.14 | 1.2 | 95% | OK |
| cis-1,3-Dichloropropene | 1.28 | 1.2 | 106% | OK |
| Toluene | 1.27 | 1.2 | 106% | OK |
| trans-1,3-Dichloropropene | 1.22 | 1.2 | 102% | OK |
| 1,1,2-Trichloroethane | 1.35 | 1.2 | 113% | OK |
| 1,3-Dichloropropane | 1.31 | 1.2 | 110% | OK |
| Tetrachloroethene | 1.33 | 1.2 | 111% | OK |
| Dibromochloromethane | 1.20 | 1.2 | 100% | OK |
| 1,2-Dibromoethane | 1.32 | 1.2 | 110% | OK |
| Chlorobenzene | 1.22 | 1.2 | 101% | OK |
| 1,1,1,2-Tetrachloroethane | 1.24 | 1.2 | 104% | OK |
| Ethylbenzene | 1.19 | 1.2 | 99% | OK |
| ,p-Xylene | 2.41 | 2.4 | 101% | OK |
| o-Xylene | 1.22 | 1.2 | 102% | OK |
| Styrene | 1.23 | 1.2 | 102% | OK |

6.6.03
VMT 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.08 | 1.2 | 90% | OK |
| Isopropylbenzene | 1.12 | 1.2 | 93% | OK |
| 1,1,2,2-Tetrachloroethane | 1.23 | 1.2 | 103% | OK |
| 1,2,3-Trichloropropane | 1.21 | 1.2 | 100% | OK |
| -Propylbenzene | 1.17 | 1.2 | 98% | OK |
| Bromobenzene | 1.22 | 1.2 | 102% | OK |
| 1,3,5-Trimethylbenzene | 1.19 | 1.2 | 99% | OK |
| 2-Chlorotoluene | 1.19 | 1.2 | 100% | OK |
| 4-Chlorotoluene | 1.21 | 1.2 | 101% | OK |
| tert-butylbenzene | 1.17 | 1.2 | 98% | OK |
| 1,2,4-Trimethylbenzene | 1.23 | 1.2 | 102% | OK |
| sec-butylbenzene | 1.19 | 1.2 | 99% | OK |
| p-isopropyltoluene | 1.14 | 1.2 | 95% | OK |
| 1,3-Dichlorobenzene | 1.22 | 1.2 | 102% | OK |
| 1,4-Dichlorobenzene | 1.19 | 1.2 | 99% | OK |
| n-butylbenzene | 1.12 | 1.2 | 93% | OK |
| 1,2-Dichlorobenzene | 1.21 | 1.2 | 100% | OK |
| 1,2-Dibromo-3-chloropropane | 1.12 | 1.2 | 94% | OK |
| 1,2,4-Trichlorobenzene | 1.20 | 1.2 | 100% | OK |
| Hexachlorobutadiene | 1.24 | 1.2 | 104% | OK |
| Naphthalene | 1.14 | 1.2 | 95% | OK |
| 1,2,3-Trichlorobenzene | 1.24 | 1.2 | 103% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16014Q.D  Vial: 21
Acq On : 5 Jun 2003 10:34 pm  Operator: JR
Sample : L506053B2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

6.6.03 VMT 6/6/03

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 102 | 0.00 | |
| 2 | TM | Dichlorodifluoromethane | 0.721 | 0.574 | 20.4# | 82 | 0.00 | |
| 3 | TMP | Chloromethane | 0.610 | 0.636 | -4.3 | 103 | 0.00 | |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.439 | -19.0 | 103 | 0.00 | |
| 5 | TM | Bromomethane | 0.170 | 0.131 | 22.9# | 91 | 0.00 | |
| 6 | TM | Chloroethane | 0.249 | 0.224 | 10.0 | 90 | 0.00 | |
| 7 | TM | t-Butyl alcohol (TBA) | 0.009 | 0.010# | -11.1 | 101 | 0.00 | |
| 8 | TM | Trichlorofluoromethane | 0.589 | 0.561 | 4.8 | 97 | 0.00 | |
| 9 | TM | Diethyl ether | 0.105 | 0.104 | 1.0 | 101 | 0.00 | |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.371 | 0.365 | 1.6 | 99 | 0.00 | |
| 11 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.10~~ | 6.6.03 |
| 12 | TM | Acetone | 0.038 | 0.012# | 68.4# | 32# | 0.01 | |
| 13 | TMC | 1,1-Dichloroethene | 0.321 | 0.312 | 2.8 | 98 | 0.00 | |
| 14 | T | Methyl iodide | 0.444 | 0.351 | 20.9# | 94 | 0.00 | |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.137 | 1.147 | -0.9 | 102 | 0.01 | |
| 16 | TM | Methylene Chloride | 0.508 | 0.543 | -6.9 | 102 | 0.00 | |
| 17 | TM | Carbon Disulfide | 0.999 | 0.822 | 17.7 | 86 | 0.00 | |
| 18 | T | Acrylonitrile | ~~0.042~~ | ~~0.045#~~ | ~~7.1~~ | ~~111~~ | ~~0.00~~ | NT |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.495 | 1.045 | -111.1# | 219# | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.354 | 0.356 | -0.6 | 102 | 0.00 | |
| 21 | TMP | 1,1-Dichloroethane | 0.681 | 0.688 | -1.0 | 100 | 0.00 | |
| 22 | T | Vinyl acetate | ~~0.014~~ | ~~0.022#~~ | ~~-57.1#~~ | ~~180~~ | ~~0.00~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.071 | 0.016# | 77.5# | 23# | 0.00 | |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 0.920 | 0.889 | 3.4 | 108 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.508 | 0.393 | 22.6# | 72 | 0.00 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.451 | 0.404 | 10.4 | 78 | 0.00 | |
| 27 | TM | t-Amyl methyl ether (TAME) | 0.845 | 0.854 | -1.1 | 105 | 0.00 | |
| 28 | T | No Compound | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | 6.6.03 |
| 29 | TMC | Chloroform | 0.835 | 0.942 | -12.8 | 107 | 0.00 | |
| 30 | TM | Bromochloromethane | 0.180 | 0.198 | -10.0 | 110 | 0.00 | |
| 31 | TM | Tetrahydrofuran | 0.016 | 0.021# | 31.3# | 134 | 0.00 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.679 | 0.679 | 0.0 | 101 | 0.00 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | 6.6.03 |
| 34 | TM | 1,1-Dichloropropene | 0.785 | 0.783 | 0.3 | 100 | 0.00 | |
| 35 | TM | Carbon Tetrachloride | 0.523 | 0.515 | 1.5 | 102 | 0.00 | |
| 36 | S | 1,4-Difluorobenzene | 1.813 | 1.770 | 2.4 | 99 | 0.00 | |
| 37 | TM | 1,2-Dichloroethane | 0.440 | 0.483 | -9.8 | 108 | 0.00 | |
| 38 | TM | Benzene | 2.275 | 2.304 | -1.3 | 100 | 0.00 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.00 | |
| 40 | TM | Trichloroethene | 0.247 | 0.282 | -14.2 | 109 | 0.00 | |

(#) = Out of Range



000160

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16014Q.D  Vial: 21
Acq On : 5 Jun 2003 10:34 pm  Operator: JR
Sample : L506053B2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.254 | 0.280 | -10.2 | 104 | 0.00 | |
| 42 | T | Methylmethacrylate | ~~0.072~~ | ~~0.075#~~ | ~~4.2~~ | ~~104~~ | ~~0.00~~ | NT |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | 06219 |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | 06219 |
| 45 | TM | Bromodichloromethane | 0.219 | 0.234 | -6.8 | 105 | 0.00 | |
| 46 | TM | Dibromomethane | 0.092 | 0.101 | -9.8 | 109 | 0.00 | |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.43 | |
| 49 | T | NO COMPOUND | 0.000 | 0.000# 06210 | 0.0 | 0# | -0.43 | |
| 50 | T | 2-Chloroethylvinyl ether | ~~0.001~~ | ~~0.000#~~ | ~~100.0#~~ | ~~0#~~ | ~~-10.16#~~ | NT |
| 51 | TM | 2-Hexanone | 0.037 | 0.007# | 81.1# | 20# | 0.00 | |
| 52 | TM | Methyl isobutyl ketone | 0.039 | 0.007# | 82.1# | 19# | 0.00 | |
| 53 | TM | cis-1,3-Dichloropropene | 0.289 | 0.308 | -6.6 | 107 | 0.00 | |
| 54 | S | Bromofluorobenzene | 0.314 | 0.330 | -5.1 | 103 | 0.00 | |
| 55 | TMC | Toluene | 0.589 | 0.626 | -6.3 | 101 | 0.00 | |
| 56 | TM | trans-1,3-Dichloropropene | 0.184 | 0.187 | -1.6 | 107 | 0.00 | |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | 06219 |
| 58 | TM | 1,1,2-Trichloroethane | 0.105 | 0.118 | -12.4 | 107 | 0.00 | |
| 59 | TM | 1,3-Dichloropropane | 0.225 | 0.247 | -9.8 | 106 | 0.00 | |
| 60 | TM | Tetrachloroethene | 0.221 | 0.244 | -10.4 | 106 | 0.00 | |
| 61 | TM | Dibromochloromethane | 0.116 | 0.116 | 0.0 | 106 | 0.00 | |
| 62 | TM | 1,2-Dibromoethane | 0.107 | 0.117 | -9.3 | 106 | 0.00 | |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 104 | 0.00 | |
| 64 | TMP | Chlorobenzene | 0.906 | 0.919 | -1.4 | 103 | 0.00 | |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.245 | 0.254 | -3.7 | 111 | 0.00 | |
| 66 | TMC | Ethylbenzene | 1.801 | 1.780 | 1.2 | 99 | 0.00 | |
| 67 | TM | m,p-Xylene | 0.631 | 0.635 | -0.6 | 101 | 0.00 | |
| 68 | TM | o-Xylene | 0.586 | 0.597 | -1.9 | 105 | 0.00 | |
| 69 | TM | Styrene | 0.943 | 0.965 | -2.3 | 106 | 0.00 | |
| 70 | TMP | Bromoform | 0.074 | 0.067# | 9.5 | 105 | 0.00 | |
| 71 | TM | Isopropylbenzene | 1.632 | 1.521 | 6.8 | 94 | 0.00 | |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.194 | 0.200 | -3.1 | 106 | 0.00 | |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.338 | 0.347 | -2.7 | 108 | 0.00 | |
| 74 | TM | 1,2,3-Trichloropropane | 0.143 | 0.143 | 0.0 | 101 | 0.00 | |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.060 | 0.054# | 10.0 | 94 | 0.00 | |
| 76 | TM | n-Propylbenzene | 2.164 | 2.118 | 2.1 | 100 | 0.00 | |
| 77 | TM | Bromobenzene | 0.294 | 0.300 | -2.0 | 104 | 0.00 | |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.269 | 1.254 | 1.2 | 101 | 0.00 | |
| 79 | TM | 2-Chlorotoluene | 1.347 | 1.340 | 0.5 | 100 | 0.00 | |
| 80 | TM | 4-Chlorotoluene | 1.181 | 1.194 | -1.1 | 104 | 0.00 | |

(#) = Out of Range



000161

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16014Q.D  Vial: 21
Acq On : 5 Jun 2003 10:34 pm  Operator: JR
Sample : L506053B2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.079 | 1.055 | 2.2 | 101 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.290 | 1.320 | -2.3 | 104 | 0.00 | |
| 83 | TM | Pentachloroethane | 0.139 | 0.139 | 0.0 | 112 | 0.00 | |
| 84 | TM | sec-butylbenzene | 1.706 | 1.693 | 0.8 | 101 | 0.00 | |
| 85 | TM | p-isopropyltoluene | 1.329 | 1.259 | 5.3 | 99 | 0.00 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.626 | 0.638 | -1.9 | 105 | 0.00 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 107 | 0.00 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.387 | 1.372 | 1.1 | 103 | 0.00 | |
| 89 | TM | n-butylbenzene | 3.259 | 3.039 | 6.8 | 97 | 0.00 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.118 | 1.123 | -0.4 | 106 | 0.00 | |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ | 15629 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.046 | 0.043# | 6.5 | 110 | 0.00 | |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ | 15629 |
| | TM | 1,2,4-Trichlorobenzene | 0.667 | 0.667 | 0.0 | 107 | 0.00 | |
| 95 | TM | Hexachlorobutadiene | 0.256 | 0.265 | -3.5 | 111 | 0.00 | |
| 96 | TM | Naphthalene | 1.035 | 0.983 | 5.0 | 104 | 0.00 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.510 | 0.526 | -3.1 | 110 | 0.00 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.957 | 0.886 | 7.4 | 97 | 0.00 | |

(#) = Out of Range  SPCC's out = 1  CCC's out = 0

## 524 RECOVERY

Data File Name **B16015Q.D**
Sample Name **L506053B3**
Date **5 Jun 2003 11:15 pm**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 0.95 | 1.2 | 79% | OK |
| Chloromethane | 1.23 | 1.2 | 103% | OK |
| Vinyl Chloride | 1.37 | 1.2 | 114% | OK |
| Bromomethane | 0.83 | 1.2 | 70% | OK |
| Chloroethane | 1.11 | 1.2 | 93% | OK |
| t-Butyl alcohol (TBA) | 6.50 | 6.0 | 108% | OK |
| Trichlorofluoromethane | 1.10 | 1.2 | 92% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.13 | 1.2 | 94% | OK |
| Acetone | 1.96 | 1.2 | 163% | * |
| 1,1-Dichloroethene | 1.14 | 1.2 | 95% | OK |
| Di-isopropyl ether (DIPE) | 1.21 | 1.2 | 101% | OK |
| Methylene Chloride | 1.26 | 1.2 | 105% | OK |
| Methyl-tert-butyl ether (MTBE) | 2.59 | 2.4 | 108% | OK |
| trans-1,2-Dichloroethene | 1.19 | 1.2 | 99% | OK |
| 1,1-Dichloroethane | 1.19 | 1.2 | 99% | OK |
| Methyl ethyl ketone | 1.27 | 1.2 | 106% | OK |
| Ethyl t-butyl ether (ETBE) | 1.17 | 1.2 | 97% | OK |
| 2,2-Dichloropropane | 0.88 | 1.2 | 73% | OK |
| cis-1,2-Dichloroethene | 1.06 | 1.2 | 89% | OK |
| t-Amyl methyl ether (TAME) | 1.26 | 1.2 | 105% | OK |
| Chloroform | 1.32 | 1.2 | 110% | OK |
| Bromochloromethane | 1.28 | 1.2 | 106% | OK |
| Tetrahydrofuran | 1.51 | 1.2 | 126% | OK |
| 1,1,1-Trichloroethane | 1.17 | 1.2 | 97% | OK |
| 1,1-Dichloropropene | 1.17 | 1.2 | 98% | OK |
| Carbon Tetrachloride | 1.15 | 1.2 | 96% | OK |
| 1,2-Dichloroethane | 1.31 | 1.2 | 109% | OK |
| Benzene | 1.19 | 1.2 | 99% | OK |
| Trichloroethene | 1.34 | 1.2 | 112% | OK |
| 1,2-Dichloropropane | 1.29 | 1.2 | 107% | OK |
| Bromodichloromethane | 1.30 | 1.2 | 108% | OK |
| Dibromomethane | 1.31 | 1.2 | 109% | OK |
| 2-Hexanone | 1.18 | 1.2 | 98% | OK |
| Methyl isobutyl ketone | 1.18 | 1.2 | 99% | OK |
| cis-1,3-Dichloropropene | 1.26 | 1.2 | 105% | OK |
| Toluene | 1.23 | 1.2 | 103% | OK |
| trans-1,3-Dichloropropene | 1.21 | 1.2 | 101% | OK |
| 1,1,2-Trichloroethane | 1.38 | 1.2 | 115% | OK |
| 1,3-Dichloropropane | 1.33 | 1.2 | 110% | OK |
| Tetrachloroethene | 1.29 | 1.2 | 108% | OK |
| Dibromochloromethane | 1.22 | 1.2 | 102% | OK |
| 1,2-Dibromoethane | 1.35 | 1.2 | 113% | OK |
| Chlorobenzene | 1.20 | 1.2 | 100% | OK |
| 1,1,1,2-Tetrachloroethane | 1.25 | 1.2 | 104% | OK |
| Ethylbenzene | 1.15 | 1.2 | 96% | OK |
| m,p-Xylene | 2.35 | 2.4 | 98% | OK |
| o-Xylene | 1.18 | 1.2 | 98% | OK |
| Styrene | 1.20 | 1.2 | 100% | OK |

6.6.03

VMC 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.15 | 1.2 | 96% | OK |
| Isopropylbenzene | 1.08 | 1.2 | 90% | OK |
| 1,1,2,2-Tetrachloroethane | 1.24 | 1.2 | 103% | OK |
| 1,2,3-Trichloropropane | 1.26 | 1.2 | 105% | OK |
| -Propylbenzene | 1.13 | 1.2 | 94% | OK |
| ɔromobenzene | 1.24 | 1.2 | 103% | OK |
| 1,3,5-Trimethylbenzene | 1.14 | 1.2 | 95% | OK |
| 2-Chlorotoluene | 1.19 | 1.2 | 99% | OK |
| 4-Chlorotoluene | 1.15 | 1.2 | 96% | OK |
| tert-butylbenzene | 1.13 | 1.2 | 94% | OK |
| 1,2,4-Trimethylbenzene | 1.18 | 1.2 | 99% | OK |
| sec-butylbenzene | 1.14 | 1.2 | 95% | OK |
| p-isopropyltoluene | 1.08 | 1.2 | 90% | OK |
| 1,3-Dichlorobenzene | 1.22 | 1.2 | 101% | OK |
| 1,4-Dichlorobenzene | 1.18 | 1.2 | 98% | OK |
| n-butylbenzene | 1.08 | 1.2 | 90% | OK |
| 1,2-Dichlorobenzene | 1.22 | 1.2 | 101% | OK |
| 1,2-Dibromo-3-chloropropane | 1.21 | 1.2 | 101% | OK |
| 1,2,4-Trichlorobenzene | 1.22 | 1.2 | 102% | OK |
| Hexachlorobutadiene | 1.22 | 1.2 | 101% | OK |
| Naphthalene | 1.20 | 1.2 | 100% | OK |
| 1,2,3-Trichlorobenzene | 1.23 | 1.2 | 102% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16015Q.D  Vial: 22
Acq On : 5 Jun 2003 11:15 pm  Operator: JR
Sample : L506053B3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

6.6.03
VMT 6/6/03

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 102 | 0.00 | |
| 2 | TM | Dichlorodifluoromethane | 0.721 | 0.571 | 20.8# | 81 | 0.00 | |
| 3 | TMP | Chloromethane | 0.610 | 0.627 | -2.8 | 101 | 0.00 | |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.421 | -14.1 | 98 | 0.00 | |
| 5 | TM | Bromomethane | 0.170 | 0.118 | 30.6# | 81 | 0.00 | |
| 6 | TM | Chloroethane | 0.249 | 0.231 | 7.2 | 92 | 0.00 | |
| 7 | TM | t-Butyl alcohol (TBA) | 0.009 | 0.010# | -11.1 | 106 | 0.02 | |
| 8 | TM | Trichlorofluoromethane | 0.589 | 0.540 | 8.3 | 93 | 0.00 | |
| 9 | TM | Diethyl ether | 0.105 | 0.109 | -3.8 | 105 | 0.00 | |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.371 | 0.350 | 5.7 | 94 | 0.00 | |
| 11 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.10~~ | 5/6/03 |
| 12 | TM | Acetone | 0.038 | 0.012# Area Out | 68.4# | 33# | 0.01 | |
| 13 | TMC | 1,1-Dichloroethene | 0.321 | 0.304 | 5.3 | 95 | 0.00 | |
| 14 | T | Methyl iodide | 0.444 | 0.297 | 33.1# | 79 | 0.00 | |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.137 | 1.144 | -0.6 | 101 | 0.01 | |
| 16 | TM | Methylene Chloride | 0.508 | 0.566 | -11.4 | 105 | 0.00 | |
| 17 | TM | Carbon Disulfide | 0.999 | 0.817 | 18.2 | 85 | 0.00 | |
| 18 | T | Acrylonitrile | ~~0.042~~ | ~~0.053#~~ | ~~-26.2#~~ | ~~129~~ | ~~0.00~~ | NT |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.495 | 1.068 | -115.8# | 222# | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.354 | 0.352 | 0.6 | 100 | 0.00 | |
| 21 | TMP | 1,1-Dichloroethane | 0.681 | 0.675 | 0.9 | 98 | 0.00 | |
| 22 | T | Vinyl acetate | ~~0.014~~ | ~~0.025#~~ | ~~78.6#~~ | ~~201#~~ | ~~0.00~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.071 | 0.015# Area Out | 78.9# | 22# | 0.01 | |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 0.920 | 0.894 | 2.8 | 108 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.508 | 0.372 | 26.8# | 67# | 0.00 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.451 | 0.400 | 11.3 | 76 | 0.00 | |
| 27 | TM | t-Amyl methyl ether (TAME) | 0.845 | 0.886 | -4.9 | 108 | 0.00 | |
| 28 | T | No Compound | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | 5/6/03 |
| 29 | TMC | Chloroform | 0.835 | 0.917 | -9.8 | 103 | 0.00 | |
| 30 | TM | Bromochloromethane | 0.180 | 0.191 | -6.1 | 106 | 0.00 | |
| 31 | TM | Tetrahydrofuran | 0.016 | 0.020# | -25.0# | 126 | 0.00 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.679 | 0.660 | 2.8 | 98 | 0.00 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | 5/6/03 |
| 34 | TM | 1,1-Dichloropropene | 0.785 | 0.769 | 2.0 | 97 | 0.00 | |
| 35 | TM | Carbon Tetrachloride | 0.523 | 0.500 | 4.4 | 99 | 0.00 | |
| 36 | S | 1,4-Difluorobenzene | 1.813 | 1.781 | 1.8 | 99 | 0.00 | |
| 37 | TM | 1,2-Dichloroethane | 0.440 | 0.479 | -8.9 | 107 | 0.00 | |
| 38 | TM | Benzene | 2.275 | 2.263 | 0.5 | 98 | 0.00 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.00 | |
| 40 | TM | Trichloroethene | 0.247 | 0.275 | -11.3 | 106 | 0.00 | |

(#) = Out of Range



000165

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16015Q.D  Vial: 22
Acq On : 5 Jun 2003 11:15 pm  Operator: JR
Sample : L506053B3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.254 | 0.272 | -7.1 | 101 | 0.00 | |
| 42 | T | Methylmethacrylate | ~~0.072~~ | ~~0.077#~~ | ~~6.9~~ | ~~107~~ | ~~0.00~~ | NT |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | MC 6219 |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | MC 6219 |
| 45 | TM | Bromodichloromethane | 0.219 | 0.236 | -7.8 | 106 | 0.00 | |
| 46 | TM | Dibromomethane | 0.092 | 0.100 | -8.7 | 108 | 0.00 | |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~-0.43~~ | |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | MC 6219 0.0 | 0# | -0.43 | |
| 49 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | 0.0 | 0# | -0.43 | |
| 50 | T | 2-Chloroethylvinyl ether | ~~0.001~~ | ~~0.000#~~ | ~~100.0#~~ | ~~0#~~ | ~~-10.16#~~ | NT |
| 51 | TM | 2-Hexanone | 0.037 | 0.007# | 81.1# | 20# | 0.00 | |
| 52 | TM | Methyl isobutyl ketone | 0.039 | 0.008# | 79.5# | 19# | 0.00 | |
| 53 | TM | cis-1,3-Dichloropropene | 0.289 | 0.304 | -5.2 | 105 | 0.00 | |
| 54 | S | Bromofluorobenzene | 0.314 | 0.332 | -5.7 | 104 | 0.00 | |
| | TMC | Toluene | 0.589 | 0.605 | -2.7 | 97 | 0.00 | |
| 56 | TM | trans-1,3-Dichloropropene | 0.184 | 0.185 | -0.5 | 106 | 0.00 | |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ | MC 213 |
| 58 | TM | 1,1,2-Trichloroethane | 0.105 | 0.120 | -14.3 | 109 | 0.00 | |
| 59 | TM | 1,3-Dichloropropane | 0.225 | 0.249 | -10.7 | 107 | 0.00 | |
| 60 | TM | Tetrachloroethene | 0.221 | 0.238 | -7.7 | 104 | 0.00 | |
| 61 | TM | Dibromochloromethane | 0.116 | 0.119 | -2.6 | 109 | 0.00 | |
| 62 | TM | 1,2-Dibromoethane | 0.107 | 0.121 | -13.1 | 109 | 0.00 | |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 105 ✓ | 0.00 | |
| 64 | TMP | Chlorobenzene | 0.906 | 0.907 | -0.1 | 103 | 0.00 | |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.245 | 0.255 | -4.1 | 112 | 0.00 | |
| 66 | TMC | Ethylbenzene | 1.801 | 1.733 | 3.8 | 97 | 0.00 | |
| 67 | TM | m,p-Xylene | 0.631 | 0.619 | 1.9 | 99 | 0.00 | |
| 68 | TM | o-Xylene | 0.586 | 0.575 | 1.9 | 102 | 0.00 | |
| 69 | TM | Styrene | 0.943 | 0.946 | -0.3 | 104 | 0.00 | |
| 70 | TMP | Bromoform | 0.074 | 0.072# | 2.7 | 113 | 0.00 | |
| 71 | TM | Isopropylbenzene | 1.632 | 1.463 | 10.4 | 91 | 0.00 | |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.194 | 0.200 | -3.1 | 106 | 0.00 | |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.338 | 0.349 | -3.3 | 109 | 0.00 | |
| 74 | TM | 1,2,3-Trichloropropane | 0.143 | 0.150 | -4.9 | 107 | 0.00 | |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.060 | 0.055# | 8.3 | 96 | 0.00 | |
| 76 | TM | n-Propylbenzene | 2.164 | 2.037 | 5.9 | 96 | 0.00 | |
| 77 | TM | Bromobenzene | 0.294 | 0.304 | -3.4 | 106 | 0.00 | |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.269 | 1.203 | 5.2 | 97 | 0.00 | |
| | TM | 2-Chlorotoluene | 1.347 | 1.334 | 1.0 | 100 | 0.01 | |
| | TM | 4-Chlorotoluene | 1.181 | 1.128 | 4.5 | 98 | 0.00 | |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-B\B16015Q.D  Vial: 22
Acq On : 5 Jun 2003 11:15 pm  Operator: JR
Sample : L506053B3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V505283B.M (RTE Integrator)
Title : 524 Purgable Organics
Last Update : Thu May 29 12:59:24 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 70% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.079 | 1.011 | 6.3 | 97 | 0.01 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.290 | 1.273 | 1.3 | 101 | 0.00 |
| 83 | TM | Pentachloroethane | 0.139 | 0.137 | 1.4 | 112 | 0.00 |
| 84 | TM | sec-butylbenzene | 1.706 | 1.621 | 5.0 | 97 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.329 | 1.200 | 9.7 | 95 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.626 | 0.634 | -1.3 | 105 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 108 ✓ | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.387 | 1.364 | 1.7 | 103 | 0.00 |
| 89 | TM | n-butylbenzene | 3.259 | 2.933 | 10.0 | 94 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.118 | 1.134 | -1.4 | 107 | 0.00 |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ 0620 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.046 | 0.046# | 0.0 | 118 | 0.00 |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000#~~ | ~~0.0~~ | ~~0#~~ | ~~0.43~~ 0623 |
| | TM | 1,2,4-Trichlorobenzene | 0.667 | 0.680 | -1.9 | 109 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.256 | 0.259 | -1.2 | 109 | 0.00 |
| 96 | TM | Naphthalene | 1.035 | 1.033 | 0.2 | 109 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.510 | 0.522 | -2.4 | 109 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.957 | 0.861 | 10.0 | 95 | 0.00 |

(#) = Out of Range  SPCC's out = 1  CCC's out = 0



000167

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15940T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 5/28/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1649

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 216173 | 6.95 | 491181 | 8.34 | 315461 | 13.16 | 138403 | 17.00 |
| | UPPER LIMIT | 281025 | 7.37 | 638535 | 8.84 | 410099 | 13.95 | 179924 | 18.02 |
| | LOWER LIMIT | 151321 | 6.53 | 343827 | 7.84 | 220823 | 12.37 | 96882 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 0.1PPB STD | 216477 | 6.95 | 494297 | 8.35 | 315487 | 13.16 | 137666 | 17.00 |
| 02 | 0.5PPB STD | 216437 | 6.95 | 491779 | 8.35 | 317353 | 13.16 | 140136 | 16.99 |
| 03 | 1.2PPB STD | 216173 | 6.95 | 491181 | 8.34 | 315461 | 13.16 | 138403 | 17.00 |
| 04 | 4.8PPB STD | 217614 | 6.94 | 491924 | 8.34 | 317920 | 13.16 | 141911 | 17.00 |
| 05 | 8PPB STD | 217260 | 6.95 | 490391 | 8.34 | 317213 | 13.16 | 142411 | 17.00 |
| 06 | 16PPB STD | 221466 | 6.94 | 499090 | 8.34 | 325937 | 13.16 | 147595 | 17.00 |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

## VOLATILE ORGANIC
## INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B15995T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0848

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 231606 | 6.94 | 514186 | 8.34 | 340917 | 13.16 | 149482 | 17.00 |
| | UPPER LIMIT | 301088 | 7.36 | 668442 | 8.84 | 443192 | 13.95 | 194327 | 18.02 |
| | LOWER LIMIT | 162124 | 6.52 | 359930 | 7.84 | 238642 | 12.37 | 104637 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | L506053B | 231606 | 6.94 | 514186 | 8.34 | 340917 | 13.16 | 149482 | 17.00 |
| 02 | B506053B | 229768 | 6.95 | 506156 | 8.34 | 338054 | 13.16 | 146321 | 17.00 |
| 03 | 49794-43 | 224719 | 6.95 | 506947 | 8.35 | 332461 | 13.16 | 141956 | 17.00 |
| 04 | 49794-10 | 227432 | 6.95 | 504901 | 8.35 | 330863 | 13.16 | 143786 | 17.00 |
| 05 | 49794-10,MS | 223709 | 6.94 | 502291 | 8.34 | 330392 | 13.16 | 146879 | 17.00 |
| 06 | 49794-10,MSD | 223255 | 6.95 | 503527 | 8.35 | 331933 | 13.16 | 147121 | 17.00 |
| 07 | 49794-14 | 225505 | 6.95 | 497712 | 8.35 | 334708 | 13.16 | 145436 | 17.00 |
| 08 | 49794-15 | 223841 | 6.95 | 490241 | 8.35 | 333924 | 13.16 | 146602 | 17.00 |
| 09 | 49794-16 | 222608 | 6.95 | 488246 | 8.35 | 332072 | 13.16 | 146106 | 17.00 |
| 10 | 49794-17 | 220802 | 6.95 | 480387 | 8.34 | 329717 | 13.16 | 146097 | 17.00 |
| 11 | 49794-20 | 220619 | 6.95 | 482893 | 8.35 | 331004 | 13.16 | 144989 | 17.00 |
| 12 | 49794-21 | 218373 | 6.94 | 479592 | 8.34 | 328673 | 13.16 | 146938 | 17.00 |
| 13 | 49794-22 | 216186 | 6.95 | 479748 | 8.34 | 330584 | 13.15 | 146751 | 17.00 |
| 14 | ZZZZZ | 210796 | 6.95 | 449086 | 8.35 | 327995 | 13.16 | 150420 | 17.00 |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: B16013T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1954

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 221295 | | 6.94 | | 477976 | | 8.34 | | 328852 | | 13.16 | | 148769 | | 17.00 | |
| | UPPER LIMIT | 287684 | | 7.36 | | 621369 | | 8.84 | | 427508 | | 13.95 | | 193400 | | 18.02 | |
| | LOWER LIMIT | 154907 | | 6.52 | | 334583 | | 7.84 | | 230196 | | 12.37 | | 104138 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L506053B2 | 221295 | | 6.94 | | 477976 | | 8.34 | | 328852 | | 13.16 | | 148769 | | 17.00 | |
| 02 | L506053B3 | 219767 | | 6.95 | | 479080 | | 8.34 | | 330478 | | 13.16 | | 148846 | | 17.00 | |
| 03 | B506053B2 | 220566 | | 6.95 | | 478837 | | 8.35 | | 329237 | | 13.16 | | 146833 | | 17.00 | |
| 04 | 49794-35 | 219064 | | 6.94 | | 476596 | | 8.34 | | 330010 | | 13.16 | | 146715 | | 17.00 | |
| 05 | 49794-36 | 219758 | | 6.95 | | 476847 | | 8.34 | | 328299 | | 13.16 | | 147056 | | 17.00 | |
| 06 | 49794-37 | 215119 | | 6.94 | | 478187 | | 8.34 | | 331073 | | 13.16 | | 148305 | | 17.00 | |
| 07 | 49794-38 | 193585 | | 6.95 | | 468390 | | 8.35 | | 328512 | | 13.16 | | 149011 | | 17.00 | |
| 08 | 49794-39 | 214439 | | 6.95 | | 466080 | | 8.34 | | 325721 | | 13.16 | | 147187 | | 17.00 | |
| 09 | 49794-40 | 211090 | | 6.95 | | 466848 | | 8.35 | | 327145 | | 13.16 | | 147149 | | 16.99 | |
| 10 | 49794-41 | 213098 | | 6.95 | | 469063 | | 8.35 | | 325361 | | 13.16 | | 145580 | | 17.00 | |
| 11 | 49794-42 | 193973 | | 6.95 | | 466957 | | 8.34 | | 327053 | | 13.16 | | 146078 | | 17.00 | |
| 12 | ZZZZZ | 196200 | | 6.95 | | 460975 | | 8.35 | | 322807 | | 13.16 | | 145899 | | 17.00 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11533T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/4/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0959

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 121 | 81 | 79 | 0 |
| 02 | 0.5PPB STD | 119 | 82 | 75 | 0 |
| 03 | 1.2PPB STD | 99 | 102 | 89 | 0 |
| 04 | 4.8PPB STD | 98 | 101 | 115 | 0 |
| 05 | 8PPB STD | 98 | 101 | 121 | 0 |
| 06 | 16PPB STD | 100 | 98 | 115 | 0 |
| 07 | 32PPB STD | 103 | 97 | 112 | 0 |
| 08 | ZZZZZ | 101 | 90 | 96 | 0 |
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| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11545T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L506053I | 95 | 101 | 98 | 0 |
| 02 | B506053I | 101 | 100 | 94 | 0 |
| 03 | 49794-30 | 99 | 99 | 94 | 0 |
| 04 | 49794-30,MS | 100 | 99 | 106 | 0 |
| 05 | 49794-30,MSD | 92 | 109 | 101 | 0 |
| 06 | ZZZZZ | 95 | 106 | 101 | 0 |
| 07 | 49794-1 | 100 | 109 | 105 | 0 |
| 08 | 49794-2 | 98 | 104 | 106 | 0 |
| 09 | 49794-3 | 102 | 106 | 104 | 0 |
| 10 | 49794-4 | 101 | 110 | 103 | 0 |
| 11 | 49794-5 | 102 | 111 | 104 | 0 |
| 12 | 49794-6 | 104 | 107 | 98 | 0 |
| 13 | 49794-7 | 103 | 109 | 101 | 0 |
| 14 | 49794-8 | 101 | 110 | 107 | 0 |
| 15 | 49794-9 | 102 | 117 | 109 | 0 |
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| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L50605312 | 102 | 112 | 112 | 0 |
| 02 | L50605313 | 100 | 108 | 109 | 0 |
| 03 | B50605312 | 101 | 106 | 101 | 0 |
| 04 | 49794-24 | 98 | 112 | 104 | 0 |
| 05 | 49794-25 | 100 | 100 | 108 | 0 |
| 06 | 49794-26 | 103 | 110 | 103 | 0 |
| 07 | 49794-31 | 102 | 113 | 109 | 0 |
| 08 | 49794-32 | 103 | 114 | 106 | 0 |
| 09 | 49794-33 | 103 | 112 | 106 | 0 |
| 10 | 49794-34 | 103 | 107 | 101 | 0 |
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| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11578T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L506063I | 98 | 103 | 98 | 0 |
| 02 | B506063I | 98 | 103 | 100 | 0 |
| 03 | 49794-11 | 101 | 100 | 101 | 0 |
| 04 | 49794-11,MS | 99 | 102 | 104 | 0 |
| 05 | 49794-11,MSD | 99 | 103 | 104 | 0 |
| 06 | 49794-12 | 97 | 114 | 104 | 0 |
| 07 | 49794-13 | 100 | 102 | 99 | 0 |
| 08 | 49794-18 | 100 | 103 | 96 | 0 |
| 09 | 49794-19 | 101 | 102 | 91 | 0 |
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| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L50606312 | 105 | 91 | 98 | 0 |
| 02 | L50606313 | 93 | 101 | 100 | 0 |
| 03 | B50606312 | 106 | 90 | 99 | 0 |
| 04 | 49794-23 | 96 | 96 | 96 | 0 |
| 05 | 49794-27 | 104 | 95 | 100 | 0 |
| 06 | 49794-28 | 103 | 95 | 99 | 0 |
| 07 | 49794-29 | 102 | 92 | 99 | 0 |
| 08 | ZZZZZ | 98 | 97 | 95 | 0 |
| 09 | ZZZZZ | 103 | 86 | 94 | 0 |
| 10 | 49794-42,DL | 105 | 104 | 91 | 0 |
| 11 | 49794-24,DL | 101 | 89 | 98 | 0 |
| 12 | 49794-25,DL | 102 | 88 | 97 | 0 |
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| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11545T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 84 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 98 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.3 | 107 | | 70-130 |
| Bromomethane | 1.2 | 1.3 | 104 | | 70-130 |
| Chloroethane | 1.2 | 1.1 | 92 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 5.5 | 92 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.1 | 93 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 104 | | 70-130 |
| Acetone | 1.2 | 1.5 | 127 | | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 100 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.2 | 99 | | 70-130 |
| Methylene Chloride | 1.2 | 0.9 | 71 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.2 | 93 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.2 | 100 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.6 | 130 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.2 | 99 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.2 | 102 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.2 | 102 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.1 | 93 | | 70-130 |
| Chloroform | 1.2 | 1.2 | 100 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 106 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.5 | 126 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 100 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| Benzene | 1.2 | 1.2 | 103 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.2 | 103 | | 70-130 |
| Dibromomethane | 1.2 | 1.2 | 99 | | 70-130 |
| 2-Hexanone | 1.2 | 1.2 | 102 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.3 | 108 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 109 | | 70-130 |
| Toluene | 1.2 | 1.3 | 105 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.3 | 104 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 118 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 102 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.3 | 109 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 | Quote #: | SDG: 49794

BFB File ID: I11545T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: I | BFB Injection Date: 6/5/03

GC Column: RTX-502.2 | ID: 0.25 (mm) | BFB Injection Time: 0902

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.3 | 107 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 107 | | 70-130 |
| m,p-Xylene | 2.4 | 2.6 | 106 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 104 | | 70-130 |
| Styrene | 1.2 | 1.1 | 93 | | 70-130 |
| Bromoform | 1.2 | 1.3 | 104 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.2 | 101 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| Bromobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 109 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 106 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.2 | 101 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 106 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| n-butylbenzene | 1.2 | 1.2 | 100 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.1 | 92 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 86 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 109 | | 70-130 |
| Naphthalene | 1.2 | 1.1 | 90 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.1 | 88 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: I11545T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-30

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | U | 4.8 | 101 | | 5.0 | 105 | | 4 | | 15 | 70-130 |
| Chloromethane | 4.8 | U | 5.6 | 116 | | 5.6 | 116 | | 1 | | 15 | 70-130 |
| Vinyl Chloride | 4.8 | U | 5.2 | 108 | | 5.0 | 103 | | 4 | | 15 | 70-130 |
| Bromomethane | 4.8 | U | 5.2 | 109 | | 5.2 | 109 | | 0 | | 15 | 70-130 |
| Chloroethane | 4.8 | U | 5.5 | 114 | | 5.4 | 112 | | 1 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 24.0 | U | 23.8 | 99 | | 27.8 | 116 | | 16 | * | 15 | 70-130 |
| Trichlorofluoromethane | 4.8 | U | 5.7 | 118 | | 5.6 | 116 | | 1 | | 15 | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | U | 6.0 | 125 | | 5.8 | 121 | | 3 | | 15 | 70-130 |
| Acetone | 4.8 | U | 5.8 | 121 | | 6.2 | 129 | | 6 | | 15 | 70-130 |
| 1,1-Dichloroethene | 4.8 | U | 5.8 | 120 | | 5.7 | 119 | | 1 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 4.8 | U | 5.55 | 116 | | 5.7 | 119 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 4.8 | U | 3.9 | 76 | | 4.0 | 78 | | 3 | | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 9.6 | U | 10.1 | 105 | | 10.8 | 112 | | 6 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 4.8 | U | 5.8 | 121 | | 5.7 | 119 | | 1 | | 15 | 70-130 |
| 1,1-Dichloroethane | 4.8 | U | 5.8 | 121 | | 5.8 | 120 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 4.8 | U | 5.8 | 120 | | 5.3 | 109 | | 9 | | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| 2,2-Dichloropropane | 4.8 | U | 6.2 | 129 | | 6.1 | 128 | | 1 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | U | 5.7 | 119 | | 5.8 | 120 | | 1 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 4.8 | U | 5.1 | 107 | | 4.7 | 98 | | 9 | | 15 | 70-130 |
| Chloroform | 4.8 | U | 5.3 | 110 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| Bromochloromethane | 4.8 | U | 5.4 | 111 | | 5.4 | 113 | | 2 | | 15 | 70-130 |
| Tetrahydrofuran | 4.8 | U | 5.5 | 115 | | 5.9 | 124 | | 8 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | U | 5.6 | 116 | | 5.2 | 108 | | 8 | | 15 | 70-130 |
| 1,1-Dichloropropene | 4.8 | U | 6.0 | 124 | | 5.1 | 106 | | 15 | | 15 | 70-130 |
| Carbon Tetrachloride | 4.8 | U | 5.8 | 120 | | 5.4 | 111 | | 7 | | 15 | 70-130 |
| 1,2-Dichloroethane | 4.8 | U | 5.4 | 112 | | 4.9 | 102 | | 9 | | 15 | 70-130 |
| Benzene | 4.8 | U | 5.5 | 115 | | 5.0 | 105 | | 9 | | 15 | 70-130 |
| Trichloroethene | 4.8 | U | 5.8 | 122 | | 5.9 | 124 | | 2 | | 15 | 70-130 |
| 1,2-Dichloropropane | 4.8 | U | 5.2 | 109 | | 5.7 | 119 | | 9 | | 15 | 70-130 |
| Bromodichloromethane | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Dibromomethane | 4.8 | U | 5.0 | 104 | | 5.3 | 111 | | 6 | | 15 | 70-130 |
| 2-Hexanone | 4.8 | U | 5.1 | 107 | | 5.7 | 119 | | 11 | | 15 | 70-130 |
| Methyl isobutyl ketone | 4.8 | U | 4.9 | 103 | | 5.5 | 115 | | 11 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | U | 5.6 | 118 | | 6.1 | 128 | | 8 | | 15 | 70-130 |
| Toluene | 4.8 | U | 5.2 | 108 | | 5.7 | 118 | | 9 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | U | 5.4 | 113 | | 6.0 | 125 | | 10 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | U | 5.1 | 107 | | 5.8 | 121 | | 12 | | 15 | 70-130 |
| 1,3-Dichloropropane | 4.8 | U | 5.0 | 105 | | 5.7 | 119 | | 12 | | 15 | 70-130 |
| Tetrachloroethene | 4.8 | U | 5.7 | 119 | | 6.1 | 128 | | 7 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: I11545T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-30

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 4.8 | U | 5.2 | 107 | | 5.9 | 123 | | 14 | | 15 | 70-130 |
| 1,2-Dibromoethane | 4.8 | U | 5.3 | 111 | | 5.8 | 121 | | 9 | | 15 | 70-130 |
| Chlorobenzene | 4.8 | U | 5.3 | 110 | | 5.4 | 113 | | 2 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | U | 5.6 | 116 | | 5.8 | 121 | | 4 | | 15 | 70-130 |
| Ethylbenzene | 4.8 | U | 5.4 | 112 | | 5.4 | 113 | | 1 | | 15 | 70-130 |
| m,p-Xylene | 9.6 | U | 11.0 | 115 | | 11.1 | 116 | | 1 | | 15 | 70-130 |
| o-Xylene | 4.8 | U | 5.6 | 116 | | 5.6 | 116 | | 0 | | 15 | 70-130 |
| Styrene | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Bromoform | 4.8 | U | 5.4 | 112 | | 5.6 | 117 | | 5 | | 15 | 70-130 |
| Isopropylbenzene | 4.8 | U | 5.4 | 113 | | 5.4 | 112 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | U | 5.1 | 107 | | 5.2 | 108 | | 1 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | U | 5.0 | 105 | | 5.2 | 108 | | 3 | | 15 | 70-130 |
| n-Propylbenzene | 4.8 | U | 5.6 | 117 | | 5.6 | 117 | | 0 | | 15 | 70-130 |
| Bromobenzene | 4.8 | U | 5.3 | 110 | | 5.4 | 111 | | 2 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | U | 5.8 | 120 | | 5.7 | 118 | | 2 | | 15 | 70-130 |
| 2-Chlorotoluene | 4.8 | U | 5.7 | 119 | | 5.7 | 118 | | 1 | | 15 | 70-130 |
| 4-Chlorotoluene | 4.8 | U | 5.5 | 115 | | 5.5 | 114 | | 1 | | 15 | 70-130 |
| tert-butylbenzene | 4.8 | U | 5.9 | 122 | | 5.6 | 116 | | 5 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | U | 5.8 | 120 | | 5.6 | 118 | | 2 | | 15 | 70-130 |
| sec-butylbenzene | 4.8 | U | 5.9 | 124 | | 5.9 | 122 | | 1 | | 15 | 70-130 |
| p-isopropyltoluene | 4.8 | U | 5.7 | 118 | | 5.4 | 113 | | 4 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | U | 5.6 | 116 | | 5.5 | 114 | | 2 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | U | 5.2 | 109 | | 5.4 | 112 | | 3 | | 15 | 70-130 |
| n-butylbenzene | 4.8 | U | 5.7 | 118 | | 5.8 | 121 | | 2 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | U | 5.3 | 111 | | 5.4 | 112 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | U | 4.9 | 102 | | 5.1 | 106 | | 4 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | U | 5.1 | 107 | | 5.3 | 111 | | 4 | | 15 | 70-130 |
| Hexachlorobutadiene | 4.8 | U | 6.2 | 129 | | 6.0 | 125 | | 4 | | 15 | 70-130 |
| Naphthalene | 4.8 | U | 4.6 | 96 | | 4.9 | 101 | | 5 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 4.7 | U | 5.1 | 110 | | 5.2 | 111 | | 1 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 1 out of 70 outside limits
Spike Recovery: 0 out of 140 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 83 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 98 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.2 | 103 | | 70-130 |
| Bromomethane | 1.2 | 1.3 | 106 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 96 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 7.8 | 130 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 98 | | 70-130 |
| Acetone | 1.2 | 2.5 | 208 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 98 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.4 | 113 | | 70-130 |
| Methylene Chloride | 1.2 | 1.5 | 123 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.6 | 108 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 106 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.6 | 132 | * | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 110 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.0 | 85 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 110 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.3 | 111 | | 70-130 |
| Chloroform | 1.2 | 1.3 | 108 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 112 | | 70-130 |
| Tetrahydrofuran | 1.2 | 2.2 | 182 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 102 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.3 | 106 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.4 | 115 | | 70-130 |
| Benzene | 1.2 | 1.3 | 109 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 116 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 112 | | 70-130 |
| Dibromomethane | 1.2 | 1.5 | 128 | | 70-130 |
| 2-Hexanone | 1.2 | 1.5 | 121 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.5 | 123 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.5 | 122 | | 70-130 |
| Toluene | 1.2 | 1.3 | 108 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.5 | 123 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.5 | 124 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 114 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.4 | 118 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.5 | 121 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| Ethylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| m,p-Xylene | 2.4 | 2.5 | 105 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 108 | | 70-130 |
| Styrene | 1.2 | 1.3 | 105 | | 70-130 |
| Bromoform | 1.2 | 1.5 | 123 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.4 | 116 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 106 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 111 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 110 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 105 | | 70-130 |
| n-butylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 98 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 106 | | 70-130 |
| Naphthalene | 1.2 | 1.2 | 102 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.2 | 98 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 3 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 83 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 98 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.2 | 101 | | 70-130 |
| Bromomethane | 1.2 | 1.2 | 100 | | 70-130 |
| Chloroethane | 1.2 | 1.1 | 92 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 8.9 | 149 | * | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.1 | 95 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 98 | | 70-130 |
| Acetone | 1.2 | 2.8 | 233 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 97 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 108 | | 70-130 |
| Methylene Chloride | 1.2 | 0.9 | 77 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.5 | 106 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.2 | 102 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.5 | 127 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 108 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 0.9 | 77 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 110 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.3 | 105 | | 70-130 |
| Chloroform | 1.2 | 1.2 | 103 | | 70-130 |
| Bromochloromethane | 1.2 | 1.4 | 114 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.9 | 159 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 97 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 112 | | 70-130 |
| Benzene | 1.2 | 1.3 | 105 | | 70-130 |
| Trichloroethene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 107 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.4 | 113 | | 70-130 |
| Dibromomethane | 1.2 | 1.5 | 122 | | 70-130 |
| 2-Hexanone | 1.2 | 1.5 | 122 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.5 | 121 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.4 | 117 | | 70-130 |
| Toluene | 1.2 | 1.3 | 104 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.5 | 123 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.4 | 118 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.3 | 109 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.4 | 119 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.5 | 128 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 | Quote #: | SDG: 49794

BFB File ID: I11566T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: I | BFB Injection Date: 6/5/03

GC Column: RTX-502.2 | ID: 0.25 (mm) | BFB Injection Time: 2209

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506053I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Ethylbenzene | 1.2 | 1.2 | 97 | | 70-130 |
| m,p-Xylene | 2.4 | 2.5 | 105 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 107 | | 70-130 |
| Styrene | 1.2 | 1.3 | 107 | | 70-130 |
| Bromoform | 1.2 | 1.5 | 123 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.4 | 118 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.4 | 118 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.2 | 99 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 107 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 106 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 105 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| n-butylbenzene | 1.2 | 1.1 | 93 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 106 | | 70-130 |
| Naphthalene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.2 | 102 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 3 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11578T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 86 | | 70-130 |
| Chloromethane | 1.2 | 1.3 | 106 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.3 | 108 | | 70-130 |
| Bromomethane | 1.2 | 1.2 | 96 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.3 | 105 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 103 | | 70-130 |
| Acetone | 1.2 | 2.2 | 183 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 101 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 108 | | 70-130 |
| Methylene Chloride | 1.2 | 1.8 | 147 | * | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.3 | 95 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.7 | 138 | * | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.2 | 98 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 112 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.2 | 96 | | 70-130 |
| Chloroform | 1.2 | 1.3 | 104 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.4 | 113 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.3 | 104 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.3 | 105 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 112 | | 70-130 |
| Benzene | 1.2 | 1.3 | 110 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 115 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 114 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 110 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 107 | | 70-130 |
| 2-Hexanone | 1.2 | 1.3 | 109 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.4 | 114 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.4 | 118 | | 70-130 |
| Toluene | 1.2 | 1.3 | 111 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 118 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.4 | 117 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 118 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.4 | 116 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11578T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 114 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 110 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 109 | | 70-130 |
| Styrene | 1.2 | 1.2 | 97 | | 70-130 |
| Bromoform | 1.2 | 1.3 | 112 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.2 | 103 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.4 | 113 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 111 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 107 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 111 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 87 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.4 | 113 | | 70-130 |
| Naphthalene | 1.2 | 1.0 | 83 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.0 | 83 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 3 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 86 | | 70-130 |
| Chloromethane | 1.2 | 1.3 | 106 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.3 | 108 | | 70-130 |
| Bromomethane | 1.2 | 1.2 | 98 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 99 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.3 | 105 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 104 | | 70-130 |
| Acetone | 1.2 | 2.9 | 242 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 103 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 111 | | 70-130 |
| Methylene Chloride | 1.2 | 2.3 | 195 | * | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.4 | 100 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 110 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.3 | 108 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 104 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.3 | 112 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.2 | 101 | | 70-130 |
| Chloroform | 1.2 | 1.5 | 124 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 107 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.6 | 135 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.3 | 106 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.4 | 114 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.3 | 112 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.4 | 116 | | 70-130 |
| Benzene | 1.2 | 1.4 | 115 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 116 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 116 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.4 | 113 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 108 | | 70-130 |
| 2-Hexanone | 1.2 | 1.1 | 93 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.5 | 126 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.4 | 115 | | 70-130 |
| Toluene | 1.2 | 1.2 | 103 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 100 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.2 | 101 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.2 | 103 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.2 | 103 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.2 | 100 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.3 | 112 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 114 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 111 | | 70-130 |
| Styrene | 1.2 | 1.3 | 107 | | 70-130 |
| Bromoform | 1.2 | 1.4 | 113 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 105 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.4 | 113 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 109 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.4 | 113 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 84 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 109 | | 70-130 |
| Naphthalene | 1.2 | 1.0 | 81 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 0.9 | 77 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 3 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: I11578T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-11

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | U | 4.2 | 88 | | 4.2 | 88 | | 0 | | 15 | 70-130 |
| Chloromethane | 4.8 | U | 4.8 | 100 | | 4.7 | 98 | | 2 | | 15 | 70-130 |
| Vinyl Chloride | 4.8 | U | 4.4 | 91 | | 4.4 | 91 | | 1 | | 15 | 70-130 |
| Bromomethane | 4.8 | U | 4.1 | 84 | | 4.1 | 85 | | 0 | | 15 | 70-130 |
| Chloroethane | 4.8 | U | 4.7 | 98 | | 4.6 | 95 | | 2 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 24.0 | U | 23.4 | 97 | | 25.0 | 104 | | 7 | | 15 | 70-130 |
| Trichlorofluoromethane | 4.8 | U | 4.8 | 100 | | 4.8 | 101 | | 1 | | 15 | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | U | 5.0 | 105 | | 5.1 | 107 | | 2 | | 15 | 70-130 |
| Acetone | 4.8 | U | 6.0 | 124 | | 5.4 | 113 | | 9 | | 15 | 70-130 |
| 1,1-Dichloroethene | 4.8 | U | 4.8 | 100 | | 5.0 | 105 | | 4 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 4.8 | U | 5.02 | 105 | | 5.1 | 107 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 4.8 | U | 3.4 | 65 | * | 3.5 | 67 | * | 2 | | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 9.6 | U | 9.1 | 95 | | 9.2 | 96 | | 1 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 4.8 | U | 5.1 | 106 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| 1,1-Dichloroethane | 4.8 | U | 5.1 | 105 | | 5.2 | 107 | | 2 | | 15 | 70-130 |
| Methyl ethyl ketone | 4.8 | U | 5.1 | 106 | | 5.4 | 112 | | 5 | | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 4.8 | U | 4.7 | 98 | | 4.9 | 103 | | 5 | | 15 | 70-130 |
| 2,2-Dichloropropane | 4.8 | U | 5.4 | 113 | | 5.5 | 115 | | 2 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | U | 5.2 | 109 | | 5.3 | 109 | | 0 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 4.8 | U | 4.6 | 96 | | 4.7 | 98 | | 2 | | 15 | 70-130 |
| Chloroform | 4.8 | U | 4.8 | 101 | | 5.0 | 104 | | 3 | | 15 | 70-130 |
| Bromochloromethane | 4.8 | U | 5.1 | 106 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| Tetrahydrofuran | 4.8 | U | 5.2 | 107 | | 6.0 | 124 | | 14 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | U | 5.0 | 104 | | 5.3 | 109 | | 5 | | 15 | 70-130 |
| 1,1-Dichloropropene | 4.8 | U | 5.2 | 108 | | 5.4 | 113 | | 4 | | 15 | 70-130 |
| Carbon Tetrachloride | 4.8 | U | 5.4 | 111 | | 5.5 | 114 | | 3 | | 15 | 70-130 |
| 1,2-Dichloroethane | 4.8 | U | 5.0 | 105 | | 5.2 | 109 | | 4 | | 15 | 70-130 |
| Benzene | 4.8 | U | 5.1 | 106 | | 5.2 | 109 | | 3 | | 15 | 70-130 |
| Trichloroethene | 4.8 | U | 5.6 | 116 | | 5.7 | 120 | | 3 | | 15 | 70-130 |
| 1,2-Dichloropropane | 4.8 | U | 5.5 | 114 | | 5.5 | 115 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 2 | | 15 | 70-130 |
| Dibromomethane | 4.8 | U | 5.1 | 106 | | 5.1 | 107 | | 1 | | 15 | 70-130 |
| 2-Hexanone | 4.8 | U | 5.5 | 114 | | 5.5 | 115 | | 1 | | 15 | 70-130 |
| Methyl isobutyl ketone | 4.8 | U | 5.6 | 116 | | 5.6 | 116 | | 0 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | U | 5.9 | 124 | | 6.1 | 126 | | 2 | | 15 | 70-130 |
| Toluene | 4.8 | U | 5.4 | 112 | | 5.4 | 113 | | 1 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | U | 5.7 | 119 | | 5.9 | 122 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | U | 5.5 | 115 | | 5.6 | 116 | | 1 | | 15 | 70-130 |
| 1,3-Dichloropropane | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Tetrachloroethene | 4.8 | U | 5.7 | 119 | | 5.8 | 121 | | 2 | | 15 | 70-130 |
| Dibromochloromethane | 4.8 | U | 5.5 | 115 | | 5.6 | 117 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49794

BFB File ID: I11578T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49794-11

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 4.8 | U | 5.5 | 115 | | 5.7 | 119 | | 4 | | 15 | 70-130 |
| Chlorobenzene | 4.8 | U | 5.2 | 108 | | 5.3 | 111 | | 2 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | U | 5.3 | 110 | | 5.6 | 117 | | 6 | | 15 | 70-130 |
| Ethylbenzene | 4.8 | U | 5.2 | 107 | | 5.3 | 111 | | 3 | | 15 | 70-130 |
| m,p-Xylene | 9.6 | U | 10.5 | 110 | | 10.8 | 112 | | 2 | | 15 | 70-130 |
| o-Xylene | 4.8 | U | 5.2 | 109 | | 5.4 | 113 | | 3 | | 15 | 70-130 |
| Styrene | 4.8 | U | 5.3 | 110 | | 5.4 | 113 | | 2 | | 15 | 70-130 |
| Bromoform | 4.8 | U | 5.5 | 114 | | 5.7 | 118 | | 3 | | 15 | 70-130 |
| Isopropylbenzene | 4.8 | U | 5.1 | 106 | | 5.2 | 109 | | 3 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | U | 5.1 | 107 | | 5.3 | 110 | | 3 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | U | 5.0 | 104 | | 5.0 | 104 | | 1 | | 15 | 70-130 |
| n-Propylbenzene | 4.8 | U | 5.2 | 108 | | 5.4 | 112 | | 3 | | 15 | 70-130 |
| Bromobenzene | 4.8 | U | 5.0 | 105 | | 5.2 | 109 | | 4 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | U | 5.4 | 112 | | 5.5 | 115 | | 3 | | 15 | 70-130 |
| 2-Chlorotoluene | 4.8 | U | 5.3 | 110 | | 5.5 | 115 | | 4 | | 15 | 70-130 |
| 4-Chlorotoluene | 4.8 | U | 5.2 | 109 | | 5.3 | 111 | | 2 | | 15 | 70-130 |
| tert-butylbenzene | 4.8 | U | 5.3 | 110 | | 5.5 | 115 | | 4 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | U | 5.4 | 112 | | 5.5 | 115 | | 3 | | 15 | 70-130 |
| sec-butylbenzene | 4.8 | U | 5.4 | 113 | | 5.6 | 117 | | 3 | | 15 | 70-130 |
| p-isopropyltoluene | 4.8 | U | 5.1 | 107 | | 5.4 | 111 | | 4 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | U | 5.2 | 108 | | 5.3 | 111 | | 3 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | U | 4.9 | 103 | | 5.3 | 110 | | 7 | | 15 | 70-130 |
| n-butylbenzene | 4.8 | U | 5.3 | 110 | | 5.6 | 117 | | 7 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | U | 5.0 | 104 | | 5.3 | 111 | | 7 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | U | 4.7 | 97 | | 5.4 | 112 | | 14 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | U | 4.8 | 99 | | 5.2 | 107 | | 8 | | 15 | 70-130 |
| Hexachlorobutadiene | 4.8 | U | 5.2 | 108 | | 5.8 | 121 | | 12 | | 15 | 70-130 |
| Naphthalene | 4.8 | U | 4.2 | 87 | | 4.5 | 94 | | 8 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 4.7 | U | 4.5 | 98 | | 5.0 | 107 | | 9 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 0 out of 70 outside limits
Spike Recovery: 2 out of 140 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.1 | 92 | | 70-130 |
| Chloromethane | 1.2 | 1.4 | 116 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.4 | 118 | | 70-130 |
| Bromomethane | 1.2 | 1.3 | 104 | | 70-130 |
| Chloroethane | 1.2 | 1.3 | 108 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 7.7 | 128 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.3 | 108 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.4 | 117 | | 70-130 |
| Acetone | 1.2 | 3.0 | 251 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.3 | 112 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.4 | 120 | | 70-130 |
| Methylene Chloride | 1.2 | 2.5 | 207 | * | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.6 | 108 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.4 | 119 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.4 | 115 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.7 | 139 | * | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 108 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 111 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.1 | 93 | | 70-130 |
| Chloroform | 1.2 | 1.4 | 118 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 111 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.6 | 133 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.3 | 105 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| Benzene | 1.2 | 1.3 | 105 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 119 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.4 | 113 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 108 | | 70-130 |
| 2-Hexanone | 1.2 | 1.3 | 106 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.5 | 125 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.4 | 119 | | 70-130 |
| Toluene | 1.2 | 1.4 | 115 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 117 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.4 | 114 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 118 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.4 | 118 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.3 | 110 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506063I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 118 | | 70-130 |
| Ethylbenzene | 1.2 | 1.4 | 113 | | 70-130 |
| m,p-Xylene | 2.4 | 2.8 | 118 | | 70-130 |
| o-Xylene | 1.2 | 1.4 | 116 | | 70-130 |
| Styrene | 1.2 | 1.3 | 109 | | 70-130 |
| Bromoform | 1.2 | 1.4 | 119 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| Bromobenzene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.4 | 116 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 112 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.4 | 117 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.4 | 115 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.1 | 95 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 86 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.3 | 110 | | 70-130 |
| Naphthalene | 1.2 | 0.9 | 78 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.0 | 80 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 4 out of 70 outside limits

Comments: _____

_____

[045]

## GC/MS Volatiles Instrument: I

IS only# SS + IS# V4486 Exp: Exp: 6.1403

Voltage 1706

Threshold 100

Sun 060403-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-I- | 060403-1-JR | | | | | | |
| 1 | VS060403I | Blank | 25mL | | | I11531 | Sun | |
| 2 | | Blank | | | | 32 | | |
| 3 | | BFB 25ng/mL V4487 | | ✓ | | 33 | T | |
| 4 | | 0.1PPB 0.125mL V4484 V4479 | | ✓ | | 34 | S1 | |
| 5 | | 0.5PPB 0.625mL V | | ✓ | | 35 | S1 | |
| 6 | | 1.2PPB 1.5mL V | | ✓ | | 36 | S1 | |
| 7 | | 4.8PPB 6mL V | | ✓ | | 37 | S1 | |
| 8 | | 8PPB 10mL V | | ✓ | | 38 | S1 | |
| 9 | | 16PPB 20mL V | | ✓ | | 39 | S1 | |
| 10 | | 32PPB 40mL V | | ✓ | | 40 | S1 | |
| 11 | | Blank | | | | 41 | | |
| 12 | | Blank | | | | 42 | | |
| 13 | | VS060403I V4485 V4481 | | | Acetone & MEK↑ | 43 | Q | |
| 14 | | | | | | | | |

6.5.07

Revision: 11/01/97

[046]

# GC/MS Volatiles Instrument: I

IS only# SS + IS# V4486 Exp: Exp: 6-14-03

Voltage 1706
Threshold 100

Sec 060503-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-I- | 060503-1-JR | | | | | | |
| 1 | V506043I | Blank | 25mL | | | I11544 | Sec | |
| 2 | | BFB 25g/ml V4487 | | ✓ | | 45 | T | 902 |
| 3 | | L506053I V4485 V4493 | | ✓ | All OK | 46 | Q | |
| 4 | | B506053I | | ✓ | | 47 | B | |
| 5 | | 49794-30 | 25mL | ✓ | | 48 | | <2 |
| 6 | | -30, MS | | ✓ | TBA RPD @16% | 49 | SP | <2 |
| 7 | | -30, MSD | | ✓ | | 50 | SP | <2 |
| 8 | | Blank | | | CO Check. | 51 | | |
| 9 | | 49794-1 | | ✓ | | 52 | | <2 |
| 10 | | -2 | | ✓ | | 53 | | <2 |
| 11 | | -3 | | ✓ | | 54 | | <2 |
| 12 | | -4 | | ✓ | | 55 | | <2 |
| 13 | | -5 | | ✓ | | 56 | | <2 |
| 14 | | -6 | | ✓ | | 57 | | <2 |
| 15 | | -7 | | ✓ | | 58 | | <2 |
| 16 | | -8 | | ✓ | | 59 | | <2 |
| 17 | | -9 | | ✓ | | 60 | | <2 |
| 18 | | -11 | | RR | error - Run Stopped | 61 | | |
| 19 | | -12 | | | | 62 | | |
| 20 | | -13 | | | | 63 | | |
| 21 | | -18 | | | | 64 | | |
| 22 | | -19 | | | | 65 | | |
| 23 | | BFB 25g/ml V4487 | 25mL | ✓ | | 66 | T | |
| 24 | | L506053I2 V4485 V4493 | | | Acetone, MEK, THF ↑ | 67 | Q | |
| 25 | | L506053I3 | | | TBA | 68 | Q | |
| 26 | | B506053I | | ✓ | | 69 | B | |
| 27 | | 49794-24 | 25mL | ✓ | RR ~~Smt/Dmt~~ 2.5mL Sec | 70 | | <2 |
| 28 | | -25 | | ✓ | RR ~~Smt/Dmt~~ 2.5mL 6-6-03 | 71 | | <2 |
| 29 | | -26 | | ✓ | | 72 | | <2 |
| 30 | | -31 | | ✓ | | 73 | | <2 |

Revision: 11/01/97

192A

IS only# Exp:
SS + IS# V4486 Exp: 6·14·03

[047]

# GC/MS Volatiles Instrument: I

Voltage 1706
Threshold 100

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V506043I | 49794-32 | 25ml | ✓ | | I11574 | [illegible] | <2 |
| 32 | ↓ | ↓ -33 | ↓ | ✓ | | 75 | ↓ | <2 |
| 33 | ↓ | ↓ -34 | ↓ | ✓ | | 76 | ↓ | <2 |

MT 6/6/03

Revision: 11/01/97

IS only# —
SS + IS# V4486

Exp: —
Exp: 6/14/03

[048]

# GC/MS Volatiles Instrument: I

060603-I

Voltage 1706
Threshold 100

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH | |
|---|---|---|---|---|---|---|---|---|---|
| | | W-I-060603-1-MT | | | | | | | |
| 1 | V506043I | Blank | 25mL | | | I11577 | MT | | |
| 2 | | BFB 25ng 1ul V4487 | | ✓ | | 78T | | | 0853 |
| 3 | | L506063I 1.5ul V4485 V4493 | | ✓ | Acetone, MeCl2, MEK↑ | 79Q | | | |
| 4 | | B506063I | | ✓ | | 80B | Sw | | |
| 5 | | 49794-11 | | ✓ | | 81 | | <2 | |
| 6 | | -11, MS | | ✓ | All ok | 82 | SP | <2 | |
| 7 | | -11, MSD | | ✓ | | 83 | SP | <2 | |
| 8 | | -12 | | ✓ | | 84 | | <2 | |
| 9 | | -13 | | ✓ | | 85 | | <2 | |
| 10 | | -18 | | ✓ | Syringe error - Restarted 1930 | 86 | | <2 | |
| 11 | | -19 | | ✓ | after sample analyzed Sw 6.9.03 | 87 | | <2 | |
| 12 | | -23 | | | | 88 | | | |
| 13 | | -27 | | | | 89 | | | |
| 14 | | -28 | | | | 90 | | | |
| 15 | | -29 | | | SWR 6/6/03 | 91 | | | |
| 16 | | 49799-1 | | | | 92 | | | |
| 17 | | 49800-1 | | | | 93 | | | |
| 18 | | 49794-42, DL | 5mL | | | 94 | | | |
| 19 | | -24, DL | 2.5mL | | | 95 | | | |
| 20 | | -25, DL | | | | 96 | | | |
| 8 | V506043I | BFB 25ng 1ul V4487 | 25mL | | ✓ | 88T | MW | N/A | 0853 |
| 9 | | L506063I 2 | | | Acetone, MEK, MeCl2↑ | 89Q | | | |
| 10 | | L506063I 2 | | | | 90Q | | | |
| 11 | | B506063I2 | | | MeCl2 @ 1.1 - RR if MeCl2 hits. | 91B | | | |
| 12 | | 49794-23 | | ✓ | | 92 | | <2 | |
| 13 | | -27 | | ✓ | | 93 | | <2 | |
| 14 | | -28 | | ✓ | | 94 | | <2 | |
| 15 | | -29 | | ✓ | | 95 | | <2 | |
| 16 | | 49799-1 | | ✓ | | 96 | | <2 | |
| 17 | | 49800-1 | | ✓ | | 97 | | <2 | |

Cont. Pg. 49

Revision: 11/01/97

[049]

IS only# ——
SS + IS# V4456

Exp: ——
Exp: 6/14/03

**GC/MS Volatiles Instrument: I**

060603-I Cont.

**Voltage** 1706

**Threshold** 100

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 18 | V506043 | I49794-42,DL | 5ml | ✓ | | I11598 | AVR | <2 |
| 19 | ↓ | -24,DL | 2.5ml | ✓ | | 99 | ↓ | <2 |
| 20 | ↓ | -25,DL | ↓ | ✓ | | I11600 | ↓ | <2 |

6-9-03

Revision: 11/01/97

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11533T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/4/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0959

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 23.5 |
| 75 | 30.0 - 60.0% of mass 95 | 54.6 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.9 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 73.7 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 7.0 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 71.6 ( 97.2 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.6 ( 6.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 0.1PPB STD | I11534SI.D | 06/04/03 | 10:31 |
| 02 | 0.5PPB STD | 0.5PPB STD | I11535SI.D | 06/04/03 | 11:09 |
| 03 | 1.2PPB STD | 1.2PPB STD | I11536SI.D | 06/04/03 | 11:44 |
| 04 | 4.8PPB STD | 4.8PPB STD | I11537SI.D | 06/04/03 | 12:18 |
| 05 | 8PPB STD | 8PPB STD | I11538SI.D | 06/04/03 | 12:53 |
| 06 | 16PPB STD | 16PPB STD | I11539SI.D | 06/04/03 | 13:28 |
| 07 | 32PPB STD | 32PPB STD | I11540SI.D | 06/04/03 | 14:03 |
| 08 | ZZZZZ | ZZZZZ | I11543Q.D | 06/04/03 | 15:48 |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
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| 19 | | | | | |
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| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11545T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 25.2 |
| 75 | 30.0 - 60.0% of mass 95 | 59.3 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.6 ( 0.7 )1 |
| 174 | Greater than 50% of mass 95 | 78.6 |
| 175 | 5.0 - 9.0% of mass 174 | 5.6 ( 7.2 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 75.5 ( 96.1 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 ( 6.5 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506053I | L506053I | I11546Q.D | 06/05/03 | 9:37 |
| 02 | B506053I | B506053I | I11547B.D | 06/05/03 | 10:12 |
| 03 | 49794-30 | 49794-30 | I11548.D | 06/05/03 | 10:47 |
| 04 | 49794-30,MS | 49794-30,MS | I11549SP.D | 06/05/03 | 11:22 |
| 05 | 49794-30,MSD | 49794-30,MSD | I11550SP.D | 06/05/03 | 11:57 |
| 06 | ZZZZZ | ZZZZZ | I11551.D | 06/05/03 | 12:32 |
| 07 | 49794-1 | 49794-1 | I11552.D | 06/05/03 | 13:06 |
| 08 | 49794-2 | 49794-2 | I11553.D | 06/05/03 | 13:42 |
| 09 | 49794-3 | 49794-3 | I11554.D | 06/05/03 | 14:17 |
| 10 | 49794-4 | 49794-4 | I11555.D | 06/05/03 | 14:52 |
| 11 | 49794-5 | 49794-5 | I11556.D | 06/05/03 | 15:28 |
| 12 | 49794-6 | 49794-6 | I11557.D | 06/05/03 | 16:17 |
| 13 | 49794-7 | 49794-7 | I11558.D | 06/05/03 | 16:52 |
| 14 | 49794-8 | 49794-8 | I11559.D | 06/05/03 | 17:28 |
| 15 | 49794-9 | 49794-9 | I11560.D | 06/05/03 | 18:03 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.1 |
| 75 | 30.0 - 60.0% of mass 95 | 56.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.1 |
| 173 | Less than 2.0% of mass 174 | 0.6 ( 0.8 )1 |
| 174 | Greater than 50% of mass 95 | 81.6 |
| 175 | 5.0 - 9.0% of mass 174 | 5.5 ( 6.7 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 78.9 ( 96.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.6 ( 5.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506053I2 | L506053I2 | I11567Q.D | 06/05/03 | 22:45 |
| 02 | L506053I3 | L506053I3 | I11568Q.D | 06/05/03 | 23:20 |
| 03 | B506053I2 | B506053I2 | I11569B.D | 06/05/03 | 23:55 |
| 04 | 49794-24 | 49794-24 | I11570.D | 06/06/03 | 0:30 |
| 05 | 49794-25 | 49794-25 | I11571.D | 06/06/03 | 1:06 |
| 06 | 49794-26 | 49794-26 | I11572.D | 06/06/03 | 1:41 |
| 07 | 49794-31 | 49794-31 | I11573.D | 06/06/03 | 2:17 |
| 08 | 49794-32 | 49794-32 | I11574.D | 06/06/03 | 2:53 |
| 09 | 49794-33 | 49794-33 | I11575.D | 06/06/03 | 3:29 |
| 10 | 49794-34 | 49794-34 | I11576.D | 06/06/03 | 4:04 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11578T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 26.2 |
| 75 | 30.0 - 60.0% of mass 95 | 59.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.9 |
| 173 | Less than 2.0% of mass 174 | 0.7 ( 1.0 )1 |
| 174 | Greater than 50% of mass 95 | 73.4 |
| 175 | 5.0 - 9.0% of mass 174 | 5.2 ( 7.0 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 72.2 ( 98.4 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 ( 6.8 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506063I | L506063I | I11579Q.D | 06/06/03 | 9:28 |
| 02 | B506063I | B506063I | I11580B.D | 06/06/03 | 10:12 |
| 03 | 49794-11 | 49794-11 | I11581.D | 06/06/03 | 10:47 |
| 04 | 49794-11,MS | 49794-11,MS | I11582SP.D | 06/06/03 | 11:22 |
| 05 | 49794-11,MSD | 49794-11,MSD | I11583SP.D | 06/06/03 | 11:57 |
| 06 | 49794-12 | 49794-12 | I11584.D | 06/06/03 | 12:32 |
| 07 | 49794-13 | 49794-13 | I11585.D | 06/06/03 | 13:07 |
| 08 | 49794-18 | 49794-18 | I11586.D | 06/06/03 | 13:42 |
| 09 | 49794-19 | 49794-19 | I11587.D | 06/06/03 | 19:49 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 27.6 |
| 75 | 30.0 - 60.0% of mass 95 | 59.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 75.6 |
| 175 | 5.0 - 9.0% of mass 174 | 5.2 ( 6.9 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 72.7 ( 96.2 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.2 ( 7.2 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506063I2 | L506063I2 | I11589Q.D | 06/06/03 | 21:28 |
| 02 | L506063I3 | L506063I3 | I11590Q.D | 06/06/03 | 22:03 |
| 03 | B506063I2 | B506063I2 | I11591B.D | 06/06/03 | 22:38 |
| 04 | 49794-23 | 49794-23 | I11592.D | 06/06/03 | 23:13 |
| 05 | 49794-27 | 49794-27 | I11593.D | 06/06/03 | 23:47 |
| 06 | 49794-28 | 49794-28 | I11594.D | 06/07/03 | 0:22 |
| 07 | 49794-29 | 49794-29 | I11595.D | 06/07/03 | 0:57 |
| 08 | ZZZZZ | ZZZZZ | I11596.D | 06/07/03 | 1:32 |
| 09 | ZZZZZ | ZZZZZ | I11597.D | 06/07/03 | 2:06 |
| 10 | 49794-42,DL | 49794-42,DL | I11598.D | 06/07/03 | 2:41 |
| 11 | 49794-24,DL | 49794-24,DL | I11599.D | 06/07/03 | 3:16 |
| 12 | 49794-25,DL | 49794-25,DL | I11600.D | 06/07/03 | 3:51 |
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Response Factor Report  Instrumen

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration

JW 6.5.03
VMT 6/5/03

Calibration Files
0.1 =I11534SI.D 0.5 =I11535SI.D 1.2 =I11536SI.D
4.8 =I11537SI.D 8 =I11538SI.D 16 =I11539SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 0.993 | 0.951 | 0.982 | 0.941 | 1.006 | 0.924 | 0.955 | 4.4 |
| 3) | TMP | Chloromethane | 0.864 | 0.639 | 0.645 | 0.577 | 0.624 | 0.561 | 0.639 | 16.4 |
| 4) | TMC | Vinyl Chloride | 0.545 | 0.543 | 0.494 | 0.391 | 0.396 | 0.340 | 0.451 | 19.3 |
| 5) | TM | Bromomethane | 0.429 | 0.339 | 0.355 | 0.295 | 0.330 | 0.320 | 0.342 | 12.3 |
| 6) | TM | Chloroethane | 0.408 | 0.334 | 0.310 | 0.289 | 0.321 | 0.293 | 0.320 | 13.4 |
| 7) | TM | t-Butyl alcohol | | 0.011 | 0.010 | 0.009 | 0.010 | 0.011 | 0.010 | 7.7 |
| 8) | TM | Trichlorofluorometh | 0.834 | 0.844 | 0.852 | 0.823 | 0.875 | 0.834 | 0.839 | 2.4 |
| 9) | TM | Diethyl ether | | 0.128 | 0.143 | 0.125 | 0.134 | 0.133 | 0.133 | 4.6 |
| 10) | TM | 1,1,2-Trichlorotrif | 0.449 | 0.448 | 0.477 | 0.435 | 0.457 | 0.431 | 0.446 | 3.8 |
| 11) | T | Acrolein | | 0.024 | 0.023 | 0.021 | 0.023 | 0.023 | 0.023 | 3.7 |
| 12) | TM | Acetone | | 0.050 | 0.043 | 0.038 | 0.038 | 0.040 | 0.042 | 11.1 |
| 13) | TMC | 1,1-Dichloroethene | 0.374 | 0.376 | 0.405 | 0.359 | 0.381 | 0.364 | 0.374 | 4.2 |
| 14) | T | Methyl iodide | | 0.314 | 0.378 | 0.396 | 0.638 | 0.704 | 0.526 | 34.7 NT |
| 15) | TM | Di-isopropyl ether | 1.526 | 1.671 | 1.766 | 1.712 | 1.828 | 1.761 | 1.711 | 5.6 |
| 16) | TM | Methylene Chloride | | 1.732 | 1.066 | 0.674 | 0.649 | 0.569 | 0.871 | 53.1 limit |
| 17) | TM | Carbon Disulfide | | 0.981 | 1.022 | 1.026 | 1.132 | 1.013 | 1.024 | 5.6 |
| 18) | T | Acrylonitrile | 0.083 | 0.070 | 0.074 | 0.073 | 0.068 | 0.070 | 0.074 | 6.8 |
| 19) | TM | Methyl-tert-butyl e | 0.812 | 0.778 | 0.797 | 0.770 | 0.814 | 0.810 | 0.800 | 2.3 |
| 20) | TM | trans-1,2-Dichloroe | 0.499 | 0.580 | 0.573 | 0.539 | 0.573 | 0.540 | 0.547 | 5.5 |
| 21) | TMP | 1,1-Dichloroethane | 0.943 | 1.083 | 1.133 | 1.065 | 1.139 | 1.074 | 1.069 | 6.1 |
| 22) | T | Vinyl acetate | | 0.026 | 0.024 | 0.024 | 0.024 | 0.025 | 0.025 | 4.1 |
| 23) | TM | Methyl ethyl ketone | 0.017 | 0.018 | 0.016 | 0.017 | 0.017 | 0.018 | 0.017 | 5.3 |
| 24) | TM | Ethyl t-butyl ether | 0.971 | 1.181 | 1.203 | 1.191 | 1.231 | 1.248 | 1.180 | 8.0 |
| 25) | TM | 2,2-Dichloropropane | 0.630 | 0.758 | 0.827 | 0.788 | 0.828 | 0.790 | 0.771 | 8.7 |
| 26) | TM | cis-1,2-Dichloroeth | 0.528 | 0.575 | 0.557 | 0.535 | 0.565 | 0.541 | 0.547 | 3.3 |
| 27) | TM | t-Amyl methyl ether | 0.688 | 0.771 | 0.817 | 0.790 | 0.834 | 0.849 | 0.801 | 7.3 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000 | -1.0 |
| 29) | TMC | Chloroform | | 1.271 | 1.185 | 1.080 | 1.115 | 1.077 | 1.131 | 7.2 |
| 30) | TM | Bromochloromethane | 0.192 | 0.191 | 0.197 | 0.194 | 0.198 | 0.194 | 0.194 | 1.5 |
| 31) | TM | Tetrahydrofuran | | 0.018 | 0.016 | 0.017 | 0.016 | 0.018 | 0.017 | 7.4 |
| 32) | TM | 1,1,1-Trichloroetha | 0.904 | 0.980 | 0.969 | 0.930 | 0.996 | 0.970 | 0.960 | 3.2 |
| 33) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 34) | TM | 1,1-Dichloropropene | 0.820 | 0.875 | 0.897 | 0.845 | 0.878 | 0.836 | 0.854 | 3.4 |
| 35) | TM | Carbon Tetrachlorid | 0.694 | 0.766 | 0.805 | 0.806 | 0.826 | 0.814 | 0.789 | 5.8 |
| 36) | S | 1,4-Difluorobenzene | 1.592 | 1.624 | 1.578 | 1.561 | 1.564 | 1.585 | 1.590 | 1.6 |
| 37) | TM | 1,2-Dichloroethane | 0.572 | 0.591 | 0.629 | 0.584 | 0.600 | 0.593 | 0.591 | 3.3 |
| 38) | TM | Benzene | 2.014 | 2.249 | 2.230 | 2.071 | 2.096 | 2.033 | 2.092 | 5.3 |
| 39) | I | Fluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | 0.305 | 0.323 | 0.329 | 0.316 | 0.311 | 0.302 | 0.311 | 3.9 |
| 41) | TMC | 1,2-Dichloropropane | 0.226 | 0.246 | 0.255 | 0.258 | 0.234 | 0.249 | 0.245 | 4.5 |
| 42) | T | Methylmethacrylate | 0.071 | 0.068 | 0.077 | 0.079 | 0.073 | 0.083 | 0.077 | 8.1 |

(#) = Out of Range ### Number of calibration levels exceeded format ###



090201

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11534SI.D 0.5 =I11535SI.D 1.2 =I11536SI.D
4.8 =I11537SI.D 8 =I11538SI.D 16 =I11539SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 45) | TM | Bromodichloromethan | 0.311 | 0.316 | 0.331 | 0.336 | 0.320 | 0.329 | 0.325 | 2.8 |
| 46) | TM | Dibromomethane | 0.101 | 0.112 | 0.118 | 0.113 | 0.108 | 0.109 | 0.110 | 4.8 |
| 47) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 50) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 51) | TM | 2-Hexanone | 0.025 | 0.030 | 0.032 | 0.032 | 0.031 | 0.030 | 0.031 | 9.3 |
| 52) | TM | Methyl isobutyl ket | 0.029 | 0.030 | 0.036 | 0.037 | 0.034 | 0.035 | 0.034 | 10.9 |
| 53) | TM | cis-1,3-Dichloropro | 0.244 | 0.308 | 0.327 | 0.338 | 0.316 | 0.305 | 0.311 | 10.6 |
| 54) | S | Bromofluorobenzene | 0.286 | 0.283 | 0.293 | 0.290 | 0.292 | 0.283 | 0.287 | 1.7 |
| 55) | TMC | Toluene | 0.607 | 0.639 | 0.671 | 0.647 | 0.597 | 0.541 | 0.612 | 7.1 |
| 56) | TM | trans-1,3-Dichlorop | 0.174 | 0.198 | 0.236 | 0.240 | 0.228 | 0.220 | 0.221 | 12.0 |
| 57) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.108 | 0.110 | 0.120 | 0.115 | 0.105 | 0.097 | 0.109 | 6.5 |
| 59) | TM | 1,3-Dichloropropane | 0.205 | 0.228 | 0.248 | 0.236 | 0.222 | 0.214 | 0.227 | 6.4 |
| 60) | TM | Tetrachloroethene | 0.271 | 0.274 | 0.292 | 0.289 | 0.270 | 0.242 | 0.270 | 6.8 |
| 61) | TM | Dibromochloromethan | 0.142 | 0.142 | 0.175 | 0.170 | 0.166 | 0.158 | 0.159 | 8.0 |
| 62) | TM | 1,2-Dibromoethane | 0.096 | 0.102 | 0.119 | 0.123 | 0.117 | 0.114 | 0.113 | 8.7 |
| 63) | I | d5-Chlorobenzene | ----------ISTD---------- | | | | | | | |
| 64) | TMP | Chlorobenzene | 0.905 | 0.979 | 1.054 | 1.008 | 1.002 | 0.951 | 0.976 | 5.1 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.298 | 0.316 | 0.346 | 0.346 | 0.349 | 0.334 | 0.333 | 5.7 |
| 66) | TMC | Ethylbenzene | 1.821 | 2.050 | 2.141 | 1.985 | 2.002 | 1.828 | 1.955 | 6.2 |
| 67) | TM | m,p-Xylene | 0.612 | 0.680 | 0.726 | 0.683 | 0.683 | 0.629 | 0.655 | 8.0 |
| 68) | TM | o-Xylene | 0.525 | 0.613 | 0.654 | 0.654 | 0.665 | 0.632 | 0.620 | 7.7 |
| 69) | TM | Styrene | 0.744 | 0.923 | 1.012 | 1.010 | 1.050 | 1.006 | 0.957 | 10.7 |
| 70) | TMP | Bromoform | 0.108 | 0.099 | 0.104 | 0.121 | 0.130 | 0.127 | 0.115 | 10.2 |
| 71) | TM | Isopropylbenzene | 1.485 | 1.791 | 1.910 | 1.845 | 1.901 | 1.755 | 1.761 | 8.7 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.158 | 0.209 | 0.210 | 0.203 | 0.214 | 0.214 | 0.203 | 9.9 |
| 73) | S | 1,2-Dichlorobenzene | 0.322 | 0.292 | 0.307 | 0.352 | 0.385 | 0.380 | 0.345 | 11.1 |
| 74) | TM | 1,2,3-Trichloroprop | 0.157 | 0.145 | 0.148 | 0.150 | 0.159 | 0.158 | 0.154 | 3.9 |
| 75) | T | trans-1,4-Dichloro- | 0.062 | 0.057 | 0.067 | 0.069 | 0.071 | 0.070 | 0.066 | 7.8 |
| 76) | TM | n-Propylbenzene | 2.067 | 2.276 | 2.333 | 2.289 | 2.358 | 2.187 | 2.215 | 6.2 |
| 77) | TM | Bromobenzene | 0.335 | 0.329 | 0.342 | 0.358 | 0.371 | 0.360 | 0.348 | 4.3 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.175 | 1.446 | 1.351 | 1.549 | 1.577 | 1.474 | 1.415 | 9.8 |
| 79) | TM | 2-Chlorotoluene | 1.355 | 1.508 | 1.359 | 1.502 | 1.549 | 1.433 | 1.430 | 6.5 |
| 80) | TM | 4-Chlorotoluene | 1.119 | 1.283 | 1.182 | 1.346 | 1.379 | 1.315 | 1.267 | 7.2 |
| 81) | TM | tert-butylbenzene | 1.024 | 1.153 | 1.128 | 1.257 | 1.320 | 1.247 | 1.187 | 8.2 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.254 | 1.453 | 1.416 | 1.522 | 1.628 | 1.507 | 1.450 | 8.2 |
| 83) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 84) | TM | sec-butylbenzene | 1.480 | 1.753 | 1.650 | 1.836 | 1.939 | 1.814 | 1.738 | 8.5 |
| 85) | TM | p-isopropyltoluene | 1.197 | 1.362 | 1.320 | 1.512 | 1.597 | 1.506 | 1.416 | 9.5 |

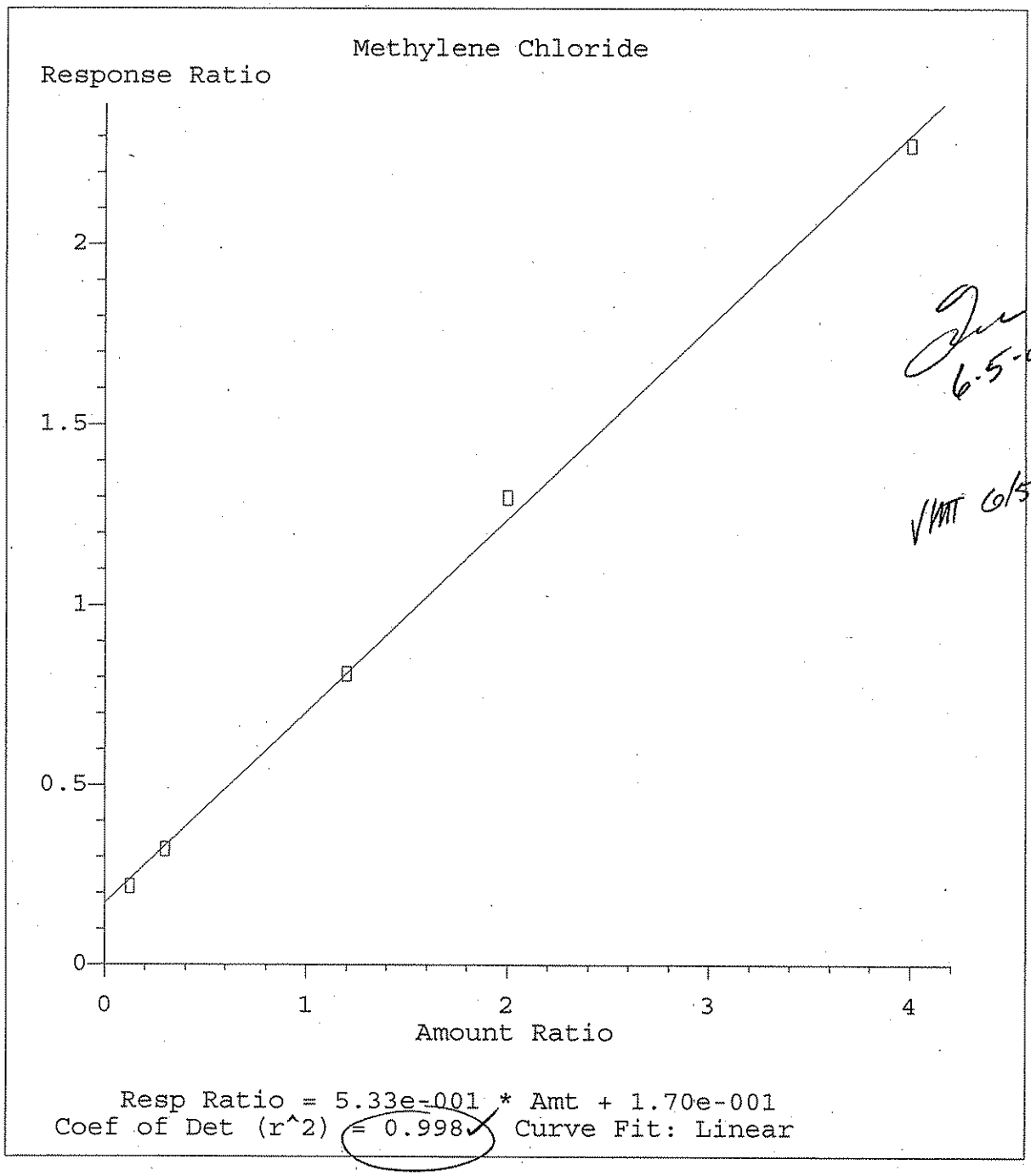
(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11534SI.D 0.5 =I11535SI.D 1.2 =I11536SI.D
4.8 =I11537SI.D 8 =I11538SI.D 16 =I11539SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.599 | 0.675 | 0.620 | 0.723 | 0.751 | 0.733 | 0.685 | 8.3 |
| 87) | I | 1,4-Dichlorobenzene-d | ISTD | | | | | | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.311 | 1.464 | 1.551 | 1.507 | 1.475 | 1.453 | 1.449 | 5.5 |
| 89) | TM | n-butylbenzene | 2.741 | 2.874 | 3.229 | 3.264 | 3.230 | 3.040 | 3.030 | 7.1 |
| 90) | TM | 1,2-Dichlorobenzene | 1.112 | 1.061 | 1.238 | 1.238 | 1.203 | 1.196 | 1.171 | 5.7 |
| 91) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | | 0.047 | 0.062 | 0.065 | 0.066 | 0.070 | 0.063 | 13.2 |
| 93) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | | 0.550 | 0.667 | 0.749 | 0.786 | 0.793 | 0.721 | 13.3 |
| 95) | TM | Hexachlorobutadiene | 0.378 | 0.357 | 0.405 | 0.404 | 0.426 | 0.397 | 0.393 | 5.5 |
| 96) | TM | Naphthalene | 0.367 | 0.503 | 0.739 | 0.910 | 0.998 | 1.066 | 0.764 | 36.7 |
| 97) | TM | 1,2,3-Trichlorobenz | | 0.383 | 0.491 | 0.558 | 0.604 | 0.616 | 0.545 | 17.0 |
| 98) | TM | 1,3,5-Trichlorobenz | | 0.975 | 1.115 | 1.149 | 1.160 | 1.141 | 1.104 | 6.2 |

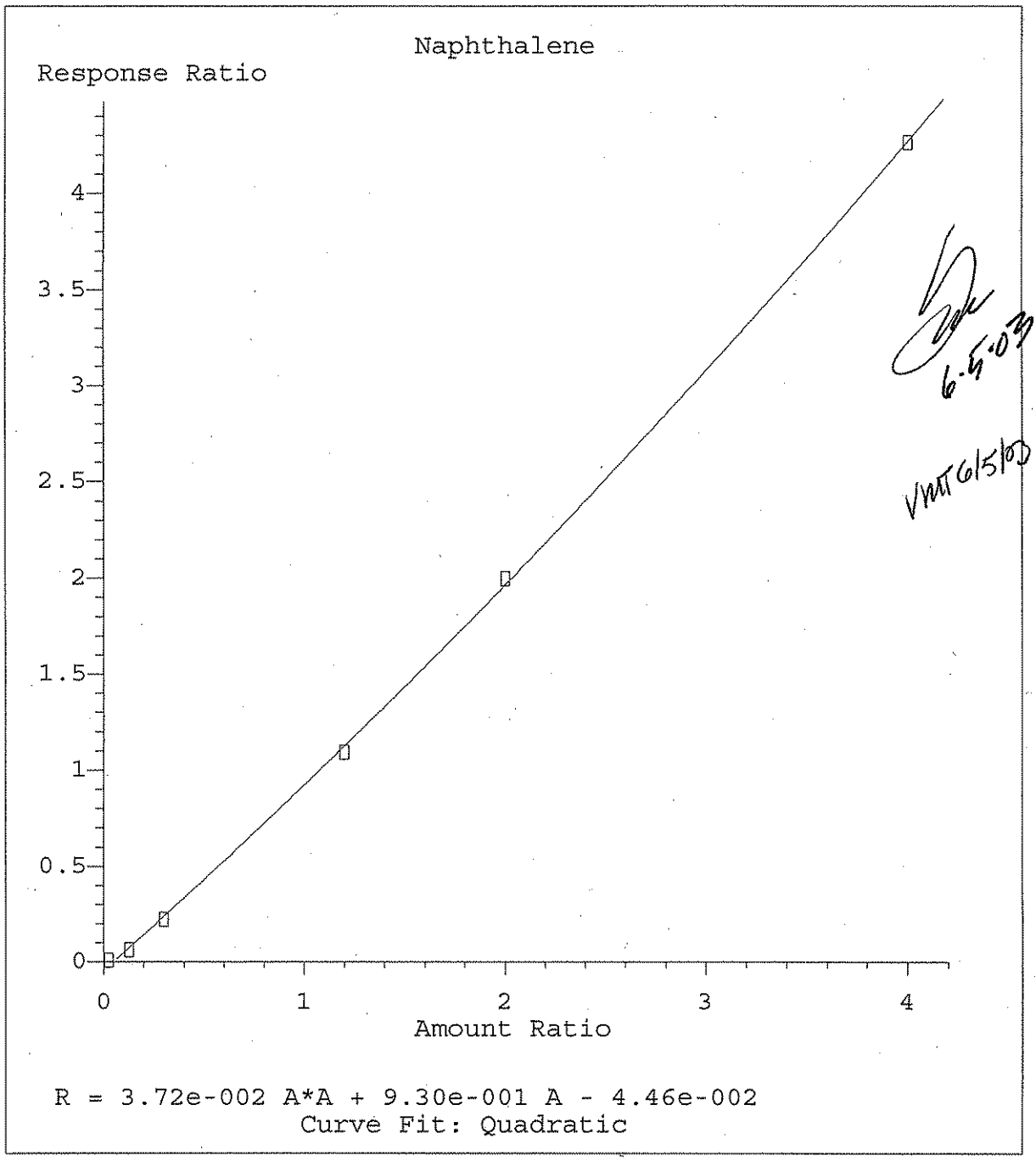
(#) = Out of Range ### Number of calibration levels exceeded format ###




6-5-03

VMT 6/5/03

Method Name: C:\HPCHEM\1\METHODS\V506043I.M
Calibration Table Last Updated: Thu Jun 05 10:02:28 2003




6-5-03

VMT 6/5/03

Method Name: C:\HPCHEM\1\METHODS\V506043I.M
Calibration Table Last Updated: Wed Jun 04 15:17:51 2003

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11534SI.D Vial: 4
Acq On : 4 Jun 2003 10:34 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:17 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03
JMR 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 777931 | 4.00 ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1502062 | 4.00 ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 936037 | 4.00 ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 399237 | 4.00 ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 1238548 | 4.83 ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 120.75% | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 428933 | 3.22 ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 80.50% | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 301631 | 3.17 ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 79.25% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 19318 | 0.15 ug/L | 97 |
| 3) Chloromethane | 2.25 | 50 | 16798 | 0.19 ug/L | 98 |
| 4) Vinyl Chloride | 2.38 | 62 | 10591 | 0.20 ug/L | 93 |
| 5) Bromomethane | 2.92 | 94 | 8334 | 0.22 ug/L | 99 |
| 6) Chloroethane | 3.02 | 64 | 7939 | 0.20 ug/L | 88 |
| 7) t-Butyl alcohol | 4.55 | 59 | 538 | 0.45 ug/L # | 1 |
| 8) Trichlorofluoromethane | 3.38 | 101 | 16213 | 0.19 ug/L | 96 |
| 9) Diethyl ether | 3.84 | 74 | 3639 | 0.17 ug/L # | 76 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 8732 | 0.17 ug/L # | 69 |
| 12) Acetone | 4.14 | 43 | 8398 | 1.11 ug/L # | 82 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 7279 | 0.17 ug/L # | 76 |
| 14) Methyl iodide | 4.78 | 142 | 4259 | 0.08 ug/L # | 29 |
| 15) Di-isopropyl ether | 6.19 | 45 | 29678 | 0.11 ug/L | 98 |
| 16) Methylene Chloride | 5.11 | 84 | 125087 | 1.61 ug/L | 97 |
| 17) Carbon Disulfide | 5.09 | 76 | 35239 | 0.60 ug/L | 100 |
| 18) Acrylonitrile | 5.34 | 53 | 1610 | 0.19 ug/L # | 73 |
| 19) Methyl-tert-butyl ether | 5.43 | 73 | 15788 | 0.18 ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 9700 | 0.12 ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 18331 | 0.12 ug/L | 93 |
| 22) Vinyl acetate | 6.33 | 86 | 659 | 0.24 ug/L # | 1 |
| 23) Methyl ethyl ketone | 7.04 | 72 | 1629 | 0.56 ug/L | 97 |
| 24) Ethyl t-butyl ether | 6.86 | 59 | 18885 | 0.12 ug/L | 95 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 12255 | 0.12 ug/L | 81 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 10265 | 0.13 ug/L # | 73 |
| 27) t-Amyl methyl ether | 8.63 | 73 | 13382 | 0.14 ug/L # | 19 |
| 29) Chloroform | 7.51 | 83 | 38580 | 0.25 ug/L | 90 |
| 30) Bromochloromethane | 7.75 | 128 | 3742 | 0.11 ug/L # | 75 |

(#) = qualifier out of range (m) = manual integration



009206

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11534SI.D Vial: 4
Acq On : 4 Jun 2003 10:34 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:17 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 31) | Tetrahydrofuran | 7.86 | 71 | 193 | 0.06 ug/L | # | 3 |
| 32) | 1,1,1-Trichloroethane | 8.15 | 97 | 17582 | 0.14 ug/L | | 86 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 15952 | 0.13 ug/L | | 79 |
| 35) | Carbon Tetrachloride | 8.53 | 119 | 13492 | 0.12 ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 8.77 | 62 | 11117 | 0.14 ug/L | | 98 |
| 38) | Benzene | 8.79 | 78 | 39172 | 0.12 ug/L | | 97 |
| 40) | Trichloroethene | 9.73 | 95 | 11439 | 0.10 ug/L | | 86 |
| 41) | 1,2-Dichloropropane | 10.00 | 63 | 8495 | 0.08 ug/L | | 83 |
| 42) | Methylmethacrylate | 10.14 | 69 | 2666 | 0.08 ug/L | # | 89 |
| 45) | Bromodichloromethane | 10.35 | 83 | 11687 | 0.11 ug/L | | 89 |
| 46) | Dibromomethane | 10.42 | 93 | 3781 | 0.09 ug/L | | 82 |
| 51) | 2-Hexanone | 12.25 | 58 | 4706 | 0.34 ug/L | | 98 |
| 52) | Methyl isobutyl ketone | 10.91 | 58 | 5395 | 0.36 ug/L | # | 76 |
| 53) | cis-1,3-Dichloropropene | 11.19 | 75 | 9152 | 0.09 ug/L | | 97 |
| 55) | Toluene | 11.68 | 92 | 22790 | 0.09 ug/L | | 96 |
| 56) | trans-1,3-Dichloropropene | 11.97 | 75 | 6543 | 0.09 ug/L | | 97 |
| 58) | 1,1,2-Trichloroethane | 12.21 | 83 | 4054 | 0.10 ug/L | | 88 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 7681 | 0.08 ug/L | | 89 |
| 60) | Tetrachloroethene | 12.70 | 166 | 10172 | 0.07 ug/L | | 88 |
| 61) | Dibromochloromethane | 12.98 | 129 | 5334 | 0.09 ug/L | | 83 |
| 62) | 1,2-Dibromoethane | 13.31 | 107 | 3603 | 0.07 ug/L | | 82 |
| 64) | Chlorobenzene | 13.96 | 112 | 21189 | 0.08 ug/L | | 94 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 6976 | 0.08 ug/L | | 89 |
| 66) | Ethylbenzene | 14.06 | 91 | 42621 | 0.10 ug/L | | 93 |
| 67) | m,p-Xylene | 14.19 | 106 | 28664 | 0.18 ug/L | | 89 |
| 68) | o-Xylene | 14.87 | 106 | 12281 | 0.08 ug/L | # | 87 |
| 69) | Styrene | 14.93 | 104 | 17399 | 0.07 ug/L | | 95 |
| 70) | Bromoform | 15.44 | 173 | 2519 | 0.11 ug/L | | 80 |
| 71) | Isopropylbenzene | 15.45 | 105 | 34746 | 0.08 ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 3702 | 0.08 ug/L | # | 60 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 3668m | 0.11 ug/L | | |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 1451 | 0.10 ug/L | | 96 |
| 76) | n-Propylbenzene | 16.09 | 91 | 48368 | 0.10 ug/L | | 94 |
| 77) | Bromobenzene | 16.14 | 156 | 7829 | 0.08 ug/L | # | 74 |
| 78) | 1,3,5-Trimethylbenzene | 16.36 | 105 | 27492 | 0.08 ug/L | | 98 |
| 79) | 2-Chlorotoluene | 16.37 | 91 | 31700 | 0.09 ug/L | | 90 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 26190 | 0.08 ug/L | | 96 |
| 81) | tert-butylbenzene | 16.92 | 119 | 23951 | 0.08 ug/L | | 91 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 29344 | 0.08 ug/L | | 88 |
| 84) | sec-butylbenzene | 17.27 | 105 | 34636 | 0.08 ug/L | | 90 |
| 85) | p-isopropyltoluene | 17.49 | 119 | 28020 | 0.08 ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration



000207

Data File : C:\HPCHEM\1\DATA\060403-I\I11534SI.D Vial: 4
Acq On : 4 Jun 2003 10:34 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:17 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 14019 | 0.07 ug/L | 89 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 13084 | 0.08 ug/L | 97 |
| 89) n-butylbenzene | 18.17 | 91 | 27356 | 0.10 ug/L | 97 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 11100 | 0.09 ug/L | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 459 | 0.09 ug/L # | 74 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 3601 | 0.04 ug/L # | 68 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 3770 | 0.05 ug/L | 72 |
| 96) Naphthalene | 21.56 | 128 | 3660 | 0.03 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 2917 | 0.04 ug/L | 94 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 8248 | 0.06 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

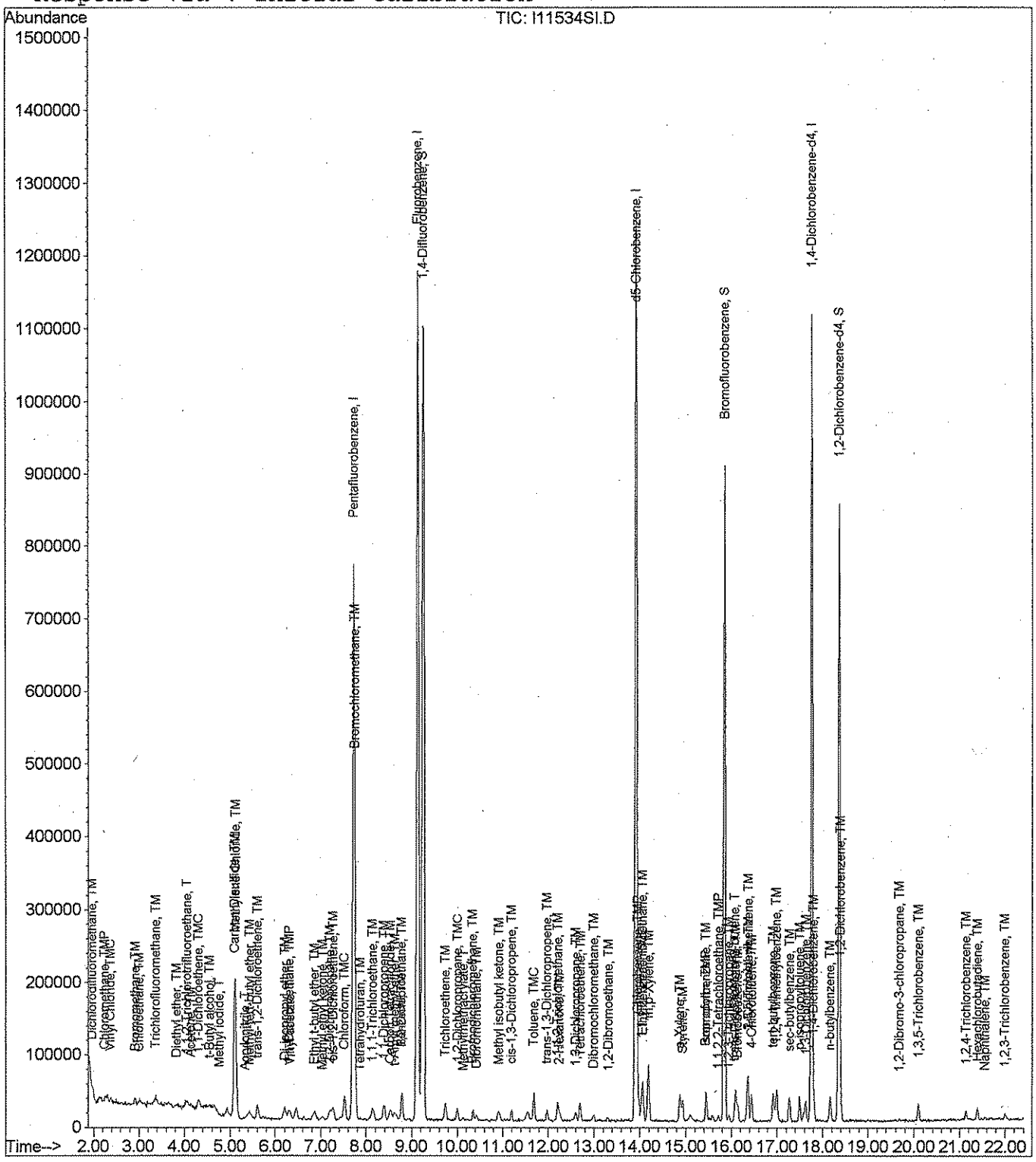


000208

Quantitation Report

Data File : C:\HPCHEM\1\DATA\060403-I\I11534SI.D Vial: 4
Acq On : 4 Jun 2003 10:34 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:17 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000209

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11535SI.D Vial: 5
Acq On : 4 Jun 2003 11:09 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:19 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03 VMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 767610 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1505251 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 936200 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 400883 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 1246394 | 4.76 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 119.00% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 426224 | 3.28 | ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 82.00% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 273277 | 2.98 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 74.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 91270 | 0.66 | ug/L | 91 |
| 3) Chloromethane | 2.26 | 50 | 61316 | 0.62 | ug/L | 98 |
| 4) Vinyl Chloride | 2.38 | 62 | 52132 | 0.88 | ug/L | 98 |
| 5) Bromomethane | 2.92 | 94 | 32492 | 0.74 | ug/L | 96 |
| 6) Chloroethane | 3.02 | 64 | 32076 | 0.70 | ug/L | 86 |
| 7) t-Butyl alcohol | 4.53 | 59 | 5205m | 4.52 | ug/L | |
| 8) Trichlorofluoromethane | 3.38 | 101 | 81024 | 0.82 | ug/L | 95 |
| 9) Diethyl ether | 3.84 | 74 | 12329 | 0.53 | ug/L # | 76 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 42952 | 0.75 | ug/L # | 78 |
| 11) Acrolein | 4.02 | 56 | 11353 | 18.68 | ug/L # | 75 |
| 12) Acetone | 4.14 | 43 | 24199 | 2.70 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 4.32 | 96 | 36067 | 0.76 | ug/L | 96 |
| 14) Methyl iodide | 4.79 | 142 | 30168 | 0.56 | ug/L | 91 |
| 15) Di-isopropyl ether | 6.19 | 45 | 160336 | 0.59 | ug/L | 96 |
| 16) Methylene Chloride | 5.11 | 84 | 166224 | 0.62 | ug/L | 99 |
| 17) Carbon Disulfide | 5.09 | 76 | 94106 | 0.89 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 6729 | 0.68 | ug/L # | 88 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 74661 | 0.75 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 55692 | 0.65 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 103871 | 0.64 | ug/L | 95 |
| 22) Vinyl acetate | 6.33 | 86 | 2489 | 0.75 | ug/L # | 43 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 8730 | 2.98 | ug/L | 82 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 113341 | 0.72 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 7.20 | 77 | 72767 | 0.73 | ug/L | 83 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 55160 | 0.65 | ug/L # | 85 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 74012 | 0.73 | ug/L # | 48 |
| 29) Chloroform | 7.51 | 83 | 121938 | 0.65 | ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11535SI.D Vial: 5
Acq On : 4 Jun 2003 11:09 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:19 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.75 | 128 | 18357 | 0.55 ug/L # | 67 |
| 31) Tetrahydrofuran | 7.87 | 71 | 1768m | 0.63 ug/L | |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 93990 | 0.72 ug/L | 93 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 83950 | 0.67 ug/L | 95 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 73484 | 0.67 ug/L | 84 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 56717 | 0.66 ug/L | 93 |
| 38) Benzene | 8.79 | 78 | 215836 | 0.64 ug/L | 97 |
| 40) Trichloroethene | 9.73 | 95 | 60754 | 0.51 ug/L | 80 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 46346 | 0.47 ug/L | 91 |
| 42) Methylmethacrylate | 10.13 | 69 | 12886 | 0.42 ug/L | 93 |
| 45) Bromodichloromethane | 10.34 | 83 | 59386 | 0.56 ug/L | 98 |
| 46) Dibromomethane | 10.42 | 93 | 21164 | 0.52 ug/L | 96 |
| 50) 2-Chloroethylvinyl ether | 10.90 | 63 | 76 | 0.10 ug/L # | 54 |
| 51) 2-Hexanone | 12.25 | 58 | 28265 | 2.15 ug/L | 98 |
| 52) Methyl isobutyl ketone | 10.91 | 58 | 28099 | 1.98 ug/L | 98 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 57883 | 0.55 ug/L | 93 |
| 55) Toluene | 11.68 | 92 | 120293 | 0.48 ug/L | 93 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 37341 | 0.51 ug/L | 99 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 20752 | 0.49 ug/L | 93 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 42897 | 0.47 ug/L | 89 |
| 60) Tetrachloroethene | 12.70 | 166 | 51525 | 0.34 ug/L | 95 |
| 61) Dibromochloromethane | 12.98 | 129 | 26805 | 0.48 ug/L | 96 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 19210 | 0.40 ug/L # | 70 |
| 64) Chlorobenzene | 13.97 | 112 | 114541 | 0.47 ug/L | 91 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 36968 | 0.47 ug/L | 92 |
| 66) Ethylbenzene | 14.06 | 91 | 239869 | 0.55 ug/L | 95 |
| 67) m,p-Xylene | 14.19 | 106 | 159062 | 1.01 ug/L | 93 |
| 68) o-Xylene | 14.87 | 106 | 71709 | 0.49 ug/L # | 76 |
| 69) Styrene | 14.93 | 104 | 108056 | 0.46 ug/L | 89 |
| 70) Bromoform | 15.44 | 173 | 11590 | 0.47 ug/L | 75 |
| 71) Isopropylbenzene | 15.45 | 105 | 209647 | 0.51 ug/L | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 24433 | 0.54 ug/L # | 87 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 16937 | 0.49 ug/L | 93 |
| 75) trans-1,4-Dichloro-2-buten | 16.06 | 53 | 6618 | 0.46 ug/L # | 86 |
| 76) n-Propylbenzene | 16.09 | 91 | 266386 | 0.53 ug/L | 98 |
| 77) Bromobenzene | 16.14 | 156 | 38465 | 0.40 ug/L # | 76 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 169210 | 0.49 ug/L | 97 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 176446 | 0.53 ug/L | 95 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 150097 | 0.49 ug/L | 89 |
| 81) tert-butylbenzene | 16.92 | 119 | 134902 | 0.46 ug/L | 91 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 170076 | 0.49 ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11535SI.D Vial: 5
Acq On : 4 Jun 2003 11:09 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:19 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Mar 12 08:12:09 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 17.27 | 105 | 205091 | 0.50 | ug/L | | 99 |
| 85) | p-isopropyltoluene | 17.50 | 119 | 159379 | 0.46 | ug/L | | 98 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 78953 | 0.42 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.80 | 146 | 73354 | 0.48 | ug/L | | 94 |
| 89) | n-butylbenzene | 18.16 | 91 | 144042 | 0.53 | ug/L | | 94 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 53163 | 0.43 | ug/L | | 99 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 2380 | 0.43 | ug/L | # | 70 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 27536 | 0.31 | ug/L | | 88 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 17889 | 0.28 | ug/L | | 71 |
| 96) | Naphthalene | 21.56 | 128 | 25203 | 0.26 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 22.00 | 180 | 19179 | 0.28 | ug/L | | 96 |
| 98) | 1,3,5-Trichlorobenzene | 20.09 | 180 | 48864 | 0.36 | ug/L | | 86 |

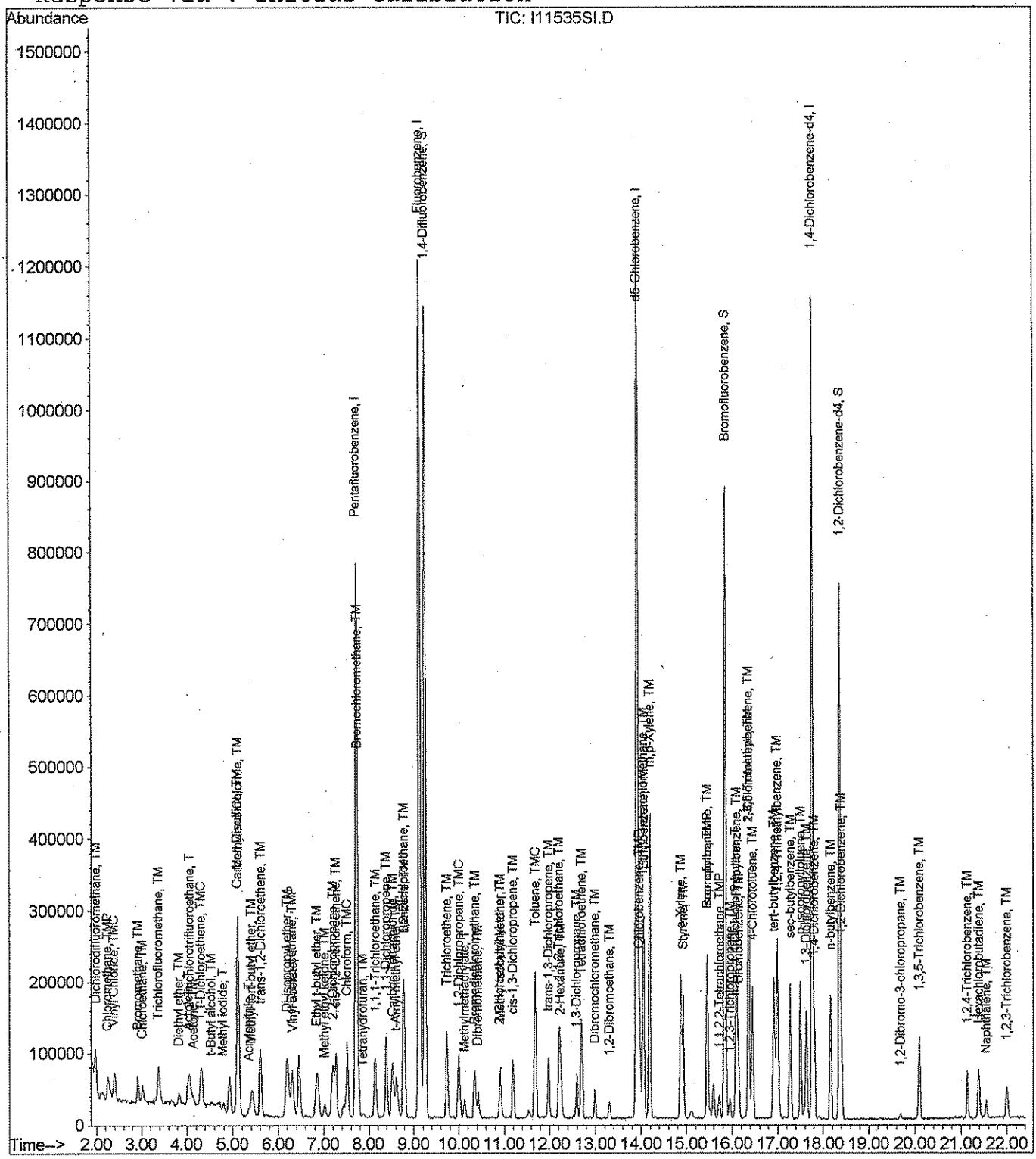
(#) = qualifier out of range (m) = manual integration



000212

Data File : C:\HPCHEM\1\DATA\060403-I\I11535SI.D Vial: 5
Acq On : 4 Jun 2003 11:09 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:19 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000213

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11536SI.D Vial: 6
Acq On : 4 Jun 2003 11:44 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:36 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 14:35:58 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03
VMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 783774 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 1510559 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 948084 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 383976 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 1236893 | 3.97 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.25% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 442590 | 4.09 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 102.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 290598 | 3.55 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 88.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 230912 | 1.23 | ug/L | 100 |
| 3) Chloromethane | 2.25 | 50 | 151731 | 1.21 | ug/L | 100 |
| 4) Vinyl Chloride | 2.38 | 62 | 116086 | 1.31 | ug/L | 100 |
| 5) Bromomethane | 2.92 | 94 | 83379 | 1.25 | ug/L | 100 |
| 6) Chloroethane | 3.02 | 64 | 72926 | 1.16 | ug/L | 100 |
| 7) t-Butyl alcohol | 4.54 | 59 | 12265 | 6.08 | ug/L | 100 |
| 8) Trichlorofluoromethane | 3.38 | 101 | 200345 | 1.22 | ug/L | 100 |
| 9) Diethyl ether | 3.83 | 74 | 33678 | 1.29 | ug/L | 100 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 112127 | 1.28 | ug/L | 100 |
| 11) Acrolein | 4.02 | 56 | 26825 | 6.06 | ug/L | 100 |
| 12) Acetone | 4.14 | 43 | 50037 | 6.14 | ug/L | 100 |
| 14) Methyl iodide | 4.79 | 142 | 88811 | 0.86 | ug/L | 100 |
| 15) Di-isopropyl ether | 6.19 | 45 | 415134 | 1.24 | ug/L | 100 |
| 16) Methylene Chloride | 5.12 | 84 | 250604 | 1.00 | ug/L | 100 |
| 17) Carbon Disulfide | 5.09 | 76 | 240417 | 1.20 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 17366 | 1.20 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 187392 | 1.20 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 134654 | 1.26 | ug/L | 100 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 266363 | 1.27 | ug/L | 100 |
| 22) Vinyl acetate | 6.34 | 86 | 5730 | 1.18 | ug/L | 100 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 18989 | 5.60 | ug/L | 100 |
| 24) Ethyl t-butyl ether | 6.85 | 59 | 282967 | 1.22 | ug/L | 100 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 194423 | 1.29 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 130943 | 1.22 | ug/L | 100 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 192032 | 1.22 | ug/L | 100 |
| 29) Chloroform | 7.51 | 83 | 278604 | 1.26 | ug/L | 100 |
| 30) Bromochloromethane | 7.77 | 128 | 46231 | 1.22 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11536SI.D Vial: 6
Acq On : 4 Jun 2003 11:44 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:36 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 14:35:58 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.87 | 71 | 3756 | 1.10 ug/L | 100 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 227842 | 1.21 ug/L | 100 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 211001 | 1.26 ug/L | 100 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 189397 | 1.23 ug/L | 100 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 147962 | 1.28 ug/L | 100 |
| 41) 1,2-Dichloropropane | 10.01 | 63 | 115608 | 1.25 ug/L | 100 |
| 42) Methylmethacrylate | 10.13 | 69 | 34776 | 1.20 ug/L | 100 |
| 45) Bromodichloromethane | 10.35 | 83 | 149821 | 1.22 ug/L | 100 |
| 46) Dibromomethane | 10.42 | 93 | 53686 | 1.29 ug/L | 100 |
| 51) 2-Hexanone | 12.24 | 58 | 72989 | 6.32 ug/L | 100 |
| 52) Methyl isobutyl ketone | 10.91 | 58 | 81835 | 6.32 ug/L | 100 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 148219 | 1.26 ug/L | 100 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 107009 | 1.28 ug/L | 100 |
| 58) 1,1,2-Trichloroethane | 12.21 | 83 | 54206 | 1.32 ug/L | 100 |
| 59) 1,3-Dichloropropane | 12.60 | 76 | 112256 | 1.31 ug/L | 100 |
| 60) Tetrachloroethene | 12.70 | 166 | 132317 | 1.30 ug/L | 100 |
| 61) Dibromochloromethane | 12.99 | 129 | 79168 | 1.32 ug/L | 100 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 53928 | 1.27 ug/L | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 98370 | 1.25 ug/L | 100 |
| 66) Ethylbenzene | 14.06 | 91 | 608967 | 1.31 ug/L | 100 |
| 67) m,p-Xylene | 14.19 | 106 | 412826 | 2.66 ug/L | 100 |
| 68) o-Xylene | 14.88 | 106 | 185874 | 1.26 ug/L | 100 |
| 69) Styrene | 14.93 | 104 | 287934 | 1.27 ug/L | 100 |
| 70) Bromoform | 15.44 | 173 | 29574 | 1.08 ug/L | 100 |
| 71) Isopropylbenzene | 15.45 | 105 | 543150 | 1.30 ug/L | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 15.71 | 83 | 59735 | 1.24 ug/L | 100 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 41997 | 1.15 ug/L | 100 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 18959 | 1.21 ug/L | 100 |
| 76) n-Propylbenzene | 16.09 | 91 | 663427 | 1.26 ug/L | 100 |
| 77) Bromobenzene | 16.14 | 156 | 97178 | 1.18 ug/L | 100 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 384400 | 1.15 ug/L | 100 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 386587 | 1.14 ug/L | 100 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 336179 | 1.12 ug/L | 100 |
| 81) tert-butylbenzene | 16.93 | 119 | 320811 | 1.14 ug/L | 100 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 402876 | 1.17 ug/L | 100 |
| 84) sec-butylbenzene | 17.27 | 105 | 469441 | 1.14 ug/L | 100 |
| 85) p-isopropyltoluene | 17.50 | 119 | 375426 | 1.12 ug/L | 100 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 176406 | 1.09 ug/L | 100 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 178648 | 1.28 ug/L | 100 |
| 89) n-butylbenzene | 18.17 | 91 | 371909 | 1.28 ug/L | 100 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 142643 | 1.27 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11536SI.D Vial: 6
Acq On : 4 Jun 2003 11:44 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:36 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 14:35:58 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

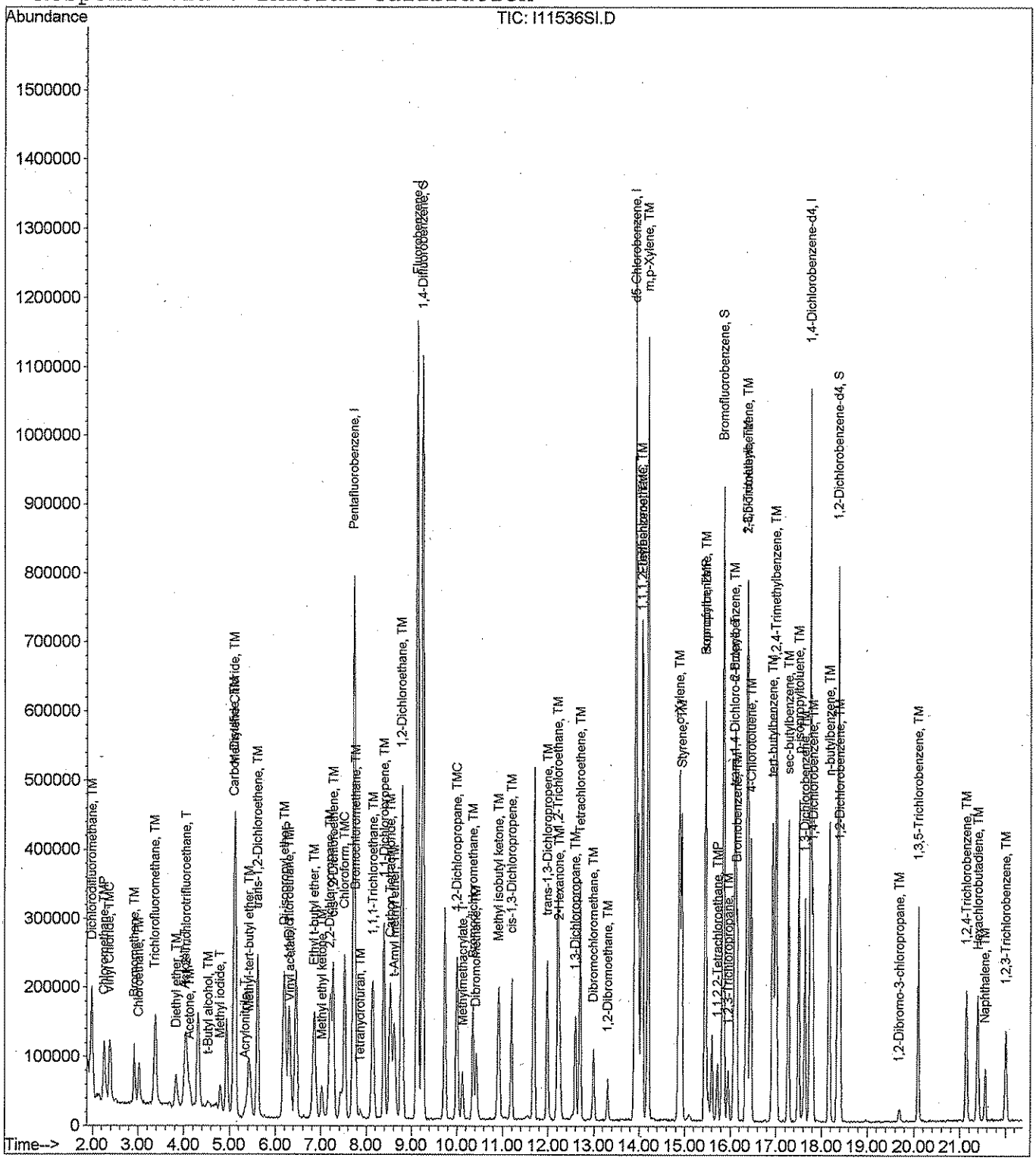
| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 92) | 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 7112 | 1.17 ug/L | 100 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 76787 | 1.11 ug/L | 100 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 46664 | 1.24 ug/L | 100 |
| 96) | Naphthalene | 21.56 | 128 | 85115 | 1.13 ug/L | 72 |
| 97) | 1,2,3-Trichlorobenzene | 22.01 | 180 | 56585 | 1.08 ug/L | 100 |
| 98) | 1,3,5-Trichlorobenzene | 20.09 | 180 | 128433 | 1.21 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\060403-I\I11536SI.D Vial: 6
Acq On : 4 Jun 2003 11:44 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:36 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000217

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11537SI.D Vial: 7
Acq On : 4 Jun 2003 12:18 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:51 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:29:01 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03 VMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 759258 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.11 | 96 | 1434718 | 4.00 | ug/L | -0.01 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 896144 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 411297 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.23 | 114 | 1185389 | 3.91 | ug/L | -0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 97.75% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 415715 | 4.04 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.00% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 315440 | 4.59 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 114.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 857562 | 4.63 | ug/L | 98 |
| 3) Chloromethane | 2.25 | 50 | 526163 | 3.87 | ug/L | 94 |
| 4) Vinyl Chloride | 2.36 | 62 | 356320 | 3.56 | ug/L | 97 |
| 5) Bromomethane | 2.91 | 94 | 269173 | 3.79 | ug/L | 97 |
| 6) Chloroethane | 3.01 | 64 | 263556 | 3.96 | ug/L | 96 |
| 7) t-Butyl alcohol | 4.51 | 59 | 40202 | 19.90 | ug/L | 100 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 750133 | 4.69 | ug/L | 91 |
| 9) Diethyl ether | 3.82 | 74 | 114055 | 4.42 | ug/L | 98 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 396274 | 4.56 | ug/L | 95 |
| 11) Acrolein | 4.02 | 56 | 96420 | 21.86 | ug/L | 99 |
| 12) Acetone | 4.13 | 43 | 173200 | 19.62 | ug/L | 94 |
| 13) 1,1-Dichloroethene | 4.30 | 96 | 327283 | 4.48 | ug/L | 94 |
| 14) Methyl iodide | 4.79 | 142 | 360915 | 5.49 | ug/L | 95 |
| 15) Di-isopropyl ether | 6.18 | 45 | 1559498 | 4.97 | ug/L | 100 |
| 16) Methylene Chloride | 5.10 | 84 | 613952 | 4.52 | ug/L | 93 |
| 17) Carbon Disulfide | 5.08 | 76 | 934468 | 4.92 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 66177 | 4.61 | ug/L # | 91 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 701898 | 4.65 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 491466 | 4.70 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 970123 | 4.86 | ug/L | 98 |
| 22) Vinyl acetate | 6.35 | 86 | 21504 | 4.50 | ug/L | 94 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 75923 | 23.48 | ug/L | 87 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 1084820 | 5.11 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 718171 | 5.12 | ug/L | 96 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 487594 | 4.64 | ug/L | 98 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 719629 | 5.00 | ug/L | 100 |
| 29) Chloroform | 7.51 | 83 | 984050 | 4.22 | ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11537SI.D Vial: 7
Acq On : 4 Jun 2003 12:18 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:51 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:29:01 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.75 | 128 | 176361 | 4.80 | ug/L | | 99 |
| 31) | Tetrahydrofuran | 7.86 | 71 | 15822 | 4.85 | ug/L | # | 70 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 847751 | 4.70 | ug/L | | 98 |
| 34) | 1,1-Dichloropropene | 8.38 | 75 | 770223 | 4.70 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 734331 | 5.12 | ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 8.76 | 62 | 531731 | 4.69 | ug/L | | 98 |
| 38) | Benzene | 8.78 | 78 | 1887360 | 4.59 | ug/L | | 99 |
| 40) | Trichloroethene | 9.73 | 95 | 544596 | 4.76 | ug/L | | 94 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 443345 | 5.10 | ug/L | | 97 |
| 42) | Methylmethacrylate | 10.12 | 69 | 135828 | 5.25 | ug/L | | 94 |
| 45) | Bromodichloromethane | 10.35 | 83 | 578089 | 5.05 | ug/L | | 100 |
| 46) | Dibromomethane | 10.42 | 93 | 193723 | 4.89 | ug/L | | 95 |
| 51) | 2-Hexanone | 12.24 | 58 | 274744 | 26.32 | ug/L | | 93 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 316034 | 27.91 | ug/L | | 98 |
| 53) | cis-1,3-Dichloropropene | 11.18 | 75 | 581845 | 5.54 | ug/L | | 93 |
| 55) | Toluene | 11.68 | 92 | 1113055 | 4.85 | ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 412710 | 5.67 | ug/L | | 93 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 197430 | 4.89 | ug/L | | 92 |
| 59) | 1,3-Dichloropropane | 12.58 | 76 | 407143 | 5.01 | ug/L | | 93 |
| 60) | Tetrachloroethene | 12.69 | 166 | 497522 | 4.97 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.99 | 129 | 292605 | 5.33 | ug/L | | 99 |
| 62) | 1,2-Dibromoethane | 13.29 | 107 | 210958 | 5.57 | ug/L | | 89 |
| 64) | Chlorobenzene | 13.96 | 112 | 1083578 | 4.94 | ug/L | | 97 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 371806 | 5.19 | ug/L | | 98 |
| 66) | Ethylbenzene | 14.05 | 91 | 2135029 | 4.76 | ug/L | | 100 |
| 67) | m,p-Xylene | 14.18 | 106 | 1468088 | 9.74 | ug/L | | 94 |
| 68) | o-Xylene | 14.86 | 106 | 703483 | 5.26 | ug/L | | 96 |
| 69) | Styrene | 14.92 | 104 | 1085923 | 5.43 | ug/L | | 95 |
| 70) | Bromoform | 15.43 | 173 | 130563 | 5.63 | ug/L | | 96 |
| 71) | Isopropylbenzene | 15.44 | 105 | 1984480 | 5.12 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 218340 | 5.07 | ug/L | | 92 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 161402 | 4.81 | ug/L | | 94 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 74034 | 5.35 | ug/L | # | 84 |
| 76) | n-Propylbenzene | 16.08 | 91 | 2461397 | 4.94 | ug/L | | 100 |
| 77) | Bromobenzene | 16.13 | 156 | 385036 | 5.13 | ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 1665482 | 5.61 | ug/L | | 100 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 1615575 | 5.12 | ug/L | | 93 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 1447979 | 5.41 | ug/L | | 100 |
| 81) | tert-butylbenzene | 16.92 | 119 | 1351918 | 5.48 | ug/L | | 98 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 1636783 | 5.31 | ug/L | | 99 |
| 84) | sec-butylbenzene | 17.27 | 105 | 1974048 | 5.41 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11537SI.D Vial: 7
Acq On : 4 Jun 2003 12:18 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:51 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:29:01 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.49 | 119 | 1626133 | 5.61 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 17.62 | 146 | 777113 | 5.49 ug/L | 100 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 743830 | 5.02 ug/L | 98 |
| 89) n-butylbenzene | 18.15 | 91 | 1611085 | 5.31 ug/L | 96 |
| 90) 1,2-Dichlorobenzene | 18.39 | 146 | 611042 | 5.23 ug/L | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 32071 | 5.71 ug/L | 87 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 369824 | 5.92 ug/L | 96 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 199227 | 5.10 ug/L | 98 |
| 96) Naphthalene | 21.54 | 128 | 449199 | 7.04 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 275436 | 6.13 ug/L | 89 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 567164 | 5.28 ug/L | 89 |

(#) = qualifier out of range (m) = manual integration

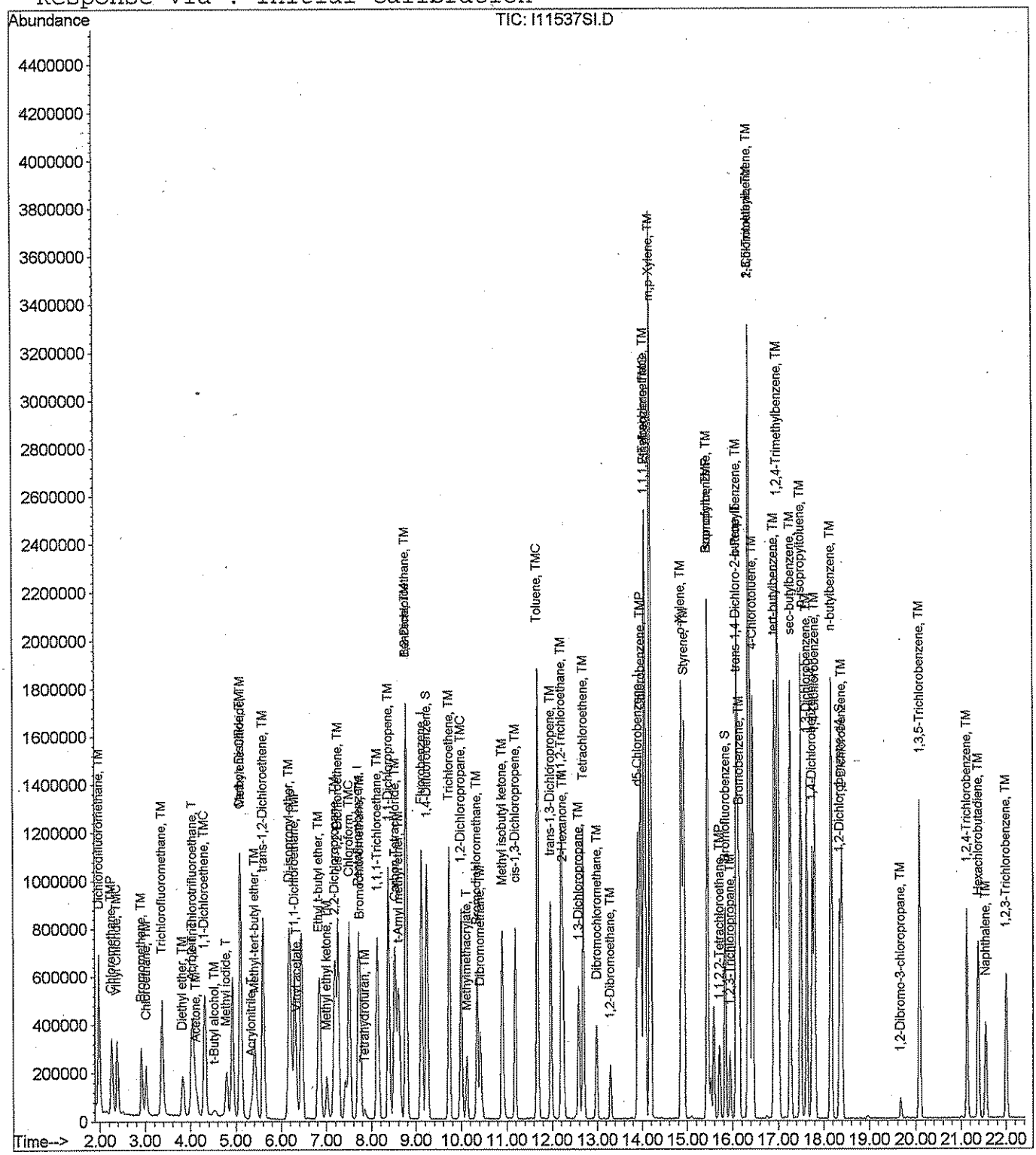


000220

Quantitation Report

Data File : C:\HPCHEM\1\DATA\060403-I\I11537SI.D Vial: 7
Acq On : 4 Jun 2003 12:18 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 12:51 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000221

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11538SI.D Vial: 8
Acq On : 4 Jun 2003 12:53 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 13:22 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03 JMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 797882 | 4.00 | ug/L | | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1485335 | 4.00 | ug/L | | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 889536 | 4.00 | ug/L | | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 443367 | 4.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 1248108 | 3.94 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 98.50% | | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 433116 | 4.05 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.25% | | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 342876 | 4.85 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 121.25% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 1604649 | 8.32 | ug/L | | 99 |
| 3) Chloromethane | 2.25 | 50 | 995427 | 7.32 | ug/L | | 99 |
| 4) Vinyl Chloride | 2.37 | 62 | 631683 | 6.42 | ug/L | | 97 |
| 5) Bromomethane | 2.91 | 94 | 527373 | 7.46 | ug/L | | 97 |
| 6) Chloroethane | 3.02 | 64 | 511815 | 7.65 | ug/L | | 94 |
| 7) t-Butyl alcohol | 4.52 | 59 | 79742 | 39.84 | ug/L | # | 91 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 1396624 | 8.35 | ug/L | | 91 |
| 9) Diethyl ether | 3.83 | 74 | 214399 | 8.12 | ug/L | | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.03 | 101 | 729558 | 8.09 | ug/L | | 96 |
| 11) Acrolein | 4.01 | 56 | 181674 | 40.39 | ug/L | | 98 |
| 12) Acetone | 4.13 | 43 | 304543 | 34.96 | ug/L | | 98 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 607207 | 8.04 | ug/L | | 99 |
| 14) Methyl iodide | 4.79 | 142 | 1017822 | 14.07 | ug/L | | 99 |
| 15) Di-isopropyl ether | 6.18 | 45 | 2917029 | 8.76 | ug/L | | 99 |
| 16) Methylene Chloride | 5.11 | 84 | 1035067 | 8.36 | ug/L | | 98 |
| 17) Carbon Disulfide | 5.08 | 76 | 1806819 | 8.97 | ug/L | | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 109115 | 7.31 | ug/L | # | 82 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 1299312 | 8.25 | ug/L | | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 914880 | 8.37 | ug/L | | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 1817685 | 8.63 | ug/L | | 97 |
| 22) Vinyl acetate | 6.34 | 86 | 38097 | 7.75 | ug/L | | 77 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 134205 | 39.71 | ug/L | | 96 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 1964668 | 8.67 | ug/L | | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 1321337 | 8.82 | ug/L | | 98 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 902233 | 8.24 | ug/L | | 97 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 1331410 | 8.71 | ug/L | | 99 |
| 29) Chloroform | 7.51 | 83 | 1778681 | 7.57 | ug/L | | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11538SI.D Vial: 8
Acq On : 4 Jun 2003 12:53 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 13:22 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.76 | 128 | 315417 | 8.17 ug/L | 95 |
| 31) Tetrahydrofuran | 7.86 | 71 | 24969 | 7.25 ug/L | 97 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 1588834 | 8.42 ug/L | 98 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 1401696 | 8.18 ug/L | 98 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 1318308 | 8.61 ug/L | 94 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 957552 | 8.08 ug/L | 99 |
| 38) Benzene | 8.78 | 78 | 3345384 | 7.83 ug/L | 99 |
| 40) Trichloroethene | 9.73 | 95 | 923795 | 7.82 ug/L | 96 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 696176 | 7.61 ug/L | 97 |
| 42) Methylmethacrylate | 10.12 | 69 | 216162 | 7.89 ug/L | 98 |
| 45) Bromodichloromethane | 10.35 | 83 | 951645 | 7.93 ug/L | 98 |
| 46) Dibromomethane | 10.42 | 93 | 321199 | 7.79 ug/L | 89 |
| 51) 2-Hexanone | 12.23 | 58 | 458172 | 41.39 ug/L | 98 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 506148 | 41.48 ug/L | 98 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 937784 | 8.30 ug/L | 90 |
| 55) Toluene | 11.68 | 92 | 1773805 | 7.45 ug/L | 100 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 676758 | 8.59 ug/L | 93 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 310515 | 7.39 ug/L | 96 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 660461 | 7.76 ug/L | 95 |
| 60) Tetrachloroethene | 12.70 | 166 | 802883 | 7.68 ug/L | 99 |
| 61) Dibromochloromethane | 12.98 | 129 | 493160 | 8.44 ug/L | 99 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 346821 | 8.50 ug/L | 94 |
| 64) Chlorobenzene | 13.97 | 112 | 1782005 | 8.12 ug/L | 93 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 621038 | 8.56 ug/L | 98 |
| 66) Ethylbenzene | 14.06 | 91 | 3562142 | 8.01 ug/L | 99 |
| 67) m,p-Xylene | 14.19 | 106 | 2430635 | 16.19 ug/L | 94 |
| 68) o-Xylene | 14.87 | 106 | 1182227 | 8.70 ug/L | 97 |
| 69) Styrene | 14.93 | 104 | 1868754 | 9.11 ug/L | 99 |
| 70) Bromoform | 15.44 | 173 | 230923 | 9.61 ug/L | 98 |
| 71) Isopropylbenzene | 15.45 | 105 | 3381791 | 8.65 ug/L | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 15.71 | 83 | 380316 | 8.77 ug/L # | 88 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 282762 | 8.49 ug/L | 100 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 125430 | 8.88 ug/L # | 81 |
| 76) n-Propylbenzene | 16.09 | 91 | 4194784 | 8.42 ug/L | 98 |
| 77) Bromobenzene | 16.14 | 156 | 659319 | 8.70 ug/L | 92 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 2806037 | 9.14 ug/L | 100 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 2755095 | 8.66 ug/L | 96 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 2453059 | 8.95 ug/L | 97 |
| 81) tert-butylbenzene | 16.92 | 119 | 2348368 | 9.26 ug/L | 97 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 2896106 | 9.23 ug/L | 99 |
| 84) sec-butylbenzene | 17.26 | 105 | 3449846 | 9.24 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\060403-I\I11538SI.D Vial: 8
Acq On : 4 Jun 2003 12:53 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 13:22 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.50 | 119 | 2842032 | 9.48 | ug/L | | 97 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 1335954 | 9.18 | ug/L | | 97 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 1307606 | 8.09 | ug/L | | 97 |
| 89) n-butylbenzene | 18.16 | 91 | 2864402 | 8.54 | ug/L | | 99 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 1067127 | 8.28 | ug/L | | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 58511 | 9.09 | ug/L | # | 74 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 696826 | 9.60 | ug/L | | 98 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 377315 | 8.82 | ug/L | | 95 |
| 96) Naphthalene | 21.55 | 128 | 884607 | 11.13 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 535444 | 10.12 | ug/L | | 91 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 1028935 | 8.60 | ug/L | | 92 |

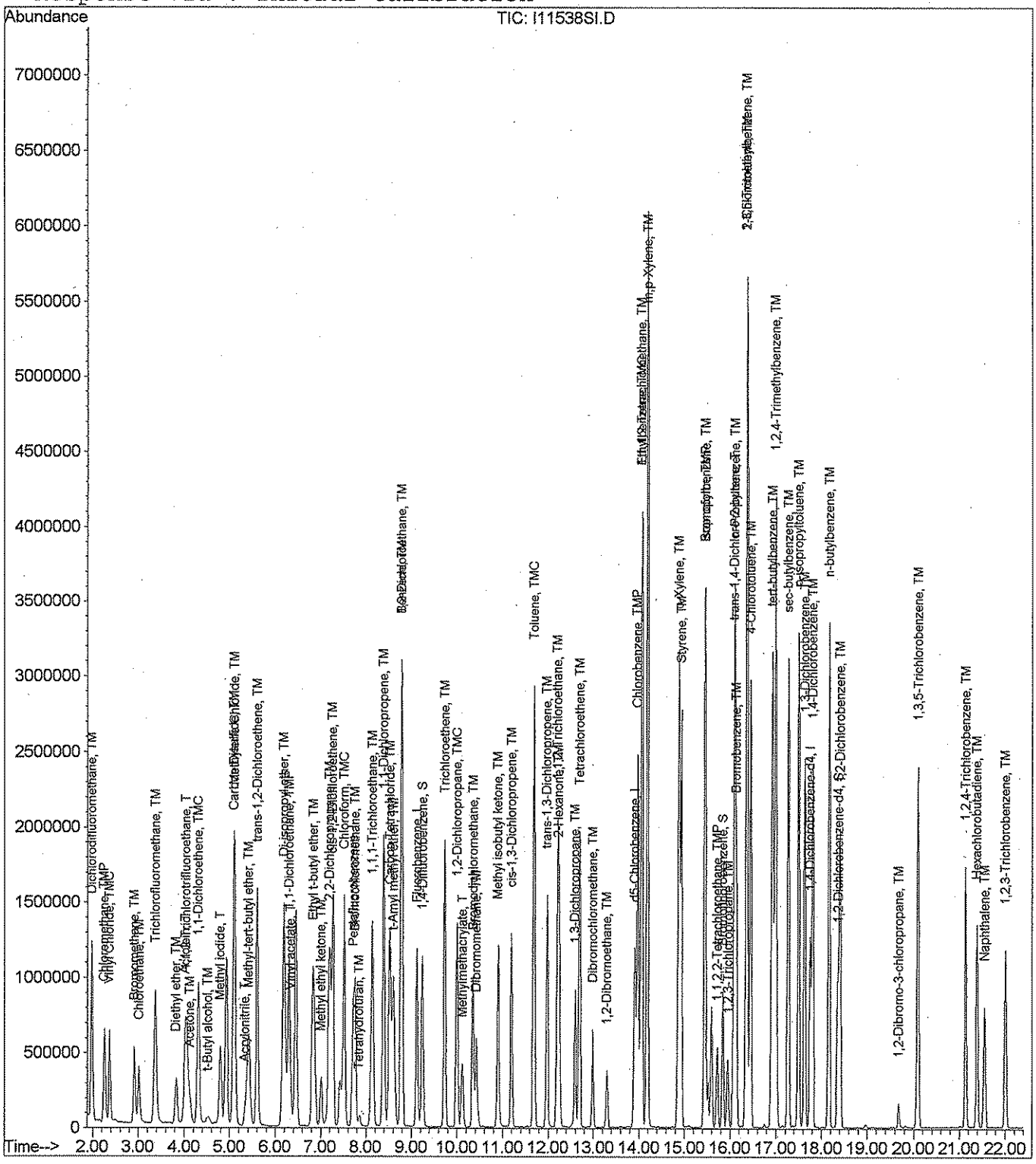
(#) = qualifier out of range (m) = manual integration



000224

Data File : C:\HPCHEM\1\DATA\060403-I\I11538SI.D Vial: 8
Acq On : 4 Jun 2003 12:53 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 13:22 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000225

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11539SI.D Vial: 9
Acq On : 4 Jun 2003 1:28 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:04 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03 VMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 835806 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1605242 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 925498 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 457190 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 1324692 | 4.00 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 454975 | 3.93 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 98.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 351585 | 4.58 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 114.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 3089804 | 15.17 | ug/L | 100 |
| 3) Chloromethane | 2.25 | 50 | 1876204 | 13.40 | ug/L | 94 |
| 4) Vinyl Chloride | 2.36 | 62 | 1135529 | 11.47 | ug/L | 98 |
| 5) Bromomethane | 2.90 | 94 | 1069464 | 14.64 | ug/L | 98 |
| 6) Chloroethane | 3.01 | 64 | 980301 | 14.11 | ug/L | 93 |
| 7) t-Butyl alcohol | 4.51 | 59 | 181909 | 86.84 | ug/L # | 91 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 2789413 | 15.78 | ug/L | 92 |
| 9) Diethyl ether | 3.83 | 74 | 444798 | 16.03 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 1441686 | 15.23 | ug/L | 96 |
| 11) Acrolein | 4.01 | 56 | 383674 | 81.23 | ug/L | 98 |
| 12) Acetone | 4.14 | 43 | 669142 | 75.71 | ug/L | 93 |
| 13) 1,1-Dichloroethene | 4.30 | 96 | 1216650 | 15.36 | ug/L | 98 |
| 14) Methyl iodide | 4.79 | 142 | 2353896 | 26.11 | ug/L | 99 |
| 15) Di-isopropyl ether | 6.19 | 45 | 5888309 | 16.57 | ug/L | 100 |
| 16) Methylene Chloride | 5.10 | 84 | 1901748 | 14.91 | ug/L | 98 |
| 17) Carbon Disulfide | 5.08 | 76 | 3386402 | 15.58 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 234541 | 15.26 | ug/L # | 80 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 2707630 | 16.31 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.59 | 96 | 1806551 | 15.64 | ug/L | 88 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 3591403 | 16.03 | ug/L | 97 |
| 22) Vinyl acetate | 6.33 | 86 | 84217 | 16.49 | ug/L | 92 |
| 23) Methyl ethyl ketone | 7.00 | 72 | 302021 | 85.44 | ug/L | 90 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 4173754 | 17.29 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 2641059 | 16.49 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 1808153 | 15.68 | ug/L | 95 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 2837721 | 17.41 | ug/L | 99 |
| 29) Chloroform | 7.52 | 83 | 3601975 | 14.83 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\060403-I\I11539SI.D Vial: 9
Acq On : 4 Jun 2003 1:28 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:04 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.76 | 128 | 648862 | 15.98 ug/L | 97 |
| 31) Tetrahydrofuran | 7.85 | 71 | 61811 | 17.55 ug/L | 78 |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 3243778 | 16.24 ug/L | 98 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 2794534 | 15.49 ug/L | 97 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 2721829 | 16.71 ug/L | 94 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 1980884 | 15.93 ug/L | 99 |
| 38) Benzene | 8.78 | 78 | 6796991 | 15.26 ug/L | 98 |
| 40) Trichloroethene | 9.72 | 95 | 1942207 | 15.28 ug/L | 98 |
| 41) 1,2-Dichloropropane | 9.99 | 63 | 1601735 | 16.36 ug/L | 96 |
| 42) Methylmethacrylate | 10.12 | 69 | 533950 | 18.08 ug/L | 97 |
| 45) Bromodichloromethane | 10.35 | 83 | 2109478 | 16.29 ug/L | 97 |
| 46) Dibromomethane | 10.42 | 93 | 702445 | 15.85 ug/L | 96 |
| 51) 2-Hexanone | 12.24 | 58 | 953502 | 79.15 ug/L | 97 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 1131309 | 85.16 ug/L | 98 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 1960914 | 15.95 ug/L | 91 |
| 55) Toluene | 11.69 | 92 | 3474016 | 13.69 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.96 | 75 | 1409630 | 16.32 ug/L | 93 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 625738 | 14.00 ug/L | 95 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 1374251 | 15.03 ug/L | 95 |
| 60) Tetrachloroethene | 12.69 | 166 | 1553917 | 13.87 ug/L | 99 |
| 61) Dibromochloromethane | 12.99 | 129 | 1014840 | 15.90 ug/L | 98 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 729255 | 16.33 ug/L | 89 |
| 64) Chlorobenzene | 13.96 | 112 | 3521975 | 15.38 ug/L | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 1235583 | 16.14 ug/L | 99 |
| 66) Ethylbenzene | 14.06 | 91 | 6768756 | 14.63 ug/L | 98 |
| 67) m,p-Xylene | 14.19 | 106 | 4657088 | 29.74 ug/L | 98 |
| 68) o-Xylene | 14.87 | 106 | 2341227 | 16.27 ug/L | 91 |
| 69) Styrene | 14.93 | 104 | 3722814 | 16.97 ug/L | 100 |
| 70) Bromoform | 15.44 | 173 | 469520 | 18.06 ug/L | 95 |
| 71) Isopropylbenzene | 15.45 | 105 | 6497205 | 15.72 ug/L | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 794030 | 17.27 ug/L | 89 |
| 74) 1,2,3-Trichloropropane | 15.94 | 75 | 586573 | 16.72 ug/L | 98 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 260880 | 17.37 ug/L # | 80 |
| 76) n-Propylbenzene | 16.09 | 91 | 8098053 | 15.46 ug/L | 97 |
| 77) Bromobenzene | 16.14 | 156 | 1332095 | 16.61 ug/L | 91 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 5455658 | 16.61 ug/L | 99 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 5305626 | 15.77 ug/L | 91 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 4866587 | 16.67 ug/L | 98 |
| 81) tert-butylbenzene | 16.92 | 119 | 4615073 | 16.96 ug/L | 99 |
| 82) 1,2,4-Trimethylbenzene | 16.98 | 105 | 5580122 | 16.58 ug/L | 98 |
| 84) sec-butylbenzene | 17.27 | 105 | 6715422 | 16.76 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration



000227

Data File : C:\HPCHEM\1\DATA\060403-I\I11539SI.D Vial: 9
Acq On : 4 Jun 2003 1:28 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:04 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

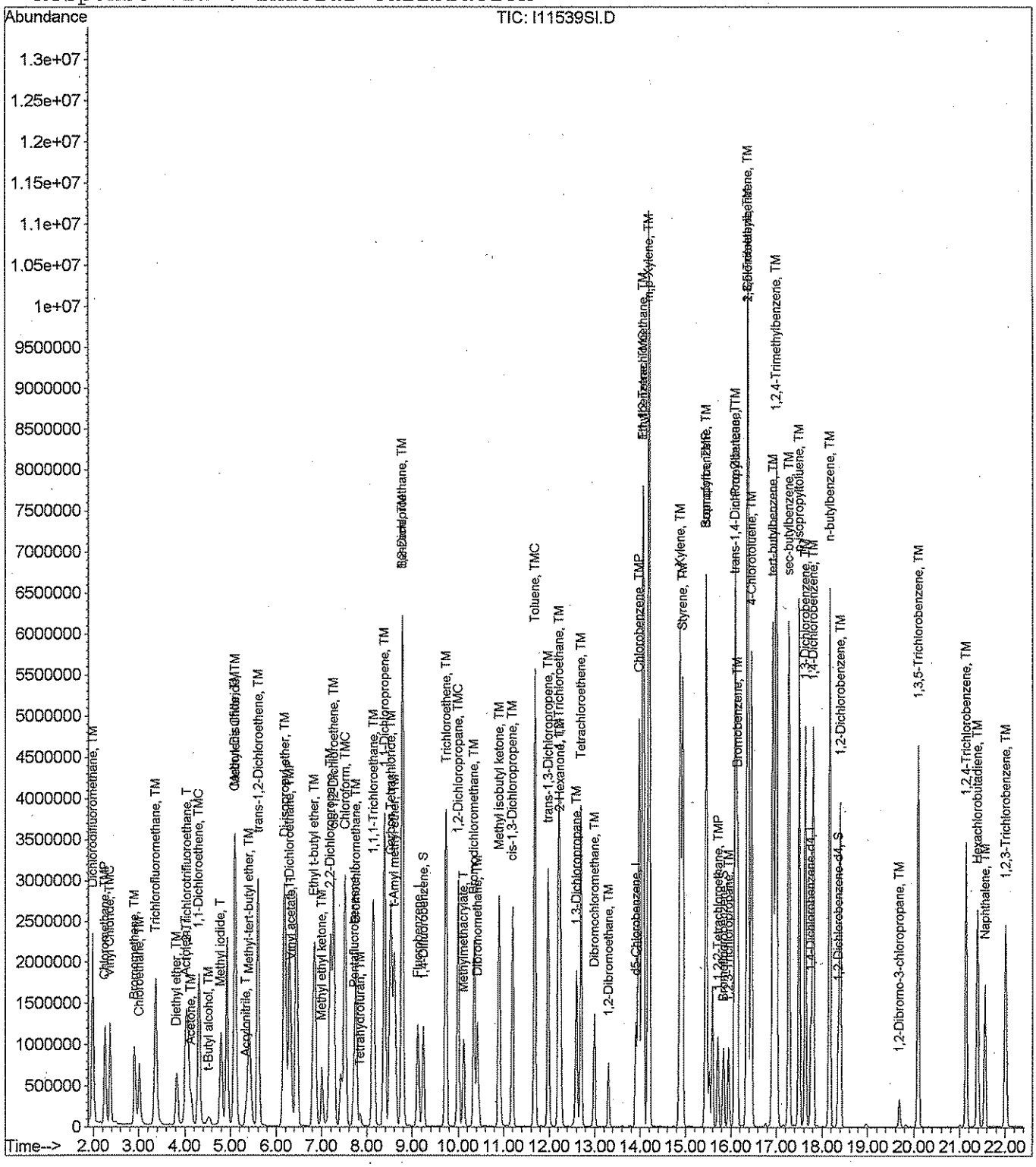
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.49 | 119 | 5573630 | 17.23 | ug/L | | 98 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 2712156 | 17.40 | ug/L | | 99 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 2657411 | 15.91 | ug/L | | 99 |
| 89) n-butylbenzene | 18.16 | 91 | 5559297 | 15.86 | ug/L | | 99 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 2186526 | 16.34 | ug/L | | 95 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 127156 | 18.53 | ug/L | # | 78 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 1450978 | 18.46 | ug/L | | 100 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 725735 | 16.12 | ug/L | | 99 |
| 96) Naphthalene | 21.55 | 128 | 1949346 | 21.66 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 1126006 | 19.36 | ug/L | | 91 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 2086227 | 16.59 | ug/L | | 91 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\060403-I\I11539SI.D Vial: 9
Acq On : 4 Jun 2003 1:28 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:04 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






000229

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11540SI.D Vial: 10
Acq On : 4 Jun 2003 2:03 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:27 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

6.5.03
VMT 6/5/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 841150 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1649443 | 4.00 | ug/L | -0.01 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 918453 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 450934 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.23 | 114 | 1366026 | 4.10 | ug/L | -0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 102.50% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 460474 | 3.88 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 97.00% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 348053 | 4.46 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 111.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 5965189 | 29.36 | ug/L | 99 |
| 3) Chloromethane | 2.25 | 50 | 3790221 | 27.65 | ug/L | 94 |
| 4) Vinyl Chloride | 2.35 | 62 | 1999328 | 21.06 | ug/L | 97 |
| 5) Bromomethane | 2.90 | 94 | 2183898 | 30.14 | ug/L | 96 |
| 6) Chloroethane | 2.99 | 64 | 1906184 | 27.81 | ug/L | 96 |
| 7) t-Butyl alcohol | 4.52 | 59 | 363639 | 169.59 | ug/L # | 90 |
| 8) Trichlorofluoromethane | 3.35 | 101 | 5453115 | 30.73 | ug/L | 94 |
| 9) Diethyl ether | 3.82 | 74 | 889012 | 31.82 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 2877507 | 30.44 | ug/L | 96 |
| 11) Acrolein | 4.01 | 56 | 747869 | 156.85 | ug/L | 98 |
| 12) Acetone | 4.14 | 43 | 1359811 | 154.54 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 2417952 | 30.54 | ug/L | 98 |
| 14) Methyl iodide | 4.79 | 142 | 4868208 | 47.63 | ug/L | 98 |
| 15) Di-isopropyl ether | 6.18 | 45 | 11553732 | 32.12 | ug/L | 99 |
| 16) Methylene Chloride | 5.10 | 84 | 3610779 | 30.92 | ug/L | 97 |
| 17) Carbon Disulfide | 5.07 | 76 | 6537414 | 30.04 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 522307 | 34.03 | ug/L | 95 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 5513782 | 32.90 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 3518958 | 30.38 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 7037849 | 31.20 | ug/L | 98 |
| 22) Vinyl acetate | 6.34 | 86 | 174511 | 33.74 | ug/L | 97 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 623739 | 173.37 | ug/L | 87 |
| 24) Ethyl t-butyl ether | 6.83 | 59 | 8305789 | 33.73 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 5231893 | 32.30 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 3562619 | 30.79 | ug/L | 91 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 5766975 | 34.65 | ug/L | 97 |
| 29) Chloroform | 7.51 | 83 | 7130524 | 29.60 | ug/L | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\060403-I\I11540SI.D Vial: 10
Acq On : 4 Jun 2003 2:03 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:27 2003 Quant Results File: V506043I.

Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.76 | 128 | 1271993 | 31.14 | ug/L | | 98 |
| 31) | Tetrahydrofuran | 7.84 | 71 | 123736 | 34.25 | ug/L | | 81 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 6528111 | 32.40 | ug/L | | 97 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 5570559 | 30.85 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 5453410 | 33.03 | ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 8.76 | 62 | 3840006 | 30.71 | ug/L | | 98 |
| 38) | Benzene | 8.78 | 78 | 13125547 | 29.50 | ug/L | | 98 |
| 40) | Trichloroethene | 9.73 | 95 | 3877059 | 29.91 | ug/L | | 98 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 3226597 | 31.96 | ug/L | | 97 |
| 42) | Methylmethacrylate | 10.12 | 69 | 1124849 | 36.29 | ug/L | | 96 |
| 45) | Bromodichloromethane | 10.35 | 83 | 4372845 | 32.76 | ug/L | | 99 |
| 46) | Dibromomethane | 10.42 | 93 | 1458778 | 32.08 | ug/L | | 94 |
| 51) | 2-Hexanone | 12.24 | 58 | 2257356 | 182.69 | ug/L | | 94 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 2582133 | 187.16 | ug/L | | 98 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 4512034 | 35.73 | ug/L | | 93 |
| 55) | Toluene | 11.69 | 92 | 7686799 | 30.21 | ug/L | | 95 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 3327132 | 37.36 | ug/L | | 95 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 1425938 | 31.70 | ug/L | | 93 |
| 59) | 1,3-Dichloropropane | 12.60 | 76 | 3116128 | 33.51 | ug/L | | 93 |
| 60) | Tetrachloroethene | 12.69 | 166 | 3302821 | 29.34 | ug/L | | 97 |
| 61) | Dibromochloromethane | 12.99 | 129 | 2136912 | 32.62 | ug/L | | 100 |
| 62) | 1,2-Dibromoethane | 13.31 | 107 | 1557408 | 33.83 | ug/L | | 92 |
| 64) | Chlorobenzene | 13.97 | 112 | 6852919 | 30.36 | ug/L | | 97 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 2521305 | 33.13 | ug/L | | 96 |
| 66) | Ethylbenzene | 14.06 | 91 | 13627648 | 30.11 | ug/L | | 95 |
| 67) | m,p-Xylene | 14.19 | 106 | 8380719 | 54.58 | ug/L | | 87 |
| 68) | o-Xylene | 14.87 | 106 | 4405850 | 30.77 | ug/L | | 90 |
| 69) | Styrene | 14.93 | 104 | 6984892 | 31.77 | ug/L | | 97 |
| 70) | Bromoform | 15.43 | 173 | 873658 | 33.15 | ug/L | | 95 |
| 71) | Isopropylbenzene | 15.45 | 105 | 12036638 | 29.43 | ug/L | | 96 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 1566835 | 33.88 | ug/L | | 90 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 1166566 | 33.26 | ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 16.07 | 53 | 503689 | 33.32 | ug/L | # | 78 |
| 76) | n-Propylbenzene | 16.10 | 91 | 14636023 | 28.31 | ug/L | | 94 |
| 77) | Bromobenzene | 16.14 | 156 | 2515325 | 31.40 | ug/L | | 89 |
| 78) | 1,3,5-Trimethylbenzene | 16.36 | 105 | 9815334 | 29.92 | ug/L | | 98 |
| 79) | 2-Chlorotoluene | 16.37 | 91 | 9581103 | 28.76 | ug/L | | 91 |
| 80) | 4-Chlorotoluene | 16.45 | 91 | 9152933 | 31.37 | ug/L | | 97 |
| 81) | tert-butylbenzene | 16.92 | 119 | 8688632 | 31.85 | ug/L | | 99 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 10060249 | 29.94 | ug/L | | 97 |
| 84) | sec-butylbenzene | 17.27 | 105 | 12430475 | 31.02 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\060403-I\I11540SI.D Vial: 10
Acq On : 4 Jun 2003 2:03 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:27 2003 Quant Results File: V506043I.

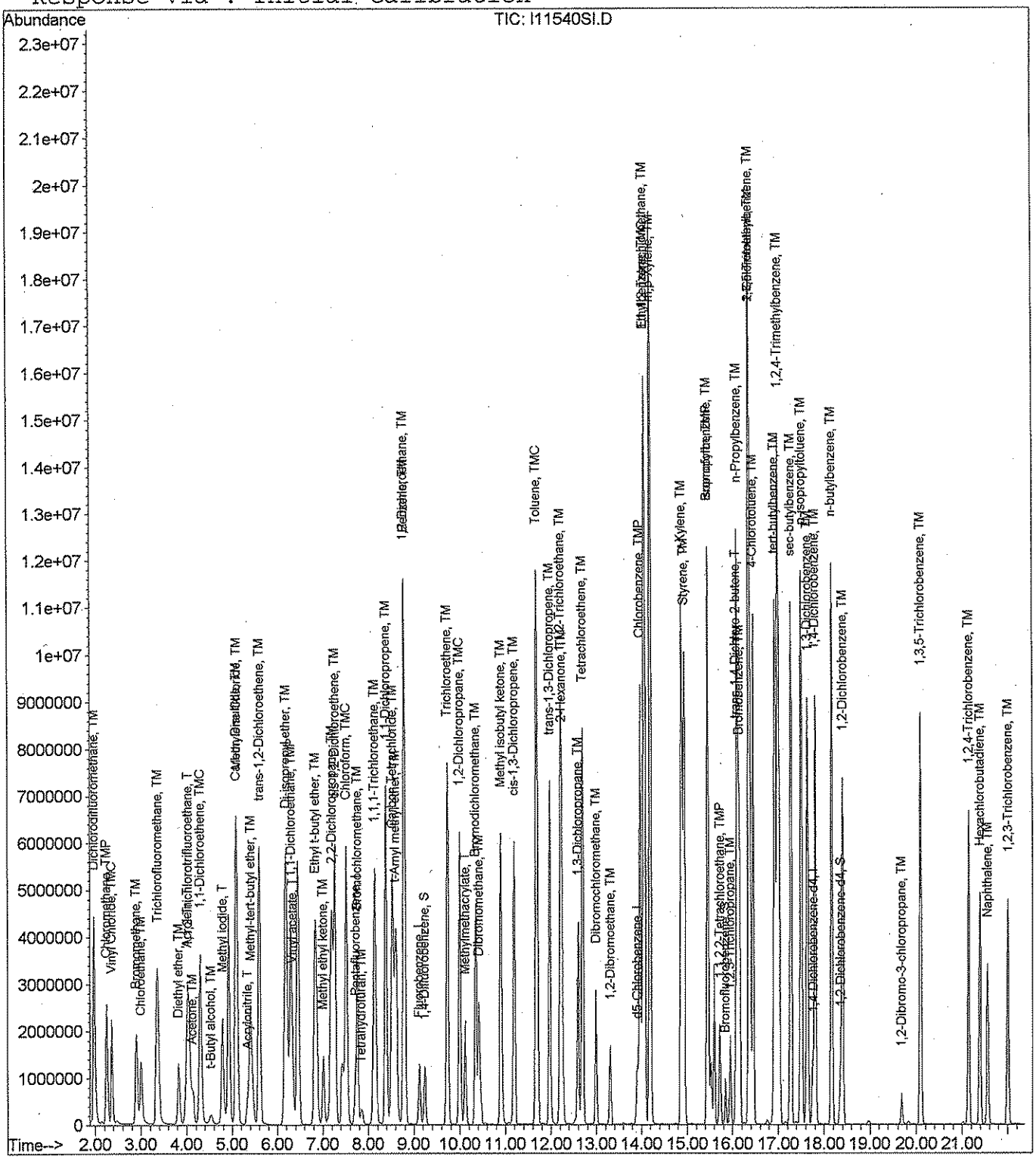
Quant Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 12:52:52 2003
Response via : Initial Calibration
DataAcq Meth : V506043I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.50 | 119 | 10420193 | 32.05 | ug/L | | 98 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 5084807 | 32.41 | ug/L | | 99 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 4989798 | 30.31 | ug/L | | 99 |
| 89) n-butylbenzene | 18.17 | 91 | 10212138 | 29.57 | ug/L | | 99 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 4131025 | 31.19 | ug/L | | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 254130 | 36.39 | ug/L | # | 74 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 2813437 | 35.20 | ug/L | | 98 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 1399611 | 31.49 | ug/L | | 98 |
| 96) Naphthalene | 21.56 | 128 | 3884909 | 40.87 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 2221524 | 37.16 | ug/L | | 89 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 3908518 | 31.29 | ug/L | | 92 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\060403-I\I11540SI.D Vial: 10
Acq On : 4 Jun 2003 2:03 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 4 14:27 2003 Quant Results File: V506043I.

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Initial Calibration






090233

## 524 RECOVERY

Data File Name **I11546Q.D**
Sample Name **L506053I**
Date **5 Jun 2003 9:37 am**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.01 | 1.2 | 85% | OK |
| Chloromethane | 1.17 | 1.2 | 98% | OK |
| Vinyl Chloride | 1.28 | 1.2 | 107% | OK |
| Bromomethane | 1.25 | 1.2 | 104% | OK |
| Chloroethane | 1.10 | 1.2 | 92% | OK |
| t-Butyl alcohol | 5.51 | 6.0 | 92% | OK |
| Trichlorofluoromethane | 1.12 | 1.2 | 93% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.25 | 1.2 | 104% | OK |
| Acetone | 1.52 | 1.2 | 126% | OK |
| 1,1-Dichloroethene | 1.20 | 1.2 | 100% | OK |
| Di-isopropyl ether | 1.19 | 1.2 | 99% | OK |
| Methylene Chloride | 0.85 | 1.2 | 71% | OK |
| Methyl-tert-butyl ether | 2.24 | 2.4 | 93% | OK |
| trans-1,2-Dichloroethene | 1.18 | 1.2 | 99% | OK |
| 1,1-Dichloroethane | 1.20 | 1.2 | 100% | OK |
| Methyl ethyl ketone | 1.56 | 1.2 | 130% | OK |
| Ethyl t-butyl ether | 1.19 | 1.2 | 99% | OK |
| 2,2-Dichloropropane | 1.22 | 1.2 | 102% | OK |
| cis-1,2-Dichloroethene | 1.22 | 1.2 | 102% | OK |
| t-Amyl methyl ether | 1.12 | 1.2 | 93% | OK |
| Chloroform | 1.20 | 1.2 | 100% | OK |
| Bromochloromethane | 1.27 | 1.2 | 105% | OK |
| Tetrahydrofuran | 1.51 | 1.2 | 126% | OK |
| 1,1,1-Trichloroethane | 1.18 | 1.2 | 99% | OK |
| 1,1-Dichloropropene | 1.17 | 1.2 | 98% | OK |
| Carbon Tetrachloride | 1.20 | 1.2 | 100% | OK |
| 1,2-Dichloroethane | 1.23 | 1.2 | 103% | OK |
| Benzene | 1.23 | 1.2 | 102% | OK |
| Trichloroethene | 1.35 | 1.2 | 112% | OK |
| 1,2-Dichloropropane | 1.29 | 1.2 | 107% | OK |
| Bromodichloromethane | 1.24 | 1.2 | 103% | OK |
| Dibromomethane | 1.19 | 1.2 | 99% | OK |
| 2-Hexanone | 1.22 | 1.2 | 102% | OK |
| Methyl isobutyl ketone | 1.29 | 1.2 | 108% | OK |
| cis-1,3-Dichloropropene | 1.31 | 1.2 | 109% | OK |
| Toluene | 1.26 | 1.2 | 105% | OK |
| trans-1,3-Dichloropropene | 1.28 | 1.2 | 107% | OK |
| 1,1,2-Trichloroethane | 1.36 | 1.2 | 113% | OK |
| 1,3-Dichloropropane | 1.25 | 1.2 | 104% | OK |
| Tetrachloroethene | 1.41 | 1.2 | 118% | OK |
| Dibromochloromethane | 1.22 | 1.2 | 102% | OK |
| 1,2-Dibromoethane | 1.31 | 1.2 | 109% | OK |
| Chlorobenzene | 1.25 | 1.2 | 104% | OK |
| 1,1,1,2-Tetrachloroethane | 1.28 | 1.2 | 107% | OK |
| Ethylbenzene | 1.28 | 1.2 | 107% | OK |
| m,p-Xylene | 2.55 | 2.4 | 106% | OK |
| o-Xylene | 1.25 | 1.2 | 104% | OK |
| Styrene | 1.12 | 1.2 | 94% | OK |

6-6-03
VMT 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.25 | 1.2 | 104% | OK |
| Isopropylbenzene | 1.22 | 1.2 | 101% | OK |
| 1,1,2,2-Tetrachloroethane | 1.23 | 1.2 | 103% | OK |
| 1,2,3-Trichloropropane | 1.21 | 1.2 | 101% | OK |
| -Propylbenzene | 1.23 | 1.2 | 103% | OK |
| Bromobenzene | 1.21 | 1.2 | 100% | OK |
| 1,3,5-Trimethylbenzene | 1.26 | 1.2 | 105% | OK |
| 2-Chlorotoluene | 1.31 | 1.2 | 109% | OK |
| 4-Chlorotoluene | 1.27 | 1.2 | 106% | OK |
| tert-butylbenzene | 1.26 | 1.2 | 105% | OK |
| 1,2,4-Trimethylbenzene | 1.21 | 1.2 | 101% | OK |
| sec-butylbenzene | 1.27 | 1.2 | 106% | OK |
| p-isopropyltoluene | 1.18 | 1.2 | 99% | OK |
| 1,3-Dichlorobenzene | 1.22 | 1.2 | 102% | OK |
| 1,4-Dichlorobenzene | 1.21 | 1.2 | 101% | OK |
| n-butylbenzene | 1.20 | 1.2 | 100% | OK |
| 1,2-Dichlorobenzene | 1.23 | 1.2 | 103% | OK |
| 1,2-Dibromo-3-chloropropane | 1.10 | 1.2 | 92% | OK |
| 1,2,4-Trichlorobenzene | 1.03 | 1.2 | 86% | OK |
| Hexachlorobutadiene | 1.31 | 1.2 | 109% | OK |
| Naphthalene | 1.08 | 1.2 | 90% | OK |
| 1,2,3-Trichlorobenzene | 1.05 | 1.2 | 88% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11546Q.D  Vial: 3
Acq On : 5 Jun 2003 9:37 am  Operator: JMR
Sample : L506053I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

VMT 6/16/03

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 101 | 0.02 | |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.807 | 15.5 | 83 | 0.00 | |
| 3 | TMP | Chloromethane | 0.639 | 0.626 | 2.0 | 97 | 0.02 | |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.482 | -6.9 | 98 | 0.00 | |
| 5 | TM | Bromomethane | 0.342 | 0.356 | -4.1 | 101 | 0.02 | |
| 6 | TM | Chloroethane | 0.320 | 0.293 | 8.4 | 95 | 0.02 | |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.009 | 10.0 | 91 | 0.00 | |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.784 | 6.6 | 92 | 0.00 | |
| 9 | TM | Diethyl ether | 0.133 | 0.131 | 1.5 | 92 | 0.03 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.464 | -4.0 | 98 | 0.00 | |
| 11 | T | Acrolein | ~~0.023~~ | ~~0.017~~ | ~~26.1~~ | ~~73~~ | ~~0.02~~ | NT |
| 12 | TM | Acetone | 0.042 | 0.011 RERUN | 73.8# | 25# | 0.02 | |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.374 | 0.0 | 93 | 0.02 | |
| 14 | T | Methyl iodide | 0.526 | 0.238 | 54.8# | 63 | 0.03 | |
| 15 | TM | Di-isopropyl ether | 1.711 | 1.693 | 1.1 | 96 | 0.02 | |
| 16 | TM | Methylene Chloride | 0.938 | 0.943 | -0.5 | 89 | 0.02 | |
| 17 | TM | Carbon Disulfide | 1.024 | 1.007 | 1.7 | 99 | 0.02 | |
| 18 | T | Acrylonitrile | ~~0.074~~ | ~~0.081~~ | ~~-9.5~~ | ~~110~~ | ~~0.02~~ | NT |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.493 RERUN | -86.6# | 188 | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.540 | 1.3 | 95 | 0.02 | |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.070 | -0.1 | 95 | 0.02 | |
| 22 | T | Vinyl acetate | ~~0.025~~ | ~~0.041~~ | ~~-64.0#~~ | ~~171~~ | ~~0.02~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.004 | 76.5# | 28# | 0.02 | |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.170 | 0.8 | 98 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.785 | -1.8 | 95 | 0.00 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.555 | -1.5 | 100 | 0.02 | |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.746 | 6.9 | 92 | 0.00 | |
| 28 | T | NO COUMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.24~~ | 6/20 |
| 29 | TMC | Chloroform | 1.131 | 1.131 | 0.0 | 96 | 0.03 | |
| 30 | TM | Bromochloromethane | 0.194 | 0.204 | -5.2 | 104 | 0.00 | |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.022 | -29.4 | 138 | 0.03 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 0.946 | 1.5 | 98 | 0.03 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | 6/20 |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.836 | 2.1 | 94 | 0.02 | |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.791 | -0.3 | 99 | 0.02 | |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.518 | 4.5 | 97 | 0.00 | |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.607 | -2.7 | 97 | 0.02 | |
| 38 | TM | Benzene | 2.092 | 2.144 | -2.5 | 97 | 0.02 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.00 | |
| 40 | TM | Trichloroethene | 0.311 | 0.350 | -12.5 | 104 | 0.02 | |

(#) = Out of Range



000236

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11546Q.D  Vial: 3
Acq On : 5 Jun 2003 9:37 am  Operator: JMR
Sample : L506053I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.262 | -6.9 | 100 | 0.00 |
| 42 | T | Methylmethacrylate | 0.077 | 0.077 | 0.0 | 97 | 0.02 |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ 06213 |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ 06213 |
| 45 | TM | Bromodichloromethane | 0.325 | 0.336 | -3.4 | 99 | 0.02 |
| 46 | TM | Dibromomethane | 0.110 | 0.109 | 0.9 | 90 | 0.02 |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 06213 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ |
| 51 | TM | 2-Hexanone | 0.031 | 0.006 see RPT | 80.6# | 19# | 0.03 |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.007 see RPT | 79.4# | 20# | 0.02 |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.340 | -9.3 | 102 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.287 | 0.288 | -0.3 | 96 | 0.00 |
| 55 | TMC | Toluene | 0.612 | 0.644 | -5.2 | 93 | 0.02 |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.236 | -6.8 | 97 | 0.02 |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ 06213 |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.124 | -13.8 | 101 | 0.02 |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.236 | -4.0 | 93 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.270 | 0.317 | -17.4 | 106 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.159 | 0.162 | -1.9 | 91 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.123 | -8.8 | 100 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.976 | 1.018 | -4.3 | 94 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.356 | -6.9 | 100 | 0.02 |
| 66 | TMC | Ethylbenzene | 1.955 | 2.083 | -6.5 | 95 | 0.02 |
| 67 | TM | m,p-Xylene | 0.655 | 0.695 | -6.1 | 93 | 0.02 |
| 68 | TM | o-Xylene | 0.620 | 0.646 | -4.2 | 96 | 0.00 |
| 69 | TM | Styrene | 0.957 | 0.895 | 6.5 | 86 | 0.02 |
| 70 | TMP | Bromoform | 0.115 | 0.120 | -4.3 | 112 | 0.02 |
| 71 | TM | Isopropylbenzene | 1.761 | 1.787 | -1.5 | 91 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.209 | -3.0 | 97 | 0.02 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.338 | 2.0 | 107 | 0.02 |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.155 | -0.6 | 102 | 0.02 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.066 | 0.0 | 96 | 0.02 |
| 76 | TM | n-Propylbenzene | 2.215 | 2.279 | -2.9 | 95 | 0.02 |
| 77 | TM | Bromobenzene | 0.348 | 0.349 | -0.3 | 99 | 0.02 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.488 | -5.2 | 107 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.430 | 1.557 | -8.9 | 111 | 0.02 |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.345 | -6.2 | 111 | 0.02 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11546Q.D  Vial: 3
Acq On : 5 Jun 2003 9:37 am  Operator: JMR
Sample : L506053I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 04 15:17:51 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.248 | -5.1 | 107 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.468 | -1.2 | 101 | 0.02 |
| 83 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ b 6/25 |
| 84 | TM | sec-butylbenzene | 1.738 | 1.836 | -5.6 | 108 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.397 | 1.3 | 103 | 0.02 |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.697 | -1.8 | 109 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 108 ✓ | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.465 | -1.1 | 102 | 0.02 |
| 89 | TM | n-butylbenzene | 3.030 | 3.028 | 0.1 | 101 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.202 | -2.6 | 105 | 0.02 |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ b 6/25 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.058 | 7.9 | 102 | 0.02 |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ b 6/25 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.620 | 14.0 | 100 | 0.02 |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.431 | -9.7 | 115 | 0.02 |
| 96 | TM | Naphthalene | 0.764 | 0.694 | 9.2 | 101 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.479 | 12.1 | 105 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.016 | 8.0 | 98 | 0.02 |

## 524 RECOVERY

Data File Name **I11567Q.D**
Sample Name **L506053I2**
Date **5 Jun 2003 10:45 pm**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.00 | 1.2 | 84% | OK |
| Chloromethane | 1.17 | 1.2 | 98% | OK |
| Vinyl Chloride | 1.23 | 1.2 | 103% | OK |
| Bromomethane | 1.27 | 1.2 | 106% | OK |
| Chloroethane | 1.15 | 1.2 | 95% | OK |
| t-Butyl alcohol | 7.79 | 6.0 | 130% | OK |
| Trichlorofluoromethane | 1.18 | 1.2 | 99% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.17 | 1.2 | 97% | OK |
| Acetone | 2.50 | 1.2 | 209% | * |
| 1,1-Dichloroethene | 1.17 | 1.2 | 98% | OK |
| Di-isopropyl ether | 1.36 | 1.2 | 113% | OK |
| Methylene Chloride | 1.48 | 1.2 | 124% | OK |
| Methyl-tert-butyl ether | 2.58 | 2.4 | 108% | OK |
| trans-1,2-Dichloroethene | 1.24 | 1.2 | 104% | OK |
| 1,1-Dichloroethane | 1.27 | 1.2 | 106% | OK |
| Methyl ethyl ketone | 1.58 | 1.2 | 132% | * |
| Ethyl t-butyl ether | 1.32 | 1.2 | 110% | OK |
| 2,2-Dichloropropane | 1.02 | 1.2 | 85% | OK |
| cis-1,2-Dichloroethene | 1.32 | 1.2 | 110% | OK |
| t-Amyl methyl ether | 1.33 | 1.2 | 110% | OK |
| Chloroform | 1.30 | 1.2 | 108% | OK |
| Bromochloromethane | 1.34 | 1.2 | 112% | OK |
| Tetrahydrofuran | 2.18 | 1.2 | 182% | * |
| 1,1,1-Trichloroethane | 1.22 | 1.2 | 102% | OK |
| 1,1-Dichloropropene | 1.27 | 1.2 | 106% | OK |
| Carbon Tetrachloride | 1.24 | 1.2 | 103% | OK |
| 1,2-Dichloroethane | 1.38 | 1.2 | 115% | OK |
| Benzene | 1.31 | 1.2 | 109% | OK |
| Trichloroethene | 1.36 | 1.2 | 113% | OK |
| 1,2-Dichloropropane | 1.39 | 1.2 | 116% | OK |
| Bromodichloromethane | 1.34 | 1.2 | 112% | OK |
| Dibromomethane | 1.53 | 1.2 | 128% | OK |
| 2-Hexanone | 1.45 | 1.2 | 121% | OK |
| Methyl isobutyl ketone | 1.48 | 1.2 | 123% | OK |
| cis-1,3-Dichloropropene | 1.46 | 1.2 | 122% | OK |
| Toluene | 1.29 | 1.2 | 108% | OK |
| trans-1,3-Dichloropropene | 1.34 | 1.2 | 112% | OK |
| 1,1,2-Trichloroethane | 1.48 | 1.2 | 123% | OK |
| 1,3-Dichloropropane | 1.49 | 1.2 | 125% | OK |
| Tetrachloroethene | 1.37 | 1.2 | 114% | OK |
| Dibromochloromethane | 1.41 | 1.2 | 117% | OK |
| 1,2-Dibromoethane | 1.45 | 1.2 | 121% | OK |
| Chlorobenzene | 1.30 | 1.2 | 109% | OK |
| 1,1,1,2-Tetrachloroethane | 1.35 | 1.2 | 112% | OK |
| Ethylbenzene | 1.24 | 1.2 | 104% | OK |
| m,p-Xylene | 2.53 | 2.4 | 105% | OK |
| o-Xylene | 1.29 | 1.2 | 107% | OK |
| Styrene | 1.26 | 1.2 | 105% | OK |

6.6.03

VMI 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.47 | 1.2 | 122% | OK |
| Isopropylbenzene | 1.22 | 1.2 | 102% | OK |
| 1,1,2,2-Tetrachloroethane | 1.39 | 1.2 | 116% | OK |
| 1,2,3-Trichloropropane | 1.36 | 1.2 | 113% | OK |
| n-Propylbenzene | 1.27 | 1.2 | 106% | OK |
| Bromobenzene | 1.32 | 1.2 | 110% | OK |
| 1,3,5-Trimethylbenzene | 1.26 | 1.2 | 105% | OK |
| 2-Chlorotoluene | 1.33 | 1.2 | 111% | OK |
| 4-Chlorotoluene | 1.32 | 1.2 | 110% | OK |
| tert-butylbenzene | 1.31 | 1.2 | 109% | OK |
| 1,2,4-Trimethylbenzene | 1.30 | 1.2 | 108% | OK |
| sec-butylbenzene | 1.30 | 1.2 | 108% | OK |
| p-isopropyltoluene | 1.23 | 1.2 | 102% | OK |
| 1,3-Dichlorobenzene | 1.36 | 1.2 | 113% | OK |
| 1,4-Dichlorobenzene | 1.26 | 1.2 | 105% | OK |
| n-butylbenzene | 1.17 | 1.2 | 97% | OK |
| 1,2-Dichlorobenzene | 1.31 | 1.2 | 109% | OK |
| 1,2-Dibromo-3-chloropropane | 1.30 | 1.2 | 109% | OK |
| 1,2,4-Trichlorobenzene | 1.18 | 1.2 | 98% | OK |
| Hexachlorobutadiene | 1.27 | 1.2 | 106% | OK |
| Naphthalene | 1.22 | 1.2 | 102% | OK |
| 1,2,3-Trichlorobenzene | 1.18 | 1.2 | 99% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11567Q.D  Vial: 24
Acq On : 5 Jun 2003 10:45 pm  Operator: JMR
Sample : L506053I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

6.6.03

Min. RRF : 0.000  Min. Rel. Area : 50%  Max. R.T. Dev 0.50min
Max. RRF Dev : 30%  Max. Rel. Area : 200%

VMC 6/6/03

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 107 | 0.01 | |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.798 | 16.4 | 87 | 0.01 | |
| 3 | TMP | Chloromethane | 0.639 | 0.625 | 2.2 | 103 | 0.02 | |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.463 | -2.7 | 100 | 0.01 | |
| 5 | TM | Bromomethane | 0.342 | 0.361 | -5.6 | 109 | 0.01 | |
| 6 | TM | Chloroethane | 0.320 | 0.305 | 4.7 | 105 | 0.02 | |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.013 | -30.0 | 137 | 0.00 | |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.827 | 1.4 | 104 | 0.01 | |
| 9 | TM | Diethyl ether | 0.133 | 0.153 | -15.0 | 114 | 0.02 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.434 | 2.7 | 97 | 0.01 | |
| 11 | T | Acrolein | ~~0.023~~ | ~~0.018~~ | ~~21.7~~ | ~~83~~ | ~~0.00~~ | NT |
| 12 | TM | Acetone | 0.042 | 0.017 RERPT | 59.5# | 44# | 0.01 | |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.366 | 2.1 | 97 | 0.02 | |
| 14 | T | Methyl iodide | ~~0.526~~ | ~~0.217~~ | ~~58.7#~~ | ~~61~~ | ~~0.01~~ | NT |
| | TM | Di-isopropyl ether | 1.711 | 1.933 | -13.0 | 117 | 0.01 | |
| 16 | TM | Methylene Chloride | 0.938 | 1.227 | -30.8# | 123 | 0.01 | |
| 17 | TM | Carbon Disulfide | 1.024 | 1.001 | 2.2 | 105 | 0.01 | |
| 18 | T | Acrylonitrile | ~~0.074~~ | ~~0.082~~ | ~~-10.8~~ | ~~118~~ | ~~0.02~~ | NT |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.723 RERPT | -115.4# | 231# | 0.01 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.566 | -3.5 | 106 | 0.01 | |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.133 | -6.0 | 107 | 0.01 | |
| 22 | T | Vinyl acetate | ~~0.025~~ | ~~0.049~~ | ~~96.0#~~ | ~~214#~~ | ~~0.01~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.005 RERPT | 70.6# | 30# | 0.01 | |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.303 | -10.4 | 116 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.653 | 15.3 | 84 | 0.01 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.601 | -9.9 | 115 | 0.01 | |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.885 | -10.5 | 116 | 0.00 | |
| 28 | T | NO COUMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.24~~ | NT |
| 29 | TMC | Chloroform | 1.131 | 1.224 | -8.2 | 110 | 0.02 | |
| 30 | TM | Bromochloromethane | 0.194 | 0.216 | -11.3 | 117 | 0.01 | |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.032 RERPT | -88.2# | 212# | 0.01 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 0.975 | -1.6 | 107 | 0.02 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.902 | -5.6 | 107 | 0.01 | |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.813 | -3.0 | 108 | 0.01 | |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.624 | -2.1 | 110 | 0.01 | |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.681 | -15.2 | 116 | 0.01 | |
| 38 | TM | Benzene | 2.092 | 2.288 | -9.4 | 110 | 0.01 | |
| | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 111 | 0.00 | |
| | TM | Trichloroethene | 0.311 | 0.352 | -13.2 | 119 | 0.01 | |

(#) = Out of Range



000241

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11567Q.D  Vial: 24
Acq On : 5 Jun 2003 10:45 pm  Operator: JMR
Sample : L506053I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.284 | -15.9 | 124 | 0.01 |
| 42 | T | Methylmethacrylate | 0.077 | 0.094 | -22.1 | 137 | 0.01 |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 NT |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 NT |
| 45 | TM | Bromodichloromethane | 0.325 | 0.364 | -12.0 | 122 | 0.01 |
| 46 | TM | Dibromomethane | 0.110 | 0.141 | -28.2 | 132 | 0.01 |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | -0.50 |
| 51 | TM | 2-Hexanone | 0.031 | 0.007 per RPT | 77.4# | 26# | 0.01 |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.008 per RPT | 76.5# | 26# | 0.01 |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.379 | -21.9 | 129 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.287 | 0.320 | -11.5 | 122 | 0.01 |
| | TMC | Toluene | 0.612 | 0.660 | -7.8 | 109 | 0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.248 | -12.2 | 117 | 0.01 |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.134 | -22.9 | 125 | 0.01 |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.283 | -24.7 | 127 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.270 | 0.308 | -14.1 | 117 | 0.01 |
| 61 | TM | Dibromochloromethane | 0.159 | 0.187 | -17.6 | 119 | 0.01 |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.136 | -20.4 | 127 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 118 | 0.01 |
| 64 | TMP | Chlorobenzene | 0.976 | 1.061 | -8.7 | 118 | 0.01 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.374 | -12.3 | 127 | 0.01 |
| 66 | TMC | Ethylbenzene | 1.955 | 2.028 | -3.7 | 111 | 0.01 |
| 67 | TM | m,p-Xylene | 0.655 | 0.689 | -5.2 | 112 | 0.01 |
| 68 | TM | o-Xylene | 0.620 | 0.666 | -7.4 | 120 | 0.01 |
| 69 | TM | Styrene | 0.957 | 1.004 | -4.9 | 117 | 0.01 |
| 70 | TMP | Bromoform | 0.115 | 0.141 | -22.6 | 160 | 0.01 |
| 71 | TM | Isopropylbenzene | 1.761 | 1.789 | -1.6 | 110 | 0.01 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.236 | -16.3 | 132 | 0.02 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.385 | -11.6 | 148 | 0.01 |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.174 | -13.0 | 138 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.084 | -27.3 | 147 | 0.01 |
| 76 | TM | n-Propylbenzene | 2.215 | 2.338 | -5.6 | 118 | 0.01 |
| 77 | TM | Bromobenzene | 0.348 | 0.383 | -10.1 | 132 | 0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.482 | -4.7 | 129 | 0.01 |
| | TM | 2-Chlorotoluene | 1.430 | 1.590 | -11.2 | 137 | 0.01 |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.395 | -10.1 | 139 | 0.01 |

(#) = Out of Range



000242

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11567Q.D  Vial: 24
Acq On : 5 Jun 2003 10:45 pm  Operator: JMR
Sample : L506053I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.292 | -8.8 | 135 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.571 | -8.3 | 130 | 0.01 | |
| 83 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.738 | 1.878 | -8.1 | 134 | 0.01 | |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.446 | -2.1 | 129 | 0.01 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.776 | -13.3 | 147 | 0.00 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 143 | 0.00 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.516 | -4.6 | 140 | 0.01 | |
| 89 | TM | n-butylbenzene | 3.030 | 2.952 | 2.6 | 131 | 0.00 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.279 | -9.2 | 148 | 0.01 | |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.069 | -9.5 | 159 | 0.01 | |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.707 | 1.9 | 152 | 0.01 | |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.418 | -6.4 | 148 | 0.01 | |
| 96 | TM | Naphthalene | 0.764 | 0.810 | -6.0 | 157 | 0.00 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.537 | 1.5 | 157 | 0.00 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.043 | 5.5 | 134 | 0.01 | |



000243

## 524 RECOVERY

Data File Name **I11568Q.D**
Sample Name **L506053I3**
Date **5 Jun 2003 11:20 pm**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.00 | 1.2 | 84% | OK |
| Chloromethane | 1.17 | 1.2 | 98% | OK |
| Vinyl Chloride | 1.21 | 1.2 | 101% | OK |
| Bromomethane | 1.20 | 1.2 | 100% | OK |
| Chloroethane | 1.10 | 1.2 | 92% | OK |
| t-Butyl alcohol | 8.92 | 6.0 | 149% | * |
| Trichlorofluoromethane | 1.14 | 1.2 | 95% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.18 | 1.2 | 99% | OK |
| Acetone | 2.80 | 1.2 | 233% | * |
| 1,1-Dichloroethene | 1.16 | 1.2 | 97% | OK |
| Di-isopropyl ether | 1.30 | 1.2 | 108% | OK |
| Methylene Chloride | 0.92 | 1.2 | 77% | OK |
| Methyl-tert-butyl ether | 2.54 | 2.4 | 106% | OK |
| trans-1,2-Dichloroethene | 1.21 | 1.2 | 101% | OK |
| 1,1-Dichloroethane | 1.22 | 1.2 | 102% | OK |
| Methyl ethyl ketone | 1.52 | 1.2 | 127% | OK |
| Ethyl t-butyl ether | 1.29 | 1.2 | 107% | OK |
| 2,2-Dichloropropane | 0.92 | 1.2 | 77% | OK |
| cis-1,2-Dichloroethene | 1.32 | 1.2 | 110% | OK |
| t-Amyl methyl ether | 1.26 | 1.2 | 105% | OK |
| Chloroform | 1.24 | 1.2 | 103% | OK |
| Bromochloromethane | 1.37 | 1.2 | 114% | OK |
| Tetrahydrofuran | 1.91 | 1.2 | 159% | * |
| 1,1,1-Trichloroethane | 1.16 | 1.2 | 97% | OK |
| 1,1-Dichloropropene | 1.18 | 1.2 | 98% | OK |
| Carbon Tetrachloride | 1.18 | 1.2 | 98% | OK |
| 1,2-Dichloroethane | 1.34 | 1.2 | 111% | OK |
| Benzene | 1.26 | 1.2 | 105% | OK |
| Trichloroethene | 1.26 | 1.2 | 105% | OK |
| 1,2-Dichloropropane | 1.28 | 1.2 | 107% | OK |
| Bromodichloromethane | 1.35 | 1.2 | 113% | OK |
| Dibromomethane | 1.46 | 1.2 | 121% | OK |
| 2-Hexanone | 1.46 | 1.2 | 121% | OK |
| Methyl isobutyl ketone | 1.45 | 1.2 | 121% | OK |
| cis-1,3-Dichloropropene | 1.40 | 1.2 | 117% | OK |
| Toluene | 1.25 | 1.2 | 104% | OK |
| trans-1,3-Dichloropropene | 1.32 | 1.2 | 110% | OK |
| 1,1,2-Trichloroethane | 1.47 | 1.2 | 122% | OK |
| 1,3-Dichloropropane | 1.42 | 1.2 | 119% | OK |
| Tetrachloroethene | 1.31 | 1.2 | 109% | OK |
| Dibromochloromethane | 1.43 | 1.2 | 119% | OK |
| 1,2-Dibromoethane | 1.53 | 1.2 | 128% | OK |
| Chlorobenzene | 1.24 | 1.2 | 103% | OK |
| 1,1,1,2-Tetrachloroethane | 1.31 | 1.2 | 109% | OK |
| Ethylbenzene | 1.16 | 1.2 | 97% | OK |
| m,p-Xylene | 2.52 | 2.4 | 105% | OK |
| o-Xylene | 1.28 | 1.2 | 107% | OK |
| Styrene | 1.28 | 1.2 | 107% | OK |

6.6.03
JMT 6/6/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.48 | 1.2 | 124% | OK |
| Isopropylbenzene | 1.17 | 1.2 | 97% | OK |
| 1,1,2,2-Tetrachloroethane | 1.42 | 1.2 | 118% | OK |
| 1,2,3-Trichloropropane | 1.42 | 1.2 | 119% | OK |
| -Propylbenzene | 1.19 | 1.2 | 99% | OK |
| romobenzene | 1.30 | 1.2 | 108% | OK |
| 1,3,5-Trimethylbenzene | 1.24 | 1.2 | 103% | OK |
| 2-Chlorotoluene | 1.28 | 1.2 | 107% | OK |
| 4-Chlorotoluene | 1.27 | 1.2 | 106% | OK |
| tert-butylbenzene | 1.23 | 1.2 | 103% | OK |
| 1,2,4-Trimethylbenzene | 1.29 | 1.2 | 107% | OK |
| sec-butylbenzene | 1.26 | 1.2 | 105% | OK |
| p-isopropyltoluene | 1.18 | 1.2 | 98% | OK |
| 1,3-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,4-Dichlorobenzene | 1.21 | 1.2 | 101% | OK |
| n-butylbenzene | 1.12 | 1.2 | 94% | OK |
| 1,2-Dichlorobenzene | 1.26 | 1.2 | 105% | OK |
| 1,2-Dibromo-3-chloropropane | 1.35 | 1.2 | 113% | OK |
| 1,2,4-Trichlorobenzene | 1.21 | 1.2 | 101% | OK |
| Hexachlorobutadiene | 1.27 | 1.2 | 106% | OK |
| Naphthalene | 1.24 | 1.2 | 103% | OK |
| 1,2,3-Trichlorobenzene | 1.22 | 1.2 | 101% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11568Q.D  Vial: 25
Acq On : 5 Jun 2003 11:20 pm  Operator: JMR
Sample : L506053I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

6.6.03

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

VMT 6/6/03

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 109 | 0.01 | |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.798 | 16.4 | 89 | 0.01 | |
| 3 | TMP | Chloromethane | 0.639 | 0.626 | 2.0 | 106 | 0.02 | |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.455 | -0.9 | 101 | 0.01 | |
| 5 | TM | Bromomethane | 0.342 | 0.341 | 0.3 | 105 | 0.01 | |
| 6 | TM | Chloroethane | 0.320 | 0.293 | 8.4 | 103 | 0.02 | |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.015 | -50.0# | 160 | 0.00 | |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.797 | 5.0 | 102 | 0.01 | |
| 9 | TM | Diethyl ether | 0.133 | 0.148 | -11.3 | 113 | 0.02 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.440 | 1.3 | 101 | 0.01 | |
| 11 | T | Acrolein | ~~0.023~~ | ~~0.018~~ | ~~21.7~~ | ~~84~~ | ~~0.01~~ | NT |
| 12 | TM | Acetone | 0.042 | 0.019 see RPT | 54.8# | 50# | 0.02 | |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.361 | 3.5 | 97 | 0.01 | |
| 14 | T | Methyl iodide | ~~0.526~~ | ~~0.215~~ | ~~59.1#~~ | ~~62~~ | ~~0.01~~ | NT |
| 15 | TM | Di-isopropyl ether | 1.711 | 1.856 | -8.5 | 115 | 0.01 | |
| 16 | TM | Methylene Chloride | 0.938 | 0.977 | -4.2 | 100 | 0.01 | |
| 17 | TM | Carbon Disulfide | 1.024 | 0.673 | 34.3# | 72 | 0.01 | |
| 18 | T | Acrylonitrile | 0.074 | 0.081 | -9.5 | 120 | 0.01 | |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.696 see RPT | -112.0# | 232# | 0.01 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.552 | -0.9 | 105 | 0.01 | |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.085 | -1.5 | 105 | 0.02 | |
| 22 | T | Vinyl acetate | ~~0.025~~ | ~~0.037~~ | ~~-48.0#~~ | ~~167~~ | ~~0.01~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.004 see RPT | 76.5# | 30# | 0.02 | |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.268 | -7.5 | 115 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.594 | 23.0 | 78 | 0.00 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.602 | -10.1 | 118 | 0.01 | |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.840 | -4.9 | 112 | 0.01 | |
| 28 | T | NO COUMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.24~~ | NT |
| 29 | TMC | Chloroform | 1.131 | 1.165 | -3.0 | 107 | 0.02 | |
| 30 | TM | Bromochloromethane | 0.194 | 0.221 | -13.9 | 122 | 0.01 | |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.028 | -64.7# | 189 | 0.01 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 0.929 | 3.2 | 105 | 0.01 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.840 | 1.6 | 102 | 0.00 | |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.776 | 1.6 | 105 | 0.01 | |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.598 | -0.5 | 110 | 0.01 | |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.659 | -11.5 | 114 | 0.01 | |
| 38 | TM | Benzene | 2.092 | 2.192 | -4.8 | 107 | 0.01 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 110 | 0.00 | |
| 40 | TM | Trichloroethene | 0.311 | 0.328 | -5.5 | 109 | 0.01 | |

(#) = Out of Range



000246

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11568Q.D  Vial: 25
Acq On : 5 Jun 2003 11:20 pm  Operator: JMR
Sample : L506053I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.261 | -6.5 | 112 | 0.00 | |
| 42 | T | Methylmethacrylate | 0.077 | 0.084 | -9.1 | 120 | 0.00 | |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 45 | TM | Bromodichloromethane | 0.325 | 0.366 | -12.6 | 121 | 0.01 | |
| 46 | TM | Dibromomethane | 0.110 | 0.134 | -21.8 | 124 | 0.01 | |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 50 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | |
| 51 | TM | 2-Hexanone | 0.031 | 0.007 see RPT | 77.4# | 25# | 0.02 | |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.008 see RPT | 76.5# | 25# | 0.00 | |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.363 | -16.7 | 122 | 0.00 | |
| 54 | S | Bromofluorobenzene | 0.287 | 0.309 | -7.7 | 116 | 0.00 | |
| 55 | TMC | Toluene | 0.612 | 0.636 | -3.9 | 104 | 0.01 | |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.243 | -10.0 | 113 | 0.01 | |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.133 | -22.0 | 122 | 0.01 | |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.269 | -18.5 | 119 | 0.01 | |
| 60 | TM | Tetrachloroethene | 0.270 | 0.294 | -8.9 | 111 | 0.01 | |
| 61 | TM | Dibromochloromethane | 0.159 | 0.189 | -18.9 | 119 | 0.01 | |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.144 | -27.4 | 132 | 0.00 | |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 116 | 0.01 | |
| 64 | TMP | Chlorobenzene | 0.976 | 1.008 | -3.3 | 111 | 0.01 | |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.364 | -9.3 | 122 | 0.01 | |
| 66 | TMC | Ethylbenzene | 1.955 | 1.896 | 3.0 | 103 | 0.01 | |
| 67 | TM | m,p-Xylene | 0.655 | 0.688 | -5.0 | 110 | 0.01 | |
| 68 | TM | o-Xylene | 0.620 | 0.662 | -6.8 | 117 | 0.00 | |
| 69 | TM | Styrene | 0.957 | 1.024 | -7.0 | 117 | 0.01 | |
| 70 | TMP | Bromoform | 0.115 | 0.143 | -24.3 | 159 | 0.01 | |
| 71 | TM | Isopropylbenzene | 1.761 | 1.716 | 2.6 | 104 | 0.01 | |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.240 | -18.2 | 132 | 0.01 | |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.376 | -9.0 | 142 | 0.01 | |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.182 | -18.2 | 143 | 0.01 | |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.075 | -13.6 | 130 | 0.01 | |
| 76 | TM | n-Propylbenzene | 2.215 | 2.195 | 0.9 | 109 | 0.01 | |
| 77 | TM | Bromobenzene | 0.348 | 0.377 | -8.3 | 128 | 0.01 | |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.462 | -3.3 | 125 | 0.01 | |
| 79 | TM | 2-Chlorotoluene | 1.430 | 1.527 | -6.8 | 130 | 0.01 | |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.346 | -6.2 | 132 | 0.01 | |

(#) = Out of Range



000247

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060503-I\I11568Q.D  Vial: 25
Acq On : 5 Jun 2003 11:20 pm  Operator: JMR
Sample : L506053I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.220 | -2.8 | 125 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.555 | -7.2 | 127 | 0.01 | |
| 83 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.738 | 1.825 | -5.0 | 128 | 0.01 | |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.391 | 1.8 | 122 | 0.01 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.755 | -10.2 | 141 | 0.00 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 140 | 0.01 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.467 | -1.2 | 132 | 0.01 | |
| 89 | TM | n-butylbenzene | 3.030 | 2.835 | 6.4 | 123 | 0.00 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.232 | -5.2 | 139 | 0.01 | |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.072 | -14.3 | 162 | 0.01 | |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.729 | -1.1 | 153 | 0.01 | |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.418 | -6.4 | 144 | 0.01 | |
| 96 | TM | Naphthalene | 0.764 | 0.825 | -8.0 | 156 | 0.00 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.552 | -1.3 | 157 | 0.01 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.064 | 3.6 | 134 | 0.01 | |

## 524 RECOVERY

| | |
|---|---|
| Data File Name | I11579Q.D |
| Sample Name | L506063I |
| Date | 6 Jun 2003 9:28 am |

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.03 | 1.2 | 86% | OK |
| Chloromethane | 1.27 | 1.2 | 106% | OK |
| Vinyl Chloride | 1.30 | 1.2 | 109% | OK |
| Bromomethane | 1.15 | 1.2 | 96% | OK |
| Chloroethane | 1.24 | 1.2 | 103% | OK |
| t-Butyl alcohol | 6.27 | 6.0 | 104% | OK |
| Trichlorofluoromethane | 1.17 | 1.2 | 97% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.23 | 1.2 | 102% | OK |
| Acetone | 2.20 | 1.2 | 184% | (*) |
| 1,1-Dichloroethene | 1.21 | 1.2 | 101% | OK |
| Di-isopropyl ether | 1.29 | 1.2 | 108% | OK |
| Methylene Chloride | 1.76 | 1.2 | 147% | (*) |
| Methyl-tert-butyl ether | 2.28 | 2.4 | 95% | OK |
| trans-1,2-Dichloroethene | 1.27 | 1.2 | 106% | OK |
| 1,1-Dichloroethane | 1.26 | 1.2 | 105% | OK |
| Methyl ethyl ketone | 1.65 | 1.2 | 138% | (*) |
| Ethyl t-butyl ether | 1.17 | 1.2 | 97% | OK |
| 2,2-Dichloropropane | 1.29 | 1.2 | 107% | OK |
| cis-1,2-Dichloroethene | 1.34 | 1.2 | 111% | OK |
| t-Amyl methyl ether | 1.15 | 1.2 | 96% | OK |
| Chloroform | 1.25 | 1.2 | 104% | OK |
| romochloromethane | 1.29 | 1.2 | 108% | OK |
| etrahydrofuran | 1.36 | 1.2 | 114% | OK |
| 1,1,1-Trichloroethane | 1.25 | 1.2 | 104% | OK |
| 1,1-Dichloropropene | 1.26 | 1.2 | 105% | OK |
| Carbon Tetrachloride | 1.29 | 1.2 | 108% | OK |
| 1,2-Dichloroethane | 1.34 | 1.2 | 112% | OK |
| Benzene | 1.32 | 1.2 | 110% | OK |
| Trichloroethene | 1.38 | 1.2 | 115% | OK |
| 1,2-Dichloropropane | 1.37 | 1.2 | 114% | OK |
| Bromodichloromethane | 1.32 | 1.2 | 110% | OK |
| Dibromomethane | 1.28 | 1.2 | 107% | OK |
| 2-Hexanone | 1.31 | 1.2 | 109% | OK |
| Methyl isobutyl ketone | 1.37 | 1.2 | 114% | OK |
| cis-1,3-Dichloropropene | 1.41 | 1.2 | 117% | OK |
| Toluene | 1.33 | 1.2 | 111% | OK |
| trans-1,3-Dichloropropene | 1.34 | 1.2 | 112% | OK |
| 1,1,2-Trichloroethane | 1.41 | 1.2 | 117% | OK |
| 1,3-Dichloropropane | 1.40 | 1.2 | 117% | OK |
| Tetrachloroethene | 1.41 | 1.2 | 117% | OK |
| Dibromochloromethane | 1.31 | 1.2 | 109% | OK |
| 1,2-Dibromoethane | 1.39 | 1.2 | 116% | OK |
| Chlorobenzene | 1.33 | 1.2 | 111% | OK |
| 1,1,1,2-Tetrachloroethane | 1.37 | 1.2 | 114% | OK |
| Ethylbenzene | 1.32 | 1.2 | 110% | OK |
| ,p-Xylene | 2.65 | 2.4 | 110% | OK |
| -Xylene | 1.31 | 1.2 | 109% | OK |
| Styrene | 1.16 | 1.2 | 97% | OK |

6-9-03

VMT 6/9/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.34 | 1.2 | 112% | OK |
| Isopropylbenzene | 1.25 | 1.2 | 104% | OK |
| 1,1,2,2-Tetrachloroethane | 1.27 | 1.2 | 106% | OK |
| 1,2,3-Trichloropropane | 1.24 | 1.2 | 103% | OK |
| -Propylbenzene | 1.30 | 1.2 | 108% | OK |
| Bromobenzene | 1.26 | 1.2 | 105% | OK |
| 1,3,5-Trimethylbenzene | 1.25 | 1.2 | 104% | OK |
| 2-Chlorotoluene | 1.35 | 1.2 | 112% | OK |
| 4-Chlorotoluene | 1.33 | 1.2 | 111% | OK |
| tert-butylbenzene | 1.32 | 1.2 | 110% | OK |
| 1,2,4-Trimethylbenzene | 1.28 | 1.2 | 107% | OK |
| sec-butylbenzene | 1.33 | 1.2 | 111% | OK |
| p-isopropyltoluene | 1.26 | 1.2 | 105% | OK |
| 1,3-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,4-Dichlorobenzene | 1.31 | 1.2 | 109% | OK |
| n-butylbenzene | 1.31 | 1.2 | 109% | OK |
| 1,2-Dichlorobenzene | 1.36 | 1.2 | 113% | OK |
| 1,2-Dibromo-3-chloropropane | 1.17 | 1.2 | 97% | OK |
| 1,2,4-Trichlorobenzene | 1.04 | 1.2 | 87% | OK |
| Hexachlorobutadiene | 1.35 | 1.2 | 113% | OK |
| Naphthalene | 0.99 | 1.2 | 82% | OK |
| 1,2,3-Trichlorobenzene | 1.00 | 1.2 | 83% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11579Q.D  Vial: 3
Acq On : 6 Jun 2003 9:28 am  Operator: JMR
Sample : L506063I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

6-9-03 VMT 6/9/03

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.01 |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.823 | 13.8 | 80 | 0.00 |
| 3 | TMP | Chloromethane | 0.639 | 0.677 | -5.9 | 101 | 0.01 |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.491 | -8.9 | 95 | 0.01 |
| 5 | TM | Bromomethane | 0.342 | 0.329 | 3.8 | 89 | 0.01 |
| 6 | TM | Chloroethane | 0.320 | 0.329 | -2.8 | 102 | 0.01 |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.011 | -10.0 | 99 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.815 | 2.9 | 92 | 0.00 |
| 9 | TM | Diethyl ether | 0.133 | 0.150 | -12.8 | 100 | 0.02 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.457 | -2.5 | 92 | 0.00 |
| 11 | T | Acrolein | ~~0.023~~ | ~~0.016~~ | ~~30.4#~~ | ~~69~~ | ~~0.01~~ NT |
| 12 | TM | Acetone | 0.042 | 0.015 Dec RPT | 64.3# | 34# | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.379 | -1.3 | 90 | 0.01 |
| 14 | T | Methyl iodide | ~~0.526~~ | ~~0.290~~ | ~~44.9#~~ | ~~74~~ | ~~0.03~~ NT |
| 15 | TM | Di-isopropyl ether | 1.711 | 1.840 | -7.5 | 100 | 0.01 |
| 16 | TM | Methylene Chloride | 0.938 | 1.349 | -43.8# | 122 | 0.01 |
| 17 | TM | Carbon Disulfide | 1.024 | 1.048 | -2.3 | 98 | 0.01 |
| 18 | T | Acrylonitrile | ~~0.074~~ | ~~0.075~~ | ~~-1.4~~ | ~~97~~ | ~~0.01~~ NT |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.519 Dec RPT | -89.9# | 183 | 0.01 |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.580 | -6.0 | 97 | 0.01 |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.125 | -5.2 | 95 | 0.01 |
| 22 | T | Vinyl acetate | ~~0.025~~ | ~~0.045~~ | ~~80.0#~~ | ~~178~~ | ~~0.02~~ NT |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.005 Dec RPT | 70.6# | 28# | 0.00 |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.149 | 2.6 | 92 | 0.01 |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.826 | -7.1 | 96 | 0.01 |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.610 | -11.5 | 105 | 0.02 |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.766 | 4.4 | 90 | 0.01 |
| 28 | T | NO COUMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.24~~ NT |
| 29 | TMC | Chloroform | 1.131 | 1.179 | -4.2 | 95 | 0.02 |
| 30 | TM | Bromochloromethane | 0.194 | 0.209 | -7.7 | 102 | 0.01 |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.020 | -17.6 | 119 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 1.002 | -4.4 | 99 | 0.02 |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.899 | -5.3 | 96 | 0.01 |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.851 | -7.9 | 101 | 0.01 |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.561 | 1.8 | 95 | 0.01 |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.661 | -11.8 | 101 | 0.02 |
| 38 | TM | Benzene | 2.092 | 2.301 | -10.0 | 99 | 0.01 |
| 9 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.01 |
| 0 | TM | Trichloroethene | 0.311 | 0.358 | -15.1 | 103 | 0.02 |

(#) = Out of Range



000251

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11579Q.D  Vial: 3
Acq On : 6 Jun 2003 9:28 am  Operator: JMR
Sample : L506063I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.279 | -13.9 | 103 | 0.00 |
| 42 | T | Methylmethacrylate | 0.077 | 0.078 | -1.3 | 96 | 0.01 |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 45 | TM | Bromodichloromethane | 0.325 | 0.357 | -9.8 | 102 | 0.01 |
| 46 | TM | Dibromomethane | 0.110 | 0.118 | -7.3 | 94 | 0.01 |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ |
| 51 | TM | 2-Hexanone | 0.031 | 0.007 per RDT | 77.4# | 20# | 0.01 |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.008 per RDT | 76.5# | 20# | 0.02 |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.365 | -17.4 | 106 | 0.01 |
| 54 | S | Bromofluorobenzene | 0.287 | 0.294 | -2.4 | 95 | 0.01 |
| 55 | TMC | Toluene | 0.612 | 0.677 | -10.6 | 95 | 0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.247 | -11.8 | 99 | 0.01 |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.128 | -17.4 | 101 | 0.01 |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.266 | -17.2 | 101 | 0.01 |
| 60 | TM | Tetrachloroethene | 0.270 | 0.317 | -17.4 | 103 | 0.01 |
| 61 | TM | Dibromochloromethane | 0.159 | 0.173 | -8.8 | 94 | 0.01 |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.131 | -15.9 | 104 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.01 |
| 64 | TMP | Chlorobenzene | 0.976 | 1.081 | -10.8 | 97 | 0.01 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.381 | -14.4 | 105 | 0.02 |
| 66 | TMC | Ethylbenzene | 1.955 | 2.154 | -10.2 | 96 | 0.01 |
| 67 | TM | m,p-Xylene | 0.655 | 0.723 | -10.4 | 95 | 0.01 |
| 68 | TM | o-Xylene | 0.620 | 0.676 | -9.0 | 98 | 0.01 |
| 69 | TM | Styrene | 0.957 | 0.925 | 3.3 | 87 | 0.01 |
| 70 | TMP | Bromoform | 0.115 | 0.129 | -12.2 | 118 | 0.01 |
| 71 | TM | Isopropylbenzene | 1.761 | 1.837 | -4.3 | 91 | 0.01 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.216 | -6.4 | 98 | 0.01 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.339 | 1.7 | 105 | 0.01 |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.159 | -3.2 | 102 | 0.01 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.079 | -19.7 | 112 | 0.02 |
| 76 | TM | n-Propylbenzene | 2.215 | 2.401 | -8.4 | 98 | 0.02 |
| 77 | TM | Bromobenzene | 0.348 | 0.366 | -5.2 | 102 | 0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.473 | -4.1 | 104 | 0.01 |
| 79 | TM | 2-Chlorotoluene | 1.430 | 1.604 | -12.2 | 112 | 0.01 |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.402 | -10.7 | 113 | 0.01 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11579Q.D  Vial: 3
Acq On : 6 Jun 2003 9:28 am  Operator: JMR
Sample : L506063I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.306 | -10.0 | 110 | 0.01 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.544 | -6.5 | 104 | 0.01 | |
| 83 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.738 | 1.923 | -10.6 | 111 | 0.01 | |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.483 | -4.7 | 107 | 0.01 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.755 | -10.2 | 116 | 0.01 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 105 | 0.01 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.585 | -9.4 | 107 | 0.01 | |
| 89 | TM | n-butylbenzene | 3.030 | 3.303 | -9.0 | 107 | 0.01 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.325 | -13.2 | 112 | 0.01 | |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.062 | 1.6 | 104 | 0.01 | |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.625 | 13.3 | 98 | 0.01 | |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.444 | -13.0 | 115 | 0.01 | |
| 96 | TM | Naphthalene | 0.764 | 0.623 | 18.5 | 88 | 0.01 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.453 | 16.9 | 96 | 0.01 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.068 | 3.3 | 100 | 0.01 | |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0

## 524 RECOVERY

Data File Name I11589Q.D
Sample Name L506063I2
Date 6 Jun 2003 9:28 pm

6.9.03
VMC 6/9/03

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.03 | 1.2 | 86% | OK |
| Chloromethane | 1.27 | 1.2 | 106% | OK |
| Vinyl Chloride | 1.30 | 1.2 | 108% | OK |
| Bromomethane | 1.17 | 1.2 | 97% | OK |
| Chloroethane | 1.19 | 1.2 | 99% | OK |
| t-Butyl alcohol | 6.32 | 6.0 | 105% | OK |
| Trichlorofluoromethane | 1.17 | 1.2 | 98% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.25 | 1.2 | 104% | OK |
| Acetone | 2.90 | 1.2 | 242% | * |
| 1,1-Dichloroethene | 1.23 | 1.2 | 102% | OK |
| Di-isopropyl ether | 1.33 | 1.2 | 111% | OK |
| Methylene Chloride | 2.34 | 1.2 | 195% | * |
| Methyl-tert-butyl ether | 2.41 | 2.4 | 101% | OK |
| trans-1,2-Dichloroethene | 1.31 | 1.2 | 109% | OK |
| 1,1-Dichloroethane | 1.32 | 1.2 | 110% | OK |
| Methyl ethyl ketone | 1.29 | 1.2 | 108% | OK |
| Ethyl t-butyl ether | 1.25 | 1.2 | 104% | OK |
| 2,2-Dichloropropane | 1.34 | 1.2 | 112% | OK |
| cis-1,2-Dichloroethene | 1.35 | 1.2 | 112% | OK |
| t-Amyl methyl ether | 1.21 | 1.2 | 101% | OK |
| Chloroform | 1.49 | 1.2 | 124% | OK |
| romochloromethane | 1.28 | 1.2 | 107% | OK |
| etrahydrofuran | 1.62 | 1.2 | 135% | * |
| 1,1,1-Trichloroethane | 1.27 | 1.2 | 106% | OK |
| 1,1-Dichloropropene | 1.37 | 1.2 | 114% | OK |
| Carbon Tetrachloride | 1.34 | 1.2 | 111% | OK |
| 1,2-Dichloroethane | 1.39 | 1.2 | 115% | OK |
| Benzene | 1.38 | 1.2 | 115% | OK |
| Trichloroethene | 1.39 | 1.2 | 116% | OK |
| 1,2-Dichloropropane | 1.39 | 1.2 | 116% | OK |
| Bromodichloromethane | 1.35 | 1.2 | 112% | OK |
| Dibromomethane | 1.30 | 1.2 | 109% | OK |
| 2-Hexanone | 1.11 | 1.2 | 93% | OK |
| Methyl isobutyl ketone | 1.51 | 1.2 | 126% | OK |
| cis-1,3-Dichloropropene | 1.38 | 1.2 | 115% | OK |
| Toluene | 1.24 | 1.2 | 103% | OK |
| trans-1,3-Dichloropropene | 1.20 | 1.2 | 100% | OK |
| 1,1,2-Trichloroethane | 1.21 | 1.2 | 101% | OK |
| 1,3-Dichloropropane | 1.24 | 1.2 | 103% | OK |
| Tetrachloroethene | 1.24 | 1.2 | 103% | OK |
| Dibromochloromethane | 1.23 | 1.2 | 102% | OK |
| 1,2-Dibromoethane | 1.20 | 1.2 | 100% | OK |
| Chlorobenzene | 1.28 | 1.2 | 107% | OK |
| 1,1,1,2-Tetrachloroethane | 1.34 | 1.2 | 112% | OK |
| Ethylbenzene | 1.32 | 1.2 | 110% | OK |
| ,p-Xylene | 2.73 | 2.4 | 114% | OK |
| -Xylene | 1.33 | 1.2 | 111% | OK |
| Styrene | 1.28 | 1.2 | 107% | OK |

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.36 | 1.2 | 114% | OK |
| Isopropylbenzene | 1.27 | 1.2 | 106% | OK |
| 1,1,2,2-Tetrachloroethane | 1.33 | 1.2 | 111% | OK |
| 1,2,3-Trichloropropane | 1.26 | 1.2 | 105% | OK |
| -Propylbenzene | 1.31 | 1.2 | 109% | OK |
| Bromobenzene | 1.28 | 1.2 | 106% | OK |
| 1,3,5-Trimethylbenzene | 1.30 | 1.2 | 108% | OK |
| 2-Chlorotoluene | 1.35 | 1.2 | 113% | OK |
| 4-Chlorotoluene | 1.31 | 1.2 | 110% | OK |
| tert-butylbenzene | 1.30 | 1.2 | 109% | OK |
| 1,2,4-Trimethylbenzene | 1.35 | 1.2 | 113% | OK |
| sec-butylbenzene | 1.34 | 1.2 | 112% | OK |
| p-isopropyltoluene | 1.24 | 1.2 | 104% | OK |
| 1,3-Dichlorobenzene | 1.28 | 1.2 | 106% | OK |
| 1,4-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| n-butylbenzene | 1.32 | 1.2 | 110% | OK |
| 1,2-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,2-Dibromo-3-chloropropane | 1.33 | 1.2 | 111% | OK |
| 1,2,4-Trichlorobenzene | 1.01 | 1.2 | 84% | OK |
| Hexachlorobutadiene | 1.31 | 1.2 | 109% | OK |
| Naphthalene | 0.97 | 1.2 | 80% | OK |
| 1,2,3-Trichlorobenzene | 0.92 | 1.2 | 76% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11589Q.D  Vial: 9
Acq On : 6 Jun 2003 9:28 pm  Operator: JMR
Sample : L506063I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

6.9.03 VMT 6/9/03

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.819 | 14.2 | 80 | 0.00 |
| 3 | TMP | Chloromethane | 0.639 | 0.679 | -6.3 | 101 | 0.01 |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.488 | -8.2 | 95 | 0.00 |
| 5 | TM | Bromomethane | 0.342 | 0.333 | 2.6 | 90 | 0.00 |
| 6 | TM | Chloroethane | 0.320 | 0.318 | 0.6 | 99 | 0.01 |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.011 | -10.0 | 100 | -0.02 |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.821 | 2.1 | 93 | 0.00 |
| 9 | TM | Diethyl ether | 0.133 | 0.156 | -17.3 | 105 | 0.01 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.465 | -4.3 | 94 | 0.00 |
| 11 | T | Acrolein | 0.023 | 0.018 | 21.7 | 78 | 0.01 |
| 12 | TM | Acetone | 0.042 | 0.020 | 52.4# | 46# | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.383 | -2.4 | 91 | 0.00 |
| 14 | T | Methyl iodide | 0.526 | 0.418 | 20.5 | 106 | 0.01 |
| 15 | TM | Di-isopropyl ether | 1.711 | 1.904 | -11.3 | 104 | 0.00 |
| 16 | TM | Methylene Chloride | 0.938 | 1.607 | -71.3# | 145 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.024 | 1.147 | -12.0 | 108 | 0.01 |
| 18 | T | Acrylonitrile | 0.074 | 0.072 | 2.7 | 94 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.610 | -101.3# | 195 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.595 | -8.8 | 100 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.175 | -9.9 | 100 | 0.01 |
| 22 | T | Vinyl acetate | 0.025 | 0.051 | -104.0# | 201# | 0.01 |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.004 | 76.5# | 22# | 0.00 |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.229 | -4.2 | 98 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.861 | -11.7 | 100 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.615 | -12.4 | 106 | 0.01 |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.807 | -0.7 | 95 | 0.00 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.24 |
| 29 | TMC | Chloroform | 1.131 | 1.401 | -23.9# | 114 | 0.01 |
| 30 | TM | Bromochloromethane | 0.194 | 0.207 | -6.7 | 101 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.023 | -35.3# | 141 | 0.01 |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 1.016 | -5.8 | 101 | 0.01 |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.973 | -13.9 | 104 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.878 | -11.3 | 105 | 0.00 |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.671 | -5.1 | 102 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.683 | -15.6 | 104 | 0.01 |
| 38 | TM | Benzene | 2.092 | 2.411 | -15.2 | 104 | 0.00 |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 101 | 0.00 |
| 40 | TM | Trichloroethene | 0.311 | 0.362 | -16.4 | 111 | 0.01 |

(#) = Out of Range



000256

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11589Q.D  Vial: 9
Acq On : 6 Jun 2003 9:28 pm  Operator: JMR
Sample : L506063I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.284 | -15.9 | 112 | 0.00 |
| 42 | T | Methylmethacrylate | 0.077 | 0.082 | -6.5 | 107 | 0.01 |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 45 | TM | Bromodichloromethane | 0.325 | 0.364 | -12.0 | 111 | 0.01 |
| 46 | TM | Dibromomethane | 0.110 | 0.120 | -9.1 | 102 | 0.01 |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | -0.50 |
| 51 | TM | 2-Hexanone | 0.031 | 0.006 | 80.6# | 18# | 0.01 |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.009 | 73.5# | 24# | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.358 | -15.1 | 110 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.287 | 0.262 | 8.7 | 90 | 0.00 |
| 55 | TMC | Toluene | 0.612 | 0.631 | -3.1 | 94 | 0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.221 | 0.0 | 94 | 0.01 |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.110 | -0.9 | 92 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.235 | -3.5 | 95 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.270 | 0.278 | -3.0 | 96 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.159 | 0.163 | -2.5 | 94 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.113 | 0.0 | 95 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 91 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.976 | 1.041 | -6.7 | 90 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.373 | -12.0 | 98 | 0.01 |
| 66 | TMC | Ethylbenzene | 1.955 | 2.153 | -10.1 | 91 | 0.01 |
| 67 | TM | m,p-Xylene | 0.655 | 0.745 | -13.7 | 93 | 0.00 |
| 68 | TM | o-Xylene | 0.620 | 0.687 | -10.8 | 95 | 0.00 |
| 69 | TM | Styrene | 0.957 | 1.023 | -6.9 | 92 | 0.01 |
| 70 | TMP | Bromoform | 0.115 | 0.131 | -13.9 | 115 | 0.01 |
| 71 | TM | Isopropylbenzene | 1.761 | 1.862 | -5.7 | 88 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.225 | -10.8 | 97 | 0.01 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.338 | 2.0 | 100 | 0.01 |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.161 | -4.5 | 99 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.076 | -15.2 | 104 | 0.01 |
| 76 | TM | n-Propylbenzene | 2.215 | 2.410 | -8.8 | 94 | 0.01 |
| 77 | TM | Bromobenzene | 0.348 | 0.371 | -6.6 | 98 | 0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.529 | -8.1 | 103 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.430 | 1.614 | -12.9 | 108 | 0.01 |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.387 | -9.5 | 107 | 0.01 |

(#) = Out of Range



000257

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11589Q.D  Vial: 9
Acq On : 6 Jun 2003 9:28 pm  Operator: JMR
Sample : L506063I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.289 | -8.6 | 104 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.631 | -12.5 | 105 | 0.00 |
| 83 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | -0.50 |
| 84 | TM | sec-butylbenzene | 1.738 | 1.938 | -11.5 | 107 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.466 | -3.5 | 101 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.729 | -6.4 | 107 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.590 | -9.7 | 102 | 0.00 |
| 89 | TM | n-butylbenzene | 3.030 | 3.333 | -10.0 | 103 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.285 | -9.7 | 103 | 0.01 |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.070 | -11.1 | 114 | 0.01 |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.606 | 16.0 | 91 | 0.01 |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.430 | -9.4 | 106 | 0.00 |
| 96 | TM | Naphthalene | 0.764 | 0.606 | 20.7 | 82 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.416 | 23.7 | 84 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.048 | 5.1 | 94 | 0.01 |

## 524 RECOVERY

Data File Name **I11590Q.D**
Sample Name **L5060631 3**
Date **6 Jun 2003 10:03 pm**

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.10 | 1.2 | 92% | OK |
| Chloromethane | 1.39 | 1.2 | 116% | OK |
| Vinyl Chloride | 1.41 | 1.2 | 117% | OK |
| Bromomethane | 1.25 | 1.2 | 104% | OK |
| Chloroethane | 1.30 | 1.2 | 109% | OK |
| t-Butyl alcohol | 7.66 | 6.0 | 128% | OK |
| Trichlorofluoromethane | 1.29 | 1.2 | 107% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.40 | 1.2 | 117% | OK |
| Acetone | 3.01 | 1.2 | 251% | * |
| 1,1-Dichloroethene | 1.34 | 1.2 | 111% | OK |
| Di-isopropyl ether | 1.44 | 1.2 | 120% | OK |
| Methylene Chloride | 2.48 | 1.2 | 206% | * |
| Methyl-tert-butyl ether | 2.58 | 2.4 | 107% | OK |
| trans-1,2-Dichloroethene | 1.43 | 1.2 | 119% | OK |
| 1,1-Dichloroethane | 1.38 | 1.2 | 115% | OK |
| Methyl ethyl ketone | 1.67 | 1.2 | 139% | * |
| Ethyl t-butyl ether | 1.30 | 1.2 | 108% | OK |
| 2,2-Dichloropropane | 1.35 | 1.2 | 113% | OK |
| cis-1,2-Dichloroethene | 1.33 | 1.2 | 111% | OK |
| t-Amyl methyl ether | 1.11 | 1.2 | 93% | OK |
| Chloroform | 1.42 | 1.2 | 119% | OK |
| Bromochloromethane | 1.33 | 1.2 | 111% | OK |
| Tetrahydrofuran | 1.60 | 1.2 | 133% | * |
| 1,1,1-Trichloroethane | 1.24 | 1.2 | 104% | OK |
| 1,1-Dichloropropene | 1.26 | 1.2 | 105% | OK |
| Carbon Tetrachloride | 1.27 | 1.2 | 106% | OK |
| 1,2-Dichloroethane | 1.26 | 1.2 | 105% | OK |
| Benzene | 1.26 | 1.2 | 105% | OK |
| Trichloroethene | 1.43 | 1.2 | 119% | OK |
| 1,2-Dichloropropane | 1.35 | 1.2 | 112% | OK |
| Bromodichloromethane | 1.35 | 1.2 | 112% | OK |
| Dibromomethane | 1.29 | 1.2 | 108% | OK |
| 2-Hexanone | 1.27 | 1.2 | 106% | OK |
| Methyl isobutyl ketone | 1.50 | 1.2 | 125% | OK |
| cis-1,3-Dichloropropene | 1.43 | 1.2 | 119% | OK |
| Toluene | 1.38 | 1.2 | 115% | OK |
| trans-1,3-Dichloropropene | 1.33 | 1.2 | 111% | OK |
| 1,1,2-Trichloroethane | 1.40 | 1.2 | 117% | OK |
| 1,3-Dichloropropane | 1.37 | 1.2 | 114% | OK |
| Tetrachloroethene | 1.42 | 1.2 | 118% | OK |
| Dibromochloromethane | 1.42 | 1.2 | 119% | OK |
| 1,2-Dibromoethane | 1.32 | 1.2 | 110% | OK |
| Chlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,1,1,2-Tetrachloroethane | 1.42 | 1.2 | 118% | OK |
| Ethylbenzene | 1.36 | 1.2 | 113% | OK |
| m,p-Xylene | 2.84 | 2.4 | 119% | OK |
| o-Xylene | 1.39 | 1.2 | 116% | OK |
| Styrene | 1.31 | 1.2 | 109% | OK |

6-9-03
VMT 6/9/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.43 | 1.2 | 119% | OK |
| Isopropylbenzene | 1.30 | 1.2 | 108% | OK |
| 1,1,2,2-Tetrachloroethane | 1.30 | 1.2 | 108% | OK |
| 1,2,3-Trichloropropane | 1.29 | 1.2 | 108% | OK |
| -Propylbenzene | 1.34 | 1.2 | 112% | OK |
| Bromobenzene | 1.35 | 1.2 | 112% | OK |
| 1,3,5-Trimethylbenzene | 1.34 | 1.2 | 112% | OK |
| 2-Chlorotoluene | 1.39 | 1.2 | 115% | OK |
| 4-Chlorotoluene | 1.34 | 1.2 | 112% | OK |
| tert-butylbenzene | 1.36 | 1.2 | 113% | OK |
| 1,2,4-Trimethylbenzene | 1.40 | 1.2 | 117% | OK |
| sec-butylbenzene | 1.38 | 1.2 | 115% | OK |
| p-isopropyltoluene | 1.28 | 1.2 | 107% | OK |
| 1,3-Dichlorobenzene | 1.33 | 1.2 | 111% | OK |
| 1,4-Dichlorobenzene | 1.30 | 1.2 | 108% | OK |
| n-butylbenzene | 1.32 | 1.2 | 110% | OK |
| 1,2-Dichlorobenzene | 1.31 | 1.2 | 109% | OK |
| 1,2-Dibromo-3-chloropropane | 1.14 | 1.2 | 95% | OK |
| 1,2,4-Trichlorobenzene | 1.03 | 1.2 | 86% | OK |
| Hexachlorobutadiene | 1.32 | 1.2 | 110% | OK |
| Naphthalene | 0.94 | 1.2 | 78% | OK |
| 1,2,3-Trichlorobenzene | 0.96 | 1.2 | 80% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11590Q.D  Vial: 10
Acq On : 6 Jun 2003 10:03 pm  Operator: JMR
Sample : L506063I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

6.9.03
VMT 6/9/03

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.955 | 0.876 | 8.3 | 86 | 0.00 |
| 3 | TMP | Chloromethane | 0.639 | 0.742 | -16.1 | 110 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.451 | 0.530 | -17.5 | 103 | 0.00 |
| 5 | TM | Bromomethane | 0.342 | 0.356 | -4.1 | 96 | 0.00 |
| 6 | TM | Chloroethane | 0.320 | 0.348 | -8.7 | 108 | 0.00 |
| 7 | TM | t-Butyl alcohol | 0.010 | 0.013 | -30.0 | 121 | -0.02 |
| 8 | TM | Trichlorofluoromethane | 0.839 | 0.898 | -7.0 | 101 | 0.00 |
| 9 | TM | Diethyl ether | 0.133 | 0.158 | -18.8 | 106 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.446 | 0.522 | -17.0 | 105 | 0.00 |
| 11 | T | Acrolein | 0.023 | 0.021 | 8.7 | 90 | 0.00 |
| 12 | TM | Acetone | 0.042 | 0.021 | 50.0# | 47# | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.374 | 0.416 | -11.2 | 99 | 0.00 |
| 14 | T | Methyl iodide | 0.526 | 0.462 | 12.2 | 117 | 0.00 |
| 15 | TM | Di-isopropyl ether | 1.711 | 2.048 | -19.7 | 111 | 0.00 |
| 16 | TM | Methylene Chloride | 0.938 | 1.667 | -77.7# | 150 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.024 | 1.212 | -18.4 | 114 | 0.00 |
| 18 | T | Acrylonitrile | 0.074 | 0.079 | -6.8 | 103 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether | 0.800 | 1.717 | -114.6# | 207# | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.547 | 0.652 | -19.2 | 109 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 1.069 | 1.230 | -15.1 | 104 | 0.00 |
| 22 | T | Vinyl acetate | 0.025 | 0.050 | -100.0# | 197 | 0.01 |
| 23 | TM | Methyl ethyl ketone | 0.017 | 0.005 | 70.6# | 29# | 0.00 |
| 24 | TM | Ethyl t-butyl ether | 1.180 | 1.275 | -8.1 | 102 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.771 | 0.870 | -12.8 | 101 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.547 | 0.606 | -10.8 | 105 | 0.01 |
| 27 | TM | t-Amyl methyl ether | 0.801 | 0.743 | 7.2 | 87 | 0.00 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.24 |
| 29 | TMC | Chloroform | 1.131 | 1.342 | -18.7 | 109 | 0.00 |
| 30 | TM | Bromochloromethane | 0.194 | 0.214 | -10.3 | 105 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.023 | -35.3# | 139 | 0.01 |
| 32 | TM | 1,1,1-Trichloroethane | 0.960 | 0.994 | -3.5 | 99 | 0.01 |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 34 | TM | 1,1-Dichloropropene | 0.854 | 0.900 | -5.4 | 96 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.789 | 0.834 | -5.7 | 99 | 0.00 |
| 36 | S | 1,4-Difluorobenzene | 1.590 | 1.478 | 7.0 | 90 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.591 | 0.622 | -5.2 | 95 | 0.00 |
| 38 | TM | Benzene | 2.092 | 2.199 | -5.1 | 95 | 0.00 |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 90 | 0.00 |
| 40 | TM | Trichloroethene | 0.311 | 0.371 | -19.3 | 102 | 0.00 |

(#) = Out of Range



000261

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11590Q.D  Vial: 10
Acq On : 6 Jun 2003 10:03 pm  Operator: JMR
Sample : L506063I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.245 | 0.275 | -12.2 | 97 | 0.00 |
| 42 | T | Methylmethacrylate | 0.077 | 0.078 | -1.3 | 92 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 45 | TM | Bromodichloromethane | 0.325 | 0.364 | -12.0 | 100 | 0.00 |
| 46 | TM | Dibromomethane | 0.110 | 0.119 | -8.2 | 91 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | -0.50 |
| 51 | TM | 2-Hexanone | 0.031 | 0.006 | 80.6# | 18# | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.034 | 0.009 | 73.5# | 22# | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.311 | 0.370 | -19.0 | 102 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.287 | 0.289 | -0.7 | 89 | 0.00 |
| 55 | TMC | Toluene | 0.612 | 0.702 | -14.7 | 95 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.221 | 0.245 | -10.9 | 94 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 58 | TM | 1,1,2-Trichloroethane | 0.109 | 0.127 | -16.5 | 96 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.227 | 0.259 | -14.1 | 95 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.270 | 0.320 | -18.5 | 99 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.159 | 0.189 | -18.9 | 98 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.113 | 0.124 | -9.7 | 94 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 90 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.976 | 1.075 | -10.1 | 92 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.333 | 0.394 | -18.3 | 103 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.955 | 2.213 | -13.2 | 93 | 0.00 |
| 67 | TM | m,p-Xylene | 0.655 | 0.776 | -18.5 | 97 | 0.00 |
| 68 | TM | o-Xylene | 0.620 | 0.717 | -15.6 | 99 | 0.00 |
| 69 | TM | Styrene | 0.957 | 1.043 | -9.0 | 93 | 0.00 |
| 70 | TMP | Bromoform | 0.115 | 0.137 | -19.1 | 119 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.761 | 1.903 | -8.1 | 90 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.203 | 0.220 | -8.4 | 94 | 0.00 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.345 | 0.345 | 0.0 | 102 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.154 | 0.165 | -7.1 | 101 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.066 | 0.080 | -21.2 | 108 | 0.00 |
| 76 | TM | n-Propylbenzene | 2.215 | 2.474 | -11.7 | 96 | 0.00 |
| 77 | TM | Bromobenzene | 0.348 | 0.390 | -12.1 | 103 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.415 | 1.586 | -12.1 | 106 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.430 | 1.651 | -15.5 | 110 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.267 | 1.420 | -12.1 | 108 | 0.00 |

(#) = Out of Range



000262

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\060603-I\I11590Q.D  Vial: 10
Acq On : 6 Jun 2003 10:03 pm  Operator: JMR
Sample : L506063I3  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506043I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 05 10:02:28 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.187 | 1.346 | -13.4 | 108 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.450 | 1.695 | -16.9 | 108 | 0.00 |
| 83 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | -0.50 |
| 84 | TM | sec-butylbenzene | 1.738 | 2.000 | -15.1 | 109 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.416 | 1.510 | -6.6 | 103 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.685 | 0.761 | -11.1 | 111 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 102 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.449 | 1.566 | -8.1 | 103 | 0.00 |
| 89 | TM | n-butylbenzene | 3.030 | 3.345 | -10.4 | 106 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.171 | 1.276 | -9.0 | 105 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.063 | 0.060 | 4.8 | 100 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.721 | 0.617 | 14.4 | 95 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.393 | 0.433 | -10.2 | 109 | 0.00 |
| 96 | TM | Naphthalene | 0.764 | 0.582 | 23.8 | 81 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.545 | 0.434 | 20.4 | 90 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.104 | 1.030 | 6.7 | 95 | 0.00 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I15533T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/4/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0959

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 783774 | | 7.72 | | 1510559 | | 9.13 | | 948084 | | 13.91 | | 383976 | | 17.75 | |
| | UPPER LIMIT | 1018906 | | 8.18 | | 1963727 | | 9.68 | | 1232509 | | 14.74 | | 499169 | | 18.82 | |
| | LOWER LIMIT | 548642 | | 7.26 | | 1057391 | | 8.58 | | 663659 | | 13.08 | | 268783 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 0.1PPB STD | 777931 | | 7.72 | | 1502062 | | 9.12 | | 936037 | | 13.91 | | 399237 | | 17.76 | |
| 02 | 0.5PPB STD | 767610 | | 7.71 | | 1505251 | | 9.12 | | 936200 | | 13.91 | | 400883 | | 17.76 | |
| 03 | 1.2PPB STD | 783774 | | 7.72 | | 1510559 | | 9.13 | | 948084 | | 13.91 | | 383976 | | 17.75 | |
| 04 | 4.8PPB STD | 759258 | | 7.72 | | 1434718 | | 9.11 | | 896144 | | 13.91 | | 411297 | | 17.75 | |
| 05 | 8PPB STD | 797882 | | 7.71 | | 1485335 | | 9.12 | | 889536 | | 13.91 | | 443367 | | 17.75 | |
| 06 | 16PPB STD | 835806 | | 7.71 | | 1605242 | | 9.12 | | 925498 | | 13.90 | | 457190 | | 17.75 | |
| 07 | 32PPB STD | 841150 | | 7.72 | | 1649443 | | 9.12 | | 918453 | | 13.91 | | 450934 | | 17.75 | |
| 08 | ZZZZZ | 826028 | | 7.72 | | 1623759 | | 9.12 | | 996001 | | 13.91 | | 420551 | | 17.76 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I15545T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0902

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 787913 | | 7.74 | | 1473207 | | 9.14 | | 921003 | | 13.92 | | 414209 | | 17.76 | |
| | UPPER LIMIT | 1024287 | | 8.20 | | 1915169 | | 9.69 | | 1197304 | | 14.76 | | 538472 | | 18.83 | |
| | LOWER LIMIT | 551539 | | 7.28 | | 1031245 | | 8.59 | | 644702 | | 13.08 | | 289946 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L506053I | 787913 | | 7.74 | | 1473207 | | 9.14 | | 921003 | | 13.92 | | 414209 | | 17.76 | |
| 02 | B506053I | 803809 | | 7.73 | | 1562373 | | 9.14 | | 990200 | | 13.92 | | 435245 | | 17.76 | |
| 03 | 49794-30 | 766393 | | 7.73 | | 1459108 | | 9.14 | | 922343 | | 13.92 | | 393580 | | 17.77 | |
| 04 | 49794-30,MS | 775998 | | 7.73 | | 1451721 | | 9.14 | | 881400 | | 13.92 | | 421975 | | 17.77 | |
| 05 | 49794-30,MSD | 786545 | | 7.73 | | 1410475 | | 9.14 | | 925292 | | 13.92 | | 421576 | | 17.77 | |
| 06 | ZZZZZ | 776881 | | 7.73 | | 1390246 | | 9.14 | | 921940 | | 13.92 | | 420588 | | 17.77 | |
| 07 | 49794-1 | 765103 | | 7.74 | | 1470034 | | 9.14 | | 985308 | | 13.92 | | 451014 | | 17.76 | |
| 08 | 49794-2 | 837683 | | 7.73 | | 1586006 | | 9.13 | | 997739 | | 13.92 | | 470833 | | 17.76 | |
| 09 | 49794-3 | 903651 | | 7.72 | | 1766214 | | 9.13 | | 1181027 | | 13.91 | | 546206 | * | 17.76 | |
| 10 | 49794-4 | 919958 | | 7.73 | | 1762129 | | 9.13 | | 1207508 | * | 13.91 | | 554269 | * | 17.76 | |
| 11 | 49794-5 | 910960 | | 7.73 | | 1780075 | | 9.13 | | 1246840 | * | 13.92 | | 562060 | * | 17.76 | |
| 12 | 49794-6 | 882657 | | 7.73 | | 1731145 | | 9.14 | | 1170390 | | 13.92 | | 525310 | | 17.76 | |
| 13 | 49794-7 | 903660 | | 7.73 | | 1757013 | | 9.13 | | 1193878 | | 13.91 | | 546550 | * | 17.76 | |
| 14 | 49794-8 | 890688 | | 7.73 | | 1705230 | | 9.14 | | 1167378 | | 13.92 | | 557227 | * | 17.76 | |
| 15 | 49794-9 | 853799 | | 7.73 | | 1648997 | | 9.14 | | 1144793 | | 13.92 | | 565775 | * | 17.76 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside the 30% limit but within the 50 % limit to the initial calibration.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I15566T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/5/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2209

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 837322 | | 7.73 | | 1680349 | | 9.13 | | 1114224 | | 13.92 | | 549656 | | 17.76 | |
| | UPPER LIMIT | 1088519 | | 8.19 | | 2184454 | | 9.68 | | 1448491 | | 14.76 | | 714553 | | 18.83 | |
| | LOWER LIMIT | 586125 | | 7.27 | | 1176244 | | 8.58 | | 779957 | | 13.08 | | 384759 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L506053I2 | 837322 | | 7.73 | | 1680349 | | 9.13 | | 1114224 | | 13.92 | | 549656 | | 17.76 | |
| 02 | L506053I3 | 855189 | | 7.73 | | 1657499 | | 9.13 | | 1097851 | | 13.92 | | 537093 | | 17.77 | |
| 03 | B506053I2 | 932144 | | 7.73 | | 1812975 | | 9.14 | | 1206006 | | 13.92 | | 527604 | | 17.76 | |
| 04 | 49794-24 | 902556 | | 7.73 | | 1707342 | | 9.13 | | 1158640 | | 13.92 | | 540494 | | 17.76 | |
| 05 | 49794-25 | 925307 | | 7.73 | | 1773798 | | 9.13 | | 1108723 | | 13.92 | | 519529 | | 17.76 | |
| 06 | 49794-26 | 954972 | | 7.73 | | 1886183 | | 9.14 | | 1279349 | | 13.92 | | 581744 | | 17.76 | |
| 07 | 49794-31 | 888747 | | 7.73 | | 1716590 | | 9.14 | | 1200960 | | 13.92 | | 563189 | | 17.76 | |
| 08 | 49794-32 | 949528 | | 7.73 | | 1850990 | | 9.14 | | 1261490 | | 13.92 | | 586290 | | 17.75 | |
| 09 | 49794-33 | 891553 | | 7.73 | | 1760114 | | 9.14 | | 1197307 | | 13.92 | | 560946 | | 17.76 | |
| 10 | 49794-34 | 976185 | | 7.73 | | 1904864 | | 9.13 | | 1284332 | | 13.91 | | 557720 | | 17.76 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11578T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0853

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 752483 | | 7.73 | | 1428211 | | 9.14 | | 900742 | | 13.92 | | 401346 | | 17.77 | |
| | UPPER LIMIT | 978228 | | 8.19 | | 1856674 | | 9.69 | | 1170965 | | 14.76 | | 521750 | | 18.84 | |
| | LOWER LIMIT | 526738 | | 7.27 | | 999748 | | 8.59 | | 630519 | | 13.08 | | 280942 | | 16.70 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L506063I | 752483 | | 7.73 | | 1428211 | | 9.14 | | 900742 | | 13.92 | | 401346 | | 17.77 | |
| 02 | B506063I | 727021 | | 7.74 | | 1356111 | | 9.14 | | 863074 | | 13.93 | | 397997 | | 17.77 | |
| 03 | 49794-11 | 710043 | | 7.74 | | 1360470 | | 9.15 | | 861106 | | 13.93 | | 390404 | | 17.77 | |
| 04 | 49794-11,MS | 768764 | | 7.73 | | 1468683 | | 9.13 | | 939732 | | 13.92 | | 441956 | | 17.77 | |
| 05 | 49794-11,MSD | 776143 | | 7.73 | | 1475017 | | 9.14 | | 940916 | | 13.92 | | 427227 | | 17.76 | |
| 06 | 49794-12 | 737667 | | 7.74 | | 1372454 | | 9.14 | | 957102 | | 13.93 | | 447898 | | 17.76 | |
| 07 | 49794-13 | 735560 | | 7.73 | | 1414206 | | 9.14 | | 910947 | | 13.92 | | 405467 | | 17.76 | |
| 08 | 49794-18 | 737266 | | 7.74 | | 1426870 | | 9.14 | | 935959 | | 13.93 | | 401959 | | 17.76 | |
| 09 | 49794-19 | 776667 | | 7.73 | | 1515723 | | 9.13 | | 987592 | | 13.92 | | 405924 | | 17.77 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

## VOLATILE ORGANIC
## INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

BFB File ID: I11588T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/6/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 754668 | | 7.72 | | 1518381 | | 9.13 | | 860472 | | 13.91 | | 382650 | | 17.76 | |
| | UPPER LIMIT | 981068 | | 8.18 | | 1973895 | | 9.68 | | 1118614 | | 14.74 | | 497445 | | 18.83 | |
| | LOWER LIMIT | 528268 | | 7.26 | | 1062867 | | 8.58 | | 602330 | | 13.08 | | 267855 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L50606312 | 754668 | | 7.72 | | 1518381 | | 9.13 | | 860472 | | 13.91 | | 382650 | | 17.76 | |
| 02 | L50606313 | 752987 | | 7.72 | | 1366318 | | 9.12 | | 855927 | | 13.92 | | 392946 | | 17.75 | |
| 03 | B50606312 | 741313 | | 7.73 | | 1482033 | | 9.13 | | 863529 | | 13.91 | | 373125 | | 17.75 | |
| 04 | 49794-23 | 754008 | | 7.72 | | 1403505 | | 9.13 | | 852056 | | 13.91 | | 362720 | | 17.76 | |
| 05 | 49794-27 | 749288 | | 7.72 | | 1465598 | | 9.13 | | 842365 | | 13.91 | | 380188 | | 17.76 | |
| 06 | 49794-28 | 752215 | | 7.72 | | 1451668 | | 9.13 | | 869917 | | 13.91 | | 395674 | | 17.76 | |
| 07 | 49794-29 | 759442 | | 7.72 | | 1505557 | | 9.13 | | 879302 | | 13.91 | | 383275 | | 17.75 | |
| 08 | ZZZZZ | 761617 | | 7.72 | | 1406998 | | 9.13 | | 862875 | | 13.91 | | 367865 | | 17.75 | |
| 09 | ZZZZZ | 767184 | | 7.72 | | 1521867 | | 9.12 | | 886357 | | 13.91 | | 366594 | | 17.76 | |
| 10 | 49794-42,DL | 745676 | | 7.72 | | 1503097 | | 9.13 | | 960461 | | 13.91 | | 402338 | | 17.75 | |
| 11 | 49794-24,DL | 782448 | | 7.72 | | 1537394 | | 9.13 | | 859901 | | 13.91 | | 381565 | | 17.76 | |
| 12 | 49794-25,DL | 810901 | | 7.73 | | 1547429 | | 9.13 | | 878604 | | 13.92 | | 384709 | | 17.75 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

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Portsmouth, New Hampshire 03801
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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** B06063M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 102 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

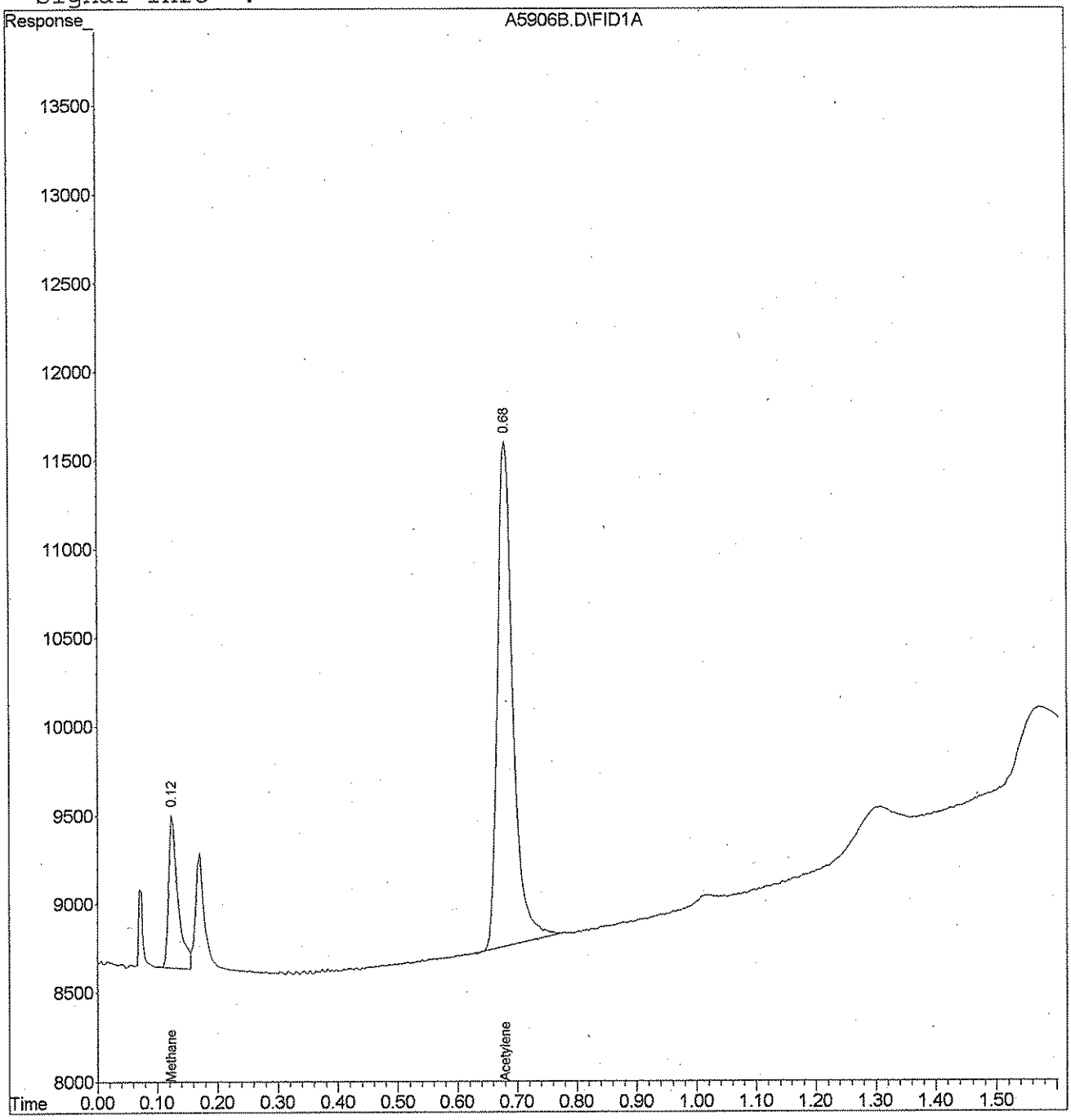
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5906B.D Vial: 100
Acq On : 6 Jun 2003 9:38 pm Operator:
Sample : B06063M,N,QA060603,IB Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 21:48 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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analytics environmental laboratory LLC

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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 11, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** B06063M2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 78 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

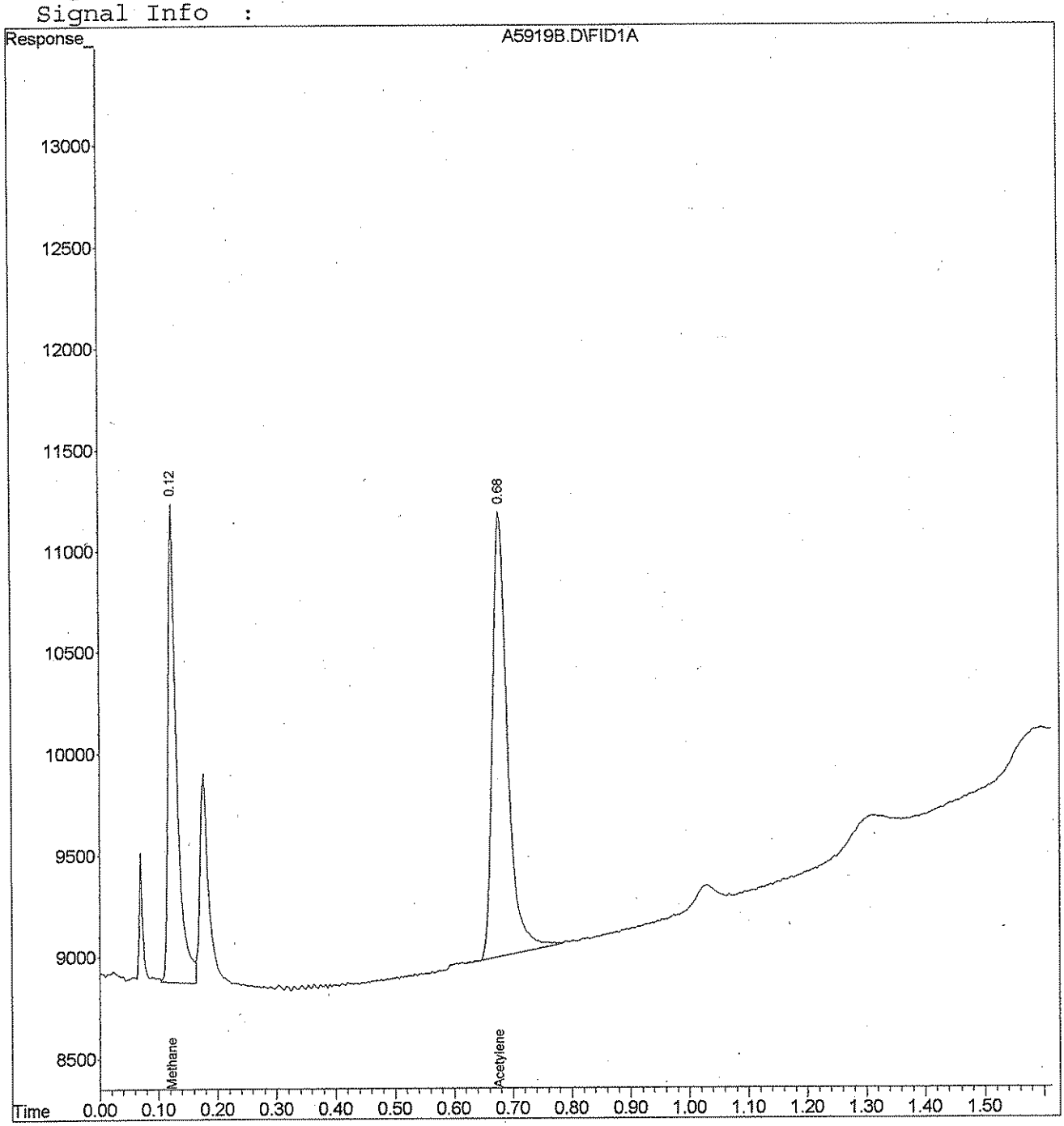
Authorized signature Melissa A Valli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5919B.D Vial: 100
Acq On : 7 Jun 2003 12:48 am Operator:
Sample : B06063M2,N,QA060603,IB Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:48 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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analytics environmental laboratory LLC

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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** B06093M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 86 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

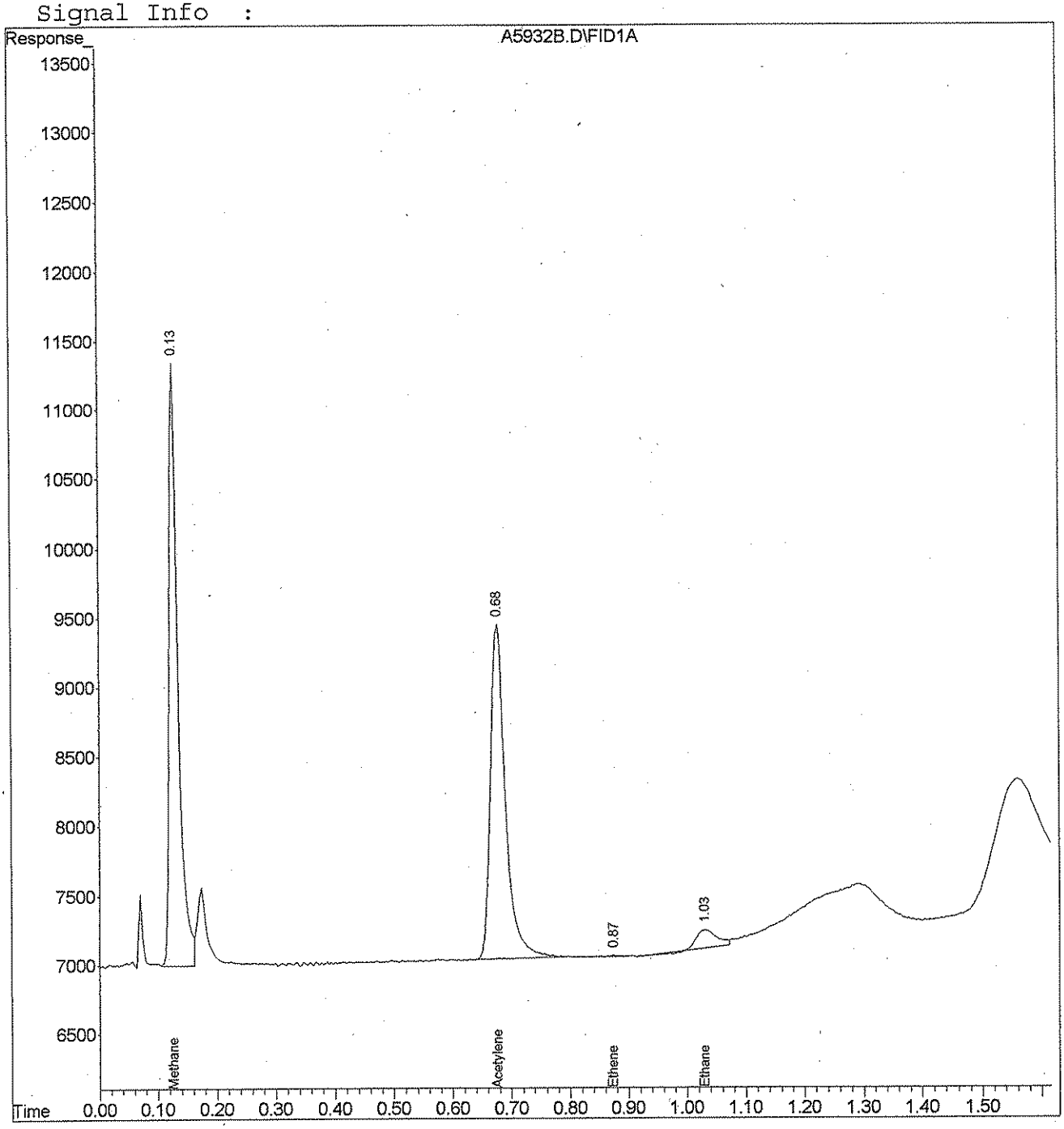
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5932B.D Vial: 100
Acq On : 9 Jun 2003 8:23 pm Operator:
Sample : B060803M,N,QA060803,IB Inst : Instr. A
Misc : 15000 MY 6/19/03 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 20:30 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** B06093M2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 87 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

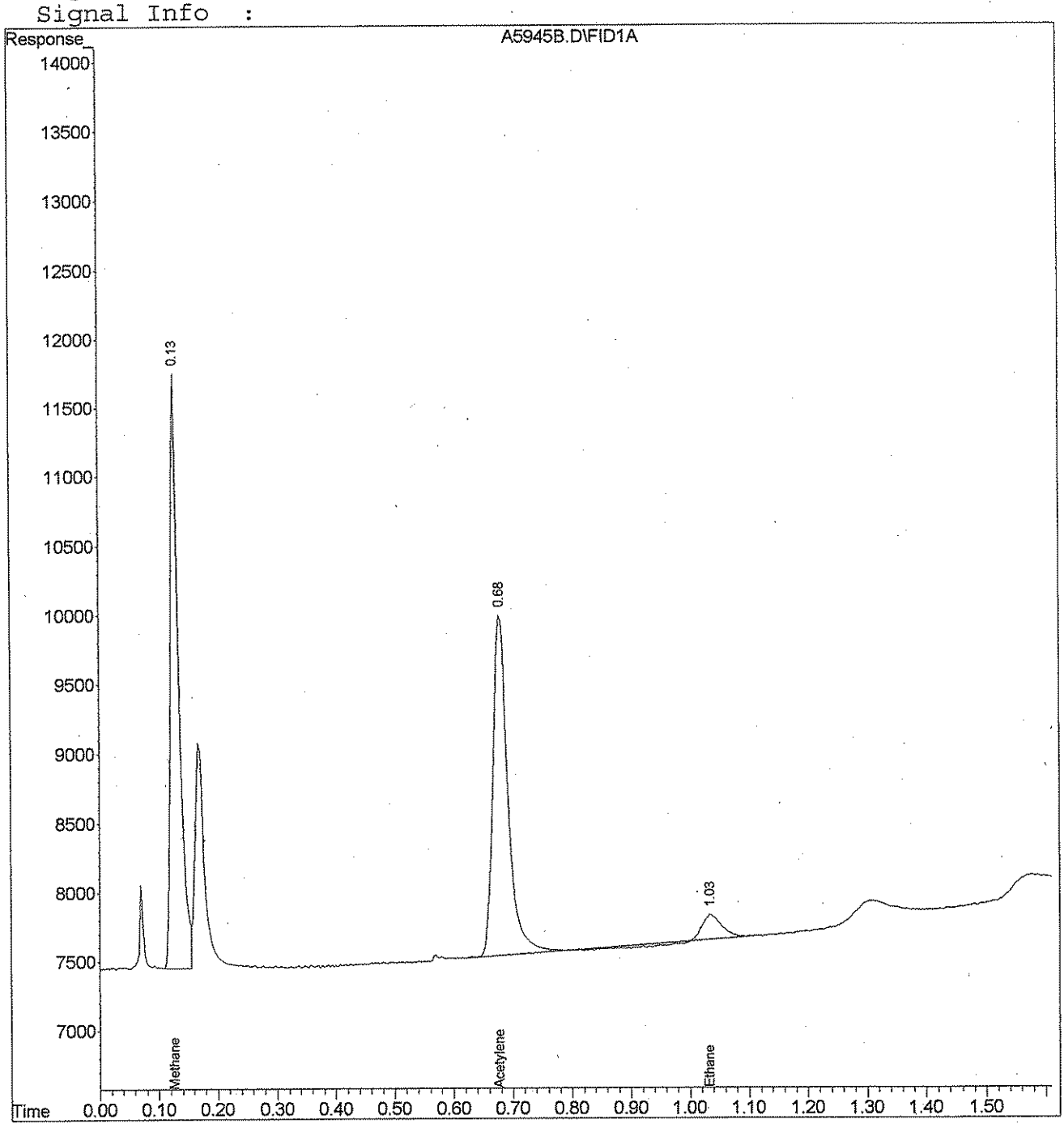
Authorized signature Melinda Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5945B.D Vial: 100
Acq On : 9 Jun 2003 10:49 pm Operator:
Sample : B060303M2,N,QA060803,IB Inst : Instr. A
Misc : 15000 5G19B Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:53 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW32-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-1
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 80 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

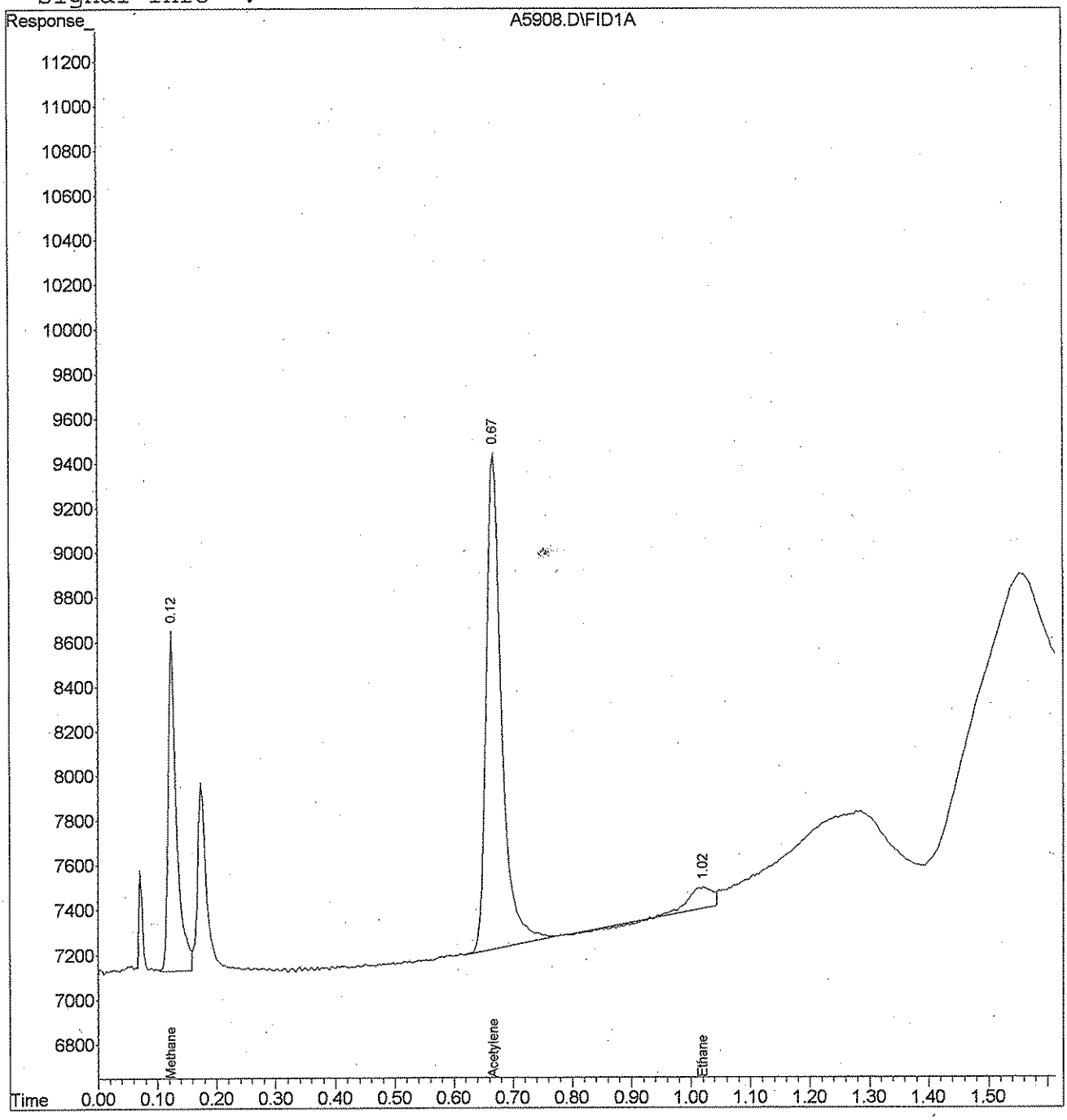
Authorized signature Melissa A. Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5908.D Vial: 100
Acq On : 6 Jun 2003 11:12 pm Operator:
Sample : 49794-1D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:20 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW12-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 76 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

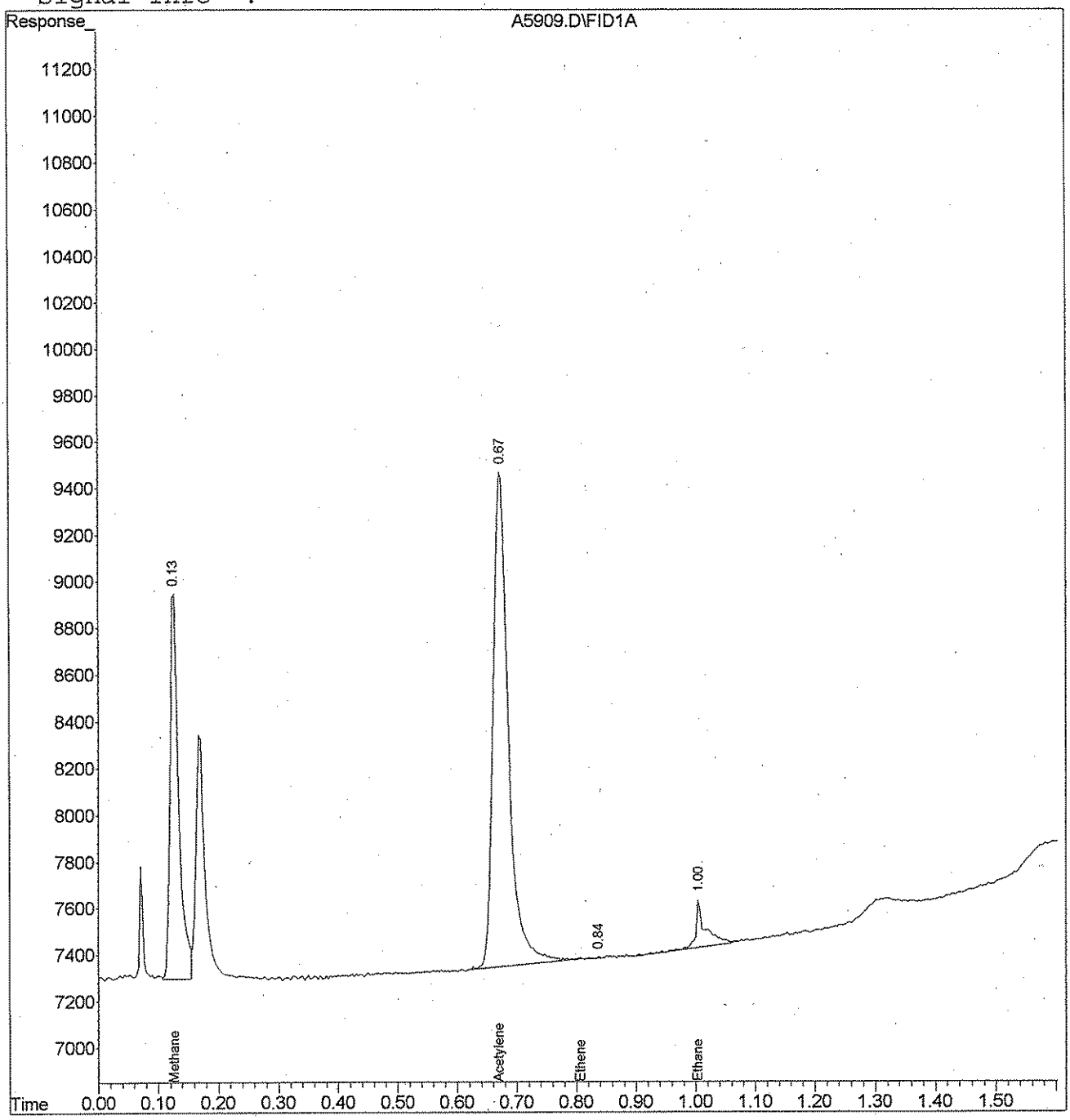
Authorized signature Melissa A. Kelly

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5909.D Vial: 100
Acq On : 6 Jun 2003 11:16 pm Operator:
Sample : 49794-2D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:20 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW40-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 74 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

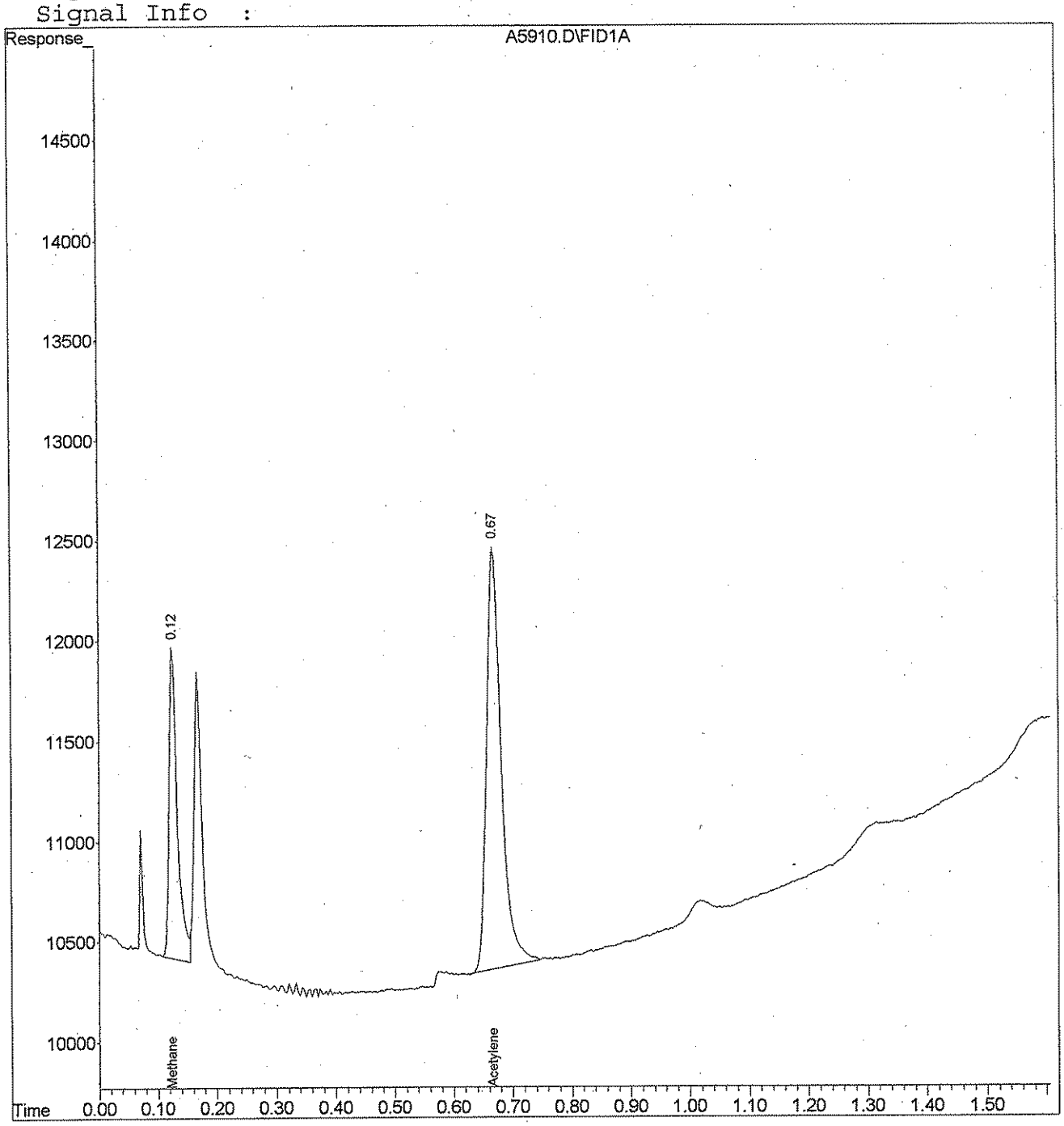
Authorized signature Melissa A. Mall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5910.D Vial: 100
Acq On : 6 Jun 2003 11:21 pm Operator:
Sample : 49794-3D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:26 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW33-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 67 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

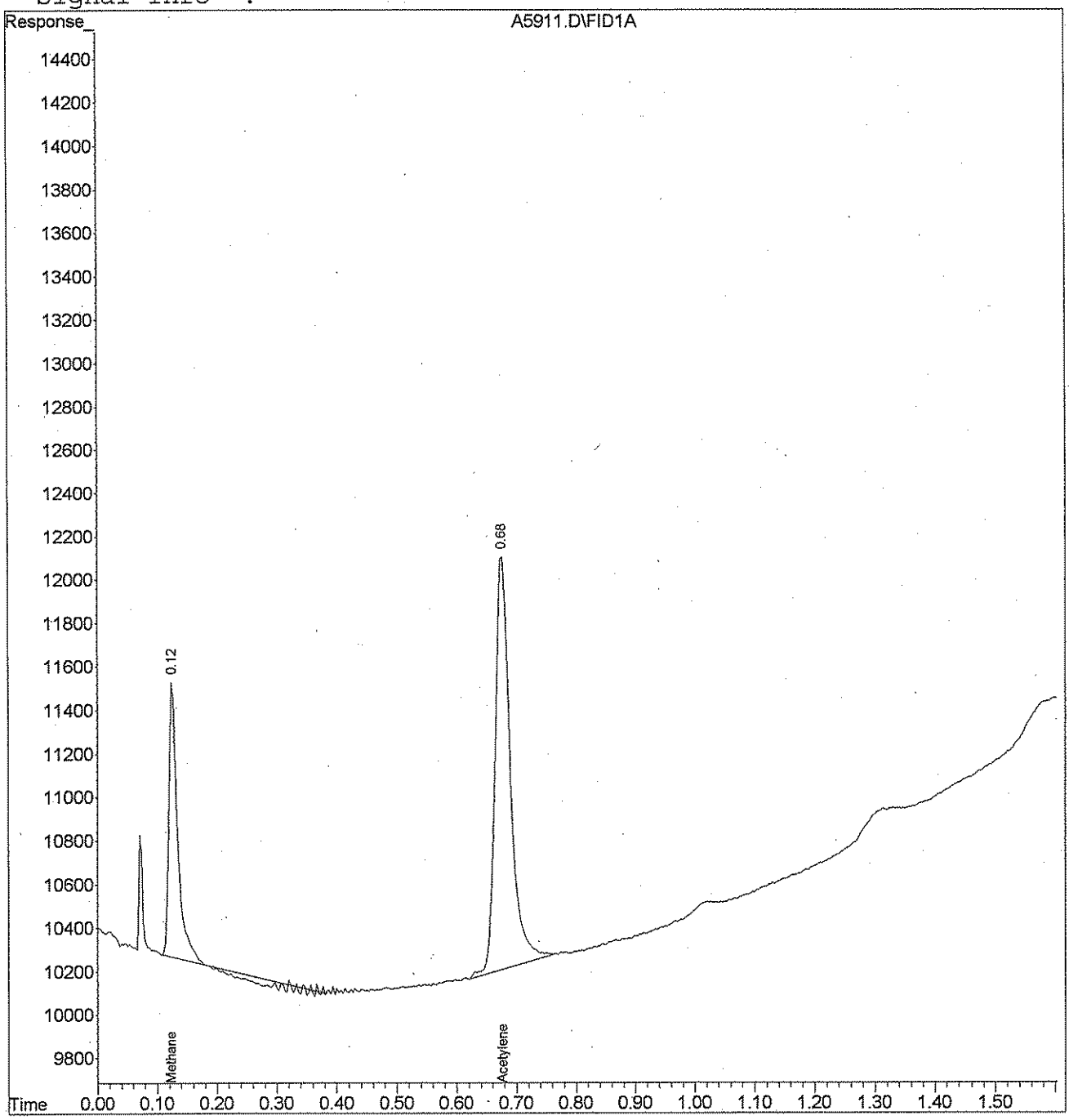
Authorized signature Melissa A Nolle

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5911.D Vial: 100
Acq On : 6 Jun 2003 11:26 pm Operator:
Sample : 49794-4D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:29 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW28-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 66 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

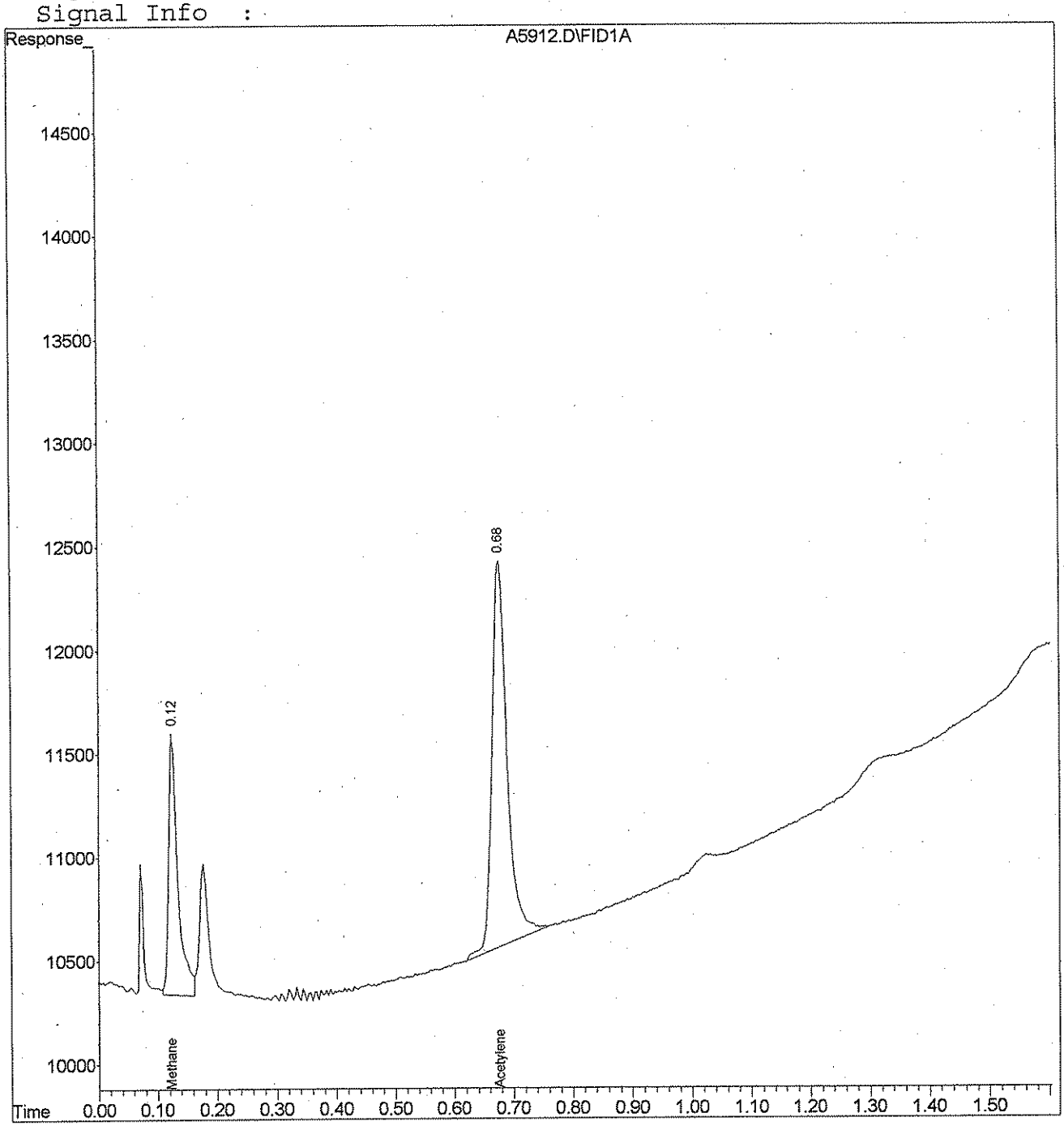
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5912.D Vial: 100
Acq On : 6 Jun 2003 11:39 pm Operator:
Sample : 49794-5D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:44 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW25-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 66 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

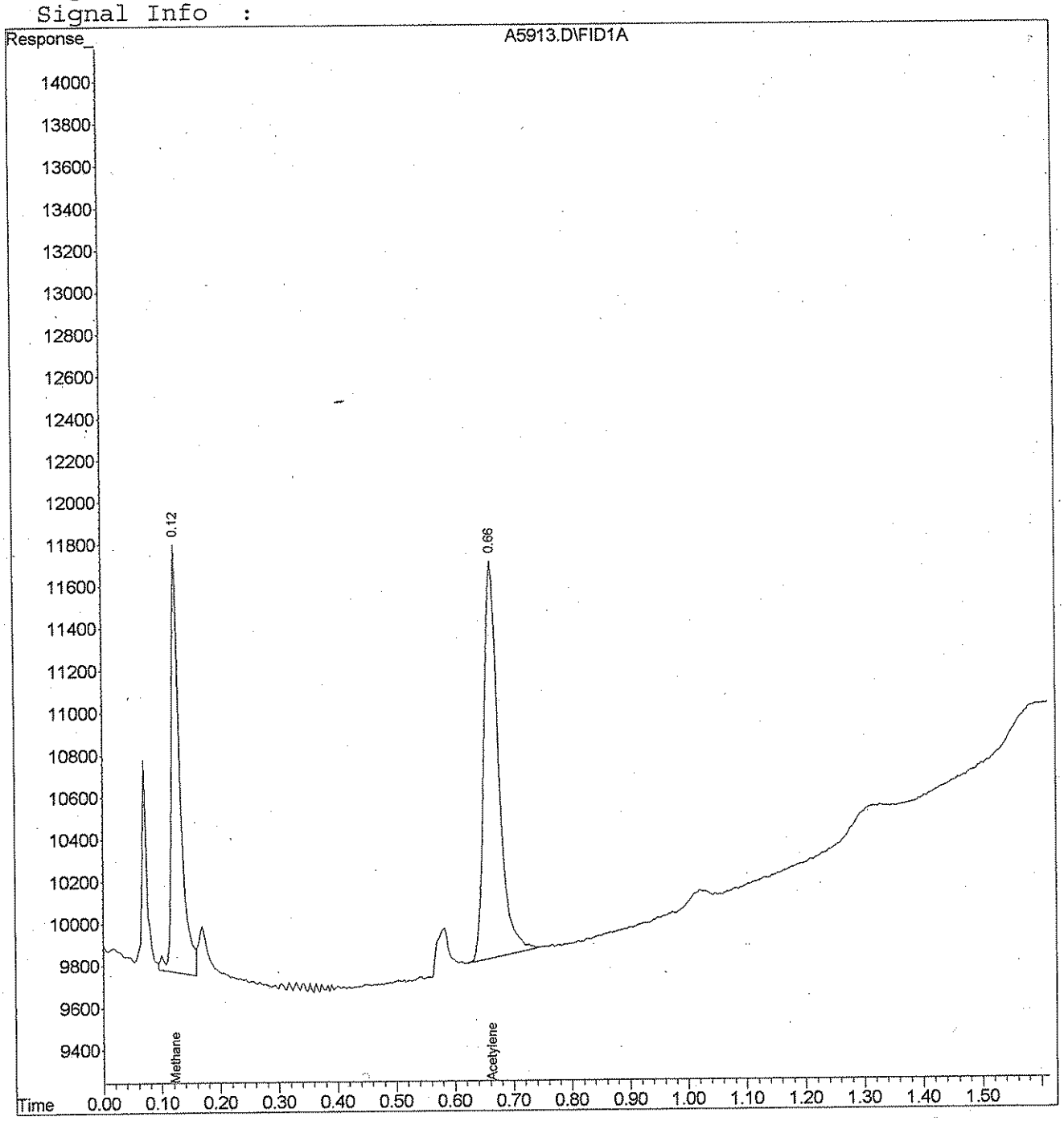
Authorized signature Melena A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5913.D Vial: 100
Acq On : 6 Jun 2003 11:45 pm Operator:
Sample : 49794-6D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:54 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW31-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 93 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

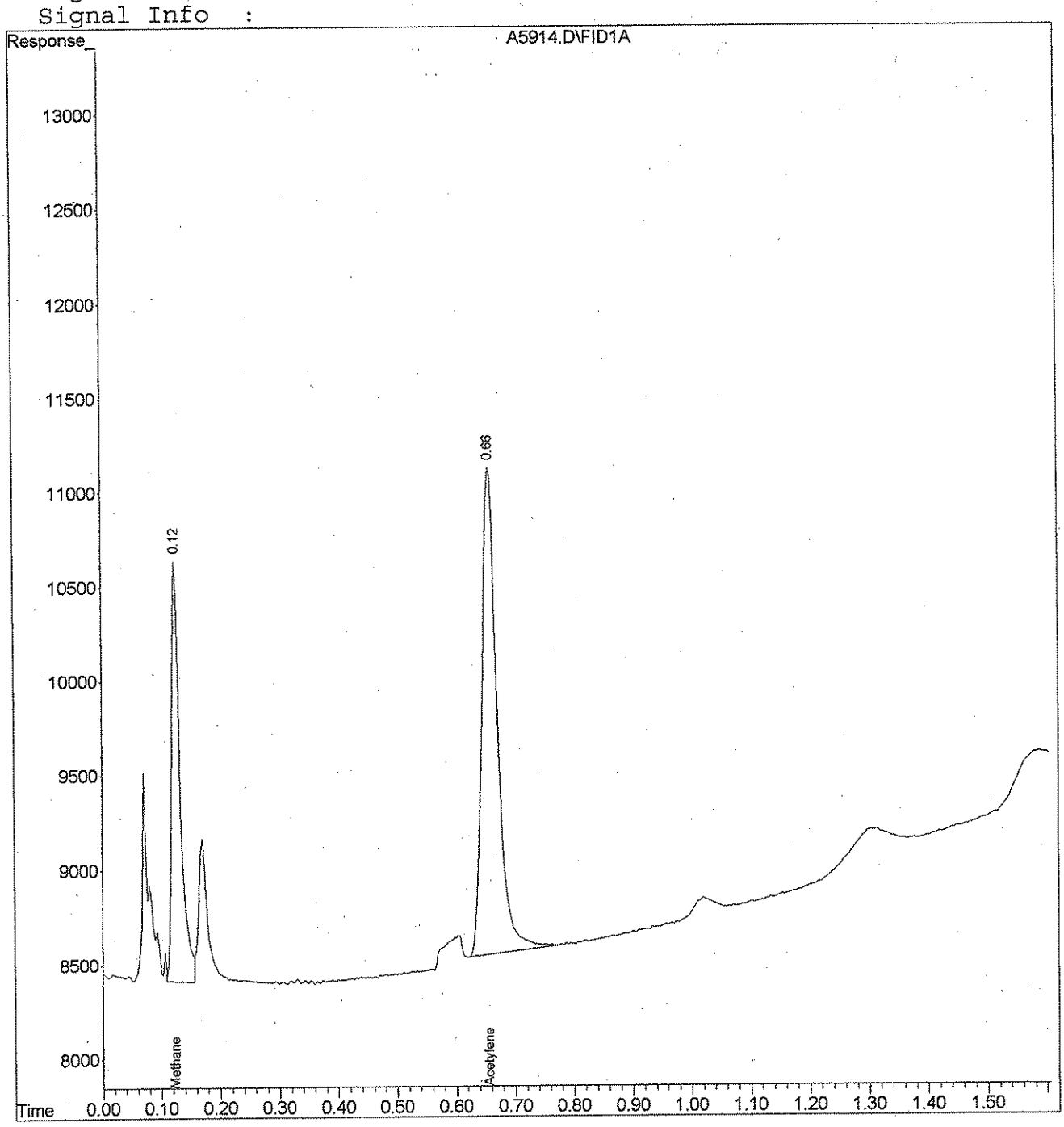
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5914.D Vial: 100
Acq On : 6 Jun 2003 11:55 pm Operator:
Sample : 49794-7D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 6 23:59 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW29-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-8
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 63 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

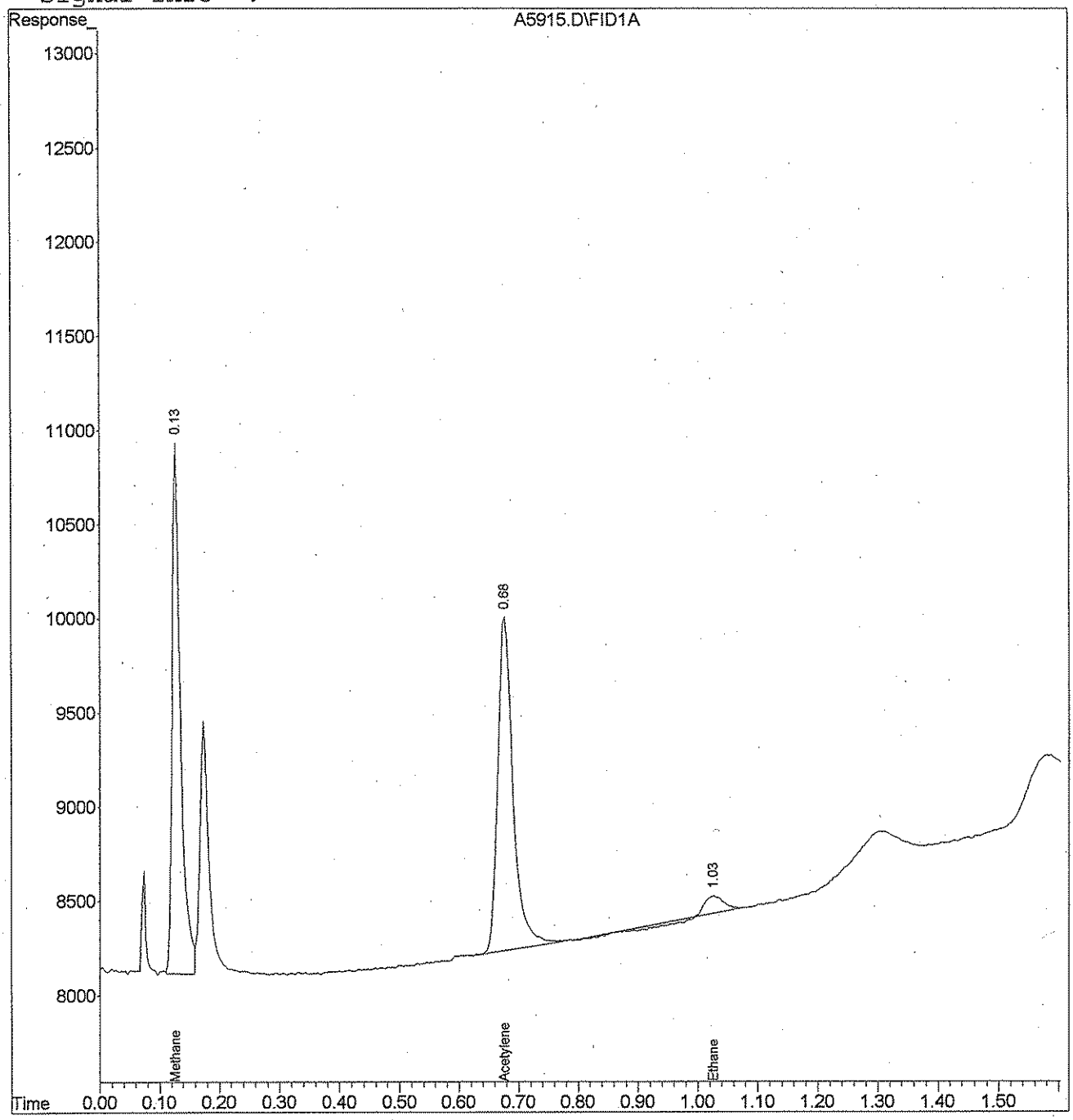
Authorized signature Melissa A. Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5915.D Vial: 100
Acq On : 7 Jun 2003 12:15 am Operator:
Sample : 49794-8D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 0:20 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW36-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 67 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

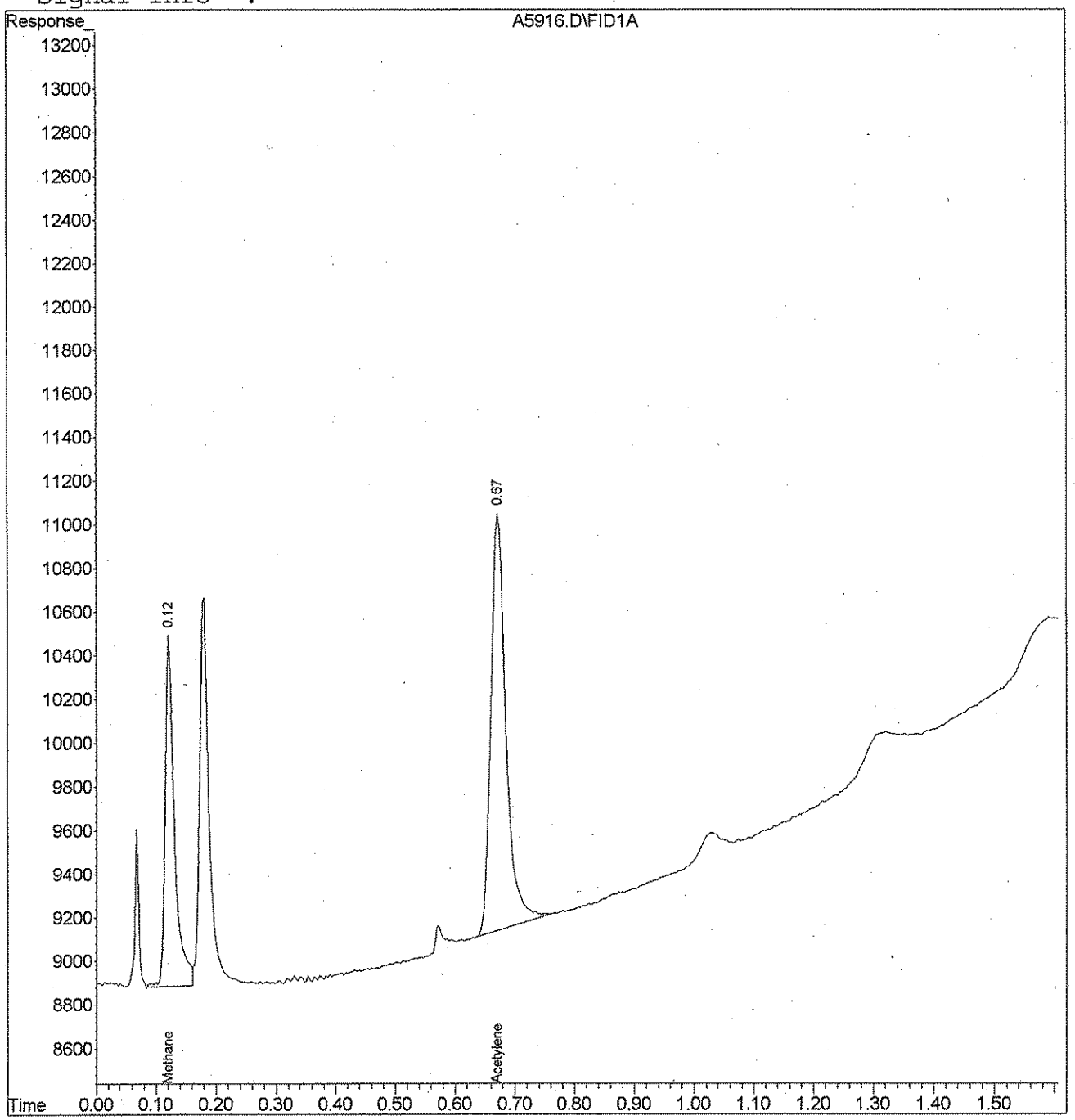
Authorized signature Melena A Kuhl

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5916.D Vial: 100
Acq On : 7 Jun 2003 12:21 am Operator:
Sample : 49794-9D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 0:23 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW39-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-10
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 85 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

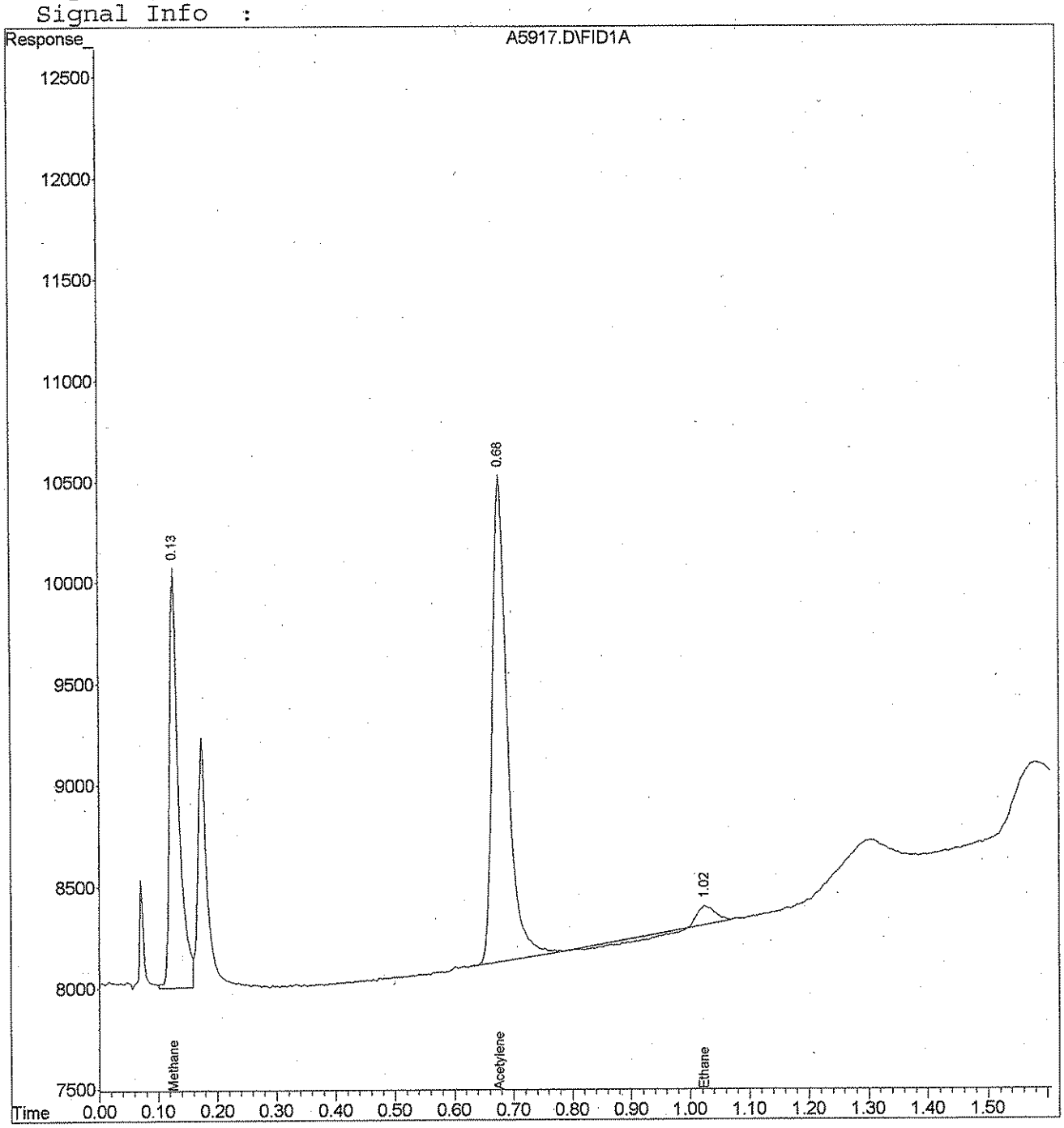
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5917.D Vial: 100
Acq On : 7 Jun 2003 12:35 am Operator:
Sample : 49794-10D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 0:37 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW06-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-11
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/02/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 72 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

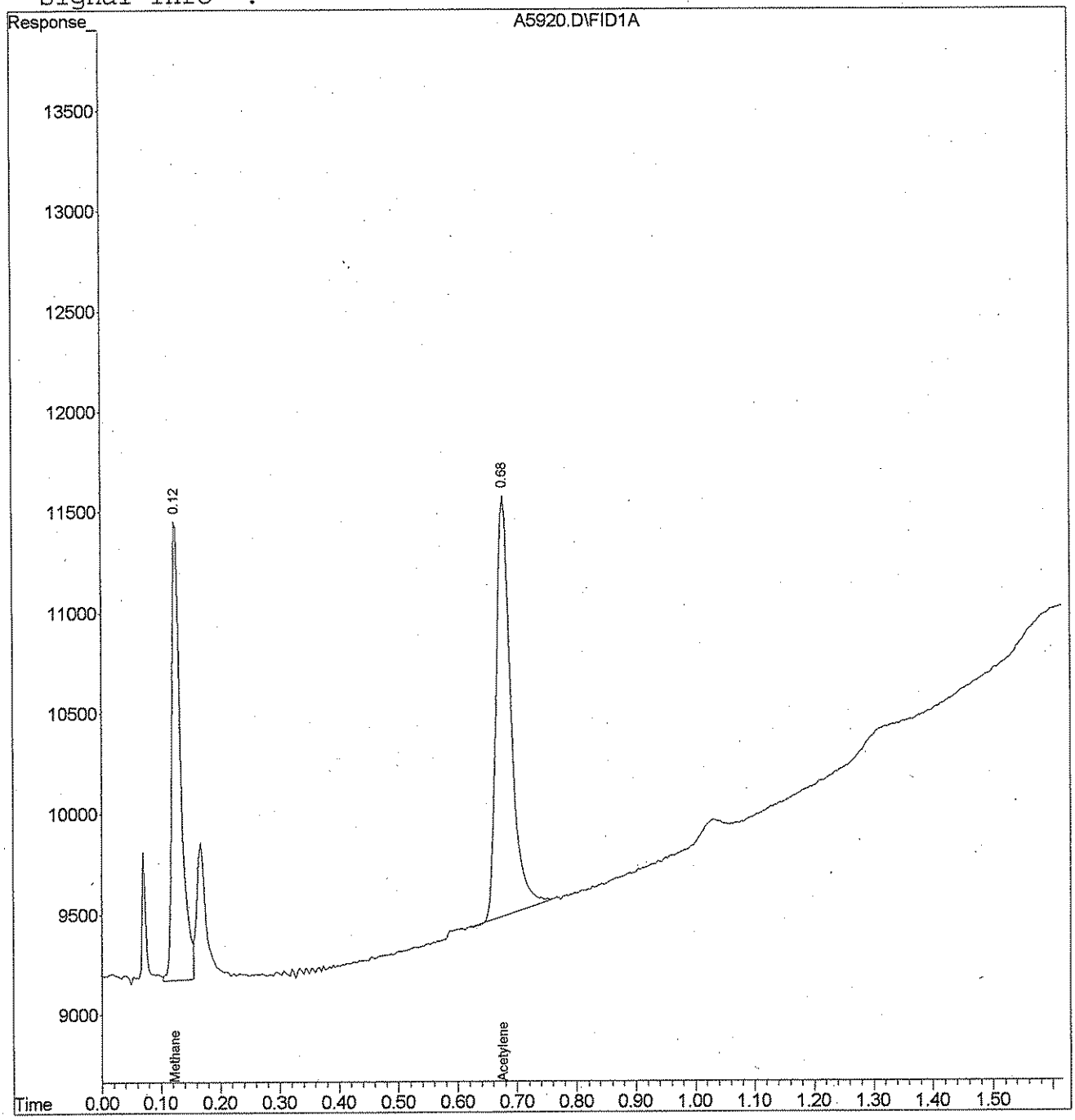
Authorized signature Melissa A Valli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5920.D Vial: 100
Acq On : 7 Jun 2003 12:53 am Operator:
Sample : 49794-11E,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 0:59 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW01-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-14
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 73 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

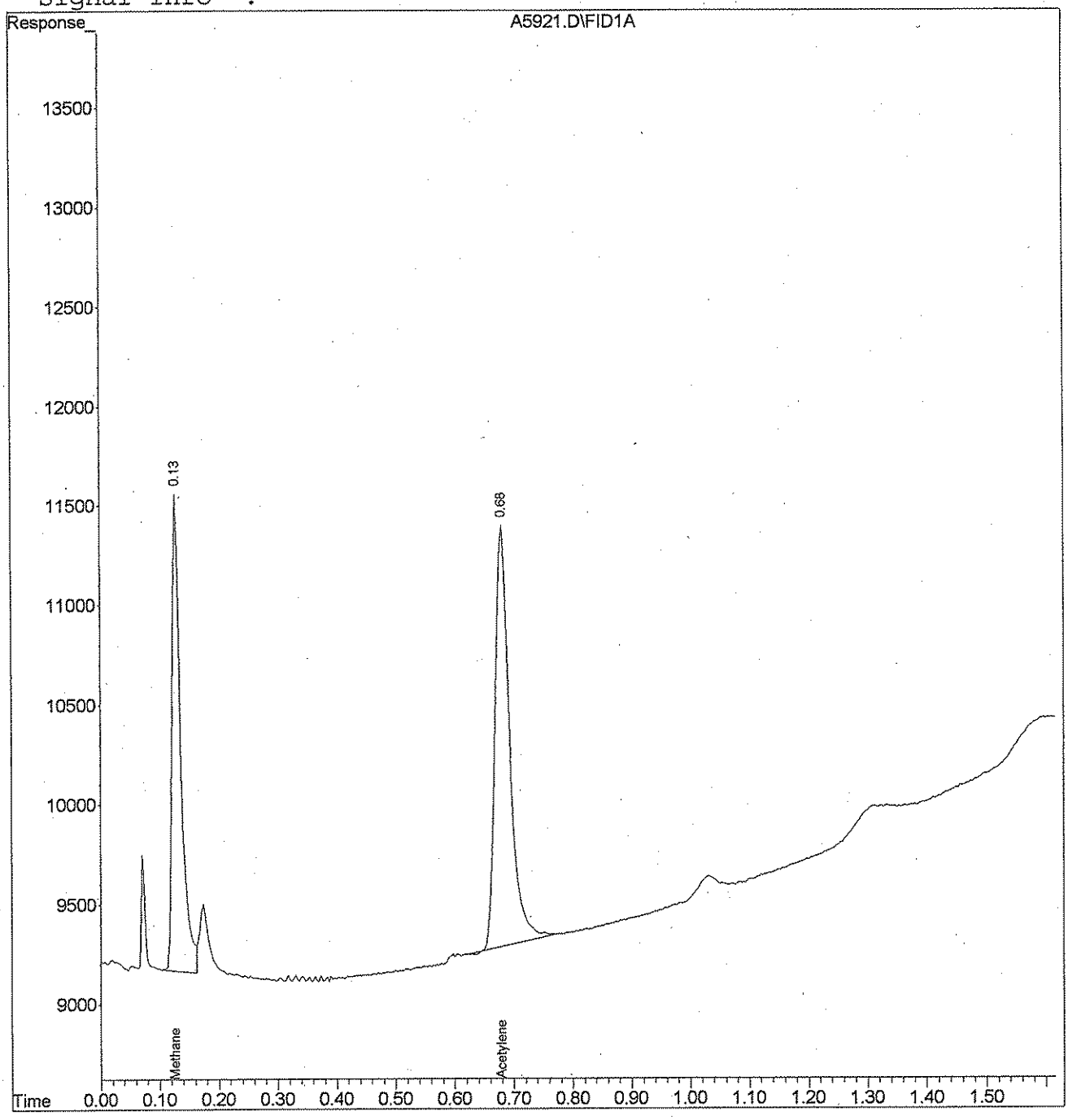
Authorized signature Melissa A Mallk

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5921.D Vial: 100
Acq On : 7 Jun 2003 12:59 am Operator:
Sample : 49794-14D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:02 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** WY03-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-15
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 69 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

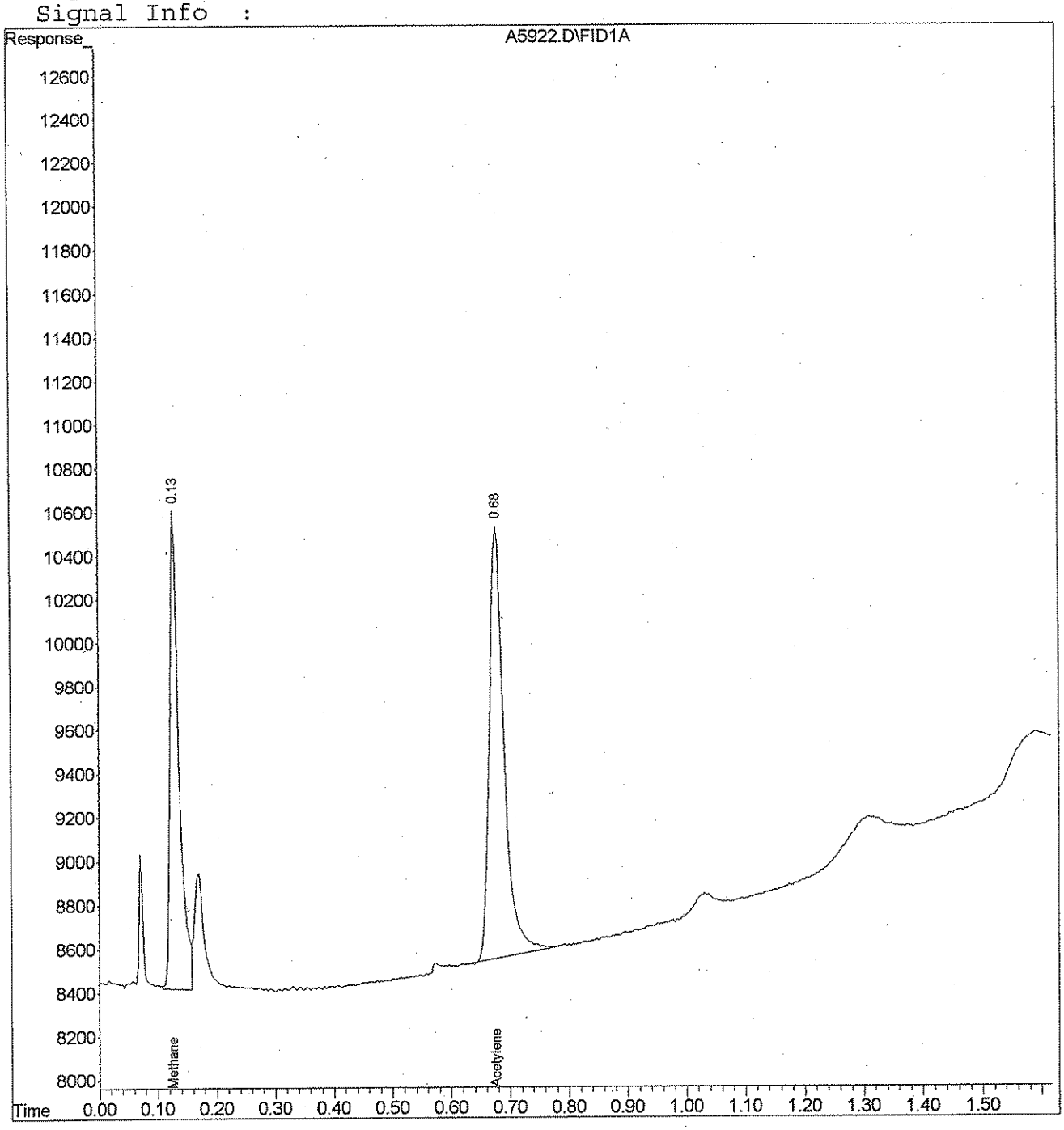
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5922.D Vial: 100
Acq On : 7 Jun 2003 1:09 am Operator:
Sample : 49794-15D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:16 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW13-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-16
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 71 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

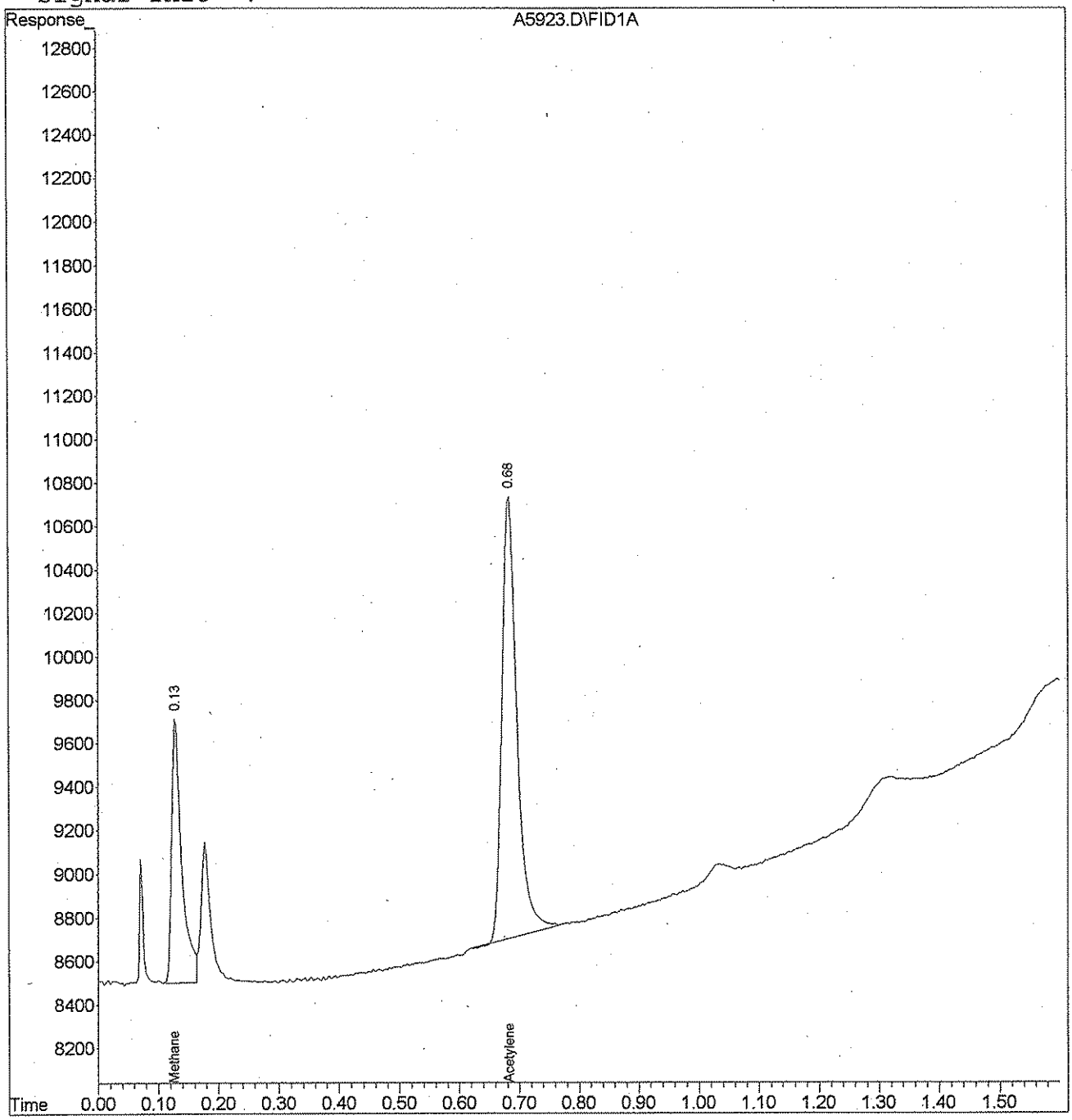
Authorized signature Melissa G. Kalb

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5923.D Vial: 100
Acq On : 7 Jun 2003 1:16 am Operator:
Sample : 49794-16D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:20 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW22-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-17
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 69 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

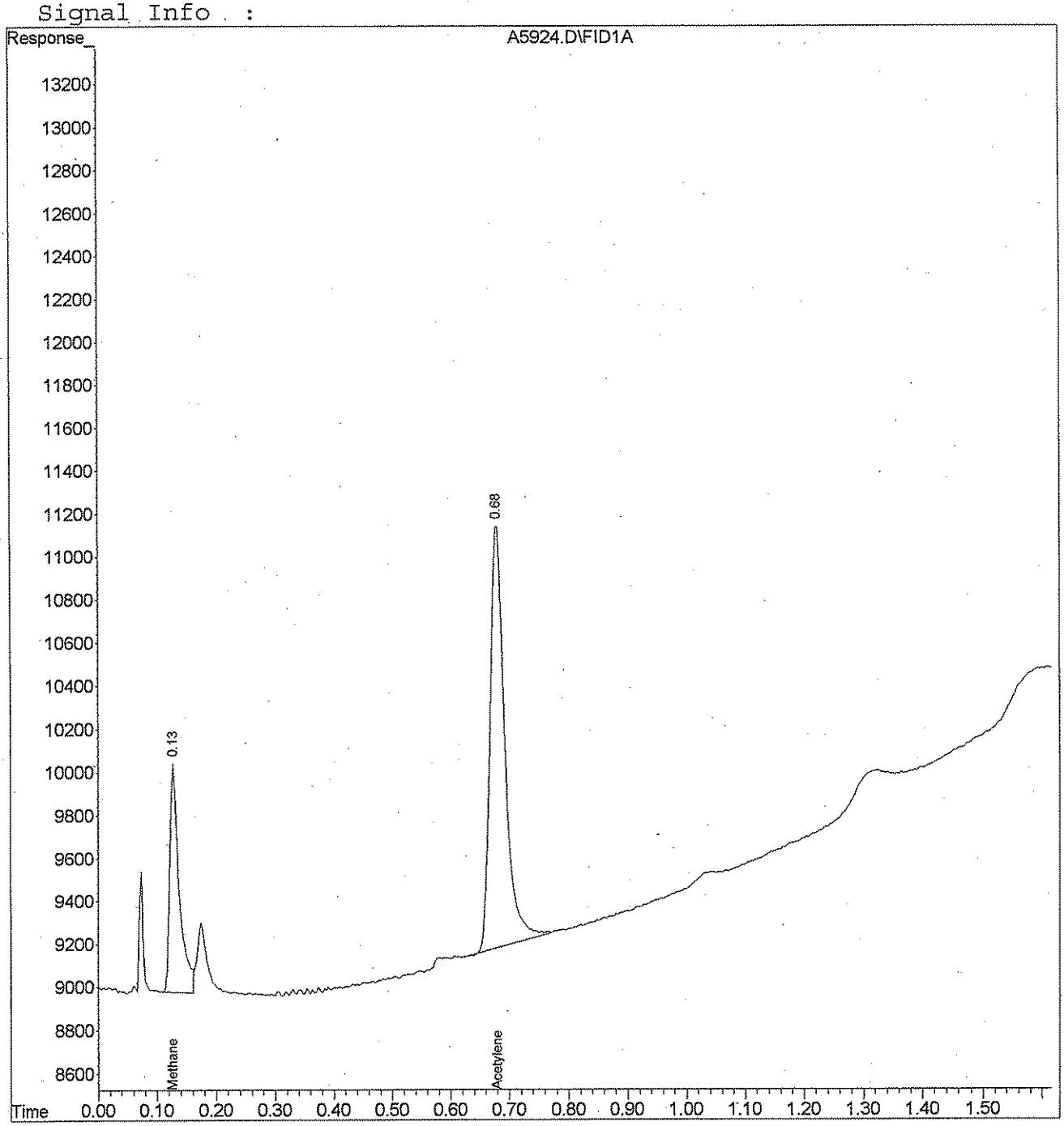
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5924.D Vial: 100
Acq On : 7 Jun 2003 1:22 am Operator:
Sample : 49794-17D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:29 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW23-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-18
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 70 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

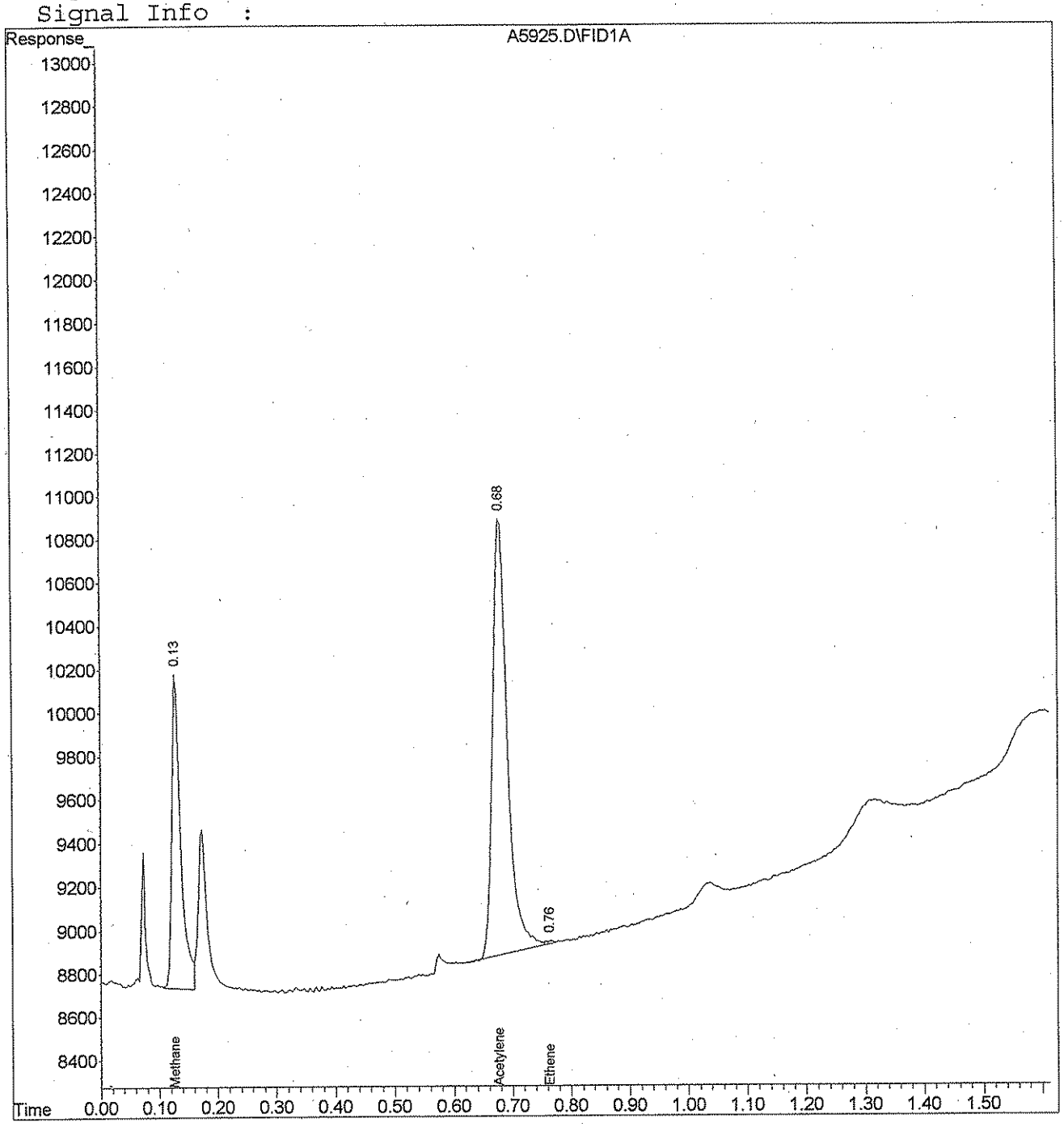
Authorized signature Melissa A. Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5925.D Vial: 100
Acq On : 7 Jun 2003 1:30 am Operator:
Sample : 49794-18D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:37 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW23-0603-01-B
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-19
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 79 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

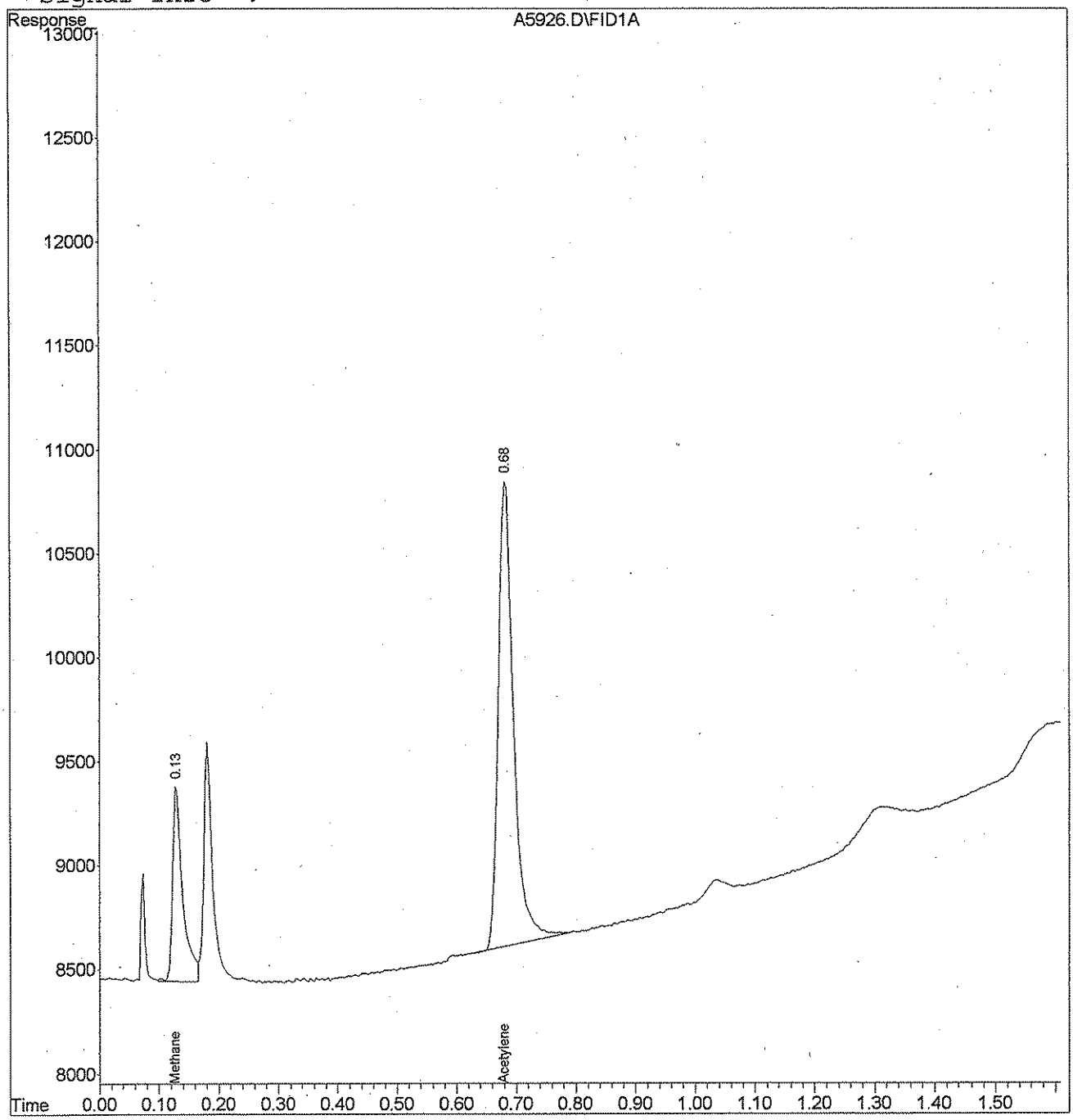
Authorized signature Melissa A Kelly

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5926.D Vial: 100
Acq On : 7 Jun 2003 1:38 am Operator:
Sample : 49794-19D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:40 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW24-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-21
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 77 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

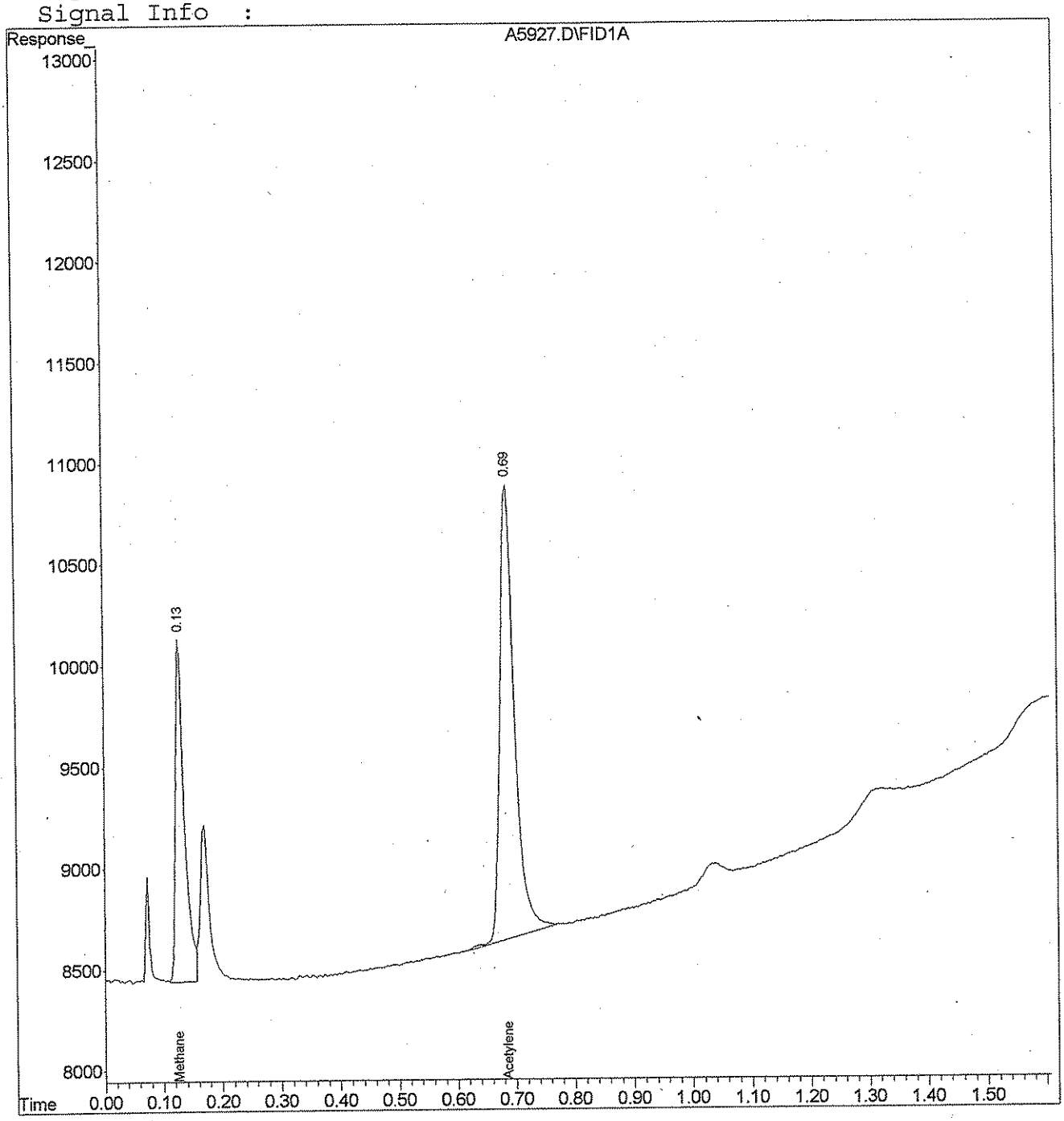
Authorized signature Melinda A Kulli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060603-A\A5927.D Vial: 100
Acq On : 7 Jun 2003 1:44 am Operator:
Sample : 49794-21D,N,QA060603,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 7 1:47 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW30-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-22
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 80 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

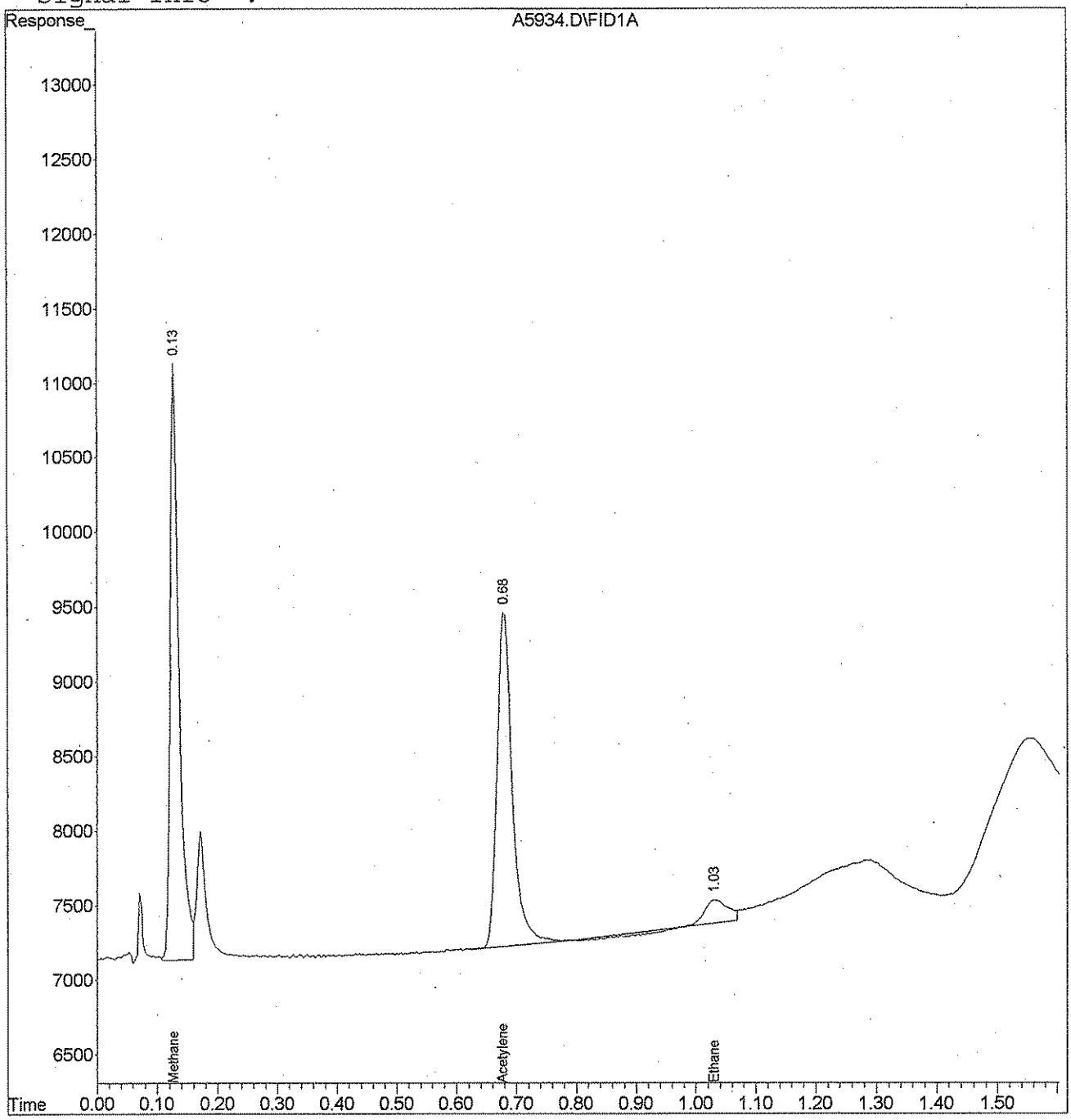
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5934.D Vial: 100
Acq On : 9 Jun 2003 9:35 pm Operator:
Sample : 49794-22D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 21:39 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW09-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-23
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 78 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

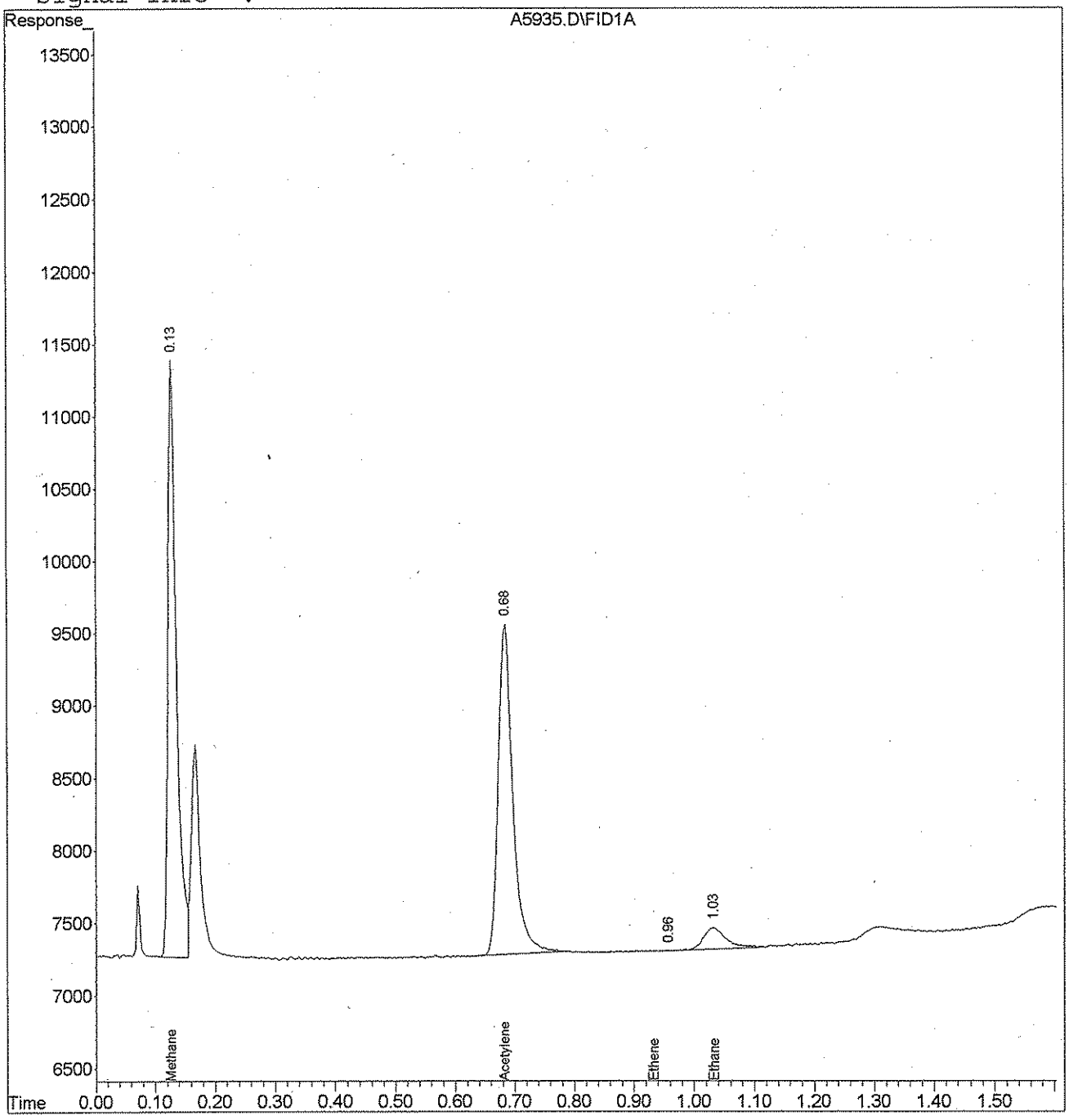
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5935.D Vial: 100
Acq On : 9 Jun 2003 9:39 pm Operator:
Sample : 49794-23D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 21:48 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-A

**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-24
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 72 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

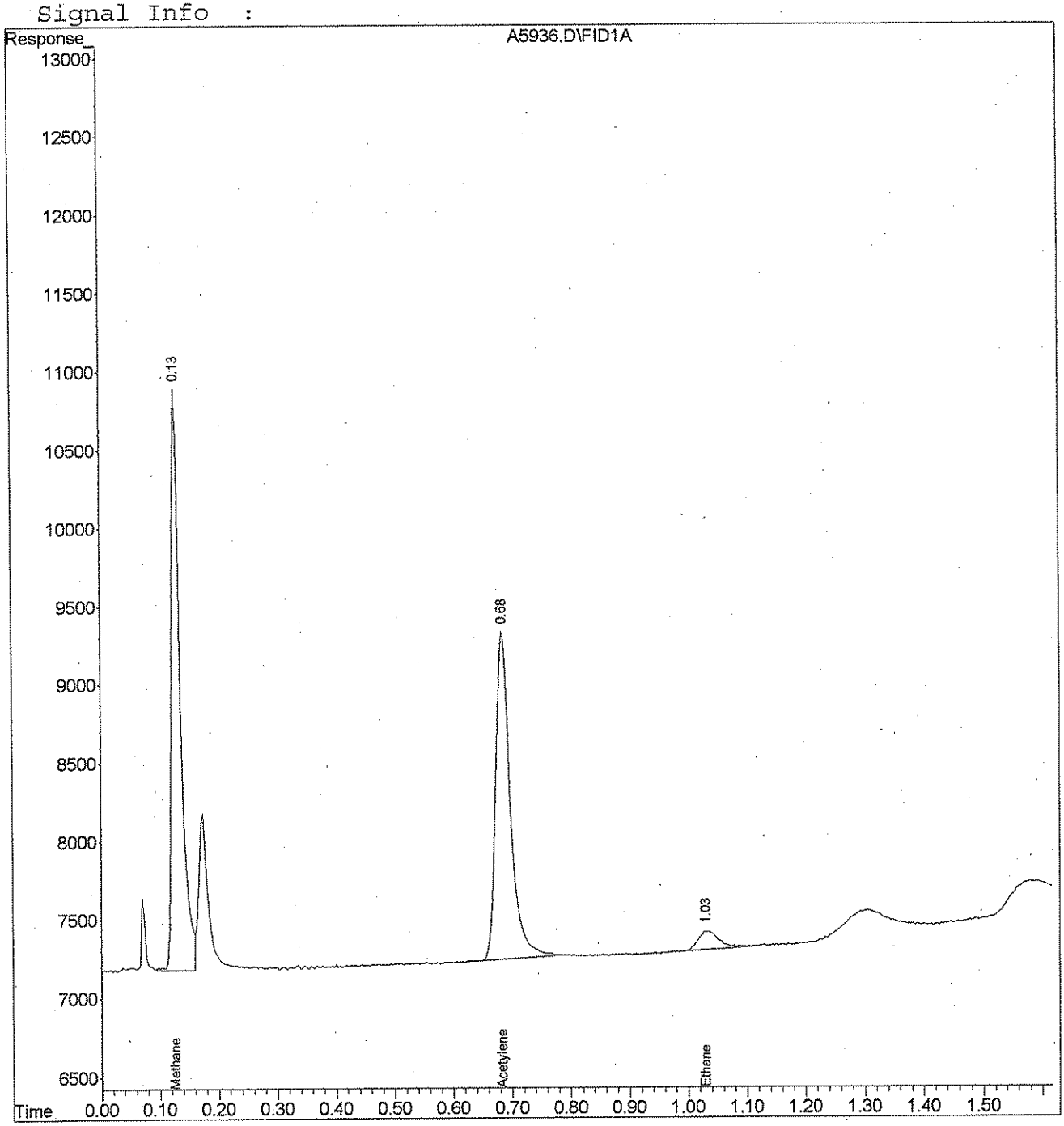
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5936.D Vial: 100
Acq On : 9 Jun 2003 9:49 pm Operator:
Sample : 49794-24D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 21:52 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** DW04-0603-01-B

**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-25
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 68 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

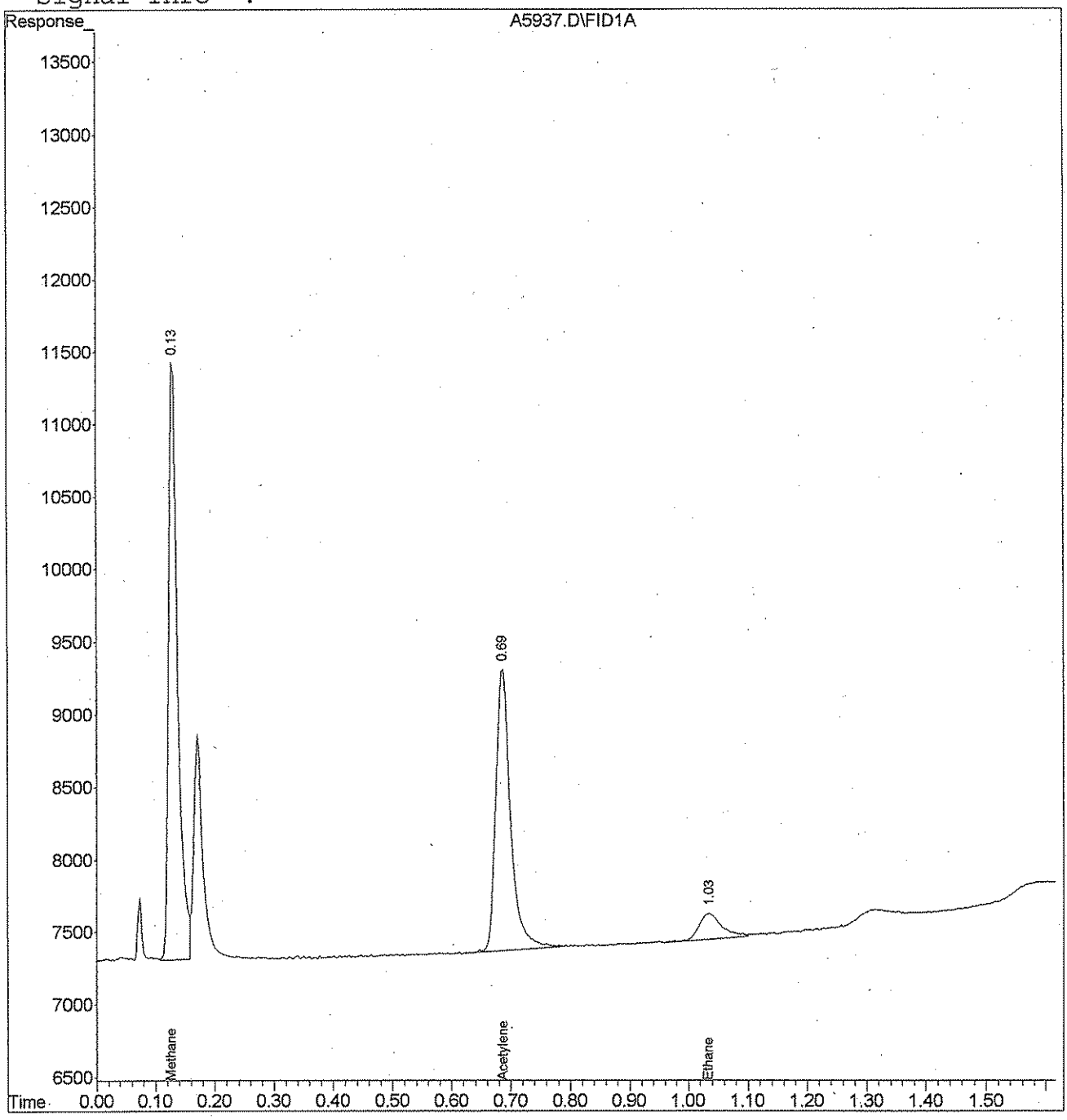
Authorized signature Melissa A Nulli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5937.D Vial: 100
Acq On : 9 Jun 2003 9:53 pm Operator:
Sample : 49794-25D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 21:59 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW08-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-27
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 70 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

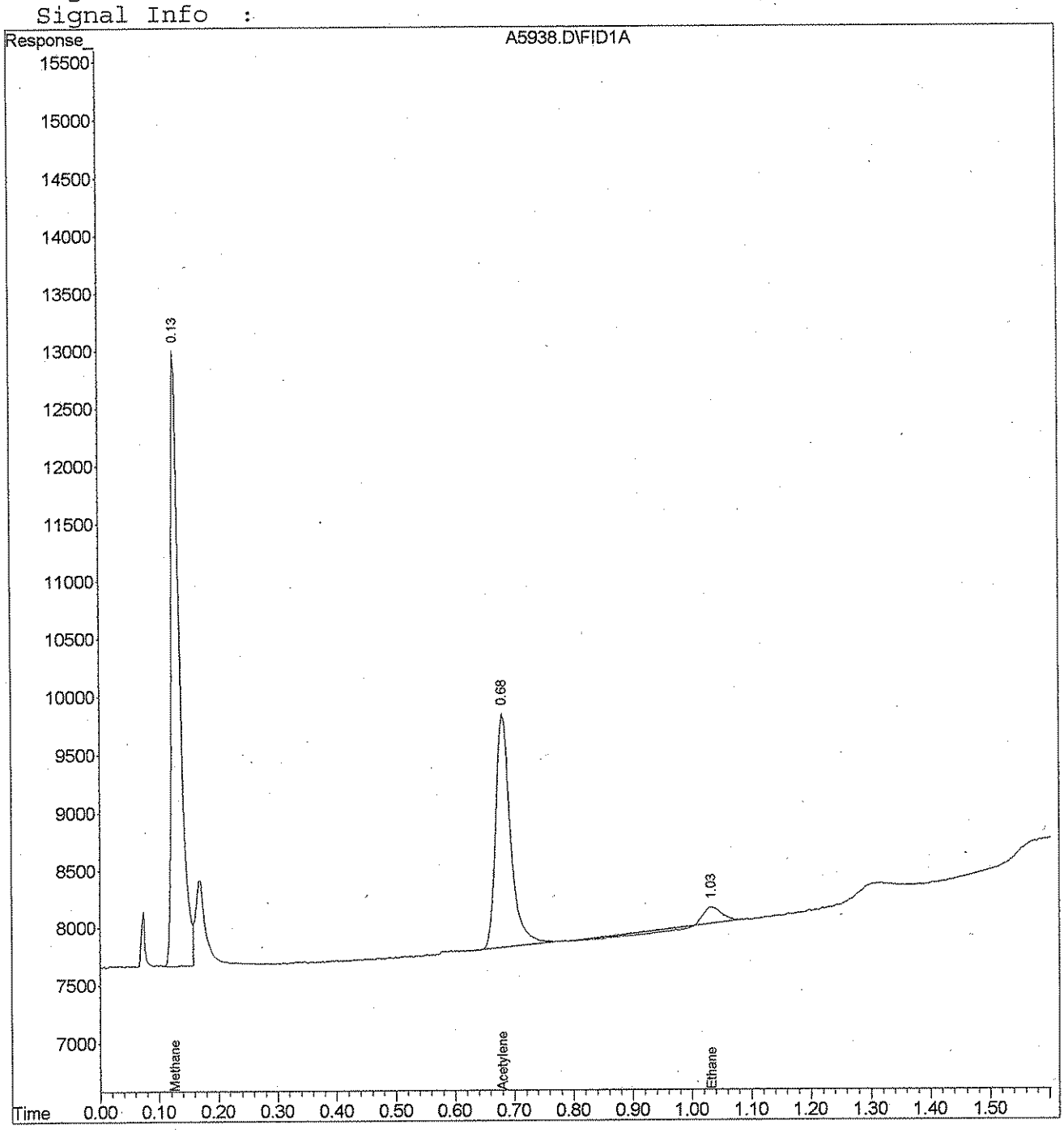
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5938.D Vial: 100
Acq On : 9 Jun 2003 9:59 pm Operator:
Sample : 49794-27D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:03 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW07-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-28
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 66 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

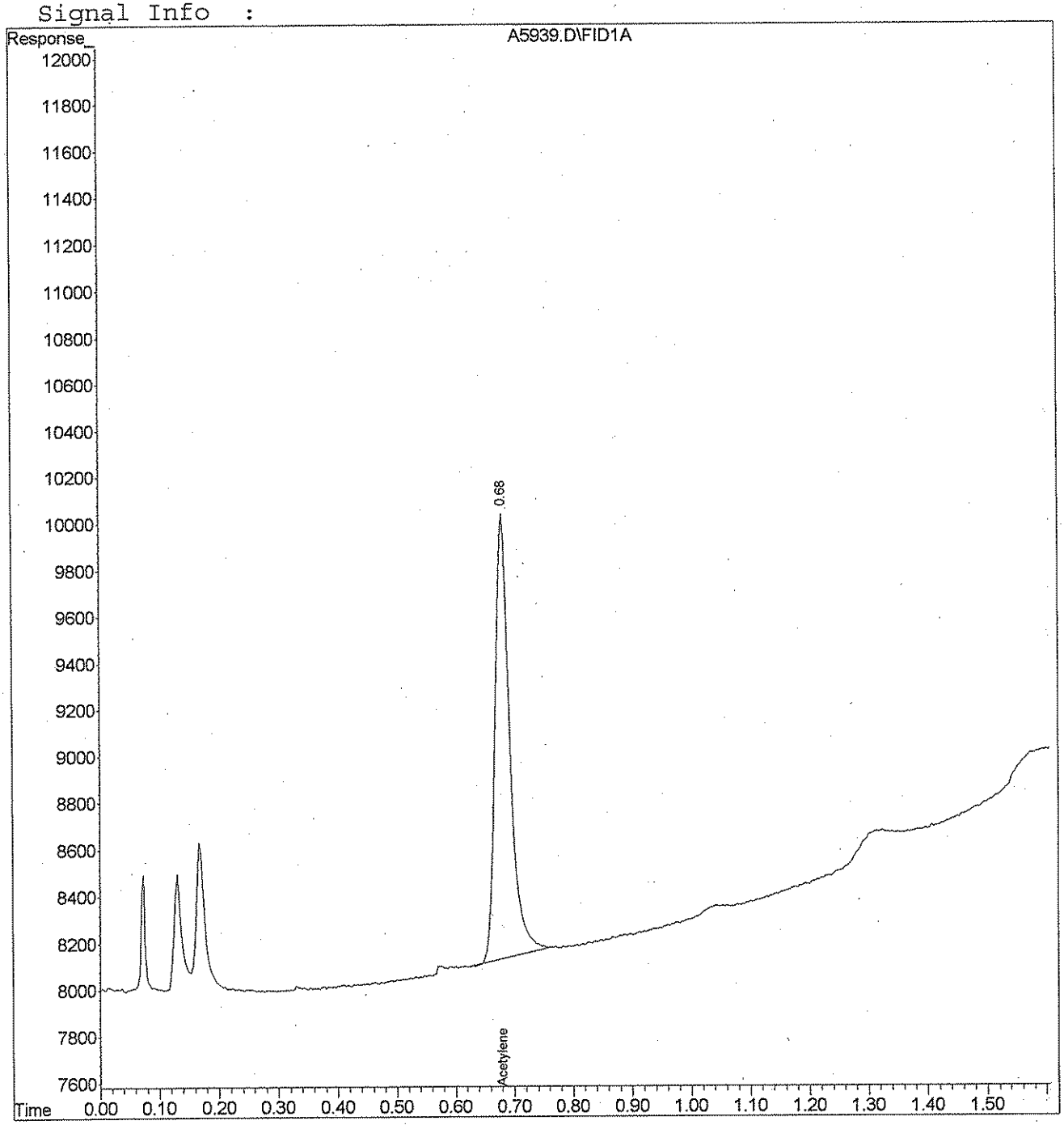
Authorized signature Melissa Hale

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5939.D Vial: 100
Acq On : 9 Jun 2003 10:04 pm Operator:
Sample : 49794-28D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:08 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW34-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-29
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 70 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

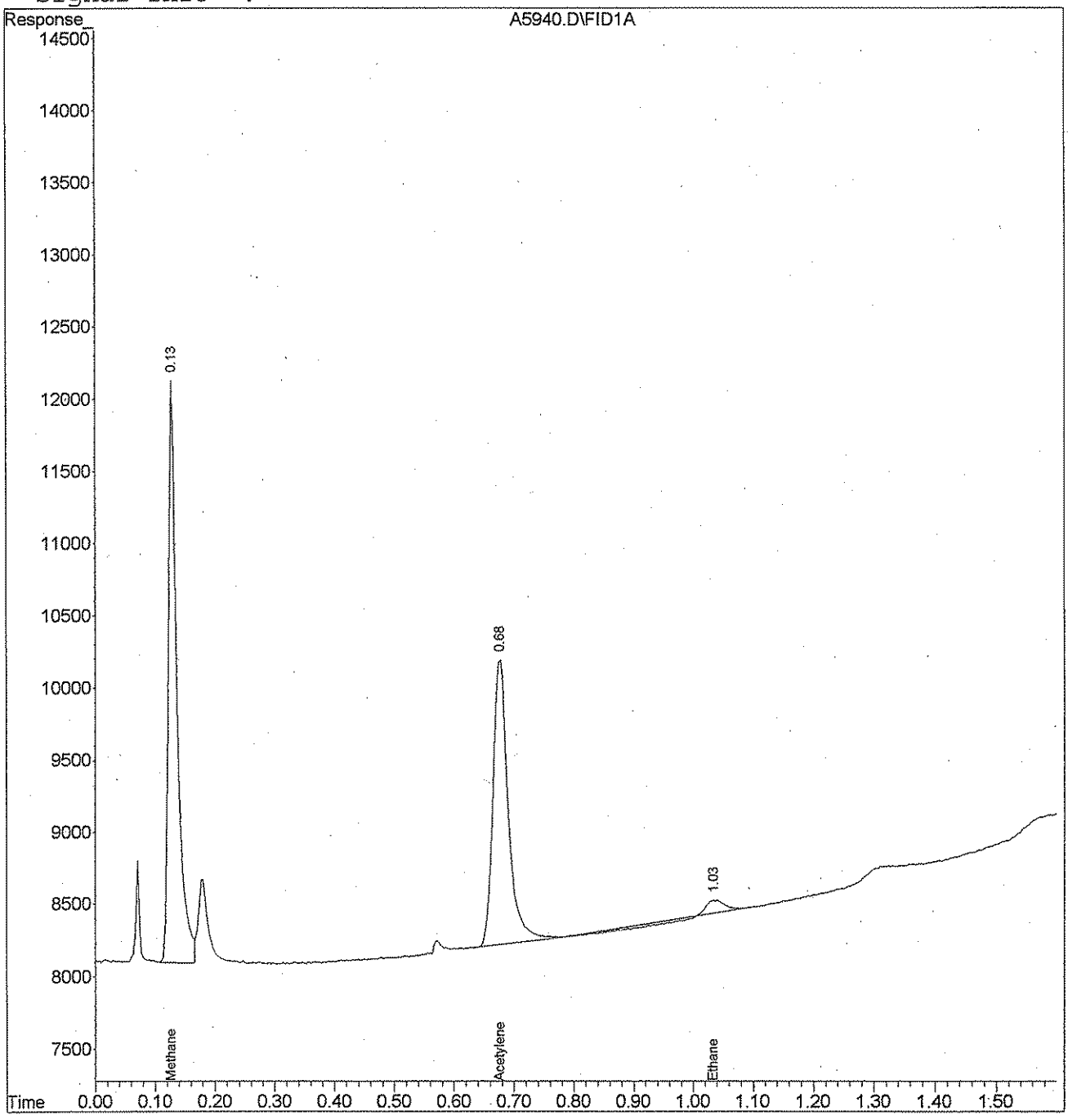
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5940.D Vial: 100
Acq On : 9 Jun 2003 10:08 pm Operator:
Sample : 49794-29D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:13 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW05-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-30
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 67 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

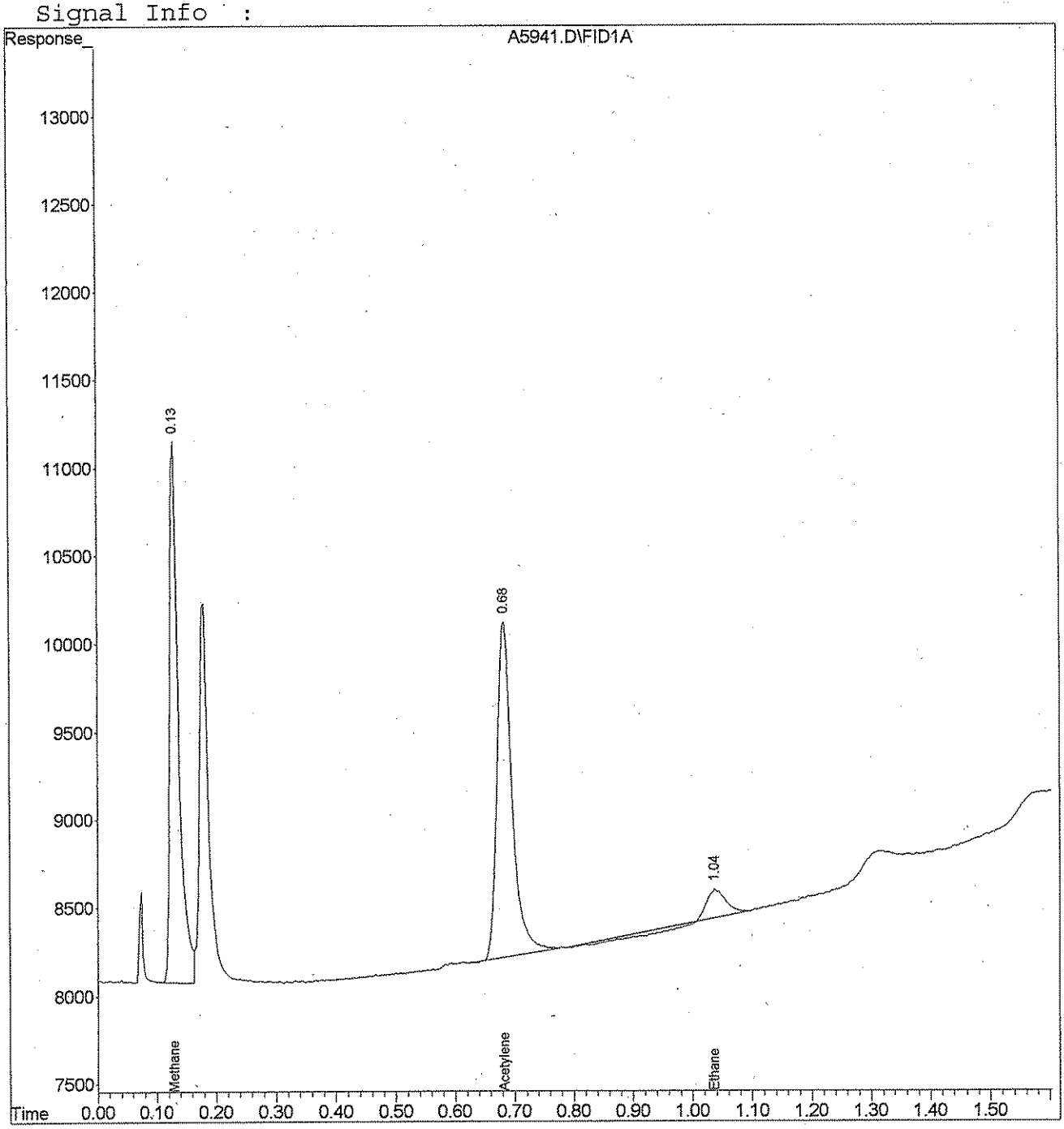
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5941.D Vial: 100
Acq On : 9 Jun 2003 10:13 pm Operator:
Sample : 49794-30D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:16 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW03-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-31
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 68 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

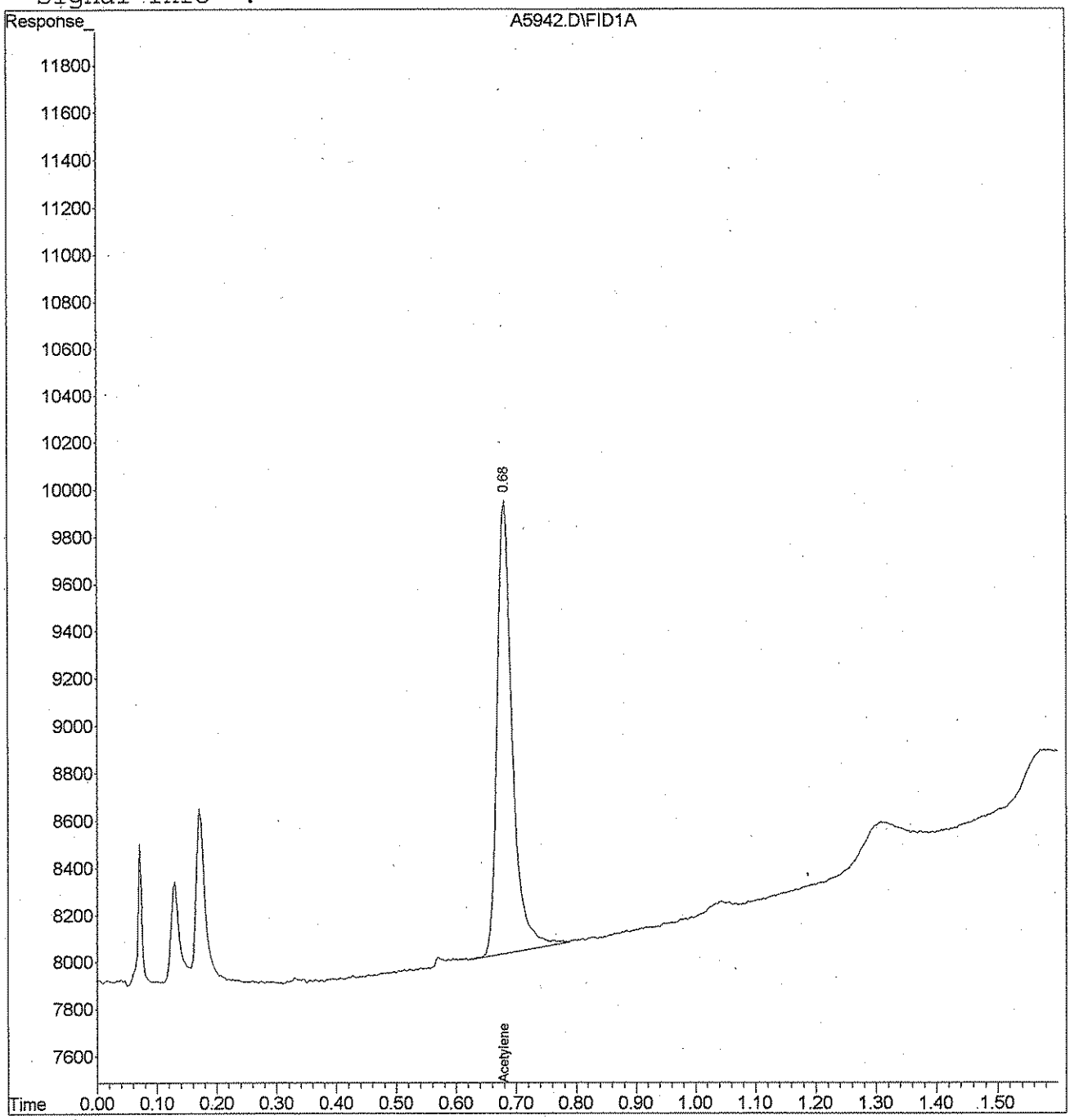
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5942.D Vial: 100
Acq On : 9 Jun 2003 10:21 pm Operator:
Sample : 49794-31D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:41 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW03-0603-01-B
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-32
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 86 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

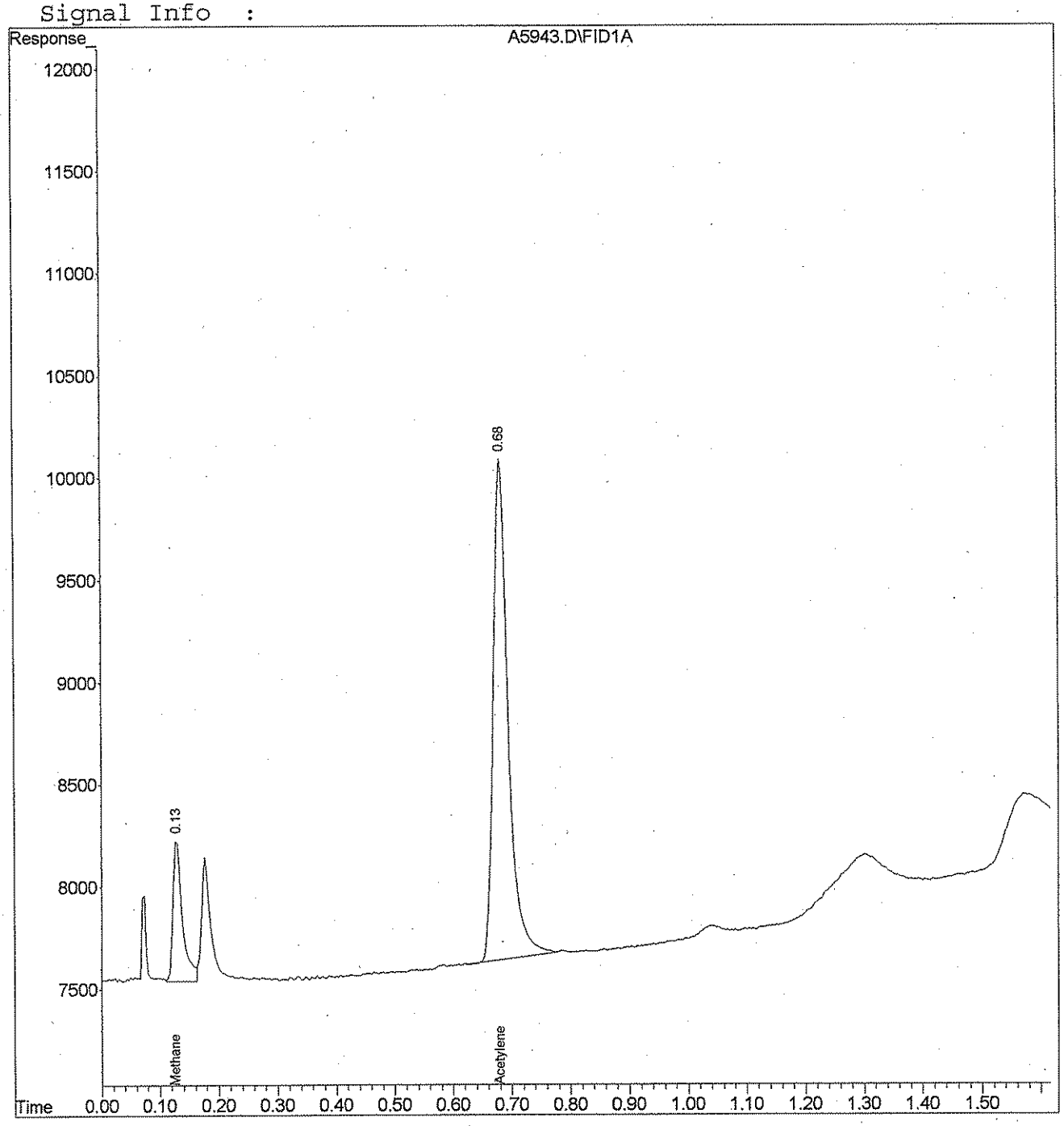
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5943.D Vial: 100
Acq On : 9 Jun 2003 10:36 pm Operator:
Sample : 49794-32D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 22:41 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW13-0603-02-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-35
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 68 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

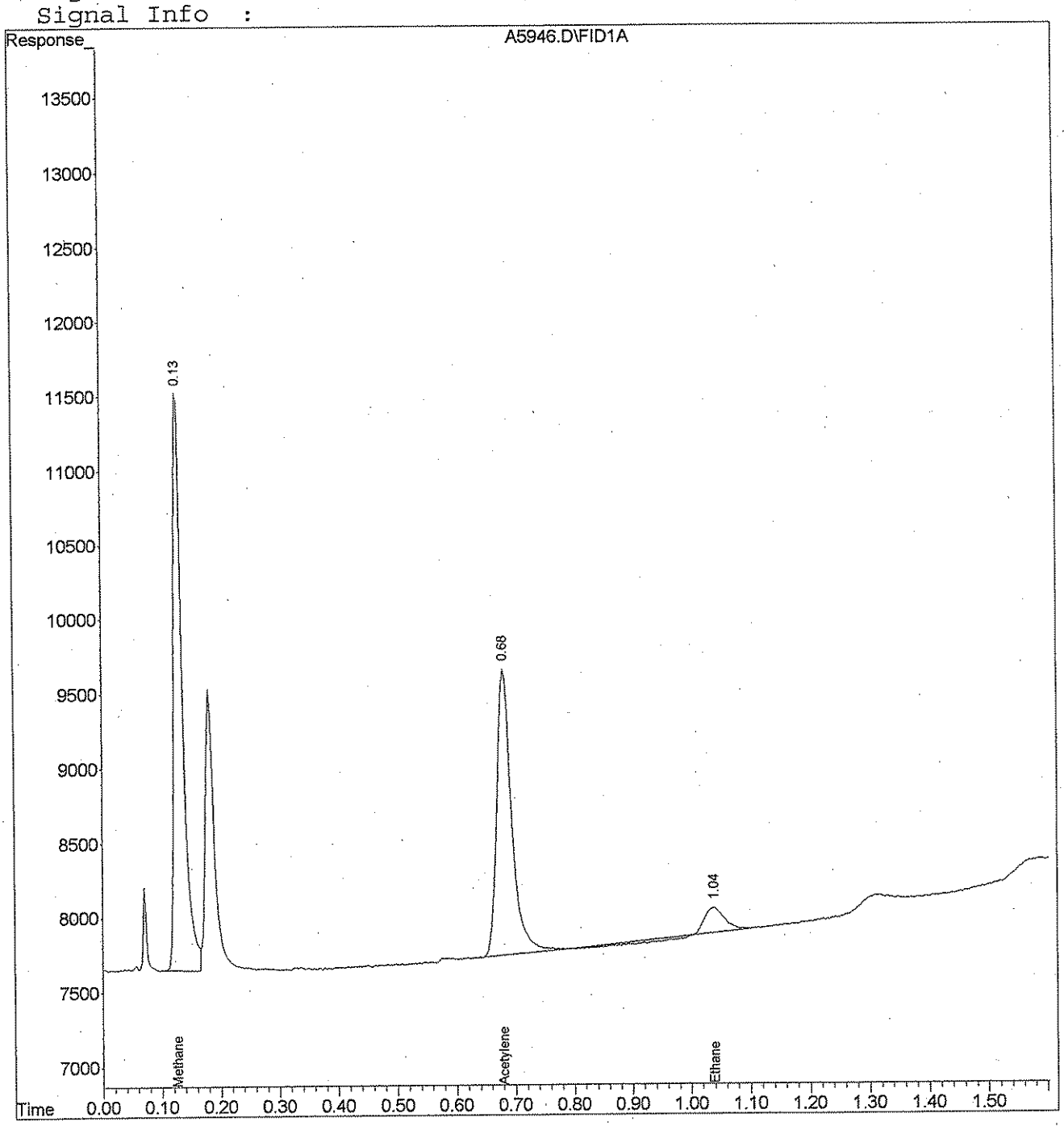
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5946.D Vial: 100
Acq On : 9 Jun 2003 11:00 pm Operator:
Sample : 49794-35D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 23:04 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW38-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-36
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 70 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

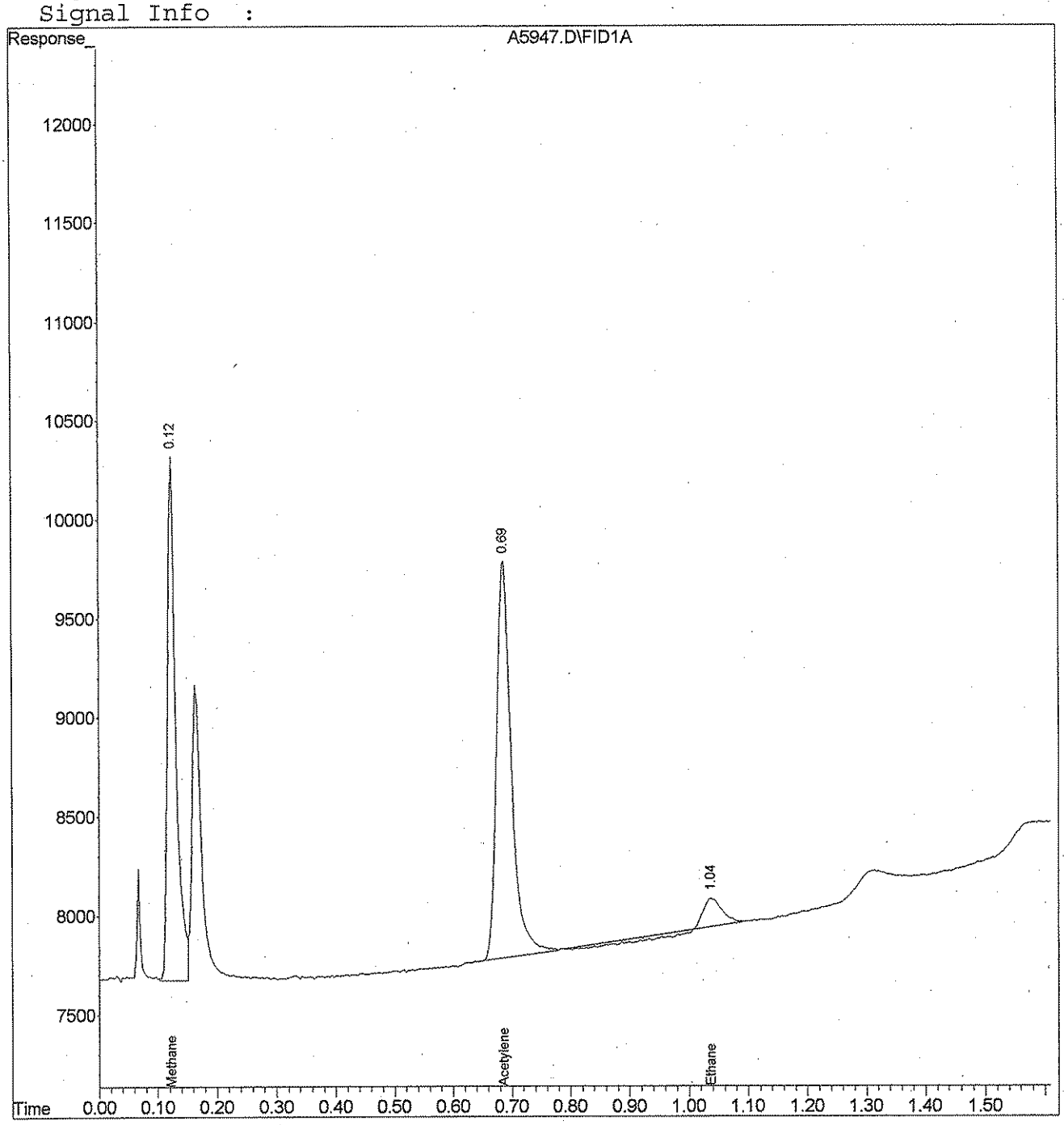
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060903-A\A5947.D Vial: 100
Acq On : 9 Jun 2003 11:05 pm Operator:
Sample : 49794-36D,N,QA060803,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 9 23:07 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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# ETHENE/ETHANE AQUEOUS
# SYSTEM MONITORING COMPOUND
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06063M | 102 | 0 |
| 02 | L06063M | 78 | 0 |
| 03 | 49794-1 | 80 | 0 |
| 04 | 49794-2 | 76 | 0 |
| 05 | 49794-3 | 74 | 0 |
| 06 | 49794-4 | 67 | 0 |
| 07 | 49794-5 | 66 | 0 |
| 08 | 49794-6 | 66 | 0 |
| 09 | 49794-7 | 93 | 0 |
| 10 | 49794-8 | 63 | 0 |
| 11 | 49794-9 | 67 | 0 |
| 12 | 49794-10 | 85 | 0 |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

QC LIMITS

SMC1 = Acetylene 60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# ETHENE/ETHANE AQUEOUS
# SYSTEM MONITORING COMPOUND
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06063M2 | 102 | 0 |
| 02 | 49794-11 | 72 | 0 |
| 03 | 49794-14 | 73 | 0 |
| 04 | 49794-15 | 69 | 0 |
| 05 | 49794-16 | 71 | 0 |
| 06 | 49794-17 | 69 | 0 |
| 07 | 49794-18 | 70 | 0 |
| 08 | 49794-19 | 79 | 0 |
| 09 | 49794-21 | 77 | 0 |
| 10 | 49794-21, MS | 73 | 0 |
| 11 | 49794-21, MSD | 70 | 0 |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Acetylene | 60-140% |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

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# ETHENE/ETHANE AQUEOUS SYSTEM MONITORING COMPOUND SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06093M | 86 | 0 |
| 02 | L06093M | 74 | 0 |
| 03 | 49794-22 | 80 | 0 |
| 04 | 49794-23 | 78 | 0 |
| 05 | 49794-24 | 72 | 0 |
| 06 | 49794-25 | 68 | 0 |
| 07 | 49794-27 | 70 | 0 |
| 08 | 49794-28 | 66 | 0 |
| 09 | 49794-29 | 70 | 0 |
| 10 | 49794-30 | 67 | 0 |
| 11 | 49794-31 | 68 | 0 |
| 12 | 49794-32 | 86 | 0 |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

QC LIMITS

SMC1 = Acetylene 60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# ETHENE/ETHANE AQUEOUS SYSTEM MONITORING COMPOUND SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06093M2 | 86 | 0 |
| 02 | 49794-35 | 68 | 0 |
| 03 | 49794-36 | 70 | 0 |
| 04 | 49794-30, MS | 62 | 0 |
| 05 | 49794-30, MSD | 62 | 0 |
| 06 | | | |
| 07 | | | |
| 08 | | | |
| 09 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

SMC1 = Acetylene

QC LIMITS
60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

195 Commerce Way
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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 11, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** L06063M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/06/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Result % |
|---|---|---|
| Ethene | 000-12-0 | **94** |
| Ethane | 74-84-0 | **98** |

**Surrogate Standard Recovery**

Acetylene 78 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

Authorized signature Melissa A Hall

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Manchester NH 03101-1501

June 11, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW24-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-21
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/03/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/07/03

## ETHENE, ETHANE MATRIX SPIKE RESULTS

| Compound | Sample Concentration (µg/L) | Spike Added (µg/L) | Matrix Spike Concentration (µg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|---|
| Ethene | U | 134 | 115 | 86 | | **60-140** |
| Ethane | U | 143 | 132 | 92 | | **60-140** |

| Compound | Matrix Spike Duplicate Concentration (µg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| Ethene | 124 | 93 | | 8 | | **30** | **60-140** |
| Ethane | 140 | 98 | | 6 | | **30** | **60-140** |

Authorized signature Melanie A Kelly

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Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** L06093M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/09/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Result % |
|---|---|---|
| Ethene | 000-12-0 | **98** |
| Ethane | 74-84-0 | **106** |

**Surrogate Standard Recovery**

Acetylene 74 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

Authorized signature Melissa A Kalli

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Manchester NH 03101-1501

June 11, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** DW05-0603-01-A
**SDG Number:** 49794

**SAMPLE DATA**

**Lab Sample ID:** 49794-30
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/04/03
**Analysis Date:** 06/09/03

## ETHENE, ETHANE MATRIX SPIKE RESULTS

| Compound | Sample Concentration (µg/L) | Spike Added (µg/L) | Matrix Spike Concentration (µg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|---|
| Ethene | U | 134 | 116 | 87 | | **60-140** |
| Ethane | U | 143 | 136 | 95 | | **60-140** |

| Compound | Matrix Spike Duplicate Concentration (µg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| Ethene | 106 | 79 | | 9 | | **30** | **60-140** |
| Ethane | 128 | 90 | | 6 | | **30** | **60-140** |

Authorized signature Melissa A Stull

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Std M027 x 6/11/03
SS M026 x 6/11/03
Spike M028 x 9/28/03

Date: 6/2/03

W-A-060203-1-AUR

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| MEE04173 | Std #4 | — | A5883SC | ↑CH4 ~~6/2/03~~ | N/A | AUR |
| ↓ | Std #4 | — | 84SC | ✓ Changed Lines | ↓ | ↓ |
| | B06023M | — | 85B | ↑SS RR | | |
| ↓ | B06023M | — | 86B | ↑SS re-cal | | |
| MEE06023 | Std #1 | — | 87SI | ✓ | | |
| | Std #2 | — | 88SI | ✓ | | |
| | Std #3 | — | 89SI | ✓ | | |
| | Std #4 | — | 90SI | ✓ | | |
| | Std #5 | — | 91SI | Not used | | |
| | Std #6 | — | 92SI | ✓ | | |
| | Std #7 | — | 93SI | ✓ | | |
| | B06023M | — | 94B | ✓ | | |
| | L06023M | — | 95Q | ✓ | ↓ | |
| | 49719-1D | — | 96 | ✓ | <2 | |
| | -2D | — | 97 | ✓ RR SS=60% | <2 | |
| | -3D | — | 98 | ✓ RR SS=65% | <2 | |
| | -1 ~~3~~ EMS | — | 99SP | ✓ | <2 | |
| | -1 ~~3~~ EMSD | — | A5900SP | ✓ | <2 | |
| | -2E | — | 01 | SS=66% Confirms | <2 | |
| | -3E | — | 02 | SS=65% ↓ | <2 | |
| ↓ | Std #4 | — | 03SC | ✓ SS=96% | N/A | ↓ |
| | | | | | | |
| | | | | | | |
| | | | AUR | | | |
| | | | 6/3/03 | | | |
| | | | | | | |

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Std M027 x 6/11/03
SS M026 x 6/11/03
Spike M028 x 9/28/03

Date: 6/06/03

W-A-060603-1-AER

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| RSK026023 | Std #4 | | A59045C | RP | N/A | AER |
| | Std #4 | | 05C | ✓ | | |
| | B0606M3 3M | | 06B | ✓ | | |
| | 060603M3 3M | | 07Q | ✓ OK Ethene/Ethane | | |
| | 49794-1D | | 08 | ✓ | <2 | |
| | -2D | | 09 | ✓ | <2 | |
| | -3D | | 10 | ✓ | <2 | |
| | -4D | | 11 | ✓ | <2 | |
| | -5D | | 12 | ✓ | <2 | |
| | -6D | | 13 | ✓ | <2 | |
| | -7D | | 14 | ✓ | <2 | |
| | -8D | | 15 | ✓ | <2 | |
| | -9D | | 16 | ✓ | <2 | |
| | -10D | | 17 | ✓ | <2 | |
| | Std #4 | | 18SC | ✓ OK Ethene/Ethane | N/A | |
| | B0606MS 3M2 | | 19B | ✓ | | |
| | 49794-11E | | 20 | ✓ | <2 | |
| | -14D | | 21 | ✓ | <2 | |
| | -15D | | 22 | ✓ | <2 | |
| | -16D | | 23 | ✓ | <2 | |
| | -17D | | 24 | ✓ | <2 | |
| | -18D | | 25 | ✓ | <2 | |
| | -19D | | 26 | ✓ | <2 | |
| | -21D | | 27 | ✓ | <2 | |
| | -21EMS | | 28SP | ✓ | <2 | |
| | -21EMSD | | 29SP | ✓ | <2 | |
| ✓ | Std #4 | | 30SC | OK Ethene/Ethane | N/A | ✓ |

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Std. MO27 x 6/11/03
SS MO26 x 6/11/03
Spike MO28 x 9/28/03

9 MR 6/9/03

Date: 6/8/03

W-A-060803-1AR

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| MEE06023 | Std #4 | — | A5931SC | ✓ ok Ethene/Ethane | N/A | AR |
| | B06093M | — | 32B | ✓ | ↓ | |
| | L06093M | — | 33Q | ✓ ok Ethene/Ethane | ↓ | |
| | 49794-22D | — | 34 | ✓ | <2 | |
| | -23D | — | 35 | ✓ | <2 | |
| | -24D | — | 36 | ✓ | <2 | |
| | -25D | — | 37 | ✓ | <2 | |
| | -27D | — | 38 | ✓ | <2 | |
| | -28D | — | 39 | ✓ | <2 | |
| | -29D | — | 40 | ✓ | <2 | |
| | -30D | — | 41 | ✓ | <2 | |
| | -31D | — | 42 | ✓ | <2 | |
| | -32D | — | 43 | ✓ | <2 | |
| | Std #4 | — | 44SC | ✓ | N/A | |
| | B06093M2 | — | 45B | ✓ | ↓ | |
| | 49794-35D | — | 46 | ✓ | <2 | |
| | -36D | — | 47 | ✓ | <2 | |
| | -30EMS | — | 48SP | ✓ | <2 | |
| | -30EMSD | — | 49SP | ✓ | <2 | |
| ↓ | Std #4 | — | 50SC | ✓ | N/A | ✓ |

AR 6/9/03

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

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# ETHANE, ETHENE
# INITIAL CALIBRATION DATA

Project #: 10971.217.002 Quote #: NA SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/2/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2219

| COMPOUND | RRF= 15.5 | RRF= 31 | RRF= 97 | RRF= 135 | RRF= 290 | RRF= 387 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|
| ACETYLENE | 3.72E+02 | 3.53E+02 | 4.22E+02 | 3.85E+02 | 3.28E+02 | 3.54E+02 | 3.69E+02 | 8.80 |
| ACETYLENE AREA | 5764 | 10932 | 40979 | 51994 | 95229 | 136954 | | |

| COMPOUND | RRF= 15.5 | RRF= 31 | RRF= 95 | RRF= 134 | RRF= 287 | RRF= 382 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|
| ETHENE | 4.39E+02 | 4.03E+02 | 4.70E+02 | 4.40E+02 | 3.95E+02 | 4.09E+02 | 4.26E+02 | 6.68 |
| ETHENE AREA | 6798 | 12489 | 44637 | 58931 | 113472 | 156121 | | |

| COMPOUND | RRF= 16.5 | RRF= 33 | RRF= 102 | RRF= 143 | RRF= 308 | RRF= 410 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|
| ETHANE | 4.20E+02 | 4.10E+02 | 4.48E+02 | 4.25E+02 | 3.82E+02 | 3.91E+02 | 4.13E+02 | 5.84 |
| ETHANE AREA | 6931 | 13518 | 45721 | 60770 | 117553 | 160356 | | |
| FILE # | A5887SI.D | A5888SI.D | A5889SI.D | A5890SI.D | A5892SI.D | A5893SI.D | | |

*Compounds must have a %RSD of ≤30% or correlation coefficient of 0.995 or greater.

Comments: _____

Response Factor Report Instr. A

Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:21:46 2003

6-3-03

6/3/03

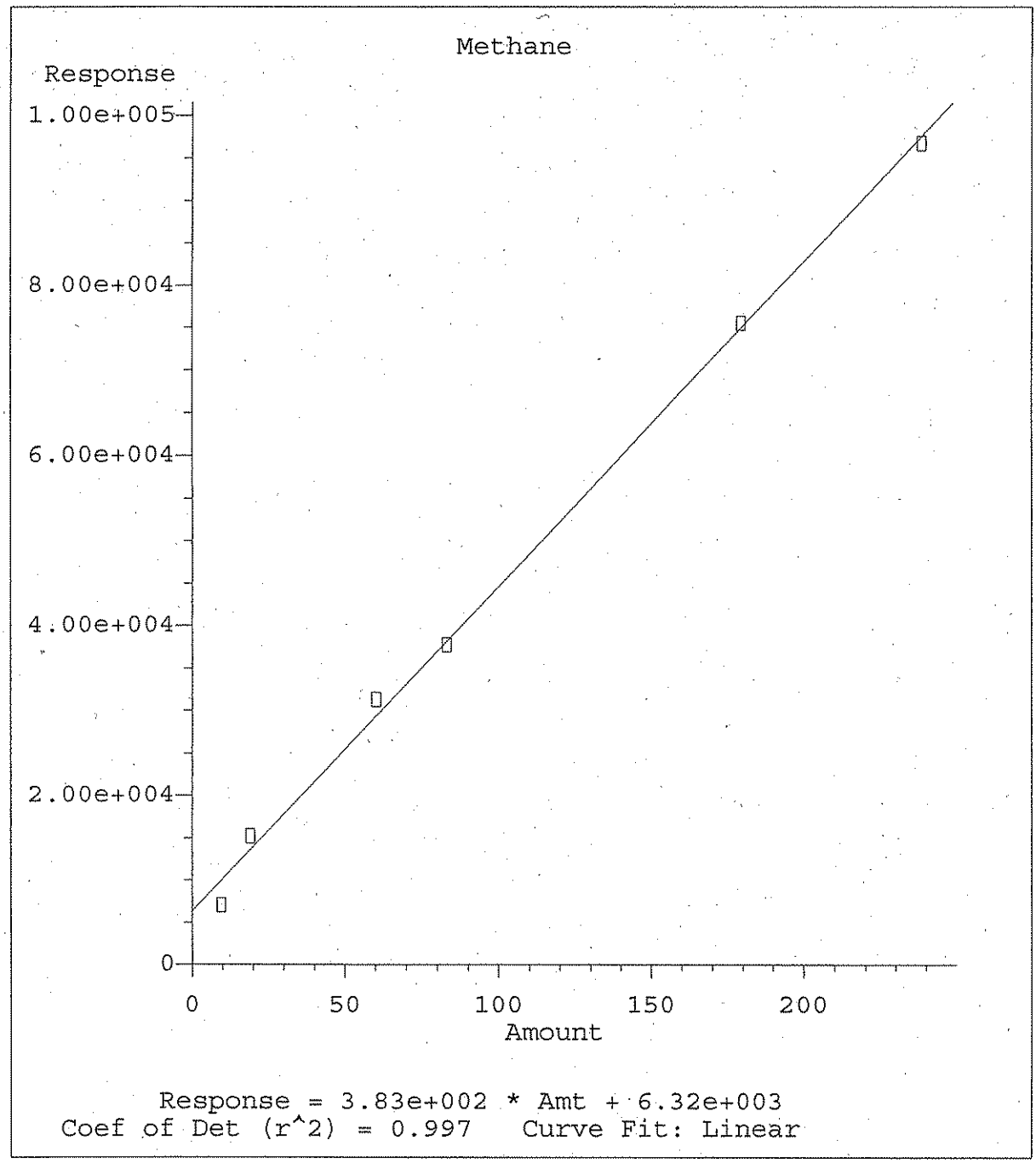
Calibration Files
1 =A5887SI.D 2 =A5888SI.D 3 =A5889SI.D
4 =A5890SI.D 5 =A5891SI.D 6 =A5892SI.D

| | | Compound | 1 | 2 | 3 | 4 | 5 | 6 | Avg | | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | TM | Methane linear | 7.372 | 8.018 | 5.215 | 4.542 | 4.219 | 5.572 | E2 | | 30. |
| 2) | S | Acetylene | 3.719 | 3.526 | 4.225 | 3.851 | 3.284 | 3.691 | E2 | | 8. |
| 3) | TM | Ethene | 4.386 | 4.029 | 4.699 | 4.398 | 3.954 | 4.259 | E2 | | 6. |
| 4) | TM | Ethane | 4.201 | 4.096 | 4.482 | 4.250 | 3.817 | 4.126 | E2 | | 5. |

(#) = Out of Range ### Number of calibration levels exceeded format ###



000349




Method Name: C:\HPCHEM\1\METHODS\MEE06023.M
Calibration Table Last Updated: Mon Jun 02 23:21:02 2003

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5887SI.D Vial: 100
Acq On : 2 Jun 2003 10:19 pm Operator:
Sample : STD #1,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 22:38 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Fri Apr 18 00:17:21 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6.7.07

6/3/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 5764 | 26.677 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 19.76%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 7004 | N.D. UG/L |
| 3) TM Ethene | 0.82 | 6798 | 17.477 UG/L |
| 4) TM Ethane | 0.97 | 6931 | 17.129 UG/L |

090351

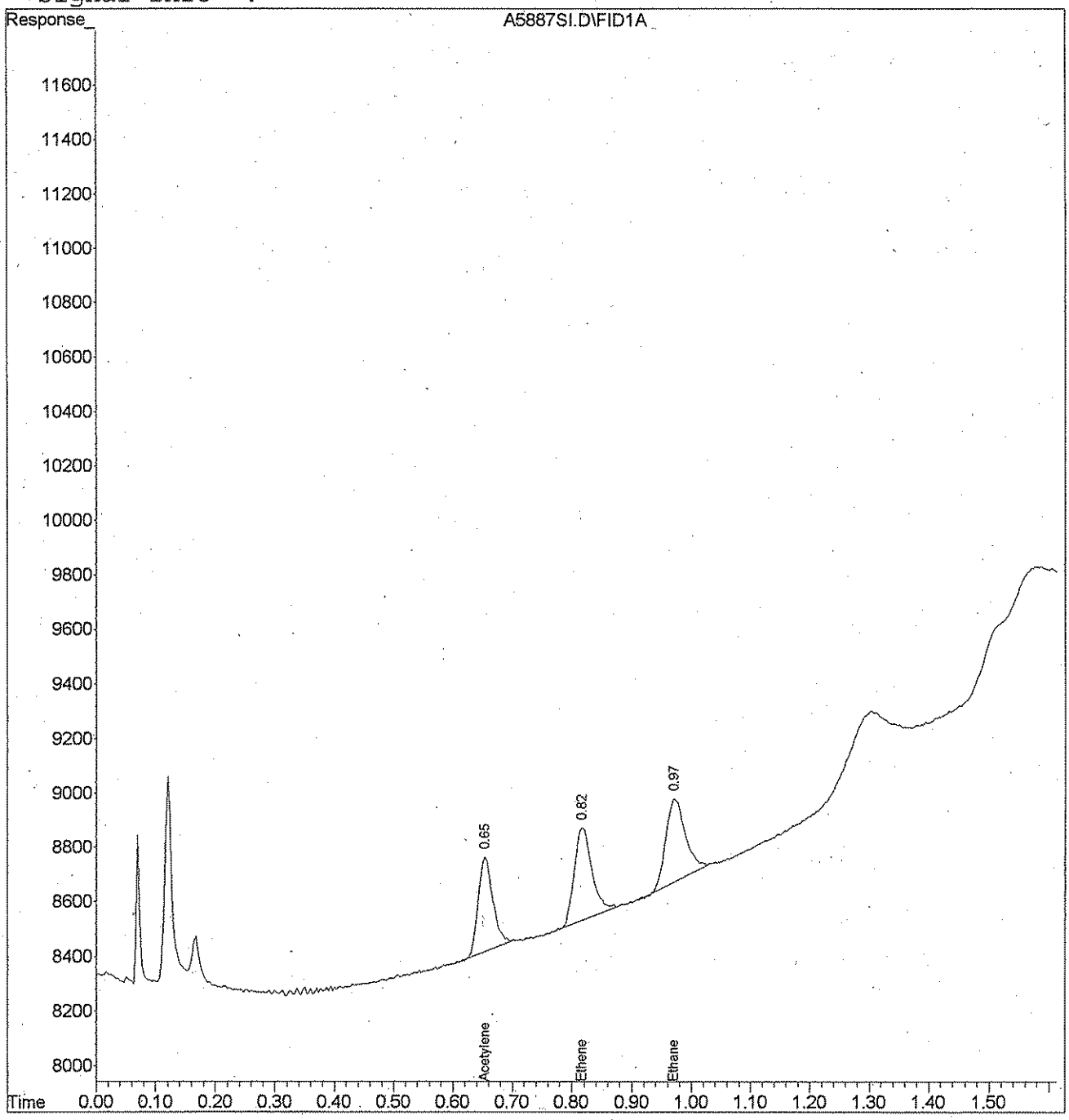
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5887SI.D Vial: 100
Acq On : 2 Jun 2003 10:19 pm Operator:
Sample : STD #1,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 22:38 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Fri Apr 18 00:17:21 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





000352

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5888SI.D Vial: 100
Acq On : 2 Jun 2003 10:27 pm Operator:
Sample : STD #2,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 22:38 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Fri Apr 18 00:17:21 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :

6.7.07

6/3/03

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 10932 | 50.591 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 37.47%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 15235 | 17.789 UG/L |
| 3) TM Ethene | 0.82 | 12489 | 32.108 UG/L |
| 4) TM Ethane | 0.97 | 13518 | 33.407 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



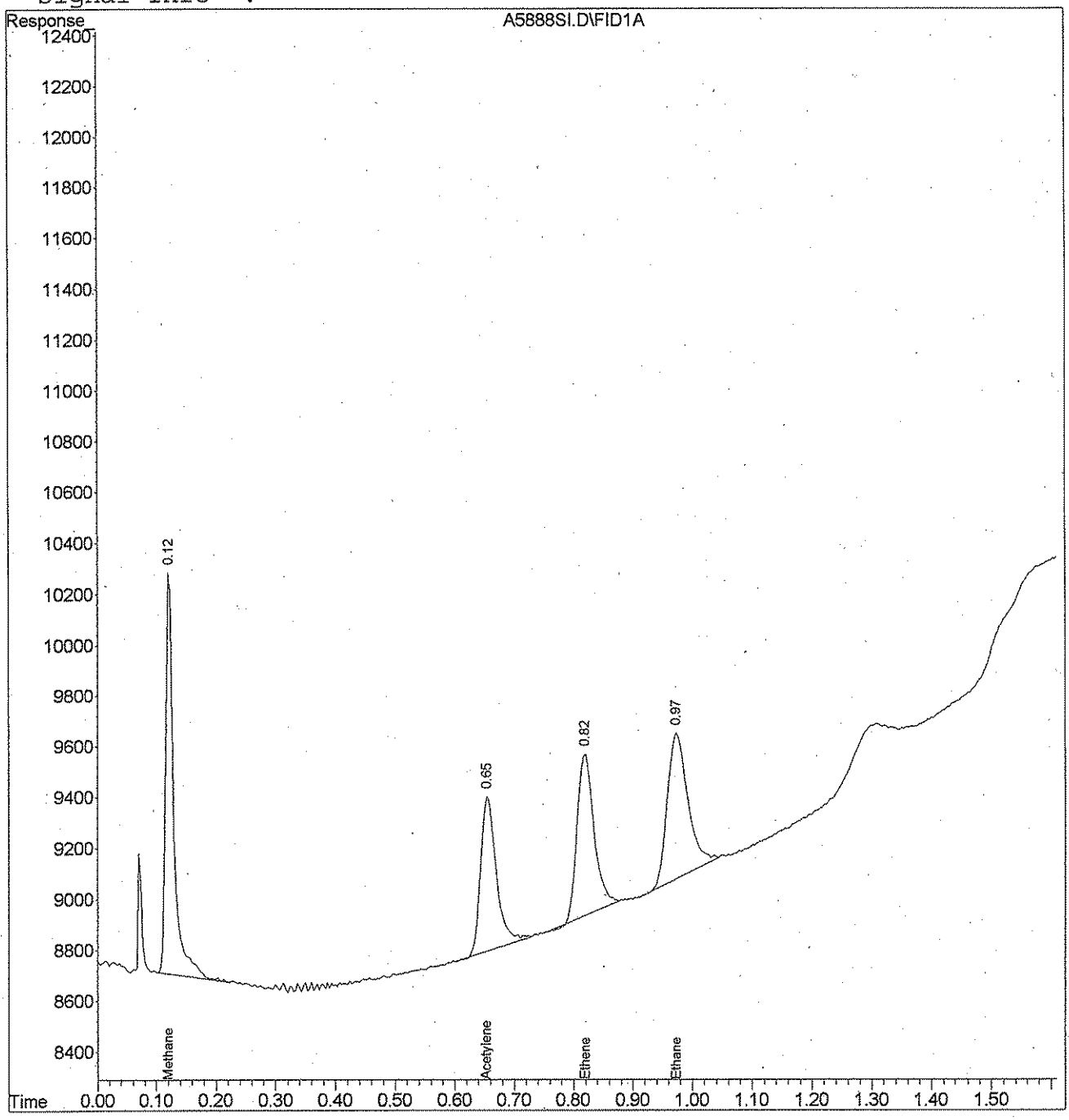
000353

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5888SI.D Vial: 100
Acq On : 2 Jun 2003 10:27 pm Operator:
Sample : STD #2,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 22:38 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Fri Apr 18 00:17:21 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000354

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5889SI.D Vial: 100
Acq On : 2 Jun 2003 10:35 pm Operator:
Sample : STD #3,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6-3-03

6/3/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 40979 | 111.524 UG/L |
| Spiked Amount 135.000 | Range 60 - 140 | Recovery = | 82.61% |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 31289 | 65.140 UG/L |
| 3) TM Ethene | 0.82 | 44637 | 105.949 UG/L |
| 4) TM Ethane | 0.97 | 45721 | 111.804 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



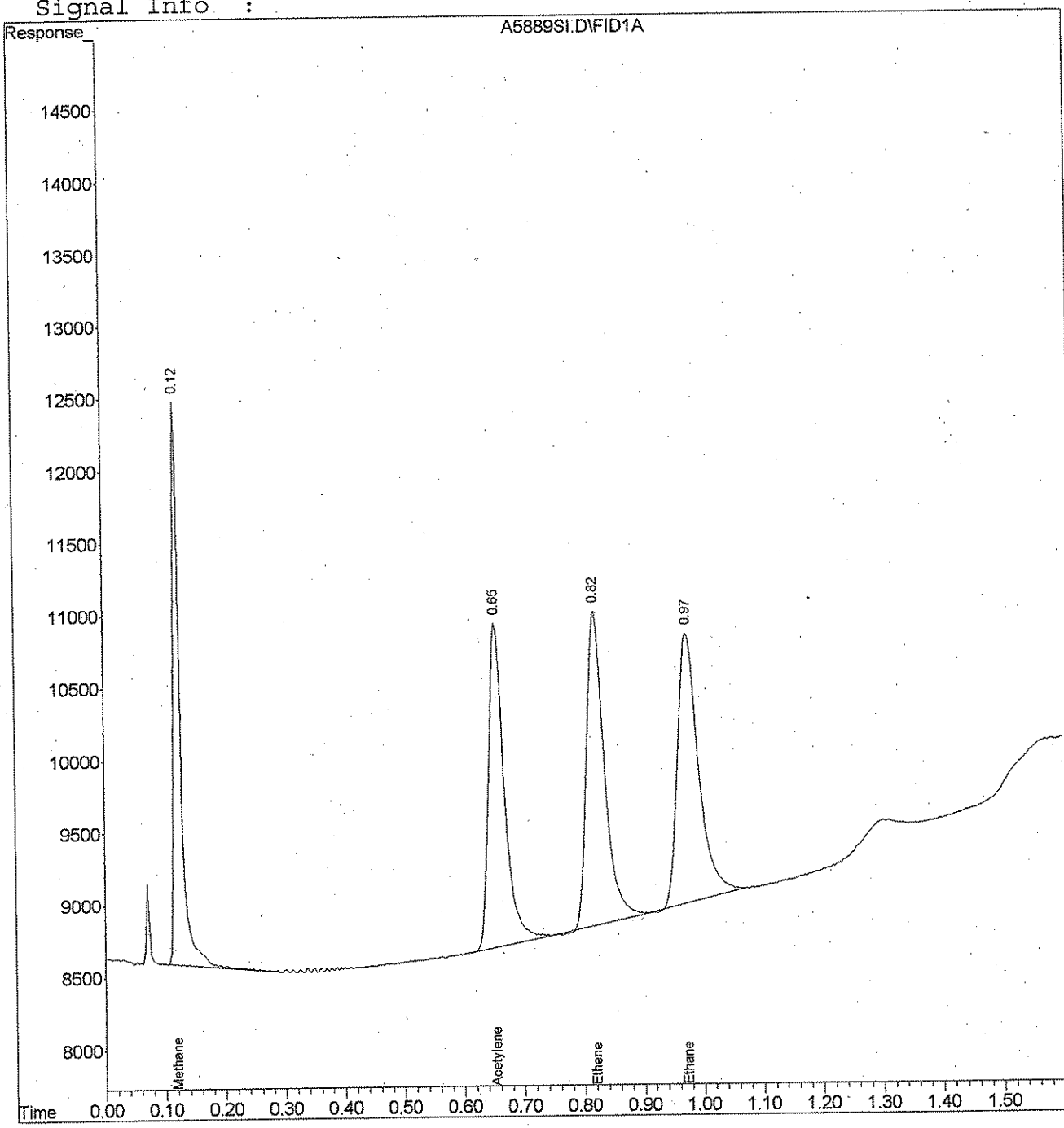
000355

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5889SI.D Vial: 100
Acq On : 2 Jun 2003 10:35 pm Operator:
Sample : STD #3,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000356

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5890SI.D Vial: 100
Acq On : 2 Jun 2003 10:42 pm Operator:
Sample : STD #4,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6-3-03 6/3/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 51994 | 141.500 UG/L |
| Spiked Amount 135.000 | Range 60 - 140 | Recovery = 104.81% | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 37701 | 81.869 UG/L |
| 3) TM Ethene | 0.82 | 58931 | 139.877 UG/L |
| 4) TM Ethane | 0.98 | 60770 | 148.604 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



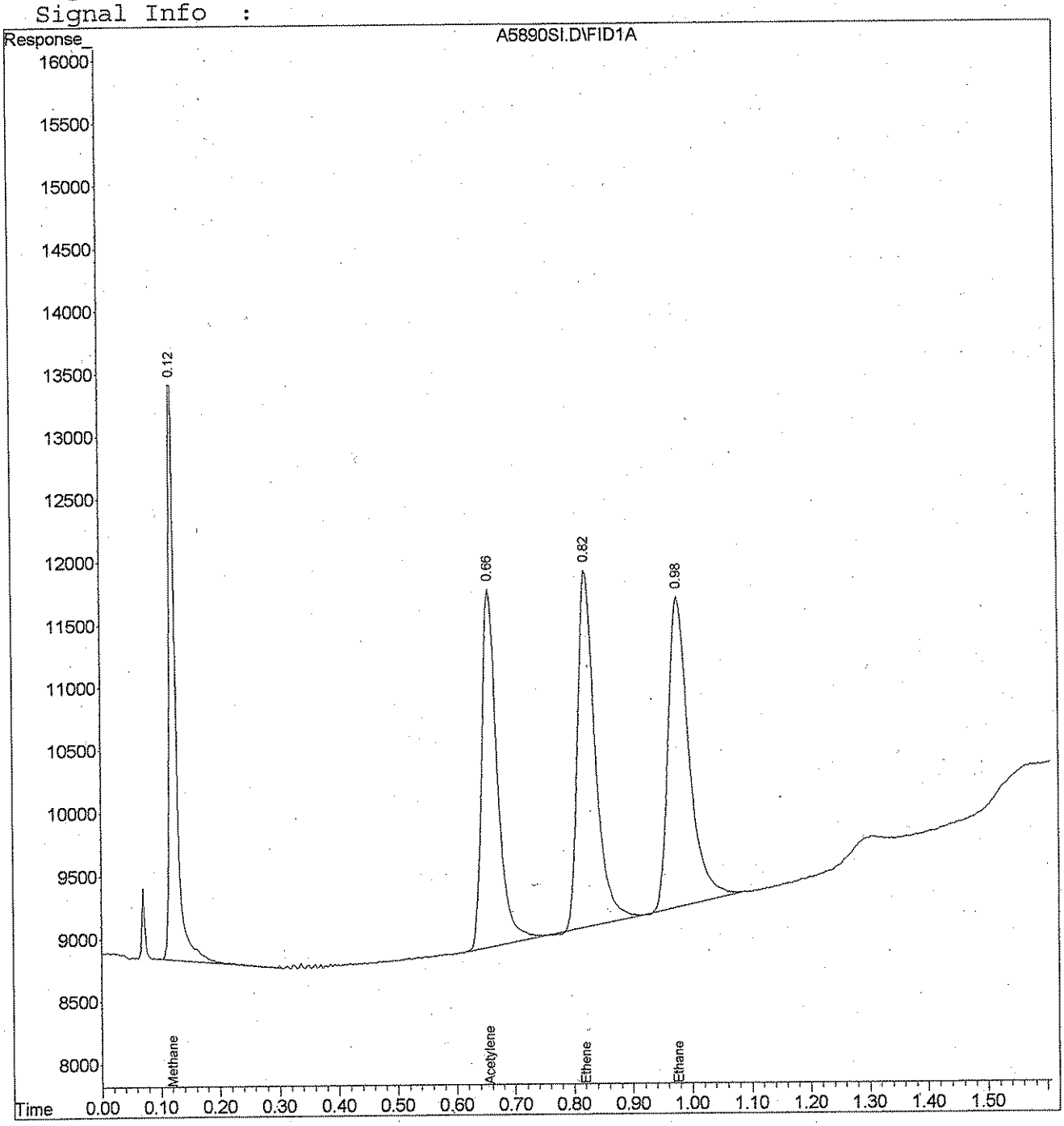
000357

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5890SI.D Vial: 100
Acq On : 2 Jun 2003 10:42 pm Operator:
Sample : STD #4,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000358

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5892SI.D Vial: 100
Acq On : 2 Jun 2003 11:02 pm Operator:
Sample : STD #6,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :

6.2.03

6/3/03

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 95229 | 259.163 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 191.97%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 75523 | 180.539 UG/L |
| 3) TM Ethene | 0.83 | 113472 | 269.335 UG/L |
| 4) TM Ethane | 0.98 | 117553 | 287.455 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



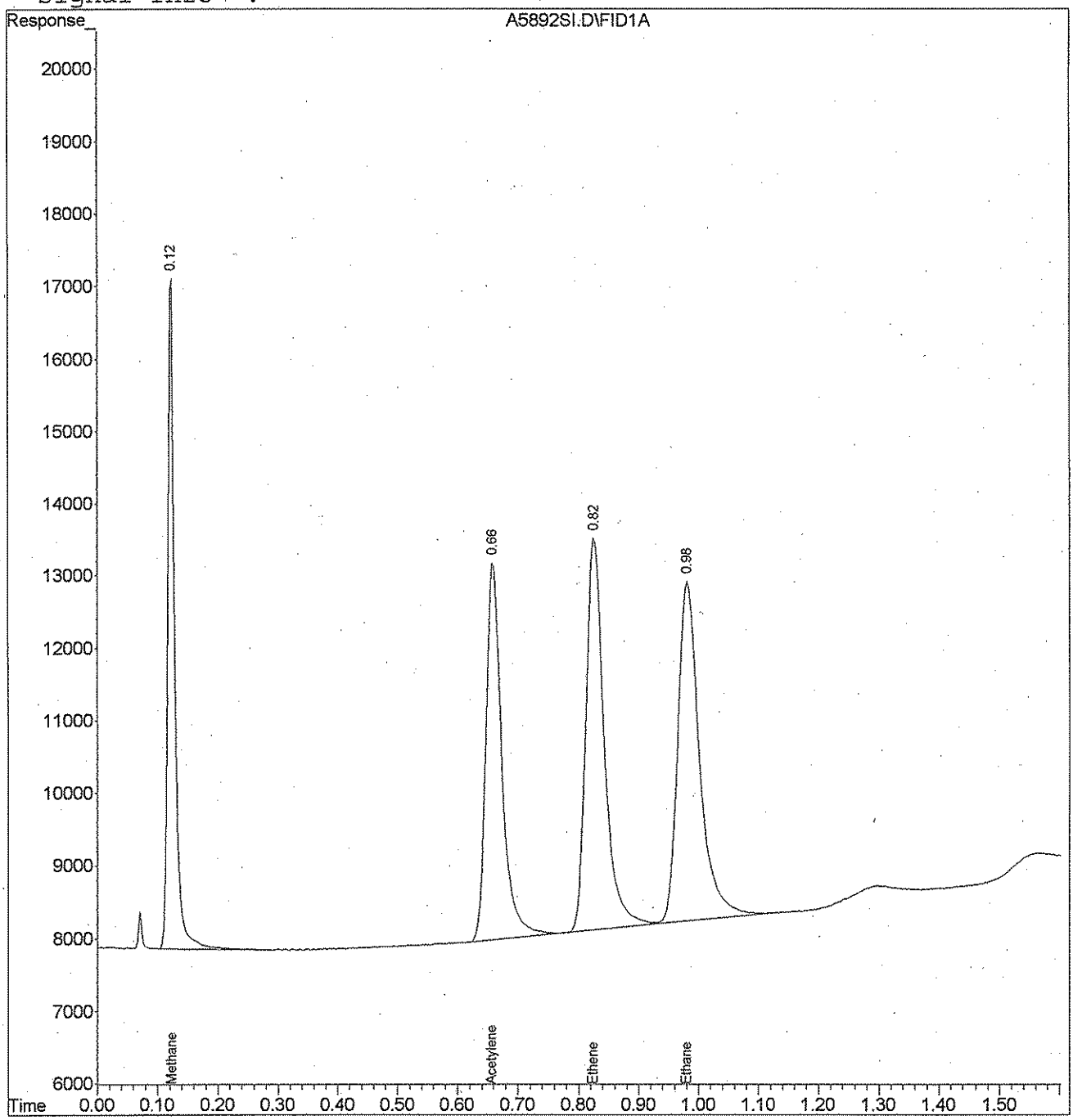
000359

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5892SI.D Vial: 100
Acq On : 2 Jun 2003 11:02 pm Operator:
Sample : STD #6,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000360

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5893SI.D Vial: 100
Acq On : 2 Jun 2003 11:10 pm Operator:
Sample : STD #7,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6-3-03 6/3/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.66 | 136954 | 372.718 UG/L |
| Spiked Amount 135.000 | Range 60 - 140 | Recovery = 276.09%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 96747 | 235.909 UG/L |
| 3) TM Ethene | 0.83 | 156121 | 370.565 UG/L |
| 4) TM Ethane | 0.98 | 160356 | 392.123 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



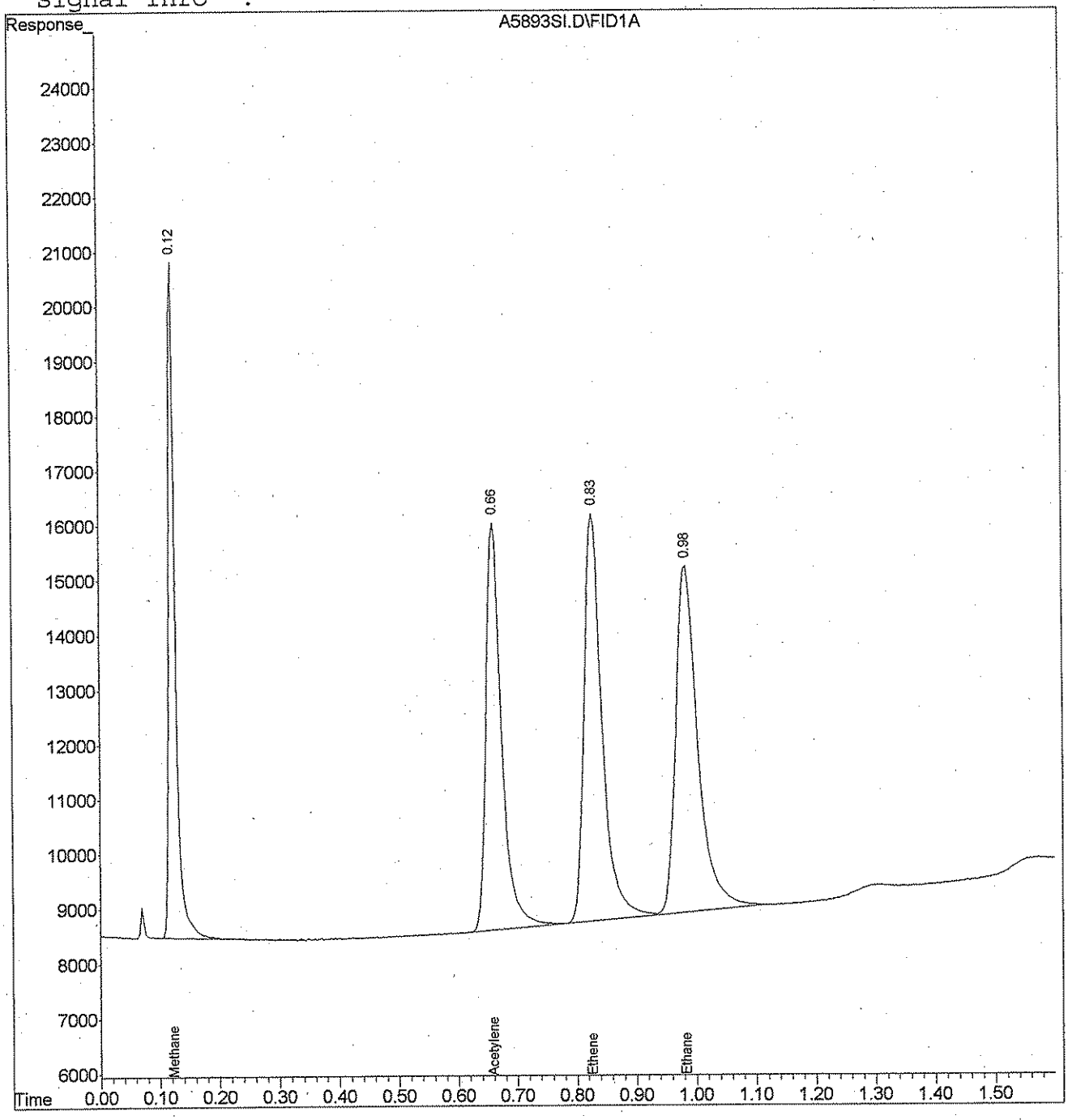
000361

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\060203-A\A5893SI.D Vial: 100
Acq On : 2 Jun 2003 11:10 pm Operator:
Sample : STD #7,N,QA060203,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 2 23:19 2003 Quant Results File: MEE06023.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06023.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 02 23:13:33 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





990362

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5905SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/6/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 2129

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 120 | 89 | 60-140 | 0 |
| Ethene | 134 | 136 | 102 | 70-130 | 0 |
| Ethane | 143 | 146 | 102 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5918SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/7/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0040

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 104 | 77 | 60-140 | 0 |
| Ethene | 134 | 134 | 100 | 70-130 | 0 |
| Ethane | 143 | 149 | 104 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5930SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/7/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0239

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 90 | 67 | 60-140 | 0 |
| Ethene | 134 | 127 | 95 | 70-130 | 0 |
| Ethane | 143 | 147 | 103 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5931SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/9/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 1946

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 113 | 83 | | 60-140 | 0 |
| Ethene | 134 | 112 | 84 | | 70-130 | 0 |
| Ethane | 143 | 119 | 83 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5944SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/9/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 2242

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 107 | 79 | | 60-140 | 0 |
| Ethene | 134 | 135 | 101 | | 70-130 | 0 |
| Ethane | 143 | 158 | 110 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49794

Lab File ID: A5950SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/9/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 2321

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 88 | 65 | 60-140 | 0 |
| Ethene | 134 | 120 | 90 | 70-130 | 0 |
| Ethane | 143 | 145 | 101 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHANE, ETHENE
## RETENTION TIME SUMMARY

Project #: 10971.217.002 Quote #: NA SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/2/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2321

Lab File IDs (Standards): A5889SI Date Analyzed: 6/2/03
A5903SC 6/3/03
A5905SC 6/6/03

| | | ETHENE RT | # | ETHANE RT | # |
|---|---|---|---|---|---|
| | | 0.82 | | 0.97 | |
| | | 0.84 | | 1.00 | |
| | | 0.85 | | 1.01 | |
| | UPPER LIMIT | 0.87 | | 1.04 | |
| | LOWER LIMIT | 0.80 | | 0.94 | |
| | SAMPLE NO. | | | | |
| 01 | L06063M | 0.86 | | 1.01 | |
| 02 | 49794-21, MS | 0.87 | | 1.03 | |
| 03 | 49794-21, MSD | 0.87 | | 1.03 | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
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| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| | | | | | |

RT UPPER LIMIT = + 3 std. dev. above the avg. RT
RT LOWER LIMIT = - 3 std. dev. below the avg. RT
Note: If std. dev. = 0.00 then a default window of 0.03 minutes is used

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Comments: _____

analytics environmental laboratory LLC

## ETHANE, ETHENE
## RETENTION TIME SUMMARY

Project #: 10971.217.002 Quote #: NA SDG#: 49794

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/2/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2321

Lab File IDs (Standards): A5631SC Date Analyzed: 6/9/03
A5903SC 6/3/03
A5905SC 6/6/03

| | | ETHENE RT | # | ETHANE RT | # |
|---|---|---|---|---|---|
| | | 0.87 | | 1.03 | |
| | | 0.84 | | 1.00 | |
| | | 0.85 | | 1.01 | |
| | UPPER LIMIT | 0.89 | | 1.05 | |
| | LOWER LIMIT | 0.82 | | 0.98 | |
| | SAMPLE NO. | | | | |
| 01 | L06093M | 0.86 | | 1.03 | |
| 02 | 49794-30, MS | 0.87 | | 1.04 | |
| 03 | 49794-30, MSD | 0.87 | | 1.04 | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
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| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| | | | | | |

RT UPPER LIMIT = + 3 std. dev. above the avg. RT
RT LOWER LIMIT = - 3 std. dev. below the avg. RT
Note: If std. dev. = 0.00 then a default window of 0.03 minutes is used

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Comments: _____

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 6°C
3) Received in good condition Y or N
4) pH checked by: N/A
5) Labels checked by: AM 6/4/03

Project#: 10971.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Sonkup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 656-5574 PO# 0037759 Quote #
Sampler (Signature): KTS

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW32-0603-01-A | 6/2/03 | 0705 | VOC524.2 + Ethane | | | | | X | | | GW | 7 | G | | 49794-1 |
| DW12-0603-01-A | | 0820 | | | | | | X | | | | 7 | | | -2 |
| DW40-0603-01-A | | 0900 | | | | | | X | | | | 7 | | | -3 |
| DW33-0603-01-A | | 0920 | | | | | | X | | | | 7 | | | -4 |
| DW28-0603-01-A | | 1000 | | | | | | X | | | | 7 | | | -5 |
| DW25-0603-01-A | | 0950 | | | | | | X | | | | 7 | | | -6 |
| DW31-0603-01-A | | 1035 | | | | | | X | | | | 7 | | | -7 |
| DW29-0603-01-A | | 1100 | | | | | | X | | | | 7 | | | -8 |
| DW36-0603-01-A | | 1245 | | | | | | X | | | | 7 | | | -9 |
| DW39-0603-01-A | | 1315 | | | | | | X | | | | 9 | | | -10 |
| DW06-0603-01-A | | 1215 | | | | | | X | | | | 7 | | | -11 |
| TB-060203-01 | 6/2/03 | 0700 | VOC524.2 | | | | | X | | | W | 2 | G | | -42 ~~-12~~ SB 6/4/03 |

FAX RESULTS? YES NO
Fax # x5401

Turnaround Request
Standard [X] Priority [ ]
Due Date Due Date

Comments / Instructions:
VOCs via 524.2
Ethane via 8015 modified
Sample Dup 0603-01-A w/ MS/MSD for VOCs only

Client Code: WESTONM

Page 1 of 4

Received By: Time: 1650 Date: 6/4/03 Relinquished By Sampler:
Received By: Time: Date: Relinquished By:
Received By: Time: Date: Relinquished By:

Analytics\AEL Documents\AEL COC

000371

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 6.0 6.6
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: MN 6/4/03

Project#: 10971.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Sorkeup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 624-5574 PO# 0037759 Quote #
Sampler (Signature): KT Sorkeup

Matrix Key: WW=Wastewater, SW=Surfacewater, GW=Groundwater, DW=Drinkingwater, S=Soil/Sludge, O=Oil, E=Extract, X=Other

Container Key: P=plastic G=glass

Preservation: Unpres, 4° C, $HNO_3$, $H_2SO_4$, HCl, Methanol, Other

| Station Identification | Sample Date | Sample Time | Analysis | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|
| DW12-0603-01-B | 6/2/03 | 0820 | VOCs S24.2 | GW | 4 | G | | 49794-T312 |
| DW12-0603-02-A | 6/2/03 | 0825 | VOCs S24.2 | GW | 4 | G | | -14T13 |
| DW01-0603-01-A | 6/3/03 | 0820 | VOCs + ethane | GW | 7 | G | | -15T9 |
| DW03-0603-01-A | 6/3/03 | 0800 | | | 7 | | | -16T15 |
| DW13-0603-01-A | | 1330 | | | 7 | | SB 6/4/03 | -17T16 |
| DW22-0603-01-A | | 0845 | | | 7 | | | -18T17 |
| DW23-0603-01-A | | 0850 | | | 7 | | | -19T18 |
| DW23-0603-01-B | | 0850 | VOCs + ethane | | 7 | | | -20T19 |
| DW23-0603-02-A | | 0900 | VOCs S24.2 | | 4 | | | -21T20 |
| DW24-0603-01-A | | 1015 | VOCs + ethane | | 7 | | | -22T21 |
| DW30-0603-01-A | | 1000 | | | 7 | | | -23T22 |
| DW09-0603-01-A | | 1140 | | | 7 | | | -24T23 |

FAX RESULTS? YES NO
Fax # 5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOCs via S24.2
ethane via 8015 Modified

Client Code: WESTONM

Page 2 of 4

Received By: Time: 1650 Date: 6/4/03
Relinquished By Sampler:
Received By:
Relinquished By:
Received By:
Relinquished By:

# Chain Of Custody Form

**analytics** environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 6°C
3) Received in good condition Y or N
4) pH checked by: N/A
5) Labels checked by: [illegible] 6/4/03

Project#: 10971.217.002 Project: Bucks Harbor
Company: **Weston Solutions**
Contact: Kathleen Soukup
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 656-5574 PO# 0037759 Quote #
Sampler (Signature): [illegible]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW04-0603-01-A | 6/3/03 | 1055 | VOCs + ethane | | | | | | | | | 7 | | 49794 ~~25~~ 24 |
| DW04-0603-01-B | | 1055 | VOCs + ethane | | | | | | | | | 7 | | -26 25 |
| DW04-0603-02-A | | 1100 | VOCs 524.2 | | | | | | | | | 4 | | -27 26 |
| DW08-0603-01-A | | 1315 | VOCs + ethane | | | | | | | | | 7 | | -28 27 |
| DW07-0603-01-A | | 1210 | | | | | | | | | | 7 | | -29 28 |
| ~~DW38-0603-01-A~~ | | | | | | | | | | | | ~~7~~ | FT | SB |
| DW34-0603-01-A | 6/4/03 | 0815 | | | | | | | | | | 7 | | 6/4/03 -30 29 |
| DW05-0603-01-A | | 0940 | | | | | | | | | | 9 | | -31 30 |
| DW03-0603-01-A | | 0850 | | | | | | | | | | 7 | | -32 31 |
| DW03-0603-01-B | | 0850 | | | | | | | | | | 7 | | -33 32 |
| DW03-0603-02-A | | 0855 | VOCs 524.2 | | | | | | | | | 4 | | -34 33 |
| DW03-0603-03-A | | 0900 | VOCs 524.2 | | | | | | | | | 4 | | -~~35~~ 34 |

FAX RESULTS? YES NO
Fax # 5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOCs via 524.2
ethane via 8015 modified
Sample DW05-0603-01-A w/ MS/MSD for VOCs only

Client Code: WESTONM

Page 3 of 4

Received By: [illegible] Time: 1650 Date: 6/4/03
Relinquished By Sampler: [illegible]

Analytics\AEL Documents\AEL COC

000373

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 6°C
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: 6/4/03

Project#: 10471.217.002 Project: Bucks

Company: Weston Solutions

Contact: Kathleen Sawicki

Address: 1 Wall Street
Manchester, NH 03101-1501

Phone: 603 656-5574 PO# 0037759 Quote #

Sampler (Signature):

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DW13-0603-02-A | 6/3/03 | 1325 | VOC + ethane | | | | | X | | | GW | 7 | G | | 497941-3736 |
| DW38-0603-01-A | 6/4/03 | 1025 | ↓ | | | | | X | | | GW | 7 | G | | -3736 |
| DW15-0603-01-A | 6/2/03 | 1155 | VOC only per Kathleen @Weston amb 6.5.03 | | | | | | | | | | | | -3737 |
| DW16-0603-01-A | 6/2/03 | 0745 | | | | | | | | | | | | | JB -3738 |
| DW17-0603-01-A | 6/2/03 | 1200 | | | | | | | | | | | | | 6/4/03 -4039 |
| DW19-0603-01-A | 6/2/03 | 1140 | | | | | | | | | | | | | -4140 |
| DW20-0603-01-A | 6/2/03 | 1135 | | | | | | | | | | | | | -4241 |
| DW21-0603-01-A | 6/2/03 | 1120 | | | | | | | | | | | | | -4342 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Received By: Time: 1055 Date: 6/4/03
Received By: Time: Date:
Received By: Time: Date:

Relinquished By Sampler:
Relinquished By:
Relinquished By:

FAX RESULTS? YES NO
Fax # x5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOCs via SW4.2
ethane via 8015 Modified

Client Code: WESTONM





003774

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 49794 | COOLER NUMBER: —

CLIENT: Weston | NUMBER OF COOLERS: 1

PROJECT: Bucks | DATE RECEIVED: 6/4/03

**A: PRELIMINARY EXAMINATION:** | DATE COOLER OPENED: 6/4/03

1. Cooler received by(initials) JB | Date Received: 6/4/03
2. Did cooler come with a shipping slip? Y (N)

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? Y (N)
How many & where: _____ Seal Date: _____ Seal Name: _____
4. Did the custody seals arrive unbroken and intact upon arrival? Y (N/A)
5. COC#: _____
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? Y (N)
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 6°C

**B. Log-In:** Date samples were logged in: 6/4/03 By: JB

11. Type of packing in cooler(bubble wrap, popcorn) Y (N/A)
12. Were all bottles sealed in separate plastic bags? (Y) N
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? Y (N/A)
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y (N)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): [signature] Date: 6/4/03

analytics environmental laboratory LLC

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June 30, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49855**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 8260B and for Total Organic Carbon (TOC). TOC was subcontracted to STL Chicago.
Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
STL Chicago TOC Data Package
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Aqueous Volatile Organics:**
Two compounds t-Butyl alcohol and Tetrahydrofuran had high recoveries in the Laboratory control spike (LCS) analyzed 06/16/03 (L806163B). (See Form III). ). Methyl ethyl ketone and Ethyl t-butyl ether had high recoveries in the matrix spike duplicate 49855-5 (ECOSW4-0603). These compounds also had RPD above the limit of 15%. (See Form III). These analytes were not detected in this SDG and results were reported without qualification.

**Sediment Volatile Organics:**
Two samples, 49855-11 (ECOSED2-0603) and 49855-14 (ECOSED2-0603-E), had low recoveries for all three surrogates due to high moisture content and matrix affect. The samples were reanalyzed with similar results. Only the results for 49855-14 reanalysis were reported due to potential instrument carryover on the original analysis.

Bromomethane had low recovery in the Laboratory control spike (LCS) analyzed 06/18/03 (LS06183B2) The LCS (LS06183C,RR) was reanalyzed for Bromomethane and the recovery was still low but within the marginal limits of 60-140%. Bromomethane was not detected in any of the sediment samples.

Multiple analytes had low recoveries for the matrix spike/matrix spike duplicate (MS/MSD) analyzed on 49855-13 (ECOSED4-0603) due to a combination of moisture content and matrix affect. (See Form III). The MS/MSD was reanalyzed and confirmed results.

Bromomethane had low recovery in the Laboratory control spike (LCS) analyzed 06/19/03 (L806193C) The LCS (L806193C4) was reanalyzed with all analytes in control

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49855**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002.2010**

Enclosed are the results of the analyses on your sample(s). Samples were received on 13 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49855-1 | 06/12/03 | TB-061203-01 | EPA 8260 Volatile Organics | |
| 49855-2 | 06/12/03 | ECOSW1-0603 | EPA 8260 Volatile Organics | |
| 49855-3 | 06/12/03 | ECOSW2-0603 | EPA 8260 Volatile Organics | |
| 49855-4 | 06/12/03 | ECOSW3-0603 | EPA 8260 Volatile Organics | |
| 49855-5 | 06/12/03 | ECOSW4-0603 | EPA 8260 Volatile Organics | |
| 49855-6 | 06/12/03 | ECOSW2-0603-E | EPA 8260 Volatile Organics | |
| 49855-7 | 06/12/03 | RB-061203-01 | EPA 8260 Volatile Organics | |
| 49855-8 | 06/04/03 | TB-061203-02 | EPA 8260 Volatile Organics | |
| 49855-9 | 06/12/03 | RB-061203-02 | EPA 8260 Volatile Organics | |
| 49855-10 | 06/12/03 | ECOSED1-0603 | EPA 8260 Volatile Organics | |
| | 06/12/03 | ECOSED1-0603 | Total Organic Carbon in Solid Matrices | |
| 49855-11 | 06/12/03 | ECOSED2-0603 | EPA 8260 Volatile Organics | |
| | 06/12/03 | ECOSED2-0603 | Total Organic Carbon in Solid Matrices | |
| 49855-12 | 06/12/03 | ECOSED3-0603 | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/27/2003

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analytics environmental laboratory LLC

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**Re: Bucks Harbor** **10971.217.002.2010**

Enclosed are the results of the analyses on your sample(s). Samples were received on 13 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/12/03 | ECOSED3-0603 | Total Organic Carbon in Solid Matrices | |
| 49855-13 | 06/12/03 | ECOSED4-0603 | EPA 8260 Volatile Organics | |
| | 06/12/03 | ECOSED4-0603 | Total Organic Carbon in Solid Matrices | |
| 49855-14 | 06/12/03 | ECOSED2-0603-E | Electronic Data Deliverable | |
| | 06/12/03 | ECOSED2-0603-E | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/27/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806163B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

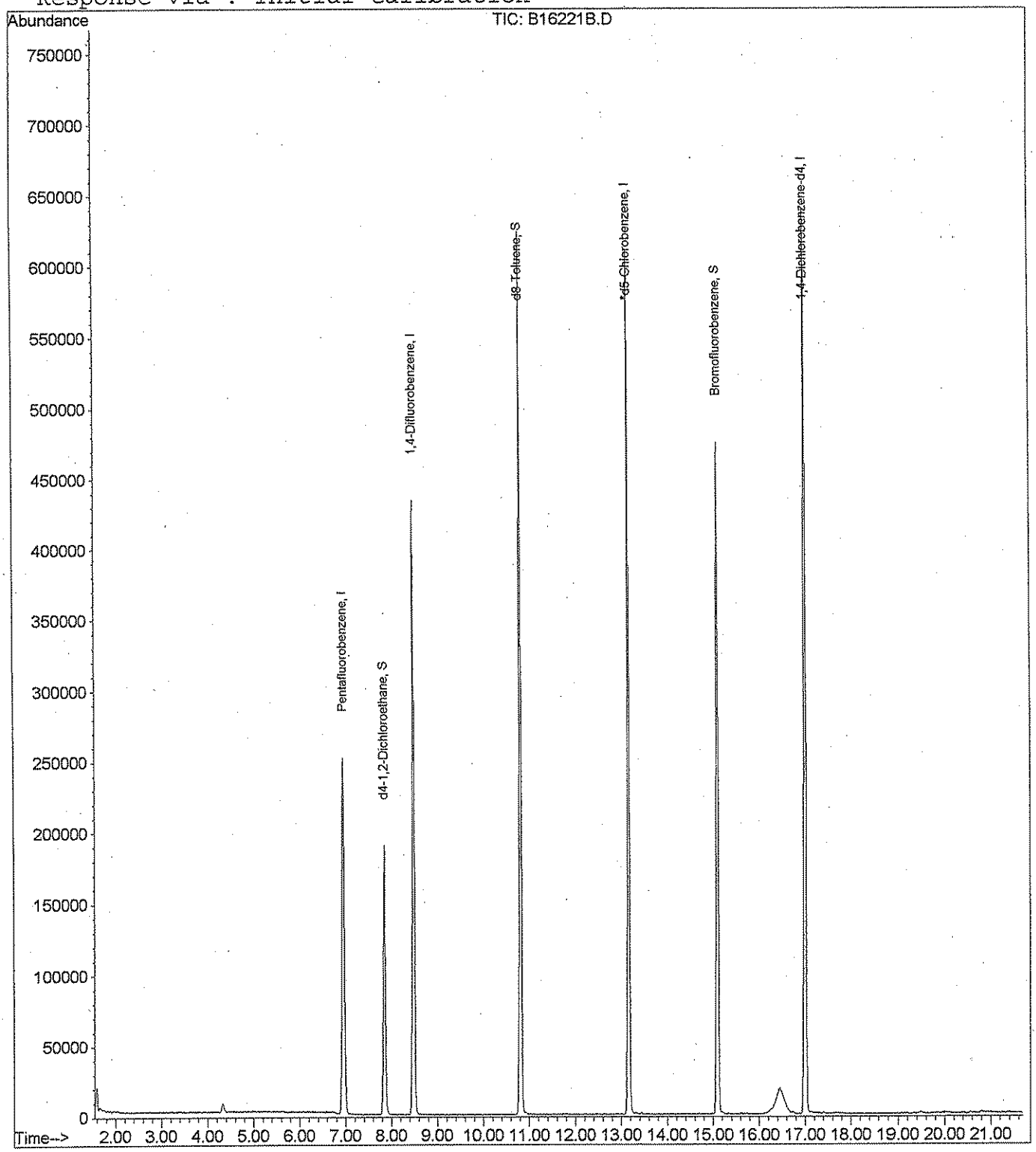
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16221B.D Vial: 6
Acq On : 16 Jun 2003 10:56 am Operator: JR
Sample : B806163B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 11:18 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** MB06183B
**Matrix:** Solid
**Percent Solid:** 100
**Dilution Factor:** 100
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/18/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 100 | U | 1,3-Dichloropropane | 100 | U |
| Bromobenzene | 100 | U | cis-1,3-Dichloropropene | 100 | U |
| Bromochloromethane | 100 | U | trans-1,3-Dichloropropene | 100 | U |
| Bromodichloromethane | 75 | U | 2,2-Dichloropropane | 100 | U |
| Bromoform | 75 | U | 1,1-Dichloropropene | 100 | U |
| Bromomethane | 100 | U | Ethylbenzene | 100 | U |
| n-butylbenzene | 100 | U | Hexachlorobutadiene | 100 | U |
| sec-butylbenzene | 100 | U | Isopropylbenzene | 100 | U |
| tert-butylbenzene | 100 | U | p-isopropyltoluene | 100 | U |
| Carbon Tetrachloride | 100 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 100 | U | Methyl-tert-butyl ether (MTBE) | 100 | U |
| Chloroethane | 100 | U | Naphthalene | 100 | U |
| Chloroform | 75 | U | n-Propylbenzene | 100 | U |
| Chloromethane | 100 | U | Styrene | 100 | U |
| 2-Chlorotoluene | 100 | U | 1,1,1,2-Tetrachloroethane | 100 | U |
| 4-Chlorotoluene | 100 | U | 1,1,2,2-Tetrachloroethane | 75 | U |
| Dibromochloromethane | 75 | U | Tetrachloroethene | 100 | U |
| 1,2-Dibromo-3-chloropropane | 100 | U | Toluene | 100 | U |
| 1,2-Dibromoethane | 75 | U | 1,2,3-Trichlorobenzene | 100 | U |
| Dibromomethane | 100 | U | 1,2,4-Trichlorobenzene | 100 | U |
| 1,2-Dichlorobenzene | 100 | U | 1,1,1-Trichloroethane | 100 | U |
| 1,3-Dichlorobenzene | 100 | U | 1,1,2-Trichloroethane | 75 | U |
| 1,4-Dichlorobenzene | 100 | U | Trichloroethene | 100 | U |
| Dichlorodifluoromethane | 100 | U | Trichlorofluoromethane | 100 | U |
| 1,1-Dichloroethane | 100 | U | 1,2,3-Trichloropropane | 100 | U |
| 1,2-Dichloroethane | 75 | U | 1,2,4-Trimethylbenzene | 100 | U |
| 1,1-Dichloroethene | 75 | U | 1,3,5-Trimethylbenzene | 100 | U |
| cis-1,2-Dichloroethene | 100 | U | Vinyl Chloride | 100 | U |
| trans-1,2-Dichloroethene | 100 | U | o-Xylene | 100 | U |
| 1,2-Dichloropropane | 75 | U | m,p-Xylene | 100 | U |
| Acetone | 1000 | U | Diethyl ether | 100 | U |
| Carbon Disulfide | 100 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 100 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 100 | U |
| t-Amyl methyl ether (TAME) | 100 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 105 % | d8-Toluene | 103 % | Bromofluorobenzene | 108 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

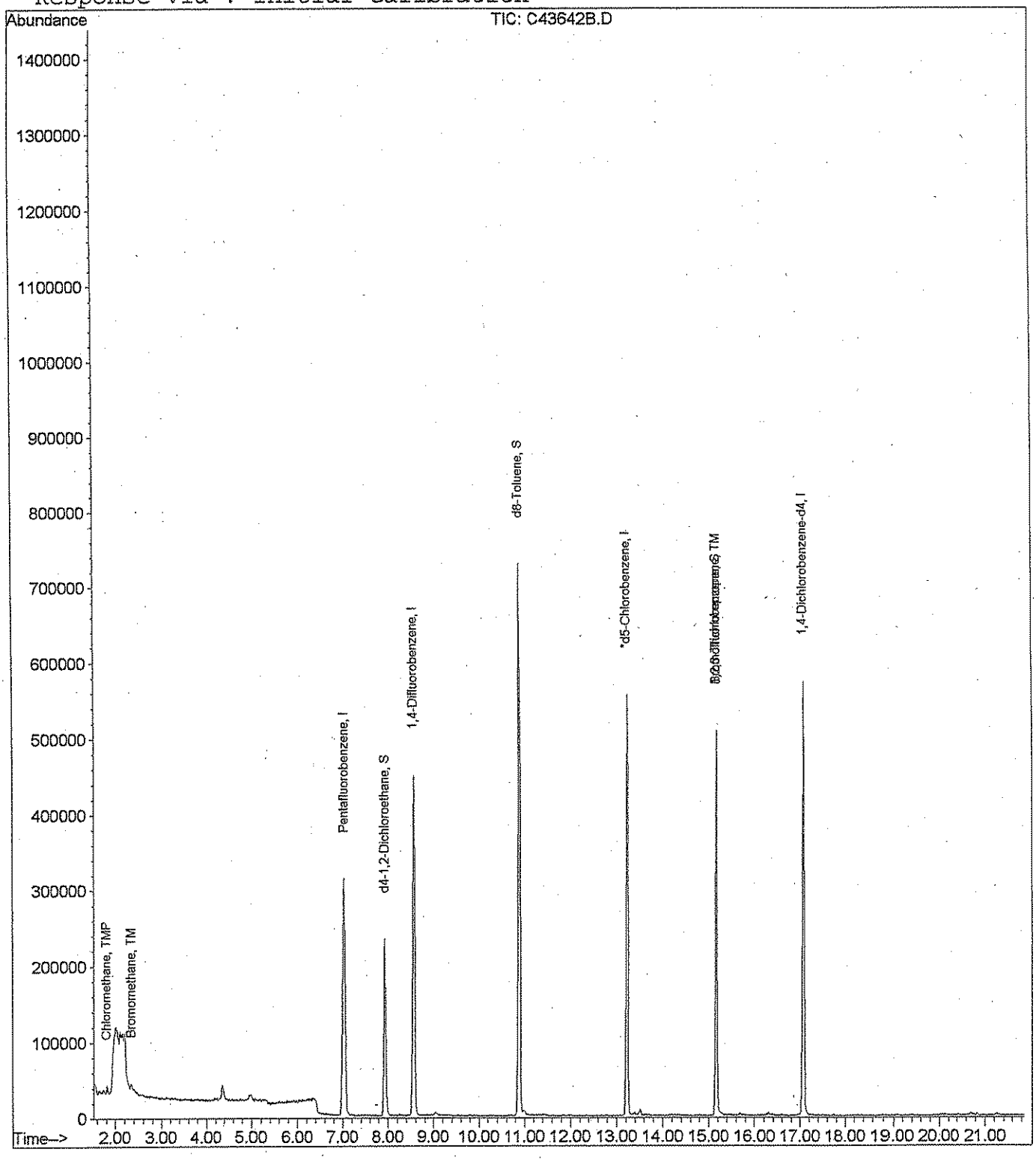
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803C\C43642B.D Vial: 4
Acq On : 18 Jun 2003 11:52 pm Operator: JMR
Sample : MB06183B Inst : Instr_C
Misc : 50,10,SOIL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 9:17 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806193C
**Matrix:** Solid
**Percent Solid:** 100
**Dilution Factor:** 100
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 100 | U | 1,3-Dichloropropane | 100 | U |
| Bromobenzene | 100 | U | cis-1,3-Dichloropropene | 100 | U |
| Bromochloromethane | 100 | U | trans-1,3-Dichloropropene | 100 | U |
| Bromodichloromethane | 75 | U | 2,2-Dichloropropane | 100 | U |
| Bromoform | 75 | U | 1,1-Dichloropropene | 100 | U |
| Bromomethane | 100 | U | Ethylbenzene | 100 | U |
| n-butylbenzene | 100 | U | Hexachlorobutadiene | 100 | U |
| sec-butylbenzene | 100 | U | Isopropylbenzene | 100 | U |
| tert-butylbenzene | 100 | U | p-isopropyltoluene | 100 | U |
| Carbon Tetrachloride | 100 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 100 | U | Methyl-tert-butyl ether (MTBE) | 100 | U |
| Chloroethane | 100 | U | Naphthalene | 100 | U |
| Chloroform | 75 | U | n-Propylbenzene | 100 | U |
| Chloromethane | 100 | U | Styrene | 100 | U |
| 2-Chlorotoluene | 100 | U | 1,1,1,2-Tetrachloroethane | 100 | U |
| 4-Chlorotoluene | 100 | U | 1,1,2,2-Tetrachloroethane | 75 | U |
| Dibromochloromethane | 75 | U | Tetrachloroethene | 100 | U |
| 1,2-Dibromo-3-chloropropane | 100 | U | Toluene | 100 | U |
| 1,2-Dibromoethane | 75 | U | 1,2,3-Trichlorobenzene | 100 | U |
| Dibromomethane | 100 | U | 1,2,4-Trichlorobenzene | 100 | U |
| 1,2-Dichlorobenzene | 100 | U | 1,1,1-Trichloroethane | 100 | U |
| 1,3-Dichlorobenzene | 100 | U | 1,1,2-Trichloroethane | 75 | U |
| 1,4-Dichlorobenzene | 100 | U | Trichloroethene | 100 | U |
| Dichlorodifluoromethane | 100 | U | Trichlorofluoromethane | 100 | U |
| 1,1-Dichloroethane | 100 | U | 1,2,3-Trichloropropane | 100 | U |
| 1,2-Dichloroethane | 75 | U | 1,2,4-Trimethylbenzene | 100 | U |
| 1,1-Dichloroethene | 75 | U | 1,3,5-Trimethylbenzene | 100 | U |
| cis-1,2-Dichloroethene | 100 | U | Vinyl Chloride | 100 | U |
| trans-1,2-Dichloroethene | 100 | U | o-Xylene | 100 | U |
| 1,2-Dichloropropane | 75 | U | m,p-Xylene | 100 | U |
| Acetone | 1000 | U | Diethyl ether | 100 | U |
| Carbon Disulfide | 100 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 100 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 100 | U |
| t-Amyl methyl ether (TAME) | 100 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 88 % | d8-Toluene | 96 % | Bromofluorobenzene | 94 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis.

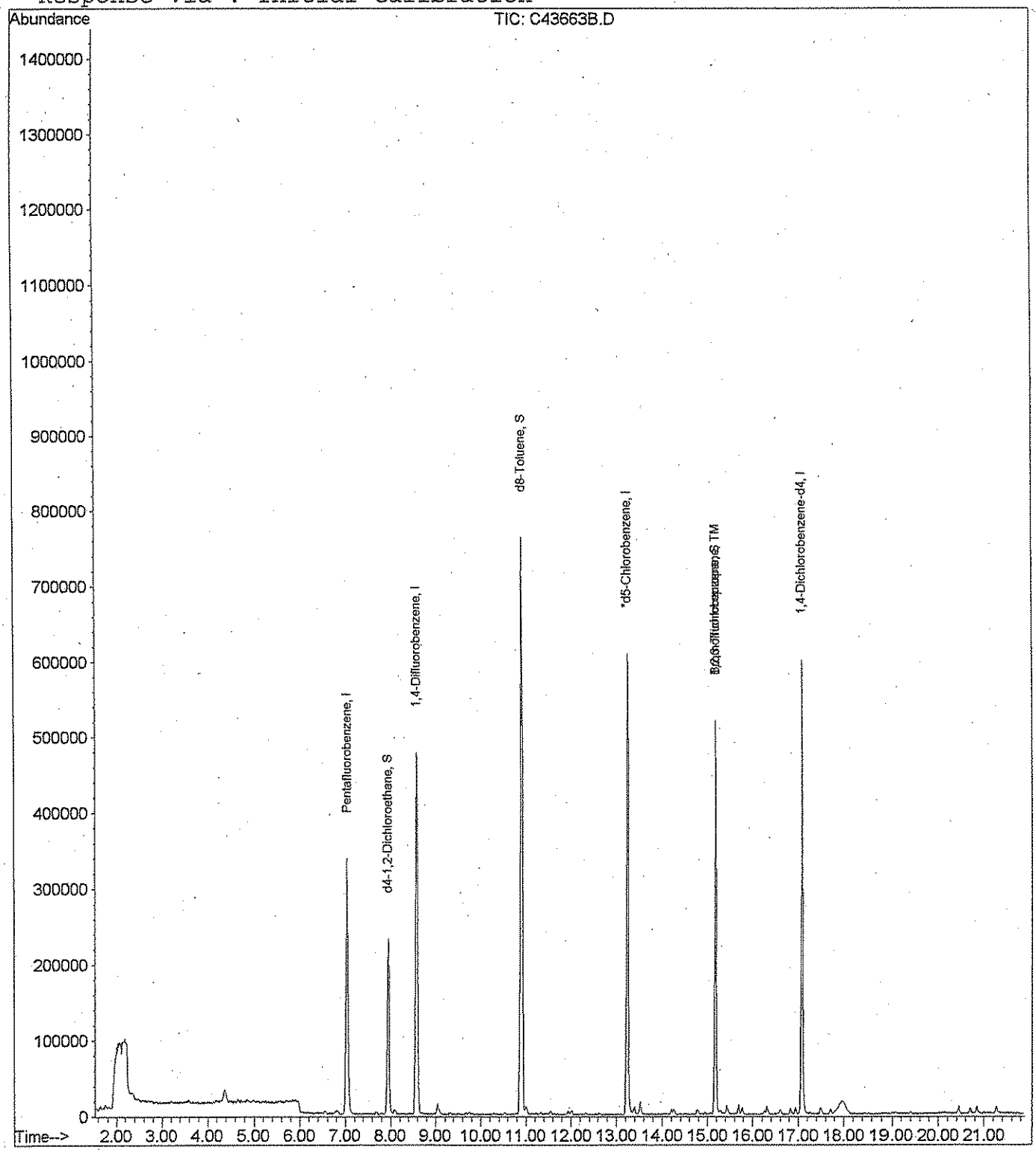
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903C\C43663B.D Vial: 14
Acq On : 19 Jun 2003 1:39 pm Operator: JMR
Sample : B806193C Inst : Instr_C
Misc : 5000,,W/ 50UL MEOH Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 14:02 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** TB-061203-01

**SAMPLE DATA**

**Lab Sample ID:** 49855-1
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 99 % | d8-Toluene | 99 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

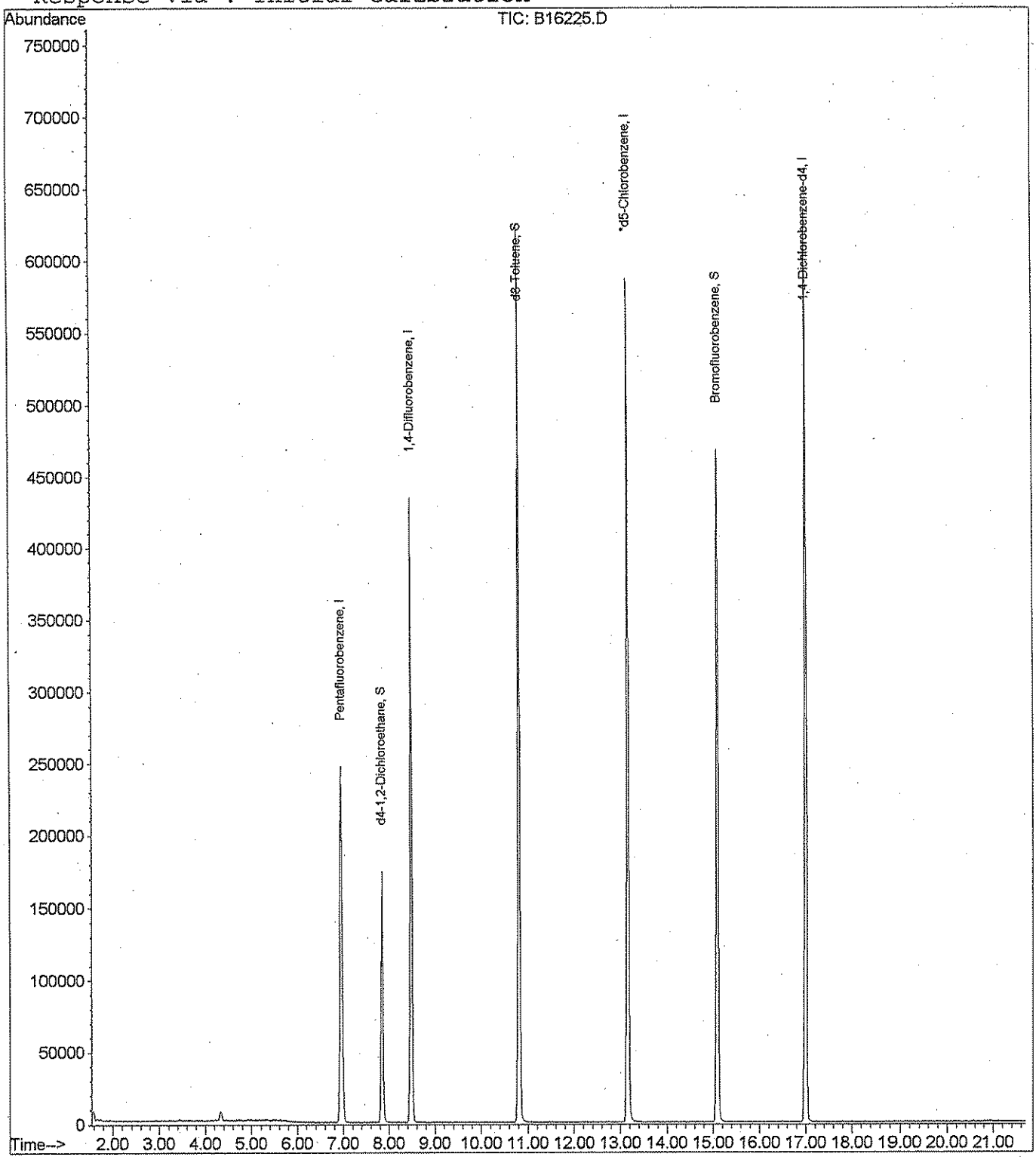
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16225.D Vial: 10
Acq On : 16 Jun 2003 1:02 pm Operator: JR
Sample : 49855-1 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 13:24 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSW1-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

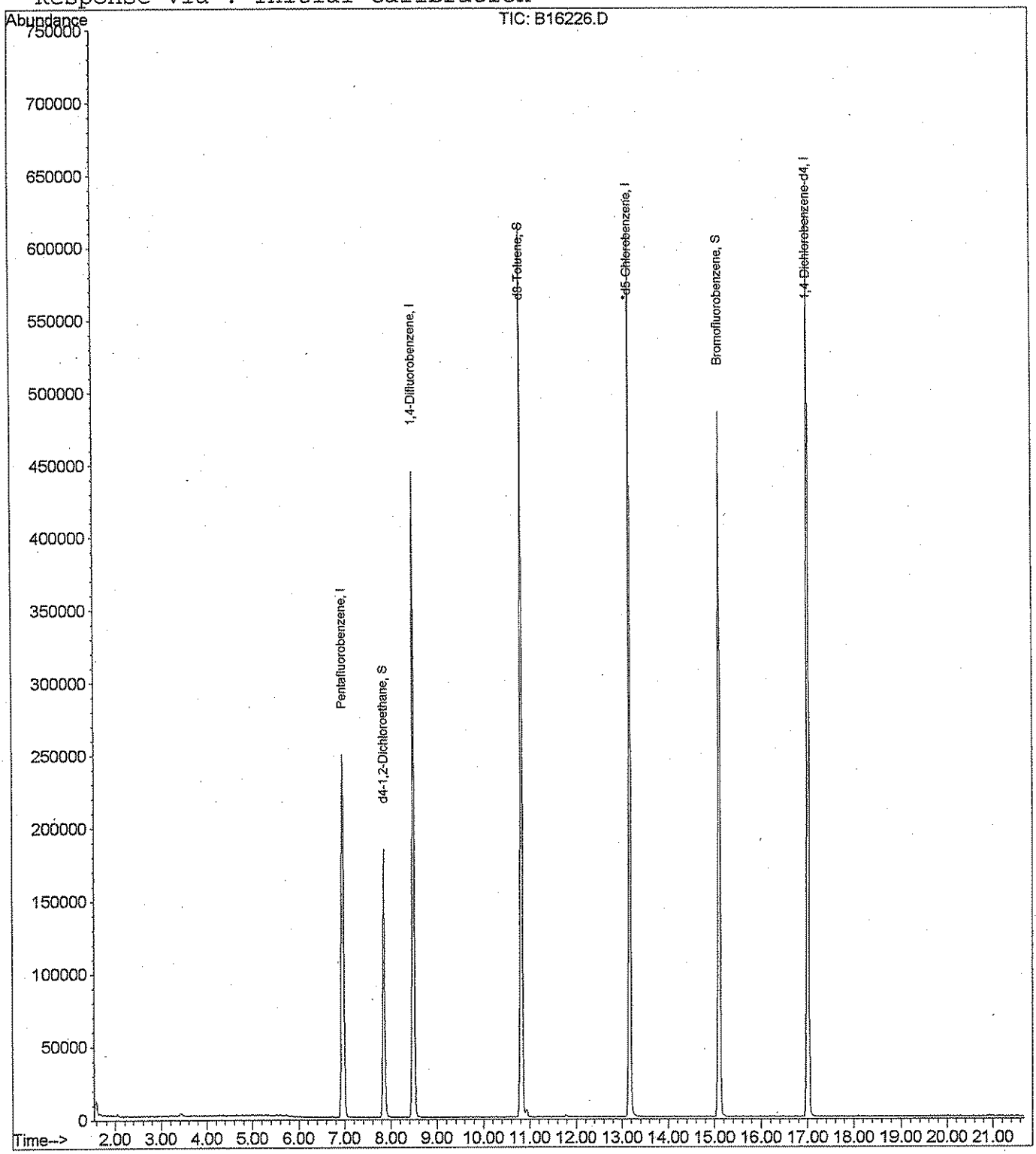
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16226.D Vial: 11
Acq On : 16 Jun 2003 1:33 pm Operator: JR
Sample : 49855-2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 13:55 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSW2-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

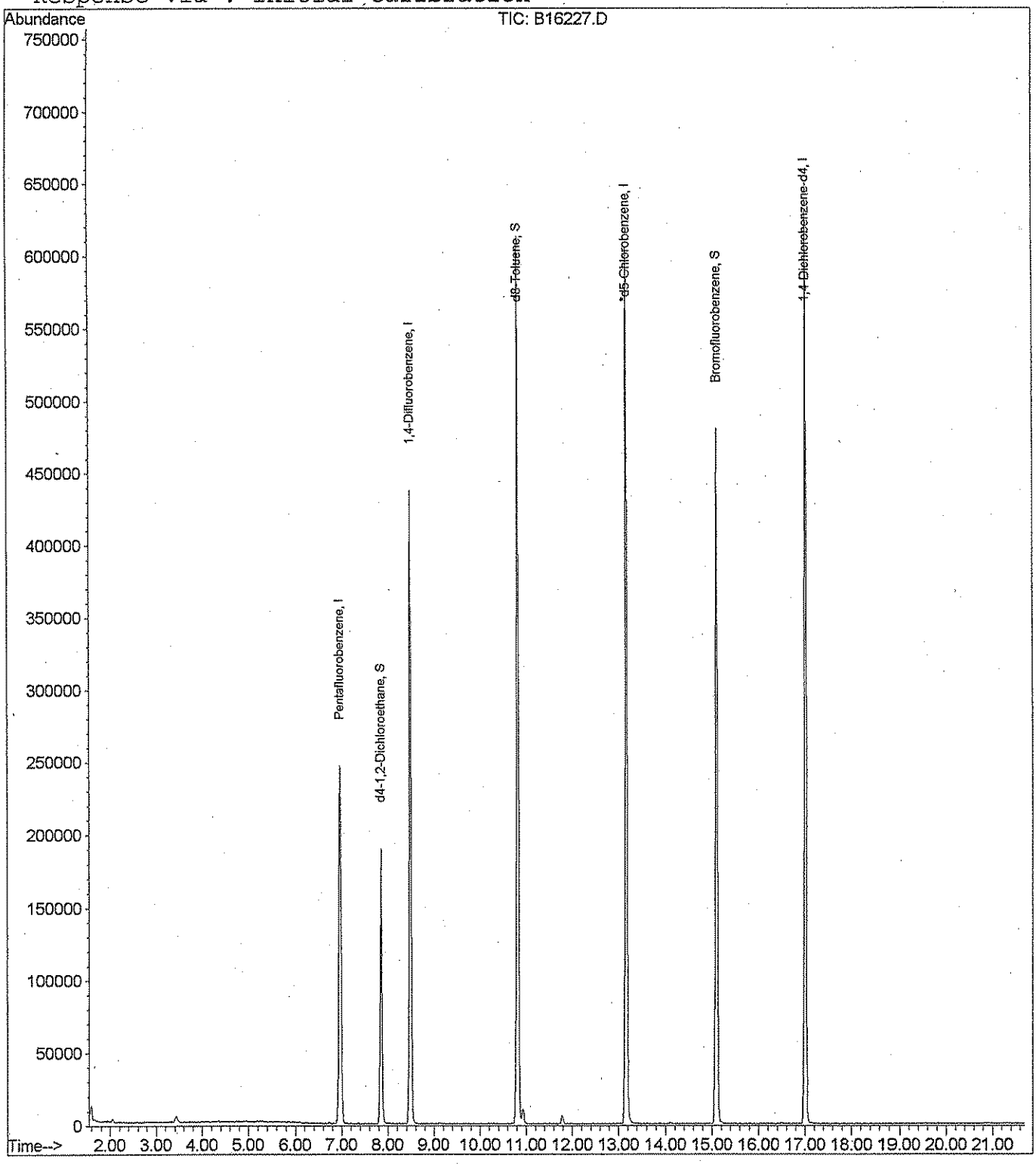
8260 full

Authorized signature Melissa A Valli

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16227.D Vial: 12
Acq On : 16 Jun 2003 2:04 pm Operator: JR
Sample : 49855-3 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 14:26 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSW3-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 99 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

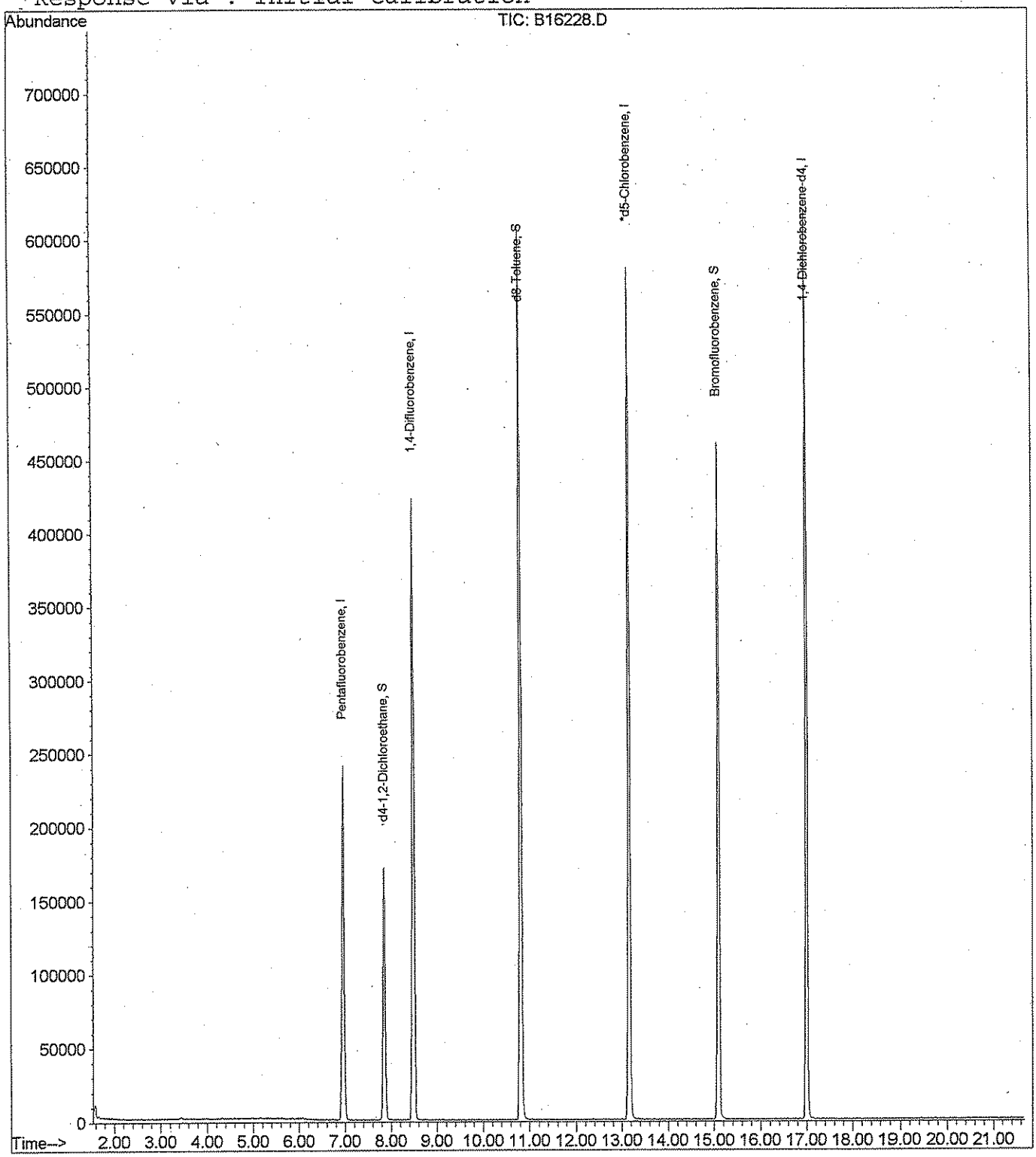
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16228.D Vial: 13
Acq On : 16 Jun 2003 2:34 pm Operator: JR
Sample : 49855-4 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 14:56 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSW4-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

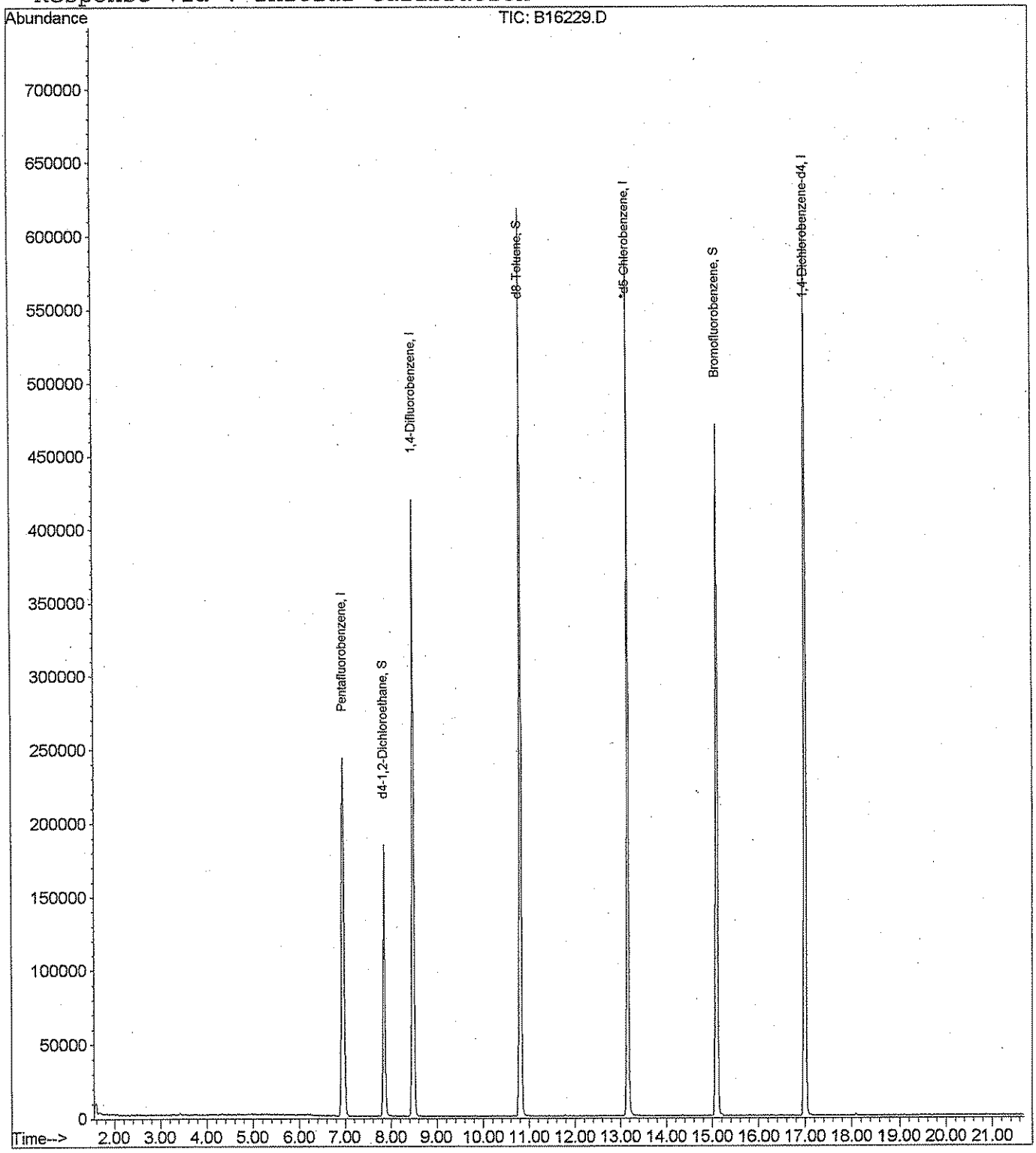
8260 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16229.D Vial: 14
Acq On : 16 Jun 2003 3:05 pm Operator: JR
Sample : 49855-5 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 15:27 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSW2-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49855-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 101 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

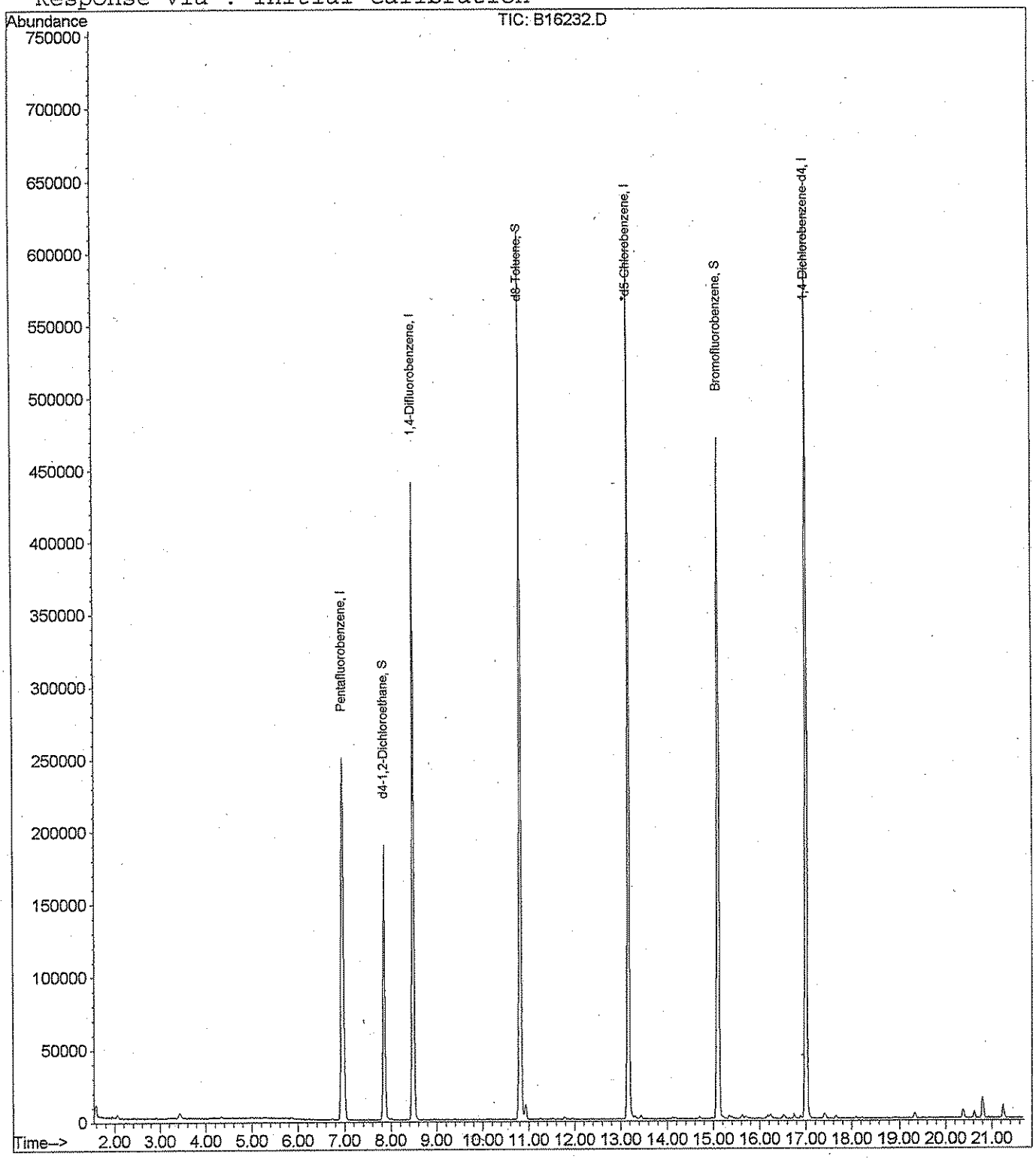
8260 full

Authorized signature Melissa A. Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16232.D Vial: 17
Acq On : 16 Jun 2003 4:37 pm Operator: JR
Sample : 49855-6 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 16:59 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** RB-061203-01

**SAMPLE DATA**

**Lab Sample ID:** 49855-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 100 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

Authorized signature

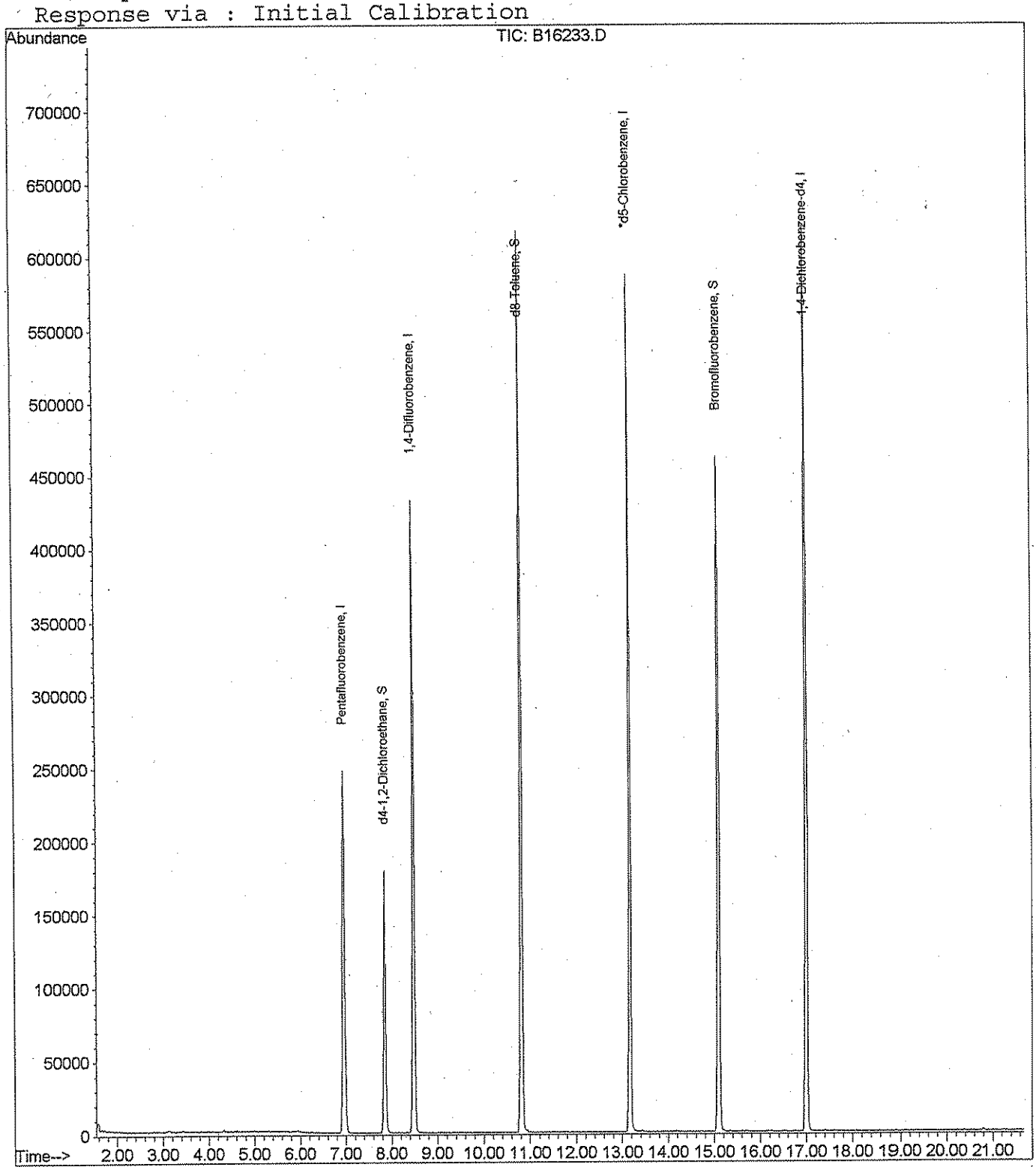
Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16233.D
Acq On : 16 Jun 2003 5:07 pm
Sample : 49855-7
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 16 17:29 2003

Vial: 18
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** TB-061203-02

**SAMPLE DATA**

**Lab Sample ID:** 49855-8
**Matrix:** Solid
**Percent Solid:** 100
**Dilution Factor:** 100
**Collection Date:** 06/04/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 100 | U | 1,3-Dichloropropane | 100 | U |
| Bromobenzene | 100 | U | cis-1,3-Dichloropropene | 100 | U |
| Bromochloromethane | 100 | U | trans-1,3-Dichloropropene | 100 | U |
| Bromodichloromethane | 75 | U | 2,2-Dichloropropane | 100 | U |
| Bromoform | 75 | U | 1,1-Dichloropropene | 100 | U |
| Bromomethane | 100 | U | Ethylbenzene | 100 | U |
| n-butylbenzene | 100 | U | Hexachlorobutadiene | 100 | U |
| sec-butylbenzene | 100 | U | Isopropylbenzene | 100 | U |
| tert-butylbenzene | 100 | U | p-isopropyltoluene | 100 | U |
| Carbon Tetrachloride | 100 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 100 | U | Methyl-tert-butyl ether (MTBE) | 100 | U |
| Chloroethane | 100 | U | Naphthalene | 100 | U |
| Chloroform | 75 | U | n-Propylbenzene | 100 | U |
| Chloromethane | 100 | U | Styrene | 100 | U |
| 2-Chlorotoluene | 100 | U | 1,1,1,2-Tetrachloroethane | 100 | U |
| 4-Chlorotoluene | 100 | U | 1,1,2,2-Tetrachloroethane | 75 | U |
| Dibromochloromethane | 75 | U | Tetrachloroethene | 100 | U |
| 1,2-Dibromo-3-chloropropane | 100 | U | Toluene | 100 | U |
| 1,2-Dibromoethane | 75 | U | 1,2,3-Trichlorobenzene | 100 | U |
| Dibromomethane | 100 | U | 1,2,4-Trichlorobenzene | 100 | U |
| 1,2-Dichlorobenzene | 100 | U | 1,1,1-Trichloroethane | 100 | U |
| 1,3-Dichlorobenzene | 100 | U | 1,1,2-Trichloroethane | 75 | U |
| 1,4-Dichlorobenzene | 100 | U | Trichloroethene | 100 | U |
| Dichlorodifluoromethane | 100 | U | Trichlorofluoromethane | 100 | U |
| 1,1-Dichloroethane | 100 | U | 1,2,3-Trichloropropane | 100 | U |
| 1,2-Dichloroethane | 75 | U | 1,2,4-Trimethylbenzene | 100 | U |
| 1,1-Dichloroethene | 75 | U | 1,3,5-Trimethylbenzene | 100 | U |
| cis-1,2-Dichloroethene | 100 | U | Vinyl Chloride | 100 | U |
| trans-1,2-Dichloroethene | 100 | U | o-Xylene | 100 | U |
| 1,2-Dichloropropane | 75 | U | m,p-Xylene | 100 | U |
| Acetone | 1000 | U | Diethyl ether | 100 | U |
| Carbon Disulfide | 100 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 100 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 100 | U |
| t-Amyl methyl ether (TAME) | 100 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 95 % | d8-Toluene | 103 % | Bromofluorobenzene | 104 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

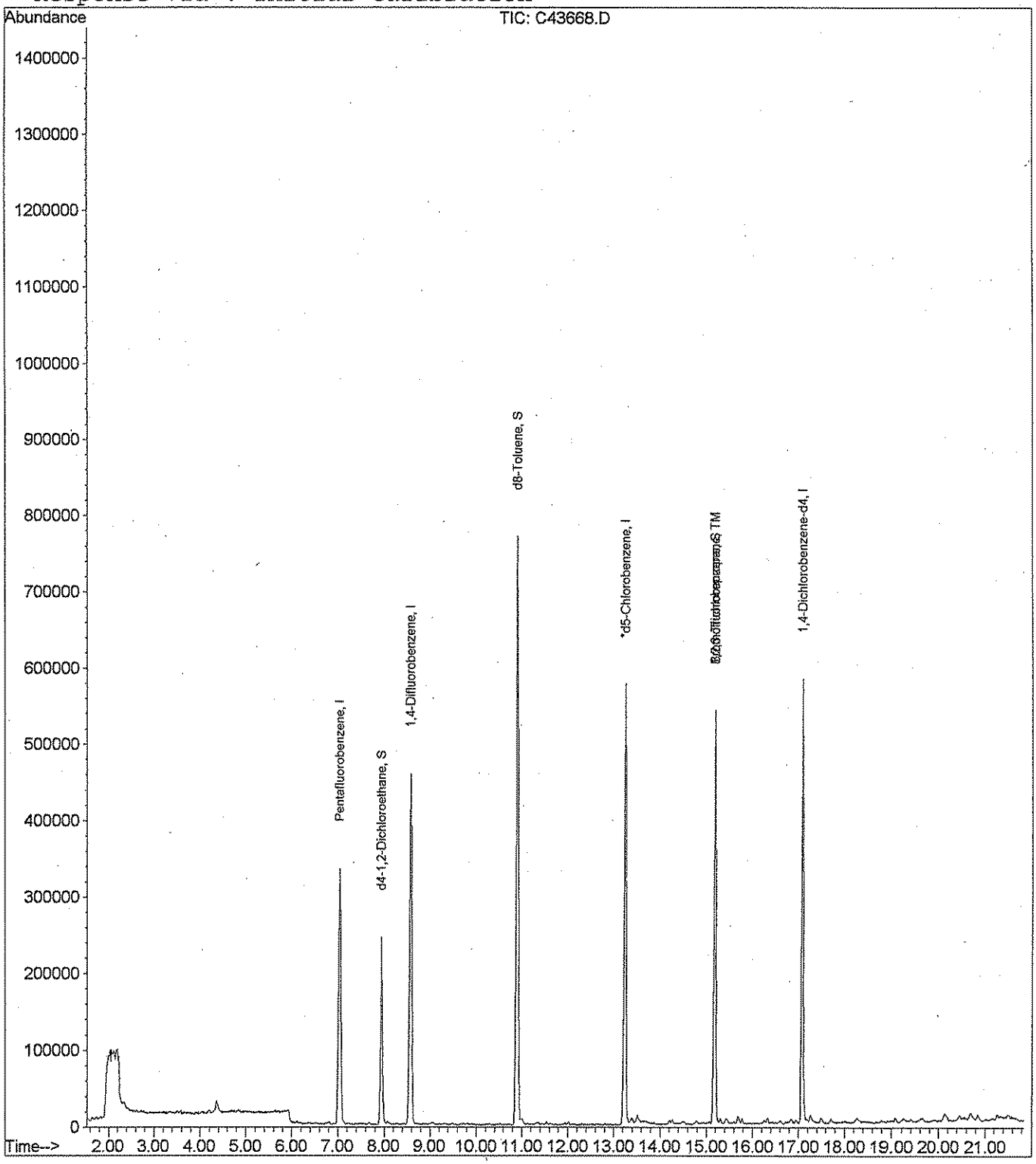
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903C\C43668.D Vial: 7
Acq On : 19 Jun 2003 4:18 pm Operator: JMR
Sample : 49855-8 Inst : Instr_C
Misc : 50,10.00,SOIL,,TRIP BLANK Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 16:40 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 17, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** RB-061203-02

**SAMPLE DATA**

**Lab Sample ID:** 49855-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/16/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

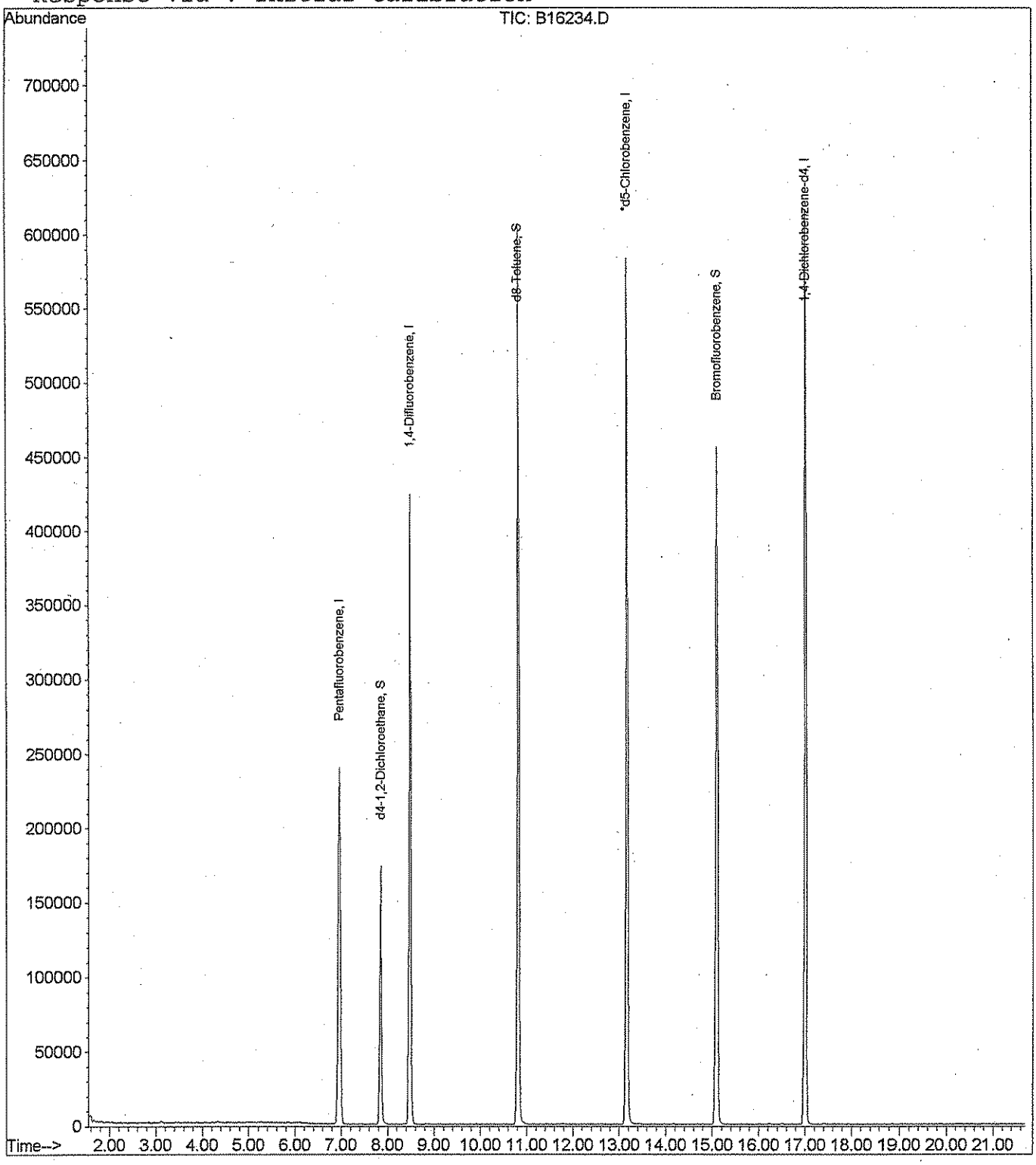
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\061603-B\B16234.D Vial: 19
Acq On : 16 Jun 2003 5:38 pm Operator: JR
Sample : 49855-9 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 16 18:00 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED1-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-10
**Matrix:** Solid
**Percent Solid:** 77
**Dilution Factor:** 152
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 150 | U | 1,3-Dichloropropane | 150 | U |
| Bromobenzene | 150 | U | cis-1,3-Dichloropropene | 150 | U |
| Bromochloromethane | 150 | U | trans-1,3-Dichloropropene | 150 | U |
| Bromodichloromethane | 110 | U | 2,2-Dichloropropane | 150 | U |
| Bromoform | 110 | U | 1,1-Dichloropropene | 150 | U |
| Bromomethane | 150 | U | Ethylbenzene | 150 | U |
| n-butylbenzene | 150 | U | Hexachlorobutadiene | 150 | U |
| sec-butylbenzene | 150 | U | Isopropylbenzene | 150 | U |
| tert-butylbenzene | 150 | U | p-isopropyltoluene | 150 | U |
| Carbon Tetrachloride | 150 | U | Methylene Chloride | 760 | U |
| Chlorobenzene | 150 | U | Methyl-tert-butyl ether (MTBE) | 150 | U |
| Chloroethane | 150 | U | Naphthalene | 150 | U |
| Chloroform | 110 | U | n-Propylbenzene | 150 | U |
| Chloromethane | 150 | U | Styrene | 150 | U |
| 2-Chlorotoluene | 150 | U | 1,1,1,2-Tetrachloroethane | 150 | U |
| 4-Chlorotoluene | 150 | U | 1,1,2,2-Tetrachloroethane | 110 | U |
| Dibromochloromethane | 110 | U | Tetrachloroethene | 150 | U |
| 1,2-Dibromo-3-chloropropane | 150 | U | Toluene | 150 | U |
| 1,2-Dibromoethane | 110 | U | 1,2,3-Trichlorobenzene | 150 | U |
| Dibromomethane | 150 | U | 1,2,4-Trichlorobenzene | 150 | U |
| 1,2-Dichlorobenzene | 150 | U | 1,1,1-Trichloroethane | 150 | U |
| 1,3-Dichlorobenzene | 150 | U | 1,1,2-Trichloroethane | 110 | U |
| 1,4-Dichlorobenzene | 150 | U | Trichloroethene | 150 | U |
| Dichlorodifluoromethane | 150 | U | Trichlorofluoromethane | 150 | U |
| 1,1-Dichloroethane | 150 | U | 1,2,3-Trichloropropane | 150 | U |
| 1,2-Dichloroethane | 110 | U | 1,2,4-Trimethylbenzene | 150 | U |
| 1,1-Dichloroethene | 110 | U | 1,3,5-Trimethylbenzene | 150 | U |
| cis-1,2-Dichloroethene | 150 | U | Vinyl Chloride | 150 | U |
| trans-1,2-Dichloroethene | 150 | U | o-Xylene | 150 | U |
| 1,2-Dichloropropane | 110 | U | m,p-Xylene | 150 | U |
| Acetone | 1500 | U | Diethyl ether | 150 | U |
| Carbon Disulfide | 150 | U | 2-Hexanone | 1500 | U |
| Tetrahydrofuran | 760 | U | Methyl isobutyl ketone | 1500 | U |
| Methyl ethyl ketone | 1500 | U | Di-isopropyl ether (DIPE) | 150 | U |
| t-Butyl alcohol (TBA) | 3000 | U | Ethyl t-butyl ether (ETBE) | 150 | U |
| t-Amyl methyl ether (TAME) | 150 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 92 % | d8-Toluene | 89 % | Bromofluorobenzene | 88 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

8260 full

Authorized signature Melissa A. Kelly

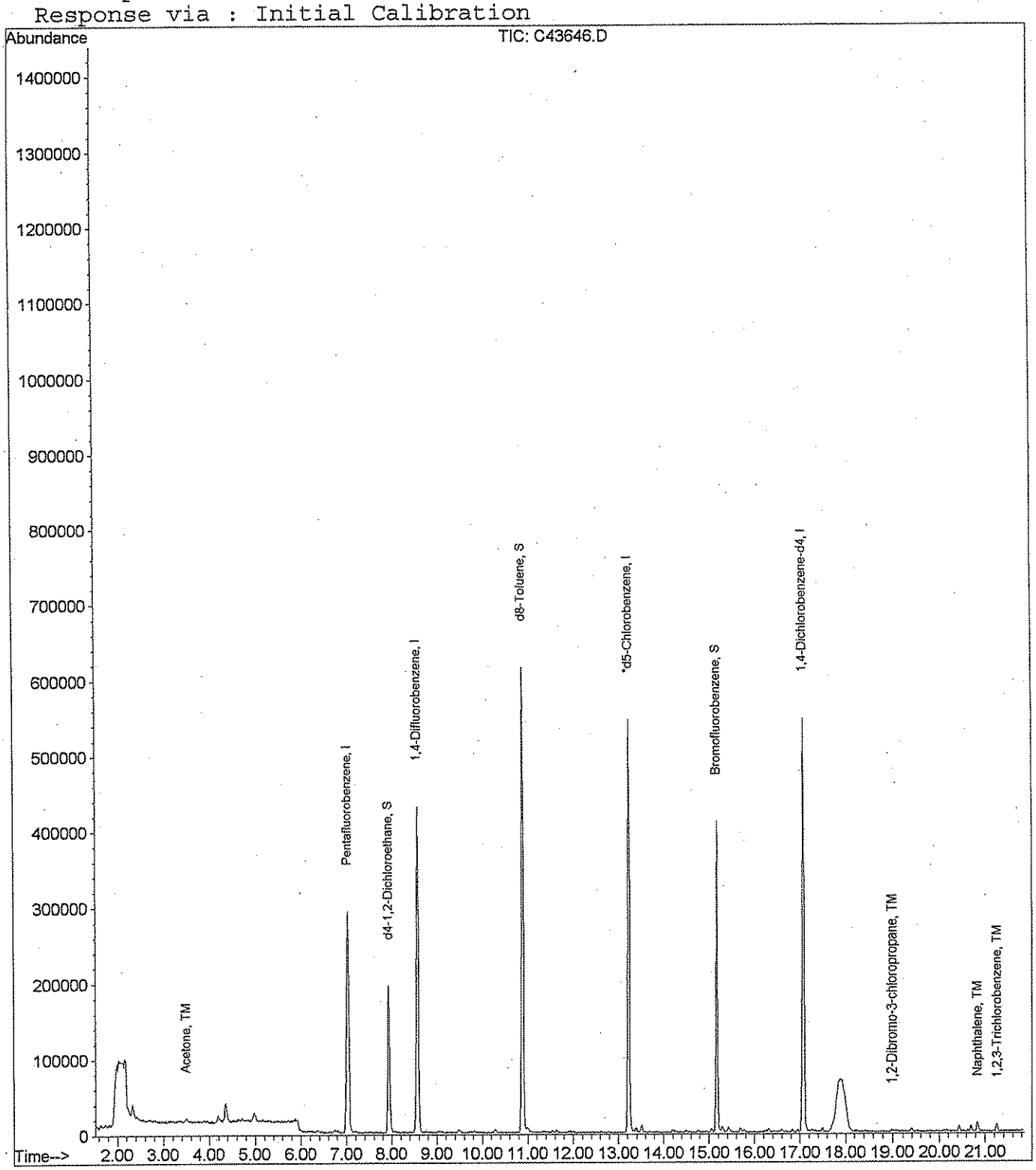
Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803C\C43646.D
Acq On : 19 Jun 2003 2:06 am
Sample : 49855-10
Misc : 50,8.56,SOIL
MS Integration Params: rteint.p
Quant Time: Jun 19 7:44 2003

Vial: 8
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED2-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-11
**Matrix:** Solid
**Percent Solid:** 35
**Dilution Factor:** 224
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 220 | U J | 1,3-Dichloropropane | 220 | U J |
| Bromobenzene | 220 | U | cis-1,3-Dichloropropene | 220 | U |
| Bromochloromethane | 220 | U | trans-1,3-Dichloropropene | 220 | U |
| Bromodichloromethane | 170 | U | 2,2-Dichloropropane | 220 | U |
| Bromoform | 170 | U | 1,1-Dichloropropene | 220 | U |
| Bromomethane | 220 | U | Ethylbenzene | 220 | U |
| n-butylbenzene | 220 | U | Hexachlorobutadiene | 220 | U |
| sec-butylbenzene | 220 | U | Isopropylbenzene | 220 | U |
| tert-butylbenzene | 220 | U | p-isopropyltoluene | 220 | U |
| Carbon Tetrachloride | 220 | U | Methylene Chloride | 1100 | U |
| Chlorobenzene | 220 | U | Methyl-tert-butyl ether (MTBE) | 220 | U |
| Chloroethane | 220 | U | Naphthalene | 220 | U |
| Chloroform | 170 | U | n-Propylbenzene | 220 | U |
| Chloromethane | 220 | U | Styrene | 220 | U |
| 2-Chlorotoluene | 220 | U | 1,1,1,2-Tetrachloroethane | 220 | U |
| 4-Chlorotoluene | 220 | U | 1,1,2,2-Tetrachloroethane | 170 | U |
| Dibromochloromethane | 170 | U | Tetrachloroethene | 220 | U |
| 1,2-Dibromo-3-chloropropane | 220 | U | Toluene | 220 | U |
| 1,2-Dibromoethane | 170 | U | 1,2,3-Trichlorobenzene | 220 | U |
| Dibromomethane | 220 | U | 1,2,4-Trichlorobenzene | 220 | U |
| 1,2-Dichlorobenzene | 220 | U | 1,1,1-Trichloroethane | 220 | U |
| 1,3-Dichlorobenzene | 220 | U | 1,1,2-Trichloroethane | 170 | U |
| 1,4-Dichlorobenzene | 220 | U | Trichloroethene | 220 | U |
| Dichlorodifluoromethane | 220 | U | Trichlorofluoromethane | 220 | U |
| 1,1-Dichloroethane | 220 | U | 1,2,3-Trichloropropane | 220 | U |
| 1,2-Dichloroethane | 170 | U | 1,2,4-Trimethylbenzene | 220 | U |
| 1,1-Dichloroethene | 170 | U | 1,3,5-Trimethylbenzene | 220 | U |
| cis-1,2-Dichloroethene | 220 | U | Vinyl Chloride | 220 | U |
| trans-1,2-Dichloroethene | 220 | U | o-Xylene | 220 | U |
| 1,2-Dichloropropane | 170 | U | m,p-Xylene | 220 | U |
| Acetone | 2200 | U | Diethyl ether | 220 | U |
| Carbon Disulfide | 220 | U | 2-Hexanone | 2200 | U |
| Tetrahydrofuran | 1100 | U | Methyl isobutyl ketone | 2200 | U |
| Methyl ethyl ketone | 2200 | U | Di-isopropyl ether (DIPE) | 220 | U |
| t-Butyl alcohol (TBA) | 4500 | U | Ethyl t-butyl ether (ETBE) | 220 | U |
| t-Amyl methyl ether (TAME) | 220 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 59 * % | d8-Toluene | 53 * % | Bromofluorobenzene | 49 * % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035. Sample did not meet method acceptance criteria for 1:1 soil to methanol ratio.
*Surrogate recoveries were outside laboratory acceptance criteria due to high moisture content. Sample was reanalyzed with similar results.

8260 full

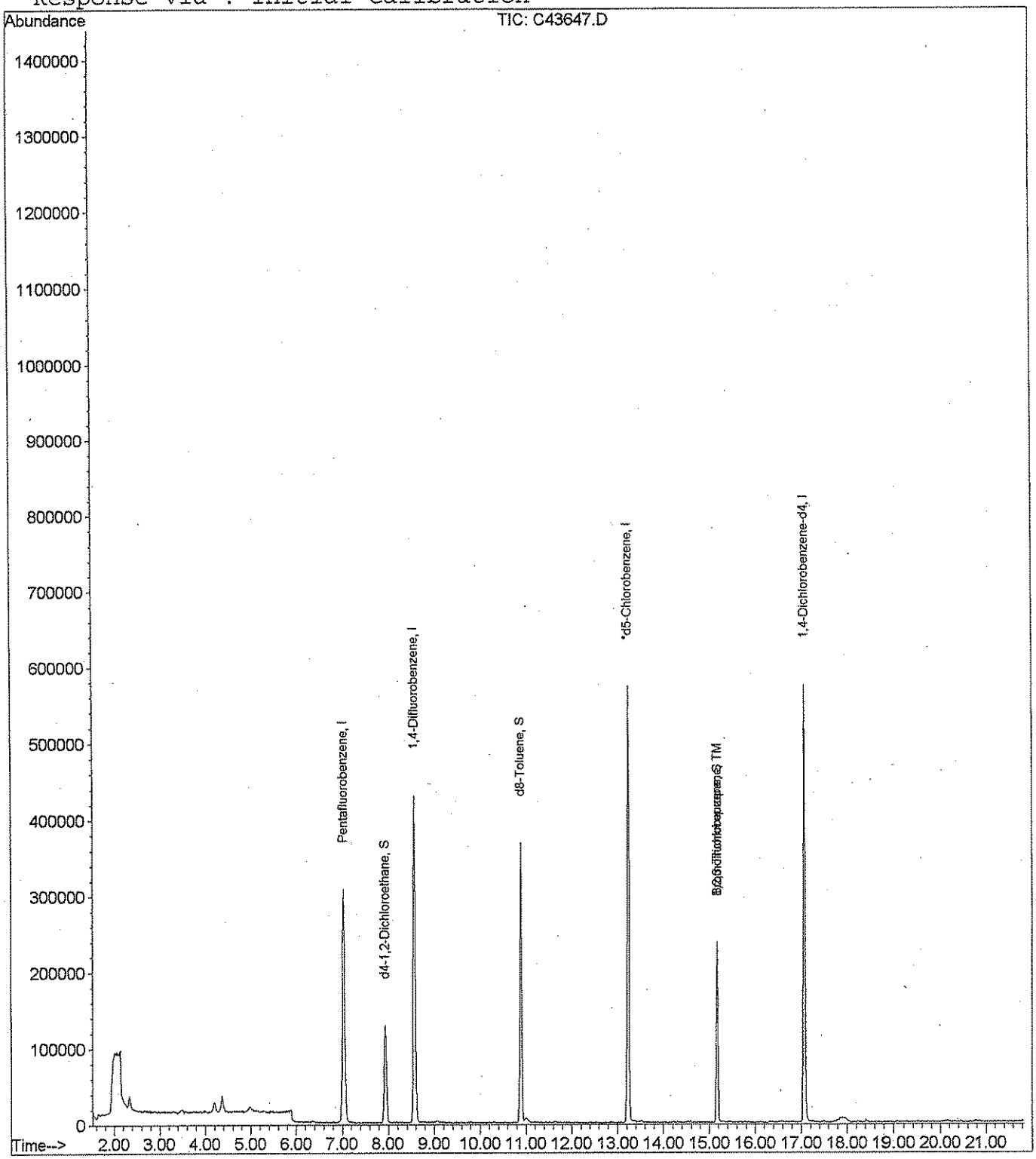
Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803C\C43647.D
Acq On : 19 Jun 2003 2:35 am
Sample : 49855-11
Misc : 50,12.81,SOIL
MS Integration Params: rteint.p
Quant Time: Jun 19 7:45 2003

Vial: 9
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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Manchester NH 03101-1501

June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED2-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-11 RR
**Matrix:** Solid
**Percent Solid:** 35
**Dilution Factor:** 224
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 220 | U | 1,3-Dichloropropane | 220 | U |
| Bromobenzene | 220 | U | cis-1,3-Dichloropropene | 220 | U |
| Bromochloromethane | 220 | U | trans-1,3-Dichloropropene | 220 | U |
| Bromodichloromethane | 170 | U | 2,2-Dichloropropane | 220 | U |
| Bromoform | 170 | U | 1,1-Dichloropropene | 220 | U |
| Bromomethane | 220 | U | Ethylbenzene | 220 | U |
| n-butylbenzene | 220 | U | Hexachlorobutadiene | 220 | U |
| sec-butylbenzene | 220 | U | Isopropylbenzene | 220 | U |
| tert-butylbenzene | 220 | U | p-isopropyltoluene | 220 | U |
| Carbon Tetrachloride | 220 | U | Methylene Chloride | 1100 | U |
| Chlorobenzene | 220 | U | Methyl-tert-butyl ether (MTBE) | 220 | U |
| Chloroethane | 220 | U | Naphthalene | 220 | U |
| Chloroform | 170 | U | n-Propylbenzene | 220 | U |
| Chloromethane | 220 | U | Styrene | 220 | U |
| 2-Chlorotoluene | 220 | U | 1,1,1,2-Tetrachloroethane | 220 | U |
| 4-Chlorotoluene | 220 | U | 1,1,2,2-Tetrachloroethane | 170 | U |
| Dibromochloromethane | 170 | U | Tetrachloroethene | 220 | U |
| 1,2-Dibromo-3-chloropropane | 220 | U | Toluene | 220 | U |
| 1,2-Dibromoethane | 170 | U | 1,2,3-Trichlorobenzene | 220 | U |
| Dibromomethane | 220 | U | 1,2,4-Trichlorobenzene | 220 | U |
| 1,2-Dichlorobenzene | 220 | U | 1,1,1-Trichloroethane | 220 | U |
| 1,3-Dichlorobenzene | 220 | U | 1,1,2-Trichloroethane | 170 | U |
| 1,4-Dichlorobenzene | 220 | U | Trichloroethene | 220 | U |
| Dichlorodifluoromethane | 220 | U | Trichlorofluoromethane | 220 | U |
| 1,1-Dichloroethane | 220 | U | 1,2,3-Trichloropropane | 220 | U |
| 1,2-Dichloroethane | 170 | U | 1,2,4-Trimethylbenzene | 220 | U |
| 1,1-Dichloroethene | 170 | U | 1,3,5-Trimethylbenzene | 220 | U |
| cis-1,2-Dichloroethene | 220 | U | Vinyl Chloride | 220 | U |
| trans-1,2-Dichloroethene | 220 | U | o-Xylene | 220 | U |
| 1,2-Dichloropropane | 170 | U | m,p-Xylene | 220 | U |
| Acetone | 2200 | U | Diethyl ether | 220 | U |
| Carbon Disulfide | 220 | U | 2-Hexanone | 2200 | U |
| Tetrahydrofuran | 1100 | U | Methyl isobutyl ketone | 2200 | U |
| Methyl ethyl ketone | 2200 | U | Di-isopropyl ether (DIPE) | 220 | U |
| t-Butyl alcohol (TBA) | 4500 | U | Ethyl t-butyl ether (ETBE) | 220 | U |
| t-Amyl methyl ether (TAME) | 220 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 45 * % | d8-Toluene | 42 * % | Bromofluorobenzene | 40 * % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035. Sample did not meet method acceptance criteria for 1:1 soil to methanol ratio.
*Surrogate recoveries were outside laboratory acceptance criteria due to high moisture content. Sample was analyzed previously with similar results.

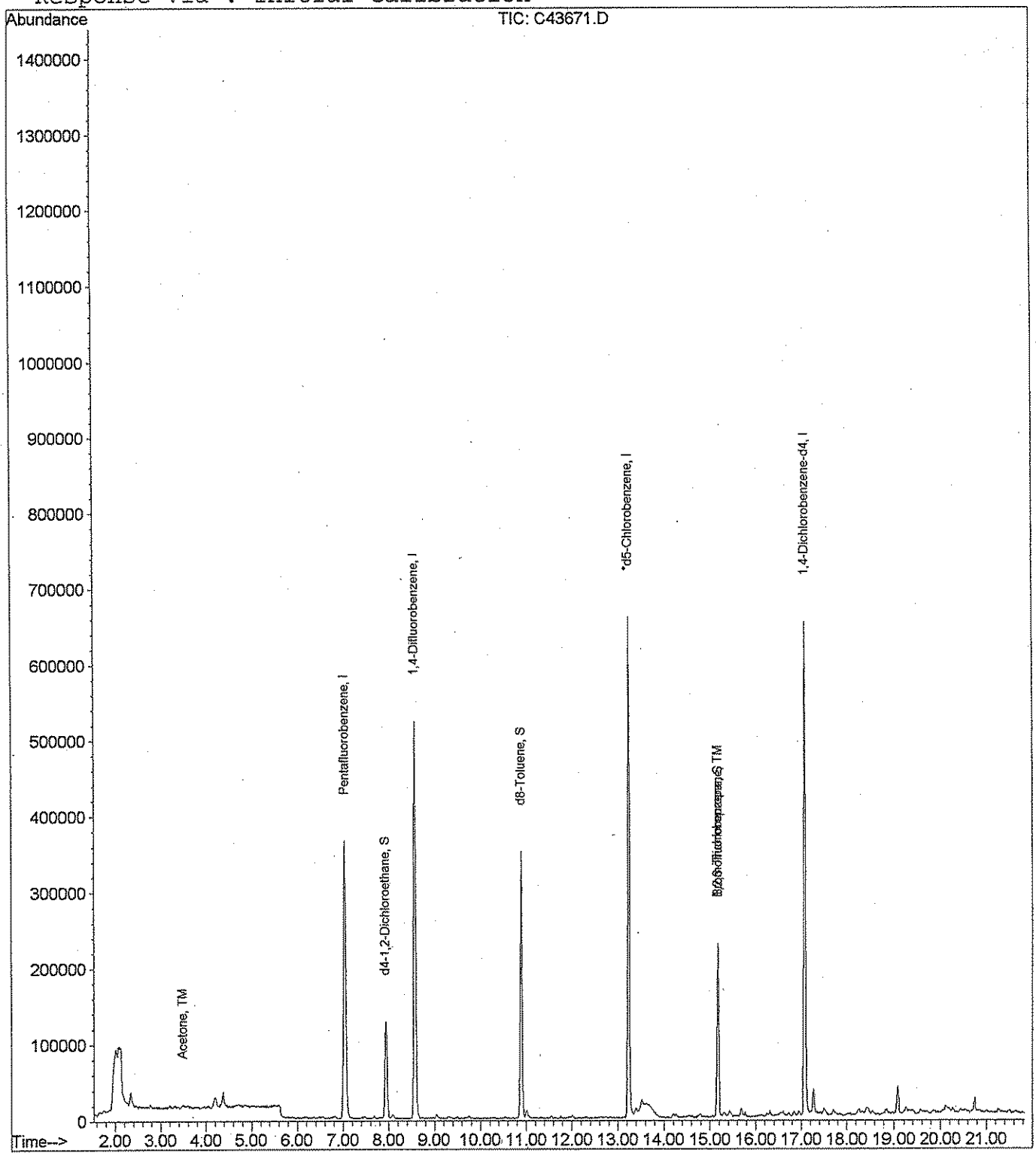
8260 full

Authorized signature Melena A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903C\C43671.D Vial: 10
Acq On : 19 Jun 2003 5:44 pm Operator: JMR
Sample : 49855-11,RR Inst : Instr_C
Misc : 50,12.81,SOIL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 18:06 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED3-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-12
**Matrix:** Solid
**Percent Solid:** 78
**Dilution Factor:** 128
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 130 | U | 1,3-Dichloropropane | 130 | U |
| Bromobenzene | 130 | U | cis-1,3-Dichloropropene | 130 | U |
| Bromochloromethane | 130 | U | trans-1,3-Dichloropropene | 130 | U |
| Bromodichloromethane | 96 | U | 2,2-Dichloropropane | 130 | U |
| Bromoform | 96 | U | 1,1-Dichloropropene | 130 | U |
| Bromomethane | 130 | U | Ethylbenzene | 130 | U |
| n-butylbenzene | 130 | U | Hexachlorobutadiene | 130 | U |
| sec-butylbenzene | 130 | U | Isopropylbenzene | 130 | U |
| tert-butylbenzene | 130 | U | p-isopropyltoluene | 130 | U |
| Carbon Tetrachloride | 130 | U | Methylene Chloride | 640 | U |
| Chlorobenzene | 130 | U | Methyl-tert-butyl ether (MTBE) | 130 | U |
| Chloroethane | 130 | U | Naphthalene | 130 | U |
| Chloroform | 96 | U | n-Propylbenzene | 130 | U |
| Chloromethane | 130 | U | Styrene | 130 | U |
| 2-Chlorotoluene | 130 | U | 1,1,1,2-Tetrachloroethane | 130 | U |
| 4-Chlorotoluene | 130 | U | 1,1,2,2-Tetrachloroethane | 96 | U |
| Dibromochloromethane | 96 | U | Tetrachloroethene | 130 | U |
| 1,2-Dibromo-3-chloropropane | 130 | U | Toluene | 130 | U |
| 1,2-Dibromoethane | 96 | U | 1,2,3-Trichlorobenzene | 130 | U |
| Dibromomethane | 130 | U | 1,2,4-Trichlorobenzene | 130 | U |
| 1,2-Dichlorobenzene | 130 | U | 1,1,1-Trichloroethane | 130 | U |
| 1,3-Dichlorobenzene | 130 | U | 1,1,2-Trichloroethane | 96 | U |
| 1,4-Dichlorobenzene | 130 | U | Trichloroethene | 130 | U |
| Dichlorodifluoromethane | 130 | U | Trichlorofluoromethane | 130 | U |
| 1,1-Dichloroethane | 130 | U | 1,2,3-Trichloropropane | 130 | U |
| 1,2-Dichloroethane | 96 | U | 1,2,4-Trimethylbenzene | 130 | U |
| 1,1-Dichloroethene | 96 | U | 1,3,5-Trimethylbenzene | 130 | U |
| cis-1,2-Dichloroethene | 130 | U | Vinyl Chloride | 130 | U |
| trans-1,2-Dichloroethene | 130 | U | o-Xylene | 130 | U |
| 1,2-Dichloropropane | 96 | U | m,p-Xylene | 130 | U |
| Acetone | 1300 | U | Diethyl ether | 130 | U |
| Carbon Disulfide | 130 | U | 2-Hexanone | 1300 | U |
| Tetrahydrofuran | 640 | U | Methyl isobutyl ketone | 1300 | U |
| Methyl ethyl ketone | 1300 | U | Di-isopropyl ether (DIPE) | 130 | U |
| t-Butyl alcohol (TBA) | 2600 | U | Ethyl t-butyl ether (ETBE) | 130 | U |
| t-Amyl methyl ether (TAME) | 130 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 83 % | d8-Toluene | 81 % | Bromofluorobenzene | 83 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

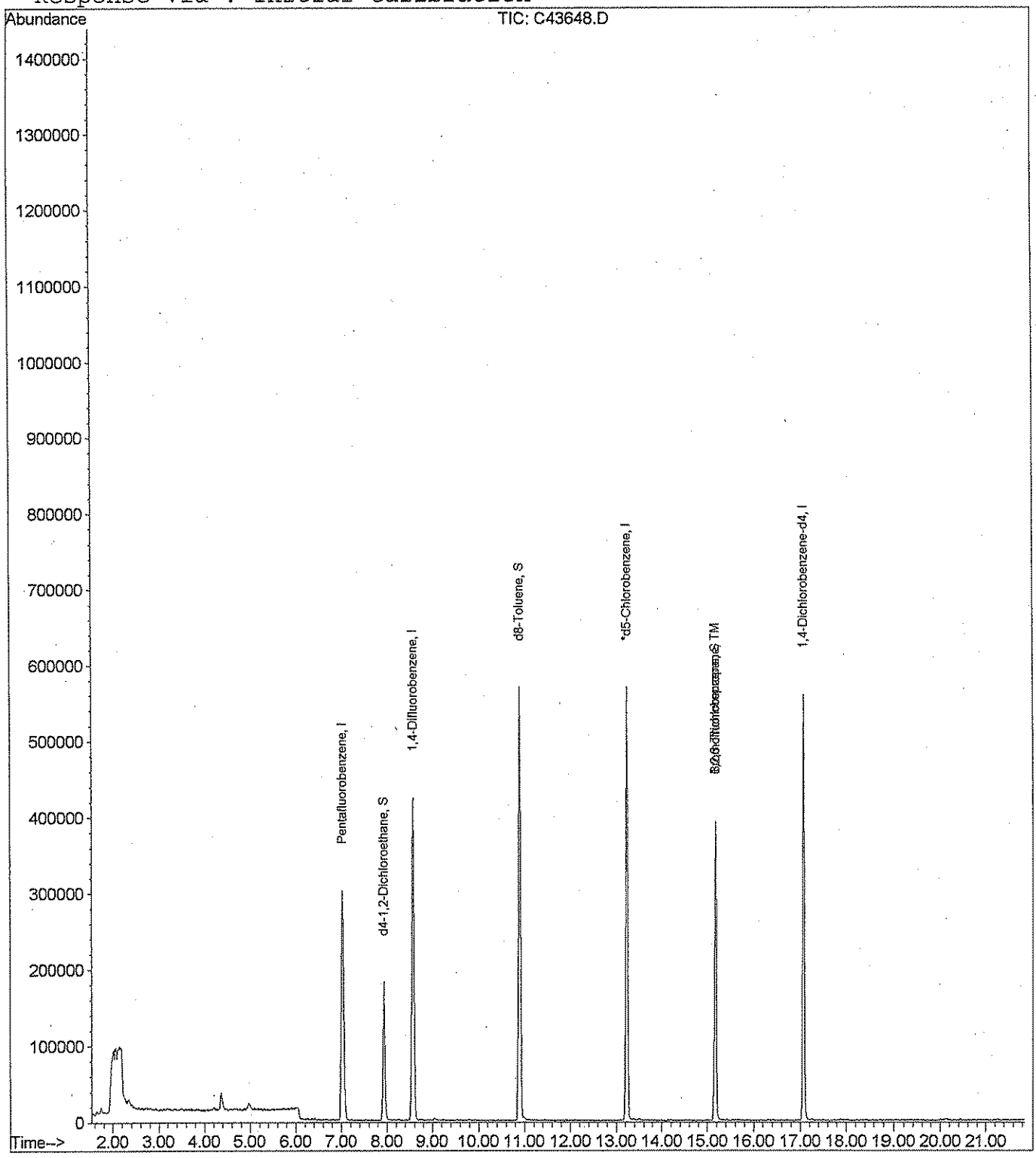
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803C\C43648.D Vial: 10
Acq On : 19 Jun 2003 3:04 am Operator: JMR
Sample : 49855-12 Inst : Instr_C
Misc : 50,10.00,SOIL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 7:46 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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June 20, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED4-0603

**SAMPLE DATA**

**Lab Sample ID:** 49855-13
**Matrix:** Solid
**Percent Solid:** 54
**Dilution Factor:** 302
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 300 | U | 1,3-Dichloropropane | 300 | U |
| Bromobenzene | 300 | U | cis-1,3-Dichloropropene | 300 | U |
| Bromochloromethane | 300 | U | trans-1,3-Dichloropropene | 300 | U |
| Bromodichloromethane | 230 | U | 2,2-Dichloropropane | 300 | U |
| Bromoform | 230 | U | 1,1-Dichloropropene | 300 | U |
| Bromomethane | 300 | U | Ethylbenzene | 300 | U |
| n-butylbenzene | 300 | U | Hexachlorobutadiene | 300 | U |
| sec-butylbenzene | 300 | U | Isopropylbenzene | 300 | U |
| tert-butylbenzene | 300 | U | p-isopropyltoluene | 300 | U |
| Carbon Tetrachloride | 300 | U | Methylene Chloride | 1500 | U |
| Chlorobenzene | 300 | U | Methyl-tert-butyl ether (MTBE) | 300 | U |
| Chloroethane | 300 | U | Naphthalene | 300 | U |
| Chloroform | 230 | U | n-Propylbenzene | 300 | U |
| Chloromethane | 300 | U | Styrene | 300 | U |
| 2-Chlorotoluene | 300 | U | 1,1,1,2-Tetrachloroethane | 300 | U |
| 4-Chlorotoluene | 300 | U | 1,1,2,2-Tetrachloroethane | 230 | U |
| Dibromochloromethane | 230 | U | Tetrachloroethene | 300 | U |
| 1,2-Dibromo-3-chloropropane | 300 | U | Toluene | 300 | U |
| 1,2-Dibromoethane | 230 | U | 1,2,3-Trichlorobenzene | 300 | U |
| Dibromomethane | 300 | U | 1,2,4-Trichlorobenzene | 300 | U |
| 1,2-Dichlorobenzene | 300 | U | 1,1,1-Trichloroethane | 300 | U |
| 1,3-Dichlorobenzene | 300 | U | 1,1,2-Trichloroethane | 230 | U |
| 1,4-Dichlorobenzene | 300 | U | Trichloroethene | 300 | U |
| Dichlorodifluoromethane | 300 | U | Trichlorofluoromethane | 300 | U |
| 1,1-Dichloroethane | 300 | U | 1,2,3-Trichloropropane | 300 | U |
| 1,2-Dichloroethane | 230 | U | 1,2,4-Trimethylbenzene | 300 | U |
| 1,1-Dichloroethene | 230 | U | 1,3,5-Trimethylbenzene | 300 | U |
| cis-1,2-Dichloroethene | 300 | U | Vinyl Chloride | 300 | U |
| trans-1,2-Dichloroethene | 300 | U | o-Xylene | 300 | U |
| 1,2-Dichloropropane | 230 | U | m,p-Xylene | 300 | U |
| Acetone | 3000 | U | Diethyl ether | 300 | U |
| Carbon Disulfide | 300 | U | 2-Hexanone | 3000 | U |
| Tetrahydrofuran | 1500 | U | Methyl isobutyl ketone | 3000 | U |
| Methyl ethyl ketone | 3000 | U | Di-isopropyl ether (DIPE) | 300 | U |
| t-Butyl alcohol (TBA) | 6000 | U | Ethyl t-butyl ether (ETBE) | 300 | U |
| t-Amyl methyl ether (TAME) | 300 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 84 % | d8-Toluene | 82 % | Bromofluorobenzene | 84 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035. Sample did not meet method acceptance criteria for 1:1 soil to methanol ratio.

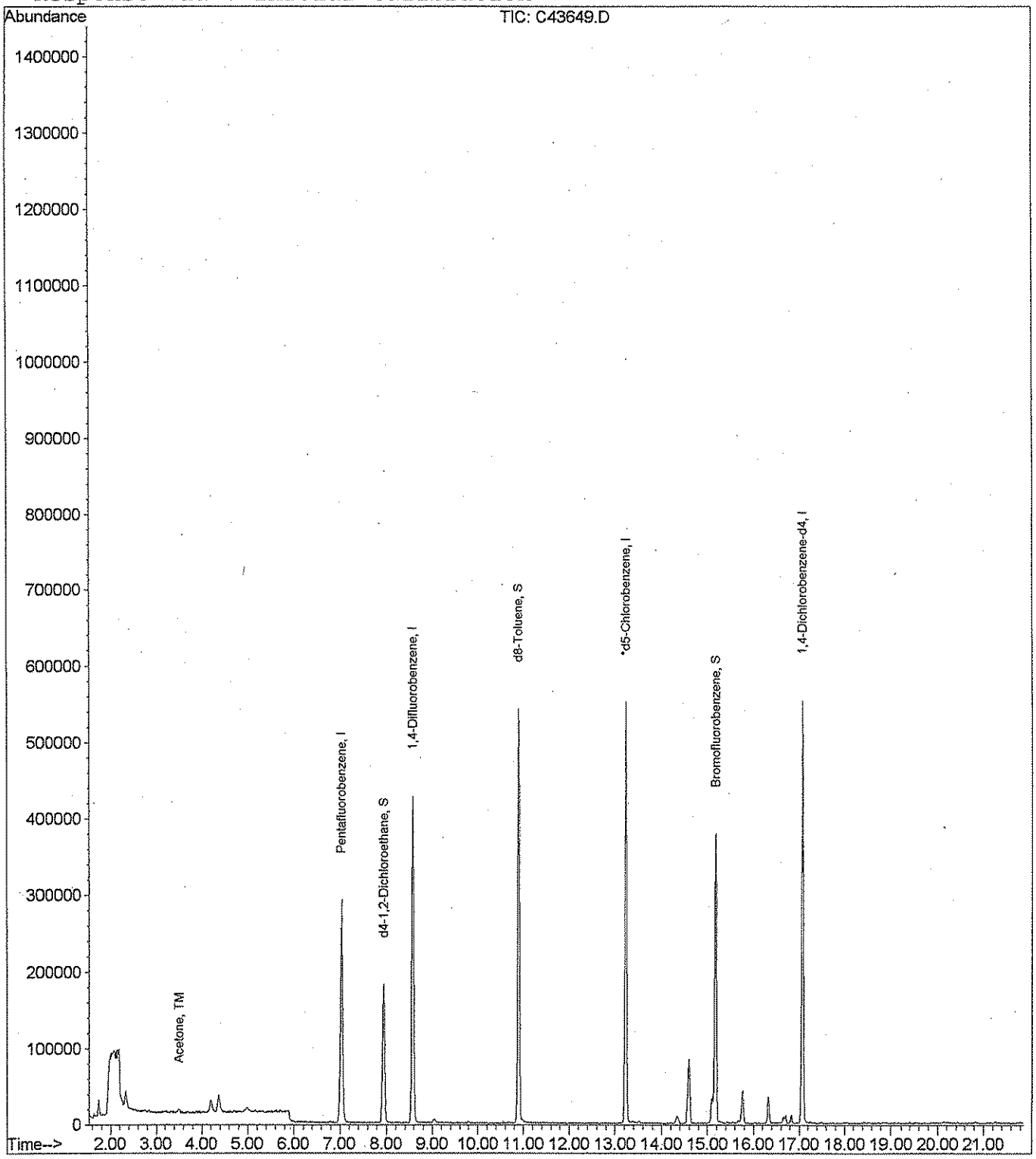
8260 full

Authorized signature Melissa G Kelli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803C\C43649.D Vial: 11
Acq On : 19 Jun 2003 3:33 am Operator: JMR
Sample : 49855-13 Inst : Instr_C
Misc : 50,6.12,SOIL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 7:47 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002.2010

**Field Sample ID:** ECOSED2-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49855-14
**Matrix:** Solid
**Percent Solid:** 30
**Dilution Factor:** 404
**Collection Date:** 06/12/03
**Lab Receipt Date:** 06/13/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/kg | Result µg/kg | COMPOUND | Quantitation Limit µg/kg | Result µg/kg |
|---|---|---|---|---|---|
| Benzene | 400 | U J | 1,3-Dichloropropane | 400 | U J |
| Bromobenzene | 400 | U | cis-1,3-Dichloropropene | 400 | U |
| Bromochloromethane | 400 | U | trans-1,3-Dichloropropene | 400 | U |
| Bromodichloromethane | 300 | U | 2,2-Dichloropropane | 400 | U |
| Bromoform | 300 | U | 1,1-Dichloropropene | 400 | U |
| Bromomethane | 400 | U | Ethylbenzene | 400 | U |
| n-butylbenzene | 400 | U | Hexachlorobutadiene | 400 | U |
| sec-butylbenzene | 400 | U | Isopropylbenzene | 400 | U |
| tert-butylbenzene | 400 | U | p-isopropyltoluene | 400 | U |
| Carbon Tetrachloride | 400 | U | Methylene Chloride | 2000 | U |
| Chlorobenzene | 400 | U | Methyl-tert-butyl ether (MTBE) | 400 | U |
| Chloroethane | 400 | U | Naphthalene | 400 | U |
| Chloroform | 300 | U | n-Propylbenzene | 400 | U |
| Chloromethane | 400 | U | Styrene | 400 | U |
| 2-Chlorotoluene | 400 | U | 1,1,1,2-Tetrachloroethane | 400 | U |
| 4-Chlorotoluene | 400 | U | 1,1,2,2-Tetrachloroethane | 300 | U |
| Dibromochloromethane | 300 | U | Tetrachloroethene | 400 | U |
| 1,2-Dibromo-3-chloropropane | 400 | U | Toluene | 400 | U |
| 1,2-Dibromoethane | 300 | U | 1,2,3-Trichlorobenzene | 400 | U |
| Dibromomethane | 400 | U | 1,2,4-Trichlorobenzene | 400 | U |
| 1,2-Dichlorobenzene | 400 | U | 1,1,1-Trichloroethane | 400 | U |
| 1,3-Dichlorobenzene | 400 | U | 1,1,2-Trichloroethane | 300 | U |
| 1,4-Dichlorobenzene | 400 | U | Trichloroethene | 400 | U |
| Dichlorodifluoromethane | 400 | U | Trichlorofluoromethane | 400 | U |
| 1,1-Dichloroethane | 400 | U | 1,2,3-Trichloropropane | 400 | U |
| 1,2-Dichloroethane | 300 | U | 1,2,4-Trimethylbenzene | 400 | U |
| 1,1-Dichloroethene | 300 | U | 1,3,5-Trimethylbenzene | 400 | U |
| cis-1,2-Dichloroethene | 400 | U | Vinyl Chloride | 400 | U |
| trans-1,2-Dichloroethene | 400 | U | o-Xylene | 400 | U |
| 1,2-Dichloropropane | 300 | U | m,p-Xylene | 400 | U |
| Acetone | 4000 | U | Diethyl ether | 400 | U |
| Carbon Disulfide | 400 | U | 2-Hexanone | 4000 | U |
| Tetrahydrofuran | 2000 | U | Methyl isobutyl ketone | 4000 | U |
| Methyl ethyl ketone | 4000 | U | Di-isopropyl ether (DIPE) | 400 | U |
| t-Butyl alcohol (TBA) | 8100 | U | Ethyl t-butyl ether (ETBE) | 400 | U |
| t-Amyl methyl ether (TAME) | 400 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 59 * % | d8-Toluene | 60 * % | Bromofluorobenzene | 60 * % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:** Results are expressed on a dry weight basis. Sample collection and analysis in accordance with SW-846 method 5035.

*Surrogate recoveries were outside laboratory acceptance criteria due to high moisture content. Sample was reanalyzed with similar results.

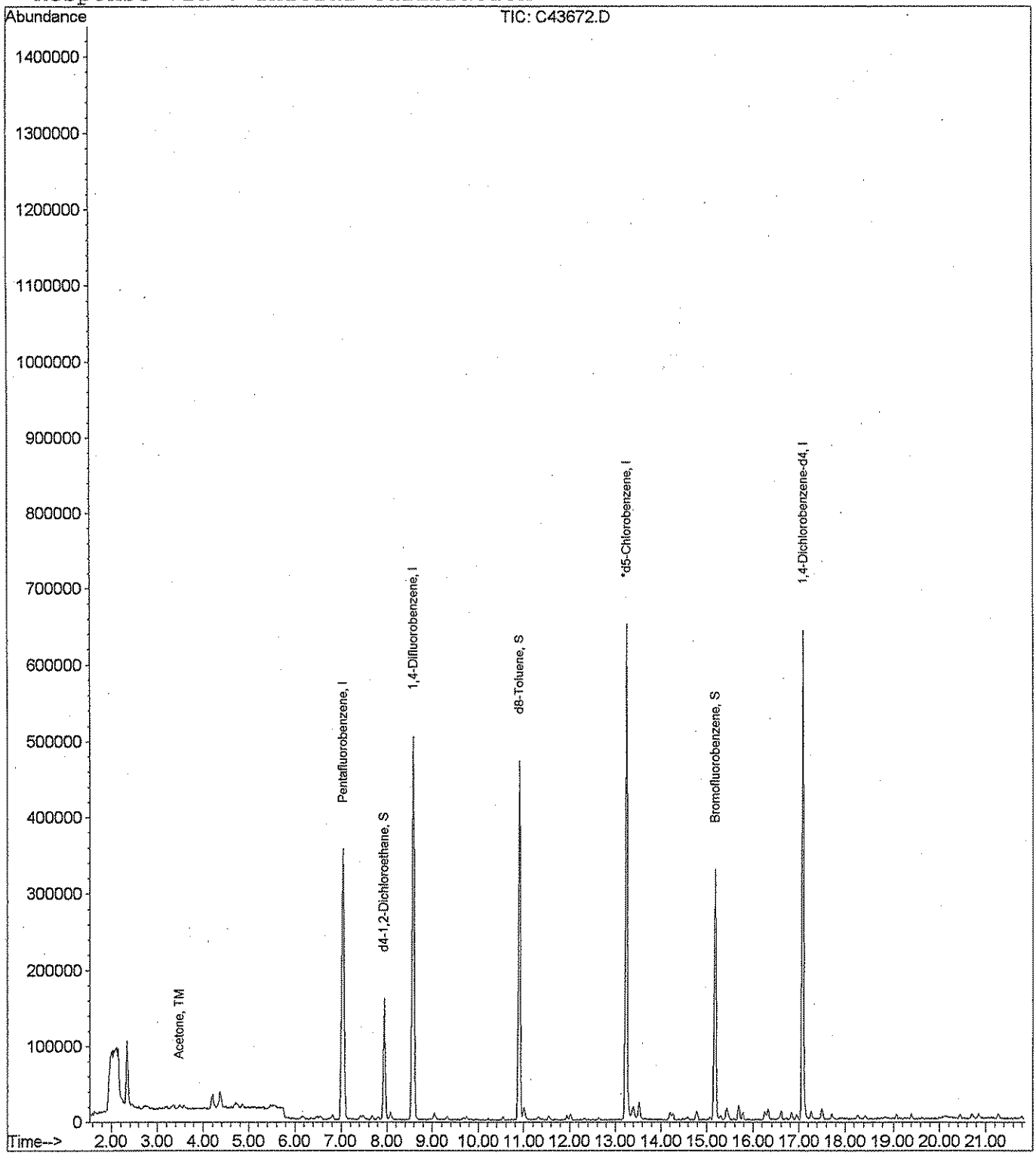
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903C\C43672.D Vial: 11
Acq On : 19 Jun 2003 6:12 pm Operator: JMR
Sample : 49855-14 Inst : Instr_C
Misc : 50,8.14,SOIL Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 18:34 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

# VOLATILE ORGANIC
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16118T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/12/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0928

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 1PPB STD | 92 | 98 | 98 | 0 |
| 02 | 2PPB STD | 92 | 99 | 98 | 0 |
| 03 | 5PPB STD | 92 | 99 | 99 | 0 |
| 04 | 20PPB STD | 94 | 99 | 98 | 0 |
| 05 | 50PPB STD | 101 | 100 | 100 | 0 |
| 06 | 100PPB STD | 102 | 102 | 101 | 0 |
| 07 | ZZZZZ | 92 | 98 | 101 | 0 |
| 08 | ZZZZZ | 96 | 99 | 101 | 0 |
| 09 | ZZZZZ | 97 | 99 | 100 | 0 |
| 10 | ZZZZZ | 97 | 99 | 101 | 0 |
| 11 | ZZZZZ | 95 | 99 | 100 | 0 |
| 12 | ZZZZZ | 97 | 99 | 101 | 0 |
| 13 | ZZZZZ | 94 | 100 | 101 | 0 |
| 14 | ZZZZZ | 98 | 98 | 99 | 0 |
| 15 | ZZZZZ | 102 | 99 | 98 | 0 |
| 16 | ZZZZZ | 103 | 100 | 99 | 0 |
| 17 | ZZZZZ | 102 | 100 | 100 | 0 |
| 18 | ZZZZZ | 98 | 99 | 98 | 0 |
| 19 | ZZZZZ | 99 | 98 | 97 | 0 |
| 20 | ZZZZZ | 98 | 100 | 98 | 0 |
| 21 | ZZZZZ | 99 | 99 | 99 | 0 |
| 22 | ZZZZZ | 98 | 98 | 98 | 0 |
| 23 | ZZZZZ | 102 | 99 | 97 | 0 |
| 24 | ZZZZZ | 101 | 100 | 98 | 0 |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16217T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/16/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0849

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 96 | 99 | 99 | 0 |
| 02 | L806163B | 98 | 101 | 98 | 0 |
| 03 | ZZZZZ | 101 | 101 | 98 | 0 |
| 04 | B806163B | 101 | 100 | 97 | 0 |
| 05 | ZZZZZ | 100 | 100 | 97 | 0 |
| 06 | ZZZZZ | 100 | 100 | 97 | 0 |
| 07 | ZZZZZ | 98 | 99 | 98 | 0 |
| 08 | 49855-1 | 99 | 99 | 99 | 0 |
| 09 | 49855-2 | 102 | 99 | 97 | 0 |
| 10 | 49855-3 | 103 | 100 | 97 | 0 |
| 11 | 49855-4 | 99 | 99 | 98 | 0 |
| 12 | 49855-5 | 102 | 100 | 97 | 0 |
| 13 | 49855-5,MS | 103 | 101 | 99 | 0 |
| 14 | 49855-5,MSD | 105 | 101 | 98 | 0 |
| 15 | 49855-6 | 104 | 101 | 96 | 0 |
| 16 | 49855-7 | 102 | 100 | 96 | 0 |
| 17 | 49855-9 | 101 | 99 | 97 | 0 |
| 18 | ZZZZZ | 103 | 100 | 96 | 0 |
| 19 | ZZZZZ | 102 | 100 | 98 | 0 |
| 20 | ZZZZZ | 101 | 98 | 98 | 0 |
| 21 | ZZZZZ | 103 | 100 | 97 | 0 |
| 22 | ZZZZZ | 105 | 100 | 96 | 0 |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806163B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 16.7 | 84 | | 70-130 |
| Chloromethane | 20 | 21.6 | 108 | | 70-130 |
| Vinyl Chloride | 20 | 18.6 | 93 | | 70-130 |
| Bromomethane | 20 | 16.6 | 83 | | 70-130 |
| Chloroethane | 20 | 18.8 | 94 | | 70-130 |
| t-Butyl alcohol | 100 | 134.3 | 134 | * | 70-130 |
| Trichlorofluoromethane | 20 | 20.2 | 101 | | 70-130 |
| Diethyl ether | 20 | 20.3 | 102 | | 70-130 |
| Acetone | 20 | 24.8 | 124 | | 70-130 |
| 1,1-Dichloroethene | 20 | 20.1 | 101 | | 70-130 |
| Di-isopropyl ether | 20 | 20.4 | 102 | | 70-130 |
| Methylene Chloride | 20 | 17.0 | 85 | | 70-130 |
| Carbon Disulfide | 20 | 18.8 | 94 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 43.4 | 109 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 20.7 | 103 | | 70-130 |
| 1,1-Dichloroethane | 20 | 20.5 | 102 | | 70-130 |
| Methyl ethyl ketone | 20 | 24.1 | 120 | | 70-130 |
| Ethyl t-butyl ether | 20 | 21.0 | 105 | | 70-130 |
| 2,2-Dichloropropane | 20 | 18.5 | 92 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 15.7 | 78 | | 70-130 |
| t-Amyl methyl ether | 20 | 21.6 | 108 | | 70-130 |
| Chloroform | 20 | 20.7 | 104 | | 70-130 |
| Bromochloromethane | 20 | 21.0 | 105 | | 70-130 |
| Tetrahydrofuran | 20 | 27.7 | 139 | * | 70-130 |
| 1,1,1-Trichloroethane | 20 | 22.0 | 110 | | 70-130 |
| 1,1-Dichloropropene | 20 | 20.9 | 104 | | 70-130 |
| Carbon Tetrachloride | 20 | 22.2 | 111 | | 70-130 |
| 1,2-Dichloroethane | 20 | 21.4 | 107 | | 70-130 |
| Benzene | 20 | 19.9 | 100 | | 70-130 |
| Trichloroethene | 20 | 22.6 | 113 | | 70-130 |
| 1,2-Dichloropropane | 20 | 21.6 | 108 | | 70-130 |
| Bromodichloromethane | 20 | 23.1 | 115 | | 70-130 |
| Dibromomethane | 20 | 21.8 | 109 | | 70-130 |
| 2-Hexanone | 20 | 25.4 | 127 | | 70-130 |
| Methyl isobutyl ketone | 20 | 25.5 | 127 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 23.6 | 118 | | 70-130 |
| Toluene | 20 | 20.6 | 103 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 24.0 | 120 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 22.6 | 113 | | 70-130 |
| 1,3-Dichloropropane | 20 | 21.8 | 109 | | 70-130 |
| Tetrachloroethene | 20 | 21.8 | 109 | | 70-130 |
| Dibromochloromethane | 20 | 22.9 | 115 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806163B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 23.0 | 115 | | 70-130 |
| Chlorobenzene | 20 | 20.3 | 101 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 23.1 | 115 | | 70-130 |
| Ethylbenzene | 20 | 20.1 | 100 | | 70-130 |
| M-,P-Xylene | 40 | 40.3 | 101 | | 70-130 |
| O-Xylene | 20 | 20.3 | 101 | | 70-130 |
| Styrene | 20 | 20.7 | 104 | | 70-130 |
| Bromoform | 20 | 24.8 | 124 | | 70-130 |
| Isopropylbenzene | 20 | 19.3 | 97 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 22.2 | 111 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 22.1 | 111 | | 70-130 |
| N-Propylbenzene | 20 | 20.2 | 101 | | 70-130 |
| Bromobenzene | 20 | 20.5 | 103 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 20.2 | 101 | | 70-130 |
| 2-Chlorotoluene | 20 | 20.2 | 101 | | 70-130 |
| 4-Chlorotoluene | 20 | 20.3 | 101 | | 70-130 |
| Tert-Butylbenzene | 20 | 20.3 | 101 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 20.4 | 102 | | 70-130 |
| Sec-Butylbenzene | 20 | 20.6 | 103 | | 70-130 |
| P-Isopropyltoluene | 20 | 19.7 | 99 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 20.3 | 101 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 19.8 | 99 | | 70-130 |
| N-Butylbenzene | 20 | 19.6 | 98 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 20.2 | 101 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 25.6 | 128 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 20.5 | 102 | | 70-130 |
| Hexachlorobutadiene | 20 | 21.0 | 105 | | 70-130 |
| Naphthalene | 20 | 22.1 | 111 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 20.9 | 105 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 18.9 | 95 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 71 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-5

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 16.3 | 82 | | 16.0 | 80 | | 2 | | 15 | 70-130 |
| Chloromethane | 20 | U | 22.6 | 113 | | 22.5 | 113 | | 0 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 19.2 | 96 | | 19.9 | 100 | | 4 | | 15 | 70-130 |
| Bromomethane | 20 | U | 18.1 | 91 | | 20.8 | 104 | | 14 | | 15 | 70-130 |
| Chloroethane | 20 | U | 20.0 | 100 | | 20.0 | 100 | | 0 | | 15 | 70-130 |
| t-Butyl alcohol | 100 | U | 115.2 | 115 | | 106.7 | 107 | | 8 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 20.5 | 103 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| Acetone | 20 | U | 24.2 | 121 | | 23.0 | 115 | | 5 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 21.2 | 106 | | 21.5 | 107 | | 2 | | 15 | 70-130 |
| Di-isopropyl ether | 20 | U | 20.4 | 102 | | 20.0 | 100 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 16.4 | 82 | | 15.8 | 79 | | 4 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 19.3 | 97 | | 19.4 | 97 | | 0 | | 15 | 70-130 |
| Methyl-tert-butyl ether | 40 | U | 42.4 | 106 | | 41.8 | 105 | | 1 | | 15 | 70-130 |
| Trans-1,2-Dichloroethene | 20 | U | 21.5 | 108 | | 22.0 | 110 | | 2 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 21.2 | 106 | | 21.1 | 105 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 20 | U | 22.9 | 114 | | 30.3 | 152 | * | 28 | * | 15 | 70-130 |
| Ethyl t-butyl ether | 20 | U | 20.8 | 104 | | 28.4 | 142 | * | 31 | * | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 22.0 | 110 | | 22.6 | 113 | | 3 | | 15 | 70-130 |
| Cis-1,2-Dichloroethene | 20 | U | 21.5 | 108 | | 22.4 | 112 | | 4 | | 15 | 70-130 |
| t-Amyl methyl ether | 20 | U | 20.0 | 100 | | 20.1 | 100 | | 0 | | 15 | 70-130 |
| Chloroform | 20 | U | 21.2 | 106 | | 21.9 | 109 | | 3 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 20.6 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 23.6 | 118 | | 23.5 | 117 | | 1 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 22.1 | 111 | | 22.7 | 114 | | 3 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 21.4 | 107 | | 21.8 | 109 | | 2 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 22.5 | 113 | | 23.2 | 116 | | 3 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 21.4 | 107 | | 21.9 | 110 | | 2 | | 15 | 70-130 |
| Benzene | 20 | U | 20.2 | 101 | | 20.4 | 102 | | 1 | | 15 | 70-130 |
| Trichloroethene | 20 | U | 22.6 | 113 | | 22.8 | 114 | | 1 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 21.5 | 108 | | 21.8 | 109 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 22.2 | 111 | | 22.7 | 114 | | 2 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 20.8 | 104 | | 20.9 | 105 | | 1 | | 15 | 70-130 |
| 2-Hexanone | 20 | U | 21.5 | 108 | | 20.8 | 104 | | 3 | | 15 | 70-130 |
| Methyl isobutyl ketone | 20 | U | 21.4 | 107 | | 20.8 | 104 | | 3 | | 15 | 70-130 |
| Cis-1,3-Dichloropropene | 20 | U | 22.5 | 112 | | 22.8 | 114 | | 1 | | 15 | 70-130 |
| Toluene | 20 | U | 20.0 | 100 | | 20.2 | 101 | | 1 | | 15 | 70-130 |
| Trans-1,3-Dichloropropene | 20 | U | 22.1 | 111 | | 22.3 | 111 | | 1 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 21.1 | 105 | | 21.1 | 105 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 20.7 | 103 | | 20.7 | 104 | | 0 | | 15 | 70-130 |
| Tetrachloroethene | 20 | U | 20.8 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-5

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 20.9 | 105 | | 20.9 | 104 | | 0 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 19.7 | 98 | | 19.5 | 98 | | 1 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.5 | 108 | | 21.7 | 108 | | 1 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 19.7 | 99 | | 19.7 | 98 | | 0 | | 15 | 70-130 |
| M-,P-Xylene | 40 | U | 39.0 | 97 | | 38.4 | 96 | | 1 | | 15 | 70-130 |
| O-Xylene | 20 | U | 19.5 | 98 | | 19.4 | 97 | | 1 | | 15 | 70-130 |
| Styrene | 20 | U | 19.9 | 100 | | 19.8 | 99 | | 1 | | 15 | 70-130 |
| Bromoform | 20 | U | 21.3 | 107 | | 20.7 | 103 | | 3 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 18.7 | 94 | | 18.8 | 94 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 19.4 | 97 | | 18.8 | 94 | | 3 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 19.5 | 98 | | 18.7 | 94 | | 4 | | 15 | 70-130 |
| N-Propylbenzene | 20 | U | 19.5 | 98 | | 19.3 | 97 | | 1 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 19.1 | 96 | | 19.3 | 96 | | 1 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 19.4 | 97 | | 19.4 | 97 | | 0 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 19.3 | 96 | | 19.6 | 98 | | 2 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 19.2 | 96 | | 18.7 | 93 | | 3 | | 15 | 70-130 |
| Tert-Butylbenzene | 20 | U | 19.7 | 99 | | 19.2 | 96 | | 3 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 19.5 | 98 | | 19.7 | 98 | | 1 | | 15 | 70-130 |
| Sec-Butylbenzene | 20 | U | 19.8 | 99 | | 19.7 | 99 | | 0 | | 15 | 70-130 |
| P-Isopropyltoluene | 20 | U | 18.9 | 95 | | 18.9 | 94 | | 0 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 19.2 | 96 | | 18.9 | 95 | | 1 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 18.7 | 93 | | 19.1 | 96 | | 2 | | 15 | 70-130 |
| N-Butylbenzene | 20 | U | 19.2 | 96 | | 19.5 | 98 | | 2 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 18.8 | 94 | | 19.1 | 95 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 20.5 | 102 | | 20.8 | 104 | | 2 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 18.6 | 93 | | 19.0 | 95 | | 2 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 20.1 | 100 | | 20.9 | 105 | | 4 | | 15 | 70-130 |
| Naphthalene | 20 | U | 18.4 | 92 | | 18.9 | 94 | | 2 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 18.2 | 91 | | 19.0 | 95 | | 4 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 17.6 | 88 | | 18.1 | 91 | | 3 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 2 out of 71 outside limits

Spike Recovery: 2 out of 142 outside limits

Comments: _____

_____

# GC/MS Volatiles Instrument: B

IS only Exp:

SS+IS ✓4495 Exp: 6.2003

Voltage 1918

Threshold 100

Jm 061203-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-061203-1-JR | | | | | | | |
| 1 | V806123B | Blank | 5mL | | System Cond. | B16116 | Jm | |
| 1 | | Blank | | | ↓ | 17 | | |
| 2 | | BFB 50ng 2mL V4487 | | ✓ | | 18 | T | |
| 3 | | 1PPB 0.25mL V4496 V4492 | | ✓ | | 19 | SI | |
| 4 | | 2PPB 0.5mL | | ✓ | | 20 | SI | |
| 5 | | 5PPB 1.25mL | | ✓ | | 21 | SI | |
| 6 | | 20PPB 5mL | | ✓ | | 22 | SI | |
| 7 | | 50PPB 12.5mL | | ✓ | | 23 | SI | |
| 8 | | 100PPB 25mL | | ✓ | | 24 | ST | |
| 9 | | Blank | | | | 25 | | |
| 10 | | L806123B V4497 V4493 | | ✓ | All OK | 26 | Q | |
| 11 | | L806123B2 ↓ | | | MEK↑ 148% | 27 | Q | |
| 12 | | B806123B | | ✓ | | 28 | B | |
| 13 | | 49819-4 | 5mL | ✓ | | 29 | | <2 |
| 14 | | 49830-2 | | ✓ | | 30 | | <2 |
| 15 | | 49801-5 | | ✓ | | 31 | | <2 |
| 16 | | 49786-3 | | ✓ | | 32 | | <2 |
| 17 | | 49824-1 | | ✓ | NR 2.5mL | 33 | | <2 |
| 18 | | -1, MS | | ✓ | All OK | 34 | SP | <2 |
| 19 | | -1, MSD | | ✓ | | 35 | SP | <2 |
| 20 | | -2 | 25mL | ✓ | | 36 | | <2 |
| 21 | | -3 | 25mL | ✓ | | 37 | | <2 |
| 22 | | -4 | 5mL | ✓ | | 38 | | <2 |
| 23 | | -5 | 100mL | ✓ | | 39 | | <2 |
| 24 | | 49830-1 | 5mL | ✓ | | 40 | | <2 |
| 25 | | 49832-1 | | ✓ | | 41 | | <2 |
| 26 | | -2 | | | *out of 12hr. NR 5mL | 42 | | <2 |
| 27 | | Blank | 5mL | ✓ | clean | 43 | | |
| 28 | | BFB 50ng 2mL V4487 | | ✓ | | 44 | T | |
| 29 | | 20PPB 5mL V4496 V4492 | | ✓ | | 45 | SC | |

1044

(CONT.)

Revision: 04/30/02

DB

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4495 Exp: 6-20-03

**Voltage** 1918

**Threshold** 100

061603-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-061603-1-OR | | | | | | | |
| 1 | V806123B | Blank | 5mL | | | B16216 | Jm | |
| 2 | | BFB 50ng 2ml V4487 | | ✓ | | 17 | T | |
| 3 | | 20PPB 5ml V4496 V4492 | | ✓ | | 18 | SC | |
| 4 | | L806163B V4497 V4493 | | | TBA 134%. THF 139%. | 19 | Q | |
| 5 | | Bromoform | | ✓ | | 20 | | |
| 6 | | B806163B | | ✓ | | 21 | B | |
| 7 | | 49838-5 | 5mL | ✓ | | 22 | | <2 |
| 8 | | 49843-8 | | ✓ | | 23 | | <2 |
| 9 | | 49829-8 | 5mL | ✓ | | 24 | | <2 |
| 10 | | 49855-1 | | ✓ | | 25 | | <2 |
| 11 | | -2 | | ✓ | | 26 | | <2 |
| 12 | | -3 | | ✓ | | 27 | | <2 |
| 13 | | -4 | | ✓ | | 28 | | <2 |
| 14 | | -5 | | ✓ | | 29 | | <2 |
| 15 | | -5MS | | | MEK, ETBE ↑ | 30sp | | <2 |
| 16 | | -5MSD | | | | 31sp | | <2 |
| 17 | | -6 | | ✓ | | 32 | | <2 |
| 18 | | -7 | | ✓ | | 33 | | <2 |
| 19 | | -9 | | ✓ | | 34 | | <2 |
| 20 | | ~~49838-1~~ 49824-9 | | ✓ | | 35 | | <2 |
| 21 | | ~~-2~~ -12 | | ✓ | | 36 | | <2 |
| 22 | | ~~-3~~ 49840-3 | 250ml | ✓ | | 37 | | <2 |
| 23 | | ~~-4~~ -11 | 5mL | ✓ | | 38 | | <2 |
| 24 | | 49848-1 | 500ml | | MK 5mL - co potential. | 39 | | <2 |
| 25 | | BFB 50ng 2ml V4487 | 5mL | ✓ | | 40 | T | |
| 26 | | 20PPB 5ml V4496 V4492 | | ✓ | | 41 | SC | |
| 27 | | L806163B2 V4497 V4493 | | | MEK, ETBE ↑ | 42 | Q | |
| 28 | | L806163B3 | | | | 43 | Q | |
| 29 | | B806163B2 | | ✓ | | 44 | B | |
| 30 | | 49843-2 | 1mL | ✓ | | 45 | | <2 |

841

Revision: 04/30/02



[0261]

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16118T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/12/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0928

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.3 |
| 75 | 30.0 - 60.0% of mass 95 | 42.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.2 ( 0.3 )1 |
| 174 | Greater than 50% of mass 95 | 67.9 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 7.0 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 65.1 ( 96.0 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 ( 6.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 1PPB STD | 1PPB STD | B16119SI.D | 06/12/03 | 9:59 |
| 02 | 2PPB STD | 2PPB STD | B16120SI.D | 06/12/03 | 10:30 |
| 03 | 5PPB STD | 5PPB STD | B16121SI.D | 06/12/03 | 11:01 |
| 04 | 20PPB STD | 20PPB STD | B16122SI.D | 06/12/03 | 11:31 |
| 05 | 50PPB STD | 50PPB STD | B16123SI.D | 06/12/03 | 12:02 |
| 06 | 100PPB STD | 100PPB STD | B16124SI.D | 06/12/03 | 12:33 |
| 07 | ZZZZZ | ZZZZZ | B16125.D | 06/12/03 | 13:03 |
| 08 | ZZZZZ | ZZZZZ | B16126Q.D | 06/12/03 | 13:34 |
| 09 | ZZZZZ | ZZZZZ | B16127Q.D | 06/12/03 | 14:05 |
| 10 | ZZZZZ | ZZZZZ | B16128B.D | 06/12/03 | 14:35 |
| 11 | ZZZZZ | ZZZZZ | B16129.D | 06/12/03 | 15:06 |
| 12 | ZZZZZ | ZZZZZ | B16130.D | 06/12/03 | 15:37 |
| 13 | ZZZZZ | ZZZZZ | B16131.D | 06/12/03 | 16:07 |
| 14 | ZZZZZ | ZZZZZ | B16132.D | 06/12/03 | 16:38 |
| 15 | ZZZZZ | ZZZZZ | B16133.D | 06/12/03 | 17:08 |
| 16 | ZZZZZ | ZZZZZ | B16134SP.D | 06/12/03 | 17:39 |
| 17 | ZZZZZ | ZZZZZ | B16135SP.D | 06/12/03 | 18:09 |
| 18 | ZZZZZ | ZZZZZ | B16136.D | 06/12/03 | 18:40 |
| 19 | ZZZZZ | ZZZZZ | B16137.D | 06/12/03 | 19:10 |
| 20 | ZZZZZ | ZZZZZ | B16138.D | 06/12/03 | 19:41 |
| 21 | ZZZZZ | ZZZZZ | B16139.D | 06/12/03 | 20:11 |
| 22 | ZZZZZ | ZZZZZ | B16140.D | 06/12/03 | 20:42 |
| 23 | ZZZZZ | ZZZZZ | B16141.D | 06/12/03 | 21:12 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16217T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/16/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0849

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 20.1 |
| 75 | 30.0 - 60.0% of mass 95 | 43.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 68.0 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 7.1 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 65.3 ( 95.9 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B16218SC.D | 06/16/03 | 9:20 |
| 02 | L806163B | L806163B | B16219Q.D | 06/16/03 | 9:51 |
| 03 | ZZZZZ | ZZZZZ | B16220.D | 06/16/03 | 10:23 |
| 04 | B806163B | B806163B | B16221B.D | 06/16/03 | 10:56 |
| 05 | ZZZZZ | ZZZZZ | B16222.D | 06/16/03 | 11:31 |
| 06 | ZZZZZ | ZZZZZ | B16223.D | 06/16/03 | 12:01 |
| 07 | ZZZZZ | ZZZZZ | B16224.D | 06/16/03 | 12:32 |
| 08 | 49855-1 | 49855-1 | B16225.D | 06/16/03 | 13:02 |
| 09 | 49855-2 | 49855-2 | B16226.D | 06/16/03 | 13:33 |
| 10 | 49855-3 | 49855-3 | B16227.D | 06/16/03 | 14:04 |
| 11 | 49855-4 | 49855-4 | B16228.D | 06/16/03 | 14:34 |
| 12 | 49855-5 | 49855-5 | B16229.D | 06/16/03 | 15:05 |
| 13 | 49855-5,MS | 49855-5,MS | B16230.D | 06/16/03 | 15:36 |
| 14 | 49855-5,MSD | 49855-5,MSD | B16231.D | 06/16/03 | 16:06 |
| 15 | 49855-6 | 49855-6 | B16232.D | 06/16/03 | 16:37 |
| 16 | 49855-7 | 49855-7 | B16233.D | 06/16/03 | 17:07 |
| 17 | 49855-9 | 49855-9 | B16234.D | 06/16/03 | 17:38 |
| 18 | ZZZZZ | ZZZZZ | B16235.D | 06/16/03 | 18:08 |
| 19 | ZZZZZ | ZZZZZ | B16236.D | 06/16/03 | 18:39 |
| 20 | ZZZZZ | ZZZZZ | B16237.D | 06/16/03 | 19:10 |
| 21 | ZZZZZ | ZZZZZ | B16238.D | 06/16/03 | 19:40 |
| 22 | ZZZZZ | ZZZZZ | B16239.D | 06/16/03 | 20:11 |
| 23 | | | | | |

C:\HPCHEM\1\DATA\061203-B\B16125.D
Method File **V806123B**
Level 1 File Name **B16119SI.D**
Level 2 File Name **B16120SI.D**
Level 3 File Name **B16121SI.D**
Level 4 File Name **B16122SI.D**
Level 5 File Name **B16123SI.D**
Level 6 File Name **B16124SI.D**

| Name | LEVEL 1 RF | LEVEL 2 RF | LEVEL 3 RF | LEVEL 4 RF | LEVEL 5 RF | LEVEL 6 RF | AVG RF |
|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.693 | 0.715 | 0.724 | 0.750 | 0.735 | 0.683 | 3.5% |
| Chloromethane | 0.555 | 0.571 | 0.555 | 0.577 | 0.562 | 0.547 | 2.0% |
| Vinyl Chloride | 0.397 | 0.384 | 0.338 | 0.282 | 0.273 | 0.237 | 20.3% |
| Bromomethane | 0.168 | 0.185 | 0.198 | 0.230 | 0.251 | 0.240 | 15.6% |
| Chloroethane | 0.285 | 0.295 | 0.252 | 0.261 | 0.250 | 0.222 | 10.1% |
| t-Butyl alcohol (TBA) | 0.027 | 0.027 | 0.027 | 0.033 | 0.034 | 0.035 | 12.1% |
| Trichlorofluoromethane | 0.489 | 0.527 | 0.533 | 0.578 | 0.556 | 0.541 | 5.6% |
| Diethyl ether | 0.189 | 0.175 | 0.172 | 0.187 | 0.178 | 0.175 | 3.9% |
| 1,1,2-Trichlorotrifluoroethane | 0.337 | 0.323 | 0.306 | 0.343 | 0.322 | 0.305 | 4.9% |
| Acrolein | 0.076 | 0.074 | 0.075 | 0.085 | 0.081 | 0.079 | 5.2% |
| Acetone | 0.127 | 0.118 | 0.111 | 0.124 | 0.118 | 0.116 | 4.9% |
| 1,1-Dichloroethene | 0.319 | 0.300 | 0.288 | 0.318 | 0.308 | 0.300 | 3.9% |
| Methyl iodide | 0.381 | 0.394 | 0.442 | 0.564 | 0.604 | 0.562 | 19.7% |
| Di-isopropyl ether (DIPE) | 1.476 | 1.312 | 1.263 | 1.383 | 1.331 | 1.284 | 5.8% |
| Methylene Chloride | 0.530 | 0.415 | 0.417 | 0.391 | 0.384 | 0.000 | 13.8% |
| Carbon Disulfide | 0.806 | 0.813 | 0.827 | 0.966 | 0.957 | 0.955 | 8.9% |
| Acrylonitrile | 0.126 | 0.127 | 0.121 | 0.140 | 0.138 | 0.138 | 6.1% |
| Methyl-tert-butyl ether (MTBE | 0.945 | 0.870 | 0.861 | 0.952 | 0.916 | 0.903 | 4.1% |
| trans-1,2-Dichloroethene | 0.324 | 0.307 | 0.306 | 0.333 | 0.321 | 0.315 | 3.3% |
| 1,1-Dichloroethane | 0.648 | 0.612 | 0.592 | 0.645 | 0.628 | 0.614 | 3.4% |
| Vinyl acetate | 0.028 | 0.029 | 0.034 | 0.041 | 0.039 | 0.040 | 15.8% |
| Methyl ethyl ketone | 0.038 | 0.037 | 0.037 | 0.043 | 0.045 | 0.043 | 8.9% |
| Ethyl t-butyl ether (ETBE) | 1.296 | 1.178 | 1.158 | 1.267 | 1.236 | 1.196 | 4.7% |
| 2,2-Dichloropropane | 0.524 | 0.490 | 0.493 | 0.487 | 0.578 | 0.569 | 7.9% |
| cis-1,2-Dichloroethene | 0.540 | 0.493 | 0.487 | 0.497 | 0.527 | 0.524 | 4.3% |
| t-Amyl methyl ether (TAME) | 1.490 | 1.405 | 1.404 | 1.541 | 1.505 | 1.471 | 3.7% |
| Chloroform | 0.874 | 0.818 | 0.792 | 0.870 | 0.853 | 0.842 | 3.8% |
| Bromochloromethane | 0.286 | 0.264 | 0.267 | 0.295 | 0.287 | 0.283 | 4.4% |
| Tetrahydrofuran | 0.054 | 0.047 | 0.053 | 0.064 | 0.062 | 0.063 | 11.9% |
| 1,1,1-Trichloroethane | 0.592 | 0.583 | 0.580 | 0.649 | 0.653 | 0.649 | 5.8% |
| 1,1-Dichloropropene | 0.760 | 0.726 | 0.696 | 0.784 | 0.762 | 0.742 | 4.1% |
| Carbon Tetrachloride | 0.448 | 0.446 | 0.442 | 0.517 | 0.532 | 0.526 | 9.0% |
| 1,2-Dichloroethane | 0.706 | 0.689 | 0.663 | 0.721 | 0.701 | 0.694 | 2.8% |
| Benzene | 2.421 | 2.272 | 2.180 | 2.341 | 2.248 | 2.140 | 4.6% |
| Trichloroethene | 0.310 | 0.290 | 0.285 | 0.314 | 0.303 | 0.299 | 3.7% |
| 1,2-Dichloropropane | 0.357 | 0.343 | 0.333 | 0.371 | 0.359 | 0.353 | 3.8% |
| Methylmethacrylate | 0.243 | 0.236 | 0.238 | 0.276 | 0.266 | 0.265 | 6.6% |
| Bromodichloromethane | 0.305 | 0.306 | 0.313 | 0.365 | 0.369 | 0.377 | 10.1% |
| Dibromomethane | 0.209 | 0.208 | 0.203 | 0.226 | 0.218 | 0.220 | 4.1% |
| 2-Chloroethylvinyl ether | 0.001 | 0.002 | 0.002 | 0.002 | -1.000 | 0.000 | 29.8% |
| 2-Hexanone | 0.149 | 0.143 | 0.146 | 0.166 | 0.153 | 0.146 | 5.6% |
| Methyl isobutyl ketone | 0.143 | 0.139 | 0.141 | 0.159 | 0.150 | 0.143 | 5.2% |
| cis-1,3-Dichloropropene | 0.443 | 0.437 | 0.452 | 0.528 | 0.531 | 0.531 | 9.7% |
| Toluene | 0.764 | 0.719 | 0.699 | 0.763 | 0.736 | 0.725 | 3.5% |
| trans-1,3-Dichloropropene | 0.345 | 0.350 | 0.367 | 0.447 | 0.456 | 0.454 | 13.5% |
| 1,1,2-Trichloroethane | 0.266 | 0.260 | 0.251 | 0.274 | 0.262 | 0.251 | 3.3% |
| 1,3-Dichloropropane | 0.567 | 0.532 | 0.528 | 0.580 | 0.557 | 0.546 | 3.7% |
| Tetrachloroethene | 0.301 | 0.284 | 0.268 | 0.293 | 0.287 | 0.286 | 3.8% |
| Dibromochloromethane | 0.244 | 0.235 | 0.250 | 0.309 | 0.311 | 0.318 | 13.8% |
| 1,2-Dibromoethane | 0.299 | 0.307 | 0.298 | 0.339 | 0.332 | 0.327 | 5.7% |
| Chlorobenzene | 0.937 | 0.867 | 0.857 | 0.927 | 0.899 | 0.874 | 3.7% |
| 1,1,1,2-Tetrachloroethane | 0.255 | 0.250 | 0.257 | 0.294 | 0.296 | 0.292 | 8.0% |
| Ethylbenzene | 1.624 | 1.533 | 1.488 | 1.603 | 1.547 | 1.480 | 3.8% |
| m,p-Xylene | 0.577 | 0.562 | 0.535 | 0.579 | 0.568 | 0.540 | 3.4% |
| o-Xylene | 0.546 | 0.531 | 0.526 | 0.570 | 0.561 | 0.545 | 3.1% |
| Styrene | 0.946 | 0.927 | 0.937 | 1.021 | 1.008 | 0.971 | 4.0% |
| Bromoform | 0.143 | 0.147 | 0.159 | 0.210 | 0.219 | 0.220 | 20.3% |
| Isopropylbenzene | 1.395 | 1.322 | 1.306 | 1.428 | 1.400 | 1.342 | 3.6% |
| 1,1,2,2-Tetrachloroethane | 0.498 | 0.472 | 0.472 | 0.513 | 0.490 | 0.474 | 3.5% |
| 1,2,3-Trichloropropane | 0.398 | 0.373 | 0.371 | 0.388 | 0.365 | 0.355 | 4.2% |
| trans-1,4-Dichloro-2-butene | 0.136 | 0.129 | 0.134 | 0.163 | 0.157 | 0.150 | 9.3% |
| n-Propylbenzene | 1.764 | 1.715 | 1.689 | 1.844 | 1.811 | 1.749 | 3.3% |
| Bromobenzene | 0.374 | 0.358 | 0.349 | 0.375 | 0.372 | 0.363 | 2.9% |
| 1,3,5-Trimethylbenzene | 1.047 | 1.036 | 1.017 | 1.105 | 1.082 | 1.050 | 3.1% |
| 2-Chlorotoluene | 1.225 | 1.140 | 1.133 | 1.201 | 1.164 | 1.142 | 3.2% |
| 4-Chlorotoluene | 1.112 | 1.084 | 1.058 | 1.148 | 1.136 | 1.070 | 3.3% |
| tert-butylbenzene | 0.888 | 0.843 | 0.842 | 0.916 | 0.910 | 0.882 | 3.6% |
| 1,2,4-Trimethylbenzene | 1.173 | 1.107 | 1.090 | 1.172 | 1.145 | 1.110 | 3.2% |
| sec-butylbenzene | 1.277 | 1.221 | 1.214 | 1.334 | 1.325 | 1.303 | 4.0% |
| p-isopropyltoluene | 0.987 | 0.975 | 0.984 | 1.083 | 1.074 | 1.062 | 4.9% |
| 1,3-Dichlorobenzene | 0.680 | 0.636 | 0.626 | 0.676 | 0.675 | 0.667 | 3.5% |
| 1,4-Dichlorobenzene | 1.411 | 1.309 | 1.303 | 1.399 | 1.369 | 1.350 | 3.3% |
| n-butylbenzene | 1.971 | 1.900 | 1.898 | 2.088 | 2.053 | 2.017 | 4.0% |
| 1,2-Dichlorobenzene | 1.300 | 1.212 | 1.206 | 1.299 | 1.278 | 1.256 | 3.3% |
| 1,2-Dibromo-3-chloropropane | 0.118 | 0.108 | 0.116 | 0.143 | 0.141 | 0.146 | 13.0% |
| 1,2,4-Trichlorobenzene | 0.704 | 0.641 | 0.652 | 0.714 | 0.710 | 0.725 | 5.1% |
| Hexachlorobutadiene | 0.180 | 0.173 | 0.169 | 0.179 | 0.179 | 0.182 | 2.9% |
| Naphthalene | 2.162 | 2.041 | 2.094 | 2.337 | 2.243 | 2.296 | 5.3% |
| 1,2,3-Trichlorobenzene | 0.624 | 0.612 | 0.610 | 0.666 | 0.652 | 0.672 | 4.3% |
| 1,3,5-Trichlorobenzene | 0.710 | 0.711 | 0.691 | 0.765 | 0.765 | 0.775 | 4.9% |

**CURVE AVG RF** **6.5%**

6.13.03

VMK 6/13/03

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:29 2003
Response via : Initial Calibration

6.13.03

VMT 6/13/03

Calibration Files
1 =B16119SI.D 2 =B16120SI.D 5 =B16121SI.D
20 =B16122SI.D 50 =B16123SI.D 100 =B16124SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 0.693 | 0.715 | 0.724 | 0.750 | 0.735 | 0.683 | 0.716 | 3.5 |
| 3) | TMP | Chloromethane | 0.555 | 0.571 | 0.555 | 0.577 | 0.562 | 0.547 | 0.561 | 1.9 |
| 4) | TMC | Vinyl Chloride | 0.397 | 0.384 | 0.338 | 0.282 | 0.273 | 0.237 | 0.319 | 20.3 |
| 5) | TM | Bromomethane | 0.168 | 0.185 | 0.198 | 0.230 | 0.251 | 0.240 | 0.212 | 15.5 |
| 6) | TM | Chloroethane | 0.285 | 0.295 | 0.252 | 0.261 | 0.250 | 0.222 | 0.261 | 10.0 |
| 7) | TM | t-Butyl alcohol (TB | 0.027 | 0.027 | 0.027 | 0.033 | 0.034 | 0.035 | 0.031# | 12.0 |
| 8) | TM | Trichlorofluorometh | 0.489 | 0.527 | 0.533 | 0.578 | 0.556 | 0.541 | 0.537 | 5.5 |
| 9) | TM | Diethyl ether | 0.189 | 0.175 | 0.172 | 0.187 | 0.178 | 0.175 | 0.179 | 3.9 |
| 10) | T | 1,1,2-Trichlorotrif | 0.337 | 0.323 | 0.306 | 0.343 | 0.322 | 0.305 | 0.323 | 4.8 |
| 11) | T | Acrolein | 0.076 | 0.074 | 0.075 | 0.085 | 0.081 | 0.079 | 0.078# | 5.2 |
| 12) | TM | Acetone | 0.127 | 0.118 | 0.111 | 0.124 | 0.118 | 0.116 | 0.119 | 4.9 |
| 13) | TMC | 1,1-Dichloroethene | 0.319 | 0.300 | 0.288 | 0.318 | 0.308 | 0.300 | 0.306 | 3.9 |
| 14) | T | Methyl iodide | 0.381 | 0.394 | 0.442 | 0.564 | 0.604 | 0.562 | 0.491 | 19.7 |
| 15) | TM | Di-isopropyl ether | 1.476 | 1.312 | 1.263 | 1.383 | 1.331 | 1.284 | 1.342 | 5.8 |
| 16) | TM | Methylene Chloride | | 0.530 | 0.415 | 0.417 | 0.391 | 0.384 | 0.427 | 13.8 |
| 17) | TM | Carbon Disulfide | 0.806 | 0.813 | 0.827 | 0.966 | 0.957 | 0.955 | 0.887 | 8.9 |
| 18) | T | Acrylonitrile | 0.126 | 0.127 | 0.121 | 0.140 | 0.138 | 0.138 | 0.132 | 6.1 |
| 19) | TM | Methyl-tert-butyl e | 0.945 | 0.870 | 0.861 | 0.952 | 0.916 | 0.903 | 0.908 | 4.1 |
| 20) | TM | trans-1,2-Dichloroe | 0.324 | 0.307 | 0.306 | 0.333 | 0.321 | 0.315 | 0.317 | 3.2 |
| 21) | TMP | 1,1-Dichloroethane | 0.648 | 0.612 | 0.592 | 0.645 | 0.628 | 0.614 | 0.623 | 3.4 |
| 22) | T | Vinyl acetate | 0.028 | 0.029 | 0.034 | 0.041 | 0.039 | 0.040 | 0.035# | 15.7 |
| 23) | TM | Methyl ethyl ketone | 0.038 | 0.037 | 0.037 | 0.043 | 0.045 | 0.043 | 0.040# | 8.8 |
| 24) | TM | Ethyl t-butyl ether | 1.296 | 1.178 | 1.158 | 1.287 | 1.236 | 1.196 | 1.225 | 4.6 |
| 25) | TM | 2,2-Dichloropropane | 0.524 | 0.490 | 0.493 | 0.487 | 0.578 | 0.569 | 0.524 | 7.8 |
| 26) | TM | cis-1,2-Dichloroeth | 0.540 | 0.493 | 0.487 | 0.497 | 0.527 | 0.524 | 0.511 | 4.2 |
| 27) | TM | t-Amyl methyl ether | 1.490 | 1.405 | 1.404 | 1.541 | 1.505 | 1.471 | 1.469 | 3.7 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000# | -1.0 |
| 29) | TMC | Chloroform | 0.874 | 0.818 | 0.792 | 0.870 | 0.853 | 0.842 | 0.841 | 3.7 |
| 30) | TM | Bromochloromethane | 0.286 | 0.264 | 0.267 | 0.295 | 0.287 | 0.283 | 0.280 | 4.3 |
| 31) | TM | Tetrahydrofuran | 0.054 | 0.047 | 0.053 | 0.064 | 0.062 | 0.063 | 0.057# | 11.9 |
| 32) | TM | 1,1,1-Trichloroetha | 0.592 | 0.583 | 0.580 | 0.649 | 0.653 | 0.649 | 0.618 | 5.8 |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 34) | TM | 1,1-Dichloropropene | 0.760 | 0.726 | 0.696 | 0.784 | 0.762 | 0.742 | 0.745 | 4.1 |
| 35) | TM | Carbon Tetrachlorid | 0.448 | 0.446 | 0.442 | 0.517 | 0.532 | 0.526 | 0.485 | 9.0 |
| 36) | S | d4-1,2-Dichloroetha | 0.595 | 0.598 | 0.597 | 0.606 | 0.603 | 0.614 | 0.602 | 1.1 |
| 37) | TM | 1,2-Dichloroethane | 0.706 | 0.689 | 0.663 | 0.721 | 0.701 | 0.694 | 0.696 | 2.8 |
| 38) | TM | Benzene | 2.421 | 2.272 | 2.180 | 2.341 | 2.248 | 2.140 | 2.267 | 4.5 |
| 39) | I | 1,4-Difluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | 0.310 | 0.290 | 0.285 | 0.314 | 0.303 | 0.299 | 0.300 | 3.6 |
| 41) | TMC | 1,2-Dichloropropane | 0.357 | 0.343 | 0.333 | 0.371 | 0.359 | 0.353 | 0.353 | 3.7 |
| 42) | T | Methylmethacrylate | 0.243 | 0.236 | 0.238 | 0.276 | 0.266 | 0.265 | 0.254 | 6.6 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:29 2003
Response via : Initial Calibration

Calibration Files
1 =B16119SI.D 2 =B16120SI.D 5 =B16121SI.D
20 =B16122SI.D 50 =B16123SI.D 100 =B16124SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 45) | TM | Bromodichloromethan | 0.305 | 0.306 | 0.313 | 0.365 | 0.369 | 0.377 | 0.339 | 10.1 |
| 46) | TM | Dibromomethane | 0.209 | 0.208 | 0.203 | 0.226 | 0.218 | 0.220 | 0.214 | 4.1 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 50) | T | 2-Chloroethylvinyl | | | 0.001 | 0.002 | 0.002 | 0.002 | 0.002# | 29.8 |
| 51) | TM | 2-Hexanone | 0.149 | 0.143 | 0.146 | 0.166 | 0.153 | 0.146 | 0.151 | 5.5 |
| 52) | TM | Methyl isobutyl ket | 0.143 | 0.139 | 0.141 | 0.159 | 0.150 | 0.143 | 0.146 | 5.2 |
| 53) | TM | cis-1,3-Dichloropro | 0.443 | 0.437 | 0.452 | 0.528 | 0.531 | 0.531 | 0.487 | 9.7 |
| 54) | S | d8-Toluene | 1.167 | 1.180 | 1.177 | 1.179 | 1.182 | 1.202 | 1.181 | 0.9 |
| 55) | TMC | Toluene | 0.764 | 0.719 | 0.699 | 0.763 | 0.736 | 0.725 | 0.734 | 3.4 |
| 56) | TM | trans-1,3-Dichlorop | 0.345 | 0.350 | 0.367 | 0.447 | 0.456 | 0.454 | 0.403 | 13.5 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.266 | 0.260 | 0.251 | 0.274 | 0.262 | 0.251 | 0.261 | 3.3 |
| 59) | TM | 1,3-Dichloropropane | 0.567 | 0.532 | 0.528 | 0.580 | 0.557 | 0.546 | 0.552 | 3.7 |
| 60) | TM | Tetrachloroethene | 0.301 | 0.284 | 0.268 | 0.293 | 0.287 | 0.286 | 0.286 | 3.8 |
| 61) | TM | Dibromochloromethan | 0.244 | 0.235 | 0.250 | 0.309 | 0.311 | 0.318 | 0.278 | 13.7 |
| 62) | TM | 1,2-Dibromoethane | 0.299 | 0.307 | 0.298 | 0.339 | 0.332 | 0.327 | 0.317 | 5.6 |
| 63) | I | *d5-Chlorobenzene | ISTD | | | | | | | |
| 64) | TMP | Chlorobenzene | 0.937 | 0.867 | 0.857 | 0.927 | 0.899 | 0.874 | 0.894 | 3.7 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.255 | 0.250 | 0.257 | 0.294 | 0.296 | 0.292 | 0.274 | 7.9 |
| 66) | TMC | Ethylbenzene | 1.624 | 1.533 | 1.488 | 1.603 | 1.547 | 1.480 | 1.546 | 3.8 |
| 67) | TM | m,p-Xylene | 0.577 | 0.562 | 0.535 | 0.579 | 0.568 | 0.540 | 0.560 | 3.3 |
| 68) | TM | o-Xylene | 0.546 | 0.531 | 0.526 | 0.570 | 0.561 | 0.545 | 0.546 | 3.1 |
| 69) | TM | Styrene | 0.946 | 0.927 | 0.937 | 1.021 | 1.008 | 0.971 | 0.968 | 4.0 |
| 70) | TMP | Bromoform | 0.143 | 0.147 | 0.159 | 0.210 | 0.219 | 0.220 | 0.183 | 20.2 |
| 71) | TM | Isopropylbenzene | 1.395 | 1.322 | 1.306 | 1.428 | 1.400 | 1.342 | 1.365 | 3.5 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.498 | 0.472 | 0.472 | 0.513 | 0.490 | 0.474 | 0.486 | 3.4 |
| 73) | S | Bromofluorobenzene | 0.542 | 0.542 | 0.546 | 0.541 | 0.544 | 0.549 | 0.544 | 0.5 |
| 74) | TM | 1,2,3-Trichloroprop | 0.398 | 0.373 | 0.371 | 0.388 | 0.365 | 0.355 | 0.375 | 4.1 |
| 75) | T | trans-1,4-Dichloro- | 0.138 | 0.129 | 0.134 | 0.163 | 0.157 | 0.150 | 0.145 | 9.3 |
| 76) | TM | n-Propylbenzene | 1.764 | 1.715 | 1.689 | 1.844 | 1.811 | 1.749 | 1.762 | 3.2 |
| 77) | TM | Bromobenzene | 0.374 | 0.358 | 0.349 | 0.375 | 0.372 | 0.363 | 0.365 | 2.9 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.047 | 1.036 | 1.017 | 1.105 | 1.082 | 1.050 | 1.056 | 3.0 |
| 79) | TM | 2-Chlorotoluene | 1.225 | 1.140 | 1.133 | 1.201 | 1.164 | 1.142 | 1.167 | 3.2 |
| 80) | TM | 4-Chlorotoluene | 1.112 | 1.084 | 1.058 | 1.148 | 1.136 | 1.070 | 1.101 | 3.3 |
| 81) | TM | tert-butylbenzene | 0.888 | 0.843 | 0.842 | 0.916 | 0.910 | 0.882 | 0.880 | 3.6 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.173 | 1.107 | 1.090 | 1.172 | 1.145 | 1.110 | 1.133 | 3.1 |
| 83) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 84) | TM | sec-butylbenzene | 1.277 | 1.221 | 1.214 | 1.334 | 1.325 | 1.303 | 1.279 | 4.0 |
| 85) | TM | p-isopropyltoluene | 0.987 | 0.975 | 0.984 | 1.083 | 1.074 | 1.062 | 1.028 | 4.9 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:29 2003
Response via : Initial Calibration

Calibration Files
1 =B16119SI.D 2 =B16120SI.D 5 =B16121SI.D
20 =B16122SI.D 50 =B16123SI.D 100 =B16124SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.680 | 0.636 | 0.626 | 0.676 | 0.675 | 0.667 | 0.660 | 3.4 |
| 87) | I | 1,4-Dichlorobenzene-d | ISTD | | | | | | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.411 | 1.309 | 1.303 | 1.399 | 1.369 | 1.350 | 1.357 | 3.3 |
| 89) | TM | n-butylbenzene | 1.971 | 1.900 | 1.898 | 2.088 | 2.053 | 2.017 | 1.988 | 3.9 |
| 90) | TM | 1,2-Dichlorobenzene | 1.300 | 1.212 | 1.206 | 1.299 | 1.278 | 1.256 | 1.259 | 3.3 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.118 | 0.108 | 0.116 | 0.143 | 0.141 | 0.146 | 0.129 | 13.0 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.704 | 0.641 | 0.652 | 0.714 | 0.710 | 0.725 | 0.691 | 5.1 |
| 95) | TM | Hexachlorobutadiene | 0.180 | 0.173 | 0.169 | 0.179 | 0.179 | 0.182 | 0.177 | 2.8 |
| 96) | TM | Naphthalene | 2.162 | 2.041 | 2.094 | 2.337 | 2.243 | 2.296 | 2.196 | 5.2 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.624 | 0.612 | 0.610 | 0.666 | 0.652 | 0.672 | 0.639 | 4.3 |
| 98) | TM | 1,3,5-Trichlorobenz | 0.710 | 0.711 | 0.691 | 0.765 | 0.765 | 0.775 | 0.736 | 4.9 |

(#) = Out of Range

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16119SI.D Vial: 3
Acq On : 12 Jun 2003 9:59 am Operator: JR
Sample : 1PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6-13-03
VMT 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 346057 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 635616 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 582868 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 291752 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 206062 | 18.37 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 91.85% | | | |
| 54) d8-Toluene | 10.81 | 98 | 742077 | 19.57 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 97.85% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 316142 | 19.64 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.20% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 11985 | 1.01 | ug/L | 97 |
| 3) Chloromethane | 1.83 | 50 | 9602 | 0.96 | ug/L | 85 |
| 4) Vinyl Chloride | 1.94 | 62 | 6876 | 1.40 | ug/L | 97 |
| 5) Bromomethane | 2.39 | 94 | 2903 | 0.94 | ug/L | 100 |
| 6) Chloroethane | 2.48 | 64 | 4935 | 1.23 | ug/L | 85 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 2363 | 3.35 | ug/L # | 73 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 8465 | 0.92 | ug/L | 96 |
| 9) Diethyl ether | 3.16 | 74 | 3267 | 1.06 | ug/L # | 86 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 5838 | 1.06 | ug/L | 99 |
| 11) Acrolein | 3.32 | 56 | 6586 | 4.71 | ug/L | 88 |
| 12) Acetone | 3.43 | 43 | 11009 | 4.71 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.59 | 96 | 5521 | 1.07 | ug/L | 98 |
| 14) Methyl iodide | 4.02 | 142 | 6592 | 0.76 | ug/L # | 91 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 25545 | 1.12 | ug/L | 99 |
| 16) Methylene Chloride | 4.34 | 84 | 12584 | 1.74 | ug/L | 96 |
| 17) Carbon Disulfide | 4.31 | 76 | 13950 | 0.93 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 2186 | 0.87 | ug/L # | 89 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 16347 | 1.01 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 5604 | 1.03 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 11206 | 1.02 | ug/L | 95 |
| 22) Vinyl acetate | 5.56 | 86 | 482 | 0.79 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 3312 | 4.39 | ug/L | 85 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 22423 | 1.07 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 9062 | 1.10 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 9345 | 1.40 | ug/L | 97 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 25778 | 0.99 | ug/L | 97 |
| 29) Chloroform | 6.73 | 83 | 15121 | 1.11 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16119SI.D Vial: 3
Acq On : 12 Jun 2003 9:59 am Operator: JR
Sample : 1PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 6.97 | 128 | 4947 | 1.03 ug/L | # | 83 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 940 | 0.78 ug/L | | 81 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 10251 | 0.94 ug/L | | 89 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 13151 | 1.04 ug/L | | 94 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 7747 | 0.93 ug/L | | 93 |
| 37) | 1,2-Dichloroethane | 8.00 | 62 | 12221 | 0.99 ug/L | | 99 |
| 38) | Benzene | 8.00 | 78 | 41889 | 1.08 ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 9850 | 1.06 ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 11357 | 1.00 ug/L | | 98 |
| 42) | Methylmethacrylate | 9.38 | 69 | 7709 | 0.89 ug/L | | 96 |
| 45) | Bromodichloromethane | 9.58 | 83 | 9686 | 0.88 ug/L | | 100 |
| 46) | Dibromomethane | 9.65 | 93 | 6644 | 0.97 ug/L | | 95 |
| 51) | 2-Hexanone | 11.51 | 58 | 23745 | 4.32 ug/L | | 99 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 22765 | 4.35 ug/L | # | 74 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 14079 | 0.91 ug/L | | 98 |
| 55) | Toluene | 10.93 | 92 | 24270 | 1.06 ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 10974 | 0.85 ug/L | | 96 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 8464 | 1.00 ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 18031 | 1.02 ug/L | | 93 |
| 60) | Tetrachloroethene | 11.94 | 166 | 9551 | 1.10 ug/L | | 95 |
| 61) | Dibromochloromethane | 12.25 | 129 | 7760 | 0.90 ug/L | | 100 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 9493 | 0.94 ug/L | | 94 |
| 64) | Chlorobenzene | 13.22 | 112 | 27315 | 1.07 ug/L | | 93 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 7438 | 0.96 ug/L | | 94 |
| 66) | Ethylbenzene | 13.31 | 91 | 47336 | 1.06 ug/L | | 100 |
| 67) | m,p-Xylene | 13.44 | 106 | 33643 | 2.09 ug/L | | 99 |
| 68) | o-Xylene | 14.12 | 106 | 15924 | 1.02 ug/L | | 98 |
| 69) | Styrene | 14.18 | 104 | 27583 | 1.00 ug/L | | 94 |
| 70) | Bromoform | 14.69 | 173 | 4179 | 0.74 ug/L | | 94 |
| 71) | Isopropylbenzene | 14.70 | 105 | 40660 | 1.05 ug/L | | 98 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 14522 | 0.97 ug/L | | 95 |
| 74) | 1,2,3-Trichloropropane | 15.19 | 75 | 11598 | 1.01 ug/L | # | 90 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 4028 | 0.87 ug/L | # | 84 |
| 76) | n-Propylbenzene | 15.34 | 91 | 51413 | 1.01 ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 10914 | 1.07 ug/L | | 90 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 30527 | 1.01 ug/L | | 97 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 35695 | 1.04 ug/L | | 97 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 32406 | 1.04 ug/L | | 96 |
| 81) | tert-butylbenzene | 16.17 | 119 | 25880 | 1.05 ug/L | | 99 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 34182 | 1.07 ug/L | | 98 |
| 84) | sec-butylbenzene | 16.52 | 105 | 37214 | 0.98 ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16119SI.D Vial: 3
Acq On : 12 Jun 2003 9:59 am Operator: JR
Sample : 1PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

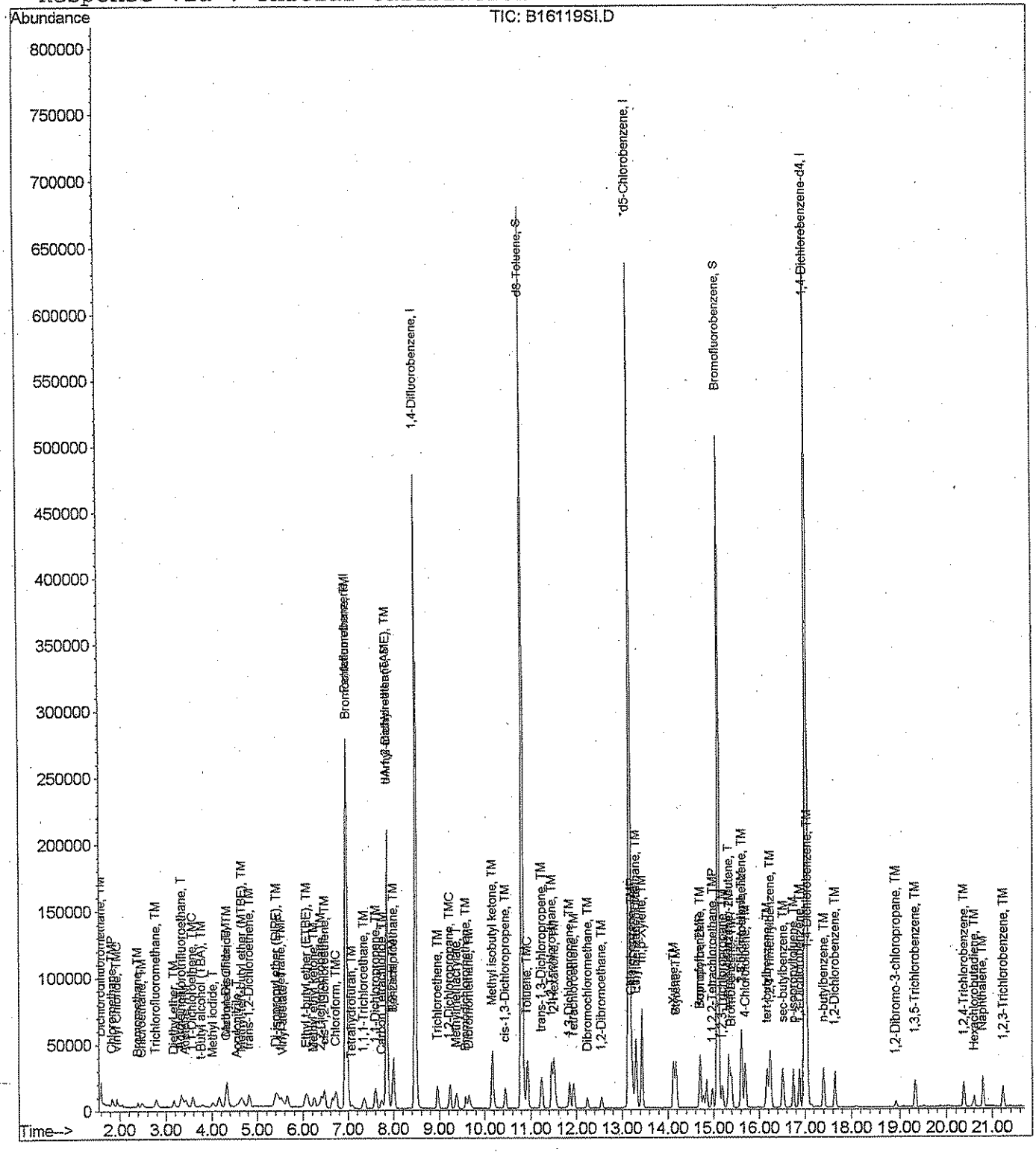
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 16.74 | 119 | 28757 | 0.98 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 19822 | 1.08 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 20582 | 1.06 ug/L | 99 |
| 89) n-butylbenzene | 17.40 | 91 | 28750 | 0.98 ug/L | 96 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 18963 | 1.05 ug/L | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 1718 | 0.80 ug/L | 89 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 10263 | 1.05 ug/L | 94 |
| 95) Hexachlorobutadiene | 20.63 | 225 | 2631 | 1.07 ug/L | 95 |
| 96) Naphthalene | 20.80 | 128 | 31543 | 0.94 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 9099 | 0.97 ug/L | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.34 | 180 | 10358 | 0.99 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061203-B\B16119SI.D Vial: 3
Acq On : 12 Jun 2003 9:59 am Operator: JR
Sample : 1PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16120SI.D Vial: 4
Acq On : 12 Jun 2003 10:30 am Operator: JR
Sample : 2PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6-13-03
JMK 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 347936 | 20.00 | ug/L | 0.01 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 629844 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 576895 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 16.99 | 152 | 291630 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 208145 | 18.45 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 92.25% | | | |
| 54) d8-Toluene | 10.81 | 98 | 743273 | 19.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.90% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 312571 | 19.62 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.10% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 24862 | 2.08 | ug/L | 95 |
| 3) Chloromethane | 1.84 | 50 | 19855 | 1.98 | ug/L | 95 |
| 4) Vinyl Chloride | 1.94 | 62 | 13361 | 2.70 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 6446 | 2.08 | ug/L | 93 |
| 6) Chloroethane | 2.48 | 64 | 10263 | 2.53 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 18328 | 1.98 | ug/L | 90 |
| 9) Diethyl ether | 3.17 | 74 | 6087 | 1.97 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.37 | 101 | 11251 | 2.02 | ug/L | 98 |
| 12) Acetone | 3.42 | 43 | 20495 | 8.71 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 10445 | 2.02 | ug/L | 97 |
| 14) Methyl iodide | 4.02 | 142 | 13704 | 1.57 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 45634 | 1.98 | ug/L | 99 |
| 16) Methylene Chloride | 4.34 | 84 | 18429 | 2.53 | ug/L | 95 |
| 17) Carbon Disulfide | 4.30 | 76 | 28280 | 1.87 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 4430 | 1.76 | ug/L | 91 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 30255 | 1.86 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 10676 | 1.94 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 21279 | 1.93 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 6390 | 8.43 | ug/L | 96 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 40977 | 1.95 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 17052 | 2.05 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 17144 | 2.56 | ug/L | 91 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 48868 | 1.86 | ug/L | 97 |
| 29) Chloroform | 6.73 | 83 | 28461 | 2.07 | ug/L | 97 |
| 30) Bromochloromethane | 6.97 | 128 | 9184 | 1.90 | ug/L | 92 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 20299 | 1.86 | ug/L | 96 |
| 34) 1,1-Dichloropropene | 7.61 | 75 | 25269 | 1.98 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16120SI.D Vial: 4
Acq On : 12 Jun 2003 10:30 am Operator: JR
Sample : 2PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 35) Carbon Tetrachloride | 7.74 | 119 | 15527 | 1.85 ug/L | 95 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 23985 | 1.94 ug/L | 98 |
| 38) Benzene | 8.00 | 78 | 79041 | 2.02 ug/L | 99 |
| 40) Trichloroethene | 8.96 | 95 | 18293 | 1.99 ug/L | 97 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 21623 | 1.93 ug/L | 97 |
| 42) Methylmethacrylate | 9.37 | 69 | 14854 | 1.73 ug/L | 98 |
| 45) Bromodichloromethane | 9.59 | 83 | 19298 | 1.78 ug/L | 95 |
| 46) Dibromomethane | 9.66 | 93 | 13071 | 1.94 ug/L | 98 |
| 51) 2-Hexanone | 11.51 | 58 | 44911 | 8.25 ug/L | 98 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 43682 | 8.42 ug/L # | 75 |
| 53) cis-1,3-Dichloropropene | 10.45 | 75 | 27510 | 1.80 ug/L | 99 |
| 55) Toluene | 10.93 | 92 | 45291 | 1.99 ug/L | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 22030 | 1.72 ug/L | 100 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 16404 | 1.96 ug/L | 100 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 33483 | 1.92 ug/L | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 17916 | 2.08 ug/L | 97 |
| 61) Dibromochloromethane | 12.24 | 129 | 14830 | 1.74 ug/L | 93 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 19363 | 1.93 ug/L | 98 |
| 64) Chlorobenzene | 13.22 | 112 | 49994 | 1.99 ug/L | 96 |
| 65) 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 14448 | 1.88 ug/L | 99 |
| 66) Ethylbenzene | 13.32 | 91 | 88450 | 2.00 ug/L | 98 |
| 67) m,p-Xylene | 13.43 | 106 | 64870 | 4.07 ug/L | 94 |
| 68) o-Xylene | 14.12 | 106 | 30613 | 1.99 ug/L | 96 |
| 69) Styrene | 14.18 | 104 | 53474 | 1.97 ug/L | 98 |
| 70) Bromoform | 14.70 | 173 | 8475 | 1.52 ug/L | 99 |
| 71) Isopropylbenzene | 14.70 | 105 | 76270 | 1.99 ug/L | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 27208 | 1.83 ug/L | 96 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 21516 | 1.89 ug/L | 99 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 7439 | 1.62 ug/L # | 86 |
| 76) n-Propylbenzene | 15.34 | 91 | 98953 | 1.96 ug/L | 99 |
| 77) Bromobenzene | 15.40 | 156 | 20639 | 2.04 ug/L | 91 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 59770 | 2.00 ug/L | 97 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 65758 | 1.94 ug/L | 97 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 62523 | 2.02 ug/L | 96 |
| 81) tert-butylbenzene | 16.17 | 119 | 48636 | 1.99 ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 63839 | 2.02 ug/L | 98 |
| 84) sec-butylbenzene | 16.51 | 105 | 70454 | 1.87 ug/L | 100 |
| 85) p-isopropyltoluene | 16.74 | 119 | 56275 | 1.95 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 36706 | 2.02 ug/L | 97 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 38176 | 1.97 ug/L | 98 |
| 89) n-butylbenzene | 17.40 | 91 | 55413 | 1.88 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061203-B\B16120SI.D
Acq On : 12 Jun 2003 10:30 am
Sample : 2PPB STD
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003

Vial: 4
Operator: JR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

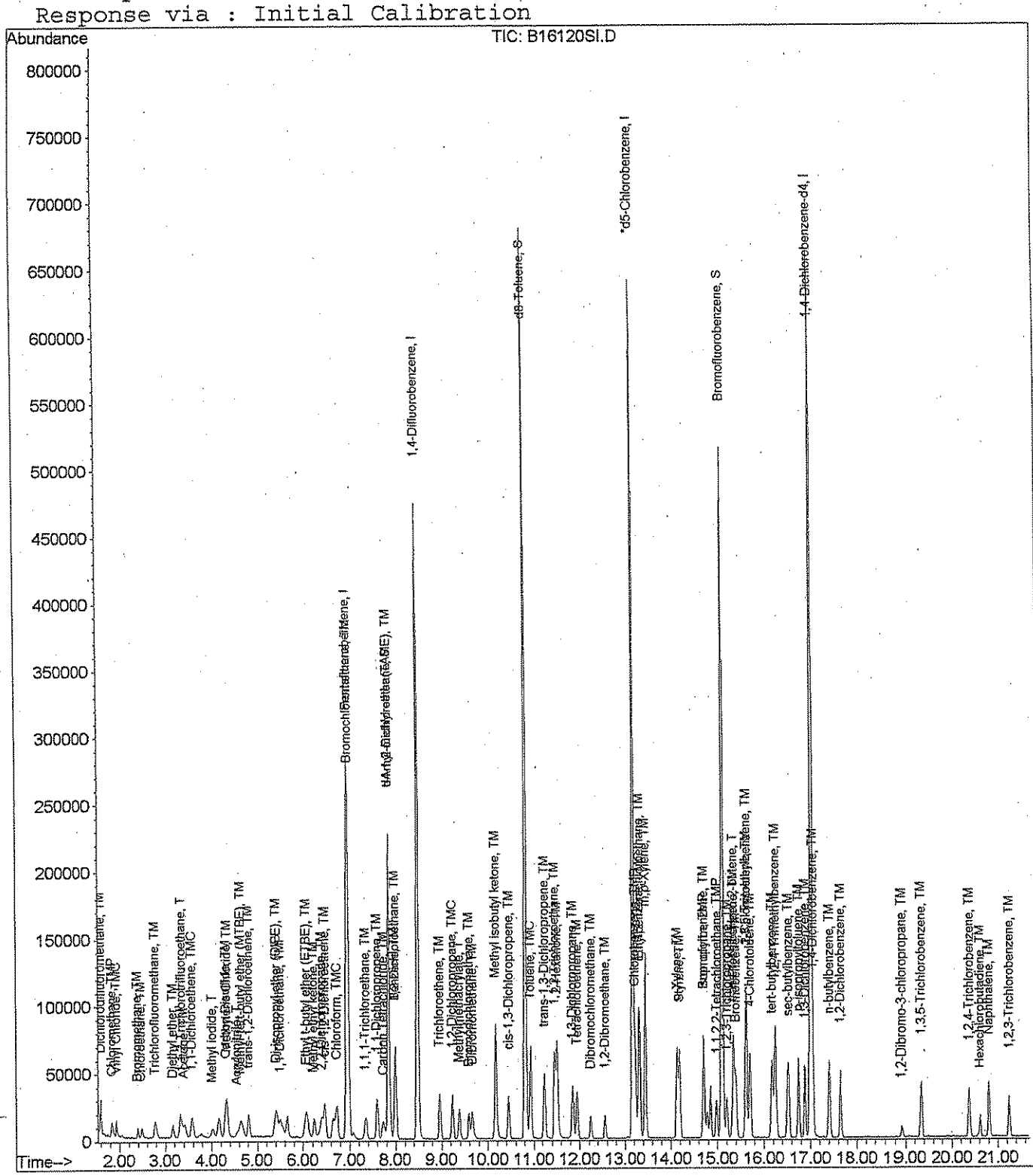
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 35342 | 1.96 ug/L | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 3138 | 1.47 ug/L | 96 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 18679 | 1.90 ug/L | 93 |
| 95) Hexachlorobutadiene | 20.61 | 225 | 5040 | 2.05 ug/L | 98 |
| 96) Naphthalene | 20.80 | 128 | 59536 | 1.78 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 17851 | 1.90 ug/L | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 20748 | 1.98 ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061203-B\B16120SI.D  Vial: 4
Acq On : 12 Jun 2003 10:30 am  Operator: JR
Sample : 2PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:10 2003  Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16121SI.D
Acq On : 12 Jun 2003 11:01 am
Sample : 5PPB STD
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003

Vial: 5
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6.13.03 VMT 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 347975 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 631829 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 576701 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 16.99 | 152 | 291366 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 207725 | 18.41 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 92.05% | | | |
| 54) d8-Toluene | 10.81 | 98 | 743635 | 19.73 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.65% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 314862 | 19.77 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.85% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 62944 | 5.27 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 48268 | 4.81 | ug/L | 94 |
| 4) Vinyl Chloride | 1.93 | 62 | 29412 | 5.94 | ug/L | 96 |
| 5) Bromomethane | 2.39 | 94 | 17255 | 5.55 | ug/L | 99 |
| 6) Chloroethane | 2.48 | 64 | 21928 | 5.41 | ug/L | 89 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 11921 | 16.80 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 46410 | 5.01 | ug/L | 94 |
| 9) Diethyl ether | 3.16 | 74 | 14956 | 4.83 | ug/L | 99 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 26589 | 4.78 | ug/L | 98 |
| 12) Acetone | 3.43 | 43 | 48262 | 20.52 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 25060 | 4.85 | ug/L | 100 |
| 14) Methyl iodide | 4.02 | 142 | 38471 | 4.41 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 109854 | 4.77 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 36062 | 4.95 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 71966 | 4.75 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 10496 | 4.17 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 74927 | 4.62 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 26595 | 4.84 | ug/L | 99 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 51539 | 4.67 | ug/L | 100 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 15900 | 20.97 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 100782 | 4.80 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 42846 | 5.15 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 42328 | 6.31 | ug/L | 98 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 122171 | 4.65 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 68876 | 5.01 | ug/L | 100 |
| 30) Bromochloromethane | 6.97 | 128 | 23220 | 4.81 | ug/L | 97 |
| 31) Tetrahydrofuran | 7.08 | 71 | 4621 | 3.80 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16121SI.D Vial: 5
Acq On : 12 Jun 2003 11:01 am Operator: JR
Sample : 5PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 32) 1,1,1-Trichloroethane | 7.34 | 97 | 50444 | 4.61 ug/L | 96 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 60589 | 4.75 ug/L | 97 |
| 35) Carbon Tetrachloride | 7.75 | 119 | 38428 | 4.59 ug/L | 95 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 57645 | 4.66 ug/L | 100 |
| 38) Benzene | 8.00 | 78 | 189607 | 4.85 ug/L | 100 |
| 40) Trichloroethene | 8.96 | 95 | 45071 | 4.89 ug/L | 96 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 52526 | 4.67 ug/L | 99 |
| 42) Methylmethacrylate | 9.38 | 69 | 37663 | 4.38 ug/L | 99 |
| 45) Bromodichloromethane | 9.59 | 83 | 49453 | 4.54 ug/L | 99 |
| 46) Dibromomethane | 9.65 | 93 | 32068 | 4.73 ug/L | 97 |
| 51) 2-Hexanone | 11.50 | 58 | 115458 | 21.13 ug/L | 100 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 111590 | 21.43 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 71368 | 4.66 ug/L | 97 |
| 55) Toluene | 10.93 | 92 | 110365 | 4.83 ug/L | 96 |
| 56) trans-1,3-Dichloropropene | 11.23 | 75 | 57990 | 4.51 ug/L | 100 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 39719 | 4.73 ug/L | 99 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 83328 | 4.76 ug/L | 100 |
| 60) Tetrachloroethene | 11.95 | 166 | 42294 | 4.89 ug/L | 99 |
| 61) Dibromochloromethane | 12.24 | 129 | 39535 | 4.62 ug/L | 96 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 47064 | 4.67 ug/L | 95 |
| 64) Chlorobenzene | 13.22 | 112 | 123574 | 4.91 ug/L | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 37101 | 4.82 ug/L | 97 |
| 66) Ethylbenzene | 13.32 | 91 | 214469 | 4.85 ug/L | 99 |
| 67) m,p-Xylene | 13.44 | 106 | 154186 | 9.67 ug/L | 97 |
| 68) o-Xylene | 14.13 | 106 | 75825 | 4.93 ug/L | 94 |
| 69) Styrene | 14.17 | 104 | 135147 | 4.97 ug/L | 99 |
| 70) Bromoform | 14.70 | 173 | 22869 | 4.10 ug/L | 95 |
| 71) Isopropylbenzene | 14.70 | 105 | 188244 | 4.91 ug/L | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 14.96 | 83 | 68104 | 4.59 ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 53506 | 4.69 ug/L | 100 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 19298 | 4.21 ug/L | 95 |
| 76) n-Propylbenzene | 15.34 | 91 | 243548 | 4.84 ug/L | 99 |
| 77) Bromobenzene | 15.39 | 156 | 50263 | 4.98 ug/L | 99 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 146555 | 4.90 ug/L | 98 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 163281 | 4.81 ug/L | 97 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 152585 | 4.93 ug/L | 99 |
| 81) tert-butylbenzene | 16.17 | 119 | 121382 | 4.97 ug/L | 100 |
| 82) 1,2,4-Trimethylbenzene | 16.24 | 105 | 157151 | 4.97 ug/L | 100 |
| 84) sec-butylbenzene | 16.51 | 105 | 175045 | 4.64 ug/L | 100 |
| 85) p-isopropyltoluene | 16.74 | 119 | 141897 | 4.91 ug/L | 99 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 90284 | 4.97 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16121SI.D Vial: 5
Acq On : 12 Jun 2003 11:01 am Operator: JR
Sample : 5PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

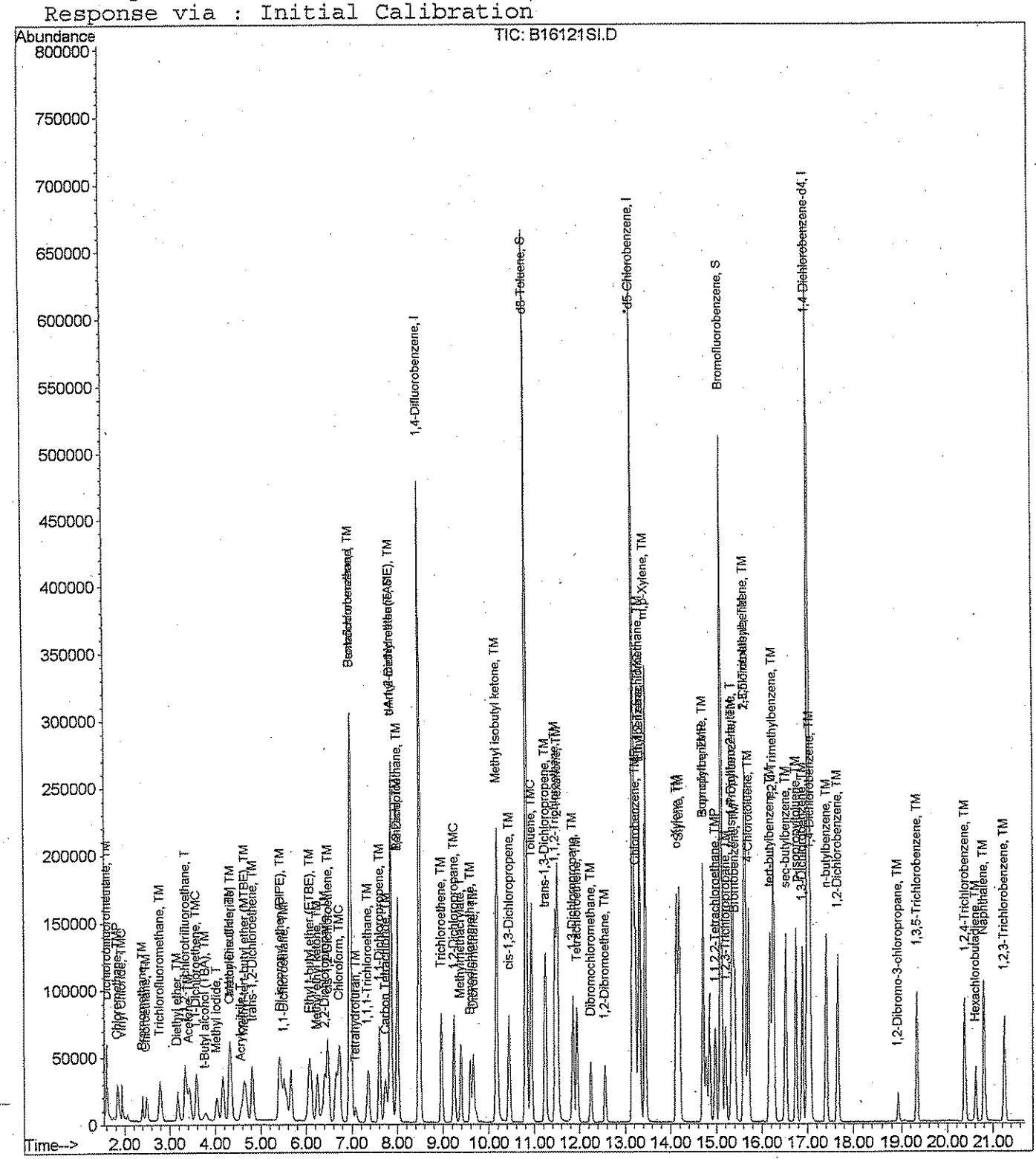
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 94893 | 4.89 ug/L | 97 |
| 89) n-butylbenzene | 17.40 | 91 | 138237 | 4.70 ug/L | 100 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 87851 | 4.89 ug/L | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 8424 | 3.94 ug/L | 93 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 47476 | 4.84 ug/L | 99 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 12304 | 5.01 ug/L | 97 |
| 96) Naphthalene | 20.80 | 128 | 152545 | 4.56 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 44420 | 4.74 ug/L | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 50299 | 4.79 ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061203-B\B16121SI.D Vial: 5
Acq On : 12 Jun 2003 11:01 am Operator: JR
Sample : 5PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16122SI.D Vial: 6
Acq On : 12 Jun 2003 11:31 am Operator: JR
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6-13-03
VMT 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 349767 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 634190 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 582473 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 293861 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 212068 | 18.70 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 93.50% | | | |
| 54) d8-Toluene | 10.81 | 98 | 747623 | 19.76 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.80% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 315368 | 19.61 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.05% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 262243 | 21.86 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 201839 | 19.99 | ug/L | 96 |
| 4) Vinyl Chloride | 1.93 | 62 | 98498 | 19.80 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 80282 | 25.71 | ug/L | 99 |
| 6) Chloroethane | 2.48 | 64 | 91287 | 22.42 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 58473 | 81.98 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 202226 | 21.70 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 65553 | 21.06 | ug/L | 98 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 120005 | 21.47 | ug/L | 99 |
| 11) Acrolein | 3.32 | 56 | 148772 | 105.25 | ug/L | 99 |
| 12) Acetone | 3.43 | 43 | 217029 | 91.80 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 111256 | 21.41 | ug/L | 97 |
| 14) Methyl iodide | 4.03 | 142 | 197419 | 22.53 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 483820 | 20.91 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 145729 | 19.89 | ug/L | 99 |
| 17) Carbon Disulfide | 4.30 | 76 | 337921 | 22.17 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 49087 | 19.39 | ug/L | 100 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 332827 | 20.40 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 116378 | 21.06 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 225567 | 20.35 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 14264 | 23.03 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 74337 | 97.54 | ug/L | 94 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 450108 | 21.31 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 170464 | 20.39 | ug/L | 98 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 173961 | 25.80 | ug/L | 93 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 538824 | 20.40 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 304232 | 22.03 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16122SI.D Vial: 6
Acq On : 12 Jun 2003 11:31 am Operator: JR
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 6.98 | 128 | 103275 | 21.30 ug/L # | 89 |
| 31) Tetrahydrofuran | 7.07 | 71 | 22349 | 18.27 ug/L | 97 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 226982 | 20.65 ug/L | 95 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 274167 | 21.37 ug/L | 99 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 180660 | 21.46 ug/L | 99 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 252223 | 20.30 ug/L | 100 |
| 38) Benzene | 8.00 | 78 | 818958 | 20.82 ug/L | 100 |
| 40) Trichloroethene | 8.96 | 95 | 199168 | 21.52 ug/L | 97 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 235195 | 20.85 ug/L | 100 |
| 42) Methylmethacrylate | 9.37 | 69 | 174727 | 20.22 ug/L | 98 |
| 45) Bromodichloromethane | 9.59 | 83 | 231466 | 21.19 ug/L | 99 |
| 46) Dibromomethane | 9.65 | 93 | 143372 | 21.08 ug/L | 97 |
| 50) 2-Chloroethylvinyl ether | 10.17 | 63 | 1246 | 16.67 ug/L # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 526803 | 96.07 ug/L | 99 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 505504 | 96.73 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 334672 | 21.76 ug/L | 99 |
| 55) Toluene | 10.93 | 92 | 483829 | 21.09 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.23 | 75 | 283729 | 22.00 ug/L | 97 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 173632 | 20.59 ug/L | 99 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 367844 | 20.94 ug/L | 99 |
| 60) Tetrachloroethene | 11.95 | 166 | 185587 | 21.38 ug/L | 98 |
| 61) Dibromochloromethane | 12.24 | 129 | 196014 | 22.81 ug/L | 100 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 215016 | 21.25 ug/L | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 539961 | 21.26 ug/L | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 171077 | 21.99 ug/L | 98 |
| 66) Ethylbenzene | 13.32 | 91 | 933439 | 20.91 ug/L | 99 |
| 67) m,p-Xylene | 13.43 | 106 | 674518 | 41.88 ug/L | 99 |
| 68) o-Xylene | 14.12 | 106 | 331933 | 21.35 ug/L | 99 |
| 69) Styrene | 14.18 | 104 | 594570 | 21.67 ug/L | 98 |
| 70) Bromoform | 14.70 | 173 | 122328 | 21.71 ug/L | 99 |
| 71) Isopropylbenzene | 14.70 | 105 | 831505 | 21.49 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 298805 | 19.94 ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 225908 | 19.62 ug/L | 99 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 95005 | 20.51 ug/L | 99 |
| 76) n-Propylbenzene | 15.34 | 91 | 1074043 | 21.12 ug/L | 99 |
| 77) Bromobenzene | 15.40 | 156 | 218712 | 21.46 ug/L | 92 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 643840 | 21.33 ug/L | 98 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 699347 | 20.39 ug/L | 97 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 668845 | 21.38 ug/L | 100 |
| 81) tert-butylbenzene | 16.17 | 119 | 533491 | 21.64 ug/L | 100 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 682884 | 21.37 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061203-B\B16122SI.D Vial: 6
Acq On : 12 Jun 2003 11:31 am Operator: JR
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Mon Jun 09 14:56:44 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

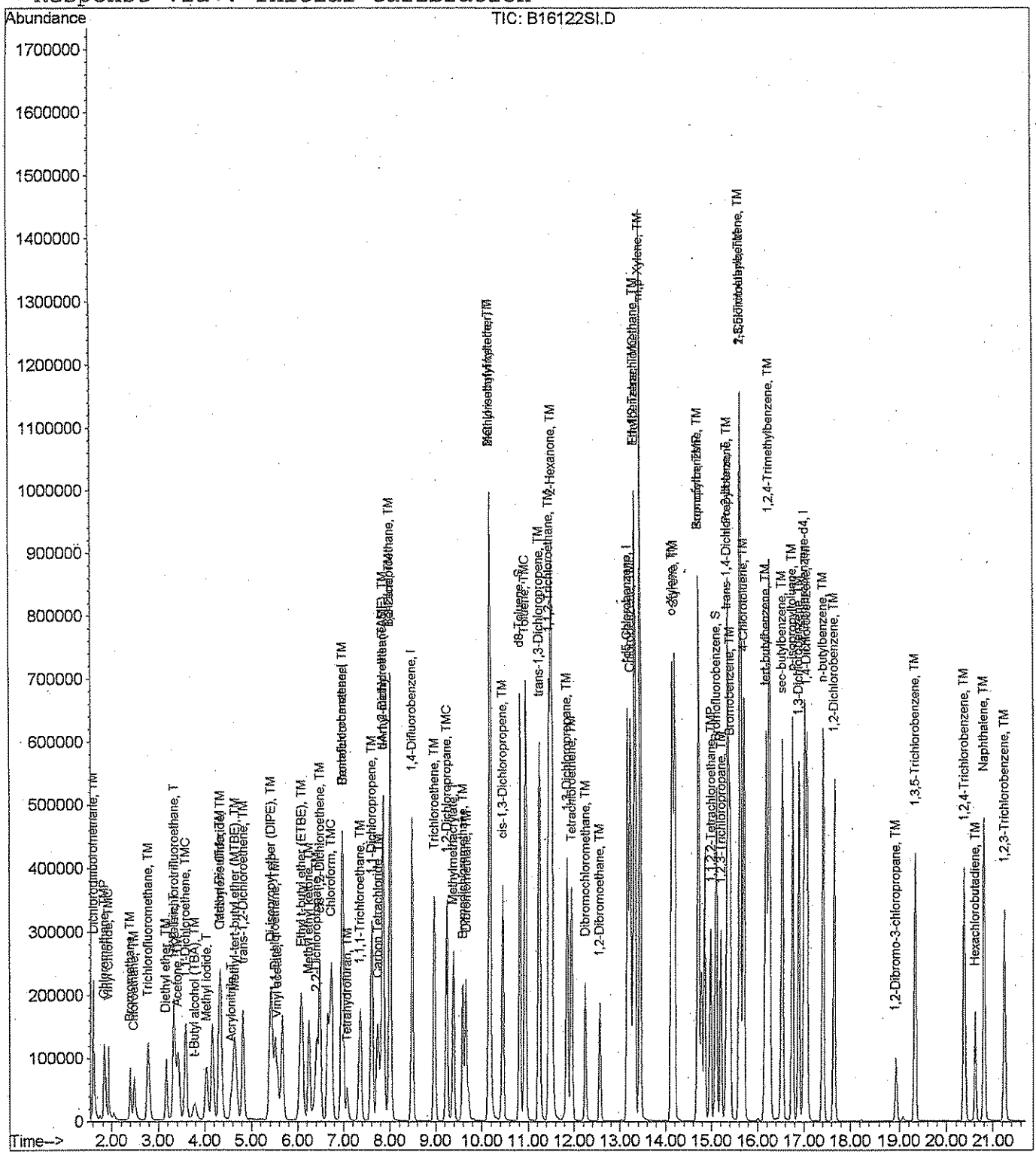
| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 84) sec-butylbenzene | 16.51 | 105 | 777026 | 20.39 | ug/L | 99 |
| 85) p-isopropyltoluene | 16.74 | 119 | 631069 | 21.62 | ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 393542 | 21.45 | ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 411228 | 21.03 | ug/L | 98 |
| 89) n-butylbenzene | 17.40 | 91 | 613644 | 20.68 | ug/L | 99 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 381681 | 21.06 | ug/L | 100 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 42167 | 19.57 | ug/L | 97 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 209722 | 21.21 | ug/L | 98 |
| 95) Hexachlorobutadiene | 20.61 | 225 | 52743 | 21.31 | ug/L | 100 |
| 96) Naphthalene | 20.80 | 128 | 686826 | 20.35 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 195714 | 20.72 | ug/L | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 224829 | 21.24 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061203-B\B16122SI.D Vial: 6
Acq On : 12 Jun 2003 11:31 am Operator: JR
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:11 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16123SI.D Vial: 7
Acq On : 12 Jun 2003 12:02 pm Operator: JR
Sample : 50PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:46 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:12:54 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6-13-03
VMT 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 342884 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 627699 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 576874 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 295575 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 206759 | 20.13 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.65% | | | |
| 54) d8-Toluene | 10.81 | 98 | 741770 | 20.10 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.50% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 314095 | 20.06 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.30% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 629664 | 51.00 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 482146 | 49.83 | ug/L | 97 |
| 4) Vinyl Chloride | 1.92 | 62 | 234415 | 39.04 | ug/L | 99 |
| 5) Bromomethane | 2.38 | 94 | 214952 | 64.22 | ug/L | 100 |
| 6) Chloroethane | 2.47 | 64 | 214077 | 45.69 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.78 | 59 | 144584 | 292.34 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 476892 | 52.30 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 152255 | 49.13 | ug/L | 98 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 276144 | 49.20 | ug/L | 100 |
| 11) Acrolein | 3.32 | 56 | 345179 | 259.42 | ug/L | 99 |
| 12) Acetone | 3.42 | 43 | 505448 | 245.63 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 263598 | 50.19 | ug/L | 96 |
| 14) Methyl iodide | 4.02 | 142 | 517483 | 67.77 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 1141261 | 49.00 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 335192 | 47.86 | ug/L | 97 |
| 17) Carbon Disulfide | 4.29 | 76 | 820027 | 56.07 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 118582 | 53.76 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 785040 | 50.50 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.80 | 96 | 274980 | 50.55 | ug/L | 98 |
| 21) 1,1-Dichloroethane | 5.49 | 63 | 538040 | 50.28 | ug/L | 100 |
| 22) Vinyl acetate | 5.56 | 86 | 33621 | 59.28 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 191784 | 290.42 | ug/L | 94 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 1059254 | 50.24 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 495812 | 58.02 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 451869 | 52.28 | ug/L | 95 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 1289864 | 51.54 | ug/L | 99 |
| 29) Chloroform | 6.73 | 83 | 731127 | 50.87 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16123SI.D Vial: 7
Acq On : 12 Jun 2003 12:02 pm Operator: JR
Sample : 50PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:46 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:12:54 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) Bromochloromethane | 6.96 | 128 | 245606 | 51.53 | ug/L | | 95 |
| 31) Tetrahydrofuran | 7.07 | 71 | 53531 | 57.20 | ug/L | | 93 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 559348 | 54.27 | ug/L | | 98 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 652928 | 51.35 | ug/L | | 100 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 455706 | 57.40 | ug/L | | 98 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 601258 | 50.47 | ug/L | | 99 |
| 38) Benzene | 8.00 | 78 | 1927063 | 48.80 | ug/L | | 99 |
| 40) Trichloroethene | 8.96 | 95 | 475387 | 50.50 | ug/L | | 95 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 562737 | 51.08 | ug/L | | 99 |
| 42) Methylmethacrylate | 9.37 | 69 | 417333 | 53.60 | ug/L | | 99 |
| 45) Bromodichloromethane | 9.59 | 83 | 578618 | 57.20 | ug/L | | 98 |
| 46) Dibromomethane | 9.66 | 93 | 342560 | 51.63 | ug/L | | 96 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 3197 | 69.91 | ug/L | # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 1203449 | 253.79 | ug/L | | 98 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 1174153 | 256.82 | ug/L | | 98 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 833982 | 57.17 | ug/L | | 99 |
| 55) Toluene | 10.93 | 92 | 1155685 | 50.02 | ug/L | | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 715619 | 60.42 | ug/L | | 97 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 411212 | 49.82 | ug/L | | 100 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 874621 | 50.52 | ug/L | | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 450412 | 50.12 | ug/L | | 98 |
| 61) Dibromochloromethane | 12.24 | 129 | 488066 | 59.87 | ug/L | | 99 |
| 62) 1,2-Dibromoethane | 12.56 | 107 | 521522 | 53.47 | ug/L | | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 1297160 | 50.14 | ug/L | | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 426321 | 55.95 | ug/L | | 98 |
| 66) Ethylbenzene | 13.31 | 91 | 2231733 | 49.54 | ug/L | | 100 |
| 67) m,p-Xylene | 13.44 | 106 | 1639032 | 100.88 | ug/L | | 97 |
| 68) o-Xylene | 14.12 | 106 | 809239 | 51.65 | ug/L | | 98 |
| 69) Styrene | 14.18 | 104 | 1453830 | 52.62 | ug/L | | 98 |
| 70) Bromoform | 14.70 | 173 | 315767 | 66.46 | ug/L | | 99 |
| 71) Isopropylbenzene | 14.70 | 105 | 2019778 | 51.39 | ug/L | | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 706092 | 50.08 | ug/L | | 99 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 525872 | 47.67 | ug/L | | 98 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 225917 | 55.54 | ug/L | | 96 |
| 76) n-Propylbenzene | 15.35 | 91 | 2611556 | 51.65 | ug/L | | 96 |
| 77) Bromobenzene | 15.40 | 156 | 536121 | 51.05 | ug/L | # | 85 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 1560935 | 51.47 | ug/L | | 98 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 1679016 | 49.56 | ug/L | | 98 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 1638534 | 51.62 | ug/L | | 100 |
| 81) tert-butylbenzene | 16.16 | 119 | 1312653 | 52.18 | ug/L | | 99 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 1651116 | 50.41 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16123SI.D Vial: 7
Acq On : 12 Jun 2003 12:02 pm Operator: JR
Sample : 50PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:46 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:12:54 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

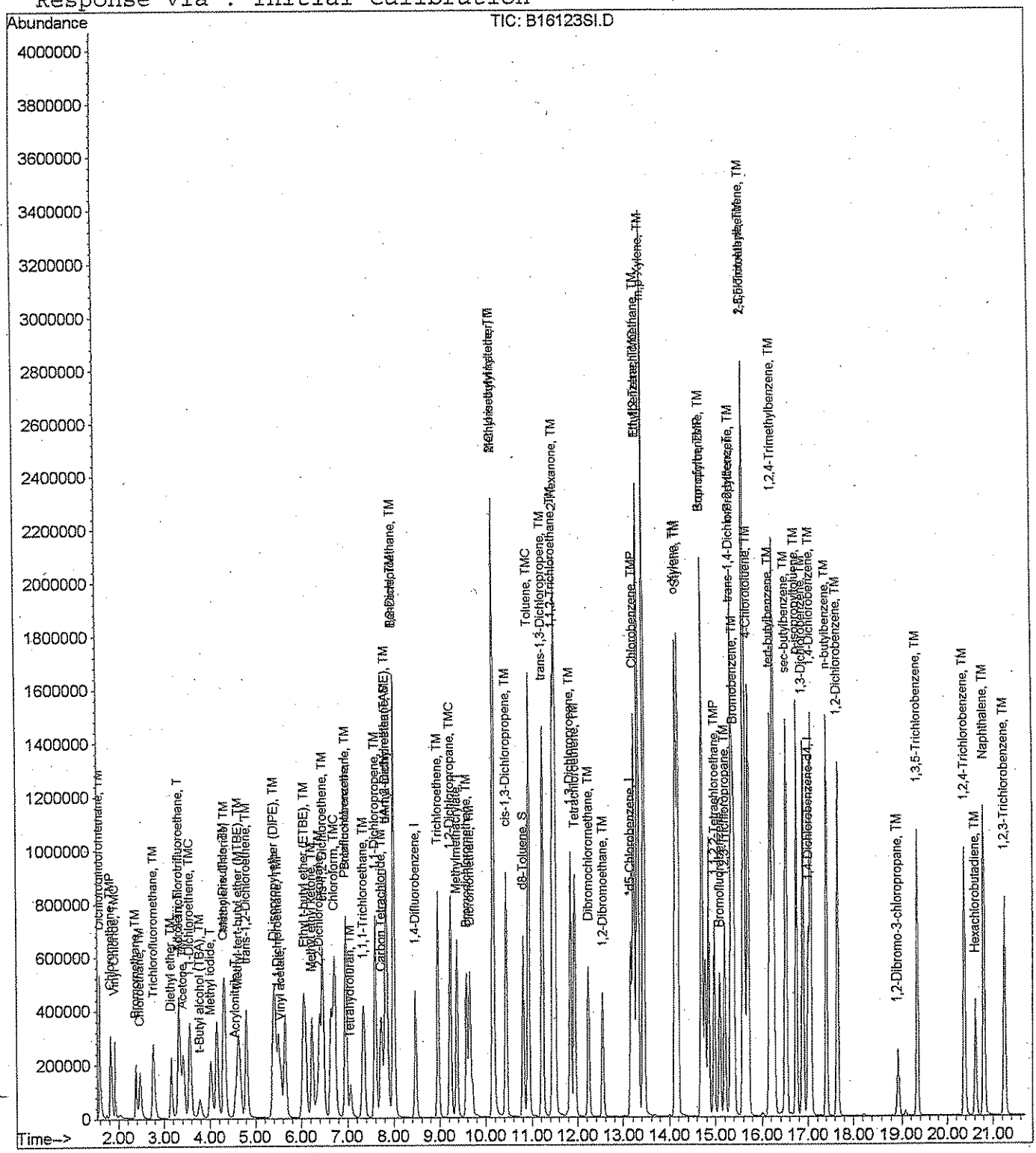
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 84) sec-butylbenzene | 16.51 | 105 | 1910682 | 52.51 ug/L | 100 |
| 85) p-isopropyltoluene | 16.74 | 119 | 1549406 | 53.32 ug/L | 99 |
| 86) 1,3-Dichlorobenzene | 16.87 | 146 | 974000 | 51.59 ug/L | 99 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 1011306 | 50.48 ug/L | 99 |
| 89) n-butylbenzene | 17.40 | 91 | 1516879 | 52.25 ug/L | 99 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 944662 | 50.97 ug/L | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 104307 | 58.27 ug/L | 96 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 524970 | 52.44 ug/L | 98 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 132259 | 51.02 ug/L | 98 |
| 96) Naphthalene | 20.80 | 128 | 1657269 | 51.94 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 481831 | 51.92 ug/L | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 564967 | 53.15 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061203-B\B16123SI.D Vial: 7
Acq On : 12 Jun 2003 12:02 pm Operator: JR
Sample : 50PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 12:46 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16124SI.D
Acq On : 12 Jun 2003 12:33 pm
Sample : 100PPB STD
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 12 13:37 2003

Vial: 8
Operator: JR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:47:20 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

6.13.03
VMT 6/13/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 342193 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 618576 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.15 | 117 | 573513 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 294934 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 209980 | 20.45 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.25% | | | |
| 54) d8-Toluene | 10.81 | 98 | 743247 | 20.42 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.10% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 314913 | 20.22 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.10% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 1168739 | 94.48 | ug/L | 99 |
| 3) Chloromethane | 1.82 | 50 | 936088 | 97.01 | ug/L | 96 |
| 4) Vinyl Chloride | 1.92 | 62 | 405668 | 70.79 | ug/L | 99 |
| 5) Bromomethane | 2.36 | 94 | 410406 | 116.25 | ug/L | 99 |
| 6) Chloroethane | 2.45 | 64 | 380145 | 82.72 | ug/L | 100 |
| 7) t-Butyl alcohol (TBA) | 3.83 | 59 | 298285 | 584.54 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.75 | 101 | 925599 | 100.78 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 299595 | 97.20 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.32 | 101 | 521721 | 93.44 | ug/L | 99 |
| 11) Acrolein | 3.32 | 56 | 675338 | 504.77 | ug/L | 99 |
| 12) Acetone | 3.43 | 43 | 992960 | 485.21 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.56 | 96 | 513411 | 97.87 | ug/L | 99 |
| 14) Methyl iodide | 4.01 | 142 | 961506 | 117.80 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 2196992 | 94.90 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 656978 | 87.67 | ug/L | 98 |
| 17) Carbon Disulfide | 4.28 | 76 | 1634441 | 109.32 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 235826 | 105.54 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 1544940 | 99.38 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.80 | 96 | 538788 | 99.03 | ug/L | 99 |
| 21) 1,1-Dichloroethane | 5.49 | 63 | 1049994 | 98.21 | ug/L | 99 |
| 22) Vinyl acetate | 5.55 | 86 | 67588 | 115.14 | ug/L | 98 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 369805 | 543.55 | ug/L | 94 |
| 24) Ethyl t-butyl ether (ETBE) | 6.06 | 59 | 2046110 | 97.15 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 973395 | 110.59 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 896062 | 102.94 | ug/L | 96 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 2516609 | 100.14 | ug/L | 98 |
| 29) Chloroform | 6.72 | 83 | 1440833 | 100.10 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061203-B\B16124SI.D Vial: 8
Acq On : 12 Jun 2003 12:33 pm Operator: JR
Sample : 100PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 13:37 2003 Quant Results File: V806123B.

Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:47:20 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) Bromochloromethane | 6.96 | 128 | 483496 | 101.03 | ug/L | | 93 |
| 31) Tetrahydrofuran | 7.07 | 71 | 107373 | 111.75 | ug/L | | 95 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 1110436 | 106.15 | ug/L | | 100 |
| 34) 1,1-Dichloropropene | 7.59 | 75 | 1269621 | 99.52 | ug/L | | 99 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 900401 | 110.38 | ug/L | | 100 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 1186755 | 99.63 | ug/L | | 99 |
| 38) Benzene | 8.00 | 78 | 3661329 | 93.35 | ug/L | | 100 |
| 40) Trichloroethene | 8.95 | 95 | 924161 | 99.42 | ug/L | | 96 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 1092082 | 100.16 | ug/L | | 100 |
| 42) Methylmethacrylate | 9.38 | 69 | 818335 | 105.14 | ug/L | | 98 |
| 45) Bromodichloromethane | 9.58 | 83 | 1166605 | 113.75 | ug/L | | 100 |
| 46) Dibromomethane | 9.65 | 93 | 680309 | 103.37 | ug/L | | 96 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 5777 | 113.17 | ug/L | # | 1 |
| 51) 2-Hexanone | 11.51 | 58 | 2257461 | 481.62 | ug/L | | 98 |
| 52) Methyl isobutyl ketone | 10.17 | 58 | 2203796 | 486.49 | ug/L | | 96 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 1641780 | 111.02 | ug/L | | 99 |
| 55) Toluene | 10.93 | 92 | 2242681 | 98.50 | ug/L | | 98 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 1404608 | 115.52 | ug/L | | 98 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 777811 | 95.69 | ug/L | | 98 |
| 59) 1,3-Dichloropropane | 11.84 | 76 | 1689112 | 98.80 | ug/L | | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 884050 | 99.77 | ug/L | | 97 |
| 61) Dibromochloromethane | 12.24 | 129 | 982223 | 117.62 | ug/L | | 100 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 1012694 | 103.91 | ug/L | | 98 |
| 64) Chlorobenzene | 13.22 | 112 | 2506054 | 97.38 | ug/L | | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 838464 | 108.11 | ug/L | | 99 |
| 66) Ethylbenzene | 13.31 | 91 | 4244086 | 94.93 | ug/L | | 100 |
| 67) m,p-Xylene | 13.44 | 106 | 3097384 | 191.42 | ug/L | | 96 |
| 68) o-Xylene | 14.12 | 106 | 1562864 | 99.67 | ug/L | | 98 |
| 69) Styrene | 14.18 | 104 | 2783586 | 100.29 | ug/L | | 98 |
| 70) Bromoform | 14.69 | 173 | 631996 | 125.53 | ug/L | | 100 |
| 71) Isopropylbenzene | 14.70 | 105 | 3848259 | 97.94 | ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 1358695 | 96.90 | ug/L | | 98 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 1017233 | 93.62 | ug/L | | 98 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 430572 | 104.16 | ug/L | | 94 |
| 76) n-Propylbenzene | 15.34 | 91 | 5015460 | 99.11 | ug/L | | 97 |
| 77) Bromobenzene | 15.39 | 156 | 1041549 | 99.34 | ug/L | # | 87 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 3011741 | 99.31 | ug/L | | 98 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 3275721 | 97.43 | ug/L | | 98 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 3067687 | 96.58 | ug/L | | 98 |
| 81) tert-butylbenzene | 16.17 | 119 | 2527916 | 100.20 | ug/L | | 96 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 3182387 | 97.58 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061203-B\B16124SI.D Vial: 8
Acq On : 12 Jun 2003 12:33 pm Operator: JR
Sample : 100PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 13:37 2003 Quant Results File: V806123B.

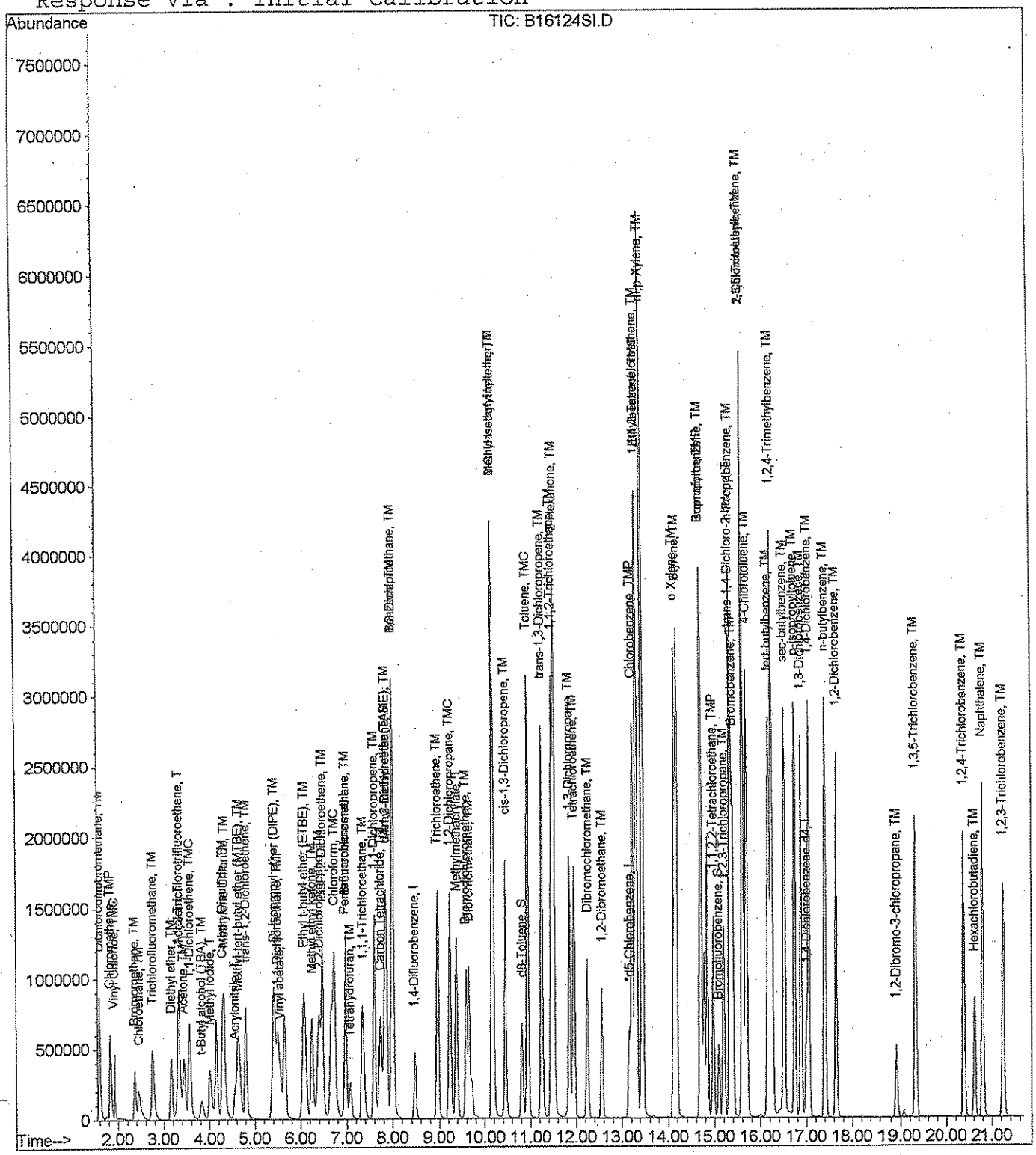
Quant Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 12:47:20 2003
Response via : Initial Calibration
DataAcq Meth : V806123B

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 3736968 | 102.27 | ug/L | 98 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 3045229 | 104.03 | ug/L | 99 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 1912645 | 101.25 | ug/L | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 1990229 | 99.37 | ug/L | 98 |
| 89) | n-butylbenzene | 17.40 | 91 | 2974308 | 101.77 | ug/L | 97 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 1852672 | 99.79 | ug/L | 99 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 215149 | 116.59 | ug/L | 96 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 1069744 | 106.06 | ug/L | 97 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 268699 | 103.46 | ug/L | 96 |
| 96) | Naphthalene | 20.80 | 128 | 3386256 | 105.55 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 991604 | 106.27 | ug/L | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 1143301 | 106.45 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061203-B\B16124SI.D Vial: 8
Acq On : 12 Jun 2003 12:33 pm Operator: JR
Sample : 100PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 12 13:37 2003 Quant Results File: V806123B.

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061603-B\B16218SC.D
Acq On : 16 Jun 2003 9:20 am
Sample : 20PPB STD
Misc : 5000
MS Integration Params: rteint.p

Vial: 3
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Multiple Level Calibration

6-17-03
VMT 6/17/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.716 | 0.709 | 1.0 | 90 | 0.00 |
| 3 | TMP | Chloromethane | 0.561 | 0.616 | -9.8 | 102 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.319 | 0.287 | 10.0 | 97 | 0.00 |
| 5 | TM | Bromomethane | 0.212 | 0.168 | 20.8# | 70 | 0.00 |
| 6 | TM | Chloroethane | 0.261 | 0.245 | 6.1 | 89 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.031 | 0.038# | -22.6# | 108 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.537 | 0.553 | -3.0 | 91 | 0.00 |
| 9 | TM | Diethyl ether | 0.179 | 0.168 | 6.1 | 85 | 0.00 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.323 | 0.295 | 8.7 | 82 | 0.00 |
| 11 | T | Acrolein | 0.078 | 0.073# | 6.4 | 81 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.121 | -1.7 | 93 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.306 | 0.280 | 8.5 | 84 | 0.00 |
| 14 | T | Methyl iodide | 0.491 | 0.451 | 8.1 | 76 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.342 | 1.276 | 4.9 | 88 | 0.00 |
| 16 | TM | Methylene Chloride | 0.427 | 0.373 | 12.6 | 85 | 0.00 |
| 17 | TM | Carbon Disulfide | 0.887 | 0.819 | 7.7 | 81 | 0.00 |
| 18 | T | Acrylonitrile | 0.132 | 0.133 | -0.8 | 90 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.908 | 0.878 | 3.3 | 88 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.317 | 0.296 | 6.6 | 85 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.623 | 0.591 | 5.1 | 87 | 0.00 |
| 22 | T | Vinyl acetate | 0.035 | 0.036# | -2.9 | 84 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.040 | 0.049# | -22.5# | 110 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.225 | 1.189 | 2.9 | 88 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.524 | 0.572 | -9.2 | 112 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.511 | 0.499 | 2.3 | 96 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.469 | 1.496 | -1.8 | 93 | 0.00 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.42 |
| 29 | TMC | Chloroform | 0.841 | 0.813 | 3.3 | 89 | 0.00 |
| 30 | TM | Bromochloromethane | 0.280 | 0.277 | 1.1 | 89 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.057 | 0.065# | -14.0 | 97 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.618 | 0.617 | 0.2 | 91 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.745 | 0.716 | 3.9 | 87 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.485 | 0.496 | -2.3 | 92 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.602 | 0.581 | 3.5 | 91 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.696 | 0.677 | 2.7 | 90 | 0.00 |
| 38 | TM | Benzene | 2.267 | 2.187 | 3.5 | 89 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 40 | TM | Trichloroethene | 0.300 | 0.294 | 2.0 | 89 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061603-B\B16218SC.D
Acq On : 16 Jun 2003 9:20 am
Sample : 20PPB STD
Misc : 5000
MS Integration Params: rteint.p

Vial: 3
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.353 | 0.345 | -2.3 | 88 | 0.00 |
| 42 | T | Methylmethacrylate | 0.254 | 0.275 | -8.3 | 95 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.339 | 0.349 | -2.9 | 91 | 0.00 |
| 46 | TM | Dibromomethane | 0.214 | 0.213 | 0.5 | 90 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 104 | -0.02 |
| 51 | TM | 2-Hexanone | 0.151 | 0.171 | -13.2 | 98 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.146 | 0.165 | -13.0 | 98 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.487 | 0.505 | -3.7 | 91 | 0.00 |
| 54 | S | d8-Toluene | 1.181 | 1.169 | 1.0 | 94 | 0.00 |
| 55 | TMC | Toluene | 0.734 | 0.717 | 2.3 | 89 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.403 | 0.443 | -9.9 | 94 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.261 | 0.263 | -0.8 | 91 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.552 | 0.549 | 0.5 | 90 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.286 | 0.289 | -1.0 | 94 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.278 | 0.302 | -8.6 | 93 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.317 | 0.329 | -3.8 | 92 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.894 | 0.867 | 3.0 | 90 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.274 | 0.291 | -6.2 | 95 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.546 | 1.491 | 3.6 | 89 | 0.00 |
| 67 | TM | m,p-Xylene | 0.560 | 0.544 | 2.9 | 90 | 0.00 |
| 68 | TM | o-Xylene | 0.546 | 0.530 | 2.9 | 89 | 0.00 |
| 69 | TM | Styrene | 0.968 | 0.956 | 1.2 | 90 | 0.00 |
| 70 | TMP | Bromoform | 0.183 | 0.218 | -19.1 | 100 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.365 | 1.325 | 2.9 | 89 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.486 | 0.501 | -3.1 | 94 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.544 | 0.537 | 1.3 | 95 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.375 | 0.382 | -1.9 | 95 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.145 | 0.164 | -13.1 | 96 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.762 | 1.720 | 2.4 | 90 | 0.00 |
| 77 | TM | Bromobenzene | 0.365 | 0.360 | 1.4 | 92 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.056 | 1.026 | 2.8 | 89 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.167 | 1.154 | 1.1 | 92 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.101 | 1.043 | 5.3 | 87 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061603-B\B16218SC.D  Vial: 3
Acq On : 16 Jun 2003 9:20 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806123B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.880 | 0.850 | 3.4 | 89 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.133 | 1.086 | 4.1 | 89 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.279 | 1.244 | 2.7 | 90 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.028 | 1.008 | 1.9 | 89 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.660 | 0.649 | 1.7 | 92 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.357 | 1.290 | 4.9 | 92 | 0.00 |
| 89 | TM | n-butylbenzene | 1.988 | 1.881 | 5.4 | 90 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.259 | 1.198 | 4.8 | 92 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.129 | 0.146 | -13.2 | 102 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.691 | 0.665 | 3.8 | 93 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.177 | 0.168 | 5.1 | 94 | 0.00 |
| 96 | TM | Naphthalene | 2.196 | 2.243 | -2.1 | 96 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.639 | 0.622 | 2.7 | 94 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.736 | 0.712 | 3.3 | 93 | 0.00 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16118T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/12/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0928

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 349767 | 6.95 | 634190 | 8.47 | 582473 | 13.16 | 293861 | 17.00 |
| | UPPER LIMIT | 699534 | 7.37 | 1268380 | 8.98 | 1164946 | 13.95 | 587722 | 18.02 |
| | LOWER LIMIT | 174884 | 6.53 | 317095 | 7.96 | 291237 | 12.37 | 146931 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 1PPB STD | 346057 | 6.95 | 635616 | 8.48 | 582868 | 13.16 | 291752 | 17.00 |
| 02 | 2PPB STD | 347936 | 6.95 | 629844 | 8.47 | 576895 | 13.16 | 291630 | 16.99 |
| 03 | 5PPB STD | 347975 | 6.95 | 631829 | 8.47 | 576701 | 13.16 | 291366 | 16.99 |
| 04 | 20PPB STD | 349767 | 6.95 | 634190 | 8.47 | 582473 | 13.16 | 293861 | 17.00 |
| 05 | 50PPB STD | 342884 | 6.94 | 627699 | 8.47 | 576874 | 13.16 | 295575 | 17.00 |
| 06 | 100PPB STD | 342193 | 6.94 | 618576 | 8.47 | 573513 | 13.15 | 294934 | 17.00 |
| 07 | ZZZZZ | 338622 | 6.95 | 623639 | 8.48 | 576162 | 13.16 | 294501 | 17.00 |
| 08 | ZZZZZ | 349270 | 6.95 | 637245 | 8.47 | 581312 | 13.16 | 296793 | 17.00 |
| 09 | ZZZZZ | 349632 | 6.95 | 638727 | 8.48 | 583487 | 13.16 | 295150 | 17.00 |
| 10 | ZZZZZ | 331682 | 6.95 | 610273 | 8.48 | 567917 | 13.16 | 289434 | 17.00 |
| 11 | ZZZZZ | 327989 | 6.94 | 605013 | 8.47 | 564926 | 13.16 | 289342 | 17.00 |
| 12 | ZZZZZ | 325818 | 6.95 | 606564 | 8.47 | 559713 | 13.16 | 287099 | 17.00 |
| 13 | ZZZZZ | 317908 | 6.95 | 589865 | 8.48 | 552170 | 13.15 | 284603 | 17.00 |
| 14 | ZZZZZ | 330962 | 6.95 | 608339 | 8.47 | 559482 | 13.16 | 283549 | 17.00 |
| 15 | ZZZZZ | 337556 | 6.95 | 619180 | 8.47 | 566685 | 13.16 | 281582 | 17.00 |
| 16 | ZZZZZ | 342304 | 6.95 | 625040 | 8.47 | 570768 | 13.16 | 284849 | 17.00 |
| 17 | ZZZZZ | 348811 | 6.95 | 625842 | 8.47 | 575059 | 13.16 | 289444 | 17.00 |
| 18 | ZZZZZ | 338421 | 6.95 | 620827 | 8.48 | 567750 | 13.16 | 282718 | 17.00 |
| 19 | ZZZZZ | 338019 | 6.95 | 618138 | 8.48 | 566169 | 13.16 | 280068 | 17.00 |
| 20 | ZZZZZ | 330703 | 6.95 | 609296 | 8.47 | 559791 | 13.16 | 279342 | 17.00 |
| 21 | ZZZZZ | 327619 | 6.95 | 602678 | 8.47 | 558796 | 13.16 | 280473 | 16.99 |
| 22 | ZZZZZ | 324055 | 6.96 | 600964 | 8.47 | 555469 | 13.16 | 276060 | 17.00 |
| 23 | ZZZZZ | 344284 | 6.95 | 620087 | 8.47 | 568569 | 13.16 | 278086 | 17.00 |
| 24 | ZZZZZ | 338840 | 6.96 | 609077 | 8.48 | 558226 | 13.16 | 278539 | 17.00 |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: B16217T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/16/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0849

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 333755 | | 6.95 | | 603437 | | 8.48 | | 560175 | | 13.16 | | 294223 | | 17.00 | |
| | UPPER LIMIT | 667510 | | 7.37 | | 1206874 | | 8.99 | | 1120350 | | 13.95 | | 588446 | | 18.02 | |
| | LOWER LIMIT | 166878 | | 6.53 | | 301719 | | 7.97 | | 280088 | | 12.37 | | 147112 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 333755 | | 6.95 | | 603437 | | 8.48 | | 560175 | | 13.16 | | 294223 | | 17.00 | |
| 02 | L806163B | 334741 | | 6.95 | | 593451 | | 8.47 | | 561128 | | 13.16 | | 290907 | | 16.99 | |
| 03 | ZZZZZ | 339978 | | 6.95 | | 598037 | | 8.47 | | 562166 | | 13.16 | | 287386 | | 16.99 | |
| 04 | B806163B | 330852 | | 6.95 | | 582082 | | 8.48 | | 553239 | | 13.16 | | 281394 | | 17.00 | |
| 05 | ZZZZZ | 328258 | | 6.95 | | 578962 | | 8.47 | | 550905 | | 13.16 | | 278756 | | 16.99 | |
| 06 | ZZZZZ | 323857 | | 6.95 | | 577875 | | 8.48 | | 545976 | | 13.16 | | 274254 | | 17.00 | |
| 07 | ZZZZZ | 315203 | | 6.95 | | 578252 | | 8.47 | | 543789 | | 13.16 | | 275814 | | 17.00 | |
| 08 | 49855-1 | 315814 | | 6.95 | | 580191 | | 8.48 | | 543332 | | 13.16 | | 275526 | | 17.00 | |
| 09 | 49855-2 | 316875 | | 6.96 | | 582495 | | 8.47 | | 547888 | | 13.16 | | 272172 | | 16.99 | |
| 10 | 49855-3 | 317823 | | 6.96 | | 576617 | | 8.47 | | 542383 | | 13.16 | | 268972 | | 16.99 | |
| 11 | 49855-4 | 306543 | | 6.95 | | 563437 | | 8.48 | | 533140 | | 13.16 | | 268845 | | 17.00 | |
| 12 | 49855-5 | 312127 | | 6.95 | | 568277 | | 8.48 | | 537571 | | 13.15 | | 268013 | | 17.00 | |
| 13 | 49855-5.MS | 317760 | | 6.95 | | 573674 | | 8.47 | | 541036 | | 13.16 | | 277230 | | 16.99 | |
| 14 | 49855-5.MSD | 317966 | | 6.95 | | 575552 | | 8.48 | | 549111 | | 13.16 | | 273731 | | 17.00 | |
| 15 | 49855-6 | 320246 | | 6.96 | | 572842 | | 8.48 | | 546980 | | 13.16 | | 269998 | | 17.00 | |
| 16 | 49855-7 | 313230 | | 6.95 | | 567996 | | 8.48 | | 536701 | | 13.16 | | 267089 | | 17.00 | |
| 17 | 49855-9 | 302669 | | 6.95 | | 561311 | | 8.48 | | 529781 | | 13.16 | | 264729 | | 17.00 | |
| 18 | ZZZZZ | 305162 | | 6.96 | | 558212 | | 8.47 | | 532028 | | 13.16 | | 262606 | | 16.99 | |
| 19 | ZZZZZ | 304157 | | 6.96 | | 553682 | | 8.47 | | 525603 | | 13.16 | | 264293 | | 16.99 | |
| 20 | ZZZZZ | 296230 | | 6.95 | | 550270 | | 8.47 | | 519009 | | 13.16 | | 262132 | | 17.00 | |
| 21 | ZZZZZ | 297539 | | 6.95 | | 547783 | | 8.48 | | 516621 | | 13.15 | | 259996 | | 17.00 | |
| 22 | ZZZZZ | 298618 | | 6.95 | | 550359 | | 8.48 | | 524473 | | 13.16 | | 263036 | | 17.00 | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43580T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/17/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1051

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | ZZZZZ | 100 | 101 | 100 | 0 |
| 02 | ZZZZZ | 105 | 103 | 103 | 0 |
| 03 | ZZZZZ | 103 | 100 | 101 | 0 |
| 04 | ZZZZZ | 96 | 101 | 100 | 0 |
| 05 | 1 PPB | 114 | 106 | 105 | 0 |
| 06 | 2 PPB | 110 | 109 | 107 | 0 |
| 07 | 5 PPB | 110 | 106 | 105 | 0 |
| 08 | 20 PPB | 110 | 104 | 103 | 0 |
| 09 | 50 PPB | 109 | 105 | 104 | 0 |
| 10 | 100 PPB | 117 | 104 | 105 | 0 |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43640T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2152

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB | 101 | 100 | 98 | 0 |
| 02 | MB06183B | 105 | 103 | 108 | 0 |
| 03 | LS06183B | 76 | 113 | 114 | 0 |
| 04 | ZZZZZ | 106 | 106 | 105 | 0 |
| 05 | ZZZZZ | 113 | 113 | 117 | 0 |
| 06 | 49855-10 | 92 | 89 | 88 | 0 |
| 07 | 49855-11 | 59 * | 53 * | 49 * | 3 |
| 08 | 49855-12 | 83 | 81 | 83 | 0 |
| 09 | 49855-13 | 84 | 82 | 84 | 0 |
| 10 | 49855-13.MS | 81 | 81 | 84 | 0 |
| 11 | ZZZZZ | NA | NA | NA | 0 |
| 12 | 49855-13.MSD | 78 | 79 | 81 | 0 |
| 13 | ZZZZZ | 67 * | 66 * | 65 * | 3 |
| 14 | ZZZZZ | 86 | 83 | 83 | 0 |
| 15 | ZZZZZ | 65 * | 61 * | 59 * | 3 |
| 16 | ZZZZZ | 84 | 88 | 86 | 0 |
| 17 | ZZZZZ | 44 * | 43 * | 40 * | 3 |
| 18 | LS06183C.RR | 97 | 103 | 100 | 0 |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43659T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1133

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB | 90 | 97 | 97 | 0 |
| 02 | L806193C | 87 | 97 | 95 | 0 |
| 03 | ZZZZZ | 88 | 94 | 96 | 0 |
| 04 | B806193C | 88 | 96 | 94 | 0 |
| 05 | ZZZZZ | 67 * | 100 | 92 | 1 |
| 06 | ZZZZZ | 92 | 98 | 96 | 0 |
| 07 | ZZZZZ | 67 * | 94 | 94 | 1 |
| 08 | ZZZZZ | 65 * | 99 | 93 | 1 |
| 09 | 49855-8 | 95 | 103 | 104 | 0 |
| 10 | ZZZZZ | 53 * | 49 * | 46 * | 3 |
| 11 | ZZZZZ | 76 | 79 | 78 | 0 |
| 12 | 49855-11,RR | 45 * | 42 * | 40 * | 3 |
| 13 | 49855-14 | 59 * | 60 * | 60 * | 3 |
| 14 | 49855-13,MS,RR | 72 | 74 | 76 | 0 |
| 15 | 49855-13,MSD,RR | 71 | 76 | 77 | 0 |
| 16 | L806193C4 | 88 | 93 | 88 | 0 |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: LS06183B2

| COMPOUND | SPIKE ADDED (ug/kg) | LCS CONC. (ug/kg) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 2000 | 1183.0 | 59 | | 49-82 |
| Chloromethane | 2000 | 1884.0 | 94 | | 75-125 |
| Vinyl Chloride | 2000 | 1691.0 | 85 | | 75-125 |
| Bromomethane | 2000 | 1112.0 | 56 | * | 75-125 |
| Chloroethane | 2000 | 1867.0 | 93 | | 75-125 |
| t-Butyl alcohol | 10000 | 10144.0 | 101 | | 60-140 |
| Trichlorofluoromethane | 2000 | 1804.0 | 90 | | 75-125 |
| Diethyl ether | 2000 | 1934.0 | 97 | | 75-125 |
| Acetone | 5000 | 4921.0 | 98 | | 75-125 |
| 1,1-Dichloroethene | 2000 | 1867.0 | 93 | | 75-125 |
| Di-isopropyl ether | 2000 | 2015.0 | 101 | | 75-125 |
| Methylene Chloride | 2000 | 1730.0 | 87 | | 75-125 |
| Carbon Disulfide | 2000 | 1788.0 | 89 | | 75-125 |
| Methyl-tert-butyl ether | 2000 | 1982.0 | 99 | | 75-125 |
| Trans-1,2-Dichloroethene | 2000 | 1915.0 | 96 | | 75-125 |
| 1,1-Dichloroethane | 2000 | 1988.0 | 99 | | 75-125 |
| Methyl ethyl ketone | 5000 | 4855.0 | 97 | | 60-140 |
| Ethyl t-butyl ether | 2000 | 1980.0 | 99 | | 75-125 |
| 2,2-Dichloropropane | 2000 | 1965.0 | 98 | | 75-125 |
| Cis-1,2-Dichloroethene | 2000 | 1905.0 | 95 | | 75-125 |
| t-Amyl methyl ether | 2000 | 2047.0 | 102 | | 75-125 |
| Chloroform | 2000 | 2018.0 | 101 | | 75-125 |
| Bromochloromethane | 2000 | 2012.0 | 101 | | 75-125 |
| Tetrahydrofuran | 2000 | 1940.0 | 97 | | 60-140 |
| 1,1,1-Trichloroethane | 2000 | 2062.0 | 103 | | 75-125 |
| 1,1-Dichloropropene | 2000 | 1992.0 | 100 | | 75-125 |
| Carbon Tetrachloride | 2000 | 2077.0 | 104 | | 75-125 |
| 1,2-Dichloroethane | 2000 | 2045.0 | 102 | | 75-125 |
| Benzene | 2000 | 1988.0 | 99 | | 75-125 |
| Trichloroethene | 2000 | 1942.0 | 97 | | 75-125 |
| 1,2-Dichloropropane | 2000 | 2074.0 | 104 | | 75-125 |
| Bromodichloromethane | 2000 | 2148.0 | 107 | | 75-125 |
| Dibromomethane | 2000 | 2064.0 | 103 | | 75-125 |
| 2-Hexanone | 5000 | 4759.0 | 95 | | 75-125 |
| Methyl isobutyl ketone | 5000 | 5096.0 | 102 | | 75-125 |
| Cis-1,3-Dichloropropene | 2000 | 2086.0 | 104 | | 75-125 |
| Toluene | 2000 | 2063.0 | 103 | | 75-125 |
| Trans-1,3-Dichloropropene | 2000 | 2130.0 | 107 | | 75-125 |
| 1,1,2-Trichloroethane | 2000 | 2045.0 | 102 | | 75-125 |
| 1,3-Dichloropropane | 2000 | 2047.0 | 102 | | 75-125 |
| Tetrachloroethene | 2000 | 2176.0 | 109 | | 75-125 |
| Dibromochloromethane | 2000 | 2127.0 | 106 | | 75-125 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: LS06183B2

| COMPOUND | SPIKE ADDED (ug/kg) | LCS CONC. (ug/kg) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 2000 | 2076.0 | 104 | | 75-125 |
| Chlorobenzene | 2000 | 2080.0 | 104 | | 75-125 |
| 1,1,1,2-Tetrachloroethane | 2000 | 2105.0 | 105 | | 75-125 |
| Ethylbenzene | 2000 | 2082.0 | 104 | | 75-125 |
| M-,P-Xylene | 4000 | 4170.0 | 104 | | 75-125 |
| O-Xylene | 2000 | 2081.0 | 104 | | 75-125 |
| Styrene | 2000 | 2095.0 | 105 | | 75-125 |
| Bromoform | 2000 | 2123.0 | 106 | | 75-125 |
| Isopropylbenzene | 2000 | 2094.0 | 105 | | 75-125 |
| 1,1,2,2-Tetrachloroethane | 2000 | 1971.0 | 99 | | 75-125 |
| 1,2,3-Trichloropropane | 2000 | 1923.0 | 96 | | 75-125 |
| N-Propylbenzene | 2000 | 2133.0 | 107 | | 75-125 |
| Bromobenzene | 2000 | 2100.0 | 105 | | 75-125 |
| 1,3,5-Trimethylbenzene | 2000 | 2113.0 | 106 | | 75-125 |
| 2-Chlorotoluene | 2000 | 2113.0 | 106 | | 75-125 |
| 4-Chlorotoluene | 2000 | 2064.0 | 103 | | 75-125 |
| Tert-Butylbenzene | 2000 | 2104.0 | 105 | | 75-125 |
| 1,2,4-Trimethylbenzene | 2000 | 2114.0 | 106 | | 75-125 |
| Sec-Butylbenzene | 2000 | 2106.0 | 105 | | 75-125 |
| P-Isopropyltoluene | 2000 | 2124.0 | 106 | | 75-125 |
| 1,3-Dichlorobenzene | 2000 | 2116.0 | 106 | | 75-125 |
| 1,4-Dichlorobenzene | 2000 | 2104.0 | 105 | | 75-125 |
| N-Butylbenzene | 2000 | 2187.0 | 109 | | 75-125 |
| 1,2-Dichlorobenzene | 2000 | 2111.0 | 106 | | 75-125 |
| 1,2-Dibromo-3-chloropropane | 2000 | 2183.0 | 109 | | 75-125 |
| 1,2,4-Trichlorobenzene | 2000 | 2125.0 | 106 | | 75-125 |
| Hexachlorobutadiene | 2000 | 2295.0 | 115 | | 75-125 |
| Naphthalene | 2000 | 2226.0 | 111 | | 75-125 |
| 1,2,3-Trichlorobenzene | 2000 | 2157.0 | 108 | | 75-125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 1 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-13

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE AMT ug/kg | MS CONC. ug/kg | MS REC % | # | SPIKE ADDED ug/kg | MSD CONC. ug/kg | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4840 | U | 1295 | 27 | * | 5080 | 1275 | 26 | * | 2 | | 15 | 49-82 |
| Chloromethane | 4840 | U | 2439 | 50 | * | 5080 | 2581 | 53 | * | 6 | | 15 | 75-125 |
| Vinyl Chloride | 4840 | U | 2597 | 54 | * | 5080 | 2708 | 56 | * | 4 | | 15 | 75-125 |
| Bromomethane | 4840 | U | 2166 | 45 | * | 5080 | 2418 | 50 | * | 11 | | 15 | 75-125 |
| Chloroethane | 4840 | U | 3156 | 65 | * | 5080 | 3241 | 67 | * | 3 | | 15 | 75-125 |
| t-Butyl alcohol | 24200 | U | 19503 | 81 | | 25400 | 18740 | 77 | | 4 | | 15 | 60-140 |
| Trichlorofluoromethane | 4840 | U | 2889 | 60 | * | 5080 | 2954 | 61 | * | 2 | | 15 | 75-125 |
| Diethyl ether | 4840 | U | 3625 | 75 | | 5080 | 3686 | 76 | | 2 | | 15 | 75-125 |
| Acetone | 12100 | U | 9290 | 77 | | 12700 | 10033 | 83 | | 8 | | 15 | 75-125 |
| 1,1-Dichloroethene | 4840 | U | 3086 | 64 | * | 5080 | 3180 | 66 | * | 3 | | 15 | 75-125 |
| Di-isopropyl ether | 4840 | U | 3700 | 76 | | 5080 | 3642 | 75 | | 2 | | 15 | 75-125 |
| Methylene Chloride | 4840 | U | 3211 | 66 | * | 5080 | 3299 | 68 | * | 3 | | 15 | 75-125 |
| Carbon Disulfide | 4840 | U | 2856 | 59 | * | 5080 | 2982 | 62 | * | 4 | | 15 | 75-125 |
| Methyl-tert-butyl ether | 4840 | U | 3683 | 76 | | 5080 | 3820 | 79 | | 4 | | 15 | 75-125 |
| Trans-1,2-Dichloroethene | 4840 | U | 3296 | 68 | * | 5080 | 3454 | 71 | * | 5 | | 15 | 75-125 |
| 1,1-Dichloroethane | 4840 | U | 3611 | 75 | | 5080 | 3231 | 67 | * | 11 | | 15 | 75-125 |
| Methyl ethyl ketone | 12100 | U | 8250 | 68 | | 12700 | 9268 | 77 | | 12 | | 15 | 60-140 |
| Ethyl t-butyl ether | 4840 | U | 3661 | 76 | | 5080 | 3680 | 76 | | 1 | | 15 | 75-125 |
| 2,2-Dichloropropane | 4840 | U | 3451 | 71 | * | 5080 | 3477 | 72 | * | 1 | | 15 | 75-125 |
| Cis-1,2-Dichloroethene | 4840 | U | 3444 | 71 | * | 5080 | 3551 | 73 | * | 3 | | 15 | 75-125 |
| t-Amyl methyl ether | 4840 | U | 3809 | 79 | | 5080 | 3807 | 79 | | 0 | | 15 | 75-125 |
| Chloroform | 4840 | U | 3596 | 74 | * | 5080 | 3650 | 75 | | 1 | | 15 | 75-125 |
| Bromochloromethane | 4840 | U | 3741 | 77 | | 5080 | 3861 | 80 | | 3 | | 15 | 75-125 |
| Tetrahydrofuran | 4840 | U | 3841 | 79 | | 5080 | 3586 | 74 | | 7 | | 15 | 60-140 |
| 1,1,1-Trichloroethane | 4840 | U | 3707 | 77 | | 5080 | 3830 | 79 | | 3 | | 15 | 75-125 |
| 1,1-Dichloropropene | 4840 | U | 3507 | 72 | * | 5080 | 3620 | 75 | | 3 | | 15 | 75-125 |
| Carbon Tetrachloride | 4840 | U | 3666 | 76 | | 5080 | 3767 | 78 | | 3 | | 15 | 75-125 |
| 1,2-Dichloroethane | 4840 | U | 3807 | 79 | | 5080 | 3800 | 79 | | 0 | | 15 | 75-125 |
| Benzene | 4840 | U | 3543 | 73 | * | 5080 | 3691 | 76 | | 4 | | 15 | 75-125 |
| Trichloroethene | 4840 | U | 4027 | 83 | | 5080 | 4054 | 84 | | 1 | | 15 | 75-125 |
| 1,2-Dichloropropane | 4840 | U | 3710 | 77 | | 5080 | 3863 | 80 | | 4 | | 15 | 75-125 |
| Bromodichloromethane | 4840 | U | 3896 | 81 | | 5080 | 3919 | 81 | | 1 | | 15 | 75-125 |
| Dibromomethane | 4840 | U | 3724 | 77 | | 5080 | 3912 | 81 | | 5 | | 15 | 75-125 |
| 2-Hexanone | 12100 | U | 6667 | 55 | * | 12700 | 9141 | 76 | | 31 | * | 15 | 75-125 |
| Methyl isobutyl ketone | 12100 | U | 8540 | 71 | * | 12700 | 9622 | 80 | | 12 | | 15 | 75-125 |
| Cis-1,3-Dichloropropene | 4840 | U | 3749 | 77 | | 5080 | 3787 | 78 | | 1 | | 15 | 75-125 |
| Toluene | 4840 | U | 3637 | 75 | | 5080 | 3741 | 77 | | 3 | | 15 | 75-125 |
| Trans-1,3-Dichloropropene | 4840 | U | 3749 | 77 | | 5080 | 3805 | 79 | | 1 | | 15 | 75-125 |
| 1,1,2-Trichloroethane | 4840 | U | 3901 | 81 | | 5080 | 3884 | 80 | | 0 | | 15 | 75-125 |
| 1,3-Dichloropropane | 4840 | U | 3768 | 78 | | 5080 | 3825 | 79 | | 2 | | 15 | 75-125 |
| Tetrachloroethene | 4840 | U | 3557 | 74 | * | 5080 | 3663 | 76 | | 3 | | 15 | 75-125 |
| Dibromochloromethane | 4840 | U | 3843 | 79 | | 5080 | 3912 | 81 | | 2 | | 15 | 75-125 |
| 1,2-Dibromoethane | 4840 | U | 3804 | 79 | | 5080 | 3848 | 80 | | 1 | | 15 | 75-125 |
| Chlorobenzene | 4840 | U | 3693 | 76 | | 5080 | 3830 | 79 | | 4 | | 15 | 75-125 |
| 1,1,1,2-Tetrachloroethane | 4840 | U | 3775 | 78 | | 5080 | 3907 | 81 | | 3 | | 15 | 75-125 |
| Ethylbenzene | 4840 | U | 3761 | 78 | | 5080 | 3800 | 79 | | 1 | | 15 | 75-125 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C
GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-13

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE AMT ug/kg | MS CONC. ug/kg | MS REC % | # | SPIKE ADDED ug/kg | MSD CONC. ug/kg | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M-,P-Xylene | 9680 | U | 7350 | 76 | | 10160 | 7457 | 77 | | 1 | | 15 | 75-125 |
| O-Xylene | 4840 | U | 3746 | 77 | | 5080 | 3848 | 80 | | 3 | | 15 | 75-125 |
| Styrene | 4840 | U | 3792 | 78 | | 5080 | 3777 | 78 | | 0 | | 15 | 75-125 |
| Bromoform | 4840 | U | 3896 | 81 | | 5080 | 3780 | 78 | | 3 | | 15 | 75-125 |
| Isopropylbenzene | 4840 | U | 3812 | 79 | | 5080 | 3866 | 80 | | 1 | | 15 | 75-125 |
| 1,1,2,2-Tetrachloroethane | 4840 | U | 3782 | 78 | | 5080 | 3721 | 77 | | 2 | | 15 | 75-125 |
| 1,2,3-Trichloropropane | 4840 | U | 3732 | 77 | | 5080 | 3678 | 76 | | 1 | | 15 | 75-125 |
| N-Propylbenzene | 4840 | U | 3729 | 77 | | 5080 | 3813 | 79 | | 2 | | 15 | 75-125 |
| Bromobenzene | 4840 | U | 3812 | 79 | | 5080 | 3785 | 78 | | 1 | | 15 | 75-125 |
| 1,3,5-Trimethylbenzene | 4840 | U | 3782 | 78 | | 5080 | 3777 | 78 | | 0 | | 15 | 75-125 |
| 2-Chlorotoluene | 4840 | U | 3778 | 78 | | 5080 | 3823 | 79 | | 1 | | 15 | 75-125 |
| 4-Chlorotoluene | 4840 | U | 3792 | 78 | | 5080 | 3767 | 78 | | 1 | | 15 | 75-125 |
| Tert-Butylbenzene | 4840 | U | 3879 | 80 | | 5080 | 3881 | 80 | | 0 | | 15 | 75-125 |
| 1,2,4-Trimethylbenzene | 4840 | U | 3770 | 78 | | 5080 | 3759 | 78 | | 0 | | 15 | 75-125 |
| Sec-Butylbenzene | 4840 | U | 3804 | 79 | | 5080 | 3782 | 78 | | 1 | | 15 | 75-125 |
| P-Isopropyltoluene | 4840 | U | 3768 | 78 | | 5080 | 3823 | 79 | | 1 | | 15 | 75-125 |
| 1,3-Dichlorobenzene | 4840 | U | 3753 | 78 | | 5080 | 3780 | 78 | | 1 | | 15 | 75-125 |
| 1,4-Dichlorobenzene | 4840 | U | 3705 | 77 | | 5080 | 3810 | 79 | | 3 | | 15 | 75-125 |
| N-Butylbenzene | 4840 | U | 3877 | 80 | | 5080 | 3912 | 81 | | 1 | | 15 | 75-125 |
| 1,2-Dichlorobenzene | 4840 | U | 3795 | 78 | | 5080 | 3777 | 78 | | 0 | | 15 | 75-125 |
| 1,2-Dibromo-3-chloropropane | 4840 | U | 3882 | 80 | | 5080 | 3752 | 78 | | 3 | | 15 | 75-125 |
| 1,2,4-Trichlorobenzene | 4840 | U | 3599 | 74 | * | 5080 | 3584 | 74 | | 0 | | 15 | 75-125 |
| Hexachlorobutadiene | 4840 | U | 4233 | 87 | | 5080 | 4150 | 86 | | 2 | | 15 | 75-125 |
| Naphthalene | 4840 | U | 3705 | 77 | | 5080 | 3647 | 75 | | 2 | | 15 | 75-125 |
| 1,2,3-Trichlorobenzene | 4840 | U | 3700 | 76 | | 5080 | 3574 | 74 | * | 3 | | 15 | 75-125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 1 out of 70 outside limits
Spike Recovery: 33 out of 140 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: LS06183C,RR

| COMPOUND | SPIKE ADDED (ug/kg) | LCS CONC. (ug/kg) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 2000 | 832 | 42 | * | 49-82 |
| Chloromethane | 2000 | 1173 | 59 | * | 75-125 |
| Vinyl Chloride | 2000 | 1330 | 67 | * | 75-125 |
| Bromomethane | 2000 | 1242 | 62 | * | 75-125 |
| Chloroethane | 2000 | 1575 | 79 | | 75-125 |
| t-Butyl alcohol | 10000 | 8295 | 83 | | 60-140 |
| Trichlorofluoromethane | 2000 | 1576 | 79 | | 75-125 |
| Diethyl ether | 2000 | 1706 | 85 | | 75-125 |
| Acetone | 5000 | 4141 | 83 | | 75-125 |
| 1,1-Dichloroethene | 2000 | 1676 | 84 | | 75-125 |
| Di-isopropyl ether | 2000 | 1820 | 91 | | 75-125 |
| Methylene Chloride | 2000 | 1541 | 77 | | 75-125 |
| Carbon Disulfide | 2000 | 1571 | 79 | | 75-125 |
| Methyl-tert-butyl ether | 2000 | 1783 | 89 | | 75-125 |
| Trans-1,2-Dichloroethene | 2000 | 1775 | 89 | | 75-125 |
| 1,1-Dichloroethane | 2000 | 1820 | 91 | | 75-125 |
| Methyl ethyl ketone | 5000 | 5352 | 107 | | 60-140 |
| Ethyl t-butyl ether | 2000 | 2009 | 100 | | 75-125 |
| 2,2-Dichloropropane | 2000 | 2083 | 104 | | 75-125 |
| Cis-1,2-Dichloroethene | 2000 | 2310 | 116 | | 75-125 |
| t-Amyl methyl ether | 2000 | 1938 | 97 | | 75-125 |
| Chloroform | 2000 | 2134 | 107 | | 75-125 |
| Bromochloromethane | 2000 | 1913 | 96 | | 75-125 |
| Tetrahydrofuran | 2000 | 1762 | 88 | | 60-140 |
| 1,1,1-Trichloroethane | 2000 | 1894 | 95 | | 75-125 |
| 1,1-Dichloropropene | 2000 | 1937 | 97 | | 75-125 |
| Carbon Tetrachloride | 2000 | 1919 | 96 | | 75-125 |
| 1,2-Dichloroethane | 2000 | 1880 | 94 | | 75-125 |
| Benzene | 2000 | 1927 | 96 | | 75-125 |
| Trichloroethene | 2000 | 1840 | 92 | | 75-125 |
| 1,2-Dichloropropane | 2000 | 1961 | 98 | | 75-125 |
| Bromodichloromethane | 2000 | 1990 | 100 | | 75-125 |
| Dibromomethane | 2000 | 1907 | 95 | | 75-125 |
| 2-Hexanone | 5000 | 4412 | 88 | | 75-125 |
| Methyl isobutyl ketone | 5000 | 4635 | 93 | | 75-125 |
| Cis-1,3-Dichloropropene | 2000 | 2008 | 100 | | 75-125 |
| Toluene | 2000 | 2007 | 100 | | 75-125 |
| Trans-1,3-Dichloropropene | 2000 | 1947 | 97 | | 75-125 |
| 1,1,2-Trichloroethane | 2000 | 1926 | 96 | | 75-125 |
| 1,3-Dichloropropane | 2000 | 1900 | 95 | | 75-125 |
| Tetrachloroethene | 2000 | 2115 | 106 | | 75-125 |
| Dibromochloromethane | 2000 | 1990 | 100 | | 75-125 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: LS06183C,RR

| COMPOUND | SPIKE ADDED (ug/kg) | LCS CONC. (ug/kg) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 2000 | 1923 | 96 | | 75-125 |
| Chlorobenzene | 2000 | 2002 | 100 | | 75-125 |
| 1,1,1,2-Tetrachloroethane | 2000 | 2074 | 104 | | 75-125 |
| Ethylbenzene | 2000 | 1959 | 98 | | 75-125 |
| M-,P-Xylene | 4000 | 3949 | 99 | | 75-125 |
| O-Xylene | 2000 | 2021 | 101 | | 75-125 |
| Styrene | 2000 | 2073 | 104 | | 75-125 |
| Bromoform | 2000 | 1882 | 94 | | 75-125 |
| Isopropylbenzene | 2000 | 2059 | 103 | | 75-125 |
| 1,1,2,2-Tetrachloroethane | 2000 | 1745 | 87 | | 75-125 |
| 1,2,3-Trichloropropane | 2000 | 1622 | 81 | | 75-125 |
| N-Propylbenzene | 2000 | 1958 | 98 | | 75-125 |
| Bromobenzene | 2000 | 1951 | 98 | | 75-125 |
| 1,3,5-Trimethylbenzene | 2000 | 2104 | 105 | | 75-125 |
| 2-Chlorotoluene | 2000 | 1969 | 98 | | 75-125 |
| 4-Chlorotoluene | 2000 | 1939 | 97 | | 75-125 |
| Tert-Butylbenzene | 2000 | 2073 | 104 | | 75-125 |
| 1,2,4-Trimethylbenzene | 2000 | 2029 | 101 | | 75-125 |
| Sec-Butylbenzene | 2000 | 2028 | 101 | | 75-125 |
| P-Isopropyltoluene | 2000 | 2046 | 102 | | 75-125 |
| 1,3-Dichlorobenzene | 2000 | 2004 | 100 | | 75-125 |
| 1,4-Dichlorobenzene | 2000 | 2016 | 101 | | 75-125 |
| N-Butylbenzene | 2000 | 2116 | 106 | | 75-125 |
| 1,2-Dichlorobenzene | 2000 | 1963 | 98 | | 75-125 |
| 1,2-Dibromo-3-chloropropane | 2000 | 1643 | 82 | | 75-125 |
| 1,2,4-Trichlorobenzene | 2000 | 2058 | 103 | | 75-125 |
| Hexachlorobutadiene | 2000 | 2319 | 116 | | 75-125 |
| Naphthalene | 2000 | 1990 | 100 | | 75-125 |
| 1,2,3-Trichlorobenzene | 2000 | 2018 | 101 | | 75-125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 4 out of 70 outside limits

Comments: _____

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analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806193C

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 17.4 | 87 | | 70-130 |
| Chloromethane | 20 | 22.3 | 111 | | 70-130 |
| Vinyl Chloride | 20 | 18.4 | 92 | | 70-130 |
| Bromomethane | 20 | 11.8 | 59 | * | 70-130 |
| Chloroethane | 20 | 18.5 | 92 | | 70-130 |
| t-Butyl alcohol | 100 | 75.7 | 76 | | 70-130 |
| Trichlorofluoromethane | 20 | 18.6 | 93 | | 70-130 |
| Diethyl ether | 20 | 17.2 | 86 | | 70-130 |
| Acetone | 20 | 19.1 | 95 | | 70-130 |
| 1,1-Dichloroethene | 20 | 18.5 | 93 | | 70-130 |
| Di-isopropyl ether | 20 | 18.8 | 94 | | 70-130 |
| Methylene Chloride | 20 | 16.6 | 83 | | 70-130 |
| Carbon Disulfide | 20 | 18.5 | 93 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 36.5 | 91 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 18.5 | 93 | | 70-130 |
| 1,1-Dichloroethane | 20 | 18.7 | 94 | | 70-130 |
| Methyl ethyl ketone | 20 | 23.6 | 118 | | 70-130 |
| Ethyl t-butyl ether | 20 | 21.0 | 105 | | 70-130 |
| 2,2-Dichloropropane | 20 | 21.5 | 108 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 24.0 | 120 | | 70-130 |
| t-Amyl methyl ether | 20 | 19.4 | 97 | | 70-130 |
| Chloroform | 20 | 19.6 | 98 | | 70-130 |
| Bromochloromethane | 20 | 19.9 | 99 | | 70-130 |
| Tetrahydrofuran | 20 | 20.2 | 101 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 20.0 | 100 | | 70-130 |
| 1,1-Dichloropropene | 20 | 20.6 | 103 | | 70-130 |
| Carbon Tetrachloride | 20 | 19.8 | 99 | | 70-130 |
| 1,2-Dichloroethane | 20 | 19.8 | 99 | | 70-130 |
| Benzene | 20 | 20.0 | 100 | | 70-130 |
| Trichloroethene | 20 | 21.5 | 108 | | 70-130 |
| 1,2-Dichloropropane | 20 | 20.8 | 104 | | 70-130 |
| Bromodichloromethane | 20 | 21.5 | 107 | | 70-130 |
| Dibromomethane | 20 | 19.3 | 97 | | 70-130 |
| 2-Hexanone | 20 | 20.6 | 103 | | 70-130 |
| Methyl isobutyl ketone | 20 | 19.1 | 95 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 22.0 | 110 | | 70-130 |
| Toluene | 20 | 20.6 | 103 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 20.8 | 104 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 20.8 | 104 | | 70-130 |
| 1,3-Dichloropropane | 20 | 20.3 | 102 | | 70-130 |
| Tetrachloroethene | 20 | 22.5 | 113 | | 70-130 |
| Dibromochloromethane | 20 | 20.0 | 100 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806193C

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 20.7 | 103 | | 70-130 |
| Chlorobenzene | 20 | 20.9 | 104 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 21.6 | 108 | | 70-130 |
| Ethylbenzene | 20 | 20.5 | 102 | | 70-130 |
| M-,P-Xylene | 40 | 41.1 | 103 | | 70-130 |
| O-Xylene | 20 | 21.1 | 105 | | 70-130 |
| Styrene | 20 | 21.4 | 107 | | 70-130 |
| Bromoform | 20 | 20.5 | 102 | | 70-130 |
| Isopropylbenzene | 20 | 20.2 | 101 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 19.0 | 95 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 18.2 | 91 | | 70-130 |
| N-Propylbenzene | 20 | 20.8 | 104 | | 70-130 |
| Bromobenzene | 20 | 20.8 | 104 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 20.8 | 104 | | 70-130 |
| 2-Chlorotoluene | 20 | 20.5 | 102 | | 70-130 |
| 4-Chlorotoluene | 20 | 20.8 | 104 | | 70-130 |
| Tert-Butylbenzene | 20 | 21.2 | 106 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 21.2 | 106 | | 70-130 |
| Sec-Butylbenzene | 20 | 21.1 | 105 | | 70-130 |
| P-Isopropyltoluene | 20 | 20.4 | 102 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 20.9 | 105 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 20.8 | 104 | | 70-130 |
| N-Butylbenzene | 20 | 21.7 | 108 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 20.7 | 104 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 19.4 | 97 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 21.8 | 109 | | 70-130 |
| Hexachlorobutadiene | 20 | 25.7 | 128 | | 70-130 |
| Naphthalene | 20 | 20.5 | 102 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 21.2 | 106 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 20.3 | 102 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 1 out of 71 outside limits

Comments: _____

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analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-13,RR

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE AMT ug/kg | MS CONC. ug/kg | MS REC % | # | SPIKE ADDED ug/kg | MSD CONC. ug/kg | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4840 | U | 1208 | 25 | * | 5080 | 1212 | 25 | * | 0 | | 15 | 49-82 |
| Chloromethane | 4840 | U | 2144 | 44 | * | 5080 | 2385 | 49 | * | 11 | | 15 | 75-125 |
| Vinyl Chloride | 4840 | U | 2301 | 48 | * | 5080 | 2446 | 51 | * | 6 | | 15 | 75-125 |
| Bromomethane | 4840 | U | 2183 | 45 | * | 5080 | 2428 | 50 | * | 11 | | 15 | 75-125 |
| Chloroethane | 4840 | U | 2877 | 59 | * | 5080 | 2873 | 59 | * | 0 | | 15 | 75-125 |
| t-Butyl alcohol | 24200 | U | 16020 | 66 | * | 25400 | 17455 | 72 | * | 9 | | 15 | 60-140 |
| Trichlorofluoromethane | 4840 | U | 2519 | 52 | * | 5080 | 2677 | 55 | * | 6 | | 15 | 75-125 |
| Diethyl ether | 4840 | U | 3291 | 68 | * | 5080 | 3452 | 71 | * | 5 | | 15 | 75-125 |
| Acetone | 12100 | U | 8076 | 67 | * | 12700 | 8270 | 68 | * | 2 | | 15 | 75-125 |
| 1,1-Dichloroethene | 4840 | U | 2841 | 59 | * | 5080 | 3040 | 63 | | 7 | | 15 | 75-125 |
| Di-isopropyl ether | 4840 | U | 3296 | 68 | * | 5080 | 3510 | 73 | * | 6 | | 15 | 75-125 |
| Methylene Chloride | 4840 | U | 2715 | 56 | * | 5080 | 2926 | 60 | * | 7 | | 15 | 75-125 |
| Carbon Disulfide | 4840 | U | 2526 | 52 | * | 5080 | 2812 | 58 | * | 11 | | 15 | 75-125 |
| Methyl-tert-butyl ether | 4840 | U | 3349 | 69 | * | 5080 | 3447 | 71 | * | 3 | | 15 | 75-125 |
| Trans-1,2-Dichloroethene | 4840 | U | 2969 | 61 | * | 5080 | 3203 | 66 | * | 8 | | 15 | 75-125 |
| 1,1-Dichloroethane | 4840 | U | 3204 | 66 | * | 5080 | 3391 | 70 | * | 6 | | 15 | 75-125 |
| Methyl ethyl ketone | 12100 | U | 7565 | 63 | | 12700 | 8349 | 69 | | 10 | | 15 | 60-140 |
| Ethyl t-butyl ether | 4840 | U | 3306 | 68 | * | 5080 | 3533 | 73 | * | 7 | | 15 | 75-125 |
| 2,2-Dichloropropane | 4840 | U | 3144 | 65 | * | 5080 | 3363 | 69 | * | 7 | | 15 | 75-125 |
| Cis-1,2-Dichloroethene | 4840 | U | 3170 | 66 | * | 5080 | 3332 | 69 | * | 5 | | 15 | 75-125 |
| t-Amyl methyl ether | 4840 | U | 3482 | 72 | * | 5080 | 3655 | 76 | | 5 | | 15 | 75-125 |
| Chloroform | 4840 | U | 3175 | 66 | * | 5080 | 3462 | 72 | * | 9 | | 15 | 75-125 |
| Bromochloromethane | 4840 | U | 3611 | 75 | | 5080 | 3673 | 76 | | 2 | | 15 | 75-125 |
| Tetrahydrofuran | 4840 | U | 3182 | 66 | | 5080 | 3465 | 72 | | 8 | | 15 | 60-140 |
| 1,1,1-Trichloroethane | 4840 | U | 3272 | 68 | * | 5080 | 3490 | 72 | * | 6 | | 15 | 75-125 |
| 1,1-Dichloropropene | 4840 | U | 3202 | 66 | * | 5080 | 3452 | 71 | * | 8 | | 15 | 75-125 |
| Carbon Tetrachloride | 4840 | U | 3238 | 67 | * | 5080 | 3442 | 71 | * | 6 | | 15 | 75-125 |
| 1,2-Dichloroethane | 4840 | U | 3330 | 69 | * | 5080 | 3475 | 72 | * | 4 | | 15 | 75-125 |
| Benzene | 4840 | U | 3318 | 69 | * | 5080 | 3531 | 73 | * | 6 | | 15 | 75-125 |
| Trichloroethene | 4840 | U | 3277 | 68 | * | 5080 | 3475 | 72 | * | 6 | | 15 | 75-125 |
| 1,2-Dichloropropane | 4840 | U | 3424 | 71 | * | 5080 | 3683 | 76 | | 7 | | 15 | 75-125 |
| Bromodichloromethane | 4840 | U | 3482 | 72 | * | 5080 | 3658 | 76 | | 5 | | 15 | 75-125 |
| Dibromomethane | 4840 | U | 3361 | 69 | * | 5080 | 3617 | 75 | | 7 | | 15 | 75-125 |
| 2-Hexanone | 12100 | U | 7095 | 59 | * | 12700 | 8588 | 71 | * | 19 | * | 15 | 75-125 |
| Methyl isobutyl ketone | 12100 | U | 8020 | 66 | * | 12700 | 9119 | 75 | | 13 | | 15 | 75-125 |
| Cis-1,3-Dichloropropene | 4840 | U | 3429 | 71 | * | 5080 | 3668 | 76 | | 7 | | 15 | 75-125 |
| Toluene | 4840 | U | 3301 | 68 | * | 5080 | 3571 | 74 | * | 8 | | 15 | 75-125 |
| Trans-1,3-Dichloropropene | 4840 | U | 3400 | 70 | * | 5080 | 3604 | 74 | * | 6 | | 15 | 75-125 |
| 1,1,2-Trichloroethane | 4840 | U | 3429 | 71 | * | 5080 | 3625 | 75 | | 6 | | 15 | 75-125 |
| 1,3-Dichloropropane | 4840 | U | 3378 | 70 | * | 5080 | 3642 | 75 | | 8 | | 15 | 75-125 |
| Tetrachloroethene | 4840 | U | 3325 | 69 | * | 5080 | 3589 | 74 | * | 8 | | 15 | 75-125 |
| Dibromochloromethane | 4840 | U | 3480 | 72 | * | 5080 | 3688 | 76 | | 6 | | 15 | 75-125 |
| 1,2-Dibromoethane | 4840 | U | 3449 | 71 | * | 5080 | 3579 | 74 | * | 4 | | 15 | 75-125 |
| Chlorobenzene | 4840 | U | 3553 | 73 | * | 5080 | 3807 | 79 | | 7 | | 15 | 75-125 |
| 1,1,1,2-Tetrachloroethane | 4840 | U | 3519 | 73 | * | 5080 | 3797 | 78 | | 8 | | 15 | 75-125 |
| Ethylbenzene | 4840 | U | 3422 | 71 | * | 5080 | 3719 | 77 | | 8 | | 15 | 75-125 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: C
GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49855-13,RR

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE AMT ug/kg | MS CONC. ug/kg | MS REC % | # | SPIKE ADDED ug/kg | MSD CONC. ug/kg | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M-,P-Xylene | 9680 | U | 6882 | 71 | * | 10160 | 7435 | 77 | | 8 | | 15 | 75-125 |
| O-Xylene | 4840 | U | 3502 | 72 | * | 5080 | 3716 | 77 | | 6 | | 15 | 75-125 |
| Styrene | 4840 | U | 3439 | 71 | * | 5080 | 3754 | 78 | | 9 | | 15 | 75-125 |
| Bromoform | 4840 | U | 3594 | 74 | * | 5080 | 3744 | 77 | | 4 | | 15 | 75-125 |
| Isopropylbenzene | 4840 | U | 3482 | 72 | * | 5080 | 3744 | 77 | | 7 | | 15 | 75-125 |
| 1,1,2,2-Tetrachloroethane | 4840 | U | 3485 | 72 | * | 5080 | 3647 | 75 | | 5 | | 15 | 75-125 |
| 1,2,3-Trichloropropane | 4840 | U | 3315 | 69 | * | 5080 | 3548 | 73 | * | 7 | | 15 | 75-125 |
| N-Propylbenzene | 4840 | U | 3429 | 71 | * | 5080 | 3716 | 77 | | 8 | | 15 | 75-125 |
| Bromobenzene | 4840 | U | 3497 | 72 | * | 5080 | 3774 | 78 | | 8 | | 15 | 75-125 |
| 1,3,5-Trimethylbenzene | 4840 | U | 3427 | 71 | * | 5080 | 3696 | 76 | | 8 | | 15 | 75-125 |
| 2-Chlorotoluene | 4840 | U | 3468 | 72 | * | 5080 | 3663 | 76 | | 5 | | 15 | 75-125 |
| 4-Chlorotoluene | 4840 | U | 3398 | 70 | * | 5080 | 3739 | 77 | | 10 | | 15 | 75-125 |
| Tert-Butylbenzene | 4840 | U | 3502 | 72 | * | 5080 | 3853 | 80 | | 10 | | 15 | 75-125 |
| 1,2,4-Trimethylbenzene | 4840 | U | 3407 | 70 | * | 5080 | 3706 | 77 | | 8 | | 15 | 75-125 |
| Sec-Butylbenzene | 4840 | U | 3468 | 72 | * | 5080 | 3736 | 77 | | 7 | | 15 | 75-125 |
| P-Isopropyltoluene | 4840 | U | 3478 | 72 | * | 5080 | 3774 | 78 | | 8 | | 15 | 75-125 |
| 1,3-Dichlorobenzene | 4840 | U | 3480 | 72 | * | 5080 | 3769 | 78 | | 8 | | 15 | 75-125 |
| 1,4-Dichlorobenzene | 4840 | U | 3509 | 73 | * | 5080 | 3711 | 77 | | 6 | | 15 | 75-125 |
| N-Butylbenzene | 4840 | U | 3526 | 73 | * | 5080 | 3757 | 78 | | 6 | | 15 | 75-125 |
| 1,2-Dichlorobenzene | 4840 | U | 3548 | 73 | * | 5080 | 3782 | 78 | | 6 | | 15 | 75-125 |
| 1,2-Dibromo-3-chloropropane | 4840 | U | 3400 | 70 | * | 5080 | 3708 | 77 | | 9 | | 15 | 75-125 |
| 1,2,4-Trichlorobenzene | 4840 | U | 3444 | 71 | * | 5080 | 3708 | 77 | | 7 | | 15 | 75-125 |
| Hexachlorobutadiene | 4840 | U | 4012 | 83 | | 5080 | 4166 | 86 | | 4 | | 15 | 75-125 |
| Naphthalene | 4840 | U | 3548 | 73 | * | 5080 | 3754 | 78 | | 6 | | 15 | 75-125 |
| 1,2,3-Trichlorobenzene | 4840 | U | 3480 | 72 | * | 5080 | 3665 | 76 | | 5 | | 15 | 75-125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 1 out of 70 outside limits
Spike Recovery: 98 out of 140 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806193C4

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 18.3 | 91 | | 70-130 |
| Chloromethane | 20 | 19.9 | 99 | | 70-130 |
| Vinyl Chloride | 20 | 19.1 | 96 | | 70-130 |
| Bromomethane | 20 | 15.6 | 78 | | 70-130 |
| Chloroethane | 20 | 19.2 | 96 | | 70-130 |
| t-Butyl alcohol | 100 | 81.7 | 82 | | 70-130 |
| Trichlorofluoromethane | 20 | 18.3 | 92 | | 70-130 |
| Diethyl ether | 20 | 18.5 | 93 | | 70-130 |
| Acetone | 20 | 19.8 | 99 | | 70-130 |
| 1,1-Dichloroethene | 20 | 18.2 | 91 | | 70-130 |
| Di-isopropyl ether | 20 | 19.3 | 96 | | 70-130 |
| Methylene Chloride | 20 | 17.0 | 85 | | 70-130 |
| Carbon Disulfide | 20 | 18.0 | 90 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 37.0 | 93 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 18.4 | 92 | | 70-130 |
| 1,1-Dichloroethane | 20 | 18.7 | 94 | | 70-130 |
| Methyl ethyl ketone | 20 | 18.6 | 93 | | 70-130 |
| Ethyl t-butyl ether | 20 | 18.8 | 94 | | 70-130 |
| 2,2-Dichloropropane | 20 | 18.1 | 90 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 19.5 | 98 | | 70-130 |
| t-Amyl methyl ether | 20 | 19.3 | 96 | | 70-130 |
| Chloroform | 20 | 19.1 | 96 | | 70-130 |
| Bromochloromethane | 20 | 21.0 | 105 | | 70-130 |
| Tetrahydrofuran | 20 | 19.6 | 98 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 19.7 | 99 | | 70-130 |
| 1,1-Dichloropropene | 20 | 19.7 | 99 | | 70-130 |
| Carbon Tetrachloride | 20 | 20.3 | 101 | | 70-130 |
| 1,2-Dichloroethane | 20 | 19.6 | 98 | | 70-130 |
| Benzene | 20 | 19.7 | 98 | | 70-130 |
| Trichloroethene | 20 | 20.5 | 103 | | 70-130 |
| 1,2-Dichloropropane | 20 | 20.3 | 101 | | 70-130 |
| Bromodichloromethane | 20 | 20.3 | 101 | | 70-130 |
| Dibromomethane | 20 | 18.6 | 93 | | 70-130 |
| 2-Hexanone | 20 | 16.9 | 85 | | 70-130 |
| Methyl isobutyl ketone | 20 | 18.4 | 92 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 20.6 | 103 | | 70-130 |
| Toluene | 20 | 19.0 | 95 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 19.3 | 97 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 19.6 | 98 | | 70-130 |
| 1,3-Dichloropropane | 20 | 19.4 | 97 | | 70-130 |
| Tetrachloroethene | 20 | 21.4 | 107 | | 70-130 |
| Dibromochloromethane | 20 | 19.2 | 96 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002.2010 Quote #: SDG# 49855

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806193C4

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 19.9 | 100 | | 70-130 |
| Chlorobenzene | 20 | 19.8 | 99 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 20.5 | 102 | | 70-130 |
| Ethylbenzene | 20 | 19.2 | 96 | | 70-130 |
| M-,P-Xylene | 40 | 39.3 | 98 | | 70-130 |
| O-Xylene | 20 | 19.9 | 99 | | 70-130 |
| Styrene | 20 | 19.8 | 99 | | 70-130 |
| Bromoform | 20 | 18.8 | 94 | | 70-130 |
| Isopropylbenzene | 20 | 18.7 | 93 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 17.5 | 88 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 17.8 | 89 | | 70-130 |
| N-Propylbenzene | 20 | 19.3 | 96 | | 70-130 |
| Bromobenzene | 20 | 19.3 | 97 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 19.5 | 97 | | 70-130 |
| 2-Chlorotoluene | 20 | 19.5 | 98 | | 70-130 |
| 4-Chlorotoluene | 20 | 18.7 | 93 | | 70-130 |
| Tert-Butylbenzene | 20 | 19.9 | 99 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 20.2 | 101 | | 70-130 |
| Sec-Butylbenzene | 20 | 19.8 | 99 | | 70-130 |
| P-Isopropyltoluene | 20 | 19.3 | 97 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 19.3 | 96 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 20.1 | 101 | | 70-130 |
| N-Butylbenzene | 20 | 20.2 | 101 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 20.3 | 101 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 19.1 | 96 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 20.5 | 103 | | 70-130 |
| Hexachlorobutadiene | 20 | 24.1 | 121 | | 70-130 |
| Naphthalene | 20 | 20.1 | 100 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 20.3 | 101 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 19.3 | 97 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 71 outside limits

Comments: _____

_____

**GC/MS Volatiles Instrument:** C

IS only V4489 Exp: 6/18/03
SS+IS V4490 Exp: 6/18/03
**Voltage** 2059
**Threshold** 100

061703-C

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | W-C-061703-1-MT | | | | | | |
| 12 | V8061230 | BFB 50ng 2ul V4487 | 5mL | | ✓ | C43580T | MT | NA |
| 2 | | 20 ppb 5ul V4504 V4512 | | | ✓ | 81SC | | |
| 3 | | 1806173C 5ul V4506 V4517 | | | Many ↑ failures - Recal | 82Q | | |
| 4 | | Bromoform V4488 | | | Not used | 83 | | |
| 5 | | B806173C | | | Not used | 84B | | |
| 6 | V8061730 | 1 ppb .25ml V4504 V4512 | | | | 85SI | | |
| 7 | | 2 ppb .5ml | | | Curve Avg RF 10.7% | 86SI | | |
| 8 | | 5 ppb 1.25ml | | | | 87SI | | |
| 9 | | 20 ppb 5ml | | | | 88SI | | |
| 10 | | 50 ppb 12.5ml | | | | 89SI | | |
| 11 | | 100ppb 25ml | | | | 90SI | | |
| 12 | | Blank | | | Cont call | 91 | | |
| 9 | | | | | Cont call | 92 | | |
| 10 | | | | | Cont call | 93 | | |
| 11 | | | | | Cont call | 94 | | |
| 1 | | BFB 50ng 2ml V4487 | 5mL | | ✓ | 95T | MM | NA 1500 |
| 2 | | 20ppb 5ml V4504 V4512 | | | ✓ | 96SC | | |
| 3 | | L806173C 5ml V4506 V4517 | | | TBA, ↓SS, RR | 97Q | | |
| 4 | | Bromoform V4488 | | | ✓ | 98 | | |
| 5 | | B806173C2 | ↓ | | ✓ | 99B | | |
| 3 | | L806173C2 | 5mL | | SS, ↓ again, Spike Compounds OK | C43600Q | | |
| 4 | | L806173C2 | ↓ | | SS, ↓ | 01Q | | |
| 5 | | 49863-25 Air | 5mL | | ✓SS, OK | 02 | | |
| 6 | | -26 | | | ✓ | 03 | | |
| 7 | | -27 | | | ✓ | 04 | | |
| 8 | | -28 | ↓ | | MM 5mL | 05 | | |
| 9 | | -29 | 100mL | | MM 5mL | 06 | | |
| 10 | | -30 | 5mL | | ✓ | 07 | | |
| 11 | | -31 | 5mL | | ✓ | 08 | | |
| 12 | | -33 | ↓ | | MM 250mL | 09 | | |

Cont pg. 17

Revision: 04/30/02

**GC/MS Volatiles Instrument:** C

IS only Exp:

SS+IS V4490 Exp: 6-18-03

**Voltage** 2059

**Threshold** 100

061803-C

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | W-C-061803-1-JR | | | | | | |
| 13 | V8260_3C | BFB 50ng 2uL V4497 | 5mL | | √ 1383 | C436187 | JR | NA 9:45 |
| 14 | | 20ppb 5mL V4504 V4512 V4506 | | | √ | 19 | SC | |
| 15 | | 1806183C V4517 | | | √ All OK | 202 | | |
| 12 | | Bromoform V4488 | | | √ | 21 | | |
| 13 | | B806183C | | | √ | 22B | | |
| 14 | | 49838-3 | 5mL | | √ | 23 | MT | <2 |
| 15 | | 49872-1 | | | √ | 24 | | <2 |
| 16 | | -2 | | | √ | 25 | | <2 |
| 1 | | 49836-88 | 2.5mL | | √ | 26 | | <2 |
| 3 | | -89 | 50uL | | √ | 27 | | <2 |
| 4 | | -90 | 5mL | | √ | 28 | | <2 |
| 5 | | 49837-4 | 2.5mL | | √ | 29 | | <2 |
| 6 | | -5 | 5mL | | √ | 30 | | <2 |
| 7 | | -5MS | | | √ All OK | 31SP | | <2 |
| 8 | | -5MSD | | | √ | 32SP | | <2 |
| 9 | | 49863-28 | | | √ AIR | 33 | | NA |
| 10 | | -29 | | | √ | 34 | | |
| 11 | | ~~32~~ 39 | | | √ | 35 | | |
| 12 | | -33 | 25uL | | √ | 36 | | |
| 13 | | -34 | 500uL | | √ | 37 | | |
| 14 | | -36 | 1mL | | √ | 38 | | |
| 15 | | -40 | 5mL | | √ | 39 | | |
| 16 | W-C-061803-2-AIR | BFB 50ng 2uL V4487 | 5mL | | ✓ | 40T | AIR | NA 2152 |
| 1 | | 20ppb 5mL V4504 V4512 | | | √ | 41SC | | |
| 4 | | MB806183B 5mL V4503 | 50mL | | √ | 42B | | |
| 5 | | LSD6183B | | | √ BM | 43B | | |
| 6 | | LSD6183B2 | | | ✱ Int. Abnormality, ↑, RR | 44B | | |
| 7 | | 49885-8 | | | RR 50uL CO T.M. | 45 | | |
| 8 | | -10 | | | √ 9.56 | 46 | | |
| 9 | | -11 | | | ✓ RR 50uL bss 12.81 | 47 | | |

Revision: 04/30/02

**GC/MS Volatiles Instrument: C**

IS only V4489 Exp: 6/18/03
SS+IS — Exp: —
**Voltage** 2059
**Threshold** 100

Cont. 061803-C

| Tube | Method | Sample | Vol | DF | Comments | | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|---|
| 10 | V80617C | 49855-12 | 50uL/5mL | | ✓ | 10.00 | C43648 | MW | NA |
| 11 | | -13 | | | ✓ | 6.12 | 49 | | |
| 12 | | -13 MS | | | many failures | 7.62 | 50SP | | |
| 13 | | Blank ~~-13 MSD~~ | | | ~~No Spike Added~~ RR | 7.27 | 51SP | | |
| 14 | | ~~BLK~~ -13MSD | | | RR to confirm. | | 52 | | |
| 15 | | 49855-14 | | | RR 50ul | 8.14 | 53 | | |
| 16 | | 49820-1 | | | ✓ | 11.18 | 54 | | |
| 1 | | 49853-1 | | | RR 50ul ↓SS | 10.48 | 55 | | |
| 2 | | 49821-1 | | | RR 50ul PCEC | 10.19 | 56 | | |
| 3 | | 49842-1 | 25uL/5mL | | ✓ | 25.45 | 57 | | |
| 4 | | LS06183C; RR ~~LS06183B; RR~~ 6270 | 50uL/5mL | | ✓ Some ↓ gases | 10.00 | 58 | MT | NA |

MT 6/19/03

Revision: 04/30/02

**GC/MS Volatiles Instrument:** C

IS only Exp:

SS+IS Exp:

061903-C

**Voltage** 2059

**Threshold** 100

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | BW-C-061903-1-MT | | | | | | |
| 3 | V806173C | BFB 50ng 2ml V4487 | 5mL | ✓ | | C43659T | MT | NA 1177 |
| 4 | | 20ppb 5ml V4504 V4512 | | ✓ | | 60SL | | |
| 12 | | L806193C 5ml V4506 V4517 | | | BM↓ 59% w/50ml MeOH | 61Q | | |
| 13 | | Bromoform | | ✓ | | 62 | | |
| 14 | | B806193C | | ✓ | w/50ml MeOH | 63B | | |
| 12 | | L806193C2 | | | ↓SS, NA w/50ml MeOH | 64Q | | |
| 13 | | Blank | | | Abnormally ↑ IS causing ↓SS. | 65 | | |
| 2 | | L806193C3 | | | ↓SS, NA | 66 | | |
| 3 | | Blank | | | | 67 | | |
| 7 | | 49855-8 | | ✓ | TB. | 68 | | |
| 8 | | 49853-1 | | | Conf ↓SS. 10.48 | 69 | | |
| 9 | | 49821-1 | | ✓ | 10.19 | 70 | | |
| 10 | | 49855-11 | | ✓ | confirmed failures. 12.81 | 71 | | |
| 11 | | -14 | | ✓ | 8.14 | 72 | | |
| 12 | | -13MS | | ✓ | 7.62 | 73 SP | | |
| 13 | | -13MSD | | ✓ | 7.27 | 74 SP | | |
| 14 | | L806193C4 | | | All ok | 75 Q | | |

6-20-03

Revision: 04/30/02

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43580T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/17/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1051

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.9 |
| 75 | 30.0 - 60.0% of mass 95 | 38.6 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 5.9 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 64.3 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 7.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 62.2 ( 96.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 ( 7.3 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | ZZZZZ | ZZZZZ | C43581SC.D | 06/17/03 | 11:20 |
| 02 | ZZZZZ | ZZZZZ | C43582Q.D | 06/17/03 | 11:53 |
| 03 | ZZZZZ | ZZZZZ | C43583.D | 06/17/03 | 12:22 |
| 04 | ZZZZZ | ZZZZZ | C43584B.D | 06/17/03 | 12:50 |
| 05 | 1 PPB | 1 PPB | C43585SI.D | 06/17/03 | 13:23 |
| 06 | 2 PPB | 2 PPB | C43586SI.D | 06/17/03 | 13:51 |
| 07 | 5 PPB | 5 PPB | C43587SI.D | 06/17/03 | 14:19 |
| 08 | 20 PPB | 20 PPB | C43588SI.D | 06/17/03 | 14:48 |
| 09 | 50 PPB | 50 PPB | C43589SI.D | 06/17/03 | 15:16 |
| 10 | 100 PPB | 100 PPB | C43590SI.D | 06/17/03 | 15:45 |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43640T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2152

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.1 |
| 75 | 30.0 - 60.0% of mass 95 | 42.5 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 63.1 |
| 175 | 5.0 - 9.0% of mass 174 | 4.4 ( 7.0 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 62.5 ( 99.0 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.3 ( 6.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB | 20PPB | C43641SC.D | 06/18/03 | 22:21 |
| 02 | MB06183B | MB06183B | C43642B.D | 06/18/03 | 23:52 |
| 03 | ZZZZZ | ZZZZZ | C43643Q.D | 06/19/03 | 0:35 |
| 04 | LS06183B2 | LS06183B2 | C43644Q.D | 06/19/03 | 1:03 |
| 05 | ZZZZZ | ZZZZZ | C43645.D | 06/19/03 | 1:37 |
| 06 | 49855-10 | 49855-10 | C43646.D | 06/19/03 | 2:06 |
| 07 | 49855-11 | 49855-11 | C43647.D | 06/19/03 | 2:35 |
| 08 | 49855-12 | 49855-12 | C43648.D | 06/19/03 | 3:04 |
| 09 | 49855-13 | 49855-13 | C43649.D | 06/19/03 | 3:33 |
| 10 | 49855-13,MS | 49855-13,MS | C43650.D | 06/19/03 | 4:01 |
| 11 | ZZZZZ | ZZZZZ | C43651.D | 06/19/03 | 4:30 |
| 12 | 49855-13,MSD | 49855-13,MSD | C43652.D | 06/19/03 | 4:59 |
| 13 | ZZZZZ | ZZZZZ | C43653.D | 06/19/03 | 5:28 |
| 14 | ZZZZZ | ZZZZZ | C43654.D | 06/19/03 | 5:57 |
| 15 | ZZZZZ | ZZZZZ | C43655.D | 06/19/03 | 6:26 |
| 16 | ZZZZZ | ZZZZZ | C43656.D | 06/19/03 | 6:55 |
| 17 | ZZZZZ | ZZZZZ | C43657.D | 06/19/03 | 7:24 |
| 18 | LS06183C,RR | LS06183C,RR | C43658Q.D | 06/19/03 | 8:00 |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43659T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1133

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.2 |
| 75 | 30.0 - 60.0% of mass 95 | 36.3 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 70.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.4 ( 7.6 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 69.6 ( 98.4 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.6 ( 6.6 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB | 20PPB | C43660SC.D | 06/19/03 | 12:01 |
| 02 | L806193C | L806193C | C43661Q.D | 06/19/03 | 12:41 |
| 03 | ZZZZZ | ZZZZZ | C43662.D | 06/19/03 | 13:09 |
| 04 | B806193C | B806193C | C43663B.D | 06/19/03 | 13:39 |
| 05 | ZZZZZ | ZZZZZ | C43664Q.D | 06/19/03 | 14:16 |
| 06 | ZZZZZ | ZZZZZ | C43665.D | 06/19/03 | 14:45 |
| 07 | ZZZZZ | ZZZZZ | C43666Q.D | 06/19/03 | 15:14 |
| 08 | ZZZZZ | ZZZZZ | C43667.D | 06/19/03 | 15:49 |
| 09 | 49855-8 | 49855-8 | C43668.D | 06/19/03 | 16:18 |
| 10 | ZZZZZ | ZZZZZ | C43669.D | 06/19/03 | 16:46 |
| 11 | ZZZZZ | ZZZZZ | C43670.D | 06/19/03 | 17:15 |
| 12 | 49855-11,RR | 49855-11,RR | C43671.D | 06/19/03 | 17:44 |
| 13 | 49855-14 | 49855-14 | C43672.D | 06/19/03 | 18:12 |
| 14 | 49855-13,MS,RR | 49855-13,MS,RR | C43673SP.D | 06/19/03 | 18:41 |
| 15 | 49855-13,MSD,RR | 49855-13,MSD,RR | C43674SP.D | 06/19/03 | 19:09 |
| 16 | L806193C4 | L806193C4 | C43675Q.D | 06/19/03 | 19:38 |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

C:\HPCHEM\1\DATA\061703C\C43584B.D
Method File **V806123C**
10.7% **C43585SI.D**
Level 2 File Name **C43586SI.D**
Level 3 File Name **C43587SI.D**
Level 4 File Name **C43588SI.D**
Level 5 File Name **C43589SI.D**
Level 6 File Name **C43590SI.D**

| Name | LEVEL 1 RF | LEVEL 2 RF | LEVEL 3 RF | LEVEL 4 RF | LEVEL 5 RF | LEVEL 6 RF | AVG RF |
|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.151 | 1.058 | 1.085 | 1.153 | 1.150 | 1.055 | 4.3% |
| Chloromethane | 1.144 | 0.897 | 0.946 | 1.017 | 1.006 | 0.962 | 8.5% |
| Vinyl Chloride | 0.963 | 0.895 | 0.923 | 0.988 | 0.972 | 0.898 | 4.2% |
| Bromomethane | 1.130 | 0.879 | 0.927 | 0.912 | 0.863 | 0.845 | 11.3% |
| Chloroethane | 0.587 | 0.498 | 0.514 | 0.541 | 0.555 | 0.531 | 5.8% |
| t-Butyl alcohol (TBA) | 0.059 | 0.057 | 0.055 | 0.055 | 0.052 | 0.057 | 4.5% |
| Trichlorofluoromethane | 1.718 | 1.428 | 1.527 | 1.640 | 1.611 | 1.469 | 7.0% |
| Diethyl ether | 0.361 | 0.322 | 0.379 | 0.389 | 0.379 | 0.418 | 8.5% |
| 1,1,2-Trichlorotrifluoroethane | 1.002 | 0.945 | 1.014 | 1.049 | 1.040 | 0.988 | 3.7% |
| Acrolein | 0.120 | 0.084 | 0.086 | 0.158 | 0.153 | 0.062 | 34.8% |
| Acetone | 0.243 | 0.218 | 0.214 | 0.221 | 0.213 | 0.245 | 6.6% |
| 1,1-Dichloroethene | 0.898 | 0.827 | 0.844 | 0.859 | 0.854 | 0.822 | 3.2% |
| Methyl iodide | 0.579 | 0.594 | 0.783 | 1.070 | 1.060 | 0.989 | 26.7% |
| Di-isopropyl ether (DIPE) | 2.754 | 2.497 | 2.719 | 2.932 | 2.868 | 2.972 | 6.2% |
| Methylene Chloride | 1.686 | 1.240 | 1.057 | 1.015 | 0.963 | 0.994 | 23.8% |
| Carbon Disulfide | 2.296 | 2.154 | 2.393 | 2.695 | 2.682 | 2.630 | 9.2% |
| Acrylonitrile | 0.304 | 0.243 | 0.259 | 0.272 | 0.262 | 0.300 | 8.8% |
| Methyl-tert-butyl ether (MTBE | 1.838 | 1.651 | 1.730 | 1.825 | 1.833 | 2.054 | 7.4% |
| trans-1,2-Dichloroethene | 1.000 | 0.899 | 0.967 | 0.994 | 0.983 | 0.973 | 3.8% |
| 1,1-Dichloroethane | 1.261 | 1.225 | 1.270 | 1.383 | 1.332 | 1.299 | 4.4% |
| Vinyl acetate | 1.373 | 0.936 | 1.103 | 1.594 | 1.626 | 0.489 | 36.7% |
| Methyl ethyl ketone | 0.067 | 0.046 | 0.050 | 0.054 | 0.054 | 0.061 | 13.9% |
| Ethyl t-butyl ether (ETBE) | 2.052 | 1.871 | 1.824 | 1.945 | 1.934 | 2.086 | 5.3% |
| 2,2-Dichloropropane | 1.309 | 0.966 | 1.053 | 1.134 | 1.130 | 1.083 | 10.2% |
| cis-1,2-Dichloroethene | 1.081 | 0.717 | 0.794 | 0.846 | 0.863 | 0.863 | 14.1% |
| t-Amyl methyl ether (TAME) | 1.417 | 1.337 | 1.436 | 1.563 | 1.555 | 1.685 | 8.4% |
| Chloroform | 1.596 | 1.221 | 1.330 | 1.423 | 1.395 | 1.397 | 8.8% |
| Bromochloromethane | 0.258 | 0.265 | 0.285 | 0.310 | 0.303 | 0.324 | 9.0% |
| Tetrahydrofuran | 0.061 | 0.043 | 0.052 | 0.052 | 0.050 | 0.058 | 12.0% |
| 1,1,1-Trichloroethane | 1.258 | 1.241 | 1.364 | 1.469 | 1.467 | 1.421 | 7.4% |
| 1,1-Dichloropropene | 0.854 | 0.767 | 0.876 | 0.913 | 0.902 | 0.875 | 6.0% |
| Carbon Tetrachloride | 0.975 | 0.903 | 1.075 | 1.183 | 1.173 | 1.147 | 10.7% |
| 1,2-Dichloroethane | 0.870 | 0.788 | 0.903 | 0.979 | 0.973 | 1.022 | 9.3% |
| Benzene | 2.180 | 2.077 | 2.253 | 2.382 | 2.374 | 2.359 | 5.5% |
| Trichloroethene | 0.412 | 0.409 | 0.470 | 0.481 | 0.518 | 0.511 | 10.1% |
| 1,2-Dichloropropane | 0.293 | 0.277 | 0.313 | 0.317 | 0.330 | 0.332 | 7.0% |
| Methylmethacrylate | 0.202 | 0.197 | 0.212 | 0.203 | 0.204 | 0.329 | 23.0% |
| Bromodichloromethane | 0.429 | 0.450 | 0.522 | 0.553 | 0.575 | 0.595 | 13.0% |
| Dibromomethane | 0.315 | 0.301 | 0.332 | 0.362 | 0.360 | 0.391 | 9.7% |
| 2-Chloroethylvinyl ether | 0.109 | 0.088 | 0.103 | 0.124 | 0.154 | 0.175 | 26.3% |
| 2-Hexanone | 0.087 | 0.091 | 0.102 | 0.112 | 0.113 | 0.118 | 12.4% |
| Methyl isobutyl ketone | 0.094 | 0.098 | 0.109 | 0.118 | 0.117 | 0.128 | 11.8% |
| cis-1,3-Dichloropropene | 0.453 | 0.453 | 0.510 | 0.555 | 0.583 | 0.607 | 12.5% |
| Toluene | 0.894 | 0.847 | 0.914 | 0.951 | 0.980 | 0.971 | 5.5% |
| trans-1,3-Dichloropropene | 0.379 | 0.383 | 0.451 | 0.499 | 0.520 | 0.549 | 15.4% |
| 1,1,2-Trichloroethane | 0.239 | 0.236 | 0.259 | 0.273 | 0.278 | 0.295 | 8.8% |
| 1,3-Dichloropropane | 0.492 | 0.462 | 0.503 | 0.534 | 0.536 | 0.577 | 7.8% |
| Tetrachloroethene | 0.334 | 0.340 | 0.366 | 0.377 | 0.398 | 0.389 | 7.1% |
| Dibromochloromethane | 0.295 | 0.321 | 0.372 | 0.418 | 0.438 | 0.462 | 17.3% |
| 1,2-Dibromoethane | 0.375 | 0.351 | 0.404 | 0.440 | 0.444 | 0.490 | 12.2% |
| Chlorobenzene | 0.967 | 0.993 | 1.099 | 1.168 | 1.203 | 1.209 | 9.6% |
| 1,1,1,2-Tetrachloroethane | 0.351 | 0.343 | 0.389 | 0.430 | 0.441 | 0.449 | 11.6% |
| Ethylbenzene | 1.900 | 1.934 | 2.155 | 2.274 | 2.316 | 2.257 | 8.4% |
| m,p-Xylene | 0.693 | 0.698 | 0.759 | 0.793 | 0.833 | 0.829 | 8.1% |
| o-Xylene | 0.655 | 0.649 | 0.705 | 0.761 | 0.774 | 0.784 | 8.4% |
| Styrene | 1.097 | 1.127 | 1.240 | 1.385 | 1.428 | 1.406 | 11.4% |
| Bromoform | 0.223 | 0.223 | 0.255 | 0.318 | 0.333 | 0.361 | 20.9% |
| Isopropylbenzene | 1.838 | 1.893 | 2.073 | 2.253 | 2.285 | 2.230 | 9.2% |
| 1,1,2,2-Tetrachloroethane | 0.446 | 0.422 | 0.462 | 0.501 | 0.484 | 0.505 | 7.0% |
| 1,2,3-Trichloropropane | 0.344 | 0.319 | 0.313 | 0.336 | 0.315 | 0.341 | 4.2% |
| trans-1,4-Dichloro-2-butene | 0.112 | 0.136 | 0.138 | 0.160 | 0.158 | 0.168 | 14.3% |
| n-Propylbenzene | 2.268 | 2.261 | 2.489 | 2.613 | 2.713 | 2.647 | 7.8% |
| Bromobenzene | 0.375 | 0.366 | 0.409 | 0.446 | 0.465 | 0.473 | 10.9% |
| 1,3,5-Trimethylbenzene | 1.463 | 1.464 | 1.566 | 1.740 | 1.795 | 1.780 | 9.5% |
| 2-Chlorotoluene | 1.452 | 1.439 | 1.582 | 1.715 | 1.771 | 1.720 | 9.0% |
| 4-Chlorotoluene | 1.301 | 1.369 | 1.406 | 1.493 | 1.512 | 1.503 | 6.0% |
| tert-butylbenzene | 1.026 | 1.045 | 1.133 | 1.238 | 1.247 | 1.208 | 8.5% |
| 1,2,4-Trimethylbenzene | 1.537 | 1.484 | 1.569 | 1.729 | 1.796 | 1.783 | 8.2% |
| sec-butylbenzene | 1.969 | 1.954 | 2.146 | 2.326 | 2.357 | 2.300 | 8.3% |
| p-isopropyltoluene | 1.258 | 1.271 | 1.382 | 1.494 | 1.555 | 1.547 | 9.5% |
| 1,3-Dichlorobenzene | 0.627 | 0.662 | 0.693 | 0.754 | 0.783 | 0.785 | 9.3% |
| 1,4-Dichlorobenzene | 1.482 | 1.403 | 1.527 | 1.614 | 1.639 | 1.623 | 6.1% |
| n-butylbenzene | 3.217 | 3.200 | 3.487 | 3.831 | 3.767 | 3.565 | 7.6% |
| 1,2-Dichlorobenzene | 1.330 | 1.228 | 1.359 | 1.486 | 1.476 | 1.472 | 7.5% |
| 1,2-Dibromo-3-chloropropane | 0.119 | 0.114 | 0.129 | 0.152 | 0.141 | 0.149 | 11.7% |
| 1,2,4-Trichlorobenzene | 0.795 | 0.758 | 0.828 | 0.933 | 0.961 | 0.975 | 10.6% |
| Hexachlorobutadiene | 0.187 | 0.397 | 0.446 | 0.510 | 0.512 | 0.486 | 29.3% |
| Naphthalene | 1.538 | 1.352 | 1.537 | 1.729 | 1.782 | 1.951 | 13.0% |
| 1,2,3-Trichlorobenzene | 0.717 | 0.649 | 0.710 | 0.827 | 0.845 | 0.886 | 12.1% |
| 1,3,5-Trichlorobenzene | 1.038 | 0.903 | 1.038 | 1.150 | 1.184 | 1.183 | 10.2% |

**CURVE AVG RF** **10.7%**

MT 6/18/03

6-20-03

# Response Factor Report Instr_C

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration

MT 6/18/03

Calibration Files
1 =C43585SI.D 2 =C43586SI.D 5 =C43587SI.D
20 =C43588SI.D 50 =C43589SI.D 100 =C43590SI.D

6.20.03

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 1.151 | 1.058 | 1.085 | 1.153 | 1.150 | 1.055 | 1.109 | 4.3 |
| 3) | TMP | Chloromethane | 1.144 | 0.897 | 0.946 | 1.017 | 1.006 | 0.962 | 0.995✓ | 8.5 |
| 4) | TMC | Vinyl Chloride | 0.963 | 0.895 | 0.923 | 0.988 | 0.972 | 0.898 | 0.940 | ✓4.2 |
| 5) | TM | Bromomethane | 1.130 | 0.879 | 0.927 | 0.912 | 0.863 | 0.845 | 0.926 | 11.2 |
| 6) | TM | Chloroethane | 0.587 | 0.498 | 0.514 | 0.541 | 0.555 | 0.531 | 0.538 | 5.8 |
| 7) | TM | t-Butyl alcohol (TB | 0.059 | 0.057 | 0.055 | 0.055 | 0.052 | 0.057 | 0.056# | 4.5 |
| 8) | TM | Trichlorofluorometh | 1.718 | 1.428 | 1.527 | 1.640 | 1.611 | 1.469 | 1.565 | 7.0 |
| 9) | TM | Diethyl ether | 0.361 | 0.322 | 0.379 | 0.389 | 0.379 | 0.418 | 0.375 | 8.5 |
| 10) | T | 1,1,2-Trichlorotrif | 1.002 | 0.945 | 1.014 | 1.049 | 1.040 | 0.988 | 1.006 | 3.7 |
| 11) | T | Acrolein | 0.120 | 0.084 | 0.086 | 0.153 | 0.153 | 0.062 | 0.110 | 34.8 |
| 12) | TM | Acetone | 0.243 | 0.218 | 0.214 | 0.221 | 0.213 | 0.245 | 0.226 | 6.5 |
| 13) | TMC | 1,1-Dichloroethene | 0.898 | 0.827 | 0.844 | 0.859 | 0.854 | 0.822 | 0.851 | ✓3.2 |
| 14) | T | Methyl iodide | 0.579 | 0.594 | 0.783 | 1.070 | 1.060 | 0.989 | 0.846 | 26.7 |
| 15) | TM | Di-isopropyl ether | 2.754 | 2.497 | 2.719 | 2.932 | 2.868 | 2.972 | 2.790 | 6.2 |
| 16) | TM | Methylene Chloride | 1.686 | 1.240 | 1.057 | 1.015 | 0.963 | 0.994 | 1.159 | 23.8 |
| 17) | TM | Carbon Disulfide | 2.296 | 2.154 | 2.393 | 2.695 | 2.682 | 2.630 | 2.475 | 9.1 |
| 18) | T | Acrylonitrile | 0.304 | 0.243 | 0.259 | 0.272 | 0.262 | 0.300 | 0.273 | 8.8 |
| 19) | TM | Methyl-tert-butyl e | 1.838 | 1.651 | 1.730 | 1.825 | 1.833 | 2.054 | 1.822 | 7.4 |
| 20) | TM | trans-1,2-Dichloroe | 1.000 | 0.899 | 0.967 | 0.994 | 0.983 | 0.973 | 0.969 | 3.7 |
| 21) | TMP | 1,1-Dichloroethane | 1.261 | 1.225 | 1.270 | 1.383 | 1.332 | 1.299 | 1.295✓ | 4.3 |
| 22) | T | Vinyl acetate | 1.373 | 0.936 | 1.103 | 1.594 | 1.626 | 0.489 | 1.187 | 36.7 |
| 23) | TM | Methyl ethyl ketone | 0.067 | 0.046 | 0.050 | 0.054 | 0.054 | 0.061 | 0.055# | 13.8 |
| 24) | TM | Ethyl t-butyl ether | 2.062 | 1.871 | 1.824 | 1.945 | 1.934 | 2.086 | 1.954 | 5.2 |
| 25) | TM | 2,2-Dichloropropane | 1.309 | 0.966 | 1.053 | 1.134 | 1.130 | 1.083 | 1.113 | 10.2 |
| 26) | TM | cis-1,2-Dichloroeth | 1.081 | 0.717 | 0.794 | 0.846 | 0.863 | 0.863 | 0.861 | 14.1 |
| 27) | TM | t-Amyl methyl ether | 1.417 | 1.337 | 1.436 | 1.563 | 1.555 | 1.685 | 1.499 | 8.3 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000# | -1.0 |
| 29) | TMC | Chloroform | 1.596 | 1.221 | 1.330 | 1.423 | 1.395 | 1.397 | 1.394 | ✓8.8 |
| 30) | TM | Bromochloromethane | 0.258 | 0.265 | 0.285 | 0.310 | 0.303 | 0.324 | 0.291 | 8.9 |
| 31) | TM | Tetrahydrofuran | 0.061 | 0.043 | 0.052 | 0.052 | 0.050 | 0.058 | 0.053# | 11.9 |
| 32) | TM | 1,1,1-Trichloroetha | 1.258 | 1.241 | 1.364 | 1.469 | 1.467 | 1.421 | 1.370 | 7.3 |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 34) | TM | 1,1-Dichloropropene | 0.854 | 0.767 | 0.876 | 0.913 | 0.902 | 0.875 | 0.864 | 6.0 |
| 35) | TM | Carbon Tetrachlorid | 0.975 | 0.903 | 1.075 | 1.183 | 1.173 | 1.147 | 1.076 | 10.6 |
| 36) | S | d4-1,2-Dichloroetha | 0.790 | 0.763 | 0.762 | 0.762 | 0.754 | 0.806 | 0.773 | 2.6 |
| 37) | TM | 1,2-Dichloroethane | 0.870 | 0.788 | 0.903 | 0.979 | 0.973 | 1.022 | 0.923 | 9.2 |
| 38) | TM | Benzene | 2.180 | 2.077 | 2.253 | 2.382 | 2.374 | 2.359 | 2.271 | 5.4 |
| 39) | I | 1,4-Difluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | 0.412 | 0.409 | 0.470 | 0.481 | 0.518 | 0.511 | 0.467 | 10.0 |
| 41) | TMC | 1,2-Dichloropropane | 0.293 | 0.277 | 0.313 | 0.317 | 0.330 | 0.332 | 0.310 | ✓6.9 |
| 42) | T | Methylmethacrylate | 0.202 | 0.197 | 0.212 | 0.203 | 0.204 | 0.329 | 0.225 | 22.9 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration

Calibration Files
1 =C43585SI.D 2 =C43586SI.D 5 =C43587SI.D
20 =C43588SI.D 50 =C43589SI.D 100 =C43590SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 45) | TM | Bromodichloromethan | 0.429 | 0.450 | 0.522 | 0.553 | 0.575 | 0.595 | 0.521 | 13.0 |
| 46) | TM | Dibromomethane | 0.315 | 0.301 | 0.332 | 0.362 | 0.360 | 0.391 | 0.344 | 9.7 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 50) | T | 2-Chloroethylvinyl | 0.109 | 0.088 | 0.103 | 0.124 | 0.154 | 0.175 | 0.125 | 26.2 |
| 51) | TM | 2-Hexanone | 0.087 | 0.091 | 0.102 | 0.112 | 0.113 | 0.118 | 0.104 | 12.3 |
| 52) | TM | Methyl isobutyl ket | 0.094 | 0.098 | 0.109 | 0.118 | 0.117 | 0.128 | 0.111 | 11.7 |
| 53) | TM | cis-1,3-Dichloropro | 0.453 | 0.453 | 0.510 | 0.555 | 0.583 | 0.607 | 0.527 | 12.4 |
| 54) | S | d8-Toluene | 1.393 | 1.435 | 1.394 | 1.377 | 1.378 | 1.365 | 1.390 | 1.7 |
| 55) | TMC | Toluene | 0.894 | 0.847 | 0.914 | 0.951 | 0.980 | 0.971 | 0.926 | ✓5.4 |
| 56) | TM | trans-1,3-Dichlorop | 0.379 | 0.383 | 0.451 | 0.499 | 0.520 | 0.549 | 0.464 | 15.4 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.239 | 0.236 | 0.259 | 0.273 | 0.278 | 0.295 | 0.263 | 8.7 |
| 59) | TM | 1,3-Dichloropropane | 0.492 | 0.462 | 0.503 | 0.534 | 0.536 | 0.577 | 0.517 | 7.8 |
| 60) | TM | Tetrachloroethene | 0.334 | 0.340 | 0.366 | 0.377 | 0.398 | 0.389 | 0.367 | 7.0 |
| 61) | TM | Dibromochloromethan | 0.295 | 0.321 | 0.372 | 0.418 | 0.438 | 0.462 | 0.384 | 17.3 |
| 62) | TM | 1,2-Dibromoethane | 0.375 | 0.351 | 0.404 | 0.440 | 0.444 | 0.490 | 0.417 | 12.1 |
| 63) | I | *d5-Chlorobenzene | ISTD | | | | | | | |
| 64) | TMP | Chlorobenzene | 0.967 | 0.993 | 1.099 | 1.168 | 1.203 | 1.209 | 1.107✓ | 9.5 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.351 | 0.343 | 0.389 | 0.430 | 0.441 | 0.449 | 0.400 | 11.5 |
| 66) | TMC | Ethylbenzene | 1.900 | 1.934 | 2.155 | 2.274 | 2.316 | 2.257 | 2.139 | ✓8.4 |
| 67) | TM | m,p-Xylene | 0.693 | 0.698 | 0.759 | 0.793 | 0.833 | 0.829 | 0.768 | 8.1 |
| 68) | TM | o-Xylene | 0.655 | 0.649 | 0.705 | 0.761 | 0.774 | 0.784 | 0.721 | 8.3 |
| 69) | TM | Styrene | 1.097 | 1.127 | 1.240 | 1.385 | 1.428 | 1.406 | 1.281 | 11.4 |
| 70) | TMP | Bromoform | 0.223 | 0.223 | 0.255 | 0.318 | 0.333 | 0.361 | 0.285✓ | 20.8 |
| 71) | TM | Isopropylbenzene | 1.838 | 1.893 | 2.073 | 2.253 | 2.285 | 2.230 | 2.095 | 9.2 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.446 | 0.422 | 0.462 | 0.501 | 0.484 | 0.505 | 0.470✓ | 6.9 |
| 73) | S | Bromofluorobenzene | 0.625 | 0.633 | 0.624 | 0.613 | 0.617 | 0.622 | 0.622 | 1.1 |
| 74) | TM | 1,2,3-Trichloroprop | 0.344 | 0.319 | 0.313 | 0.336 | 0.315 | 0.341 | 0.328 | 4.2 |
| 75) | TM | trans-1,4-Dichloro- | 0.112 | 0.136 | 0.138 | 0.160 | 0.158 | 0.168 | 0.145 | 14.2 |
| 76) | TM | n-Propylbenzene | 2.268 | 2.261 | 2.489 | 2.613 | 2.713 | 2.647 | 2.498 | 7.8 |
| 77) | TM | Bromobenzene | 0.375 | 0.366 | 0.409 | 0.446 | 0.465 | 0.473 | 0.422 | 10.8 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.463 | 1.464 | 1.566 | 1.740 | 1.795 | 1.780 | 1.635 | 9.5 |
| 79) | TM | 2-Chlorotoluene | 1.452 | 1.439 | 1.582 | 1.715 | 1.771 | 1.720 | 1.613 | 8.9 |
| 80) | TM | 4-Chlorotoluene | 1.301 | 1.369 | 1.406 | 1.493 | 1.512 | 1.503 | 1.431 | 6.0 |
| 81) | TM | tert-butylbenzene | 1.026 | 1.045 | 1.133 | 1.238 | 1.247 | 1.208 | 1.149 | 8.4 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.537 | 1.484 | 1.569 | 1.729 | 1.796 | 1.783 | 1.650 | 8.2 |
| 83) | T | Pentachloroethane | 0.221 | 0.224 | 0.254 | 0.292 | 0.306 | 0.310 | 0.268 | 15.0 |
| 84) | TM | sec-butylbenzene | 1.969 | 1.954 | 2.146 | 2.326 | 2.357 | 2.300 | 2.175 | 8.3 |
| 85) | TM | p-isopropyltoluene | 1.258 | 1.271 | 1.382 | 1.494 | 1.555 | 1.547 | 1.418 | 9.4 |

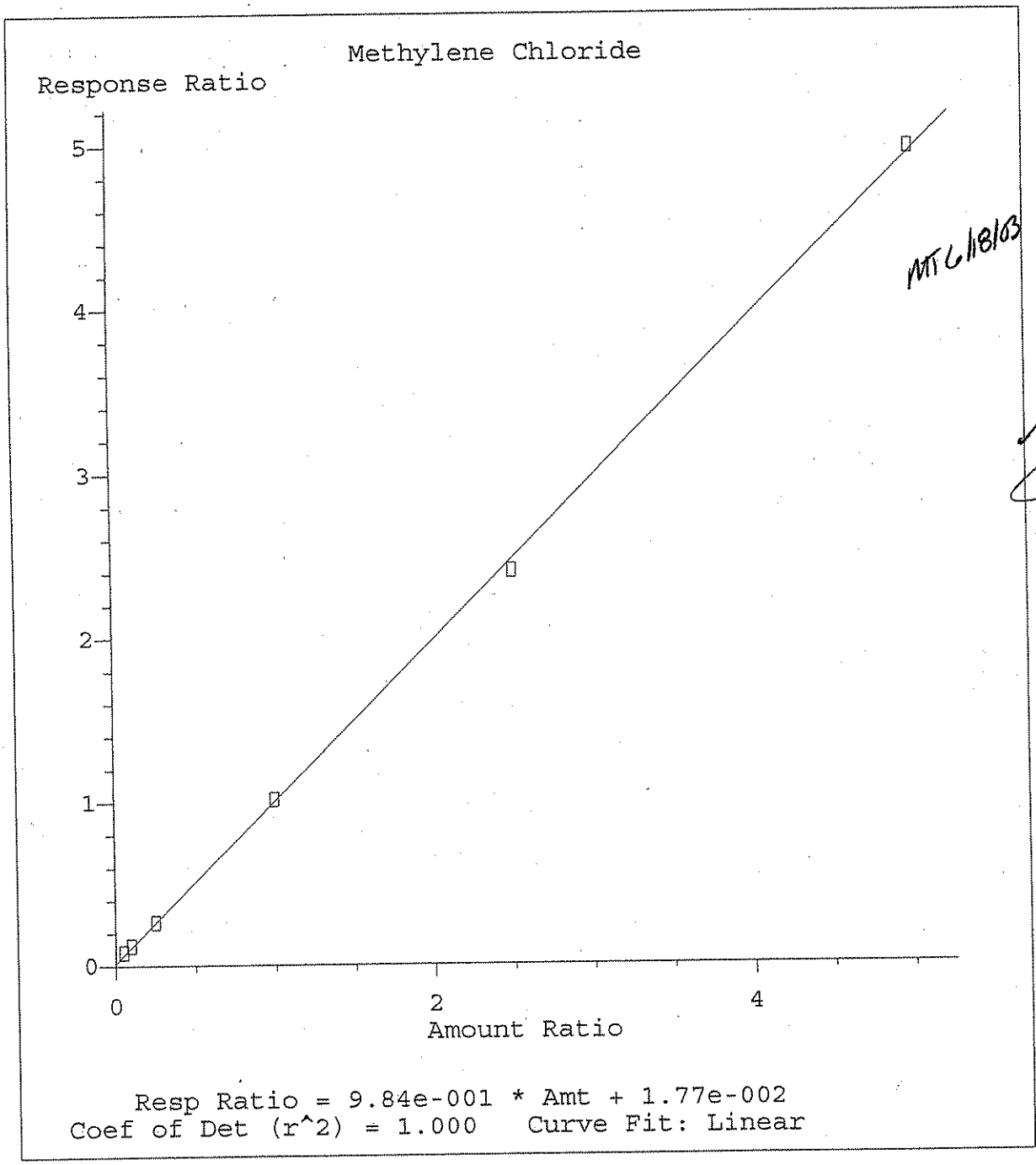
(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration

Calibration Files
1 =C43585SI.D 2 =C43586SI.D 5 =C43587SI.D
20 =C43588SI.D 50 =C43589SI.D 100 =C43590SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.627 | 0.662 | 0.693 | 0.754 | 0.783 | 0.785 | 0.717 | 9.2 |
| 87) | I | 1,4-Dichlorobenzene-d | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.482 | 1.403 | 1.527 | 1.614 | 1.639 | 1.623 | 1.548 | 6.0 |
| 89) | TM | n-butylbenzene | 3.217 | 3.200 | 3.487 | 3.831 | 3.767 | 3.565 | 3.511 | 7.5 |
| 90) | TM | 1,2-Dichlorobenzene | 1.330 | 1.228 | 1.359 | 1.486 | 1.476 | 1.472 | 1.392 | 7.4 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.119 | 0.114 | 0.129 | 0.152 | 0.141 | 0.149 | 0.134 | 11.6 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.795 | 0.758 | 0.828 | 0.933 | 0.961 | 0.975 | 0.875 | 10.6 |
| 95) | TM | Hexachlorobutadiene | 0.187 | 0.397 | 0.446 | 0.510 | 0.512 | 0.486 | 0.423 | 29.2 |
| 96) | TM | Naphthalene | 1.538 | 1.352 | 1.537 | 1.729 | 1.782 | 1.951 | 1.648 | 12.9 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.717 | 0.649 | 0.710 | 0.827 | 0.845 | 0.886 | 0.772 | 12.0 |
| 98) | T | 1,3,5-Trichlorobenz | 1.038 | 0.903 | 1.038 | 1.150 | 1.184 | 1.183 | 1.083 | 10.2 |

(#) = Out of Range




MTC 6/18/03

6-20-03

Method Name: C:\HPCHEM\1\METHODS\V806173C.M
Calibration Table Last Updated: Tue Jun 17 16:26:53 2003

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43585SI.D
Acq On : 17 Jun 2003 1:23 pm
Sample : 1 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 6
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MT 6/18/03

6-20-03

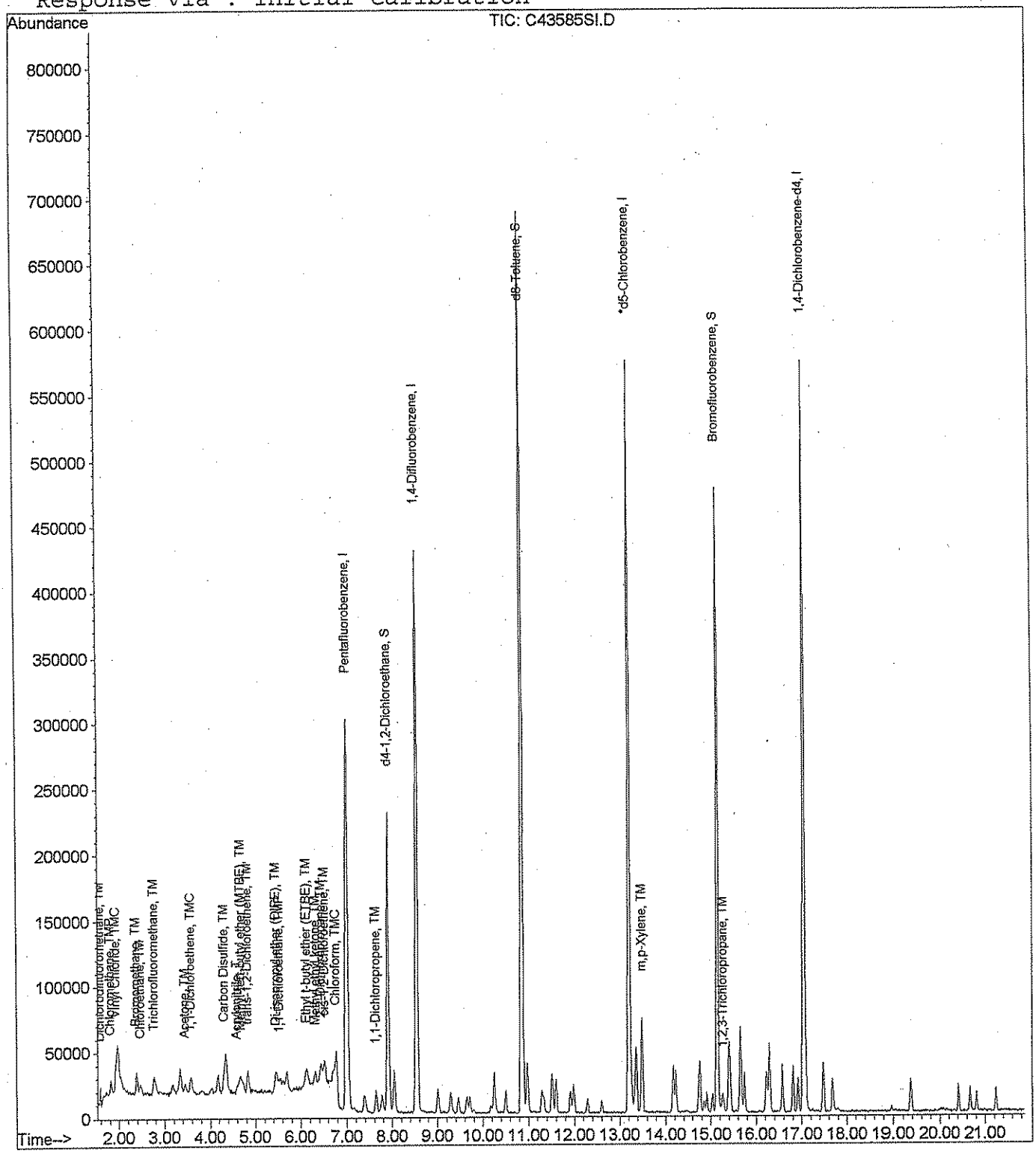
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.00 | 168 | 290110 | 20.00 | ug/L | -0.02 |
| 39) 1,4-Difluorobenzene | 8.54 | 114 | 523449 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.20 | 117 | 450029 | 20.00 | ug/L | -0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.04 | 152 | 208932 | 20.00 | ug/L | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.90 | 65 | 229102 | 22.84 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 114.20% | | | |
| 54) d8-Toluene | 10.86 | 98 | 729393 | 21.15 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.75% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 281273 | 21.08 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.40% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 16695 | 1.17 | ug/L | 96 |
| 3) Chloromethane | 1.81 | 50 | 16592 | 1.33 | ug/L | 95 |
| 4) Vinyl Chloride | 1.92 | 62 | 13972 | 1.08 | ug/L | 89 |
| 5) Bromomethane | 2.38 | 94 | 16393 | 1.17 | ug/L | 91 |
| 6) Chloroethane | 2.46 | 64 | 8511 | 1.19 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 24919 | 1.14 | ug/L | 92 |
| 12) Acetone | 3.45 | 43 | 17660 | 6.10 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 13022 | 1.10 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.45 | 45 | 39941 | 1.16 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 33306 | 1.05 | ug/L | 100 |
| 18) Acrylonitrile | 4.59 | 53 | 4403 | 1.19 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.66 | 73 | 26655 | 1.04 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.84 | 96 | 14504 | 1.14 | ug/L # | 84 |
| 21) 1,1-Dichloroethane | 5.53 | 63 | 18287 | 1.18 | ug/L | 88 |
| 23) Methyl ethyl ketone | 6.31 | 72 | 4883 | 7.34 | ug/L # | 91 |
| 24) Ethyl t-butyl ether (ETBE) | 6.12 | 59 | 29909 | 1.13 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.45 | 77 | 18985 | 1.22 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 6.53 | 96 | 15687 | 1.32 | ug/L # | 82 |
| 29) Chloroform | 6.77 | 83 | 23156 | 1.22 | ug/L | 91 |
| 34) 1,1-Dichloropropene | 7.64 | 75 | 12388 | 1.00 | ug/L | 94 |
| 67) m,p-Xylene | 13.49 | 106 | 31168 | 1.71 | ug/L | 94 |
| 74) 1,2,3-Trichloropropane | 15.27 | 75 | 7732 | 1.08 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43585SI.D
Acq On : 17 Jun 2003 1:23 pm
Sample : 1 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 6
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43586SI.D
Acq On : 17 Jun 2003 1:51 pm
Sample : 2 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 7
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MTC 6/18/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.01 | 168 | 298213 | 20.00 | ug/L | -0.01 |
| 39) 1,4-Difluorobenzene | 8.53 | 114 | 519417 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.21 | 117 | 446212 | 20.00 | ug/L | -0.01 |
| 87) 1,4-Dichlorobenzene-d4 | 17.04 | 152 | 209966 | 20.00 | ug/L | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.90 | 65 | 227515 | 22.07 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 110.35% | | | |
| 54) d8-Toluene | 10.86 | 98 | 745353 | 21.78 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 108.90% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 282526 | 21.35 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 106.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.58 | 85 | 31558 | 2.15 | ug/L | 96 |
| 3) Chloromethane | 1.82 | 50 | 26750 | 2.09 | ug/L | 94 |
| 4) Vinyl Chloride | 1.92 | 62 | 26693 | 2.01 | ug/L | 99 |
| 5) Bromomethane | 2.38 | 94 | 26209 | 1.81 | ug/L | 94 |
| 6) Chloroethane | 2.47 | 64 | 14861 | 2.02 | ug/L | 92 |
| 7) t-Butyl alcohol (TBA) | 3.79 | 59 | 8426 | 10.82 | ug/L | 95 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 42588 | 1.90 | ug/L | 94 |
| 9) Diethyl ether | 3.17 | 74 | 9600 | 1.74 | ug/L # | 81 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 28178 | 1.88 | ug/L | 96 |
| 12) Acetone | 3.44 | 43 | 32454 | 10.90 | ug/L | 94 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 24648 | 2.02 | ug/L | 98 |
| 14) Methyl iodide | 4.02 | 142 | 17700 | 1.83 | ug/L | 100 |
| 15) Di-isopropyl ether (DIPE) | 5.46 | 45 | 74467 | 2.11 | ug/L | 100 |
| 17) Carbon Disulfide | 4.30 | 76 | 64245 | 1.98 | ug/L | 100 |
| 18) Acrylonitrile | 4.58 | 53 | 7261 | 1.91 | ug/L # | 90 |
| 19) Methyl-tert-butyl ether (M | 4.68 | 73 | 49225 | 1.86 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.83 | 96 | 26820 | 2.05 | ug/L | 88 |
| 21) 1,1-Dichloroethane | 5.54 | 63 | 36522 | 2.30 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.33 | 72 | 6882 | 10.07 | ug/L # | 71 |
| 24) Ethyl t-butyl ether (ETBE) | 6.12 | 59 | 55782 | 2.05 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.44 | 77 | 28822 | 1.79 | ug/L | 96 |
| 26) cis-1,2-Dichloroethene | 6.52 | 96 | 21391 | 1.76 | ug/L | 98 |
| 27) t-Amyl methyl ether (TAME) | 7.91 | 73 | 39871 | 1.82 | ug/L | 92 |
| 29) Chloroform | 6.77 | 83 | 36416 | 1.86 | ug/L | 100 |
| 30) Bromochloromethane | 7.02 | 128 | 7899 | 1.90 | ug/L # | 83 |
| 32) 1,1,1-Trichloroethane | 7.40 | 97 | 37010 | 1.79 | ug/L | 99 |
| 34) 1,1-Dichloropropene | 7.65 | 75 | 22876 | 1.80 | ug/L | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43586SI.D Vial: 7
Acq On : 17 Jun 2003 1:51 pm Operator: JMR
Sample : 2 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 35) | Carbon Tetrachloride | 7.77 | 119 | 26930 | 1.62 | ug/L | | 98 |
| 37) | 1,2-Dichloroethane | 8.05 | 62 | 23512 | 1.77 | ug/L | | 100 |
| 38) | Benzene | 8.05 | 78 | 61932 | 1.83 | ug/L | | 98 |
| 40) | Trichloroethene | 9.01 | 95 | 21248 | 1.78 | ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.29 | 63 | 14398 | 1.77 | ug/L | | 90 |
| 42) | Methylmethacrylate | 9.45 | 69 | 10224 | 1.74 | ug/L | | 92 |
| 45) | Bromodichloromethane | 9.64 | 83 | 23378 | 1.67 | ug/L | | 97 |
| 46) | Dibromomethane | 9.71 | 93 | 15640 | 1.83 | ug/L | | 94 |
| 51) | 2-Hexanone | 11.59 | 58 | 23506 | 9.99 | ug/L | | 94 |
| 52) | Methyl isobutyl ketone | 10.25 | 58 | 25524 | 9.65 | ug/L | | 100 |
| 53) | cis-1,3-Dichloropropene | 10.51 | 75 | 23543 | 1.68 | ug/L | | 100 |
| 55) | Toluene | 10.98 | 92 | 44010 | 1.83 | ug/L | | 96 |
| 56) | trans-1,3-Dichloropropene | 11.29 | 75 | 19906 | 1.65 | ug/L | | 95 |
| 58) | 1,1,2-Trichloroethane | 11.52 | 83 | 12235 | 1.80 | ug/L | | 97 |
| 59) | 1,3-Dichloropropane | 11.92 | 76 | 23977 | 1.83 | ug/L | | 97 |
| 60) | Tetrachloroethene | 11.99 | 166 | 17660 | 1.76 | ug/L | | 97 |
| 61) | Dibromochloromethane | 12.29 | 129 | 16673 | 1.64 | ug/L | | 89 |
| 62) | 1,2-Dibromoethane | 12.60 | 107 | 18253 | 1.70 | ug/L | | 90 |
| 64) | Chlorobenzene | 13.26 | 112 | 44314 | 1.69 | ug/L | | 96 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.35 | 131 | 15293 | 1.63 | ug/L | | 97 |
| 66) | Ethylbenzene | 13.37 | 91 | 86294 | 1.75 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.48 | 106 | 62276 | 3.44 | ug/L | | 100 |
| 68) | o-Xylene | 14.17 | 106 | 28968 | 1.73 | ug/L | | 99 |
| 69) | Styrene | 14.22 | 104 | 50296 | 1.69 | ug/L | | 99 |
| 70) | Bromoform | 14.74 | 173 | 9955 | 1.51 | ug/L | | 100 |
| 71) | Isopropylbenzene | 14.76 | 105 | 84449 | 1.71 | ug/L | | 100 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.03 | 83 | 18809 | 1.82 | ug/L | | 94 |
| 74) | 1,2,3-Trichloropropane | 15.26 | 75 | 14246 | 2.01 | ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 15.41 | 53 | 6072 | 1.89 | ug/L | # | 81 |
| 76) | n-Propylbenzene | 15.40 | 91 | 100901 | 1.77 | ug/L | | 97 |
| 77) | Bromobenzene | 15.43 | 156 | 16333 | 1.64 | ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 15.66 | 105 | 65333 | 1.71 | ug/L | | 99 |
| 79) | 2-Chlorotoluene | 15.65 | 91 | 64193 | 1.73 | ug/L | | 96 |
| 80) | 4-Chlorotoluene | 15.74 | 91 | 61070 | 1.86 | ug/L | | 97 |
| 81) | tert-butylbenzene | 16.23 | 119 | 46620 | 1.76 | ug/L | | 93 |
| 82) | 1,2,4-Trimethylbenzene | 16.28 | 105 | 66223 | 1.74 | ug/L | | 99 |
| 83) | Pentachloroethane | 16.29 | 167 | 9989 | 1.54 | ug/L | # | 88 |
| 84) | sec-butylbenzene | 16.57 | 105 | 87206 | 1.69 | ug/L | | 99 |
| 85) | p-isopropyltoluene | 16.81 | 119 | 56708 | 1.72 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 16.92 | 146 | 29556 | 1.75 | ug/L | | 95 |
| 88) | 1,4-Dichlorobenzene | 17.09 | 146 | 29451 | 1.66 | ug/L | | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43586SI.D
Acq On : 17 Jun 2003 1:51 pm
Sample : 2 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 7
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

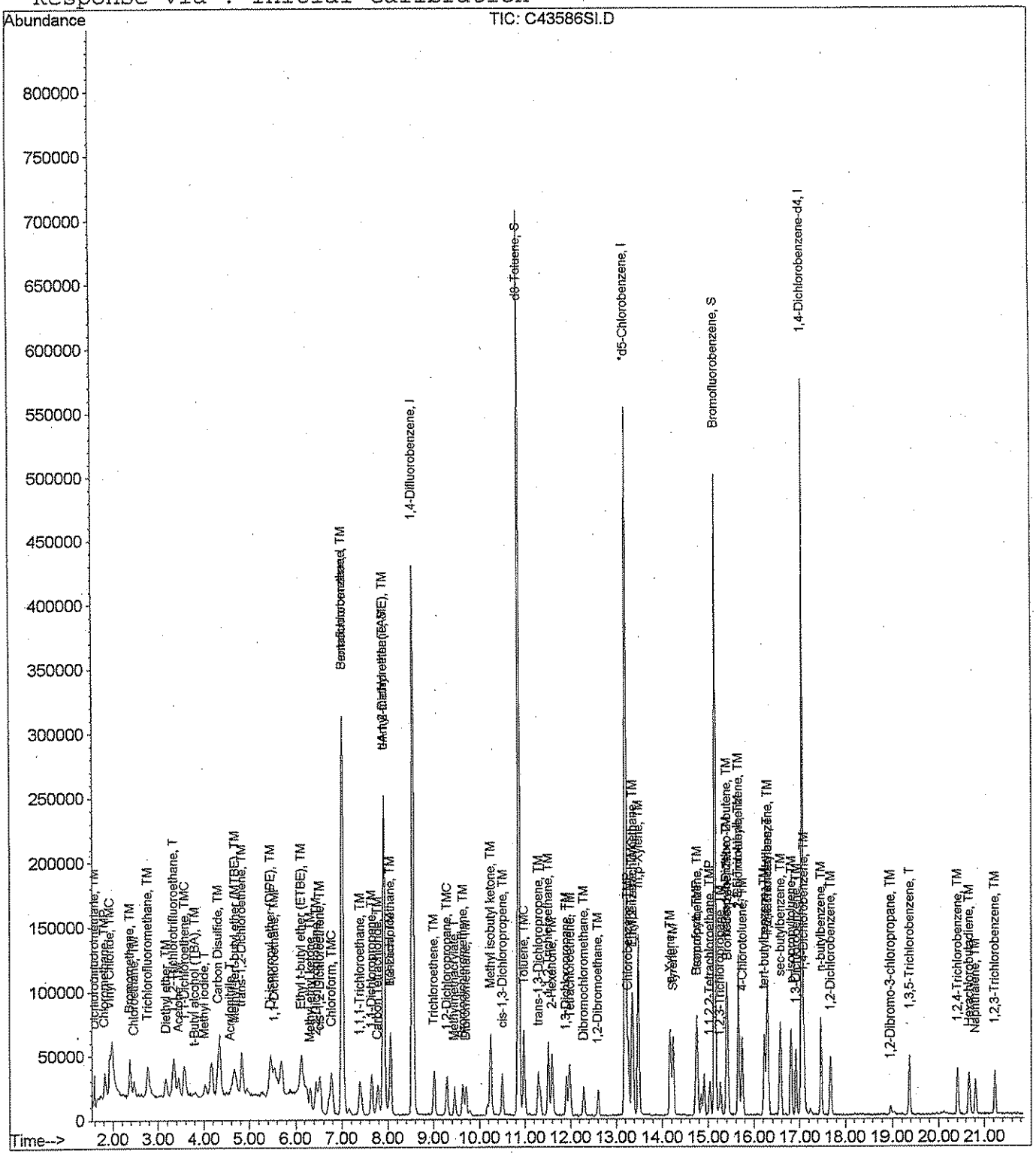
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 89) n-butylbenzene | 17.47 | 91 | 67183 | 1.72 | ug/L | | 95 |
| 90) 1,2-Dichlorobenzene | 17.67 | 146 | 25781 | 1.60 | ug/L | | 95 |
| 92) 1,2-Dibromo-3-chloropropan | 18.97 | 75 | 2401 | 1.60 | ug/L | # | 73 |
| 94) 1,2,4-Trichlorobenzene | 20.42 | 180 | 15905 | 1.60 | ug/L | | 91 |
| 95) Hexachlorobutadiene | 20.67 | 225 | 8332 | 1.59 | ug/L | | 97 |
| 96) Naphthalene | 20.81 | 128 | 28391 | 1.60 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.23 | 180 | 13617 | 1.57 | ug/L | | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.37 | 180 | 18951 | 1.53 | ug/L | | 94 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061703C\C43586SI.D Vial: 7
Acq On : 17 Jun 2003 1:51 pm Operator: JMR
Sample : 2 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43587SI.D
Acq On : 17 Jun 2003 2:19 pm
Sample : 5 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 8
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MT 6/18/03 6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.01 | 168 | 306740 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.54 | 114 | 533812 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.21 | 117 | 452809 | 20.00 | ug/L | -0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.04 | 152 | 211891 | 20.00 | ug/L | -0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.91 | 65 | 233858 | 22.05 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 110.25% | | | |
| 54) d8-Toluene | 10.86 | 98 | 744024 | 21.16 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.80% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 282610 | 21.05 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.25% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 83184 | 5.51 | ug/L | 98 |
| 3) Chloromethane | 1.82 | 50 | 72556 | 5.52 | ug/L | 100 |
| 4) Vinyl Chloride | 1.92 | 62 | 70791 | 5.19 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 71098 | 4.78 | ug/L | 100 |
| 6) Chloroethane | 2.48 | 64 | 39421 | 5.21 | ug/L | 96 |
| 7) t-Butyl alcohol (TBA) | 3.80 | 59 | 20952 | 26.15 | ug/L # | 93 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 117089 | 5.08 | ug/L | 96 |
| 9) Diethyl ether | 3.18 | 74 | 29026 | 5.13 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 77775 | 5.03 | ug/L | 98 |
| 12) Acetone | 3.45 | 43 | 81912 | 26.74 | ug/L | 96 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 64758 | 5.17 | ug/L | 95 |
| 14) Methyl iodide | 4.03 | 142 | 60036 | 6.04 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.46 | 45 | 208474 | 5.74 | ug/L | 98 |
| 16) Methylene Chloride | 4.35 | 84 | 81019 | 4.99 | ug/L | 98 |
| 17) Carbon Disulfide | 4.31 | 76 | 183526 | 5.50 | ug/L | 100 |
| 18) Acrylonitrile | 4.60 | 53 | 19825 | 5.06 | ug/L | 96 |
| 19) Methyl-tert-butyl ether (M | 4.68 | 73 | 132687 | 4.88 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.83 | 96 | 74148 | 5.51 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.54 | 63 | 97373 | 5.95 | ug/L | 99 |
| 22) Vinyl acetate | 5.60 | 43 | 84605 | 11.42 | ug/L # | 94 |
| 23) Methyl ethyl ketone | 6.31 | 72 | 19236 | 27.36 | ug/L | 85 |
| 24) Ethyl t-butyl ether (ETBE) | 6.13 | 59 | 139876 | 5.01 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.45 | 77 | 80776 | 4.89 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.53 | 96 | 60902 | 4.86 | ug/L | 99 |
| 27) t-Amyl methyl ether (TAME) | 7.91 | 73 | 110117 | 4.88 | ug/L | 98 |
| 29) Chloroform | 6.78 | 83 | 102029 | 5.07 | ug/L | 92 |
| 30) Bromochloromethane | 7.02 | 128 | 21890 | 5.12 | ug/L # | 86 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43587SI.D Vial: 8
Acq On : 17 Jun 2003 2:19 pm Operator: JMR
Sample : 5 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 7.15 | 71 | 4020 | 5.54 ug/L | 93 |
| 32) 1,1,1-Trichloroethane | 7.39 | 97 | 104600 | 4.91 ug/L | 97 |
| 34) 1,1-Dichloropropene | 7.64 | 75 | 67138 | 5.13 ug/L | 96 |
| 35) Carbon Tetrachloride | 7.78 | 119 | 82433 | 4.82 ug/L | 94 |
| 37) 1,2-Dichloroethane | 8.06 | 62 | 69243 | 5.06 ug/L | 99 |
| 38) Benzene | 8.05 | 78 | 172791 | 4.95 ug/L | 100 |
| 40) Trichloroethene | 9.01 | 95 | 62683 | 5.10 ug/L | 95 |
| 41) 1,2-Dichloropropane | 9.29 | 63 | 41747 | 4.99 ug/L | 94 |
| 42) Methylmethacrylate | 9.46 | 69 | 28348 | 4.70 ug/L | 98 |
| 45) Bromodichloromethane | 9.65 | 83 | 69630 | 4.83 ug/L | 96 |
| 46) Dibromomethane | 9.70 | 93 | 44338 | 5.05 ug/L | 88 |
| 51) 2-Hexanone | 11.59 | 58 | 67840 | 28.05 ug/L | 94 |
| 52) Methyl isobutyl ketone | 10.25 | 58 | 72955 | 26.85 ug/L | 98 |
| 53) cis-1,3-Dichloropropene | 10.50 | 75 | 68012 | 4.73 ug/L | 95 |
| 55) Toluene | 10.98 | 92 | 121936 | 4.93 ug/L | 99 |
| 56) trans-1,3-Dichloropropene | 11.29 | 75 | 60170 | 4.85 ug/L | 97 |
| 58) 1,1,2-Trichloroethane | 11.52 | 83 | 34527 | 4.93 ug/L | 97 |
| 59) 1,3-Dichloropropane | 11.91 | 76 | 67077 | 4.98 ug/L | 95 |
| 60) Tetrachloroethene | 11.98 | 166 | 48798 | 4.74 ug/L | 93 |
| 61) Dibromochloromethane | 12.29 | 129 | 49683 | 4.75 ug/L | 97 |
| 62) 1,2-Dibromoethane | 12.60 | 107 | 53925 | 4.87 ug/L | 94 |
| 64) Chlorobenzene | 13.26 | 112 | 124449 | 4.68 ug/L | 98 |
| 65) 1,1,1,2-Tetrachloroethane | 13.34 | 131 | 44043 | 4.63 ug/L | 99 |
| 66) Ethylbenzene | 13.36 | 91 | 243922 | 4.87 ug/L | 98 |
| 67) m,p-Xylene | 13.49 | 106 | 171855 | 9.36 ug/L | 94 |
| 68) o-Xylene | 14.17 | 106 | 79778 | 4.69 ug/L | 94 |
| 69) Styrene | 14.23 | 104 | 140387 | 4.65 ug/L | 96 |
| 70) Bromoform | 14.73 | 173 | 28833 | 4.30 ug/L | 100 |
| 71) Isopropylbenzene | 14.75 | 105 | 234719 | 4.68 ug/L | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 15.04 | 83 | 52303 | 5.00 ug/L | 94 |
| 74) 1,2,3-Trichloropropane | 15.27 | 75 | 35451 | 4.92 ug/L | 96 |
| 75) trans-1,4-Dichloro-2-buten | 15.39 | 53 | 15618 | 4.79 ug/L | 94 |
| 76) n-Propylbenzene | 15.39 | 91 | 281808 | 4.87 ug/L | 98 |
| 77) Bromobenzene | 15.42 | 156 | 46259 | 4.58 ug/L | 96 |
| 78) 1,3,5-Trimethylbenzene | 15.66 | 105 | 177233 | 4.57 ug/L | 99 |
| 79) 2-Chlorotoluene | 15.66 | 91 | 179066 | 4.75 ug/L | 99 |
| 80) 4-Chlorotoluene | 15.74 | 91 | 159197 | 4.79 ug/L | 100 |
| 81) tert-butylbenzene | 16.22 | 119 | 128205 | 4.77 ug/L | 99 |
| 82) 1,2,4-Trimethylbenzene | 16.28 | 105 | 177622 | 4.61 ug/L | 97 |
| 83) Pentachloroethane | 16.29 | 167 | 28789 | 4.37 ug/L | 92 |
| 84) sec-butylbenzene | 16.58 | 105 | 242939 | 4.63 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43587SI.D
Acq On : 17 Jun 2003 2:19 pm
Sample : 5 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 8
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

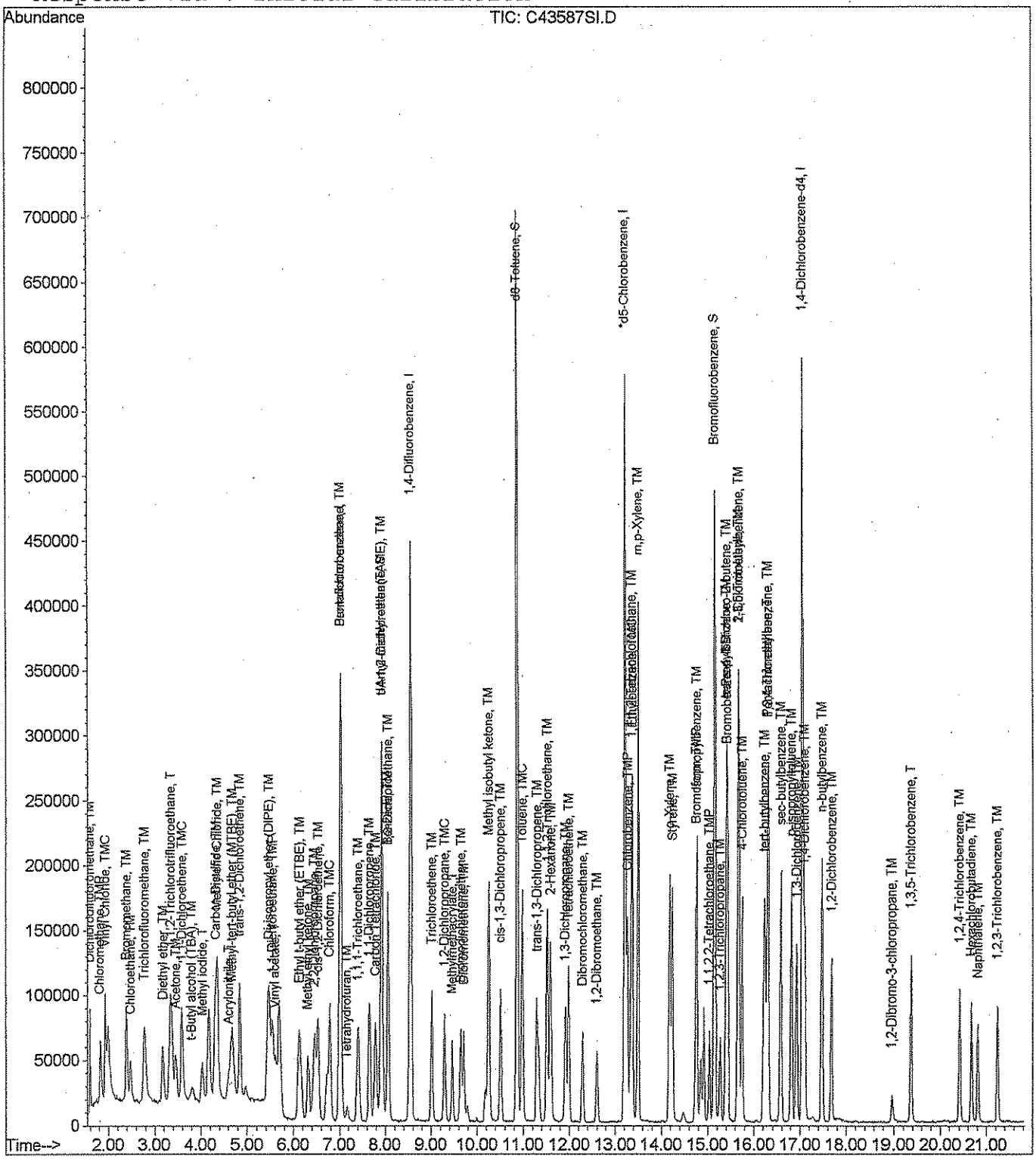
Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 16.80 | 119 | 156495 | 4.66 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 16.91 | 146 | 78398 | 4.57 ug/L | 97 |
| 88) 1,4-Dichlorobenzene | 17.09 | 146 | 80898 | 4.53 ug/L | 96 |
| 89) n-butylbenzene | 17.47 | 91 | 184714 | 4.69 ug/L | 97 |
| 90) 1,2-Dichlorobenzene | 17.68 | 146 | 71999 | 4.43 ug/L | 95 |
| 92) 1,2-Dibromo-3-chloropropan | 18.97 | 75 | 6851 | 4.53 ug/L | 96 |
| 94) 1,2,4-Trichlorobenzene | 20.41 | 180 | 43865 | 4.36 ug/L | 92 |
| 95) Hexachlorobutadiene | 20.67 | 225 | 23605 | 4.45 ug/L | 96 |
| 96) Naphthalene | 20.82 | 128 | 81405 | 4.56 ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 37585 | 4.29 ug/L | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.37 | 180 | 54984 | 4.39 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43587SI.D Vial: 8
Acq On : 17 Jun 2003 2:19 pm Operator: JMR
Sample : 5 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43588SI.D
Acq On : 17 Jun 2003 2:48 pm
Sample : 20 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 9
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MT 6/18/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.00 | 168 | 311894 | 20.00 | ug/L | -0.02 |
| 39) 1,4-Difluorobenzene | 8.54 | 114 | 561702 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.20 | 117 | 465449 | 20.00 | ug/L | -0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 218831 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.90 | 65 | 237556 | 22.03 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 110.15% | | | |
| 54) d8-Toluene | 10.86 | 98 | 773231 | 20.90 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.50% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 285223 | 20.67 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.35% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 359726 | 23.44 | ug/L | 100 |
| 3) Chloromethane | 1.81 | 50 | 317123 | 23.73 | ug/L | 96 |
| 4) Vinyl Chloride | 1.91 | 62 | 308213 | 22.22 | ug/L | 99 |
| 5) Bromomethane | 2.38 | 94 | 284439 | 18.82 | ug/L | 100 |
| 6) Chloroethane | 2.46 | 64 | 168619 | 21.92 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.80 | 59 | 86089 | 105.69 | ug/L | 100 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 511371 | 21.80 | ug/L | 100 |
| 9) Diethyl ether | 3.16 | 74 | 121359 | 21.09 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 327152 | 20.83 | ug/L | 98 |
| 11) Acrolein | 3.33 | 56 | 238714 | 165.01 | ug/L | 94 |
| 12) Acetone | 3.44 | 43 | 344533 | 110.63 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 267974 | 21.05 | ug/L | 92 |
| 14) Methyl iodide | 4.02 | 142 | 333784 | 33.04 | ug/L | 100 |
| 15) Di-isopropyl ether (DIPE) | 5.45 | 45 | 914581 | 24.77 | ug/L | 97 |
| 16) Methylene Chloride | 4.35 | 84 | 316526 | 21.98 | ug/L | 100 |
| 17) Carbon Disulfide | 4.30 | 76 | 840589 | 24.76 | ug/L | 100 |
| 18) Acrylonitrile | 4.58 | 53 | 84957 | 21.33 | ug/L | 97 |
| 19) Methyl-tert-butyl ether (M | 4.66 | 73 | 569330 | 20.61 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.83 | 96 | 309972 | 22.65 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 5.54 | 63 | 431376 | 25.93 | ug/L | 100 |
| 22) Vinyl acetate | 5.61 | 43 | 497314 | 66.02 | ug/L | 96 |
| 23) Methyl ethyl ketone | 6.31 | 72 | 83972 | 117.45 | ug/L | 85 |
| 24) Ethyl t-butyl ether (ETBE) | 6.12 | 59 | 606723 | 21.36 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.45 | 77 | 353692 | 21.06 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.53 | 96 | 263809 | 20.71 | ug/L | 98 |
| 27) t-Amyl methyl ether (TAME) | 7.90 | 73 | 487501 | 21.27 | ug/L | 98 |
| 29) Chloroform | 6.77 | 83 | 443938 | 21.71 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43588SI.D
Acq On : 17 Jun 2003 2:48 pm
Sample : 20 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 9
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.03 | 128 | 96737 | 22.25 ug/L | 94 |
| 31) Tetrahydrofuran | 7.16 | 71 | 16173 | 21.92 ug/L | 98 |
| 32) 1,1,1-Trichloroethane | 7.39 | 97 | 458057 | 21.13 ug/L | 97 |
| 34) 1,1-Dichloropropene | 7.64 | 75 | 284770 | 21.42 ug/L | 97 |
| 35) Carbon Tetrachloride | 7.78 | 119 | 368938 | 21.24 ug/L | 98 |
| 37) 1,2-Dichloroethane | 8.05 | 62 | 305401 | 21.95 ug/L | 97 |
| 38) Benzene | 8.05 | 78 | 742867 | 20.94 ug/L | 99 |
| 40) Trichloroethene | 9.01 | 95 | 270304 | 20.91 ug/L | 95 |
| 41) 1,2-Dichloropropane | 9.29 | 63 | 178082 | 20.21 ug/L | 96 |
| 42) Methylmethacrylate | 9.46 | 69 | 114117 | 17.99 ug/L | 97 |
| 45) Bromodichloromethane | 9.64 | 83 | 310628 | 20.48 ug/L | 97 |
| 46) Dibromomethane | 9.71 | 93 | 203191 | 21.99 ug/L | 92 |
| 50) 2-Chloroethylvinyl ether | 10.18 | 63 | 69443 | 42.28 ug/L # | 99 |
| 51) 2-Hexanone | 11.59 | 58 | 314232 | 123.48 ug/L | 96 |
| 52) Methyl isobutyl ketone | 10.24 | 58 | 332407 | 116.27 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 10.50 | 75 | 311860 | 20.61 ug/L | 95 |
| 55) Toluene | 10.98 | 92 | 534265 | 20.52 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.29 | 75 | 280509 | 21.47 ug/L | 96 |
| 58) 1,1,2-Trichloroethane | 11.52 | 83 | 153282 | 20.81 ug/L | 98 |
| 59) 1,3-Dichloropropane | 11.91 | 76 | 299853 | 21.17 ug/L | 99 |
| 60) Tetrachloroethene | 11.98 | 166 | 211800 | 19.57 ug/L | 97 |
| 61) Dibromochloromethane | 12.29 | 129 | 234721 | 21.32 ug/L | 99 |
| 62) 1,2-Dibromoethane | 12.60 | 107 | 247232 | 21.24 ug/L | 100 |
| 64) Chlorobenzene | 13.26 | 112 | 543711 | 19.90 ug/L | 95 |
| 65) 1,1,1,2-Tetrachloroethane | 13.34 | 131 | 199928 | 20.44 ug/L | 99 |
| 66) Ethylbenzene | 13.37 | 91 | 1058296 | 20.56 ug/L | 99 |
| 67) m,p-Xylene | 13.49 | 106 | 738335 | 39.14 ug/L | 95 |
| 68) o-Xylene | 14.17 | 106 | 354353 | 20.28 ug/L | 98 |
| 69) Styrene | 14.23 | 104 | 644482 | 20.76 ug/L | 98 |
| 70) Bromoform | 14.73 | 173 | 147951 | 21.48 ug/L | 100 |
| 71) Isopropylbenzene | 14.76 | 105 | 1048571 | 20.32 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.04 | 83 | 233311 | 21.68 ug/L | 100 |
| 74) 1,2,3-Trichloropropane | 15.26 | 75 | 156233 | 21.09 ug/L | 100 |
| 75) trans-1,4-Dichloro-2-buten | 15.39 | 53 | 74665 | 22.28 ug/L | 95 |
| 76) n-Propylbenzene | 15.40 | 91 | 1216368 | 20.46 ug/L | 100 |
| 77) Bromobenzene | 15.43 | 156 | 207373 | 19.97 ug/L | 95 |
| 78) 1,3,5-Trimethylbenzene | 15.66 | 105 | 809681 | 20.33 ug/L | 99 |
| 79) 2-Chlorotoluene | 15.66 | 91 | 798157 | 20.58 ug/L | 100 |
| 80) 4-Chlorotoluene | 15.74 | 91 | 694781 | 20.33 ug/L | 99 |
| 81) tert-butylbenzene | 16.23 | 119 | 576437 | 20.84 ug/L | 97 |
| 82) 1,2,4-Trimethylbenzene | 16.29 | 105 | 804735 | 20.31 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43588SI.D Vial: 9
Acq On : 17 Jun 2003 2:48 pm Operator: JMR
Sample : 20 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

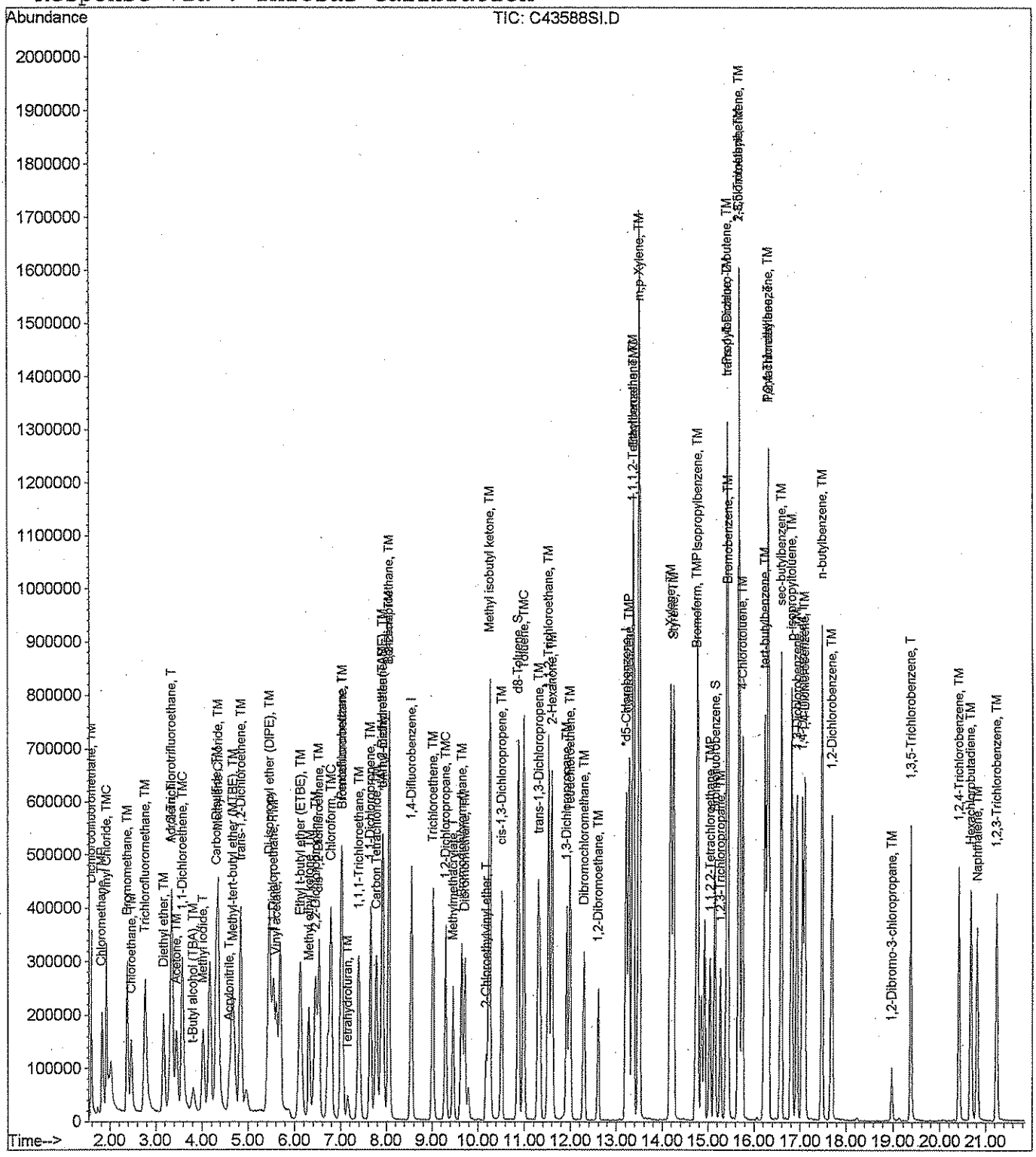
Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 83) Pentachloroethane | 16.30 | 167 | 135725 | 20.05 | ug/L | 95 |
| 84) sec-butylbenzene | 16.58 | 105 | 1082532 | 20.08 | ug/L | 100 |
| 85) p-isopropyltoluene | 16.80 | 119 | 695414 | 20.17 | ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 16.92 | 146 | 350919 | 19.91 | ug/L | 99 |
| 88) 1,4-Dichlorobenzene | 17.10 | 146 | 353191 | 19.15 | ug/L | 98 |
| 89) n-butylbenzene | 17.47 | 91 | 838246 | 20.59 | ug/L | 100 |
| 90) 1,2-Dichlorobenzene | 17.68 | 146 | 325190 | 19.39 | ug/L | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 18.97 | 75 | 33271 | 21.32 | ug/L | 93 |
| 94) 1,2,4-Trichlorobenzene | 20.41 | 180 | 204104 | 19.65 | ug/L | 99 |
| 95) Hexachlorobutadiene | 20.67 | 225 | 111708 | 20.40 | ug/L | 93 |
| 96) Naphthalene | 20.82 | 128 | 378329 | 20.52 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 180876 | 20.00 | ug/L | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.37 | 180 | 251718 | 19.46 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
C43588SI.D V806173C.M Tue Jun 17 16:29:42 2003 Page 3

Data File : C:\HPCHEM\1\DATA\061703C\C43588SI.D Vial: 9
Acq On : 17 Jun 2003 2:48 pm Operator: JMR
Sample : 20 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003 Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43589SI.D
Acq On : 17 Jun 2003 3:16 pm
Sample : 50 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 10
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MT 6/18/03

6.20.07

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.00 | 168 | 311564 | 20.00 | ug/L | -0.02 |
| 39) 1,4-Difluorobenzene | 8.54 | 114 | 543662 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.20 | 117 | 454746 | 20.00 | ug/L | -0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 222033 | 20.00 | ug/L | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.91 | 65 | 234848 | 21.80 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 109.00% | | | |
| 54) d8-Toluene | 10.86 | 98 | 749268 | 20.92 | ug/L | -0.02 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.60% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 280594 | 20.81 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.05% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 896112 | 58.45 | ug/L | 99 |
| 3) Chloromethane | 1.81 | 50 | 783897 | 58.71 | ug/L | 94 |
| 4) Vinyl Chloride | 1.91 | 62 | 757341 | 54.65 | ug/L | 100 |
| 5) Bromomethane | 2.36 | 94 | 672196 | 44.52 | ug/L | 98 |
| 6) Chloroethane | 2.44 | 64 | 432300 | 56.25 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.83 | 59 | 202202 | 248.51 | ug/L | 96 |
| 8) Trichlorofluoromethane | 2.75 | 101 | 1254527 | 53.55 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 295212 | 51.35 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.32 | 101 | 809841 | 51.61 | ug/L | 99 |
| 11) Acrolein | 3.33 | 56 | 594036 | 411.06 | ug/L | 95 |
| 12) Acetone | 3.45 | 43 | 828796 | 266.41 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 664815 | 52.27 | ug/L | 96 |
| 14) Methyl iodide | 4.01 | 142 | 825300 | 81.78 | ug/L | 100 |
| 15) Di-isopropyl ether (DIPE) | 5.45 | 45 | 2233562 | 60.55 | ug/L | 98 |
| 16) Methylene Chloride | 4.34 | 84 | 749717 | 53.47 | ug/L | 100 |
| 17) Carbon Disulfide | 4.29 | 76 | 2088980 | 61.59 | ug/L | 100 |
| 18) Acrylonitrile | 4.59 | 53 | 203776 | 51.22 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.66 | 73 | 1427637 | 51.73 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 765565 | 55.99 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 5.54 | 63 | 1037522 | 62.43 | ug/L | 99 |
| 22) Vinyl acetate | 5.61 | 43 | 1266563 | 168.31 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.31 | 72 | 208893 | 292.48 | ug/L | 88 |
| 24) Ethyl t-butyl ether (ETBE) | 6.12 | 59 | 1506068 | 53.07 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.45 | 77 | 880211 | 52.47 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.52 | 96 | 672402 | 52.83 | ug/L | 97 |
| 27) t-Amyl methyl ether (TAME) | 7.90 | 73 | 1211013 | 52.89 | ug/L | 98 |
| 29) Chloroform | 6.77 | 83 | 1086385 | 53.18 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43589SI.D
Acq On : 17 Jun 2003 3:16 pm
Sample : 50 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 10
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.02 | 128 | 236336 | 54.41 ug/L | 97 |
| 31) Tetrahydrofuran | 7.15 | 71 | 38834 | 52.69 ug/L | 98 |
| 32) 1,1,1-Trichloroethane | 7.39 | 97 | 1143031 | 52.79 ug/L | 98 |
| 34) 1,1-Dichloropropene | 7.64 | 75 | 702529 | 52.89 ug/L | 98 |
| 35) Carbon Tetrachloride | 7.78 | 119 | 913816 | 52.66 ug/L | 99 |
| 37) 1,2-Dichloroethane | 8.05 | 62 | 757689 | 54.52 ug/L | 98 |
| 38) Benzene | 8.05 | 78 | 1848903 | 52.16 ug/L | 99 |
| 40) Trichloroethene | 9.01 | 95 | 703585 | 56.23 ug/L | 98 |
| 41) 1,2-Dichloropropane | 9.29 | 63 | 448436 | 52.58 ug/L | 99 |
| 42) Methylmethacrylate | 9.46 | 69 | 276659 | 45.07 ug/L | 97 |
| 45) Bromodichloromethane | 9.64 | 83 | 782164 | 53.28 ug/L | 99 |
| 46) Dibromomethane | 9.71 | 93 | 489395 | 54.72 ug/L | 94 |
| 50) 2-Chloroethylvinyl ether | 10.18 | 63 | 209122 | 131.55 ug/L # | 99 |
| 51) 2-Hexanone | 11.59 | 58 | 768430 | 311.99 ug/L | 99 |
| 52) Methyl isobutyl ketone | 10.24 | 58 | 794287 | 287.03 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 10.50 | 75 | 792746 | 54.13 ug/L | 99 |
| 55) Toluene | 10.98 | 92 | 1331632 | 52.85 ug/L | 100 |
| 56) trans-1,3-Dichloropropene | 11.29 | 75 | 707003 | 55.92 ug/L | 95 |
| 58) 1,1,2-Trichloroethane | 11.52 | 83 | 377297 | 52.92 ug/L | 97 |
| 59) 1,3-Dichloropropane | 11.91 | 76 | 728530 | 53.13 ug/L | 99 |
| 60) Tetrachloroethene | 11.98 | 166 | 540536 | 51.60 ug/L | 97 |
| 61) Dibromochloromethane | 12.29 | 129 | 595702 | 55.90 ug/L | 97 |
| 62) 1,2-Dibromoethane | 12.60 | 107 | 603678 | 53.57 ug/L | 100 |
| 64) Chlorobenzene | 13.26 | 112 | 1367713 | 51.25 ug/L | 94 |
| 65) 1,1,1,2-Tetrachloroethane | 13.35 | 131 | 501503 | 52.47 ug/L | 98 |
| 66) Ethylbenzene | 13.37 | 91 | 2632787 | 52.35 ug/L | 100 |
| 67) m,p-Xylene | 13.49 | 106 | 1894774 | 102.80 ug/L | 96 |
| 68) o-Xylene | 14.17 | 106 | 879516 | 51.52 ug/L | 98 |
| 69) Styrene | 14.23 | 104 | 1623810 | 53.53 ug/L | 98 |
| 70) Bromoform | 14.73 | 173 | 378780 | 56.29 ug/L | 100 |
| 71) Isopropylbenzene | 14.76 | 105 | 2597449 | 51.53 ug/L | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 15.04 | 83 | 550384 | 52.34 ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.26 | 75 | 357657 | 49.41 ug/L | 97 |
| 75) trans-1,4-Dichloro-2-buten | 15.40 | 53 | 179253 | 54.75 ug/L | 98 |
| 76) n-Propylbenzene | 15.40 | 91 | 3083979 | 53.10 ug/L | 100 |
| 77) Bromobenzene | 15.43 | 156 | 528822 | 52.12 ug/L | 95 |
| 78) 1,3,5-Trimethylbenzene | 15.67 | 105 | 2040713 | 52.45 ug/L | 99 |
| 79) 2-Chlorotoluene | 15.66 | 91 | 2013703 | 53.14 ug/L | 99 |
| 80) 4-Chlorotoluene | 15.75 | 91 | 1718453 | 51.47 ug/L | 99 |
| 81) tert-butylbenzene | 16.23 | 119 | 1417221 | 52.45 ug/L | 97 |
| 82) 1,2,4-Trimethylbenzene | 16.29 | 105 | 2041494 | 52.74 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43589SI.D
Acq On : 17 Jun 2003 3:16 pm
Sample : 50 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 10
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 83) Pentachloroethane | 16.30 | 167 | 348174 | 52.65 | ug/L | 99 |
| 84) sec-butylbenzene | 16.57 | 105 | 2679592 | 50.88 | ug/L | 100 |
| 85) p-isopropyltoluene | 16.81 | 119 | 1768336 | 52.48 | ug/L | 100 |
| 86) 1,3-Dichlorobenzene | 16.92 | 146 | 890649 | 51.73 | ug/L | 99 |
| 88) 1,4-Dichlorobenzene | 17.10 | 146 | 909817 | 48.61 | ug/L | 99 |
| 89) n-butylbenzene | 17.47 | 91 | 2091225 | 50.62 | ug/L | 100 |
| 90) 1,2-Dichlorobenzene | 17.68 | 146 | 819225 | 48.14 | ug/L | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 18.97 | 75 | 78165 | 49.35 | ug/L | 97 |
| 94) 1,2,4-Trichlorobenzene | 20.42 | 180 | 533174 | 50.60 | ug/L | 99 |
| 95) Hexachlorobutadiene | 20.68 | 225 | 283972 | 51.11 | ug/L | 97 |
| 96) Naphthalene | 20.81 | 128 | 989294 | 52.89 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 468969 | 51.11 | ug/L | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.38 | 180 | 657451 | 50.10 | ug/L | 98 |

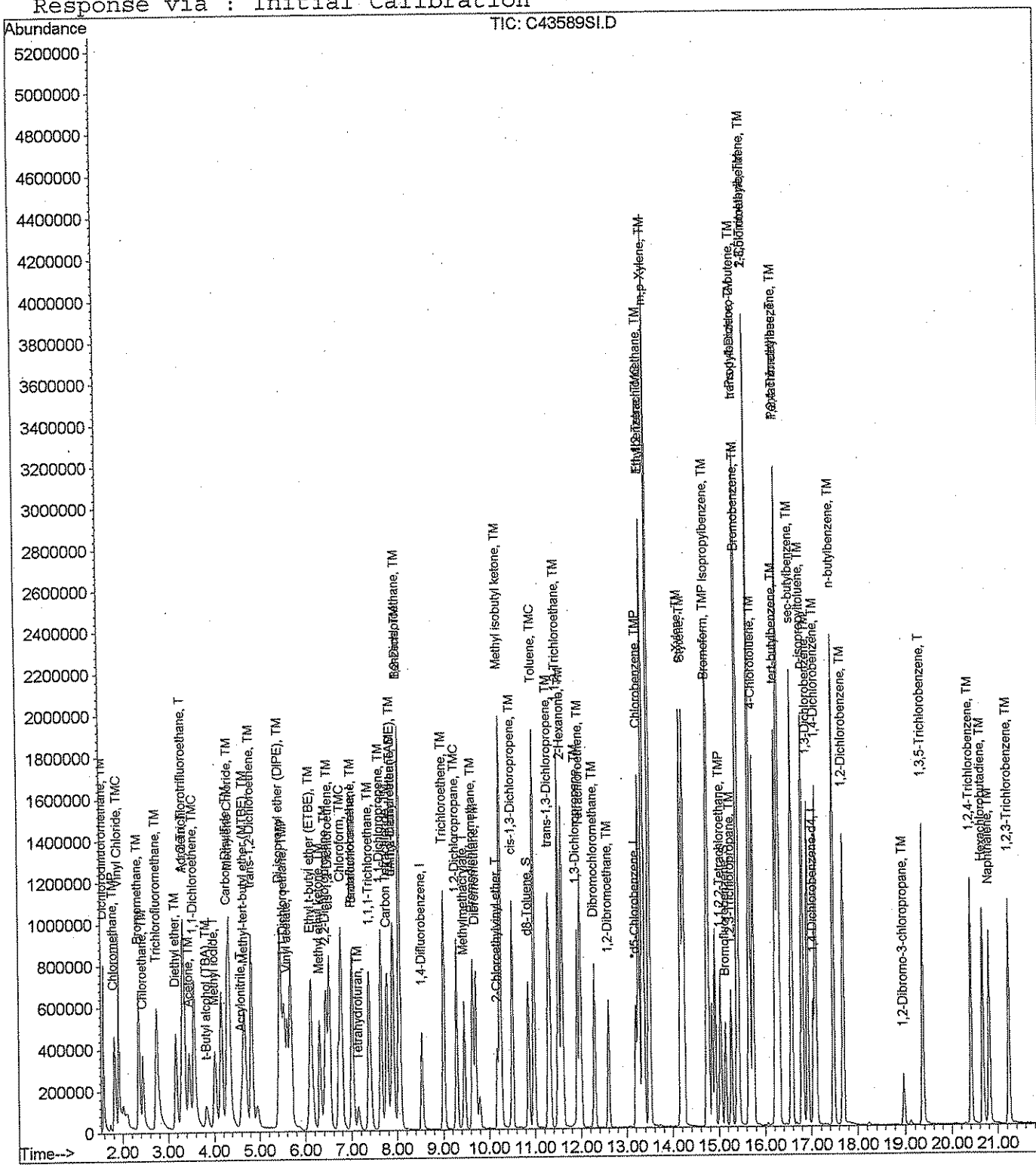
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43589SI.D
Acq On : 17 Jun 2003 3:16 pm
Sample : 50 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:22 2003

Vial: 10
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061703C\C43590SI.D Vial: 11
Acq On : 17 Jun 2003 3:45 pm Operator: JMR
Sample : 100 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:23 2003 Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

MT 6/18/03

6-20-03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.00 | 168 | 251974 | 20.00 | ug/L | -0.02 |
| 39) 1,4-Difluorobenzene | 8.54 | 114 | 443071 | 20.00 | ug/L | -0.02 |
| 63) *d5-Chlorobenzene | 13.20 | 117 | 372709 | 20.00 | ug/L | -0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.05 | 152 | 185681 | 20.00 | ug/L | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.91 | 65 | 203061 | 23.31 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 116.55% | | | |
| 54) d8-Toluene | 10.86 | 98 | 604718 | 20.72 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.60% | | | |
| 73) Bromofluorobenzene | 15.14 | 95 | 231935 | 20.99 | ug/L | -0.01 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.95% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.58 | 85 | 1329657 | 107.24 | ug/L | 99 |
| 3) Chloromethane | 1.81 | 50 | 1211490 | 112.19 | ug/L | 98 |
| 4) Vinyl Chloride | 1.91 | 62 | 1131871 | 100.99 | ug/L | 99 |
| 5) Bromomethane | 2.33 | 94 | 1064667 | 87.18 | ug/L | 97 |
| 6) Chloroethane | 2.42 | 64 | 668961 | 107.63 | ug/L | 100 |
| 7) t-Butyl alcohol (TBA) | 3.87 | 59 | 361070 | 548.70 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.73 | 101 | 1850248 | 97.65 | ug/L | 100 |
| 9) Diethyl ether | 3.17 | 74 | 527160 | 113.38 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.31 | 101 | 1245351 | 98.13 | ug/L | 99 |
| 11) Acrolein | 3.33 | 56 | 393282 | 336.50 | ug/L | 97 |
| 12) Acetone | 3.47 | 43 | 1544059 | 613.70 | ug/L | 100 |
| 13) 1,1-Dichloroethene | 3.55 | 96 | 1035330 | 100.66 | ug/L | 95 |
| 14) Methyl iodide | 4.00 | 142 | 1245942 | 152.66 | ug/L | 98 |
| 15) Di-isopropyl ether (DIPE) | 5.45 | 45 | 3744809 | 125.54 | ug/L | 97 |
| 16) Methylene Chloride | 4.34 | 84 | 1252617 | 111.52 | ug/L | 98 |
| 17) Carbon Disulfide | 4.28 | 76 | 3313080 | 120.78 | ug/L | 100 |
| 18) Acrylonitrile | 4.59 | 53 | 378521 | 117.64 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.66 | 73 | 2587775 | 115.94 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 1226121 | 110.89 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 5.53 | 63 | 1636571 | 121.76 | ug/L | 99 |
| 22) Vinyl acetate | 5.61 | 43 | 615659 | 101.16 | ug/L | 98 |
| 23) Methyl ethyl ketone | 6.32 | 72 | 386002 | 668.27 | ug/L | 91 |
| 24) Ethyl t-butyl ether (ETBE) | 6.12 | 59 | 2628433 | 114.52 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.45 | 77 | 1364803 | 100.59 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 6.52 | 96 | 1087566 | 105.66 | ug/L | 97 |
| 27) t-Amyl methyl ether (TAME) | 7.91 | 73 | 2122997 | 114.64 | ug/L | 99 |
| 29) Chloroform | 6.77 | 83 | 1760578 | 106.56 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43590SI.D Vial: 11
Acq On : 17 Jun 2003 3:45 pm Operator: JMR
Sample : 100 PPB Inst : Instr_C
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 17 16:23 2003 Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.02 | 128 | 408598 | 116.32 ug/L | | 96 |
| 31) Tetrahydrofuran | 7.15 | 71 | 73466 | 123.26 ug/L | | 99 |
| 32) 1,1,1-Trichloroethane | 7.39 | 97 | 1789652 | 102.20 ug/L | | 99 |
| 34) 1,1-Dichloropropene | 7.64 | 75 | 1102149 | 102.60 ug/L | | 98 |
| 35) Carbon Tetrachloride | 7.78 | 119 | 1445423 | 102.98 ug/L | | 98 |
| 37) 1,2-Dichloroethane | 8.04 | 62 | 1287467 | 114.54 ug/L | | 99 |
| 38) Benzene | 8.04 | 78 | 2972071 | 103.68 ug/L | | 99 |
| 40) Trichloroethene | 9.01 | 95 | 1132759 | 111.08 ug/L | | 98 |
| 41) 1,2-Dichloropropane | 9.29 | 63 | 736534 | 105.97 ug/L | | 98 |
| 42) Methylmethacrylate | 9.45 | 69 | 729625 | 145.83 ug/L | | 98 |
| 45) Bromodichloromethane | 9.64 | 83 | 1318180 | 110.18 ug/L | | 99 |
| 46) Dibromomethane | 9.71 | 93 | 865310 | 118.71 ug/L | | 96 |
| 50) 2-Chloroethylvinyl ether | 10.17 | 63 | 387011 | 298.72 ug/L | # | 97 |
| 51) 2-Hexanone | 11.59 | 58 | 1311030 | 653.13 ug/L | | 99 |
| 52) Methyl isobutyl ketone | 10.24 | 58 | 1419608 | 629.48 ug/L | | 99 |
| 53) cis-1,3-Dichloropropene | 10.51 | 75 | 1345032 | 112.69 ug/L | | 100 |
| 55) Toluene | 10.98 | 92 | 2151213 | 104.76 ug/L | | 100 |
| 56) trans-1,3-Dichloropropene | 11.30 | 75 | 1215740 | 117.99 ug/L | | 98 |
| 58) 1,1,2-Trichloroethane | 11.53 | 83 | 652710 | 112.33 ug/L | | 99 |
| 59) 1,3-Dichloropropane | 11.92 | 76 | 1278517 | 114.41 ug/L | | 100 |
| 60) Tetrachloroethene | 11.99 | 166 | 861888 | 100.96 ug/L | | 100 |
| 61) Dibromochloromethane | 12.29 | 129 | 1022496 | 117.73 ug/L | | 100 |
| 62) 1,2-Dibromoethane | 12.60 | 107 | 1085734 | 118.23 ug/L | | 97 |
| 64) Chlorobenzene | 13.26 | 112 | 2253116 | 103.01 ug/L | | 95 |
| 65) 1,1,1,2-Tetrachloroethane | 13.35 | 131 | 836416 | 106.78 ug/L | | 98 |
| 66) Ethylbenzene | 13.37 | 91 | 4205173 | 102.01 ug/L | | 100 |
| 67) m,p-Xylene | 13.50 | 106 | 3090022 | 204.54 ug/L | | 98 |
| 68) o-Xylene | 14.18 | 106 | 1460752 | 104.41 ug/L | | 97 |
| 69) Styrene | 14.24 | 104 | 2620864 | 105.41 ug/L | | 100 |
| 70) Bromoform | 14.73 | 173 | 672764 | 121.99 ug/L | | 100 |
| 71) Isopropylbenzene | 14.76 | 105 | 4155837 | 100.59 ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.04 | 83 | 940862 | 109.17 ug/L | | 98 |
| 74) 1,2,3-Trichloropropane | 15.27 | 75 | 635705 | 107.16 ug/L | | 97 |
| 75) trans-1,4-Dichloro-2-buten | 15.40 | 53 | 313640 | 116.87 ug/L | | 100 |
| 76) n-Propylbenzene | 15.40 | 91 | 4932001 | 103.61 ug/L | | 100 |
| 77) Bromobenzene | 15.43 | 156 | 881693 | 106.02 ug/L | | 96 |
| 78) 1,3,5-Trimethylbenzene | 15.67 | 105 | 3317139 | 104.03 ug/L | | 98 |
| 79) 2-Chlorotoluene | 15.66 | 91 | 3204692 | 103.19 ug/L | | 99 |
| 80) 4-Chlorotoluene | 15.75 | 91 | 2801498 | 102.37 ug/L | | 98 |
| 81) tert-butylbenzene | 16.23 | 119 | 2252012 | 101.69 ug/L | | 97 |
| 82) 1,2,4-Trimethylbenzene | 16.29 | 105 | 3323285 | 104.76 ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43590SI.D
Acq On : 17 Jun 2003 3:45 pm
Sample : 100 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:23 2003

Vial: 11
Operator: JMR
Inst : Instr_C
Multiplr: 1.00
Quant Results File: V806173C.

Quant Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Initial Calibration
DataAcq Meth : V806173C

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 83) Pentachloroethane | 16.30 | 167 | 578627 | 106.75 | ug/L | 97 |
| 84) sec-butylbenzene | 16.57 | 105 | 4285369 | 99.29 | ug/L | 99 |
| 85) p-isopropyltoluene | 16.81 | 119 | 2883212 | 104.41 | ug/L | 99 |
| 86) 1,3-Dichlorobenzene | 16.92 | 146 | 1462057 | 103.61 | ug/L | 100 |
| 88) 1,4-Dichlorobenzene | 17.10 | 146 | 1506832 | 96.26 | ug/L | 99 |
| 89) n-butylbenzene | 17.47 | 91 | 3309676 | 95.79 | ug/L | 99 |
| 90) 1,2-Dichlorobenzene | 17.69 | 146 | 1366269 | 96.01 | ug/L | 99 |
| 92) 1,2-Dibromo-3-chloropropan | 18.97 | 75 | 138301 | 104.42 | ug/L | 98 |
| 94) 1,2,4-Trichlorobenzene | 20.42 | 180 | 904998 | 102.70 | ug/L | 99 |
| 95) Hexachlorobutadiene | 20.68 | 225 | 451447 | 97.16 | ug/L | 99 |
| 96) Naphthalene | 20.81 | 128 | 1811056 | 115.77 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 822345 | 107.17 | ug/L | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.37 | 180 | 1098165 | 100.07 | ug/L | 99 |

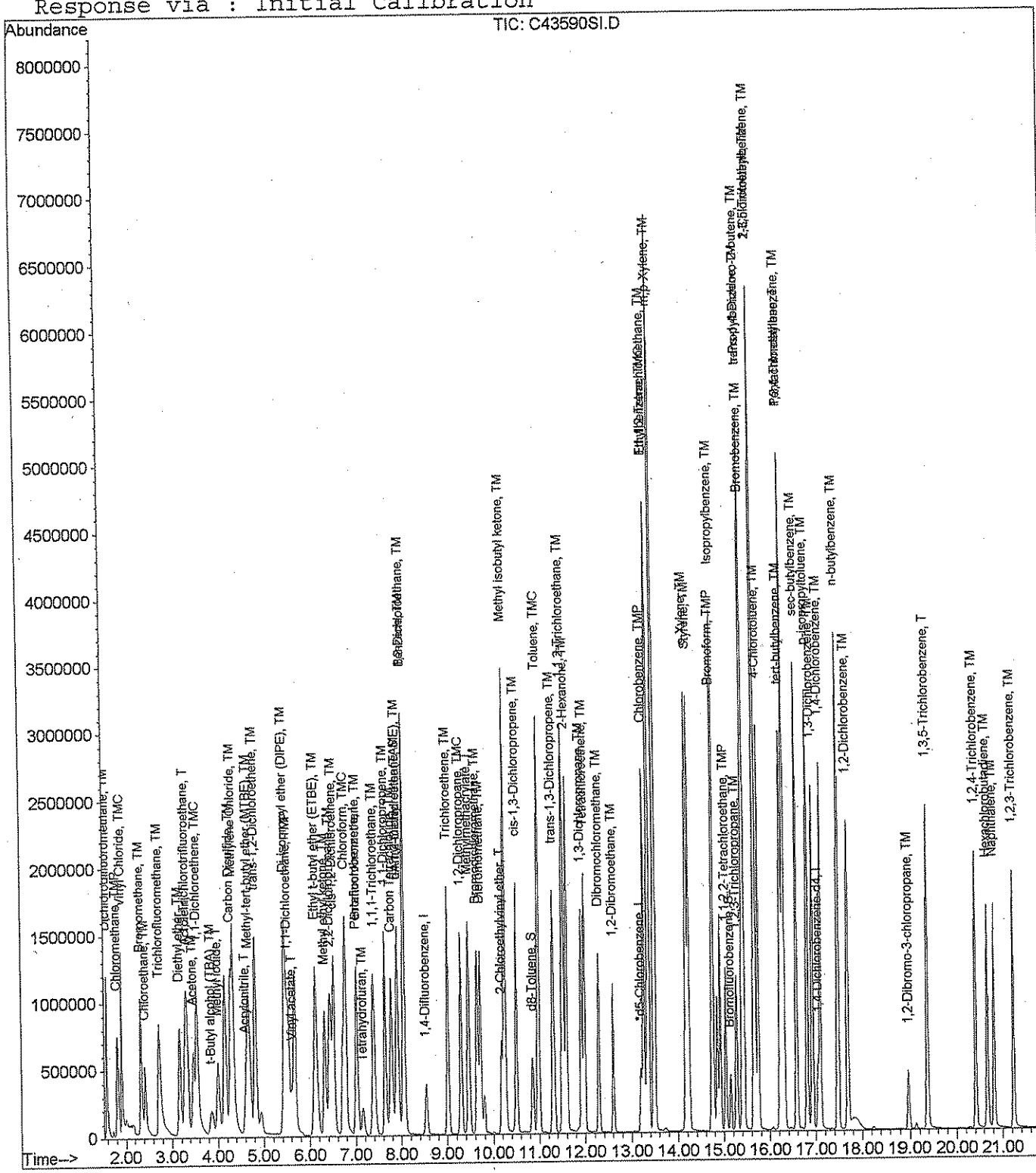
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061703C\C43590SI.D
Acq On : 17 Jun 2003 3:45 pm
Sample : 100 PPB
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 17 16:23 2003

Vial: 11
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Quant Results File: V806173C.

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 16:28:10 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061803C\C43641SC.D
Acq On : 18 Jun 2003 10:21 pm
Sample : 20PPB
Misc : 5000
MS Integration Params: rteint.p

Vial: 1
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

JMR 6/18/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

VMT 6/19/03

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.02 |
| 2 | TM | Dichlorodifluoromethane | 1.109 | 1.094 | 1.4 | 90 | 0.00 |
| 3 | TMP | Chloromethane | 0.995 | 0.930 | 6.5 | 87 | 0.01 |
| 4 | TMC | Vinyl Chloride | 0.940 | 0.936 | 0.4 | 90 | 0.01 |
| 5 | TM | Bromomethane | 0.926 | 0.760 | 17.9 | 79 | 0.00 |
| 6 | TM | Chloroethane | 0.538 | 0.531 | 1.3 | 94 | 0.01 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.056 | 0.066# | -17.9 | 114 | 0.02 |
| 8 | TM | Trichlorofluoromethane | 1.565 | 1.564 | 0.1 | 91 | 0.01 |
| 9 | TM | Diethyl ether | 0.375 | 0.390 | -4.0 | 96 | 0.02 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 1.006 | 1.032 | -2.6 | 94 | 0.01 |
| 11 | T | Acrolein | 0.110 | 0.124 | -12.7 | 77 | 0.01 |
| 12 | TM | Acetone | 0.226 | 0.242 | -7.1 | 105 | 0.02 |
| 13 | TMC | 1,1-Dichloroethene | 0.851 | 0.812 | 4.6 | 90 | 0.02 |
| 4 | T | Methyl iodide | 0.846 | 0.775 | 8.4 | 69 | 0.02 |
| 5 | TM | Di-isopropyl ether (DIPE) | 2.790 | 2.861 | -2.5 | 93 | 0.02 |
| 16 | TM | Methylene Chloride | 1.159 | 1.138 | 1.8 | 107 | 0.02 |
| 17 | TM | Carbon Disulfide | 2.475 | 2.536 | -2.5 | 90 | 0.02 |
| 18 | T | Acrylonitrile | 0.273 | 0.281 | -2.9 | 98 | 0.03 |
| 19 | TM | Methyl-tert-butyl ether (MT | 1.822 | 1.844 | -1.2 | 96 | 0.03 |
| 20 | TM | trans-1,2-Dichloroethene | 0.969 | 0.959 | 1.0 | 92 | 0.02 |
| 21 | TMP | 1,1-Dichloroethane | 1.295 | 1.260 | 2.7 | 87 | 0.02 |
| 22 | T | Vinyl acetate | 1.187 | 1.229 | -3.5 | 73 | 0.02 |
| 23 | TM | Methyl ethyl ketone | 0.055 | 0.058# | -5.5 | 103 | 0.02 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.954 | 2.134 | -9.2 | 105 | 0.02 |
| 25 | TM | 2,2-Dichloropropane | 1.113 | 1.059 | 4.9 | 89 | 0.02 |
| 26 | TM | cis-1,2-Dichloroethene | 0.861 | 0.808 | 6.2 | 91 | 0.02 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.499 | 1.522 | -1.5 | 93 | 0.03 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.29 |
| 29 | TMC | Chloroform | 1.394 | 1.368 | 1.9 | 92 | 0.03 |
| 30 | TM | Bromochloromethane | 0.291 | 0.290 | 0.3 | 89 | 0.01 |
| 31 | TM | Tetrahydrofuran | 0.053 | 0.059# | -11.3 | 109 | 0.02 |
| 32 | TM | 1,1,1-Trichloroethane | 1.370 | 1.377 | -0.5 | 89 | 0.02 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 34 | TM | 1,1-Dichloropropene | 0.864 | 0.874 | -1.2 | 91 | 0.02 |
| 35 | TM | Carbon Tetrachloride | 1.076 | 1.093 | -1.6 | 88 | 0.02 |
| 36 | S | d4-1,2-Dichloroethane | 0.773 | 0.780 | -0.9 | 98 | 0.03 |
| 37 | TM | 1,2-Dichloroethane | 0.923 | 0.951 | -3.0 | 93 | 0.02 |
| 38 | TM | Benzene | 2.271 | 2.246 | 1.1 | 90 | 0.02 |
| 9 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 94 | 0.02 |
| 40 | TM | Trichloroethene | 0.467 | 0.445 | 4.7 | 87 | 0.02 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061803C\C43641SC.D
Acq On : 18 Jun 2003 10:21 pm
Sample : 20PPB
Misc : 5000
MS Integration Params: rteint.p

Vial: 1
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.310 | 0.309 | 0.3 | 92 | 0.02 |
| 42 | T | Methylmethacrylate | 0.225 | 0.233 | -3.6 | 108 | 0.02 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 45 | TM | Bromodichloromethane | 0.521 | 0.539 | -3.5 | 92 | 0.02 |
| 46 | TM | Dibromomethane | 0.344 | 0.352 | -2.3 | 92 | 0.02 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 50 | T | 2-Chloroethylvinyl ether | 0.125 | 0.136 | -8.8 | 103 | 0.02 |
| 51 | TM | 2-Hexanone | 0.104 | 0.123 | -18.3 | 103 | 0.02 |
| 52 | TM | Methyl isobutyl ketone | 0.111 | 0.127 | -14.4 | 101 | 0.02 |
| 53 | TM | cis-1,3-Dichloropropene | 0.527 | 0.545 | -3.4 | 92 | 0.02 |
| 54 | S | d8-Toluene | 1.390 | 1.384 | 0.4 | 95 | 0.02 |
| 55 | TMC | Toluene | 0.926 | 0.910 | 1.7 | 90 | 0.02 |
| 56 | TM | trans-1,3-Dichloropropene | 0.464 | 0.483 | -4.1 | 91 | 0.02 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 58 | TM | 1,1,2-Trichloroethane | 0.263 | 0.276 | -4.9 | 95 | 0.02 |
| 59 | TM | 1,3-Dichloropropane | 0.517 | 0.527 | -1.9 | 93 | 0.02 |
| 60 | TM | Tetrachloroethene | 0.367 | 0.363 | 1.1 | 91 | 0.03 |
| 61 | TM | Dibromochloromethane | 0.384 | 0.415 | -8.1 | 93 | 0.02 |
| 62 | TM | 1,2-Dibromoethane | 0.417 | 0.432 | -3.6 | 92 | 0.02 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.02 |
| 64 | TMP | Chlorobenzene | 1.107 | 1.109 | -0.2 | 92 | 0.02 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.400 | 0.400 | 0.0 | 90 | 0.02 |
| 66 | TMC | Ethylbenzene | 2.139 | 2.131 | 0.4 | 91 | 0.01 |
| 67 | TM | m,p-Xylene | 0.768 | 0.739 | 3.8 | 90 | 0.02 |
| 68 | TM | o-Xylene | 0.721 | 0.703 | 2.5 | 89 | 0.02 |
| 69 | TM | Styrene | 1.281 | 1.273 | 0.6 | 89 | 0.02 |
| 70 | TMP | Bromoform | 0.285 | 0.307 | -7.7 | 93 | 0.02 |
| 71 | TM | Isopropylbenzene | 2.095 | 2.094 | 0.0 | 90 | 0.01 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.470 | 0.510 | -8.5 | 98 | 0.01 |
| 73 | S | Bromofluorobenzene | 0.622 | 0.612 | 1.6 | 96 | 0.03 |
| 74 | TM | 1,2,3-Trichloropropane | 0.328 | 0.336 | -2.4 | 97 | 0.02 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.145 | 0.157 | -8.3 | 94 | 0.02 |
| 76 | TM | n-Propylbenzene | 2.498 | 2.485 | 0.5 | 92 | 0.02 |
| 77 | TM | Bromobenzene | 0.422 | 0.414 | 1.9 | 90 | 0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.635 | 1.615 | 1.2 | 90 | 0.02 |
| 79 | TM | 2-Chlorotoluene | 1.613 | 1.602 | 0.7 | 90 | 0.02 |
| 80 | TM | 4-Chlorotoluene | 1.431 | 1.402 | 2.0 | 91 | 0.02 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061803C\C43641SC.D  Vial: 1
Acq On : 18 Jun 2003 10:21 pm  Operator: JMR
Sample : 20PPB  Inst : Instr_C
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.149 | 1.162 | -1.1 | 91 | 0.02 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.650 | 1.633 | 1.0 | 91 | 0.01 |
| 83 | T | Pentachloroethane | 0.268 | 0.265 | 1.1 | 88 | 0.02 |
| 84 | TM | sec-butylbenzene | 2.175 | 2.167 | 0.4 | 90 | 0.02 |
| 85 | TM | p-isopropyltoluene | 1.418 | 1.393 | 1.8 | 90 | 0.02 |
| 86 | TM | 1,3-Dichlorobenzene | 0.717 | 0.715 | 0.3 | 92 | 0.02 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 97 | 0.01 |
| 88 | TM | 1,4-Dichlorobenzene | 1.548 | 1.531 | 1.1 | 92 | 0.02 |
| 89 | TM | n-butylbenzene | 3.511 | 3.606 | -2.7 | 91 | 0.02 |
| 90 | TM | 1,2-Dichlorobenzene | 1.392 | 1.406 | -1.0 | 92 | 0.02 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.134 | 0.155 | -15.7 | 99 | 0.02 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.875 | 0.885 | -1.1 | 92 | 0.02 |
| 95 | TM | Hexachlorobutadiene | 0.423 | 0.459 | -8.5 | 87 | 0.02 |
| 96 | TM | Naphthalene | 1.648 | 1.771 | -7.5 | 99 | 0.02 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.772 | 0.798 | -3.4 | 94 | 0.02 |
| 98 | T | 1,3,5-Trichlorobenzene | 1.083 | 1.067 | 1.5 | 90 | 0.02 |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903C\C43660SC.D
Acq On : 19 Jun 2003 12:01 pm
Sample : 20PPB
Misc : 5000
MS Integration Params: rteint.p

Vial: 4
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

MT 6/19/03 6.20.03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | ✓112 | 0.03 |
| 2 | TM | Dichlorodifluoromethane | 1.109 | 0.938 | 15.4 | 91 | 0.00 |
| 3 | TMP | Chloromethane | 0.995 | 0.950✓ | 4.5 | 104 | 0.02 |
| 4 | TMC | Vinyl Chloride | 0.940 | 0.831 | ✓11.6 | 94 | 0.02 |
| 5 | TM | Bromomethane | 0.926 | 0.579 | 37.5# | 71 | 0.02 |
| 6 | TM | Chloroethane | 0.538 | 0.502 | 6.7 | 104 | 0.02 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.056 | 0.054# | 3.6 | 109 | 0.03 |
| 8 | TM | Trichlorofluoromethane | 1.565 | 1.430 | 8.6 | 97 | 0.02 |
| 9 | TM | Diethyl ether | 0.375 | 0.358 | 4.5 | 103 | 0.03 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 1.006 | 0.963 | 4.3 | 102 | 0.00 |
| 11 | T | Acrolein | 0.110 | 0.132 | -20.0# | 96 | 0.03 |
| 12 | TM | Acetone | 0.226 | 0.196 | 13.3 | 99 | 0.03 |
| 13 | TMC | 1,1-Dichloroethene | 0.851 | 0.801 | ✓5.9 | 104 | 0.03 |
| 14 | T | Methyl iodide | 0.846 | 0.859 | -1.5 | 90 | 0.03 |
| 15 | TM | Di-isopropyl ether (DIPE) | 2.790 | 2.694 | 3.4 | 103 | 0.03 |
| 16 | TM | Methylene Chloride | 1.159 | 0.925 | 20.2# | 102 | 0.03 |
| 17 | TM | Carbon Disulfide | 2.475 | 2.397 | 3.2 | 99 | 0.03 |
| 18 | T | Acrylonitrile | 0.273 | 0.249 | 8.8 | 102 | 0.04 |
| 19 | TM | Methyl-tert-butyl ether (MT | 1.822 | 1.718 | 5.7 | 105 | 0.04 |
| 20 | TM | trans-1,2-Dichloroethene | 0.969 | 0.916 | 5.5 | 103 | 0.04 |
| 21 | TMP | 1,1-Dichloroethane | 1.295 | 1.242✓ | 4.1 | 100 | 0.03 |
| 22 | T | Vinyl acetate | 1.187 | 1.442 | -21.5# | 101 | 0.03 |
| 23 | TM | Methyl ethyl ketone | 0.055 | 0.055# | 0.0 | 113 | 0.03 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.954 | 2.061 | -5.5 | 118 | 0.03 |
| 25 | TM | 2,2-Dichloropropane | 1.113 | 1.085 | 2.5 | 107 | 0.04 |
| 26 | TM | cis-1,2-Dichloroethene | 0.861 | 0.819 | 4.9 | 108 | 0.03 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.499 | 1.503 | -0.3 | 107 | 0.04 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.29 |
| 29 | TMC | Chloroform | 1.394 | 1.350 | ✓3.2 | 106 | 0.04 |
| 30 | TM | Bromochloromethane | 0.291 | 0.290 | 0.3 | 104 | 0.03 |
| 31 | TM | Tetrahydrofuran | 0.053 | 0.050# | 5.7 | 107 | 0.02 |
| 32 | TM | 1,1,1-Trichloroethane | 1.370 | 1.380 | -0.7 | 105 | 0.03 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 34 | TM | 1,1-Dichloropropene | 0.864 | 0.872 | -0.9 | 107 | 0.04 |
| 35 | TM | Carbon Tetrachloride | 1.076 | 1.073 | 0.3 | 101 | 0.03 |
| 36 | S | d4-1,2-Dichloroethane | 0.773 | 0.699 | 9.6 | 102 | 0.04 |
| 37 | TM | 1,2-Dichloroethane | 0.923 | 0.894 | 3.1 | 102 | 0.04 |
| 38 | TM | Benzene | 2.271 | 2.287 | -0.7 | 107 | 0.04 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | ✓110 | 0.03 |
| 40 | TM | Trichloroethene | 0.467 | 0.433 | 7.3 | 99 | 0.03 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903C\C43660SC.D  Vial: 4
Acq On : 19 Jun 2003 12:01 pm  Operator: JMR
Sample : 20PPB  Inst : Instr_C
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.310 | 0.307 | 1.0 | 106 | 0.03 |
| 42 | T | Methylmethacrylate | 0.225 | 0.195 | 13.3 | 105 | 0.03 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 45 | TM | Bromodichloromethane | 0.521 | 0.527 | -1.2 | 104 | 0.03 |
| 46 | TM | Dibromomethane | 0.344 | 0.333 | 3.2 | 101 | 0.03 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 50 | T | 2-Chloroethylvinyl ether | 0.125 | 0.135 | -8.0 | 120 | 0.03 |
| 51 | TM | 2-Hexanone | 0.104 | 0.108 | -3.8 | 106 | 0.03 |
| 52 | TM | Methyl isobutyl ketone | 0.111 | 0.115 | -3.6 | 106 | 0.03 |
| 53 | TM | cis-1,3-Dichloropropene | 0.527 | 0.535 | -1.5 | 106 | 0.04 |
| 54 | S | d8-Toluene | 1.390 | 1.352 | 2.7 | 108 | 0.04 |
| 55 | TMC | Toluene | 0.926 | 0.946 | -2.2 | 109 | 0.03 |
| 56 | TM | trans-1,3-Dichloropropene | 0.464 | 0.475 | -2.4 | 104 | 0.03 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 58 | TM | 1,1,2-Trichloroethane | 0.263 | 0.261 | 0.8 | 105 | 0.03 |
| 59 | TM | 1,3-Dichloropropane | 0.517 | 0.499 | 3.5 | 102 | 0.03 |
| 60 | TM | Tetrachloroethene | 0.367 | 0.381 | -3.8 | 111 | 0.04 |
| 61 | TM | Dibromochloromethane | 0.384 | 0.391 | -1.8 | 103 | 0.03 |
| 62 | TM | 1,2-Dibromoethane | 0.417 | 0.416 | 0.2 | 104 | 0.03 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 109 | 0.03 |
| 64 | TMP | Chlorobenzene | 1.107 | 1.167 | -5.4 | 109 | 0.03 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.400 | 0.412 | -3.0 | 104 | 0.03 |
| 66 | TMC | Ethylbenzene | 2.139 | 2.198 | -2.8 | 105 | 0.03 |
| 67 | TM | m,p-Xylene | 0.768 | 0.797 | -3.8 | 109 | 0.03 |
| 68 | TM | o-Xylene | 0.721 | 0.761 | -5.5 | 109 | 0.03 |
| 69 | TM | Styrene | 1.281 | 1.356 | -5.9 | 106 | 0.03 |
| 70 | TMP | Bromoform | 0.285 | 0.305 | -7.0 | 104 | 0.03 |
| 71 | TM | Isopropylbenzene | 2.095 | 2.187 | -4.4 | 105 | 0.03 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.470 | 0.457 | 2.8 | 99 | 0.03 |
| 73 | S | Bromofluorobenzene | 0.622 | 0.603 | 3.1 | 107 | 0.04 |
| 74 | TM | 1,2,3-Trichloropropane | 0.328 | 0.306 | 6.7 | 99 | 0.03 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.145 | 0.151 | -4.1 | 102 | 0.03 |
| 76 | TM | n-Propylbenzene | 2.498 | 2.565 | -2.7 | 107 | 0.03 |
| 77 | TM | Bromobenzene | 0.422 | 0.431 | -2.1 | 105 | 0.03 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.635 | 1.724 | -5.4 | 108 | 0.03 |
| 79 | TM | 2-Chlorotoluene | 1.613 | 1.637 | -1.5 | 104 | 0.03 |
| 80 | TM | 4-Chlorotoluene | 1.431 | 1.455 | -1.7 | 106 | 0.03 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903C\C43660SC.D
Acq On : 19 Jun 2003 12:01 pm
Sample : 20PPB
Misc : 5000
MS Integration Params: rteint.p

Vial: 4
Operator: JMR
Inst : Instr_C
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V806173C.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:34:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.149 | 1.203 | -4.7 | 106 | 0.03 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.650 | 1.709 | -3.6 | 107 | 0.03 |
| 83 | T | Pentachloroethane | 0.268 | 0.277 | -3.4 | 103 | 0.03 |
| 84 | TM | sec-butylbenzene | 2.175 | 2.238 | -2.9 | 105 | 0.03 |
| 85 | TM | p-isopropyltoluene | 1.418 | 1.447 | -2.0 | 105 | 0.03 |
| 86 | TM | 1,3-Dichlorobenzene | 0.717 | 0.726 | -1.3 | 105 | 0.03 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 108 | 0.02 |
| 88 | TM | 1,4-Dichlorobenzene | 1.548 | 1.558 | -0.6 | 104 | 0.03 |
| 89 | TM | n-butylbenzene | 3.511 | 3.693 | -5.2 | 104 | 0.03 |
| 90 | TM | 1,2-Dichlorobenzene | 1.392 | 1.437 | -3.2 | 104 | 0.03 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.134 | 0.136 | -1.5 | 96 | 0.03 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.11 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.875 | 0.896 | -2.4 | 104 | 0.03 |
| 95 | TM | Hexachlorobutadiene | 0.423 | 0.491 | -16.1 | 104 | 0.03 |
| 96 | TM | Naphthalene | 1.648 | 1.627 | 1.3 | 101 | 0.03 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.772 | 0.794 | -2.8 | 104 | 0.03 |
| 98 | T | 1,3,5-Trichlorobenzene | 1.083 | 1.122 | -3.6 | 105 | 0.03 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43580T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/17/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1051

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 311894 | | 7.00 | | 561702 | | 8.54 | | 465449 | | 13.20 | | 218831 | | 17.05 | |
| | UPPER LIMIT | 623788 | | 7.42 | | 1123404 | | 9.05 | | 930898 | | 13.99 | | 437662 | | 18.07 | |
| | LOWER LIMIT | 155947 | | 6.58 | | 280851 | | 8.03 | | 232725 | | 12.41 | | 109416 | | 16.03 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | ZZZZZ | 301823 | | 7.00 | | 536296 | | 8.53 | | 457325 | | 13.20 | | 217261 | | 17.04 | |
| 02 | ZZZZZ | 287264 | | 6.99 | | 536441 | | 8.54 | | 468731 | | 13.20 | | 226342 | | 17.04 | |
| 03 | ZZZZZ | 292931 | | 7.00 | | 527679 | | 8.54 | | 443084 | | 13.20 | | 211447 | | 17.04 | |
| 04 | ZZZZZ | 309753 | | 7.01 | | 532411 | | 8.54 | | 460768 | | 13.20 | | 216646 | | 17.04 | |
| 05 | 1 PPB | 290110 | | 7.00 | | 523449 | | 8.54 | | 450029 | | 13.20 | | 208932 | | 17.04 | |
| 06 | 2 PPB | 298213 | | 7.01 | | 519417 | | 8.53 | | 446212 | | 13.21 | | 209966 | | 17.04 | |
| 07 | 5 PPB | 306740 | | 7.01 | | 533812 | | 8.54 | | 452809 | | 13.21 | | 211891 | | 17.04 | |
| 08 | 20 PPB | 311894 | | 7.00 | | 561702 | | 8.54 | | 465449 | | 13.20 | | 218831 | | 17.05 | |
| 09 | 50 PPB | 311564 | | 7.00 | | 543662 | | 8.54 | | 454746 | | 13.20 | | 222033 | | 17.05 | |
| 10 | 100 PPB | 251974 | | 7.00 | | 443071 | | 8.54 | | 372709 | | 13.20 | | 185681 | | 17.05 | |
| 11 | | | | | | | | | | | | | | | | | |
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| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43640T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2152

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 297343 | | 7.02 | | 528728 | | 8.56 | | 449711 | | 13.23 | | 212327 | | 17.06 | |
| | UPPER LIMIT | 594686 | | 7.44 | | 1057456 | | 9.07 | | 899422 | | 14.02 | | 424654 | | 18.08 | |
| | LOWER LIMIT | 148672 | | 6.60 | | 264364 | | 8.05 | | 224856 | | 12.44 | | 106164 | | 16.04 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB | 297343 | | 7.02 | | 528728 | | 8.56 | | 449711 | | 13.23 | | 212327 | | 17.06 | |
| 02 | MB06183B | 300221 | | 7.02 | | 538380 | | 8.56 | | 441110 | | 13.23 | | 216449 | | 17.07 | |
| 03 | ZZZZZ | 427559 | | 7.01 | | 496164 | | 8.55 | | 433823 | | 13.23 | | 213442 | | 17.06 | |
| 04 | LS06183B2 | 305289 | | 7.03 | | 534726 | | 8.56 | | 449243 | | 13.23 | | 211101 | | 17.07 | |
| 05 | ZZZZZ | 295576 | | 7.02 | | 518952 | | 8.56 | | 424759 | | 13.23 | | 196687 | | 17.07 | |
| 06 | 49855-10 | 288910 | | 7.03 | | 517535 | | 8.57 | | 431873 | | 13.23 | | 201507 | | 17.07 | |
| 07 | 49855-11 | 301234 | | 7.03 | | 518645 | | 8.57 | | 445426 | | 13.23 | | 208740 | | 17.07 | |
| 08 | 49855-12 | 299835 | | 7.03 | | 529871 | | 8.57 | | 442563 | | 13.23 | | 205539 | | 17.07 | |
| 09 | 49855-13 | 293925 | | 7.03 | | 517051 | | 8.57 | | 430003 | | 13.23 | | 203233 | | 17.07 | |
| 10 | 49855-13,MS | 302388 | | 7.03 | | 520114 | | 8.57 | | 434882 | | 13.23 | | 206536 | | 17.07 | |
| 11 | ZZZZZ | 297189 | | 7.04 | | 526094 | | 8.58 | | 428482 | | 13.23 | | 197783 | | 17.07 | |
| 12 | 49855-13,MSD | 303505 | | 7.03 | | 524365 | | 8.57 | | 437300 | | 13.23 | | 205532 | | 17.07 | |
| 13 | ZZZZZ | 297656 | | 7.03 | | 511810 | | 8.57 | | 430194 | | 13.23 | | 203131 | | 17.07 | |
| 14 | ZZZZZ | 280738 | | 7.03 | | 497868 | | 8.57 | | 419174 | | 13.23 | | 190051 | | 17.07 | |
| 15 | ZZZZZ | 347958 | | 7.02 | | 609352 | | 8.57 | | 494006 | | 13.24 | | 224057 | | 17.07 | |
| 16 | ZZZZZ | 334853 | | 7.02 | | 576289 | | 8.56 | | 480260 | | 13.23 | | 218518 | | 17.07 | |
| 17 | ZZZZZ | 327456 | | 7.03 | | 570235 | | 8.57 | | 460968 | | 13.24 | | 223997 | | 17.07 | |
| 18 | LS06183C,RR | 338969 | | 7.02 | | 600926 | | 8.56 | | 501931 | | 13.23 | | 232918 | | 17.07 | |
| 19 | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | |
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| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002.2010 Quote #: SDG#: 49855

BFB File ID: C43659T Site ID: Bucks Harbor Location: Maine

Instrument ID: C BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1133

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 348093 | | 7.03 | | 616220 | | 8.57 | | 505757 | | 13.23 | | 235828 | | 17.07 | |
| | UPPER LIMIT | 696186 | | 7.45 | | 1232440 | | 9.08 | | 1011514 | | 14.02 | | 471656 | | 18.09 | |
| | LOWER LIMIT | 174047 | | 6.61 | | 308110 | | 8.06 | | 252879 | | 12.44 | | 117914 | | 16.05 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB | 348093 | | 7.03 | | 616220 | | 8.57 | | 505757 | | 13.23 | | 235828 | | 17.07 | |
| 02 | L806193C | 349473 | | 7.03 | | 608574 | | 8.57 | | 508236 | | 13.23 | | 235838 | | 17.07 | |
| 03 | ZZZZZ | 370759 | | 7.04 | | 641359 | | 8.57 | | 517466 | | 13.24 | | 242176 | | 17.07 | |
| 04 | B806193C | 350559 | | 7.04 | | 603365 | | 8.58 | | 498996 | | 13.23 | | 237917 | | 17.08 | |
| 05 | ZZZZZ | 491309 | | 7.02 | | 593932 | | 8.56 | | 522778 | | 13.24 | | 242979 | | 17.07 | |
| 06 | ZZZZZ | 358754 | | 7.04 | | 611167 | | 8.58 | | 518349 | | 13.24 | | 243484 | | 17.08 | |
| 07 | ZZZZZ | 456754 | | 7.03 | | 581831 | | 8.57 | | 491303 | | 13.23 | | 233885 | | 17.08 | |
| 08 | ZZZZZ | 522437 | | 7.04 | | 621879 | | 8.57 | | 531959 | | 13.24 | | 238132 | | 17.08 | |
| 09 | 49855-8 | 341292 | | 7.03 | | 573339 | | 8.57 | | 479477 | | 13.24 | | 222877 | | 17.08 | |
| 10 | ZZZZZ | 352129 | | 7.03 | | 614887 | | 8.57 | | 505891 | | 13.23 | | 233231 | | 17.07 | |
| 11 | ZZZZZ | 361595 | | 7.03 | | 625307 | | 8.57 | | 509584 | | 13.23 | | 240136 | | 17.08 | |
| 12 | 49855-11,RR | 374812 | | 7.03 | | 640695 | | 8.57 | | 527568 | | 13.24 | | 244123 | | 17.07 | |
| 13 | 49855-14 | 364456 | | 7.03 | | 624441 | | 8.57 | | 520996 | | 13.24 | | 238537 | | 17.07 | |
| 14 | 49855-13,MS,RR | 359471 | | 7.04 | | 630483 | | 8.57 | | 512945 | | 13.23 | | 238443 | | 17.08 | |
| 15 | 49855-13,MSD,RR | 358916 | | 7.03 | | 617234 | | 8.57 | | 505297 | | 13.23 | | 241179 | | 17.08 | |
| 16 | L806193C4 | 344599 | | 7.04 | | 612989 | | 8.58 | | 509726 | | 13.24 | | 227997 | | 17.08 | |
| 17 | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | |
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| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
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# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 218290

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 06/24/2003

Bonnie Stadelmann
Signature

06/24/03
Date

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

# STL Chicago
# Wet Chemistry Case Narrative

Client: Analytics Environmental Laboratory
Job #: 218290 Date Rec'd: 06/14/03

1. This narrative covers the analysis of the soil samples in the above Job # for **Total Organic Carbon** by the Lloyd Kahn Method. The sample was analyzed by furnace combustion and non-dispersive infrared detection on a Dohrmann Phoenix 8000 TOC analyzer, after acidification to remove inorganic carbon, and low-temperature drying. All analysis was done in duplicate with the average reported. Since the samples were dried prior to analysis, no correction was made for moisture content.

2. The method-recommended holding time of 2 weeks from collection was met.

3. The standard curve for this test is run monthly or more frequently if necessary. The initial and continuing calibration verification standards were all within acceptance limits. The blanks were less than the reporting limit.

4. The LCS recoveries were within the statistical control limits of 53-140% recovery.

5. The matrix QC done on sample 218290-1 was within acceptance limits.

Diane L. Harper
Wet Chemistry Section Manager

6-24-03
Date

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## SAMPLE INFORMATION
Date: 06/24/2003

Job Number.: 218290
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49855
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 218290-1 | ECOSED1-0603 | Sediment | 06/12/2003 | 08:05 | 06/14/2003 | 09:20 |
| 218290-2 | ECOSED2-0603 | Sediment | 06/12/2003 | 08:35 | 06/14/2003 | 09:20 |
| 218290-3 | ECOSED3-0603 | Sediment | 06/12/2003 | 09:05 | 06/14/2003 | 09:20 |
| 218290-4 | ECOSED4-0603 | Sediment | 06/12/2003 | 09:35 | 06/14/2003 | 09:20 |

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LABORATORY TEST RESULTS

Job Number: 218290

Date:06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49855 ATTN: Steve Knollmeyer

Customer Sample ID: ECOSED1-0603
Date Sampled.....: 06/12/2003
Time Sampled.....: 08:05
Sample Matrix.....: Sediment

Laboratory Sample ID: 218290-1
Date Received.....: 06/14/2003
Time Received.....: 09:20

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils)<br>TOC Average Duplicates, Solid | 2900 | | | 200 | 390 | 1 | mg/Kg | 87814 | | 06/19/03 0922 | cls |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218290

Date:06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49855

ATTN: Steve Knollmeyer

Customer Sample ID: ECOSED2-0603
Date Sampled.....: 06/12/2003
Time Sampled.....: 08:35
Sample Matrix.....: Sediment

Laboratory Sample ID: 218290-2
Date Received.....: 06/14/2003
Time Received.....: 09:20

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils)<br>TOC Average Duplicates, Solid | 48000 | | | 2800 | 5600 | 1 | mg/Kg | 87814 | | 06/19/03 1001 | cls |

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218290

Date:06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49855

ATTN: Steve Knollmeyer

Customer Sample ID: ECOSED3-0603
Date Sampled.....: 06/12/2003
Time Sampled.....: 09:05
Sample Matrix.....: Sediment

Laboratory Sample ID: 218290-3
Date Received.....: 06/14/2003
Time Received.....: 09:20

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils)<br>TOC Average Duplicates, Solid | 3100 | | | 250 | 490 | 1 | mg/Kg | 87814 | | 06/19/03 1026 | cls |

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS

Job Number: 218290

Date:06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49855 ATTN: Steve Knollmeyer

Customer Sample ID: ECOSED4-0603
Date Sampled.....: 06/12/2003
Time Sampled.....: 09:35
Sample Matrix.....: Sediment

Laboratory Sample ID: 218290-4
Date Received.....: 06/14/2003
Time Received.....: 09:20

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils)<br>TOC Average Duplicates, Solid | 13000 | | | 850 | 1700 | 1 | mg/Kg | 87814 | | 06/19/03 1040 | cls |

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY CHRONICLE

Job Number: 218290

Date: 06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC  PROJECT: BUCKS HARBOR 49855  ATTN: Steve Knollmeyer

Lab ID: 218290-1  Client ID: ECOSED1-0603
Date Recvd: 06/14/2003  Sample Date: 06/12/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| EDD | Electronic Data Deliverable | 1 | | | | |
| 9060M | Total Organic Carbon (Soils) | 1 | 87814 | 87814 | 06/19/2003 0922 | |

Lab ID: 218290-2  Client ID: ECOSED2-0603
Date Recvd: 06/14/2003  Sample Date: 06/12/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils) | 1 | 87814 | 87814 | 06/19/2003 1001 | |

Lab ID: 218290-3  Client ID: ECOSED3-0603
Date Recvd: 06/14/2003  Sample Date: 06/12/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils) | 1 | 87814 | 87814 | 06/19/2003 1026 | |

Lab ID: 218290-4  Client ID: ECOSED4-0603
Date Recvd: 06/14/2003  Sample Date: 06/12/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 9060M | Total Organic Carbon (Soils) | 1 | 87814 | 87814 | 06/19/2003 1040 | |

# QUALITY CONTROL RESULTS

Job Number.: 218290

Report Date.: 06/24/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49855

ATTN: Steve Knollmeyer

Test Method.....: 9060M
Method Description.: Total Organic Carbon (Soils)
Parameter.....: Organic Carbon, Tot. (TOC)

Batch.....: 87814
Equipment Code....: TOC4

Analyst...: cls
Test Code.: TOC

| QC | Lab ID | Reagent | Units | QC Result | | QC Result | True Value | Orig. Value | | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87814 -002 | I03FSTTC2 | mg/Kg | 1781.36 | | | 2000.00 | | | 89 | | % | 85-115 | 06/19/2003 | 0805 |
| MB | 87814 -003 | | mg/Kg | 64.00 | U | | | | | | | | | 06/19/2003 | 0812 |
| LCS | 87814 -004 | I00FSTLK3 | mg/Kg | 5526.52 | | | 4780.00 | 353.10 | U | 116 | | % | 53-140 | 06/19/2003 | 0821 |
| LCD | 87814 -005 | I00FSTLK3 | mg/Kg | 4182.84 | | 5526.52 | 4780.00 | 359.30 | U | 88 | | % | 53-140 | 06/19/2003 | 0838 |
| | | | | | | | | | | 28 | | R | 30 | | |
| CCV | 87814 -014 | I03FSTTC2 | mg/Kg | 1734.70 | | | 2000.00 | | | 87 | | % | 85-115 | 06/19/2003 | 1105 |
| CCB | 87814 -015 | | mg/Kg | 64.00 | U | | | | | | | | | 06/19/2003 | 1108 |

Test Method.....: 9060M
Method Description.: Total Organic Carbon (Soils)
Parameter.....: TOC Average Duplicates

Batch.....: 87814
Equipment Code....: TOC4

Analyst...: cls
Test Code.: TOCAV2

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 218290-1 | I03FSTTC2 | mg/Kg | 7702.53 | | 2000.00 | 2946.82 | 106 | | % | 53-140 | 06/19/2003 | 0939 |
| MSD | 218290-1 | I03FSTTC2 | mg/Kg | 6924.33 | 7702.53 | 2000.00 | 2946.82 | 110 | | % | 53-140 | 06/19/2003 | 0947 |
| | | | | | | | | 18 | | R | 30 | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ^ | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ^ | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group |
| Lab ID | An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

STL CHICAGO

# analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only** Rev 2/00

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 4.4
3) Received in good condition Y or N
4) pH checked by:
5) Labels checked by: JAT

Project#: 10971.217.002 Proj. Name: BUCKS HARBOR
Company: ANALYTICS
Contact: Stephen Knollmeyer
Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801
Phone: 603-436-5111 PO# Quote #
Sampler (Signature): K. SOUKUP

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwate
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| | Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4o C | HNO3 | H2SO4 | HCL | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ECOSED1-0603 | 6.12.03 | 0805 | TOC | | ✓ | | | | | S | 1 | G | | 49555-10 |
| 2 | ECOSED2-0603 | 6.12.03 | 0835 | ↓ | | ✓ | | | | | ↓ | ↓ | ↓ | | -11 |
| 3 | ECOSED3-0603 | 6.12.03 | 0905 | | | ✓ | | | | | | | | | -12 |
| 4 | ECOSED4-0603 | 6.12.03 | 0935 | | | ✓ | | | | | | | | | -13 |

Received By: | Time: | Date:
Received By: UPS | Time: 1620 | Date: 6.13.03
Received By: | Time: 0920 | Date: 6-14-03
Relinquished By Sampler:
Relinquished By:
Relinquished By: UPS

FAX RESULTS? (YES) NO
Fax #: 603-430-2151

Turnaround Request
Standard ☑ Due Date 6.25.03
Priority ☐ Due Date

Comments / Instructions:
**Please reference Station ID number and AEL Lab number on report(s).**
TOC BY 9060
LEVEL II QC

Page 1 of 1

Analytics\AEL Documents\AEL COC

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# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped ~~or~~ hand-delivered
2) Temp blank °C 6
3) Received in good condition (Y) or N
4) pH checked by: n/a
5) Labels checked by: VC 6/13/03

Project#: 10471.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Sullivan
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: (603 315-4913 PO# Quote #
Sampler (Signature):

Matrix Key: WW=Wastewater, SW=Surfacewater, GW=Groundwater, DW=Drinkingwater, S=Soil/Sludge, O=Oil, E=Extract, X=Other

Container Key: P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | HNO3 | H2SO4 | HCl | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-061203-01 | 6/12/03 | 0700 | VOC 8260B | | | | | X | | | W | 2 | V | | 4985-1 |
| ECOSW1-0603 | 6/12/03 | 0800 | | | | | | X | | | SW | 3 | V | | 2 |
| ECOSW2-0603 | | 0830 | | | | | | X | | | SW | 3 | V | | 3 |
| ECOSW3-0603 | | 0900 | | | | | | X | | | SW | 3 | V | | 4 |
| ECOSW4-0603 | | 0930 | (ms/msd) | | | | | X | | | SW | 5 | V | | 5 |
| ECOSW2-0603-E | | 0830 | | | | | | X | | | SW | 3 | V | | 6 |
| RB-061203-01 | | 0915 | | | | | | X | | | W | 3 | V | | 7 |
| TB-061203-02 | 6/4/03 | 0700 | VOC 8260B | | | | | | X | | — | 1 | V | | 8 |
| RB-061203-02 | 6/12/03 | 0915 | VOC 8260B | | | | | X | X | | W | 3 | V | | 9 |
| ECOSED1-0603 | | 0805 | VOC, % Solids, TOC | X | | | | | X | | S | 2/1 | V/G | | 10 |
| ECOSED2-0603 | | 0835 | | X | | | | | X | | S | 2/1 | V/G | | 11 |
| ECOSED3-0603 | | 0905 | | X | | | | | X | | S | 2/1 | V/G | | 12 |

FAX RESULTS? (YES) NO
Fax # (603 436-5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOCs by 8260B
TOC by 9060

Client Code: WESTONM

Page 1 of 2

| Received By: | Received By: | Received By: |
|---|---|---|
| Time: 1305 | Time: | Time: |
| Date: 6/13/03 | Date: | Date: |
| Relinquished By Sampler: | Relinquished By: | Relinquished By: |

155/157

Analytics\AEL Documents\AEL COC

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 6
3) Received in good condition (Y) or N
4) pH checked by: n/a
5) Labels checked by: _____

Project#: 10971-217002 Project: Bucks
Company: Weston Solutions
Contact: Kathleen Sankup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: (603) 315-4563 PO# Quote #
Sampler (Signature): [signature]

Matrix Key: WW=Wastewater, SW=Surfacewater, GW=Groundwater, DW=Drinkingwater, S=Soil/Sludge, O=Oil, E=Extract, X=Other

Container Key: P=plastic G=glass

Preservation: Unpres, 4° C, HNO3, H2SO4, HCL, Methanol, Other

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ECOSED4-0603 | 6/12/03 | 0935 | VOC, % solids, TOC | X | | | | | X | | S | 2/1 | V/G | | 49855-13 |
| ECOSED2-0603-E | 6/12/03 | 0935 | VOC, % solids | X | | | | | X | | S | 2 | V | | -14 |

Comments / Instructions:
ECOSED4-0603 IS an MS/MSD for VOC, only
VOC, 8260B method
TOC 9060 method

FAX RESULTS? YES NO
Fax # x5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Client Code: WESTONM

Page 2 of 2

| Received By: | Received By: | Received By: |
|---|---|---|
| Time: 1305 | Time: | Time: |
| Date: 6/13/03 | Date: | Date: |
| Relinquished By Sampler: | Relinquished By: | Relinquished By: |

Analytics\AEL Documents\AEL COC

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# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 49855-1

CLIENT: WESTON

PROJECT: BUCKS HARBOR

COOLER NUMBER: n/a

NUMBER OF COOLERS: 1

DATE RECEIVED: 6.13.03

**A: PRELIMINARY EXAMINATION:**

DATE COOLER OPENED: 6.13.03

Date Received: 6.13.03

1. Cooler received by(initials)
2. Did cooler come with a shipping slip? Y (N)

If YES, enter carrier name and airbill number here: n/a

3. Were custody seals on the outside of cooler? Y N/a
How many & where: n/a ~~Seal Date:~~ ~~Seal Name:~~

4. Did the custody seals arrive unbroken and intact upon arrival? Y N/a

5. COC#: n/a

6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N

7. Were custody papers sealed in a plastic bag? (Y) N

8. Did you sign the COC in the appropriate place? (Y) N

9. Was the project identifiable from the COC papers? (Y) N

10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 6°C

**B. Log-In:** Date samples were logged in: 6.13.03 By: amb

11. Type of packing in cooler(bubble wrap, popcorn) Y N/a

12. Were all bottles sealed in separate plastic bags? (Y) N

13. Did all bottles arrive unbroken and were labels in good condition? (Y) N

14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N

15. Did all bottle labels agree with custody papers? (Y) N

16. Were the correct containers used for the tests indicated: (Y) N

17. Were samples received at the correct pH? Y N/a

18. Was sufficient amount of sample sent for the tests indicated? (Y) N

19. Were bubbles absent in VOA samples? (Y) N

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): VC Date: 6.13.03

analytics environmental laboratory LLC

195 Commerce Way Suite E
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800-929-9906
www.analyticslab.com

June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49866**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 17 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49866-1 | 06/16/03 | MW12-0603 | Alkalinity | |
| | 06/16/03 | MW12-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW12-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW12-0603 | Metals | |
| | 06/16/03 | MW12-0603 | Metals Digestion | |
| | 06/16/03 | MW12-0603 | Nitrate | |
| | 06/16/03 | MW12-0603 | Sulfate | |
| | 06/16/03 | MW12-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-2 | 06/16/03 | MW11-0603 | Alkalinity | |
| | 06/16/03 | MW11-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW11-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW11-0603 | Metals | |
| | 06/16/03 | MW11-0603 | Metals Digestion | |
| | 06/16/03 | MW11-0603 | Nitrate | |
| | 06/16/03 | MW11-0603 | Sulfate | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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analytics environmental laboratory LLC

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800-929-9906
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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | MW11-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-3 | 06/16/03 | MW13-0603 | Alkalinity | |
| | 06/16/03 | MW13-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW13-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW13-0603 | Metals | |
| | 06/16/03 | MW13-0603 | Metals Digestion | |
| | 06/16/03 | MW13-0603 | Nitrate | |
| | 06/16/03 | MW13-0603 | Sulfate | |
| | 06/16/03 | MW13-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-4 | 06/16/03 | GAMW001-0603 | Alkalinity | |
| | 06/16/03 | GAMW001-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | GAMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | GAMW001-0603 | Metals | |
| | 06/16/03 | GAMW001-0603 | Metals Digestion | |
| | 06/16/03 | GAMW001-0603 | Nitrate | |

**Sample Receipt Exceptions:** None

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Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | GAMW001-0603 | Sulfate | |
| | 06/16/03 | GAMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-5 | 06/16/03 | MW14-0603 | Alkalinity | |
| | 06/16/03 | MW14-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW14-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW14-0603 | Metals | |
| | 06/16/03 | MW14-0603 | Metals Digestion | |
| | 06/16/03 | MW14-0603 | Nitrate | |
| | 06/16/03 | MW14-0603 | Sulfate | |
| | 06/16/03 | MW14-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-6 | 06/16/03 | STMW001-0603 | Alkalinity | |
| | 06/16/03 | STMW001-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | STMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | STMW001-0603 | Metals | |
| | 06/16/03 | STMW001-0603 | Metals Digestion | |

**Sample Receipt Exceptions:** None

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Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | STMW001-0603 | Nitrate | |
| | 06/16/03 | STMW001-0603 | Sulfate | |
| | 06/16/03 | STMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-7 | 06/16/03 | MW9-0603 | Alkalinity | |
| | 06/16/03 | MW9-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW9-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW9-0603 | Metals | |
| | 06/16/03 | MW9-0603 | Metals Digestion | |
| | 06/16/03 | MW9-0603 | Nitrate | |
| | 06/16/03 | MW9-0603 | Sulfate | |
| | 06/16/03 | MW9-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-8 | 06/16/03 | MW105-0603 | Alkalinity | |
| | 06/16/03 | MW105-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW105-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW105-0603 | Metals | |

**Sample Receipt Exceptions:** None

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Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | MW105-0603 | Metals Digestion | |
| | 06/16/03 | MW105-0603 | Nitrate | |
| | 06/16/03 | MW105-0603 | Sulfate | |
| | 06/16/03 | MW105-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-9 | 06/16/03 | MW140-0603 | Alkalinity | |
| | 06/16/03 | MW140-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW140-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | MW140-0603 | Metals | |
| | 06/16/03 | MW140-0603 | Metals Digestion | |
| | 06/16/03 | MW140-0603 | Nitrate | |
| | 06/16/03 | MW140-0603 | Sulfate | |
| | 06/16/03 | MW140-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-10 | 06/16/03 | MW101-0603 | Alkalinity | |
| | 06/16/03 | MW101-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | MW101-0603 | Ferrous Iron in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | MW101-0603 | Metals | |
| | 06/16/03 | MW101-0603 | Metals Digestion | |
| | 06/16/03 | MW101-0603 | Nitrate | |
| | 06/16/03 | MW101-0603 | Sulfate | |
| | 06/16/03 | MW101-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-11 | 06/16/03 | STMW002-0603 | Alkalinity | |
| | 06/16/03 | STMW002-0603 | Chemical Oxygen Demand | |
| | 06/16/03 | STM002-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | STMW002-0603 | Metals | |
| | 06/16/03 | STMW002-0603 | Metals Digestion | |
| | 06/16/03 | STMW002-0603 | Nitrate | |
| | 06/16/03 | STMW002-0603 | Sulfate | |
| | 06/16/03 | STMW002-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49866-12 | 06/16/03 | STMW003-0603 | Alkalinity | |
| | 06/16/03 | STMW003-0603 | Chemical Oxygen Demand | |

**Sample Receipt Exceptions:** None

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Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49866**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 17 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | STM003-0603 | Electronic Data Deliverable | |
| | 06/16/03 | STM003-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/16/03 | STMW003-0603 | Metals | |
| | 06/16/03 | STMW003-0603 | Metals Digestion | |
| | 06/16/03 | STMW003-0603 | Nitrate | |
| | 06/16/03 | STMW003-0603 | Sulfate | |
| | 06/16/03 | STMW003-0603 | Total Organic Carbon in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Stephen L. Knollmeyer Lab. Director

Date 7/3/2003

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analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 25, 2003

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

## ANALYTICAL RESULTS FERROUS IRON
## CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| L061703F | LABQC | N/A | N/A | 06/17/03 | Aqueous | 1 | 0.1 | 99 |
| B061703F | LABQC | N/A | N/A | 06/17/03 | Aqueous | 1 | 0.1 | U |
| 49866-1 | MW12-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.17** |
| 49866-2 | MW11-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.32** |
| 49866-3 | MW13-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.58** |
| 49866-4 | GAMW001-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.12** |
| 49866-5 | MW14-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | U |
| 49866-6 | STMW001-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.12** |
| 49866-7 | MW9-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.12** |
| 49866-9 | MW140-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.32** |
| 49866-10 | MW101-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **0.11** |
| 49866-11 | STM002-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 1 | 0.1 | **1.2** |
| 49866-8 | MW105-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 10 | 1 | **8.9** |
| 49866-12 | STM003-0603 | 06/16/03 | 06/17/03 | 06/17/03 | Aqueous | 5 | 0.5 | **6.4** |
| LD061703F | LABQC | N/A | N/A | 06/17/03 | Aqueous | 1 | 0.1 | **97** |
| BD061703F | LABQC | N/A | N/A | 06/17/03 | Aqueous | 1 | 0.1 | U |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/17/03
Analyst: AMB
Reviewed: MJ 6/24/03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

Curve Date: 6/2/03
Corr Coef. ('r) 0.9985
Y-int 0.000976
slope 0.109

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L061703F/CC 1MG/L | 0.107 | 0.991 | 1 | 99% |
| 2 | B061703F/METH.BL. | 0.000 | 0.009 | 1 | U |
| 3 | 49866-1 | 0.018 | 0.174 | 1 | **0.17** |
| 4 | 49866-2 | 0.034 | 0.321 | 1 | **0.32** |
| 5 | 49866-3 | 0.062 | 0.578 | 1 | **0.58** |
| 6 | 49866-4 | 0.012 | 0.119 | 1 | **0.12** |
| 7 | 49866-5 | 0.008 | 0.082 | 1 | U |
| 8 | 49866-6 | 0.012 | 0.119 | 1 | **0.12** |
| 9 | 49866-7 | 0.012 | 0.119 | 1 | **0.12** |
| 10 | 49866-8 | 0.831 | 7.633 | 1 | **7.63E** |
| 11 | 49866-9 | 0.034 | 0.321 | 1 | **0.32** |
| 12 | 49866-10 | 0.011 | 0.110 | 1 | **0.11** |
| 13 | 49866-11 | 0.129 | 1.192 | 1 | **1.2** |
| 14 | 49866-12 | 0.560 | 5.147 | 1 | **5.13E** |
| 15 | 49866-2ms | 0.151 | 1.394 | 1 | 107% |
| 16 | 49866-2msd | 0.159 | 1.468 | 1 | 115% |
| 17 | 49866-8 DL 10X | 0.096 | 0.890 | 10 | **8.90** |
| 18 | 49866-12 DL1 5x | 0.138 | 1.275 | 5 | **6.38** |
| 19 | 49866-12 DL2 10x | 0.066 | 0.614 | 10 | **6.14** |
| 20 | LD061703F/CC1MG/L | 0.105 | 0.972 | 1 | 97% |
| 21 | BD061703F/METH BL | 0.000 | 0.009 | 1 | U |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

011/067

Q-P-061703-1-AB

06.17.03 Ferrous Iron PP-061703-2-AB

F037 0.1506(g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
200mg/ml 2ml Conc $H_2SO_4$ 032815
AB 5ml $DiH_2O$ → Diluted to 100ml
06.17.03 = 200mg/ml $Fe^{3+}$

F038 0.25ml F037 → 50ml $DiH_2O$
1mg/ml
AB
06.17.03

B06173F - 12.5ml $DiH_2O$ + 5ml O-Ph + 2ml Amm. Acetate
L06173F(CC) - 12.5ml F038 + 5ml O-Ph + 2ml Amm Acetate
LD06173F(CC) - 12.5ml F038 + 5ml O-Ph + 2ml Amm. Acetate
BD06173F - 12.5ml $DiH_2O$ + 5ml O-Ph + 2ml Amm. Acetate

| SAMPLE # | Absorbance = |
|---|---|
| L06173F(CC) | .107 |
| B06173F | .000 |
| 49866-1 | .018 |
| -2 | .034 |
| -3 | .062 |
| -4 | .012 |
| -5 | .008 |
| -6 | .012 |
| -7 | .012 |
| -8 | .831 |
| -9 | .034 |
| -10 | .011 |
| -11 | .129 |
| -12 | .560 |
| -3 2 ms AB 06 | ~~.202~~ .151 AB061703 |
| -3 2 ms 17 03 | .159 |
| LD06173F | .1045 AB 06.17.03 |
| BD06173F | .000 |

| Dilutions | Absorbance = |
|---|---|
| 49866-8 10x | .096 |
| -12 5x | .138 |
| -12 10x | .066 |

analytics environmental laboratory LLC

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June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** L061703F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/17/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|
| 1.0 | U | 0.991 | 99.1 | | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| 1.0 | 0.972 | 97.2 | | 2 | | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III

analytics environmental laboratory LLC

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June 24, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** 49866-2
**Matrix:** Aqueous
**Field Sample ID:** MW11-0603
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/17/03
**Analysis Date:** 06/17/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|
| 1.0 | 0.32 | 1.39 | 107 | | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| 1.0 | 1.47 | 115 | | 7 | | 30 | 70-130 |

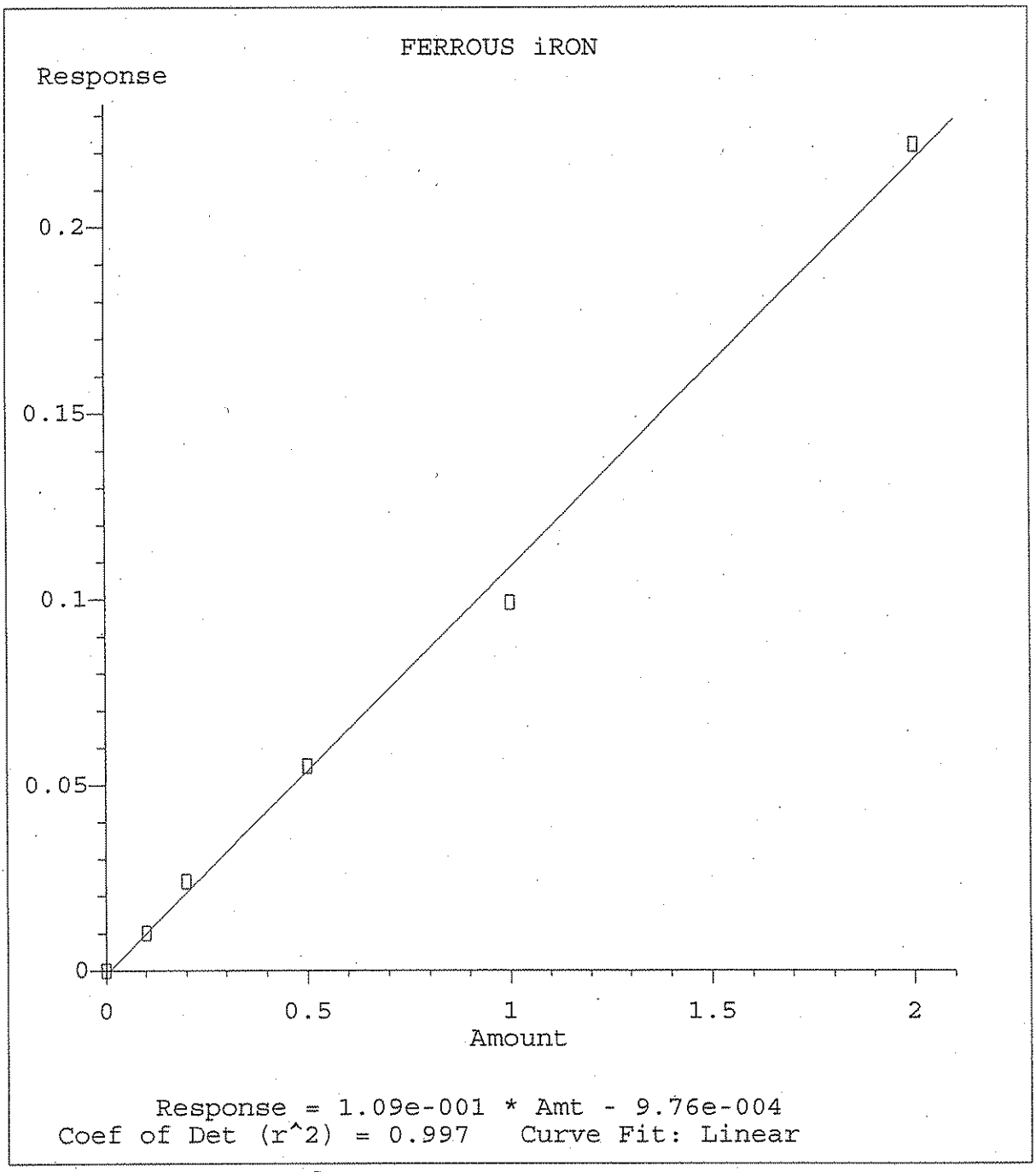
Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III




$r = 0.998$

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

# 6-2-03 mg/AB Ferrous Iron

**FO20**
200 mg/L
MG 6-2-03
STOCK MG 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

**FO26**
5 mg/L
2.5mL FO20 → 100mL DI $H_2O$

**FO21**
2mg/L
1mL FO20 → 100mL $DH_2O$

**FO22**
1mg/L
0.25mL FO20 → 50mL DI $H_2O$

**FO23**
0.5mg/L
0.125mL FO20 → 50mL DI $H_2O$

**FO24**
0.20mg/L
0.025mL FO20 → 25mL DI $H_2O$

**FO25**
0.1mg/L
0.0125mL FO20 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L. = 0.099 AB 6-02-03

2mg/L = 0.222

## Reagents

Ferrous Ammonium Sulfate - EM Science Lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Conc $H_2SO_4$ ~~J.T. Baker~~ Fisher Lot # 032815
3612-03

Ammonium Acetate Buffer VWR Lot # 2231

O-phenonanthroline VWR Lot # 2343
0.1% w/v

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 218316

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 07/01/2003

Bonnie Stadelmann
Signature

07/01/03
Date

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor 49866
STL Job #: 218316

Date Recd: 06/17/03

1. This narrative covers the Metals analysis of sample in the above Job # 218316.

   Method Ref: USEPA, SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

8. Matrix QC was performed on sample 1.

   Matrix spike recoveries were within the 75-125%.

   Duplicate RPD's were within the 20% control limits.

Jodi L. Wojcik
Metals Unit Leader

6-26-03
Date

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## SAMPLE INFORMATION
Date: 07/01/2003

Job Number.: 218316
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49866
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 218316-1 | MW12-0603 | Water | 06/16/2003 | 07:00 | 06/17/2003 | 09:40 |
| 218316-2 | MW11-0603 | Water | 06/16/2003 | 08:00 | 06/17/2003 | 09:40 |
| 218316-3 | MW13-0603 | Water | 06/16/2003 | 10:10 | 06/17/2003 | 09:40 |
| 218316-4 | GAMW001-0603 | Water | 06/16/2003 | 10:50 | 06/17/2003 | 09:40 |
| 218316-5 | MW14-0603 | Water | 06/16/2003 | 12:00 | 06/17/2003 | 09:40 |
| 218316-6 | MW9-0603 | Water | 06/16/2003 | 13:00 | 06/17/2003 | 09:40 |
| 218316-7 | STMW001-0603 | Water | 06/16/2003 | 13:50 | 06/17/2003 | 09:40 |
| 218316-8 | MW105-0603 | Water | 06/16/2003 | 08:45 | 06/17/2003 | 09:40 |
| 218316-9 | MW140-0603 | Water | 06/16/2003 | 10:15 | 06/17/2003 | 09:40 |
| 218316-10 | MW101-0603 | Water | 06/16/2003 | 12:00 | 06/17/2003 | 09:40 |
| 218316-11 | STMW002-0603 | Water | 06/16/2003 | 13:05 | 06/17/2003 | 09:40 |
| 218316-12 | STMW003-0603 | Water | 06/16/2003 | 14:10 | 06/17/2003 | 09:40 |

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49866

ATTN: Steve Knollmeyer

Customer Sample ID: MW12-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 07:00
Sample Matrix.....: Water

Laboratory Sample ID: 218316-1
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1044 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 8.2 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1514 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.21 | | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0933 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 20 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1337 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.48 | B | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1049 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0021 | B | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/24/03 2324 | lmr |

021/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49866 | ATTN: Steve Knollmeyer

Customer Sample ID: MW11-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 08:00
Sample Matrix.....: Water

Laboratory Sample ID: 218316-2
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 29 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1049 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 23 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1516 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0935 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 120 | | | 10 | 25 | 5 | mg/L | 88133 | | 06/25/03 1350 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.61 | B | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1121 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0014 | B | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/24/03 2349 | lmr |

022/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: MW13-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 10:10
Sample Matrix.....: Water

Laboratory Sample ID: 218316-3
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 88 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1055 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 15 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1519 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.083 | B | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0936 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 4.5 | B | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1350 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 2.4 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1137 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0072 | B | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/24/03 2355 | lmr |

023/057

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: GAMW001-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 10:50
Sample Matrix.....: Water

Laboratory Sample ID: 218316-4
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 19 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1105 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.6 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1521 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.061 | B | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0937 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.0 | U | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1351 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 2.8 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1152 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0031 | B | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0001 | lmr |

024/057

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49866

ATTN: Steve Knollmeyer

Customer Sample ID: MW14-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 12:00
Sample Matrix.....: Water

Laboratory Sample ID: 218316-5
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 67 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1111 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 9.7 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1523 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0937 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 6.3 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1351 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.1 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1206 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.51 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0008 | lmr |

025/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49866 | ATTN: Steve Knollmeyer

Customer Sample ID: MW9-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 13:00
Sample Matrix.....: Water

Laboratory Sample ID: 218316-6
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 24 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1116 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 13 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1525 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.12 | | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0938 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 8.0 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1351 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.3 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1220 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.050 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0014 | lmr |

026/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: STMW001-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 13:50
Sample Matrix.....: Water

Laboratory Sample ID: 218316-7
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 15 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1127 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 12 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1527 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 2.5 | | | 0.18 | 0.50 | 5 | mg/L | 88428 | | 06/27/03 0952 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 17 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1352 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.1 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1234 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.32 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0020 | lmr |

027/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: MW105-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 08:45
Sample Matrix.....: Water

Laboratory Sample ID: 218316-8
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 67 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1133 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 78 | | | 3.4 | 5.0 | 1 | mg/L | 88291 | | 06/26/03 1529 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.46 | | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0941 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.1 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1352 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 19 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1251 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 1.5 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0130 | lmr |

028/057

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: MW140-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 10:15
Sample Matrix.....: Water

Laboratory Sample ID: 218316-9
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 60 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1138 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 23 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1603 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.43 | | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0942 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 19 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1353 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 9.5 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1308 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.026 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0136 | lmr |

029/057

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: MW101-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 12:00
Sample Matrix.....: Water

Laboratory Sample ID: 218316-10
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 34 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1144 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 6.2 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1604 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.22 | | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0942 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 20 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1353 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.81 | B | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1338 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.014 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0142 | lmr |

030/057

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: STMW002-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 13:05
Sample Matrix.....: Water

Laboratory Sample ID: 218316-11
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 23 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1149 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 30 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1605 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.079 | B | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0943 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 11 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1355 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 10 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1354 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.29 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0148 | lmr |

031/057

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218316

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Customer Sample ID: STMW003-0603
Date Sampled.....: 06/16/2003
Time Sampled.....: 14:10
Sample Matrix.....: Water

Laboratory Sample ID: 218316-12
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 27 | | | 4.7 | 5.0 | 1 | mg/L | 88215 | | 06/26/03 1155 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 38 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1606 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88428 | | 06/27/03 0944 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 13 | | | 2.1 | 5.0 | 1 | mg/L | 88133 | | 06/25/03 1356 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 9.5 | | | 0.15 | 1.0 | 1 | mg/L | 88421 | | 06/27/03 1411 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.22 | | | 0.00071 | 0.010 | 1 | mg/L | 88079 | | 06/25/03 0154 | lmr |

032/057

* In Description = Dry Wgt.

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# LABORATORY CHRONICLE

Job Number: 218316 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Lab ID: 218316-1 Client ID: MW12-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1044 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1514 | |
| EDD | Electronic Data Deliverable | 1 | | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/24/2003 | 2324 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1704 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0933 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1049 | |
| PKG INO (WC) | PKG INO (WET CHEMISTRY) | 1 | | | | | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1337 | |

Lab ID: 218316-2 Client ID: MW11-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1049 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1516 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/24/2003 | 2349 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1705 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0935 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1121 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1350 | 5 |

Lab ID: 218316-3 Client ID: MW13-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1055 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1519 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/24/2003 | 2355 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1706 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0936 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1137 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1350 | |

Lab ID: 218316-4 Client ID: GAMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1105 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1521 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0001 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1706 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0937 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1152 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1351 | |

Lab ID: 218316-5 Client ID: MW14-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1111 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1523 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0008 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1707 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0937 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1206 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1351 | |

Lab ID: 218316-6 Client ID: MW9-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1116 | |

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# LABORATORY CHRONICLE

Job Number: 218316 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Lab ID: 218316-6 Client ID: MW9-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1525 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0014 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1707 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0938 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1220 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1351 | |

Lab ID: 218316-7 Client ID: STMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1127 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1527 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0020 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1709 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0952 | 5 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1234 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1352 | |

Lab ID: 218316-8 Client ID: MW105-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1133 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88291 | 88291 | 06/26/2003 | 1529 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0130 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1709 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0941 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1251 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1352 | |

Lab ID: 218316-9 Client ID: MW140-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1138 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1603 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0136 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1710 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0942 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1308 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1353 | |

Lab ID: 218316-10 Client ID: MW101-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1144 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1604 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0142 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1710 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0942 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1338 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1353 | |

Lab ID: 218316-11 Client ID: STMW002-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1149 | |

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L A B O R A T O R Y  C H R O N I C L E

Job Number: 218316 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Lab ID: 218316-11 Client ID: STMW002-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1605 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0148 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1711 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0943 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1354 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1355 | |

Lab ID: 218316-12 Client ID: STMW003-0603 Date Recvd: 06/17/2003 Sample Date: 06/16/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88215 | 88215 | 06/26/2003 | 1155 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1606 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88079 | 87551 | 06/25/2003 | 0154 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87818 | 87818 | 06/17/2003 | 1711 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88428 | 88428 | 06/27/2003 | 0944 | 1 |
| 415.1 | Organic Carbon | 1 | 88421 | 88421 | 06/27/2003 | 1411 | |
| Method | Soluble Non-Digestion Batch | 1 | 87551 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88133 | 88133 | 06/25/2003 | 1356 | |

Q U A L I T Y  C O N T R O L  R E S U L T S

Job Number.: 218316 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88079

| CCB | Continuing Calibration Blank | | 88079-016 | | 06/24/2003 | 2150 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-028 | | 06/24/2003 | 2318 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00088 B | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-040 | | 06/25/2003 | 0041 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-045 | | 06/25/2003 | 0124 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-057 | | 06/25/2003 | 0300 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00202 B | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-069 | | 06/25/2003 | 0426 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00223 B | | | | | | | |

| CCB | Continuing Calibration Blank | | 88079-076 | | 06/25/2003 | 0525 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00080 B | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-015 | | 06/24/2003 | 2135 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.87671 | | 5.00000 | | 98 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-027 | | 06/24/2003 | 2305 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.98299 | | 5.00000 | | 100 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-039 | | 06/25/2003 | 0028 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.01167 | | 5.00000 | | 100 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-044 | | 06/25/2003 | 0108 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 5.01187 | | 5.00000 | | 100 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-056 | | 06/25/2003 | 0247 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.96499 | | 5.00000 | | 99 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-068 | | 06/25/2003 | 0413 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.86395 | | 5.00000 | | 97 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV005 | 88079-075 | | 06/25/2003 | 0510 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.89284 | | 5.00000 | | 98 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

Q U A L I T Y  C O N T R O L  R E S U L T S

Job Number.: 218316 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88079

| CRI | Contract Required Detection Limits | M03FCRI002 | 88079-012 | | 06/24/2003 | 2114 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02113 | | 0.02000 | | 106 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI002 | 88079-041 | | 06/25/2003 | 0047 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02033 | | 0.02000 | | 102 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI002 | 88079-072 | | 06/25/2003 | 0449 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02044 | | 0.02000 | | 102 | % | 50-150 | |

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 88079-011 | | 06/24/2003 | 2108 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00161 B | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICV | Initial Calibration Verification | M03FICV001 | 88079-010 | | 06/24/2003 | 2058 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 3.97964 | | 4.00000 | | 99 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| ISB | Interference Check Sample B | M03FISB002 | 88079-014 | | 06/24/2003 | 2127 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48867 | | 0.50000 | | 98 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 88079-043 | | 06/25/2003 | 0100 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48636 | | 0.50000 | | 97 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 88079-074 | | 06/25/2003 | 0501 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48800 | | 0.50000 | | 98 | % | 80-120 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| LCS | Laboratory Control Sample | M03ESPK002 | 87551 -002 | | 06/24/2003 | 2203 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48519 | | 0.50000 | 0.00071 U | 97 | % | 80-120 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MB | Method Blank | 87551 | 87551 -001 | | 06/24/2003 | 2157 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MD | Method Duplicate | | 218316-1 | | 06/24/2003 | 2337 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00169 B | | | 0.00208 B | 0.00039 | A | 0.01000 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MS | Matrix Spike | M03ESPK002 | 218316-1 | | 06/24/2003 | 2343 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48693 | | 0.50000 | 0.00208 B | 97 | % | 75-125 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03DINT002 | 88079-009 | | 06/24/2003 | 2047 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.66036 | | 10.00000 | | 97 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| SD | Serial Dilution | | 218316-1 | | 06/24/2003 | 2330 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88079

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | 0.00208 B | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218316 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Test Method.....: 310.1 Batch.....: 88215 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88215 -002 | | mg/L | 4.70000 U | | | | | | | | 06/26/2003 | 1005 |
| LCS | 88215 -003 | I03ASTAK2 | mg/L | 103.20000 | | 100.00000 | 7.04000 | 103 | | % | 80-120 | 06/26/2003 | 1011 |
| MD | 218316-6 | | mg/L | 23.80000 | | | 23.60000 | 0.20000 | | A | 5.00000 | 06/26/2003 | 1122 |

Test Method.....: HACH 8000 Batch.....: 88291 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88291 -003 | | mg/L | 3.40000 U | | | | | | | | 06/26/2003 | 1510 |
| LCS | 88291 -004 | I03FSTCD1 | mg/L | 50.51000 | | 50.00000 | | 101 | | % | 80-120 | 06/26/2003 | 1512 |
| MS | 218316-5 | I03FSTCD1 | mg/L | 59.69000 | | 50.00000 | 9.69000 | 100 | | % | 75-125 | 06/26/2003 | 1531 |
| MSD | 218316-5 | I03FSTCD1 | mg/L | 58.16000 | 59.69000 | 50.00000 | 9.69000 | 97 | | % | 75-125 | 06/26/2003 | 1534 |
| | | | | | | | | 3.0 | | R | 20 | | |

Test Method.....: HACH 8000 Batch.....: 88741 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88741 -001 | | mg/L | 3.40000 U | | | | | | | | 07/01/2003 | 1600 |
| LCS | 88741 -002 | I03FSTCD1 | mg/L | 52.99000 | | 50.00000 | | 106 | | % | 80-120 | 07/01/2003 | 1601 |

Test Method.....: HACH 8000 Batch.....: 88291 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: CODH
Parameter.....: Chemical Oxygen Demand (COD-High)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCS | 88291 -015 | I03FSTCD2 | mg/L | 398.77000 | | 500.00000 | | 80 | | % | 80-120 | 06/26/2003 | 1536 |

Test Method.....: 354.1 Batch.....: 87818 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICB | 87818 -003 | | mg/L | 0.00520 U | | | | | | | | 06/17/2003 | 1702 |
| ICV | 87818 -002 | I03DSTNI2 | mg/L | 0.09810 | | 0.10000 | | 98 | | % | 90-110 | 06/17/2003 | 1702 |
| MB | 87818 -004 | | mg/L | 0.00520 U | | | | | | | | 06/17/2003 | 1703 |
| LCS | 87818 -005 | I03DSTNI2 | mg/L | 0.09410 | | 0.10000 | 0.00520 U | 94 | | % | 80-120 | 06/17/2003 | 1703 |
| MS | 218316-1 | I03DSTNI2 | mg/L | 0.09570 | | 0.10000 | 0.00520 U | 96 | | % | 75-125 | 06/17/2003 | 1704 |
| MSD | 218316-1 | I03DSTNI2 | mg/L | 0.09420 | 0.09570 | 0.10000 | 0.00520 U | 94 | | % | 75-125 | 06/17/2003 | 1705 |
| | | | | | | | | 2.1 | | R | 20 | | |
| CCB | 87818 -015 | | mg/L | 0.00520 U | | | | | | | | 06/17/2003 | 1708 |
| CCV | 87818 -014 | I03DSTNI2 | mg/L | 0.09820 | | 0.10000 | | 98 | | % | 90-110 | 06/17/2003 | 1708 |
| CCB | 87818 -015 | | mg/L | 0.00520 U | | | | | | | | 06/17/2003 | 1712 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

Q U A L I T Y  C O N T R O L  R E S U L T S

Job Number.: 218316 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866 ATTN: Steve Knollmeyer

Test Method.....: 354.1 Batch.....: 87818 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV | 87818 -014 | I03DSTNI2 | mg/L | 0.09810 | | 0.10000 | | 98 | | % | 90-110 | 06/17/2003 | 1712 |

Test Method.....: 353.2 Batch.....: 88428 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88428 -002 | I02GSTIC31 | mg/L | 1.03600 | | 1.00000 | | 104 | | % | 90-110 | 06/27/2003 | 0930 |
| ICB | 88428 -003 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0931 |
| MB | 88428 -004 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0931 |
| LCS | 88428 -005 | I02GSTIC31 | mg/L | 1.00600 | | 1.00000 | | 101 | | % | 80-120 | 06/27/2003 | 0932 |
| CCV | 88428 -014 | I02GSTIC31 | mg/L | 1.09200 | | 1.00000 | | 109 | | % | 90-110 | 06/27/2003 | 0939 |
| CCB | 88428 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0939 |
| CCV | 88428 -014 | I02GSTIC31 | mg/L | 1.04500 | | 1.00000 | | 104 | | % | 90-110 | 06/27/2003 | 0947 |
| CCB | 88428 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0948 |
| CCV | 88428 -014 | I02GSTIC31 | mg/L | 1.00400 | | 1.00000 | | 100 | | % | 90-110 | 06/27/2003 | 0950 |
| CCB | 88428 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0951 |
| CCV | 88428 -014 | I02GSTIC31 | mg/L | 1.05600 | | 1.00000 | | 106 | | % | 90-110 | 06/27/2003 | 0953 |
| CCB | 88428 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 0954 |

Test Method.....: 353.2 Batch.....: 88428 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3
Parameter.....: Nitrate as N (NO3-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 218316-1 | I02GSTIC31 | mg/L | 1.19100 | | 1.00000 | 0.21200 | 98 | | % | 75-125 | 06/27/2003 | 0934 |
| MSD | 218316-1 | I02GSTIC31 | mg/L | 1.19900 | 1.19100 | 1.00000 | 0.21200 | 99 | | % | 75-125 | 06/27/2003 | 0934 |
| | | | | | | | | 1.0 | | R | 20 | | |

Test Method.....: 375.4 Batch.....: 88133 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88133 -002 | I03FSTSA2B | mg/L | 20.75000 | | 20.00000 | | 104 | | % | 90-110 | 06/25/2003 | 1324 |
| MB | 88133 -004 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1328 |
| ICB | 88133 -003 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1328 |
| LCS | 88133 -005 | I03FSTSA2B | mg/L | 20.44000 | | 20.00000 | 2.10000 U | 102 | | % | 80-120 | 06/25/2003 | 1329 |
| CCV | 88133 -014 | I03FSTSA2B | mg/L | 9.70300 | | 10.00000 | | 97 | | % | 90-110 | 06/25/2003 | 1338 |
| CCB | 88133 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1339 |
| CCV | 88133 -014 | I03FSTSA2B | mg/L | 18.79000 | | 20.00000 | | 94 | | % | 90-110 | 06/25/2003 | 1349 |
| CCB | 88133 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1349 |
| CCV | 88133 -014 | I03FSTSA2B | mg/L | 9.39300 | | 10.00000 | | 94 | | % | 90-110 | 06/25/2003 | 1354 |
| CCB | 88133 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1355 |
| CCV | 88133 -014 | I03FSTSA2B | mg/L | 19.10000 | | 20.00000 | | 96 | | % | 90-110 | 06/25/2003 | 1359 |
| CCB | 88133 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1400 |

# QUALITY CONTROL RESULTS

Job Number.: 218316

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49866

ATTN: Steve Knollmeyer

Test Method.....: 415.1
Method Description.: Organic Carbon
Parameter.....: Organic Carbon, Tot. (TOC)

Batch.....: 88421
Equipment Code....: TOC3

Analyst...: kd
Test Code.: TOC

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88421 -002 | I03ESTTC2 | mg/L | 20.89080 | | 20.00000 | | 104 | | % | 85-115 | 06/27/2003 | 0754 |
| ICB | 88421 -003 | | mg/L | 0.36820 B | | | | | | | | 06/27/2003 | 0801 |
| CCV | 88421 -013 | I03ESTTC2 | mg/L | 9.81900 | | 10.00000 | | 98 | | % | 85-115 | 06/27/2003 | 1036 |
| CCB | 88421 -014 | | mg/L | 0.30590 B | | | | | | | | 06/27/2003 | 1043 |
| CCV | 88421 -013 | I03ESTTC2 | mg/L | 20.63190 | | 20.00000 | | 103 | | % | 85-115 | 06/27/2003 | 1325 |
| CCB | 88421 -014 | | mg/L | 0.49140 B | | | | | | | | 06/27/2003 | 1332 |
| CCV | 88421 -013 | I03ESTTC2 | mg/L | 9.83200 | | 10.00000 | | 98 | | % | 85-115 | 06/27/2003 | 1427 |
| CCB | 88421 -014 | | mg/L | 0.39140 B | | | | | | | | 06/27/2003 | 1434 |

Test Method.....: 415.1
Method Description.: Organic Carbon
Parameter.....: TOC Average Duplicates

Batch.....: 88421
Equipment Code....: TOC3

Analyst...: kd
Test Code.: TOCAV2

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88421 -004 | | mg/L | 0.17700 B | | | | | | | | 06/27/2003 | 0814 |
| LCS | 88421 -005 | I03ESTTC2 | mg/L | 10.13200 | | 10.00000 | | 101 | | % | 80-120 | 06/27/2003 | 0829 |
| MS | 218316-1 | I03ESTTC2 | mg/L | 10.67670 | | 10.00000 | 0.47700 B | 107 | | % | 75-125 | 06/27/2003 | 1104 |
| MSD | 218316-1 | I03ESTTC2 | mg/L | 10.80620 | 10.67670 | 10.00000 | 0.47700 B | 108 | | % | 75-125 | 06/27/2003 | 1111 |
| | | | | | | | | 0.9 | | R | 20 | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

**SEVERN TRENT SERVICES**

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Steve Knollmeyer
Company: Analytics
Address: 195 Commerce Way
Portsmouth, NH 03801
Phone: 603 436-5111
Fax: 603 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address:
Phone: Analytics
Fax:
PO#: Quote:

**Shaded Areas For Internal Use Only** 1 of 1

**Lab Lot#** 218316

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No |

**Temperature, °C of Cooler** 4.3, 2.0

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No NA |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No NA | Yes No NA |

**Sample Labels and COC Agree** Yes No COC not present

**Sampler Name:** Kathleen Sullivan
**Signature:** [signature]
**Project Name:** Bucks
**Project Number:** 10971217.002
**Project Location:** Maine
**Date Required**
Hard Copy: / /
Fax: 7/2/2003
**Lab PM:**

| Refrg # | | | | |
|---|---|---|---|---|
| # / Cont. | 1 P | 1 P | 1 P | 2 V |
| Volume | 1 L | 1 L | 1 L | 40 ml |
| Preserv | $HNO_3$ | — | $H_2SO_4$ | $H_2SO_4$ |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Dissolved Manganese | Sulfate Alkalinity Nitrite | COD + Nitrate | TOC | | | | | | | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW12-0603 | 6/16/03 | 0700 | W | G | X | X | X | X | | | | | | | Dissolved Manganese: 6010B |
| 2 | | MW11-0603 | | 0800 | W | G | X | X | X | X | | | | | | | Sulfate: 375.1 |
| 3 | | MW13-0603 | | 1010 | W | G | X | X | X | X | | | | | | | Alkalinity 310.1 |
| 4 | | GAMW001-0603 | | 1050 | W | G | X | X | X | X | | | | | | | Nitrite/Nitrate: 352.1 |
| 5 | | MW14-0603 | | 1200 | W | G | X | X | X | X | | | | | | | COD HACH 8000 |
| 6 | | MW9-0603 | | 1300 | W | G | X | X | X | X | | | | | | | TOC 415 1 G 9060 |
| 7 | | STMW001-0603 | | 1350 | W | G | X | X | X | X | | | | | | | |
| 8 | | MW105-0603 | | 0845 | W | G | X | X | X | X | | | | | | | Metals were field |
| 9 | | MW140-0603 | | 1015 | W | G | X | X | X | X | | | | | | | Filtered |
| 10 | | MW101-0603 | | 1200 | W | G | X | X | X | X | | | | | | | |
| 11 | | STMW002-0603 | | 1305 | W | G | X | X | X | X | | | | | | | |
| 12 | | STMW003-0603 | | 1410 | W | G | X | X | X | X | | | | | | | |

Methods for all samples

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| [signature] | Weston | 6/16/03 | 1830 | FEDEX | | 6/16/03 | 1830 |
| | | | | [signature] | | 6-17-03 | 0940 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O =

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS: 2 coolers

Note Short HT Nitrate

**Date Received** 6/17/03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading**

053/057

**SEVERN TRENT SERVICES**

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Steve Knollmeyer
Company: Analytics
Address: 195 Commerce Way
Portsmouth, NH 03801
Phone: 603 436-5111
Fax: 603 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address:
Phone: Analytics
Fax:
PO#: Quote:

**Shaded Areas For Internal Use Only** 1 of 1

**Lab Lot#** 218316

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No |

**Temperature, °C of Cooler:** 4.3, 2.0

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No NA |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No NA | Yes No NA |

**Sample Labels and COC Agree:** Yes No COC not present

**Sampler Name:** Kathleen Sulkup
**Signature:** [signature]
**Project Name:** Bucks
**Project Number:** 10971.217.002
**Project Location:** Maine
**Date Required**
Hard Copy: / /
Fax: 7/2/2003
**Lab PM:**

| Refrg # | | | | |
|---|---|---|---|---|
| # / Cont. | 1 P | 1 P | 1 P | 2 V |
| Volume | 1 L | 1 L | 1 L | 40 ml |
| Preserv. | $HNO_3$ | — | $H_2SO_4$ | $H_2SO_4$ |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Dissolved Manganese | Sulfate Alkalinity Nitrite | COD, Nitrate | TOC | | | | | | | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW12-0603 | 6/16/03 | 0700 | W | G | X | X | X | X | | | | | | | Dissolved Manganese: 6010B |
| 2 | | MW11-0603 | | 0800 | W | G | X | X | X | X | | | | | | | Sulfate: 375.1 |
| 3 | | MW13-0603 | | 1010 | W | G | X | X | X | X | | | | | | | Alkalinity 310.1 |
| 4 | | GAMW001-0603 | | 1050 | W | G | X | X | X | X | | | | | | | Nitrite/Nitrate: 352.1 |
| 5 | | MW14-0603 | | 1200 | W | G | X | X | X | X | | | | | | | COD HACH 8000 |
| 6 | | MW9-0603 | | 1300 | W | G | X | X | X | X | | | | | | | TOC 415.1 or 9060 |
| 7 | | STMW001-0603 | | 1350 | W | G | X | X | X | X | | | | | | | |
| 8 | | MW105-0603 | | 0845 | W | G | X | X | X | X | | | | | | | Metals were field |
| 9 | | MW140-0603 | | 1015 | W | G | X | X | X | X | | | | | | | Filtered |
| 10 | | MW101-0603 | | 1200 | W | G | X | X | X | X | | | | | | | |
| 11 | | STMW002-0603 | | 1305 | W | G | X | X | X | X | | | | | | | |
| 12 | | STMW003-0603 | | 1410 | W | G | X | X | X | X | | | | | | | |

Methods for all samples

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| [signature] | Weston | 6/16/03 | 1830 | FEDEX | | 6/16/03 | 1830 |
| | | | | [signature] | | 6-17-03 | 0940 |

**Matrix Key**
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air
SE = Sediment
SO = Solid
DS = Drum Solid
DL = Drum Liquid
L = Leachate
WI = Wipe
O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS: 2 coolers

Note Short HT Nitrate

**Date Received** 6/17/03
**Courier:** AX **Hand Delivered** ☐
**Bill of Lading**

STL Chicago is a part of Severn Trent Laboratories, Inc.
STL-8208 (0600)
054/057

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 6
3) Received in good condition (Y) or N
4) pH checked by: amb 6.17.03
5) Labels checked by: ✓ 6.17.03

Project#: 10971.217.002 Project: Bucks
Company: **Weston Solutions**
Contact: Kathleen Soukup
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 603 315-4513 PO# 0037759 Quote #
Sampler (Signature):

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

| Station Identification | Sample Date | Sample Time | Analysis | Preservation: Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCl | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW12-0603 | 6/16/03 | 0700 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2.5 | 49866-1 |
| MW11-0603 | | 0800 | | | | | | X | | | | | | 2 | 2 |
| ~~FD~~ MW13-0603 | | 1010 | | | | | | X | | | | | | 2 | 3 |
| GAMW001-0603 | | 1050 | | | | | | X | | | | | | 2 | 4 |
| MW14-0603 | | 1200 | | | | | | X | | | | | | 2 | 5 |
| STMW001-0603 | | 1350 | | | | | | X | | | | | | 2 | 6 |
| MW9-0603 | | 1300 | | | | | | X | | | | | | 2 | 7 |
| MW105-0603 | | 0945 | | | | | | X | | | | | | 1.5 | 8 |
| MW140-0603 | | 1015 | | | | | | X | | | | | | 3 | 9 |
| MW~~103~~ 101 (C) -0603 | | 1200 | | | | | | X | | | | | | 25 | 10 |
| STMW002-0603 | | 1305 | | | | | | X | | | | | | 1.5 | 11 |
| STMW003-0603 | | 1410 | | | | | | X | | | | | | 2 | 12 |

Comments / Instructions:
Ferrous Iron by SM3500D

FAX RESULTS? (YES) NO
Fax # ~~603-626-5401~~

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date

Client Code: WESTONM

Page 1 of 1

Received By: FED EX Time: 1930 Date: 6/16/03
Received By: Time: 1000 Date: 6.17.03
Received By: Time: Date:
Relinquished By Sampler: Date:
Relinquished By: Date:
Relinquished By: Date:

Analytics\AEL Documents\AEL COC

056/057

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 49866 — COOLER NUMBER: n/a

CLIENT: WESTPAC — NUMBER OF COOLERS: 1

PROJECT: Bucks Harbor — DATE RECEIVED: 6.17.03

**A: PRELIMINARY EXAMINATION:** — DATE COOLER OPENED: 6.17.03

1. Cooler received by(initials) — Date Received: 6.17.03
2. Did cooler come with a shipping slip? (Y) N

If YES, enter carrier name and airbill number here: FedEx 886892593457

3. Were custody seals on the outside of cooler? (Y) N
How many & where: 1 on front lid Seal Date: 6.16.03 Seal Name: K. Soukup
4. Did the custody seals arrive unbroken and intact upon arrival? (Y) N
5. COC#: n/a
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? (Y) N
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? (Y) N — Temp. of cooler: 6°C

**B. Log-In:** Date samples were logged in: 6.17.03 — By: amb

11. Type of packing in cooler(bubble wrap, popcorn) Y (N)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? Y N
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y N/a

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): K Date: 6.17.03

CUSTODY SEAL
DATE
SIGNATURE
Quality Environmental Containers
800-255-3950 • 304-255-3900

analytics environmental laboratory llc

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
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800-929-9906
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July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49874**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Melissa A. Gulli
Assistant Laboratory Director

analytics environmental laboratory LLC

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**Report Number: 49874**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49874-1 | 06/17/03 | STMW004-0603 | Alkalinity | |
| | 06/17/03 | STMW004-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | STMW004-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | STMW004-0603 | Metals | |
| | 06/17/03 | STMW004-0603 | Metals Digestion | |
| | 06/17/03 | STMW004-0603 | Nitrate | |
| | 06/17/03 | STMW004-0603 | Sulfate | |
| | 06/17/03 | STMW004-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-2 | 06/17/03 | MW102-0603 | Alkalinity | |
| | 06/17/03 | MW102-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW102-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW102-0603 | Metals | |
| | 06/17/03 | MW102-0603 | Metals Digestion | |
| | 06/17/03 | MW102-0603 | Nitrate | |
| | 06/17/03 | MW102-0603 | Sulfate | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Melissa A. Mullikin for
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW102-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-3 | 06/17/03 | MW103-0603 | Alkalinity | |
| | 06/17/03 | MW103-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW103-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW103-0603 | Metals | |
| | 06/17/03 | MW103-0603 | Metals Digestion | |
| | 06/17/03 | MW103-0603 | Nitrate | |
| | 06/17/03 | MW103-0603 | Sulfate | |
| | 06/17/03 | MW103-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-4 | 06/17/03 | MW8-0603 | Alkalinity | |
| | 06/17/03 | MW8-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW8-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW8-0603 | Metals | |
| | 06/17/03 | MW8-0603 | Metals Digestion | |
| | 06/17/03 | MW8-0603 | Nitrate | |

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Stephen L. Knollmeyer Lab. Director

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW8-0603 | Sulfate | |
| | 06/17/03 | MW8-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-5 | 06/17/03 | MW5-0603 | Alkalinity | |
| | 06/17/03 | MW5-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW5-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW5-0603 | Metals | |
| | 06/17/03 | MW5-0603 | Metals Digestion | |
| | 06/17/03 | MW5-0603 | Nitrate | |
| | 06/17/03 | MW5-0603 | Sulfate | |
| | 06/17/03 | MW5-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-6 | 06/17/03 | MW5-0603-E | Alkalinity | |
| | 06/17/03 | MW5-0603-E | Chemical Oxygen Demand | |
| | 06/17/03 | MW5-0603-E | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW5-0603-E | Metals | |
| | 06/17/03 | MW5-0603-E | Metals Digestion | |

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|---|---|---|---|---|
| | 06/17/03 | MW5-0603-E | Nitrate | |
| | 06/17/03 | MW5-0603-E | Sulfate | |
| | 06/17/03 | MW5-0603-E | Total Organic Carbon in Aqueous Matrices | |
| 49874-7 | 06/17/03 | MW1-0603 | Alkalinity | |
| | 06/17/03 | MW1-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW1-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW1-0603 | Metals | |
| | 06/17/03 | MW1-0603 | Metals Digestion | |
| | 06/17/03 | MW1-0603 | Nitrate | |
| | 06/17/03 | MW1-0603 | Sulfate | |
| | 06/17/03 | MW1-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-8 | 06/17/03 | MW6-0603 | Alkalinity | |
| | 06/17/03 | MW6-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW6-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW6-0603 | Metals | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW6-0603 | Metals Digestion | |
| | 06/17/03 | MW6-0603 | Nitrate | |
| | 06/17/03 | MW6-0603 | Sulfate | |
| | 06/17/03 | MW6-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-9 | 06/17/03 | FAMW001-0603 | Alkalinity | |
| | 06/17/03 | FAMW001-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | FAMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | FAMW001-0603 | Metals | |
| | 06/17/03 | FAMW001-0603 | Metals Digestion | |
| | 06/17/03 | FAMW001-0603 | Nitrate | |
| | 06/17/03 | FAMW001-0603 | Sulfate | |
| | 06/17/03 | FAMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-10 | 06/17/03 | FAMW002-0603 | Alkalinity | |
| | 06/17/03 | FAMW002-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | FAMW002-0603 | Ferrous Iron in Aqueous Matrices | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | FAMW002-0603 | Metals | |
| | 06/17/03 | FAMW002-0603 | Metals Digestion | |
| | 06/17/03 | FAMW002-0603 | Nitrate | |
| | 06/17/03 | FAMW002-0603 | Sulfate | |
| | 06/17/03 | FAMW002-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-11 | 06/17/03 | BPMW001-0603 | Alkalinity | |
| | 06/17/03 | BPMW001-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | BPMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | BPMW001-0603 | Metals | |
| | 06/17/03 | BPMW001-0603 | Metals Digestion | |
| | 06/17/03 | BPMW001-0603 | Nitrate | |
| | 06/17/03 | BPMW001-0603 | Sulfate | |
| | 06/17/03 | BPMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-12 | 06/17/03 | GTMW001-0603 | Alkalinity | |
| | 06/17/03 | GTMW001-0603 | Chemical Oxygen Demand | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | GTMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | GTMW001-0603 | Metals | |
| | 06/17/03 | GTMW001-0603 | Metals Digestion | |
| | 06/17/03 | GTMW001-0603 | Nitrate | |
| | 06/17/03 | GTMW001-0603 | Sulfate | |
| | 06/17/03 | GTMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-13 | 06/17/03 | TSMW001-0603 | Alkalinity | |
| | 06/17/03 | TSMW001-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | TSMW001-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | TSMW001-0603 | Metals | |
| | 06/17/03 | TSMW001-0603 | Metals Digestion | |
| | 06/17/03 | TSMW001-0603 | Nitrate | |
| | 06/17/03 | TSMW001-0603 | Sulfate | |
| | 06/17/03 | TSMW001-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-14 | 06/17/03 | TSMW002-0603 | Alkalinity | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | TSMW002-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | TSMW002-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | TSMW002-0603 | Metals | |
| | 06/17/03 | TSMW002-0603 | Metals Digestion | |
| | 06/17/03 | TSMW002-0603 | Nitrate | |
| | 06/17/03 | TSMW002-0603 | Sulfate | |
| | 06/17/03 | TSMW002-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-15 | 06/17/03 | TSMW003-0603 | Alkalinity | |
| | 06/17/03 | TSMW003-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | TSMW003-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | TSMW003-0603 | Metals | |
| | 06/17/03 | TSMW003-0603 | Metals Digestion | |
| | 06/17/03 | TSMW003-0603 | Nitrate | |
| | 06/17/03 | TSMW003-0603 | Sulfate | |
| | 06/17/03 | TSMW003-0603 | Total Organic Carbon in Aqueous Matrices | |

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49874-16 | 06/17/03 | MW3-0603 | Alkalinity | |
| | 06/17/03 | MW3-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW3-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW3-0603 | Metals | |
| | 06/17/03 | MW3-0603 | Metals Digestion | |
| | 06/17/03 | MW3-0603 | Nitrate | |
| | 06/17/03 | MW3-0603 | Sulfate | |
| | 06/17/03 | MW3-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-17 | 06/17/03 | MW2-0603 | Alkalinity | |
| | 06/17/03 | MW2-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW2-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW2-0603 | Metals | |
| | 06/17/03 | MW2-0603 | Metals Digestion | |
| | 06/17/03 | MW2-0603 | Nitrate | |
| | 06/17/03 | MW2-0603 | Sulfate | |

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Authorized signature Melissa A Gallifer
Stephen L. Knollmeyer Lab. Director

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW2-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-18 | 06/17/03 | MW7-0603 | Alkalinity | |
| | 06/17/03 | MW7-0603 | Chemical Oxygen Demand | |
| | 06/17/03 | MW7-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW7-0603 | Metals | |
| | 06/17/03 | MW7-0603 | Metals Digestion | |
| | 06/17/03 | MW7-0603 | Nitrate | |
| | 06/17/03 | MW7-0603 | Sulfate | |
| | 06/17/03 | MW7-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49874-19 | 06/17/03 | MW7-0603-E | Alkalinity | |
| | 06/17/03 | MW7-0603-E | Chemical Oxygen Demand | |
| | 06/17/03 | MW7-0603-E | Electronic Data Deliverable | |
| | 06/17/03 | MW7-0603-E | Ferrous Iron in Aqueous Matrices | |
| | 06/17/03 | MW7-0603-E | Metals | |
| | 06/17/03 | MW7-0603-E | Metals Digestion | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49874**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW7-0603-E | Nitrate | |
| | 06/17/03 | MW7-0603-E | Sulfate | |
| | 06/17/03 | MW7-0603-E | Total Organic Carbon in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

July 10, 2003

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

## ANALYTICAL RESULTS FERROUS IRON
## CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| B061803F | LABQC | N/A | N/A | 06/18/03 | Aqueous | 1 | 0.1 | U |
| BD061803 | LABQC | N/A | N/A | 06/18/03 | Aqueous | 1 | 0.1 | U |
| L061803F | LABQC | N/A | N/A | 06/18/03 | Aqueous | 1 | 0.1 | **95** |
| LD061803F | LABQC | N/A | N/A | 06/18/03 | Aqueous | 1 | 0.1 | **93** |
| 49874-1 | STMW004-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.15** |
| 49874-2, DL | MW102-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 20 | 0.1 | **14** |
| 49874-3 | MW103-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.16** |
| 49874-4 | MW8-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.89** |
| 49874-5 | MW5-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.17** |
| 49874-6 | MW5-0603-E | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.17** |
| 49874-7 | MW1-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-8 | MW6-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.35** |
| 49874-9 | FAMW001-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **1.8** |
| 49874-10 | FAMW002-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.15** |
| 49874-11, DL | BPMW001-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 10 | 0.1 | **8.6** |
| 49874-12 | GTMW001-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-13 | TSMW001-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-14 | TSMW002-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-15 | TSMW003-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-16 | MW3-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-17 | MW2-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | U |
| 49874-18, DL | MW7-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 5 | 0.1 | **3.5** |
| 49874-19, DL | MW7-0603-E | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 5 | 0.1 | **3.6** |
| 49874-10,DUP | FAMW002-0603 | 06/17/03 | 06/18/03 | 06/18/03 | Aqueous | 1 | 0.1 | **0.15** |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/18/03
Analyst: AB
Reviewed: MJ 7-10-03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

| | |
|---|---|
| Curve Date: | 6/2/03 |
| Corr Coef. ('r) | 0.9985 |
| Y-int | 0.000976 |
| slope | 0.109 |

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L061803F/CC 1MG/L | 0.102 | 0.945 | 1 | 95% |
| 2 | B061803F/METH.BL. | 0.000 | 0.009 | 1 | U |
| 3 | 49874-1 | 0.015 | 0.147 | 1 | **0.15** |
| 4 | 49874-2 | 1.200 | 11.018 | 1 | **11 E** |
| 5 | 49874-3 | 0.016 | 0.156 | 1 | **0.16** |
| 6 | 49874-4 | 0.096 | 0.890 | 1 | **0.89** |
| 7 | 49874-5 | 0.018 | 0.174 | 1 | **0.17** |
| 8 | 49874-5 ms | 0.135 | 1.247 | 1 | 107% |
| 9 | 49874-5msd | 0.134 | 1.238 | 1 | 106% |
| 10 | 49874-6 | 0.018 | 0.174 | 1 | **0.17** |
| 11 | 49874-7 | 0.002 | 0.027 | 1 | U |
| 12 | 49874-8 | 0.037 | 0.348 | 1 | **0.35** |
| 13 | 49874-9 | 0.190 | 1.752 | 1 | **1.8** |
| 14 | 49874-10 | 0.015 | 0.147 | 1 | **0.15** |
| 15 | 49874-10 dup | 0.015 | 0.147 | 1 | **0.15** |
| 16 | 49874-11 | 0.788 | 7.238 | 1 | **7.2 E** |
| 17 | 49874-12 | 0.009 | 0.092 | 1 | U |
| 18 | 49874-13 | 0.005 | 0.055 | 1 | U |
| 19 | 49874-14 | 0.000 | 0.009 | 1 | U |
| 20 | 49874-15 | 0.007 | 0.073 | 1 | U |
| 21 | 49874-16 | 0.005 | 0.055 | 1 | U |
| 22 | 49874-17 | 0.004 | 0.046 | 1 | U |
| 23 | 49874-18 | 0.319 | 2.936 | 1 | **2.9 E** |
| 24 | 49874-19 | 0.342 | 3.147 | 1 | **3.1 E** |
| 25 | 49874-2 DL | 0.078 | 0.725 | 20 | **14.00** |
| 26 | 49874-11 DL | 0.093 | 0.862 | 10 | **8.60** |
| 27 | 49874-18 DL | 0.076 | 0.706 | 5 | **3.5** |
| 28 | 49874-19 DL | 0.078 | 0.725 | 5 | **3.6** |
| 29 | BD061803F METH BL | 0.000 | 0.009 | 1 | U |
| 30 | LD061803F/CC 1MG/L | 0.100 | 0.926 | 1 | 93% |

6.18.03 Ferrous Iron Q-P-C061803-2-AB
P-P-C061803-2-AB

| SAMPLE # | ABSORBANCE = | Dilution | Absor. Act Dil. |
|---|---|---|---|
| LC061833F | .102 | 1 | — |
| BC061833F | .000 | 1 | — |
| 498744-1 | .015 | 1 | — |
| -2 | 1.200 | 20x Dilution → | .078 |
| -3 | .0116 | 1 | — |
| -4 | .1096 | 1 | — |
| -5 | ~~.021~~ .018 | 1 | — |
| -6 | .018 | 1 | — |
| -7 | .002 | 1 | — |
| -8 | .057 | 1 | — |
| -9 | .190 | 1 | — |
| -10 | .015 | 1 | — |
| -11 | .788 | 10x → | .093 |
| -12 | .009 | 1 | — |
| -13 | .005 | 1 | — |
| -14 | .000 | 1 | — |
| -15 | .007 | 1 | — |
| -16 | .005 | 1 | — |
| -17 | .004 | 1 | — |
| -18 | .319 | 5x → | .076 |
| -19 | .342 .000 | 5x → | .078 |
| LD061833F | ~~.135~~ .100 | 1 | — |
| BD061833F | ~~.134~~ .100 | 1 | — |
| 498745MS | .135 | 1 | — |
| ↓ 5MSD | .134 | 1 | — |
| 498741-1DUP | .015 | 1 | — |

AB C061803

F039
200 mg/L

0.1445 (g) $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2ml Conc $H_2SO_4$ (Off 03/28/15
5ml $DI H_2O$ → Diluted to 100ml
= 200mg/ml $Fe^{3+}$

F040
1mg/L

0.25 ml F039 in 50ml $DI H_2O$
= 1mg/L

analytics environmental laboratory LLC

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800-929-9906

July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** B061803F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/18/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | U | 0.95 | 95 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 0.93 | 93 | 2 | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature

Form III

analytics environmental laboratory LLC

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Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Lab Sample ID:** 49874-5
**Matrix:** Aqueous
**Field Sample ID:** MW5-0603
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/18/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | 0.17 | 1.25 | 108 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1.24 | 107 | 1 | 30 | 70-130 |

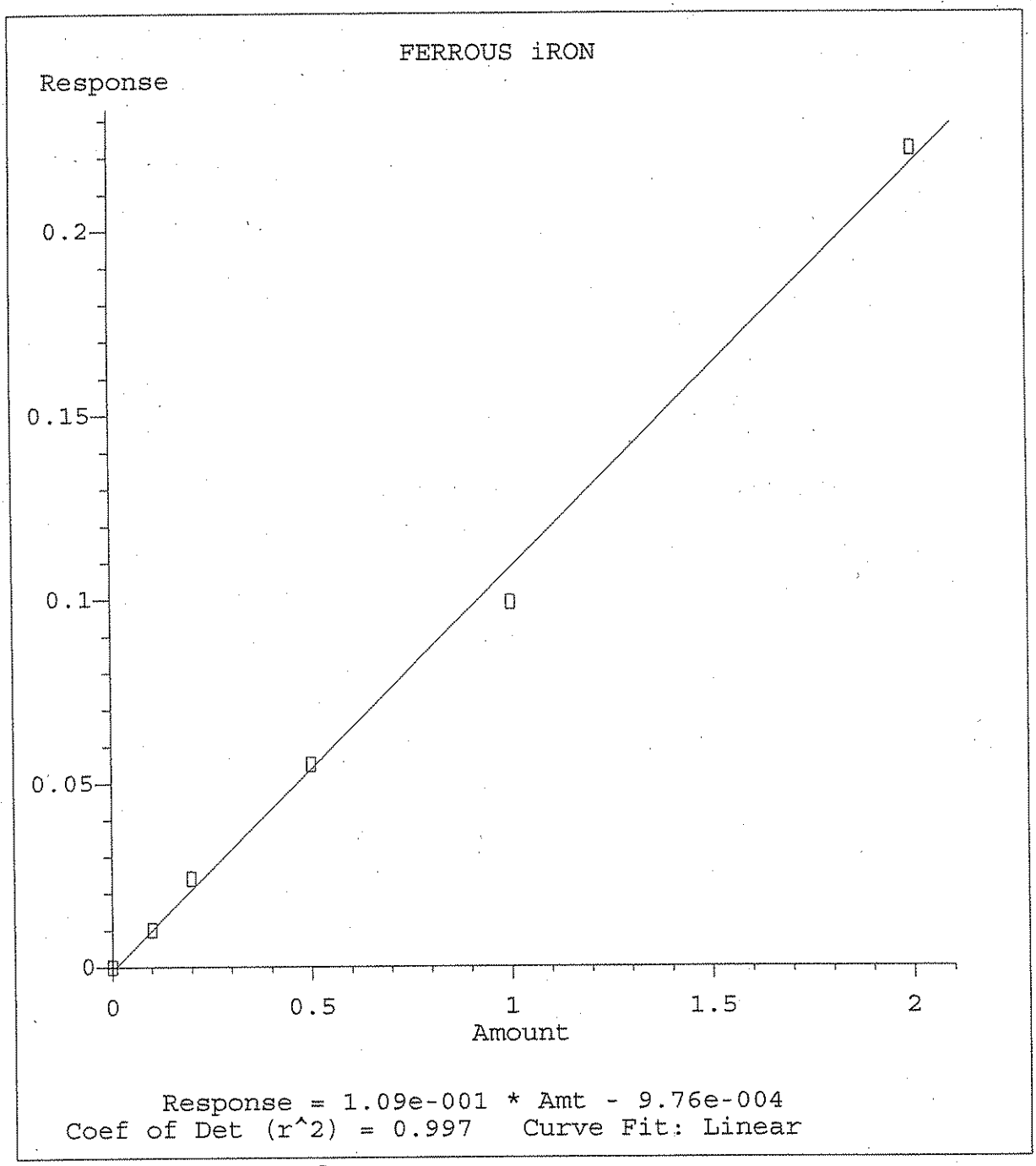
Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa A Hull

Form III




$r = 0.998$

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

6-2-03 mg/AB Ferrous Iron

F020
200 mg/L
MG-2-03
Stock
mg 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

F026
5mg/L
2.5mL F020 → 100mL DI $H_2O$

F021
2mg/L
1mL F020 → 100mL DI $H_2O$

F022
1mg/L
0.25mL F020 → 50mL DI $H_2O$

F023
0.5mg/L
0.125mL F020 → 50mL DI $H_2O$

F024
0.20mg/L
0.025mL F020 → 25mL DI $H_2O$

F025
0.1mg/L
0.0125mL F020 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L = 0.099 AB 6-02-03

2mg/L = 0.222

Reagents

Ferrous Ammonium Sulfate - EM Science lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Con C $H_2SO_4$ ~~- J T Baker~~ Fisher lot # 032815
~~5 6-2-03~~

Ammonium Acetate VWR lot # 2231
Buffer

O-phenonanthroline VWR lot # 2343
0.1% w/v

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 218342

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 07/01/2003

Bonnie S Stadelmann
Signature

07/01/03
Date

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor 49874
STL Job #: 218342

Date Recd: 06/17/03

1. This narrative covers the Metals analysis of sample in the above Job # 218342.

   Method Ref: USEPA, SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

8. Matrix QC was performed on sample 1.

   Matrix spike recoveries were within the 75-125%.

   Duplicate RPD's were within the 20% control limits.

Jodi L. Wojcik
Metals Unit Leader

6-24-03
Date

STL Chicago is part of Severn Trent Laboratories, Inc.

## SAMPLE INFORMATION
Date: 07/01/2003

Job Number.: 218342
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49874
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 218342-1 | STMW004-0603 | Water | 06/17/2003 | 06:00 | 06/17/2003 | 09:40 |
| 218342-2 | MW102-0603 | Water | 06/17/2003 | 05:15 | 06/17/2003 | 09:40 |
| 218342-3 | MW103-0603 | Water | 06/17/2003 | 05:00 | 06/17/2003 | 09:40 |
| 218342-4 | MW8-0603 | Water | 06/17/2003 | 07:00 | 06/17/2003 | 09:40 |
| 218342-5 | MW5-0603 | Water | 06/17/2003 | 08:00 | 06/17/2003 | 09:40 |
| 218342-6 | MW5-0603-E | Water | 06/17/2003 | 08:00 | 06/17/2003 | 09:40 |
| 218342-7 | MW1-0603 | Water | 06/17/2003 | 10:00 | 06/17/2003 | 09:40 |
| 218342-8 | MW6-0603 | Water | 06/17/2003 | 10:50 | 06/17/2003 | 09:40 |
| 218342-9 | FAMW001-0603 | Water | 06/17/2003 | 07:00 | 06/17/2003 | 09:40 |
| 218342-10 | FAMW002-0603 | Water | 06/17/2003 | 07:50 | 06/17/2003 | 09:40 |
| 218342-11 | BPMW001-0603 | Water | 06/17/2003 | 09:35 | 06/17/2003 | 09:40 |
| 218342-12 | GTMW001-0603 | Water | 06/17/2003 | 10:30 | 06/17/2003 | 09:40 |
| 218342-13 | TSMW001-0603 | Water | 06/17/2003 | 13:15 | 06/17/2003 | 09:40 |
| 218342-14 | TSMW002-0603 | Water | 06/17/2003 | 11:20 | 06/17/2003 | 09:40 |
| 218342-15 | TSMW003-0603 | Water | 06/17/2003 | 12:15 | 06/17/2003 | 09:40 |
| 218342-16 | MW3-0603 | Water | 06/17/2003 | 11:45 | 06/17/2003 | 09:40 |
| 218342-17 | MW2-0603 | Water | 06/17/2003 | 12:45 | 06/17/2003 | 09:40 |
| 218342-18 | MW7-0603 | Water | 06/17/2003 | 14:00 | 06/17/2003 | 09:40 |
| 218342-19 | MW7-0603-E | Water | 06/17/2003 | 14:00 | 06/17/2003 | 09:40 |

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: STMW004-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 06:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-1
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 97 | | | 4.7 | 5.0 | 1 | mg/L | 88245 | | 06/26/03 1329 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 16 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1608 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 1.8 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1303 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 16 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1429 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.64 | B | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1544 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2007 | tds |

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

# LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW102-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 05:15
Sample Matrix.....: Water

Laboratory Sample ID: 218342-2
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 170 | | | 4.7 | 5.0 | 1 | mg/L | 88245 | | 06/26/03 1335 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 69 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1609 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1304 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 13 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1430 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 14 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1615 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 9.4 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2031 | tds |

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW103-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 05:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-3
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 43 | | | 4.7 | 5.0 | 1 | mg/L | 88245 | | 06/26/03 1340 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 22 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1610 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.32 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1305 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 11 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1431 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 2.0 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1631 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0092 | B | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2037 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49874 | ATTN: Steve Knollmeyer

Customer Sample ID: MW8-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 07:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-4
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 8.3 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0722 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.2 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1611 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.058 | B | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1305 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 9.1 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1432 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.4 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1646 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.050 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2044 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW5-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 08:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-5
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 9.8 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0726 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 6.8 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1613 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.12 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1306 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.8 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1433 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.6 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1700 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.018 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2050 | tds |

* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW5-0603-E
Date Sampled.....: 06/17/2003
Time Sampled.....: 08:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-6
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 8.9 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0730 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 11 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1614 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.10 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1307 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.8 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1434 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.6 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1714 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.018 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2117 | tds |

* In Description = Dry Wgt.



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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW1-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-7
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 5.0 | U | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0734 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1615 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1308 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 9.5 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1435 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 1.6 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1742 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.013 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2124 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW6-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 10:50
Sample Matrix.....: Water

Laboratory Sample ID: 218342-8
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 5.8 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0738 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 4.7 | B | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1616 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.036 | B | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1308 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.4 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1436 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.66 | B | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1756 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.0066 | B | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2130 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: FAMW001-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 07:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-9
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 7.9 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0742 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 20 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1618 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1309 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 11 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1439 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 4.1 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1811 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.21 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2136 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: FAMW002-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 07:50
Sample Matrix.....: Water

Laboratory Sample ID: 218342-10
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 5.0 | U | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0746 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 28 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1619 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.050 | B | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1309 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 5.0 | U | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1440 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 3.9 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1826 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.012 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2142 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: BPMW001-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 09:35
Sample Matrix.....: Water

Laboratory Sample ID: 218342-11
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 9.3 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0750 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 94 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1620 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.37 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1310 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 14 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1441 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 15 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1842 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.21 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2148 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: GTMW001-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 10:30
Sample Matrix.....: Water

Laboratory Sample ID: 218342-12
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 62 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0759 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 46 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1621 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 1.1 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1310 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 12 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1442 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 18 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1859 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.55 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2154 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: TSMW001-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 13:15
Sample Matrix.....: Water

Laboratory Sample ID: 218342-13
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 8.4 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0803 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 7.3 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1623 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.20 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1311 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 16 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1443 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 5.4 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1915 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.082 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2201 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342 Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: TSMW002-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 11:20
Sample Matrix.....: Water

Laboratory Sample ID: 218342-14
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 5.0 | U | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0807 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 8.8 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1624 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1311 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.2 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1444 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 1.7 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1930 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0059 | B | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2207 | tds |

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* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49874 | ATTN: Steve Knollmeyer

Customer Sample ID: TSMW003-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 12:15
Sample Matrix.....: Water

Laboratory Sample ID: 218342-15
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 13 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0811 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 18 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1625 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.22 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1312 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 8.5 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1445 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 2.4 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1944 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.019 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2213 | tds |

* In Description = Dry Wgt.

STL Chicago is part of Severn Trent Laboratories, Inc.

LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: MW3-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 11:45
Sample Matrix.....: Water

Laboratory Sample ID: 218342-16
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 12 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0815 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 11 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1626 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 1.4 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1313 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 15 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1446 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 2.5 | | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 1958 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0032 | B | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2241 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: MW2-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 12:45
Sample Matrix.....: Water

Laboratory Sample ID: 218342-17
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 29 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0819 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 7.3 | | | 3.4 | 5.0 | 1 | mg/L | 88741 | | 07/01/03 1628 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.45 | | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1314 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 20 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1447 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.85 | B | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 2028 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.0061 | B | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2247 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Customer Sample ID: MW7-0603
Date Sampled.....: 06/17/2003
Time Sampled.....: 14:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-18
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 17 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0823 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 4.2 | B | | 3.4 | 5.0 | 1 | mg/L | 88745 | | 07/01/03 1629 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1314 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 11 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1452 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.94 | B | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 2042 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.25 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2253 | tds |

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218342

Date:07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Customer Sample ID: MW7-0603-E
Date Sampled.....: 06/17/2003
Time Sampled.....: 14:00
Sample Matrix.....: Water

Laboratory Sample ID: 218342-19
Date Received.....: 06/17/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 21 | | | 4.7 | 5.0 | 1 | mg/L | 88343 | | 06/27/03 0827 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 9.9 | | | 3.4 | 5.0 | 1 | mg/L | 88745 | | 07/01/03 1630 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88130 | | 06/25/03 1315 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 9.6 | | | 2.1 | 5.0 | 1 | mg/L | 88204 | | 06/25/03 1453 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.90 | B | | 0.15 | 1.0 | 1 | mg/L | 88644 | | 06/27/03 2056 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.25 | | | 0.00071 | 0.010 | 1 | mg/L | 87815 | | 06/20/03 2259 | tds |

* In Description = Dry Wgt.

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LABORATORY CHRONICLE

Job Number: 218342 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Lab ID: 218342-1 Client ID: STMW004-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88245 | 88245 | 06/26/2003 | 1329 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1608 | |
| EDD | Electronic Data Deliverable | 1 | | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2007 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2038 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1303 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1544 | |
| PKG INO (WC) | PKG INO (WET CHEMISTRY) | 1 | | | | | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1429 | |

Lab ID: 218342-2 Client ID: MW102-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88245 | 88245 | 06/26/2003 | 1335 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1609 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2031 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2038 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1304 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1615 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1430 | |

Lab ID: 218342-3 Client ID: MW103-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88245 | 88245 | 06/26/2003 | 1340 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1610 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2037 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2038 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1305 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1631 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1431 | |

Lab ID: 218342-4 Client ID: MW8-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0722 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1611 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2044 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2039 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1305 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1646 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1432 | |

Lab ID: 218342-5 Client ID: MW5-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0726 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1613 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2050 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2040 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1306 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1700 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1433 | |

Lab ID: 218342-6 Client ID: MW5-0603-E Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0730 | |

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# LABORATORY CHRONICLE

Job Number: 218342 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Lab ID: 218342-6 Client ID: MW5-0603-E Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1614 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2117 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2040 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1307 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1714 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1434 | |

Lab ID: 218342-7 Client ID: MW1-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0734 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1615 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2124 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2042 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1308 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1742 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1435 | |

Lab ID: 218342-8 Client ID: MW6-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0738 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1616 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2130 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2042 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1308 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1756 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1436 | |

Lab ID: 218342-9 Client ID: FAMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0742 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1618 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2136 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2042 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1309 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1811 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1439 | |

Lab ID: 218342-10 Client ID: FAMW002-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0746 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1619 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2142 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2043 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1309 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1826 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1440 | |

Lab ID: 218342-11 Client ID: BPMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0750 | |

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LABORATORY CHRONICLE

Job Number: 218342 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Lab ID: 218342-11 Client ID: BPMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1620 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2148 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2043 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1310 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1842 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1441 | |

Lab ID: 218342-12 Client ID: GTMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0759 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1621 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2154 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2044 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1310 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1859 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1442 | |

Lab ID: 218342-13 Client ID: TSMW001-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0803 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1623 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2201 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2044 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1311 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1915 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1443 | |

Lab ID: 218342-14 Client ID: TSMW002-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0807 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1624 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2207 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2044 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1311 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1930 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1444 | |

Lab ID: 218342-15 Client ID: TSMW003-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0811 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1625 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2213 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2045 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1312 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1944 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1445 | |

Lab ID: 218342-16 Client ID: MW3-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0815 | |

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# LABORATORY CHRONICLE

Job Number: 218342 Date: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Lab ID: 218342-16 Client ID: MW3-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1626 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2241 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2045 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1313 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 1958 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1446 | |

Lab ID: 218342-17 Client ID: MW2-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0819 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88741 | 88741 | 07/01/2003 | 1628 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2247 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2046 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1314 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 2028 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1447 | |

Lab ID: 218342-18 Client ID: MW7-0603 Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0823 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88745 | 88745 | 07/01/2003 | 1629 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2253 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2047 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1314 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 2042 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1452 | |

Lab ID: 218342-19 Client ID: MW7-0603-E Date Recvd: 06/17/2003 Sample Date: 06/17/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | | DILUTION |
|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 88343 | 88343 | 06/27/2003 | 0827 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 88745 | 88745 | 07/01/2003 | 1630 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 87815 | 87554 | 06/20/2003 | 2259 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87819 | 87819 | 06/18/2003 | 2047 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88130 | 88130 | 06/25/2003 | 1315 | 1 |
| 415.1 | Organic Carbon | 1 | 88644 | 88644 | 06/27/2003 | 2056 | |
| Method | Soluble Non-Digestion Batch | 1 | 87554 | | 06/19/2003 | 1430 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88204 | 88204 | 06/25/2003 | 1453 | |

QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 87815

| CCB | Continuing Calibration Blank | | 87815-016 | | 06/20/2003 | 1445 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-028 | | 06/20/2003 | 1630 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00114 B | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-039 | | 06/20/2003 | 1747 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-050 | | 06/20/2003 | 1908 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-055 | | 06/20/2003 | 1948 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-067 | | 06/20/2003 | 2111 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 87815-079 | | 06/20/2003 | 2234 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00075 B | | | | | | | |

QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 87815-088 | | 06/20/2003 | 2343 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 87815

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-015 | | 06/20/2003 | 1430 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.79234 | | 5.00000 | | 96 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-027 | | 06/20/2003 | 1615 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.77569 | | 5.00000 | | 96 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-038 | | 06/20/2003 | 1734 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.86005 | | 5.00000 | | 97 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-049 | | 06/20/2003 | 1853 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.72348 | | 5.00000 | | 94 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-054 | | 06/20/2003 | 1935 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.81037 | | 5.00000 | | 96 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-066 | | 06/20/2003 | 2058 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.70230 | | 5.00000 | | 94 | % | 90-110 | |

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-078 | | 06/20/2003 | 2221 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.74562 | | 5.00000 | | 95 | % | 90-110 | |

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV005 | 87815-087 | | 06/20/2003 | 2328 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.69082 | | 5.00000 | | 94 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| CRI | Contract Required Detection Limits | M03FCRI002 | 87815-012 | | 06/20/2003 | 1409 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02090 | | 0.02000 | | 104 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI002 | 87815-051 | | 06/20/2003 | 1914 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.01962 | | 0.02000 | | 98 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI002 | 87815-084 | | 06/20/2003 | 2307 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.01974 | | 0.02000 | | 99 | % | 50-150 | |

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 87815-011 | | 06/20/2003 | 1403 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00130 B | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICV | Initial Calibration Verification | M03FICV001 | 87815-010 | | 06/20/2003 | 1352 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 3.88774 | | 4.00000 | | 97 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| ISB | Interference Check Sample B | M03FISB002 | 87815-014 | | 06/20/2003 | 1421 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48155 | | 0.50000 | | 96 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 87815-053 | | 06/20/2003 | 1927 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.47307 | | 0.50000 | | 95 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 87815-086 | | 06/20/2003 | 2320 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.46638 | | 0.50000 | | 93 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| LCS | Laboratory Control Sample | M03ESPK002 | 87568 -002 | | 06/20/2003 1519 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Solid | mg/Kg | 47.29 | | 50.00 | 0.13 U | 95 | % | 80-120 | |

| LCS | Laboratory Control Sample | M03ESPK002 | 87420 -002 | | 06/20/2003 1642 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.49394 | | 0.50000 | 0.00115 B | 99 | % | 80-120 | |

| LCS | Laboratory Control Sample | M03ESPK002 | 87554 -002 | | 06/20/2003 2000 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.46765 | | 0.50000 | 0.00071 U | 94 | % | 80-120 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| MB | Method Blank | 87568 | 87568 -001 | | 06/20/2003 | 1513 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Solid | mg/Kg | 0.13 U | | | | | | | |

| MB | Method Blank | 87420 | 87420 -001 | | 06/20/2003 | 1636 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00115 B | | | | | | | |

| MB | Method Blank | 87554 | 87554 -001 | | 06/20/2003 | 1954 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MD | Method Duplicate | | 218342-1 | | 06/20/2003 | 2019 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 87815

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | 0.00071 U | 0.00009 | A | 0.01000 | |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MS | Matrix Spike | M03ESPK002 | 218342-1 | | 06/20/2003 | 2025 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.45686 | | 0.50000 | 0.00071 U | 91 | % | 75-125 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03DINT002 | 87815-009 | | 06/20/2003 | 1341 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 87815

Analyst...: tds

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.63990 | | 10.00000 | | 96 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| SD | Serial Dilution | | 218342-1 | | 06/20/2003 | 2013 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: tds
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 87815

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | 0.00071 U | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 218342

Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874

ATTN: Steve Knollmeyer

Test Method.....: 310.1
Method Description.: Alkalinity
Parameter.....: Alkalinity, Total as CaCO3

Batch.....: 88245
Equipment Code....:

Analyst...: jmk
Test Code.: ALK

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88245 -002 | | mg/L | 4.70000 U | | | | | | | | 06/26/2003 | 1205 |
| LCS | 88245 -003 | I03ASTAK2 | mg/L | 102.90000 | | 100.00000 | 7.06000 | 103 | | % | 80-120 | 06/26/2003 | 1211 |

Test Method.....: 310.1
Method Description.: Alkalinity
Parameter.....: Alkalinity, Total as CaCO3

Batch.....: 88343
Equipment Code....:

Analyst...: jmk
Test Code.: ALK

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88343 -002 | | mg/L | 4.70000 U | | | | | | | | 06/27/2003 | 0714 |
| LCS | 88343 -003 | I03ASTAK2 | mg/L | 103.00000 | | 100.00000 | 4.70000 U | 103 | | % | 80-120 | 06/27/2003 | 0718 |
| MD | 218342-13 | | mg/L | 8.30000 | | | 8.40000 | 0.10000 | | A | 5.00000 | 06/27/2003 | 0831 |

Test Method.....: HACH 8000
Method Description.: Chemical Oxygen Demand (HACH)
Parameter.....: Chemical Oxygen Demand (COD)

Batch.....: 88741
Equipment Code....:

Analyst...: cvw
Test Code.: COD

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88741 -001 | | mg/L | 3.40000 U | | | | | | | | 07/01/2003 | 1600 |
| LCS | 88741 -002 | I03FSTCD1 | mg/L | 52.99000 | | 50.00000 | | 106 | | % | 80-120 | 07/01/2003 | 1601 |
| MS | 218342-13 | I03FSTCD1 | mg/L | 60.26000 | | 50.00000 | 7.27000 | 106 | | % | 75-125 | 07/01/2003 | 1634 |
| MSD | 218342-13 | I03FSTCD1 | mg/L | 58.70000 | 60.26000 | 50.00000 | 7.27000 | 103 | | % | 75-125 | 07/01/2003 | 1635 |
| | | | | | | | | 2.9 | | R | 20 | | |

Test Method.....: HACH 8000
Method Description.: Chemical Oxygen Demand (HACH)
Parameter.....: Chemical Oxygen Demand (COD)

Batch.....: 88745
Equipment Code....:

Analyst...: cvw
Test Code.: COD

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88745 -001 | | mg/L | 3.40000 U | | | | | | | | 07/01/2003 | 1631 |
| LCS | 88745 -002 | I03FSTCD1 | mg/L | 48.83000 | | 50.00000 | | 98 | | % | 80-120 | 07/01/2003 | 1633 |

Test Method.....: 354.1
Method Description.: Nitrite, Spectrophotometric
Parameter.....: Nitrite as N (NO2-N)

Batch.....: 87819
Equipment Code....: SPEC4

Analyst...: jaa
Test Code.: NO2

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 87819 -002 | I03DSTNI2 | mg/L | 0.09680 | | 0.10000 | | 97 | | % | 90-110 | 06/18/2003 | 2036 |
| ICB | 87819 -003 | | mg/L | 0.00520 U | | | | | | | | 06/18/2003 | 2036 |
| MB | 87819 -004 | | mg/L | 0.00520 U | | | | | | | | 06/18/2003 | 2037 |
| LCS | 87819 -005 | I03DSTNI2 | mg/L | 0.09610 | | 0.10000 | 0.00520 U | 96 | | % | 80-120 | 06/18/2003 | 2037 |
| MS | 218342-4 | I03DSTNI2 | mg/L | 0.09640 | | 0.10000 | 0.00520 U | 96 | | % | 75-125 | 06/18/2003 | 2039 |
| MSD | 218342-4 | I03DSTNI2 | mg/L | 0.09710 | 0.09640 | 0.10000 | 0.00520 U | 97 | | % | 75-125 | 06/18/2003 | 2040 |
| | | | | | | | | 1.0 | | R | 20 | | |
| CCB | 87819 -015 | | mg/L | 0.00520 U | | | | | | | | 06/18/2003 | 2041 |
| CCV | 87819 -014 | I03DSTNI2 | mg/L | 0.09620 | | 0.10000 | | 96 | | % | 90-110 | 06/18/2003 | 2041 |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Test Method.....: 354.1 Batch.....: 87819 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV | 87819 -014 | I03DSTNI2 | mg/L | 0.09290 | | 0.10000 | | 93 | | % | 90-110 | 06/18/2003 | 2046 |
| CCB | 87819 -015 | | mg/L | 0.00520 U | | | | | | | | 06/18/2003 | 2046 |
| CCV | 87819 -014 | I03DSTNI2 | mg/L | 0.09370 | | 0.10000 | | 94 | | % | 90-110 | 06/18/2003 | 2048 |
| CCB | 87819 -015 | | mg/L | 0.00520 U | | | | | | | | 06/18/2003 | 2048 |

Test Method.....: 353.2 Batch.....: 88130 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88130 -002 | I02GSTIC31 | mg/L | 1.04800 | | 1.00000 | | 105 | | % | 90-110 | 06/25/2003 | 1300 |
| MB | 88130 -004 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1301 |
| ICB | 88130 -003 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1301 |
| LCS | 88130 -005 | I02GSTIC31 | mg/L | 1.03600 | | 1.00000 | | 104 | | % | 80-120 | 06/25/2003 | 1302 |
| CCV | 88130 -014 | I02GSTIC31 | mg/L | 1.01200 | | 1.00000 | | 101 | | % | 90-110 | 06/25/2003 | 1306 |
| CCB | 88130 -015 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1307 |
| CCV | 88130 -014 | I02GSTIC31 | mg/L | 0.96200 | | 1.00000 | | 96 | | % | 90-110 | 06/25/2003 | 1312 |
| CCB | 88130 -015 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1313 |
| CCV | 88130 -014 | I02GSTIC31 | mg/L | 1.03100 | | 1.00000 | | 103 | | % | 90-110 | 06/25/2003 | 1315 |
| MS | 218342-1 | I02GSTIC31 | mg/L | 2.70400 | | 5.00000 | 1.83100 | 87 | | % | 75-125 | 06/25/2003 | 1316 |
| CCB | 88130 -015 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1316 |
| MSD | 218342-1 | I02GSTIC31 | mg/L | 2.79400 | 2.70400 | 5.00000 | 1.83100 | 96 | | % | 75-125 | 06/25/2003 | 1317 |
| | | | | | | | | 9.8 | | R | 20 | | |
| CCV | 88130 -014 | I02GSTIC31 | mg/L | 0.95200 | | 1.00000 | | 95 | | % | 90-110 | 06/25/2003 | 1317 |
| CCB | 88130 -015 | | mg/L | 0.03500 U | | | | | | | | 06/25/2003 | 1318 |

Test Method.....: 375.4 Batch.....: 88204 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: SPEC3 Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88204 -002 | I03FSTSA2B | mg/L | 20.03000 | | 20.00000 | | 100 | | % | 90-110 | 06/25/2003 | 1425 |
| ICB | 88204 -003 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1426 |
| MB | 88204 -004 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1427 |
| LCS | 88204 -005 | I03FSTSA2B | mg/L | 19.92000 | | 20.00000 | 2.10000 U | 100 | | % | 80-120 | 06/25/2003 | 1428 |
| CCV | 88204 -014 | I03FSTSA2B | mg/L | 10.32000 | | 10.00000 | | 103 | | % | 90-110 | 06/25/2003 | 1437 |
| CCB | 88204 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1438 |
| CCV | 88204 -014 | I03FSTSA2B | mg/L | 18.89000 | | 20.00000 | | 94 | | % | 90-110 | 06/25/2003 | 1448 |
| CCB | 88204 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1449 |
| MS | 218342-17 | I03FSTSA2B | mg/L | 122.85000 | | 500.00000 | 19.72000 | 103 | | % | 75-125 | 06/25/2003 | 1450 |
| MSD | 218342-17 | I03FSTSA2B | mg/L | 123.40000 | 122.85000 | 500.00000 | 19.72000 | 104 | | % | 75-125 | 06/25/2003 | 1451 |
| | | | | | | | | 1.0 | | R | 20 | | |
| CCV | 88204 -014 | I03FSTSA2B | mg/L | 9.90900 | | 10.00000 | | 99 | | % | 90-110 | 06/25/2003 | 1454 |
| CCB | 88204 -015 | | mg/L | 2.10000 U | | | | | | | | 06/25/2003 | 1455 |

# QUALITY CONTROL RESULTS

Job Number.: 218342 Report Date.: 07/01/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49874 ATTN: Steve Knollmeyer

Test Method.....: 415.1 Batch.....: 88644 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOC
Parameter.....: Organic Carbon, Tot. (TOC)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88644 -002 | I03ESTTC2 | mg/L | 20.75740 | | 20.00000 | | 104 | | % | 85-115 | 06/27/2003 | 1454 |
| ICB | 88644 -003 | | mg/L | 0.36020 B | | | | | | | | 06/27/2003 | 1501 |
| CCV | 88644 -014 | I03ESTTC2 | mg/L | 10.09260 | | 10.00000 | | 101 | | % | 85-115 | 06/27/2003 | 1729 |
| CCB | 88644 -015 | | mg/L | 0.30530 B | | | | | | | | 06/27/2003 | 1735 |
| CCV | 88644 -014 | I03ESTTC2 | mg/L | 19.21990 | | 20.00000 | | 96 | | % | 85-115 | 06/27/2003 | 2014 |
| CCB | 88644 -015 | | mg/L | 0.43280 B | | | | | | | | 06/27/2003 | 2021 |
| CCV | 88644 -014 | I03ESTTC2 | mg/L | 10.53010 | | 10.00000 | | 105 | | % | 85-115 | 06/27/2003 | 2111 |
| CCB | 88644 -015 | | mg/L | 0.32530 B | | | | | | | | 06/27/2003 | 2117 |

Test Method.....: 415.1 Batch.....: 88644 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOCAV2
Parameter.....: TOC Average Duplicates

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88644 -004 | | mg/L | 0.19500 B | | | | | | | | 06/27/2003 | 1514 |
| LCS | 88644 -005 | I03ESTTC2 | mg/L | 10.45100 | | 10.00000 | | 105 | | % | 80-120 | 06/27/2003 | 1529 |
| MS | 218342-1 | I03ESTTC2 | mg/L | 10.82360 | | 10.00000 | 0.64000 B | 108 | | % | 75-125 | 06/27/2003 | 1559 |
| MSD | 218342-1 | I03ESTTC2 | mg/L | 10.90010 | 10.82360 | 10.00000 | 0.64000 B | 109 | | % | 75-125 | 06/27/2003 | 1607 |
| | | | | | | | | 0.9 | | R | 20 | | |

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ` | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ` | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group |
| | Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

SEVERN TRENT SERVICES

**STL Chicago**
2417 Bond Street
University Park, IL 60466
Phone: 708-534-5200
Fax: 708-534-5211

**Report To:**
Contact: Steve Knollmeyer
Company: Analytics
Address: 185 Commerce Way
Portsmouth, NH 03801
Phone: 603 430-9111
Fax: 603 430-2151
E-Mail:

**Bill To:**
Contact:
Company:
Address: Analytics
Phone:
Fax:
PO#: Quote:

**Shaded Areas For Internal Use Only** 1 of 2

**Lab Lot#** 218342

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No |

**Temperature °C of Cooler** 2.3 2.1 3.2 2.3

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No NA |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No NA | Yes No NA |

**Sample Labels and COC Agree**
Yes No COC not present

**Sampler Name:** Kathleen Sarkup
**Signature:**
**Project Name:** Bucks
**Project Number:** 10471.217.002
**Project Location:** Maine
**Lab PM:**
**Date Required**
**Hard Copy:**
**Fax:** 7/2/03

| Refrg # | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| # / Cont. | 1P | 1P | 1P | 2V | | | | | | | | |
| Volume | 1L | 1L | 1L | 40ml | | | | | | | | |
| Preserv | $HNO_3$ | — | $H_2SO_4$ | $H_2SO_4$ | | | | | | | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | Dissolved Manganese | Sulfate Alkalinity Nitrate | COD - Nitrate | TOC | | | | | | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | STMW004-0603 | 6/17/03 | 0600 | W | G | X | X | X | X | | | | | | Dissolved Manganese: 6010B |
| 2 | | MW102-0603 | | 0515 | | | X | X | X | X | | | | | | Sulfate: 375.1 |
| 3 | | MW103-0603 | | 0500 | | | X | X | X | X | | | | | | alkalinity: 310.1 |
| 4 | | MW8-0603 | | 0700 | | | X | X | X | X | | | | | | Nitrite/Nitrate: 352.1 |
| 5 | | MW5-0603 | | 0800 | | | X | X | X | X | | | | | | COD HACH 8000 |
| 6 | | MW5-0603-E | | 0800 | | | X | X | X | X | | | | | | TOC 415.1 or 9060 |
| 7 | | MW1-0603 | | 1000 | | | X | X | X | X | | | | | | |
| 8 | | MW6-0603 | | 1050 | | | X | X | X | X | | | | | | Metals Lvem Field |
| 9 | | FAMW001-0603 | | 0700 | | | X | X | X | X | | | | | | Filtered |
| 10 | | FAMW002-0603 | | 0750 | | | X | X | X | X | | | | | | |
| 11 | | BPMW001-0603 | 6/17/03 | 0935 | | | X | X | X | X | | | | | | |
| 12 | | GTMW001-0603 | | 1030 | | | X | X | X | X | | | | | | |

Mercuric Nitrate Cl, SO4, NO3

| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
|---|---|---|---|---|---|---|---|
| | Weston | 6/17/03 | 1830 | FEDEX | | | |
| RELINQUISHED BY | COMPANY | DATE | TIME | RECEIVED BY | COMPANY | DATE | TIME |
| | | | | | STL | 6-18-03 | 1005 |

**Matrix Key**
WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air, SE = Sediment, SO = Solid, DS = Drum Solid, DL = Drum Liquid, L = Leachate, WI = Wipe, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS
@ 4 coolers total
* note 48-hr nitrate/nitrite

**Date Received** 6/18/03
**Courier:** FX **Hand Delivered** ☐
**Bill of Lading**

# Chain of Custody Record

(1) Client Analytics — WESTON Contact Name Kathleen Soukup
Site Name Bucks Harbor — Contact Phone No. 603 315-4563
W.O. — WESTON PM John Hagopian
Laboratory STL Chicago — Fax No. 603 6516-5461
Lab Batch Number — Sampler(s) [signature]

WESTON MANAGERS OF BUSINESS/CONSULTANTS

21834.2

(2) Ship To: STL Chicago
Attn:
Phone: 708 534-5200 Fax:

Carrier/Airbill No.
# of coolers: 4

(13). Analysis Requested

| | | |

# Chain Of Custody Form

**analytics** environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were: JB 6/18/03
1) Shipped or hand-delivered
2) Temp blank °C 7.7°C
3) Received in good condition Y or N
4) pH checked by: JB 6/18/03
5) Labels checked by: amb 6.18.03

Project#: 10471.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Sullivan
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature): [signature]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STMW004-0603 | 6/17/03 | 0600 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49874-1 |
| MW102-0603 | ↓ | 0515 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -2 |
| MW103-0603 | ↓ | 0500 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -3 |
| MW8-0603 | ↓ | 0700 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -4 |
| MW5-0603 | ↓ | 0800 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -5 |
| MW5-0603-E | ↓ | 0800 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -6 |
| MW1-0603 | ↓ | 1000 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 1.5 | -7 |
| MW6-0603 | ↓ | 1050 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 1.5 | -8 |
| FAMW001-0603 | ↓ | 0700 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 1.5 | -9 |
| FAMW002-0603 | ↓ | 0750 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 1.5 | -10 |
| BPMW001-0603 | ↓ | 0935 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -11 |
| GTMW001-0603 | ↓ | 1030 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -12 |

FAX RESULTS? YES NO
Fax # 603 656-5401

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date

Comments / Instructions:
Ferrous Iron by SM3500D
STMW004-0603 received w/ pH of 2.5, added 1 pipette 1:1 HCL, brought it down to 2 JB 6/18/03
MW102-0603 & GTMW001-0603 received w pHs of 3. added 1 pipette 1:1 HCL to each, brought them both down to 2 JB 6/18/03

Client Code: WESTONM

Page 1 of 2

Received By: FedEx Time: 1830 Date: 6/17/03
Received By: [signature] Time: 1000 Date: 6/18/03
Received By: Time: Date:
Relinquished By Sampler: [signature]
Relinquished By: Fed Ex
Relinquished By:

Analytics\AEL Documents\AEL COC

70/73

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were: JB 6/18/03
1) Shipped ~~or hand-delivered~~
2) Temp blank °C 7.7°C
3) Received in good condition Y or N
4) pH checked by: JB 6/18/03
5) Labels checked by: amb 6.18.03

Project#: 10971.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Soukup
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature): [signature]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSMW001-0603 | 6/17/03 | 1315 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49874-13 |
| TSMW002-0603 | ↓ | 1120 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -14 |
| TSMW003-0603 | ↓ | 1215 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -15 |
| MW3-0603 | ↓ | 1145 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -16 |
| MW2-0603 | ↓ | 1245 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -17 |
| MW7-0603 | ↓ | 1400 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -18 |
| MW7-0603-E | ↓ | 1400 | ↓ | | | | | X | | | ↓ | ↓ | ↓ | 2 | -19 |

| Relinquished By Sampler: | Relinquished By: | Relinquished By: |
|---|---|---|
| [signature] | Fed Ex | |
| Date: 6/17/03 | Date: 6/18/03 | Date: |
| Time: 1830 | Time: 1000 | Time: |
| Received By: FEDEX | Received By: [signature] | Received By: |

FAX RESULTS? YES NO
Fax # 656-5401

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date

Comments / Instructions:
⊗ results by 7/2/03
TSMW003-0603 received w/ pH of 3. Added 1 pipette 1:1 HCL, brought it down to 2 JB 6/18/03
Ferrous Iron by SM3500 D

Client Code: WESTONM

Page 2 of 2

Analytics\AEL Documents\AEL COC

71/73

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 49874 | COOLER NUMBER: —

CLIENT: Weston | NUMBER OF COOLERS: 1

PROJECT: Bucks Harbor | DATE RECEIVED: 6/18/03

**A: PRELIMINARY EXAMINATION:** | DATE COOLER OPENED: 6/18/03

1. Cooler received by(initials) JB | Date Received: 6/18/03
2. Did cooler come with a shipping slip? (Y) ~~N~~ JB 6/18/03

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? (Y) N
How many & where: 2 on lid Seal Date: 6/17/03 Seal Name: AV
4. Did the custody seals arrive unbroken and intact upon arrival? (Y) N
5. COC#: _____
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? (Y) N
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? Y (N) Temp. of cooler: 7.7 °C

**B. Log-In:** Date samples were logged in: 6/18/03 By: JB

11. Type of packing in cooler(bubble wrap, popcorn) Y (N/A)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? Y (N) See COC for details SLC 6/19/03
18. Was sufficient amount of sample sent for the tests indicated? (Y) N
19. Were bubbles absent in VOA samples? Y (N/A)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): Date: amb 6.18.03

analytics environmental laboratory LLC

# SAMPLE RECEIPT
# NON-COMPLIANCE NOTIFICATION
## (SENT VIA FACSIMILE)

DATE 6/18/03 FROM Sample Receipt

FAX CONTACT Kathleen Soukup FAX NUMBER 603-656-5401

CLIENT Weston LAB NUMBER 49874

The exceptions noted below were found on the sample(s) received on the attached Chain of Custody (COC) form. These exceptions may render the data results as non-defensible. Analytics will continue to proceed with the analysis of the sample(s) unless notified in writing to stop the analysis. This document may become part of the final report.

**Please check the appropriate box and sign below and fax back to "Sample Receipt" at 603-430-2151.**

## Exceptions:

- [X] Sample(s) not on ice or not at 4°C ± 2°C (7.7°C)
- [ ] Sample(s) received unpreserved or not at the proper pH. (pH was adjusted at the laboratory)
- [ ] Sample(s) received in incorrect containers
- [ ] Insufficient sample volume received (Detection limits may be elevated due to this exception)
- [ ] Trip Blank provided in cooler, but not recorded on the chain of custody
- [ ] Other: _____

## Acknowledgment:

- [ ] **Please do not analyze/report Trip Blank, proceed with other analyses**
- [ ] **Proceed with the analysis.**
- [ ] **Please stop the analysis and wait for further instructions.**

KS called 6.18.03 in ME to say OK to Analyze - will be in Maine till next week and can not get to Fax machine to respond KC 6.18.03 12:35

**Signed:** _____ **Print Name:** _____

**Date:** _____

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49877**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Ferrous Iron using Standard Methods, EPA Method 3500D. Inorganic analyses were subcontracted to Severn Trent-Chicago.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
FE Results Summary Form Sample Data Results
FE Worksheet Summary Form
FE Bench Sheets
FE Form 3 MS/MSD and LCS Recoveries
FE Form 6 Initial Calibration Data (equiv.) Linear Plot plus bench sheets
Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

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July 10, 2003

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One Wall Street
Manchester, NH 03101-1501

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Inorganics Data Package from Severn Trent-Chicago
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Ferrous Iron**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Melissa A. Gulli
Assistant Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49877**

**Revision: Rev. 0**

**Re: BUCKS**

**10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49877-1 | 06/18/03 | MW4-0603 | Alkalinity | |
| | 06/18/03 | MW4-0603 | Chemical Oxygen Demand | |
| | 06/18/03 | MW4-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/18/03 | MW4-0603 | Metals | |
| | 06/18/03 | MW4-0603 | Metals Digestion | |
| | 06/18/03 | MW4-0603 | Nitrate | |
| | 06/18/03 | MW4-0603 | Sulfate | |
| | 06/18/03 | MW4-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49877-2 | 06/18/03 | MW10-0603 | Alkalinity | |
| | 06/18/03 | MW10-0603 | Chemical Oxygen Demand | |
| | 06/18/03 | MW10-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/18/03 | MW10-0603 | Metals | |
| | 06/18/03 | MW10-0603 | Metals Digestion | |
| | 06/18/03 | MW10-0603 | Nitrate | |
| | 06/18/03 | MW10-0603 | Sulfate | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Melissa A Malli for
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49877**

**Revision: Rev. 0**

**Re: BUCKS** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/18/03 | MW10-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49877-3 | 06/18/03 | MW10-0603-E | Alkalinity | |
| | 06/18/03 | MW10-0603-E | Chemical Oxygen Demand | |
| | 06/18/03 | MW10-0603-E | Ferrous Iron in Aqueous Matrices | |
| | 06/18/03 | MW10-0603-E | Metals | |
| | 06/18/03 | MW10-0603-E | Metals Digestion | |
| | 06/18/03 | MW10-0603-E | Nitrate | |
| | 06/18/03 | MW10-0603-E | Sulfate | |
| | 06/18/03 | MW10-0603-E | Total Organic Carbon in Aqueous Matrices | |
| 49877-4 | 06/18/03 | STMW005-0603 | Alkalinity | |
| | 06/18/03 | STMW005-0603 | Chemical Oxygen Demand | |
| | 06/18/03 | STMW005-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/18/03 | STMW005-0603 | Metals | |
| | 06/18/03 | STMW005-0603 | Metals Digestion | |
| | 06/18/03 | STMW005-0603 | Nitrate | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Melissa A. Hall for
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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**Report Number: 49877**

**Revision: Rev. 0**

**Re: BUCKS**

**10971.217.002**

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/18/03 | STMW005-0603 | Sulfate | |
| | 06/18/03 | STMW005-0603 | Total Organic Carbon in Aqueous Matrices | |
| 49877-5 | 06/18/03 | STMW006-0603 | Alkalinity | |
| | 06/18/03 | STMW006-0603 | Chemical Oxygen Demand | |
| | 06/18/03 | STMW006-0603 | Electronic Data Deliverable | |
| | 06/18/03 | STMW006-0603 | Ferrous Iron in Aqueous Matrices | |
| | 06/18/03 | STMW006-0603 | Metals | |
| | 06/18/03 | STMW006-0603 | Metals Digestion | |
| | 06/18/03 | STMW006-0603 | Nitrate | |
| | 06/18/03 | STMW006-0603 | Sulfate | |
| | 06/18/03 | STMW006-0603 | Total Organic Carbon in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Melissa A Hull for
Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

July 10, 2003

**Project Name:** BUCKS

**Project Number:** 10971.247.002

## ANALYTICAL RESULTS FERROUS IRON
## CAS Number: 000-09-2

| Lab Sample ID | Field Sample ID | Collection Date | Lab Receipt Date | Analysis Date | Matrix | Dilution Factor | Detection Limit mg/L | Result mg/L |
|---|---|---|---|---|---|---|---|---|
| B061903F | LABQC | N/A | N/A | 06/19/03 | Aqueous | 1 | 0.1 | U |
| L061903F | LABQC | N/A | N/A | 06/19/03 | Aqueous | 1 | 0.1 | **95** |
| LD06193F | LABQC | N/A | N/A | 06/19/03 | Aqueous | 1 | 0.1 | **94** |
| 49877-1 | MW4-0603 | 06/18/03 | 06/18/03 | 06/19/03 | Aqueous | 1 | 0.1 | **0.38** |
| 49877-2 | MW10-0603 | 06/18/03 | 06/18/03 | 06/19/03 | Aqueous | 1 | 0.1 | U |
| 49877-3 | MW10-0603-E | 06/18/03 | 06/18/03 | 06/19/03 | Aqueous | 1 | 0.1 | **0.11** |
| 49877-4 | STMW005-0603 | 06/18/03 | 06/18/03 | 06/19/03 | Aqueous | 1 | 0.1 | U |
| 49877-5 | STMW006-0603 | 06/18/03 | 06/18/03 | 06/19/03 | Aqueous | 1 | 0.1 | **0.17** |

**METHODOLOGY:** Sample analysis conducted according to: "Standard Methods, EPA Method 3500D."

**COMMENTS:** U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

Authorized signature

# FERROUS IRON DATA SUMMARY

Date Analyzed: 6/19/03
Analyst: AB
Reviewed: mg 7-10-03

| Conc. mg/L | Absorbance |
|---|---|
| 0 | 0 |
| 0.1 | 0.01 |
| 0.2 | 0.024 |
| 0.2 | 0.055 |
| 1 | 0.099 |
| 2 | 0.222 |

| | |
|---|---|
| Curve Date: | 6/2/03 |
| Corr Coef. ('r) | 0.9985 |
| Y-int | 0.000976 |
| slope | 0.109 |

Enter Data Below ⇩ Enter Data Below ⇩

| | Sample ID | Abs | Calculated Value Conc. mg/L | DF | Sample Conc. mg/L |
|---|---|---|---|---|---|
| 1 | L061903F | 0.103 | 0.954 | 1 | 95% |
| 2 | B061903F | 0.000 | 0.009 | 1 | U |
| 3 | 49877-1 | 0.041 | 0.385 | 1 | 0.38 |
| 4 | 49877-2 | 0.009 | 0.092 | 1 | U |
| 5 | 49877-3 | 0.011 | 0.110 | 1 | 0.11 |
| 6 | 49877-4 | 0.008 | 0.082 | 1 | U |
| 7 | 49877-5 | 0.018 | 0.174 | 1 | 0.17 |
| 8 | 49877-3,MS | 0.118 | 1.092 | 1 | 98% |
| 9 | 49877-3,MSD | 0.119 | 1.101 | 1 | 99% |
| 10 | LD06193F | 0.102 | 0.945 | 1 | 95% |
| 11 | B06193F2 | 0.000 | 0.009 | 1 | U |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

7/47

Q-P-060903-1-AB
P-P-060903-1-AB

060.19.03 Ferrous Iron in $H_2O$

| SAMPLE # | Absorbance = | Dilution | Abs. AFT. Dil. |
|---|---|---|---|
| L060193F | .003 | 1 | — |
| B060193F | .000 | 1 | — |
| 49857-1 | .041 | 1 | — |
| -2 | .009 | 1 | — |
| -3 | .011 | 1 | — |
| -4 | .008 | 1 | — |
| -5 | .018 | 1 | — |
| -3 MS | .118 | 1 | — |
| -3 MSD | .119 | 1 | — |
| LD060193F | .102 | 1 | — |
| B060193F | .000 | 1 | — |

FOH11 $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2ml Conc $H_2SO_4$ LOT# 032815
5ml Dilt$H_2O$
= 200 mg/L $Fe^{3+}$

FOH2 0.25 ml FOH1 → 50ml Dilt$H_2O$
= 1 mg/mL

analytics environmental laboratory LLC

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July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** BUCKS

**Project Number:** 10971.217.002

**Lab Sample ID:** B061903F
**Matrix:** Aqueous
**Field Sample ID:** LABQC
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/19/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|
| 1.0 | U | 0.95 | 95 | | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| 1.0 | 0.94 | 94 | | 1 | | 30 | 70-130 |

Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa A Hall

Form III

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

July 10, 2003

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Project Name:** BUCKS

**Project Number:** 10971.217.002

**Lab Sample ID:** 49877-3
**Matrix:** Aqueous
**Field Sample ID:** MW10-0603-E
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## FERROUS IRON SPIKE RESULTS
**CAS Number: 000-09-2**

| Spike Added (mg/L) | Sample Concentration (mg/L) | Matrix Spike Concentration (mg/L) | Matrix Spike Percent Recovery # | QC Limits Percent Recovery |
|---|---|---|---|---|
| 1.0 | 0.11 | 1.09 | 98 | 70-130 |

| Spike Added (mg/L) | Matrix Spike Duplicate Concentration (mg/L) | Matrix Spike Duplicate Percent Recovery # | Relative Percent Difference # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|
| 1.0 | 1.1 | 99 | 1 | 30 | 70-130 |

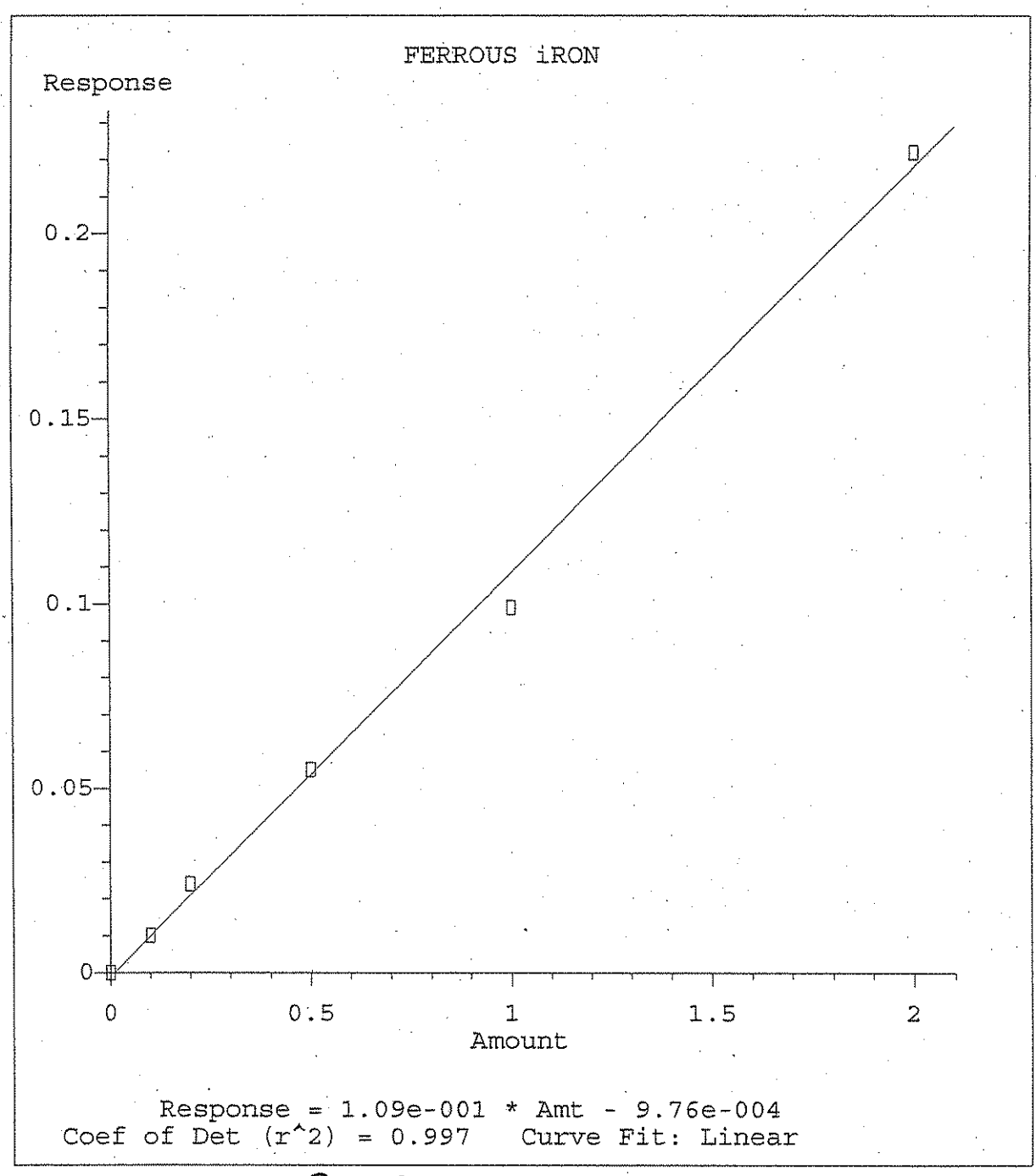
Comments:

# Column to be used to flag recovery and RPD values with an asterisk

* Value outside of QC Limits

Authorized signature Melissa A Kelli

Form III




$r = 0.998$

Method Name: C:\HPCHEM\1\METHODS\F06023.M
Calibration Table Last Updated: Wed Jun 04 09:46:55 2003

6-2-03 mg/AB Ferrous Iron

F020
200 mg/L
MS 6-2-03
STOCK
MG 6-2-03

0.144g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$
2mL Conc $H_2SO_4$
5mL DI $H_2O$
diluted to 100mL F.V. with DI $H_2O$

F026
5mg/L
2.5mL F020 → 100mL DI $H_2O$

F021
2mg/L
1mL F020 → 100mL $DH_2O$

F022
1mg/L
0.25mL F020 → 50mL DI $H_2O$

F023
0.5mg/L
0.125mL F020 → 50mL DI $H_2O$

F024
0.20mg/L
0.025mL F020 → 25mL DI $H_2O$

F025
0.1mg/L
0.0125mL F020 → 25mL DI $H_2O$

Method Blank Absorbance = 0.000

0.1mg/L = 0.01

0.2mg/L = 0.024

0.5mg/L = 0.055

1mg/L = 0.099 AB 6-02-03

2mg/L = 0.222

## Reagents

Ferrous Ammonium Sulfate - EM Science Lot # 42207238
$Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$

Conc $H_2SO_4$ ~~J.T. Baker~~ Fisher Lot # 032815
06-12-03

Ammonium Acetate Buffer VWR Lot # 2231

O-phenanthroline VWR Lot # 2343
0.1% w/v

SEVERN TRENT STL

# SEVERN TRENT LABORATORIES
# ANALYTICAL REPORT

JOB NUMBER: 218381

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Bucks Harbor Air Force Tracking Station

Attention: Steve Knollmeyer

Date: 07/03/2003

Bonnie Stadelmann
Signature

07/03/03
Date

Name: Bonnie M. Stadelmann

Title: Project Manager

E-Mail: bstadelmann@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

# STL Chicago
# Wet Chemistry Case Narrative

Client: **Analytics Environmental Laboratory, LLC**
Job #: **218381** Date Rec'd: 06/19/03

1. This narrative covers the analysis of the samples in the above Job # for alkalinity, COD, nitrite-nitrogen, nitrate-nitrogen, sulfate, and TOC by the methods referenced on the Laboratory Test Results pages.

2. All EPA holding times were met, except for the nitrite analysis of samples 218381-1 and 4. While the color reagent was added within hold time, the sample preparations were read approximately 45 minutes after the expiration of the 48-hour holding time.

3. The initial and continuing calibration verification standards and blanks that bracketed these samples were in control.

4. The method blanks were below the detection limits.

5. The LCS recoveries were within control limits. Please see the Quality Control Results pages of this report for additional details.

6. The matrix QC done on these samples was within acceptance limits. See the Quality Control Results pages of this report for additional details.

Diane L. Harper
Wet Chemistry Section Manager

7-3-03
Date

Severn Trent Laboratories - Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory, LLC
Project ID: Bucks Harbor 49877
STL Job #: 218381

Date Recd: 06/19/03

1. This narrative covers the Metals analysis of sample in the above Job # 218381.

   Method Ref: USEPA, SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. All ICP Interference Check Samples were within control limits.

7. Laboratory Control Sample (LCS) recoveries were within the 80-120% control limits.

8. Matrix QC was performed on sample 1.

   Serial dilution analysis was within control limits.

   Matrix spike recoveries were within the 75-125% control limits.

   Duplicate RPD's were within the 20% control limits.

Jodi L. Wojcik
Metals Unit Leader

6-30-03
Date

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S A M P L E  I N F O R M A T I O N
Date: 07/03/2003

Job Number.: 218381
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20002349
Customer Project ID....: BUCKS HARBOR 49877
Project Description....: Bucks Harbor Air Force Tracking Station

| Laboratory Sample ID | Customer Sample ID | Sample Matrix | Date Sampled | Time Sampled | Date Received | Time Received |
|---|---|---|---|---|---|---|
| 218381-1 | MW4-0603 | Water | 06/18/2003 | 08:20 | 06/19/2003 | 09:50 |
| 218381-2 | MW10-0603 | Water | 06/18/2003 | 09:30 | 06/19/2003 | 09:50 |
| 218381-3 | MW10-0603-E | Water | 06/18/2003 | 09:30 | 06/19/2003 | 09:50 |
| 218381-4 | STMW005-0603 | Water | 06/18/2003 | 08:15 | 06/19/2003 | 09:50 |
| 218381-5 | STMW006-0603 | Water | 06/18/2003 | 09:10 | 06/19/2003 | 09:50 |

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LABORATORY TEST RESULTS

Job Number: 218381

Date:07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49877 | ATTN: Steve Knollmeyer

Customer Sample ID: MW4-0603
Date Sampled.....: 06/18/2003
Time Sampled.....: 08:20
Sample Matrix.....: Water

Laboratory Sample ID: 218381-1
Date Received.....: 06/19/2003
Time Received.....: 09:50

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 23 | | | 4.7 | 5.0 | 1 | mg/L | 87957 | | 06/23/03 1417 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 11 | | | 3.4 | 5.0 | 1 | mg/L | 89021 | | 07/03/03 1530 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.23 | | | 0.035 | 0.10 | 1 | mg/L | 88675 | | 06/27/03 1135 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 15 | | | 2.1 | 5.0 | 1 | mg/L | 88798 | | 07/02/03 0846 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.94 | B | | 0.15 | 1.0 | 1 | mg/L | 88831 | | 07/02/03 0957 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.049 | | | 0.00071 | 0.010 | 1 | mg/L | 88372 | | 06/26/03 2335 | lmr |

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* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218381

Date:07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49877 | ATTN: Steve Knollmeyer

Customer Sample ID: MW10-0603
Date Sampled.....: 06/18/2003
Time Sampled.....: 09:30
Sample Matrix.....: Water

Laboratory Sample ID: 218381-2
Date Received.....: 06/19/2003
Time Received.....: 09:50

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity<br>Alkalinity, Total as CaCO3 | 130 | | | 4.7 | 5.0 | 1 | mg/L | 87957 | | 06/23/03 1432 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH)<br>Chemical Oxygen Demand (COD) | 5.0 | U | | 3.4 | 5.0 | 1 | mg/L | 89021 | | 07/03/03 1532 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.)<br>Nitrate as N (NO3-N) | 0.82 | | | 0.035 | 0.10 | 1 | mg/L | 88675 | | 06/27/03 1140 | kd |
| 375.4 | Sulfate, Turbidimetric<br>Sulfate | 29 | | | 4.2 | 10 | 2 | mg/L | 88798 | | 07/02/03 0847 | cls |
| 415.1 | Organic Carbon<br>TOC Average Duplicates | 0.70 | B | | 0.15 | 1.0 | 1 | mg/L | 88831 | | 07/02/03 1011 | kd |
| 6010B | Metals Analysis (ICAP Trace)<br>Manganese, Diss. | 0.018 | | | 0.00071 | 0.010 | 1 | mg/L | 88372 | | 06/27/03 0000 | lmr |

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* In Description = Dry Wgt.

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# LABORATORY TEST RESULTS

Job Number: 218381

Date:07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49877 | ATTN: Steve Knollmeyer

Customer Sample ID: MW10-0603-E
Date Sampled.....: 06/18/2003
Time Sampled.....: 09:30
Sample Matrix.....: Water

Laboratory Sample ID: 218381-3
Date Received.....: 06/19/2003
Time Received.....: 09:50

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 110 | | | 4.7 | 5.0 | 1 | mg/L | 87957 | | 06/23/03 1440 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 10 | | | 3.4 | 5.0 | 1 | mg/L | 89021 | | 07/03/03 1534 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.83 | | | 0.035 | 0.10 | 1 | mg/L | 88675 | | 06/27/03 1141 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 32 | | | 4.2 | 10 | 2 | mg/L | 88798 | | 07/02/03 0848 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 0.69 | B | | 0.15 | 1.0 | 1 | mg/L | 88831 | | 07/02/03 1025 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.018 | | | 0.00071 | 0.010 | 1 | mg/L | 88372 | | 06/27/03 0006 | lmr |

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* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218381

Date:07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

Customer Sample ID: STMW005-0603
Date Sampled.....: 06/18/2003
Time Sampled.....: 08:15
Sample Matrix.....: Water

Laboratory Sample ID: 218381-4
Date Received.....: 06/19/2003
Time Received.....: 09:50

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 11 | | | 4.7 | 5.0 | 1 | mg/L | 87957 | | 06/23/03 1448 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 21 | | | 3.4 | 5.0 | 1 | mg/L | 89021 | | 07/03/03 1536 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.10 | U | | 0.035 | 0.10 | 1 | mg/L | 88675 | | 06/27/03 1142 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 5.0 | U | | 2.1 | 5.0 | 1 | mg/L | 88798 | | 07/02/03 0849 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 2.8 | | | 0.15 | 1.0 | 1 | mg/L | 88831 | | 07/02/03 1054 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.022 | | | 0.00071 | 0.010 | 1 | mg/L | 88372 | | 06/27/03 0035 | lmr |

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* In Description = Dry Wgt.

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LABORATORY TEST RESULTS

Job Number: 218381

Date:07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC | PROJECT: BUCKS HARBOR 49877 | ATTN: Steve Knollmeyer

Customer Sample ID: STMW006-0603
Date Sampled.....: 06/18/2003
Time Sampled.....: 09:10
Sample Matrix.....: Water

Laboratory Sample ID: 218381-5
Date Received.....: 06/19/2003
Time Received.....: 09:50

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | Q | FLAGS | MDL | RL | DILUTION | UNITS | BATCH | DT | DATE/TIME | TECH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | | | | | | | | | | | |
| | Alkalinity, Total as CaCO3 | 45 | | | 4.7 | 5.0 | 1 | mg/L | 87957 | | 06/23/03 1456 | jmk |
| HACH 8000 | Chemical Oxygen Demand (HACH) | | | | | | | | | | | |
| | Chemical Oxygen Demand (COD) | 18 | | | 3.4 | 5.0 | 1 | mg/L | 89021 | | 07/03/03 1538 | cvw |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | | | | | | | | | | | |
| | Nitrate as N (NO3-N) | 0.50 | | | 0.035 | 0.10 | 1 | mg/L | 88675 | | 06/27/03 1144 | kd |
| 375.4 | Sulfate, Turbidimetric | | | | | | | | | | | |
| | Sulfate | 2.7 | B | | 2.1 | 5.0 | 1 | mg/L | 88798 | | 07/02/03 0850 | cls |
| 415.1 | Organic Carbon | | | | | | | | | | | |
| | TOC Average Duplicates | 2.6 | | | 0.15 | 1.0 | 1 | mg/L | 88831 | | 07/02/03 1108 | kd |
| 6010B | Metals Analysis (ICAP Trace) | | | | | | | | | | | |
| | Manganese, Diss. | 0.010 | U | | 0.00071 | 0.010 | 1 | mg/L | 88372 | | 06/27/03 0042 | lmr |

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* In Description = Dry Wgt.

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# LABORATORY CHRONICLE

Job Number: 218381 — Date: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC — PROJECT: BUCKS HARBOR 49877 — ATTN: Steve Knollmeyer

Lab ID: 218381-1 Client ID: MW4-0603 — Date Recvd: 06/19/2003 Sample Date: 06/18/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87957 | 87957 | 06/23/2003 1417 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 89021 | 89021 | 07/03/2003 1530 | |
| EDD | Electronic Data Deliverable | 1 | | | | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88372 | 88251 | 06/26/2003 2335 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87828 | 87828 | 06/20/2003 0905 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88675 | 88675 | 06/27/2003 1135 | 1 |
| 415.1 | Organic Carbon | 1 | 88831 | 88831 | 07/02/2003 0957 | |
| PKG INO (WC) | PKG INO (WET CHEMISTRY) | 1 | | | | |
| Method | Soluble Non-Digestion Batch | 1 | 88251 | | 06/26/2003 1410 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88798 | 88798 | 07/02/2003 0846 | |

Lab ID: 218381-2 Client ID: MW10-0603 — Date Recvd: 06/19/2003 Sample Date: 06/18/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87957 | 87957 | 06/23/2003 1432 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 89021 | 89021 | 07/03/2003 1532 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88372 | 88251 | 06/27/2003 0000 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87828 | 87828 | 06/20/2003 0905 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88675 | 88675 | 06/27/2003 1140 | 1 |
| 415.1 | Organic Carbon | 1 | 88831 | 88831 | 07/02/2003 1011 | |
| Method | Soluble Non-Digestion Batch | 1 | 88251 | | 06/26/2003 1410 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88798 | 88798 | 07/02/2003 0847 | 2 |

Lab ID: 218381-3 Client ID: MW10-0603-E — Date Recvd: 06/19/2003 Sample Date: 06/18/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87957 | 87957 | 06/23/2003 1440 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 89021 | 89021 | 07/03/2003 1534 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88372 | 88251 | 06/27/2003 0006 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87828 | 87828 | 06/20/2003 0906 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88675 | 88675 | 06/27/2003 1141 | 1 |
| 415.1 | Organic Carbon | 1 | 88831 | 88831 | 07/02/2003 1025 | |
| Method | Soluble Non-Digestion Batch | 1 | 88251 | | 06/26/2003 1410 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88798 | 88798 | 07/02/2003 0848 | 2 |

Lab ID: 218381-4 Client ID: STMW005-0603 — Date Recvd: 06/19/2003 Sample Date: 06/18/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87957 | 87957 | 06/23/2003 1448 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 89021 | 89021 | 07/03/2003 1536 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88372 | 88251 | 06/27/2003 0035 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87828 | 87828 | 06/20/2003 0906 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88675 | 88675 | 06/27/2003 1142 | 1 |
| 415.1 | Organic Carbon | 1 | 88831 | 88831 | 07/02/2003 1054 | |
| Method | Soluble Non-Digestion Batch | 1 | 88251 | | 06/26/2003 1410 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88798 | 88798 | 07/02/2003 0849 | |

Lab ID: 218381-5 Client ID: STMW006-0603 — Date Recvd: 06/19/2003 Sample Date: 06/18/2003

| METHOD | DESCRIPTION | RUN# | BATCH# | PREP BT #(S) | DATE/TIME ANALYZED | DILUTION |
|---|---|---|---|---|---|---|
| 310.1 | Alkalinity | 1 | 87957 | 87957 | 06/23/2003 1456 | |
| HACH 8000 | Chemical Oxygen Demand (HACH) | 1 | 89021 | 89021 | 07/03/2003 1538 | |
| 6010B | Metals Analysis (ICAP Trace) | 1 | 88372 | 88251 | 06/27/2003 0042 | |
| 354.1 | Nitrite, Spectrophotometric | 1 | 87828 | 87828 | 06/20/2003 0906 | |
| 353.2 | Nitrogen, NO2, NO3 (Auto Cd Red.) | 1 | 88675 | 88675 | 06/27/2003 1144 | 1 |
| 415.1 | Organic Carbon | 1 | 88831 | 88831 | 07/02/2003 1108 | |
| Method | Soluble Non-Digestion Batch | 1 | 88251 | | 06/26/2003 1410 | |
| 375.4 | Sulfate, Turbidimetric | 1 | 88798 | 88798 | 07/02/2003 0850 | |

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| CCB | Continuing Calibration Blank | | 88372-016 | | 06/26/2003 | 1639 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-026 | | 06/26/2003 | 1759 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-037 | | 06/26/2003 | 1920 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00144 B | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-049 | | 06/26/2003 | 2045 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-054 | | 06/26/2003 | 2127 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-066 | | 06/26/2003 | 2253 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

| CCB | Continuing Calibration Blank | | 88372-078 | | 06/27/2003 | 0029 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00100 B | | | | | | | |

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCB | Continuing Calibration Blank | | 88372-087 | | 06/27/2003 | 0141 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00071 U | | | | | | | |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-015 | | 06/26/2003 | 1624 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.83988 | | 5.00000 | | 97 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-025 | | 06/26/2003 | 1744 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.86634 | | 5.00000 | | 97 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-036 | | 06/26/2003 | 1907 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.88004 | | 5.00000 | | 98 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-048 | | 06/26/2003 | 2032 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.95835 | | 5.00000 | | 99 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-053 | | 06/26/2003 | 2112 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.89462 | | 5.00000 | | 98 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-065 | | 06/26/2003 | 2240 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.94887 | | 5.00000 | | 99 | % | 90-110 | |

| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-077 | | 06/27/2003 | 0016 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.93923 | | 5.00000 | | 99 | % | 90-110 | |

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| CCV | Continuing Calibration Verification | M03FCCV006 | 88372-086 | | 06/27/2003 | 0125 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.87915 | | 5.00000 | | 98 | % | 90-110 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| CRI | Contract Required Detection Limits | M03FCRI003 | 88372-012 | | 06/26/2003 1603 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02125 | | 0.02000 | | 106 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI003 | 88372-050 | | 06/26/2003 2052 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02068 | | 0.02000 | | 103 | % | 50-150 | |

| CRI | Contract Required Detection Limits | M03FCRI003 | 88372-083 | | 06/27/2003 0105 |
|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.02021 | | 0.02000 | | 101 | % | 50-150 | |

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| ICB | Initial Calibration Blank | | 88372-011 | | 06/26/2003 | 1557 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00187 B | | | | | | | |

QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| ICV | Initial Calibration Verification | M03FICV001 | 88372-010 | | 06/26/2003 | 1547 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 4.04895 | | 4.00000 | | 101 | % | 90-110 | |

QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| ISB | Interference Check Sample B | M03FISB002 | 88372-014 | | 06/26/2003 | 1616 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48442 | | 0.50000 | | 97 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 88372-052 | | 06/26/2003 | 2104 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48991 | | 0.50000 | | 98 | % | 80-120 | |

| ISB | Interference Check Sample B | M03FISB002 | 88372-085 | | 06/27/2003 | 0117 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.48297 | | 0.50000 | | 97 | % | 80-120 | |

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88372

Analyst...: lmr

| LCS | Laboratory Control Sample | MO3ESPK002 | 88165 -002 | | 06/26/2003 | 1811 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Solid | mg/Kg | 47.12 | | 50.00 | 0.13 U | 94 | % | 80-120 | |

| LCS | Laboratory Control Sample | MO3ESPK002 | 88049 -002 | | 06/26/2003 | 1932 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.50104 | | 0.50000 | | 100 | % | 80-120 | |

| LCS | Laboratory Control Sample | MO3ESPK002 | 88251 -002 | | 06/26/2003 | 2329 |
|---|---|---|---|---|---|---|

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.48335 | | 0.50000 | 0.00071 U | 97 | % | 80-120 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88372

Analyst...: lmr

| | | | | | | |
|---|---|---|---|---|---|---|
| MB | Method Blank | 88165 | 88165 -001 | | 06/26/2003 | 1805 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Solid | mg/Kg | 0.13 U | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| MB | Method Blank | 88049 | 88049 -001 | | 06/26/2003 | 1926 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 0.00091 B | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| MB | Method Blank | 88251 | 88251 -001 | | 06/26/2003 | 2322 |

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00071 U | | | | | | | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MD | Method Duplicate | | 218381-1 | | 06/26/2003 | 2347 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88372

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.04916 | | | 0.04941 | 0.00025 | A | 0.01000 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49B77 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| MS | Matrix Spike | M03ESPK002 | 218381-1 | | 06/26/2003 | 2353 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88372

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.52890 | | 0.50000 | 0.04941 | 96 | % | 75-125 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381

Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| S2 | Standard 2 | M03DINT002 | 88372-009 | | 06/26/2003 | 1536 |

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)

Equipment Code....: ICP4
Batch.....: 88372

Analyst...: lmr

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese | mg/L | 9.60387 | | 10.00000 | | 96 | % | 95-105 | |



* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN:

| QC Type | Description | Reag. Code | Lab ID | Dilution Factor | Date | Time |
|---|---|---|---|---|---|---|
| SD | Serial Dilution | | 218381-1 | | 06/26/2003 | 2341 |

Test Method.....: 6010B Equipment Code....: ICP4 Analyst...: lmr
Method Description.: Metals Analysis (ICAP Trace) Batch.....: 88372

| Parameter/Test Description | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | * | Limits | F |
|---|---|---|---|---|---|---|---|---|---|
| Manganese, Diss. | mg/L | 0.00938 B | | | 0.04941 | 5.1 | D | 10.0 | |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

Test Method.....: 310.1 Batch.....: 87957 Analyst...: jmk
Method Description.: Alkalinity Equipment Code....: Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 87957 -002 | | mg/L | 4.70000 U | | | | | | | | 06/23/2003 | 1308 |
| LCS | 87957 -003 | I03ASTAK2 | mg/L | 102.60000 | | 100.00000 | 4.70000 U | 103 | | % | 80-120 | 06/23/2003 | 1315 |

Test Method.....: HACH 8000 Batch.....: 89021 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: COD
Parameter.....: Chemical Oxygen Demand (COD)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 89021 -003 | | mg/L | 3.40000 U | | | | | | | | 07/03/2003 | 1525 |
| LCS | 89021 -004 | I03FSTCD1 | mg/L | 52.33000 | | 50.00000 | 3.40000 U | 105 | | % | 80-120 | 07/03/2003 | 1527 |
| MS | 218381-5 | I03FSTCD1 | mg/L | 66.84000 | | 50.00000 | 17.62000 | 98 | | % | 75-125 | 07/03/2003 | 1540 |
| MSD | 218381-5 | I03FSTCD1 | mg/L | 65.80000 | 66.84000 | 50.00000 | 17.62000 | 96 | | % | 75-125 | 07/03/2003 | 1541 |
| | | | | | | | | 2.1 | | R | 20 | | |

Test Method.....: HACH 8000 Batch.....: 89021 Analyst...: cvw
Method Description.: Chemical Oxygen Demand (HACH) Equipment Code....: Test Code.: CODH
Parameter.....: Chemical Oxygen Demand (COD-High)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCS | 89021 -013 | I03FSTCD2 | mg/L | 409.23000 | | 500.00000 | | 82 | | % | 80-120 | 07/03/2003 | 1543 |

Test Method.....: 354.1 Batch.....: 87828 Analyst...: jaa
Method Description.: Nitrite, Spectrophotometric Equipment Code....: SPEC4 Test Code.: NO2
Parameter.....: Nitrite as N (NO2-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICB | 87828 -003 | | mg/L | 0.00520 U | | | | | | | | 06/20/2003 | 0903 |
| ICV | 87828 -002 | I03DSTNI2 | mg/L | 0.09620 | | 0.10000 | | 96 | | % | 90-110 | 06/20/2003 | 0903 |
| MB | 87828 -004 | | mg/L | 0.00520 U | | | | | | | | 06/20/2003 | 0904 |
| LCS | 87828 -005 | I03DSTNI2 | mg/L | 0.09490 | | 0.10000 | 0.00520 U | 95 | | % | 80-120 | 06/20/2003 | 0904 |
| MSD | 218381-5 | I03DSTNI2 | mg/L | 0.09650 | 0.09500 | 0.10000 | 0.00520 U | 96 | | % | 75-125 | 06/20/2003 | 0907 |
| | | | | | | | | 1.0 | | R | 20 | | |
| MS | 218381-5 | I03DSTNI2 | mg/L | 0.09500 | | 0.10000 | 0.00520 U | 95 | | % | 75-125 | 06/20/2003 | 0907 |
| CCV | 87828 -013 | I03DSTNI2 | mg/L | 0.09440 | | 0.10000 | | 94 | | % | 90-110 | 06/20/2003 | 0908 |
| CCB | 87828 -014 | | mg/L | 0.00520 U | | | | | | | | 06/20/2003 | 0908 |

Test Method.....: 353.2 Batch.....: 88675 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88675 -002 | I02GSTIC31 | mg/L | 1.04200 | | 1.00000 | | 104 | | % | 90-110 | 06/27/2003 | 1130 |
| ICB | 88675 -003 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 1131 |
| MB | 88675 -004 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 1133 |
| LCS | 88675 -005 | I02GSTIC31 | mg/L | 0.89600 | | 1.00000 | | 90 | | % | 80-120 | 06/27/2003 | 1134 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

Test Method.....: 353.2 Batch.....: 88675 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3NO2
Parameter.....: Nitrate + Nitrite as N

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 218381-1 | I02GSTIC31 | mg/L | 1.08100 | | 1.00000 | 0.23100 | 85 | | % | 75-125 | 06/27/2003 | 1137 |
| MSD | 218381-1 | I02GSTIC31 | mg/L | 1.06000 | 1.08100 | 1.00000 | 0.23100 | 83 | | % | 75-125 | 06/27/2003 | 1138 |
| | | | | | | | | 2.4 | | R | 20 | | |
| CCV | 88675 -014 | I02GSTIC31 | mg/L | 1.00000 | | 1.00000 | | 100 | | % | 90-110 | 06/27/2003 | 1146 |
| CCB | 88675 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 1148 |
| CCV | 88675 -014 | I02GSTIC31 | mg/L | 0.99100 | | 1.00000 | | 99 | | % | 90-110 | 06/27/2003 | 1203 |
| CCB | 88675 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 1204 |
| CCV | 88675 -014 | I02GSTIC31 | mg/L | 0.97400 | | 1.00000 | | 97 | | % | 90-110 | 06/27/2003 | 1207 |
| CCB | 88675 -015 | | mg/L | 0.03500 U | | | | | | | | 06/27/2003 | 1208 |

Test Method.....: 353.2 Batch.....: 88675 Analyst...: kd
Method Description.: Nitrogen, NO2, NO3 (Auto Cd Red.) Equipment Code....: LACHAT1 Test Code.: NO3
Parameter.....: Nitrate as N (NO3-N)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MS | 218381-1 | I02GSTIC31 | mg/L | 1.08100 | | 1.00000 | 0.23100 | 85 | | % | 75-125 | 06/27/2003 | 1137 |
| MSD | 218381-1 | I02GSTIC31 | mg/L | 1.06000 | 1.08100 | 1.00000 | 0.23100 | 83 | | % | 75-125 | 06/27/2003 | 1138 |
| | | | | | | | | 2.4 | | R | 20 | | |

Test Method.....: 375.4 Batch.....: 88798 Analyst...: cls
Method Description.: Sulfate, Turbidimetric Equipment Code....: SPEC3 Test Code.: SO4
Parameter.....: Sulfate

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88798 -002 | I03FSTSA2B | mg/L | 20.65000 | | 20.00000 | | 103 | | % | 90-110 | 07/02/2003 | 0842 |
| ICB | 88798 -003 | | mg/L | 2.10000 U | | | | | | | | 07/02/2003 | 0843 |
| MB | 88798 -004 | | mg/L | 2.10000 U | | | | | | | | 07/02/2003 | 0844 |
| LCS | 88798 -005 | I03FSTSA2B | mg/L | 20.44000 | | 20.00000 | 2.10000 U | 102 | | % | 80-120 | 07/02/2003 | 0845 |
| CCV | 88798 -014 | I03FSTSA2B | mg/L | 10.42000 | | 10.00000 | | 104 | | % | 90-110 | 07/02/2003 | 0855 |
| CCB | 88798 -015 | | mg/L | 2.10000 U | | | | | | | | 07/02/2003 | 0856 |
| CCV | 88798 -014 | I03FSTSA2B | mg/L | 19.61000 | | 20.00000 | | 98 | | % | 90-110 | 07/02/2003 | 0901 |
| CCB | 88798 -015 | | mg/L | 2.10000 U | | | | | | | | 07/02/2003 | 0902 |

Test Method.....: 415.1 Batch.....: 88831 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOC
Parameter.....: Organic Carbon, Tot. (TOC)

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICV | 88831 -002 | I03FSTTC2 | mg/L | 18.98160 | | 20.00000 | | 95 | | % | 85-115 | 07/02/2003 | 0755 |
| ICB | 88831 -003 | | mg/L | 0.32500 B | | | | | | | | 07/02/2003 | 0802 |
| CCV | 88831 -013 | I03FSTTC2 | mg/L | 9.18890 | | 10.00000 | | 92 | | % | 85-115 | 07/02/2003 | 1040 |
| CCB | 88831 -014 | | mg/L | 0.29110 B | | | | | | | | 07/02/2003 | 1046 |
| CCV | 88831 -013 | I03FSTTC2 | mg/L | 18.41090 | | 20.00000 | | 92 | | % | 85-115 | 07/02/2003 | 1229 |
| CCB | 88831 -014 | | mg/L | 0.34990 B | | | | | | | | 07/02/2003 | 1236 |

# QUALITY CONTROL RESULTS

Job Number.: 218381 Report Date.: 07/03/2003

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: BUCKS HARBOR 49877 ATTN: Steve Knollmeyer

Test Method.....: 415.1 Batch.....: 88831 Analyst...: kd
Method Description.: Organic Carbon Equipment Code....: TOC3 Test Code.: TOCAV2
Parameter.....: TOC Average Duplicates

| QC | Lab ID | Reagent | Units | QC Result | QC Result | True Value | Orig. Value | QC Calc. | F | * | Limits | Date | Time |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB | 88831 -004 | | mg/L | 0.15800 B | | | | | | | | 07/02/2003 | 0815 |
| LCS | 88831 -005 | I03FSTTC2 | mg/L | 9.09500 | | 10.00000 | | 91 | | % | 80-120 | 07/02/2003 | 0829 |

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| < | Not detected at or above the reporting limit. |
| J | Result is less than the RL, but greater than or equal to the method detection limit. |
| B | Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL. |
| S | Result was determined by the Method of Standard Additions. |
| F | AFCEE: Result is less than the RL, but greater than or equal to the method detection limit. |

Inorganic Flags (Flag Column)

| | |
|---|---|
| ' | ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits. |
| * | LCS, LCD, MD: Batch QC exceeds the upper or lower control limits. |
| + | MSA correlation coefficient is less than 0.995. |
| 4 | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
| E | SD: Serial dilution exceeds the control limits. |
| H | MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit. |
| N | MS, MSD: Spike recovery exceeds the upper or lower control limits. |
| W | AS(GFAA) Post-digestion spike was outside 85-115% control limits. |

Organic Qualifiers (Q - Column)

| | |
|---|---|
| U | Analyte was not detected at or above the stated limit. |
| ND | Compound not detected. |
| J | Result is an estimated value below the reporting limit or a tentatively identified compound (TIC). |
| Q | Result was qualitatively confirmed, but not quantified. |
| C | Pesticide identification was confirmed by GC/MS. |
| Y | The chromatographic response resembles a typical fuel pattern. |
| Z | The chromatographic response does not resemble a typical fuel pattern. |
| E | Result exceeded calibration range, secondary dilution required. |
| F | AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC) |

Organic Flags (Flags Column)

| | |
|---|---|
| B | MB: Batch QC is greater than reporting limit. |
| * | LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits. |
| ' | EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit |
| A | Concentration exceeds the instrument calibration range |
| a | Concentration is below the method Reporting Limit (RL) |
| B | Compound was found in the blank and sample. |
| D | Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D. |
| H | Alternate peak selection upon analytical review |
| I | Indicates the presence of an interfence, recovery is not calculated. |
| M | Manually integrated compound. |

P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

Abbreviations

| | |
|---|---|
| AS | Post Digestion Spike (GFAA Samples - See Note 1 below) |
| Batch | Designation given to identify a specific extraction, digestion, preparation set, or analysis set |
| CAP | Capillary Column CCB Continuing Calibration Blank |
| CCV | Continuing Calibration Verification |
| CF | Confirmation analysis of original |
| C1 | Confirmation analysis of A1 or D1 |
| C2 | Confirmation analysis of A2 or D2 |
| C3 | Confirmation analysis of A3 or D3 |
| CRA | Low Level Standard Check - GFAA; Mercury |
| CRI | Low Level Standard Check - ICP |
| CV | Calilbration Verification Standard |
| Dil Fac | Dilution Factor - Secondary dilution analysis |
| D1 | Dilution 1 |
| D2 | Dilution 2 |
| D3 | Dilution 3 |
| DLFac | Detection Limit Factor |
| DSH | Distilled Standard - High Level |
| DSL | Distilled Standard - Low Level |
| DSM | Distilled Standard - Medium Level |
| EB1 | Extraction Blank 1 |
| EB2 | Extraction Blank 2 |
| EB3 | DI Blank |
| ELC | Method Extracted LCS |
| ELD | Method Extracted LCD |
| ICAL | Initial calibration |
| ICB | Initial Calibration Blank |
| ICV | Initial Calibration Verification |
| IDL | Instrument Detection Limit |
| ISA | Interference Check Sample A - ICAP |
| ISB | Interference Check Sample B - ICAP |
| Job No. | The first six digits of the sample ID which refers to a specific client, project and sample group |
| | Lab ID An 8 number unique laboratory identification |
| LCD | Laboratory Control Standard Duplicate |
| LCS | Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest |
| MB | Method Blank or (PB) Preparation Blank |
| MD | Method Duplicate |
| MDL | Method Detection Limit |
| MLE | Medium Level Extraction Blank |
| MRL | Method Reporting Limit Standard |
| MSA | Method of Standard Additions |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| ND | Not Detected |
| PREPF | Preparation factor used by the Laboratory's Information Management System (LIMS) |
| PDS | Post Digestion Spike (ICAP) |
| RA | Re-analysis of original |
| A1 | Re-analysis of D1 |
| A2 | Re-analysis of D2 |
| A3 | Re-analysis of D3 |
| RD | Re-extraction of dilution |
| RE | Re-extraction of original |
| RC | Re-extraction Confirmation |
| RL | Reporting Limit |
| RPD | Relative Percent Difference of duplicate (unrounded) analyses |
| RRF | Relative Response Factor |

| | |
|---|---|
| RT | Retention Time |
| RTW | Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number |
| SCB | Seeded Control Blank |
| SD | Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL) |
| UCB | Unseeded Control Blank |
| SSV | Second Source Verification Standard |
| SLCS | Solid Laboratory Control Standard(LCS) |
| PHC | pH Calibration Check LCSP pH Laboratory Control Sample |
| LCDP | pH Laboratory Control Sample Duplicate |
| MDPH | pH Sample Duplicate |
| MDFP | Flashpoint Sample Duplicate |
| LCFP | Flashpoint LCS |
| G1 | Gelex Check Standard Range 0-1 |
| G2 | Gelex Check Standard Range 1-10 |
| G3 | Gelex Check Standard Range 10-100 |
| G4 | Gelex Check Standard Range 100-1000 |

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)
Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.

# Chain of Custody Record

WESTON MANAGERS DESIGNERS/CONSULTANTS

218381

(1) Client: Analytics - Steve Knollenberg
WESTON Contact Name: Kathleen Soukup
Site Name: Bucks Harbor
Contact Phone No.: 603 315-4563
W.O.:
WESTON PM: John Hagopian
Laboratory: STL Chicago
Fax No.: 603 656-5401
Lab Batch Number:
Sampler(s): [signature]

(2) Ship To: STL Chicago
Attn:
Phone: 708 534-5200
Fax:
Carrier/Airbill No.:
# of coolers: 1

(13). Analysis Requested

| Type of Container | P | P | P | V |
|---|---|---|---|---|
| Volume | 1 L | 1 L | 1 L | 2 40 ml |
| (3) Turn-Around Time (# of days)——> | data due by 7/2/03 | | | |
| (4) Preservative | 2 | – | – | – |

| Matrix Codes (Box 6) | Preservative (Box 4) |
|---|---|
| SW=Surface Water | 1. HCl |
| GW=Ground Water | 2. $HNO_3$ |
| SD=Sediment | 3. NaOH |
| S=Soil | 4. $H_2SO_4$ |
| A=Air | 5. Methanol |
| PE=Performance Evaluation | 6. Ice |
| O" = Other | 7. Other___ |
| (N=explained in comments) | 8. Other___ |

| (5) Lab ID | (6) Sample ID | (7) Matrix | (8) Sample Type: Comp | (8) Sample Type: Grab | (9) MS/MSD | (10) Sampler Initials | (11) Date Collected | (12) Time Collected | Dissolved Manganese | Sulfate | Alkalinity | Nitrate | COD | Nitrate | TOC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW4-0603 | GW | | X | | KB | 6/18/03 | 0820 | X | X | X | X | X | X | X |
| 2 | MW10-0603 | | | X | | KB | | 0930 | X | X | X | X | X | X | X |
| 3 | MW10-0603-E | | | X | | KB | | 0930 | X | X | X | X | X | X | X |
| 4 | STMW005-0603 | | | X | | AV | | 0815 | X | X | X | X | X | X | X |
| 5 | STMW006-0603 | | | X | | AV | | 0910 | X | X | X | X | X | X | X |

(14) Remarks/Comments
See Project Specific Quality Assurance Project Plan
Dissolved Manganese 6010B (field filtered), Sulfate 375.1
alkalinity 310.1, nitrite/nitrate 352.1, COD HACH 8000,
TOC 415.1 & 9060,

Lab Use Only
Was Temperature Blank Included? Y N
Temp of Cooler when Received, C°
Discrepancies Between Sample Labels and COC Record? Y N
Notes:

| | | |
|---|---|---|
| Custody Seal (CS) Tape was present on outer package | Y | N |
| CS Tape was unbroken on outer package | Y | N |
| CS Tape was present on sample | Y | N |
| CS Tape was unbroken on sample | Y | N |
| Received in good condition | Y | N |
| Labels Indicate Properly Preserved | Y | N |
| Received within Holding Time | Y | N |

| (15) Relinquished by (Signature) | Date | Time | Received by (Signature) | Date | Time |
|---|---|---|---|---|---|
| [signature] | 6/18/03 | 1700 | FEDEX | 6/18/03 | 1700 |
| Relinquished by (Signature) | Date | Time | Received for Laboratory By: (Signature) | Date | Time |
| | | | [signature] | 6/19/03 | 0950 |

See Reverse Side for Standard Instructions
Top two copies of COC to laboratory in cooler (original is returned to WESTON with final data package).
Bottom copy to WESTON PM Project File

Page 1 of 1

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№ 0000322

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 10/02

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 12°C
3) Received in good condition (Y) or N
4) pH checked by: JB 6/18/03
5) Labels checked by: [illegible] 6/18/03

Project#: 10971.217.002 Project: Bucks
Company: Weston Solutions
Contact: Kathleen T. Sullivan
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: (603) 656-5400 PO# 0037759 Quote #
Sampler (Signature): [signature]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW4-0603 | 6/18/03 | 0920 | Ferrous Iron | | | | | X | | | GW | 1 | P | 2 | 49877-1 |
| MW10-0603 | | 0930 | | | | | | X | | | | 1 | P | 2 | -2 |
| MW10-0603-E | | 0930 | | | | | | X | | | | 1 | P | 2 | -3 |
| STMW005-0603 | | 0915 | | | | | | X | | | | 1 | P | 2 | -4 |
| STMW006-0603 | | 0910 | | | | | | X | | | | 1 | P | 1 | -5 |

Received By: Time: | Received By: [signature] Time: 1522 | Received By: Time:
Date: | Date: 6/18/03 | Date:
Relinquished By Sampler: | Relinquished By: [signature] | Relinquished By:

FAX RESULTS? (YES) NO
Fax # (603) 656-5401

Turnaround Request
Standard ☐ Priority ☐
Due Date: | Due Date:

Comments / Instructions:
Ferrous Iron SM3500D
STMW006-0603 arrived w/pH of 3, added 1 pipette 1:1 HCL, brought it down to 1 JB 6/18/03
complete data package by 7/2/03

Client Code: WESTONM

Page 1 of 1

Analytics\AEL Documents\AEL COC

45/47

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 19877 | COOLER NUMBER: 1

CLIENT: Weston | NUMBER OF COOLERS: 1

PROJECT: Bucks | DATE RECEIVED: 6/18/03

**A: PRELIMINARY EXAMINATION:** | DATE COOLER OPENED: 6/18/03

1. Cooler received by(initials) JB | Date Received: 6/18/03
2. Did cooler come with a shipping slip? Hand delivered — Y (N)

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? Y (N)
How many & where: _____ Seal Date: _____ Seal Name: _____
4. Did the custody seals arrive unbroken and intact upon arrival? Y (N/A)
5. COC#: _____
6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N
7. Were custody papers sealed in a plastic bag? Y (N)
8. Did you sign the COC in the appropriate place? (Y) N
9. Was the project identifiable from the COC papers? (Y) N
10. Was enough ice used to chill the cooler? JB 6/18/03 (Y) (N) Temp. of cooler: 12°c

**B. Log-In:** Date samples were logged in: 6/18/03 By: JB

11. Type of packing in cooler(bubble wrap, popcorn) Y (N/A)
12. Were all bottles sealed in separate plastic bags? Y (N)
13. Did all bottles arrive unbroken and were labels in good condition? (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N
15. Did all bottle labels agree with custody papers? (Y) N
16. Were the correct containers used for the tests indicated: (Y) N
17. Were samples received at the correct pH? Y (N) see COC for details
18. Was sufficient amount of sample sent for the tests indicated? (Y) N SLK 6/19/03
19. Were bubbles absent in VOA samples? Y (N/A)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): AVK Date: 6/18/03

analytics environmental laboratory LLC

# SAMPLE RECEIPT
# NON-COMPLIANCE NOTIFICATION
## (SENT VIA FACSIMILE)

DATE 6/18/03 FROM Sample Receipt

FAX CONTACT Kathleen Soukup FAX NUMBER 603-656-5401

CLIENT Weston LAB NUMBER ~~49878~~ 49877
JB 6/18/03

The exceptions noted below were found on the sample(s) received on the attached Chain of Custody (COC) form. These exceptions may render the data results as non-defensible. Analytics will continue to proceed with the analysis of the sample(s) unless notified in writing to stop the analysis. This document may become part of the final report.

**Please check the appropriate box and sign below and fax back to "Sample Receipt" at 603-430-2151.**

## Exceptions:

- [X] Sample(s) not on ice or not at 4°C ± 2°C
- [ ] Sample(s) received unpreserved or not at the proper pH. (pH was adjusted at the laboratory)
- [ ] Sample(s) received in incorrect containers
- [ ] Insufficient sample volume received (Detection limits may be elevated due to this exception)
- [ ] Trip Blank provided in cooler, but not recorded on the chain of custody
- [ ] Other: _____

## Acknowledgment:

- [ ] **Please do not analyze/report Trip Blank, proceed with other analyses**
- [✓] **Proceed with the analysis.**
- [ ] **Please stop the analysis and wait for further instructions.**

**Signed:** angela Vautour **Print Name:** Angela Vautour

**Date:** 6/18/03

# DATA REVIEW CHECKLIST

Site: Bucks Harbor

Analytics Lab Number: 49878

WESTON Sample IDs: TB-061603-01, MW12, MW11, MW13, GAMW001, MW2-4, MW7/E, MW14, STMW001, MW9, MW105, MW140, MW101, MW10/E, STMW002, TW1, STMW003, RB, STMW004, MW102, MW103, MW8, MW5/E, MW1, MW6, RB-061703-01, FAMW001, FAMW002, STMW005, 006, RB-061803-01

| Data Reviewed | Fraction: BPMW001, GTMW001, TSMW001-003 | | | | | | Comments |
|---|---|---|---|---|---|---|---|
| | 524.2 | | | 8260B | | 8015 ethanol ethane | |
| Chain of Custody | ✓ | | | ✓ | | ✓ | |
| Log-in Sheet | ✓ | | | ✓ | | ✓ | |
| Preservation | ✓ | | | ✓ | | ✓ | |
| Holding Time | ✓ | | | ✓ | | ✓ | |
| Trip Blanks / Equip Blank | | | | ✓ ✓ | | | |
| Instrument/Method Blanks (soils/solids) | | | | | | | |
| Instrument/Method Blanks (Aqueous) | ✓ | | | ✓ | | ✓ | |
| MS/MSD - Soil/Solid | | | | | | | |
| MS/MSD - Aqueous | Acetone above limits + MeCl2 below = no action | | | Ethyl + butyl or % rec ether RPD slightly above QC = no action | | ✓ | |
| LCS/LFB | Acetone above QC = no action | | | ✓ | | ✓ | |
| Blank Spikes (BS/BSD) | | | | ethyl + butyl ether % rec slightly above QC in one LCS = no action | | | |
| Lab Duplicates | | | | | | | |
| Field Duplicates | | | | ✓ ✓ | | ✓ | |
| Surrogate Recoveries | ✓ | | | ✓ | | ✓ | |

Calibration MeCl2 in initial RPD > 30 = no action ✓ ✓

✓ = Data reviewed

NA = Not Applicable

Note: Data reviewed but not commented on is considered acceptable.

Internal stds ✓

Qualifiers Used:

No qualifications were applied.

Data Reviewer Initials: DFC

Date: 7/8/03

# DATA REVIEW CHECKLIST

te: Bucks Harbor

Analytic Lab Number: 49855

/ESTON Sample IDs: TB-061203-01, ECOSW1-0603, ECOSW2-4, 2E, RB-061203-01, TB-061203-02, RB-061203-02, ECOSED1, ECOSED ECOSED3-0603, ECOSE ECOSED2-0603-E

| Data Reviewed | Fraction | | | | Comments |
|---|---|---|---|---|---|
| | 8260B waters | 8260B sediment | TOC | | |
| hain of Custody | ✓ | ✓ | ✓ | | |
| og-in Sheet | ✓ | ✓ | ✓ | | |
| reservation | ✓ | ✓ | ✓ | | |
| lolding Time | ✓ | ✓ | ✓ | | |
| ~~rip Blanks~~ RB | ✓ | | | | |
| nstrument/Method lanks (soils/solids) | | ✓ | ✓ | | |
| nstrument/Method lanks (Aqueous) | ✓ | | | | |
| MS/MSD - Soil/Solid | | | | | |
| MS/MSD - Aqueous | 2 compds above QC limits = no action | | | | |
| LCS/LFB | 1 compd above QC = no action | | | | |
| Blank Spikes (BS/BSD) | | | | | |
| Lab Duplicates | | | | | |
| Field Duplicates | | | | | |
| Surrogate Recoveries | ✓ | J'/UJ' | | | |

• several compds below QC limits = no action since LCS met criteria

• Bromomethane below QC limits ✓ ~~J'/UJ' = estimate all non detected bromomethane results in all soil samples~~

Calibration/IS ✓

all 3 surrogates low in sample ECOSED2-0603 & -E Estimate all results

✓ = Data reviewed

NA = Not Applicable

Note: Data reviewed but not commented on is considered acceptable.

Qualifiers Used:

* Note = High reporting limits - make sure goals of project were met

Data Reviewer Initials: DKG

Date: 7/9/03

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

July 28, 2003
Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

RECEIVED
JUL 31 2003

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49794 Rev 1**

Dear Ms. Soukup

Enclosed please find our revised narrative for Bucks Harbor Report 49794 that addresses Methylene chloride detection in the laboratory blank analyzed on 06/06/03. This revised narrative should replace pages 000001 and 000002 of the original report.

If you have any questions or I can be of further assistance please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

Bucks Data

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

July 28, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49794 Rev 1**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 524.2, Ethane, Ethene (EE) by EPA Method 8015B.
Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
EE Form 1 Sample Data Results
Chromatograms
EE Form 2 Surrogate Recoveries
EE Form 3 MS/MSD and LCS Recoveries
EE Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
EE Form 6 Initial Calibration Data (equiv..) Response Factor Report
EE Form 7 Continuing Calibration Check (equiv.)
EE Form 8 Retention Time Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

000001

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com



## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Volatile Organics:**
2,2-Dichloropropane was above the 70-130 % R limits in the MS/MSD analyzed on sample 49794-10 (DW-39-0603-01-A) on 06/05/03. This MS/MSD also had two RPDs above the acceptance criteria. (See Form III) These compounds were not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506053B2)had high recovery for Acetone and Tetrahydrofuran at 158% and 133% respectively. The LFB/CC (L506053B3) was reanalyzed with Acetone recovery still high at 163%, Tetrahydrofuran was in control. These analytes were not detected in any samples associated with this QC.

The matrix spike/matrix spike duplicate analyzed on sample 49794-30 (DW05-0603-01-A) had an RPD above the acceptance criteria of 15% for t-Butyl alcohol (TBA). (See Form III) t-Butyl alcohol was not detected in this SDG and results were reported without qualification.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506053I2) had high recovery for three compounds. (See Form III) The LFB/CC (L506053I3) was reanalyzed with similar results. These analytes were not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506063I) had high recovery for three compounds. (See Form III). The matrix spike/matrix spike duplicate analyzed on sample 49794-11 (DW06-0603-01-A) had low recoveries for methylene chloride. (See Form III) These analytes were not detected in any samples associated with this QC.

The Method Blank (B506063I2) analyzed 06/06/03 had Methylene chloride detected at 1.1 ug/L. None of the samples in this SDG had Methylene chloride detected and results were reported without qualification.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L506063I2) had high recovery for three compounds. (See Form III) The LFB/CC (L506063I3) was reanalyzed with similar results. These analytes were not detected in any samples associated with this QC.

**Ethane and Ethene:**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

000002

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 4.1
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: _____

Project#: 10976.217.002 Project: Bucks

Company: **Weston Solutions**

Contact: (Catherine Saukup)

Address: **1 Wall Street**

**Manchester, NH 03101-1501**

Phone: 603 656-5574 PO# Quote #

Sampler (Signature):

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key
P=plastic G=glass

| Station Identification | Sample Date | Sample Time | Analysis | Preservation: Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-070103-01 | 7/1/03 | 1230 | VOC S24.2 | | | | | X | | | W | 2 | V | | |
| WY03-0703-01-A | ↓ | 1235 | ↓ | | | | | X | | | DW | 4 | V | | |

FAX RESULTS? YES NO
Fax # 603 656-5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOC, S24.2
(1) Part of Residential Program for Bucks

Client Code: WESTONM

Page 1 of 1

| Received By: | Time: 1335 | Date: 7.2.03 | Relinquished By Sampler: |
|---|---|---|---|
| Received By: | Time: | Date: | Relinquished By: |
| Received By: | Time: | Date: | Relinquished By: |

**Taylor, Kathleen**

**From:** Stephen Knollmeyer [steveknollmeyer@analyticslab.com]
**Sent:** Friday, July 18, 2003 12:15 PM
**To:** Taylor, Kathleen
**Subject:** RE: Bucks Residential Data

KT,

We got the data off the instrument today. We ran two more vials. The numbers confirm as listed below.

49794-20Rerun1
trans-1,2-DCE 0.36J ug/L
1,1-DCA 0.40J
cis-1,2-DCE 5.1
1,1,1-TCA 0.77
TCE 2.1

49794-20Rerun2
trans-1,2-DCE 0.38J ug/L
1,1-DCA 0.40J
cis-1,2-DCE 5.2
1,1,1-TCA 0.77
TCE 2.3

I was not planning on charging for these reruns, nor was I planning on reporting them if the data confirmed the original run.

Do you want these reported? With a data package?

Steve

At 11:14 AM 7/18/03 -0400, you wrote:

> Bonjourno,
>
> Regarding below...can you please fax the prelim results when they are ready, and then send out the actual data package as per usual. I'm super curious.
>
> Thanks
> KT
>
> > -----Original Message-----
> > From: Stephen Knollmeyer [mailto:steveknollmeyer@analyticslab.com]
> > Sent: Tuesday, July 15, 2003 3:10 PM
> > To: Taylor, Kathleen
> > Subject: RE: Bucks Residential Data
> >
> > KT,
> >
> > Thanks, we will get that sample on and some data back to you in a 1-2 days. We are not running 524's today so it probably will go on tomorrow.
> >
> > Talk to you soon.

Steve

At 02:53 PM 7/15/03 -0400, you wrote:

> Hey Steve,
>
> Welcome back from your sailing adventure!
>
> Yes, please rerun 49794-20. We're changing out all the filters up there anyway, but i'd still like to see the sample rerun. I just don't think we actually had breakthrough...it could have been a sampling error too, but I didn't remember anything odd at the house during sampling.
> Thanks!
> KT
> -----Original Message-----
> From: Stephen Knollmeyer [mailto:steveknollmeyer@analyticslab.com]
> Sent: Tuesday, July 15, 2003 2:50 PM
> To: Taylor, Kathleen
> Cc: melissa
> Subject: Re: Bucks Residential Data
>
> KT,
>
> Everything checks out OK with the results and reporting. I looked at the vials and we took one vial from all three samples for the analysis. The labels on the vials match the sample IDs and the raw data matches the data reported.
>
> We did not have any multiple runs of any of the three samples. We have sample that has been refrigerated; do you want us to rerun 49794-20 (between filter sample) to confirm the data before you switch out the filters??
>
> Steve
>
> At 04:30 PM 7/10/03 -0400, you wrote:
>
> > Hey there,
> > I was taking a quick peak through the residential data for bucks and noticed
> > something that I hope is an error.
> >
> > For Analytics # 49794 lab package, WESTON sample ID DW23-0603-02-A (your
> > 49794-20), the data was very similar to DW23-0603-01-A and DW23-0603-01-B
> > (duplicate of the second sample mentioned). The first sample i mentioned is
> > between the charcoal filters at this house, and therefore ususally clean
> > unless the filters are spent. I'm hoping the results are a mistake, and
> > maybe one of the vials from the second or third sample listed was analyzed
> > by mistake. Can you please take a look and see if anything is out of wack.
> >
> > Thanks!
> > Kathleen

# DATA REVIEW CHECKLIST

Site: Bucks Harbor

Analytics Lab Number: 49794

WESTON Sample IDs: DW32-0603-01-A, DW12, DW40, DW33, DW28, DW25, DW31, DW29, DW36, DW06, DW12, DW01, WY03, DW13, DW22, DW23, DW24, DW30, DW09, DW04, DW08, DW07, DW34, DW05, DW03/DW03-B, DW04-B, DW13, DW38, DW15-17, DW19-21, TB-01

| Data Reviewed | Fraction | | | | | | Comments |
|---|---|---|---|---|---|---|---|
| | | 524.2 | | | 8015 etchene | ethane | |
| Chain of Custody | | ✓ | | | ✓ | | |
| Log-in Sheet | | ✓ | | | ✓ | | |
| Preservation | | ✓ | | | ✓ | | |
| Holding Time | | ✓ | | | ✓ | | |
| Trip Blanks | | ✓ | | | | | |
| Instrument/Method Blanks (soils/solids) | | | | | | | |
| Instrument/Method Blanks (Aqueous) | B50406312 MeCl2 = 1.1 ug/L | | | | ✓ | | |
| MS/MSD - Soil/Solid | | | | | | | |
| MS/MSD - Aqueous | MeCl2 = 1 Methylethylketone RPD > QC limits = no action | | | | ✓ | | |
| ~~LCS/LFB~~ | MSD % Rec 2,2-dichloropropane + RPD > QC = no action since not detected in sample | | | | | | |
| ~~Blank Spikes (BS/BSD)~~ LCS/LCSD | Bromomethane, Acetone + Tetrahydrofuran % Rec > QC limits = no action | | | | ✓ | | |
| Lab Duplicates | t-butyl alcohol | | | | | | |
| Field Duplicates | | ✓ | | | ✓ | | |
| Surrogate Recoveries | | ✓ | | | all above ~~60%~~ 60-110% ~~= not sure of QC limits~~ | | |

Initial Calib = MeCl2 > 30% RSD

✓ = Data reviewed

NA = Not Applicable

CCVs had 2 to 3 cmpds (acetone/tetrahydrofuran) above QC limits = no action since cmpds were not detected in samples

Note: Data reviewed but not commented on is considered acceptable.

Internal Stds

Qualifiers Used:

No qualifications were applied.

Data Reviewer Initials: DFG

Date: 7/17 + 7/16/03

- B's are deeps

Bucks

10971.217.002.2012

Residential Data

Thanks! KT

**Weston Solutions, Inc.**
One Wall Street
Manchester, NH 03101-1501
603-656-5400 • Fax 603-656-5401

| DATE: | 17-Oct-03 | JOB NO.: | 10971.217.002.2017 |
|---|---|---|---|
| ATT.: | **Mr. Robert Leitch** | | |
| RE: | Bucks Harbor AFRTS Site | | |
| DCN | BUCKS2-101403-AAHW | | |

# LETTER OF TRANSMITTAL

**TO:**

U.S. Army Corps of Engineers – New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

**WE ARE SENDING YOU:** [x] **Attached** [ ] **Under Separate Cover** **VIA** FedEx **THE FOLLOWING ITEMS:**

- [ ] Prints
- [ ] Specifications
- [ ] Shop Drawings
- [ ] Plans
- [ ] Copy of Letter
- [x] Other (explain) Former Bucks Harbor AFRTS Draft Remedial Investigation Report
- [ ] Samples
- [ ] Change Order

| Copies | Date | No. | Description |
|---|---|---|---|
| 2 | 10/17/03 | 1 | Draft Remedial Investigation Report |
| 1 | 10/17/03 | 1 | Laboratory Analytical Data Package (Appendix D) |
| | | | |
| | | | |
| | | | |

**THESE ARE TRANSMITTED as checked below.**

- [ ] For Approval
- [ ] For Your Use
- [ ] As Requested
- [x] For Review & Comment
- [ ] For Your Information
- [ ] Approved
- [ ] Approved as Corrected
- [ ] Revise & Resubmit
- [ ] Rejected
- [ ] Returned After Loan to Us
- [ ] Resubmit — Copies for Approval
- [ ] Submit — Copies for Distribution
- [ ] Return — Corrected Prints
- [ ] For BIDS Due _____

**REMARKS:**

Copies will be sent under separate cover to MEDEP (2), the RAB (Phil Rose), the Town of Machiasport, and Maine Rural Water Associates.

**COPIES:**

**SIGNED:** James P. Ricker

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

June 27, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49878**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for Volatile Organic Compounds using EPA Method 8260B and Ethane/Ethene (EE) using a modified EPA Method 8015B.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
EE Form 1 Sample Data Results
Chromatograms
EE Form 2 Surrogate Recoveries
EE Form 3 MS/MSD and LCS Recoveries
EE Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
EE Form 6 Initial Calibration Data (equiv..) Response Factor Report
EE Form 7 Continuing Calibration Check (equiv.)
EE Form 8 Retention Time Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**524 Volatile Organics:**
Acetone was above the 70-130 % R limits in the LCS analyzed on 6/19/03 (L506193B) at 178% recovery. Acetone had high recovery and Methylene Chloride had low recovery in the MS/MSD analyzed on sample 49878-13 (TW1-0603) (see Form 3). These compounds were not detected in any samples associated with this QC.

**8260 Volatile Organics:**
Ethyl t-butyl ether had RPD above the 15% limit at 16% in the MS/MSD analyzed on sample 49878-2 (MW012-0603). The % recoveries for Ethyl t-butyl ether in the MS/MSD were in control. The LCS had high recovery at 136% with control limits of 70-130. This compound was not detected in any of the samples associated with this QC.

Ethyl t-butyl ether had recoveries above the 70-130% limits at 131% and 131%.% in the MS/MSD analyzed on sample 49878-22 (MW01-0603). The % recoveries for Ethyl t-butyl ether in the MS/MSD were in control. The LCS had high recovery at 136% with control limits of 70-130. This compound was not detected in any of the samples associated with this QC.

**Ethane and Ethene:**
No QC deviations.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49878**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 June 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49878-1 | 06/16/03 | TB-061603-01 | EPA 8260 Volatile Organics | |
| 49878-2 | 06/16/03 | MW12-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW12-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-3 | 06/16/03 | MW11-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW11-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-4 | 06/16/03 | MW13-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW13-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-5 | 06/16/03 | GAMW001-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | GAMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-6 | 06/16/03 | MW14-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW14-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-7 | 06/16/03 | STMW001-0603 | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

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If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 6/27/2003

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/16/03 | STMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-8 | 06/16/03 | MW9-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW9-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-9 | 06/16/03 | MW105-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW105-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-10 | 06/16/03 | MW140-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW140-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-11 | 06/16/03 | MW101-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | MW101-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-12 | 06/16/03 | STMW002-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | STMW002-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-13 | 06/16/03 | TW1-0603 | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49878-14 | 06/16/03 | STMW003-0603 | EPA 8260 Volatile Organics | |
| | 06/16/03 | STMW003-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-15 | 06/16/03 | RB-061603-01 | EPA 8260 Volatile Organics | |
| 49878-16 | 06/17/03 | STMW004-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | STMW004-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-17 | 06/17/03 | MW102-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW102-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-18 | 06/17/03 | MW103-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW103-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-19 | 06/17/03 | MW8-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW8-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-20 | 06/17/03 | MW5-0603 | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| | 06/17/03 | MW5-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-21 | 06/17/03 | MW5-0603-E | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW5-0603-E | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-22 | 06/17/03 | MW1-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW1-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-23 | 06/17/03 | MW6-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW6-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-24 | 06/17/03 | RB-061703-01 | EPA 8260 Volatile Organics | |
| 49878-25 | 06/17/03 | FAMW001-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | FAMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-26 | 06/17/03 | FAMW002-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | FAMW002-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49878-27 | 06/17/03 | BPMW001-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | BPMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-28 | 06/17/03 | GTMW001-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | GTMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-29 | 06/17/03 | TSMW001-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | TSMW001-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-30 | 06/17/03 | TSMW002-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | TSMW002-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-31 | 06/17/03 | TSMW003-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | TSMW003-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-32 | 06/17/03 | MW3-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW3-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49878-33 | 06/17/03 | MW2-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW2-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-34 | 06/17/03 | MW7-0603 | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW7-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-35 | 06/17/03 | MW7-0603-E | EPA 8260 Volatile Organics | |
| | 06/17/03 | MW7-0603-E | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-36 | 06/18/03 | MW4-0603 | EPA 8260 Volatile Organics | |
| | 06/18/03 | MW4-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-37 | 06/18/03 | MW10-0603 | EPA 8260 Volatile Organics | |
| | 06/18/03 | MW10-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-38 | 06/18/03 | MW10-0603-E | EPA 8260 Volatile Organics | |
| | 06/18/03 | MW10-0603-E | Methane, Ethane and Ethene in Aqueous Matrices | |

**Sample Receipt Exceptions:** None

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| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49878-39 | 06/18/03 | STMW005-0603 | EPA 8260 Volatile Organics | |
| | 06/18/03 | STMW005-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-40 | 06/18/03 | STMW006-0603 | EPA 8260 Volatile Organics | |
| | 06/18/03 | STMW006-0603 | Methane, Ethane and Ethene in Aqueous Matrices | |
| 49878-41 | 06/18/03 | RB-061803-01 | Electronic Data Deliverable | |
| | 06/18/03 | RB-061803-01 | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LAB QC

**SAMPLE DATA**

**Lab Sample ID:** B506193I
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 92 % | 1,2-Dichlorobenzene-d4 | 91 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature Melissa A Kuller

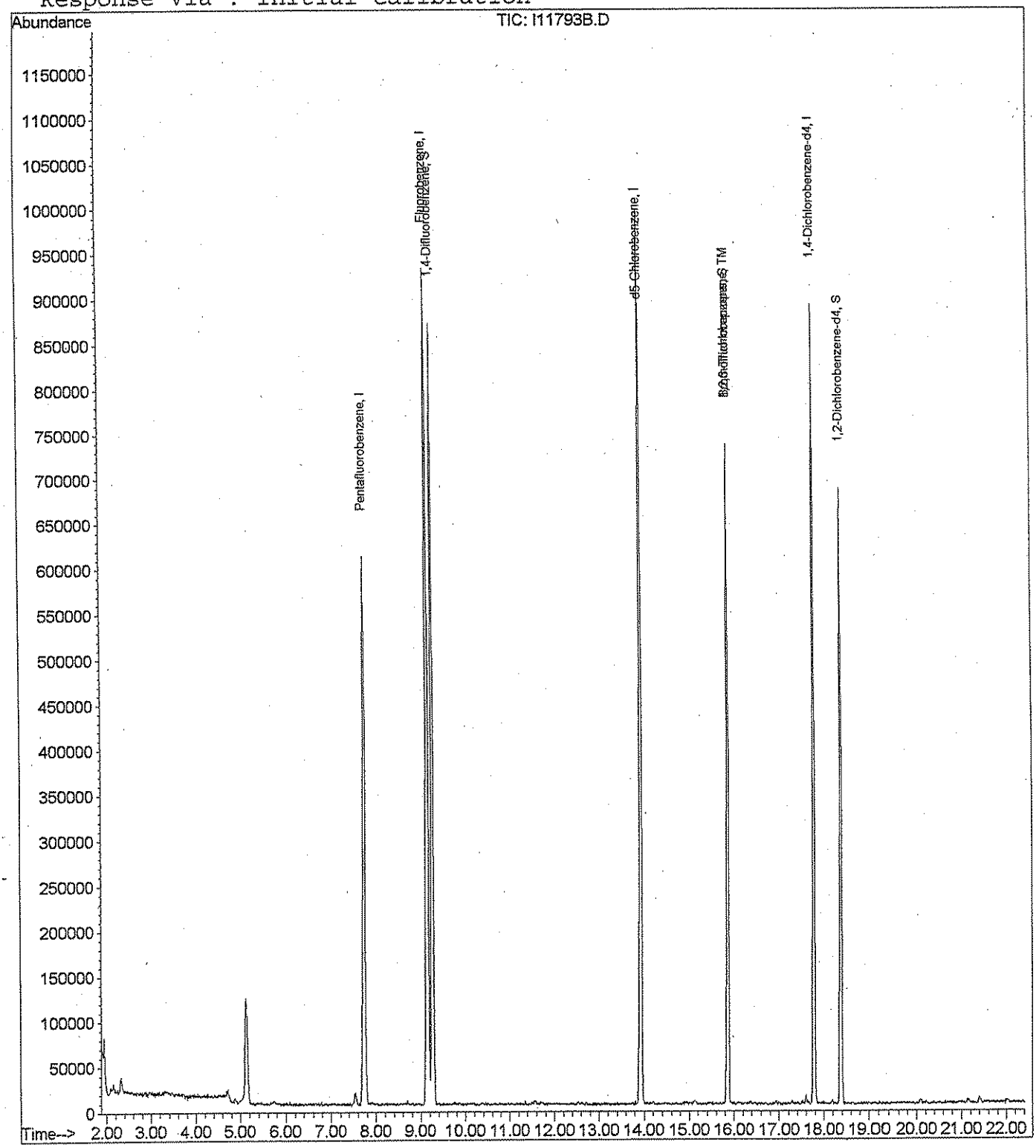
Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903-I\I11793B.D
Acq On : 19 Jun 2003 1:13 pm
Sample : B506193I
Misc : 25000,,VIAL BLANK JB 6/19/03
MS Integration Params: rteint.p
Quant Time: Jun 19 13:52 2003

Vial: 4
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



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analytics environmental laboratory LLC

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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TW1-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-13
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | **2.4** |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 % | Bromofluorobenzene | 96 % | 1,2-Dichlorobenzene-d4 | 93 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature

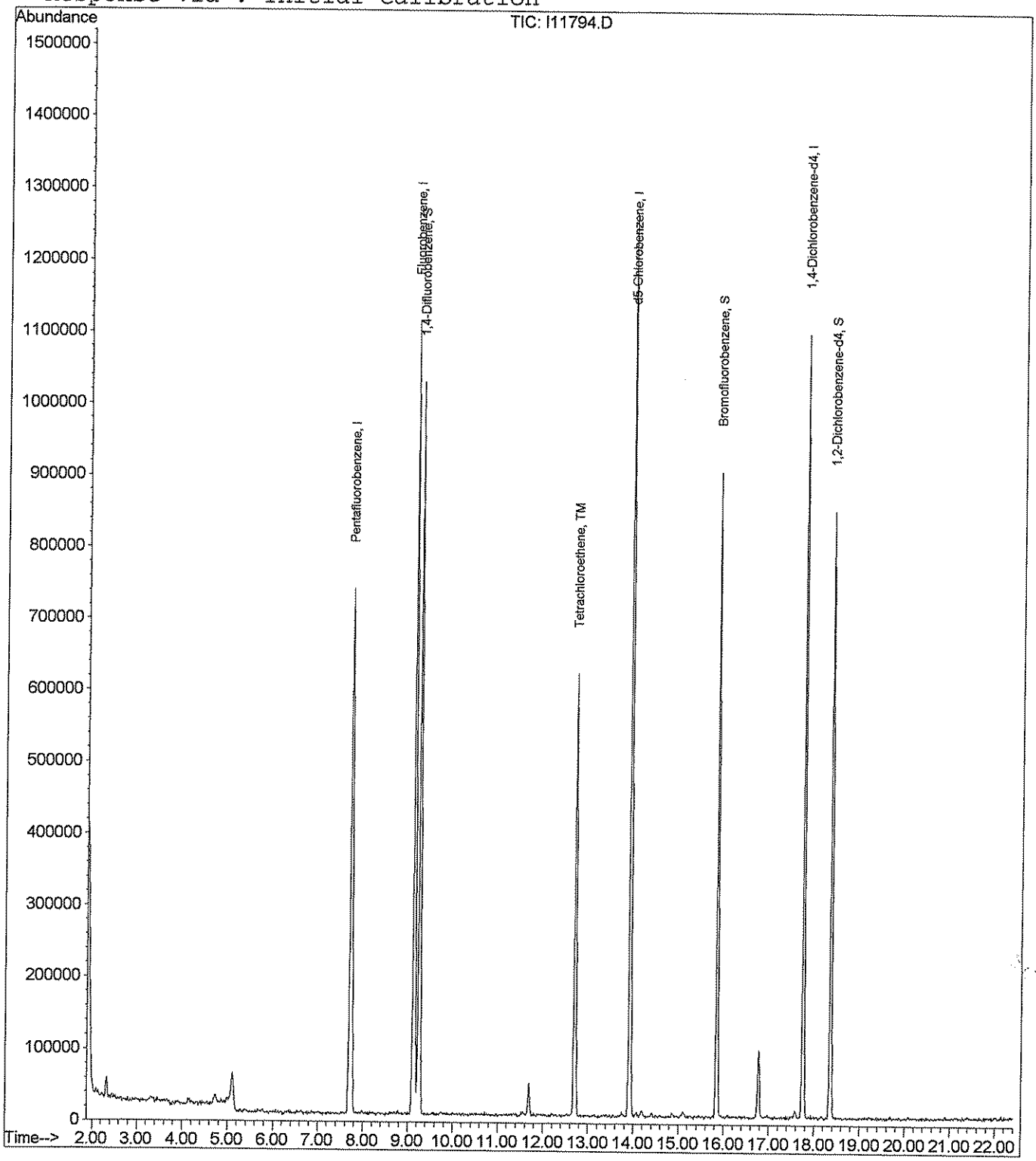
Quantitation Report

Data File : C:\HPCHEM\1\data\061903-i\I11794.D
Acq On : 19 Jun 2003 2:16 pm
Sample : 49878-13
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 19 14:38 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: I11756T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/18/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0952

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 98 | 95 | 95 | 0 |
| 02 | 0.5PPB STD | 101 | 99 | 104 | 0 |
| 03 | 1.2PPB STD | 101 | 94 | 100 | 0 |
| 04 | 4.8PPB STD | 102 | 93 | 99 | 0 |
| 05 | 8PPB STD | 99 | 96 | 104 | 0 |
| 06 | 16PPB STD | 103 | 109 | 101 | 0 |
| 07 | 32PPB STD | 99 | 104 | 101 | 0 |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
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| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: I11791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L506193I | 100 | 96 | 97 | 0 |
| 02 | B506193I | 98 | 92 | 91 | 0 |
| 03 | 49878-13 | 98 | 96 | 93 | 0 |
| 04 | 49878-13,MS | 99 | 104 | 106 | 0 |
| 05 | 49878-13,MSD | 100 | 108 | 108 | 0 |
| 06 | ZZZZZ | 98 | 98 | 94 | 0 |
| 07 | ZZZZZ | 100 | 98 | 97 | 0 |
| 08 | ZZZZZ | 98 | 94 | 94 | 0 |
| 09 | ZZZZZ | 100 | 96 | 95 | 0 |
| 10 | ZZZZZ | 98 | 96 | 94 | 0 |
| 11 | ZZZZZ | 98 | 95 | 93 | 0 |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
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| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 | Quote #: | SDG: 49878

BFB File ID: I11791T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: I | BFB Injection Date: 6/19/03

GC Column: RTX-502.2 | ID: 0.25 (mm) | BFB Injection Time: 1146

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506193B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.2 | 97 | | 70-130 |
| Chloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.3 | 110 | | 70-130 |
| Bromomethane | 1.2 | 1.3 | 107 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 98 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 7.3 | 121 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 101 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 99 | | 70-130 |
| Acetone | 1.2 | 2.1 | 178 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 100 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.2 | 101 | | 70-130 |
| Methylene Chloride | 1.2 | 1.0 | 84 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.3 | 94 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.2 | 103 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.2 | 98 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.2 | 102 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.1 | 95 | | 70-130 |
| Chloroform | 1.2 | 1.4 | 115 | | 70-130 |
| Bromochloromethane | 1.2 | 1.2 | 102 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.3 | 108 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.4 | 113 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| Benzene | 1.2 | 1.3 | 109 | | 70-130 |
| Trichloroethene | 1.2 | 1.4 | 118 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromomethane | 1.2 | 1.3 | 104 | | 70-130 |
| 2-Hexanone | 1.2 | 1.1 | 94 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 96 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 109 | | 70-130 |
| Toluene | 1.2 | 1.3 | 108 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.3 | 110 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.5 | 122 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.3 | 104 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.2 | 103 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

BFB File ID: I11791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L506193B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 111 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 112 | | 70-130 |
| Styrene | 1.2 | 1.3 | 104 | | 70-130 |
| Bromoform | 1.2 | 1.3 | 105 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 107 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 110 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 108 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 107 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.2 | 101 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.4 | 116 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 79 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.4 | 118 | | 70-130 |
| Naphthalene | 1.2 | 0.9 | 74 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 0.9 | 77 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 1 out of 70 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49878

BFB File ID: I11791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-13

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | U | 4.7 | 98 | | 4.6 | 96 | | 2 | | 15 | 70-130 |
| Chloromethane | 4.8 | U | 4.9 | 101 | | 5.0 | 105 | | 4 | | 15 | 70-130 |
| Vinyl Chloride | 4.8 | U | 4.3 | 89 | | 4.2 | 86 | | 3 | | 15 | 70-130 |
| Bromomethane | 4.8 | U | 4.7 | 97 | | 4.8 | 101 | | 4 | | 15 | 70-130 |
| Chloroethane | 4.8 | U | 4.5 | 94 | | 4.6 | 96 | | 2 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 24.0 | U | 25.8 | 108 | | 27.8 | 116 | | 7 | | 15 | 70-130 |
| Trichlorofluoromethane | 4.8 | U | 4.8 | 100 | | 4.9 | 101 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | U | 4.9 | 102 | | 4.8 | 101 | | 1 | | 15 | 70-130 |
| Acetone | 4.8 | U | 6.7 | 139 | * | 6.6 | 137 | * | 2 | | 15 | 70-130 |
| 1,1-Dichloroethene | 4.8 | U | 4.8 | 100 | | 4.8 | 100 | | 0 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 4.8 | U | 4.85 | 101 | | 4.9 | 101 | | 0 | | 15 | 70-130 |
| Methylene Chloride | 4.8 | U | 2.3 | 42 | * | 3.6 | 69 | * | 44 | * | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 9.6 | U | 9.1 | 94 | | 9.4 | 98 | | 4 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 4.8 | U | 4.9 | 103 | | 5.0 | 104 | | 1 | | 15 | 70-130 |
| 1,1-Dichloroethane | 4.8 | U | 5.0 | 103 | | 5.0 | 104 | | 0 | | 15 | 70-130 |
| Methyl ethyl ketone | 4.8 | U | 5.6 | 117 | | 5.4 | 112 | | 4 | | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 4.8 | U | 4.8 | 99 | | 4.7 | 99 | | 1 | | 15 | 70-130 |
| 2,2-Dichloropropane | 4.8 | U | 5.4 | 113 | | 5.4 | 113 | | 0 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | U | 5.2 | 108 | | 5.3 | 110 | | 2 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 4.8 | U | 4.6 | 96 | | 4.7 | 98 | | 3 | | 15 | 70-130 |
| Chloroform | 4.8 | U | 5.0 | 105 | | 5.1 | 107 | | 2 | | 15 | 70-130 |
| Bromochloromethane | 4.8 | U | 5.2 | 107 | | 5.1 | 106 | | 1 | | 15 | 70-130 |
| Tetrahydrofuran | 4.8 | U | 5.7 | 120 | | 5.8 | 121 | | 1 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | U | 4.9 | 102 | | 4.9 | 103 | | 1 | | 15 | 70-130 |
| 1,1-Dichloropropene | 4.8 | U | 5.2 | 107 | | 5.2 | 108 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 4.8 | U | 5.2 | 109 | | 5.3 | 110 | | 1 | | 15 | 70-130 |
| 1,2-Dichloroethane | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 0 | | 15 | 70-130 |
| Benzene | 4.8 | U | 5.1 | 105 | | 5.0 | 105 | | 0 | | 15 | 70-130 |
| Trichloroethene | 4.8 | U | 5.7 | 120 | | 5.6 | 117 | | 2 | | 15 | 70-130 |
| 1,2-Dichloropropane | 4.8 | U | 5.2 | 108 | | 5.3 | 109 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 4.8 | U | 5.2 | 108 | | 5.2 | 108 | | 0 | | 15 | 70-130 |
| Dibromomethane | 4.8 | U | 5.0 | 105 | | 5.3 | 110 | | 5 | | 15 | 70-130 |
| 2-Hexanone | 4.8 | U | 5.1 | 107 | | 5.6 | 116 | | 8 | | 15 | 70-130 |
| Methyl isobutyl ketone | 4.8 | U | 5.1 | 107 | | 5.3 | 111 | | 3 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | U | 5.6 | 117 | | 5.7 | 118 | | 1 | | 15 | 70-130 |
| Toluene | 4.8 | U | 5.2 | 109 | | 5.2 | 108 | | 1 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | U | 5.6 | 117 | | 5.6 | 116 | | 1 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | U | 5.3 | 111 | | 5.6 | 116 | | 4 | | 15 | 70-130 |
| 1,3-Dichloropropane | 4.8 | U | 5.3 | 111 | | 5.4 | 112 | | 0 | | 15 | 70-130 |
| Tetrachloroethene | 4.8 | 2 | 8.2 | 124 | | 8.1 | 121 | | 1 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49878

BFB File ID: I11791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-13

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 4.8 | U | 5.2 | 108 | | 5.1 | 107 | | 0 | | 15 | 70-130 |
| 1,2-Dibromoethane | 4.8 | U | 5.4 | 113 | | 5.4 | 113 | | 0 | | 15 | 70-130 |
| Chlorobenzene | 4.8 | U | 5.2 | 107 | | 5.2 | 107 | | 0 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | U | 5.4 | 112 | | 5.4 | 113 | | 0 | | 15 | 70-130 |
| Ethylbenzene | 4.8 | U | 5.1 | 106 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| m,p-Xylene | 9.6 | U | 9.9 | 103 | | 10.0 | 104 | | 2 | | 15 | 70-130 |
| o-Xylene | 4.8 | U | 4.9 | 103 | | 5.2 | 107 | | 4 | | 15 | 70-130 |
| Styrene | 4.8 | U | 4.1 | 85 | | 4.5 | 93 | | 9 | | 15 | 70-130 |
| Bromoform | 4.8 | U | 5.0 | 103 | | 5.0 | 104 | | 1 | | 15 | 70-130 |
| Isopropylbenzene | 4.8 | U | 5.0 | 104 | | 5.0 | 104 | | 0 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | U | 5.3 | 111 | | 5.3 | 110 | | 1 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | U | 5.1 | 107 | | 5.2 | 109 | | 2 | | 15 | 70-130 |
| n-Propylbenzene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| Bromobenzene | 4.8 | U | 5.2 | 108 | | 5.3 | 110 | | 2 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | U | 4.7 | 98 | | 5.0 | 104 | | 6 | | 15 | 70-130 |
| 2-Chlorotoluene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 0 | | 15 | 70-130 |
| 4-Chlorotoluene | 4.8 | U | 5.1 | 107 | | 5.2 | 108 | | 1 | | 15 | 70-130 |
| tert-butylbenzene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | U | 4.7 | 99 | | 5.1 | 107 | | 8 | | 15 | 70-130 |
| sec-butylbenzene | 4.8 | U | 5.3 | 111 | | 5.3 | 111 | | 0 | | 15 | 70-130 |
| p-isopropyltoluene | 4.8 | U | 5.0 | 105 | | 5.1 | 105 | | 1 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | U | 5.3 | 111 | | 5.4 | 112 | | 1 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | U | 5.1 | 106 | | 4.9 | 102 | | 4 | | 15 | 70-130 |
| n-butylbenzene | 4.8 | U | 5.0 | 104 | | 4.9 | 103 | | 1 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | U | 5.0 | 104 | | 5.0 | 104 | | 0 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | U | 5.0 | 104 | | 4.9 | 103 | | 1 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | U | 5.3 | 111 | | 5.3 | 110 | | 0 | | 15 | 70-130 |
| Hexachlorobutadiene | 4.8 | U | 5.6 | 117 | | 5.8 | 120 | | 2 | | 15 | 70-130 |
| Naphthalene | 4.8 | U | 4.7 | 97 | | 4.8 | 99 | | 2 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 4.8 | U | 5.1 | 105 | | 5.2 | 109 | | 3 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 1 out of 70 outside limits
Spike Recovery: 4 out of 140 outside limits

Comments: _____

_____

**GC/MS Volatiles Instrument: I**

IS only V4519 Exp:
~~SS+IS V4502~~ Exp: ~~6~~ 7.2.03
6.18.03
**Voltage** 1706
**Threshold** 102

Jan 061803-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-I-061803-1-JR | | | | | | | |
| 1 | V506183 | Blank | 25mL | | | I11755 | Jan | |
| 2 | | BFB 25ng/mL V4487 | | | | 56 | T | |
| 3 | | 0.1 PPB 0.125mL V4504 V4512 | | | | 57 | SI | |
| 4 | | 0.5 PPB 0.625mL | | | | 58 | SI | |
| 5 | | 1.2 PPB 1.5mL | | | | 59 | SI | |
| 6 | | 4.8 PPB 6mL | | | | 60 | SI | |
| 7 | | 8 PPB 10mL | | | | 61 | SI | |
| 8 | | 16 PPB 20mL | | | | 62 | SI | |
| 9 | | 32 PPB 40mL | | | | 63 | SI | |
| 10 | | Blank | | | | 64 | | |
| 11 | | BFB 25ng/mL V4487 V4506 | 25mL | | √ | 65 | T | |
| 12 | | L506183I V4517 | | | √ CM ↑, BM ↑ | 66 | Q | |
| 13 | | L506183I2 ↓ | | | √ CM, BM OK | 67 | Q | |
| 14 | | B506183I | | | √ | 68 | B | |
| 15 | | 49863-24 | | | √ | 69 | | |
| 16 | | 49836-26 | | | √ | 70 | | |
| 17 | | -31 | | | √ | 71 | | |
| 18 | | -31 MS | | | TBA RPD ↑ | 72 | SP | |
| 19 | | -31 MSD | | | All else OK | 73 | SP | |
| 20 | | -33 | | | √ | 74 | | |
| 21 | | -34 | | | √ | 75 | | |
| 22 | | -35 | | | √ | 76 | | |
| 23 | | -36 | | | √ | 77 | | |
| 24 | | -37 | | | √ | 78 | | |
| 25 | | -38 | | | √ | 79 | | |
| 26 | | -39 | | | √ | 80 | | |
| 27 | | -40 | | | √ | 81 | | |
| 28 | | -41 | | | √ | 82 | | |
| 29 | | -42 | | | √ | 83 | | |
| 30 | | 49863-18 | | | √ | 84 | | |
| ~~31~~ | | | | | Jan 6.18.03 | ~~85~~ | | |

(Cont.)

Revision: 04/30/02

000020

**GC/MS Volatiles Instrument: I**

IS only Exp:

SS+IS V4519 Exp: 7-2-03

**Voltage** 1706

**Threshold** 100

Jan 061803-I (CONT-)

| Tube | Method | Sample 6.18.03 | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V5061803I | 49863+820 | 25mL | | √ | I11785 | Jan | |
| 32 | ↓ | 49862-1 | ↓ | | √ | 86 | ↓ | |
| 33 | | -2 | | | √ | 87 | | |
| 34 | | -3 | | | √ | 88 | | |
| 35 | ↓ | -4 | ↓ | | Syringe error RR 25mL | 89 | ↓ | |

MG 6/19/03

Revision: 04/30/02

**GC/MS Volatiles Instrument: I**

IS only — Exp: —
SS+IS V4519 Exp: 7/2/03
**Voltage** 1706
**Threshold** 100

061903-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | W-I-061903-1-MT | | | | | | |
| 1 | V506183I | Blank | 25mL | | | I11790 | MT | NA |
| 2 | | BFB 25ng 1ml V4487 V4506 | | | V1420 | 91T | | 1146 |
| 3 | | 1506193I 1.5ml V4517 | | | ✓ Acetone ↑ 178% | 92Q | | |
| 4 | | B506193I | | | ✓ Vial blank JB 6/19/03 | 93B | | |
| 5 | | 49878-13 | | | ✓ | 94 | | |
| 6 | | -13MS | | | Acetone ↑, RMS Mel2, CD ↑ | 95SP | | |
| 7 | | -13MSD | | | | 96SP | | |
| 8 | | Blank | | | | 97 | | NA |
| 9 | | 49847-4 | | ✓ | | 98 | | <2 |
| 10 | | 49860-1 | | ✓ | | 99 | | <2 |
| 11 | | 49861-1 | | ✓ | | I11800 | | <2 |
| 12 | | 49862-4 | | ✓ | | 01 | | <2 |
| 13 | | 49895-1 | | ✓ | | 02 | | <2 |
| 14 | | 49863-23 | | ✓ | | 03 | | <2 |

6-20-03

Revision: 04/30/02

000022

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: I11756T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/18/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0952

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.2 |
| 75 | 30.0 - 60.0% of mass 95 | 58.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.3 )1 |
| 174 | Greater than 50% of mass 95 | 90.8 |
| 175 | 5.0 - 9.0% of mass 174 | 0.5 ( 5.9 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 8.9 ( 97.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 0.5 ( 5.7 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 0.1PPB STD | I11757SI.D | 06/18/03 | 10:40 |
| 02 | 0.5PPB STD | 0.5PPB STD | I11758SI.D | 06/18/03 | 11:15 |
| 03 | 1.2PPB STD | 1.2PPB STD | I11759SI.D | 06/18/03 | 11:50 |
| 04 | 4.8PPB STD | 4.8PPB STD | I11760SI.D | 06/18/03 | 12:25 |
| 05 | 8PPB STD | 8PPB STD | I11761SI.D | 06/18/03 | 13:00 |
| 06 | 16PPB STD | 16PPB STD | I11762SI.D | 06/18/03 | 13:34 |
| 07 | 32PPB STD | 32PPB STD | I11763SI.D | 06/18/03 | 14:09 |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: I11791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 23.5 |
| 75 | 30.0 - 60.0% of mass 95 | 59.3 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.3 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 75.6 |
| 175 | 5.0 - 9.0% of mass 174 | 5.6 ( 7.4 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 73.3 ( 96.9 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.8 ( 6.6 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L506193I | L506193I | I11792Q.D | 06/19/03 | 12:21 |
| 02 | B506193I | B506193I | I11793B.D | 06/19/03 | 13:13 |
| 03 | 49878-13 | 49878-13 | I11794.D | 06/19/03 | 14:16 |
| 04 | 49878-13,MS | 49878-13,MS | I11795SP.D | 06/19/03 | 14:51 |
| 05 | 49878-13,MSD | 49878-13,MSD | I11796SP.D | 06/19/03 | 15:27 |
| 06 | ZZZZZ | ZZZZZ | I11798.D | 06/19/03 | 16:37 |
| 07 | ZZZZZ | ZZZZZ | I11799.D | 06/19/03 | 17:12 |
| 08 | ZZZZZ | ZZZZZ | I11800.D | 06/19/03 | 17:47 |
| 09 | ZZZZZ | ZZZZZ | I11801.D | 06/19/03 | 18:22 |
| 10 | ZZZZZ | ZZZZZ | I11802.D | 06/19/03 | 18:58 |
| 11 | ZZZZZ | ZZZZZ | I11803.D | 06/19/03 | 19:32 |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
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| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

Response Factor Report  Instrumen

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

6-18-03
VMT 6/19/03

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ---------- | ISTD | ---------- | | | | | |
| 2) | TM | Dichlorodifluoromet | 1.109 | 1.045 | 1.047 | 0.950 | 0.973 | 1.092 | 1.009 | 8.9 |
| 3) | TMP | Chloromethane | | 0.711 | 0.709 | 0.559 | 0.568 | 0.652 | 0.619 | 13.4 |
| 4) | TMC | Vinyl Chloride | | 0.548 | 0.534 | 0.386 | 0.370 | 0.400 | 0.447 | 19.2 |
| 5) | TM | Bromomethane | | 0.367 | 0.376 | 0.285 | 0.294 | 0.338 | 0.323 | 13.2 |
| 6) | TM | Chloroethane | | 0.310 | 0.334 | 0.274 | 0.285 | 0.328 | 0.298 | 10.4 |
| 7) | TM | t-Butyl alcohol | | 0.008 | 0.008 | 0.006 | 0.006 | 0.007 | 0.007 | 15.9 |
| 8) | TM | Trichlorofluorometh | 0.882 | 0.883 | 0.801 | 0.756 | 0.781 | 0.904 | 0.820 | 8.3 |
| 9) | TM | Diethyl ether | | 0.153 | 0.136 | 0.119 | 0.111 | 0.136 | 0.128 | 13.2 |
| 10) | TM | 1,1,2-Trichlorotrif | 0.522 | 0.472 | 0.410 | 0.412 | 0.394 | 0.449 | 0.435 | 11.3 |
| 11) | T | Acrolein | | 0.031 | 0.025 | 0.024 | 0.024 | 0.028 | 0.026 | 12.6 |
| 12) | TM | Acetone | | 0.058 | 0.044 | 0.039 | 0.037 | 0.044 | 0.045 | 18.4 |
| 13) | TMC | 1,1-Dichloroethene | | 0.407 | 0.347 | 0.333 | 0.321 | 0.366 | 0.348 | 9.9 |
| 14) | T | Methyl iodide | 0.482 | 0.310 | 0.398 | 0.535 | 0.463 | 0.669 | 0.501 | 25.7 M |
| 15) | TM | Di-isopropyl ether | 1.782 | 1.627 | 1.799 | 1.748 | 1.642 | 1.671 | 1.695 | 4.7 |
| 16) | TM | Methylene Chloride | | 1.626 | 0.931 | 0.646 | 0.573 | 0.547 | 0.865 | 52.3 Li |
| 17) | TM | Carbon Disulfide | | 0.977 | 1.018 | 1.004 | 0.997 | 1.035 | 0.996 | 3.1 |
| 18) | T | Acrylonitrile | 0.090 | 0.073 | 0.064 | 0.067 | 0.077 | 0.078 | 0.075 | 11.4 |
| 19) | TM | Methyl-tert-butyl e | 0.475 | 0.543 | 0.568 | 0.563 | 0.548 | 0.557 | 0.545 | 5.9 |
| 20) | TM | trans-1,2-Dichloroe | | 0.509 | 0.558 | 0.540 | 0.515 | 0.511 | 0.520 | 4.7 |
| 21) | TMP | 1,1-Dichloroethane | | 0.992 | 1.118 | 1.070 | 1.019 | 1.018 | 1.035 | 4.7 |
| 22) | T | Vinyl acetate | | 0.038 | 0.035 | 0.038 | 0.034 | 0.036 | 0.036 | 4.4 |
| 23) | TM | Methyl ethyl ketone | 0.015 | 0.016 | 0.017 | 0.016 | 0.016 | 0.015 | 0.016 | 4.6 |
| 24) | TM | Ethyl t-butyl ether | 0.852 | 0.772 | 0.869 | 0.858 | 0.806 | 0.823 | 0.829 | 4.0 |
| 25) | TM | 2,2-Dichloropropane | | 0.692 | 0.692 | 0.693 | 0.660 | 0.673 | 0.679 | 2.1 |
| 26) | TM | cis-1,2-Dichloroeth | | 0.533 | 0.568 | 0.531 | 0.507 | 0.500 | 0.521 | 5.7 |
| 27) | TM | t-Amyl methyl ether | 0.562 | 0.535 | 0.590 | 0.550 | 0.521 | 0.559 | 0.553 | 3.9 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000 | -1.0 |
| 29) | TMC | Chloroform | | 1.136 | 1.170 | 1.101 | 1.022 | 1.038 | 1.078 | 6.3 |
| 30) | TM | Bromochloromethane | 0.194 | 0.187 | 0.202 | 0.191 | 0.178 | 0.180 | 0.187 | 5.0 |
| 31) | TM | Tetrahydrofuran | | 0.020 | 0.018 | 0.016 | 0.016 | 0.016 | 0.017 | 8.9 |
| 32) | TM | 1,1,1-Trichloroetha | 1.163 | 0.896 | 0.954 | 0.951 | 0.900 | 0.936 | 0.961 | 9.6 |
| 33) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 34) | TM | 1,1-Dichloropropene | | 0.826 | 0.916 | 0.876 | 0.825 | 0.833 | 0.845 | 5.1 |
| 35) | TM | Carbon Tetrachlorid | | 0.795 | 0.885 | 0.868 | 0.830 | 0.857 | 0.847 | 3.7 |
| 36) | S | 1,4-Difluorobenzene | 1.509 | 1.544 | 1.543 | 1.552 | 1.518 | 1.580 | 1.539 | 1.5 |
| 37) | TM | 1,2-Dichloroethane | 0.665 | 0.587 | 0.681 | 0.632 | 0.593 | 0.593 | 0.615 | 7.5 |
| 38) | TM | Benzene | | 2.086 | 2.252 | 2.105 | 1.984 | 1.983 | 2.040 | 6.9 |
| 39) | I | Fluorobenzene | ---------- | ISTD | ---------- | | | | | |
| 40) | TM | Trichloroethene | | 0.312 | 0.332 | 0.313 | 0.297 | 0.303 | 0.308 | 4.6 |
| 41) | TMC | 1,2-Dichloropropane | 0.275 | 0.248 | 0.278 | 0.256 | 0.241 | 0.252 | 0.256 | 5.7 |
| 42) | T | Methylmethacrylate | 0.075 | 0.070 | 0.080 | 0.078 | 0.075 | 0.080 | 0.077 | 5.1 |

(#) = Out of Range ### Number of calibration levels exceeded format ###



000025

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 45) | TM | Bromodichloromethan | 0.385 | 0.324 | 0.353 | 0.342 | 0.335 | 0.345 | 0.346 | 5.6 |
| 46) | TM | Dibromomethane | 0.133 | 0.119 | 0.120 | 0.111 | 0.109 | 0.112 | 0.116 | 7.3 |
| 47) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 50) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 51) | TM | 2-Hexanone | | 0.028 | 0.034 | 0.031 | 0.031 | 0.033 | 0.032 | 6.4 |
| 52) | TM | Methyl isobutyl ket | | 0.035 | 0.037 | 0.037 | 0.036 | 0.038 | 0.037 | 3.5 |
| 53) | TM | cis-1,3-Dichloropro | 0.317 | 0.294 | 0.339 | 0.337 | 0.325 | 0.349 | 0.328 | 5.5 |
| 54) | S | Bromofluorobenzene | 0.285 | 0.313 | 0.297 | 0.293 | 0.303 | 0.326 | 0.305 | 4.6 |
| 55) | TMC | Toluene | | 0.656 | 0.674 | 0.632 | 0.601 | 0.609 | 0.626 | 5.6 |
| 56) | TM | trans-1,3-Dichlorop | 0.192 | 0.203 | 0.235 | 0.237 | 0.231 | 0.246 | 0.227 | 9.2 |
| 57) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.126 | 0.114 | 0.132 | 0.113 | 0.108 | 0.110 | 0.115 | 8.8 |
| 59) | TM | 1,3-Dichloropropane | 0.242 | 0.243 | 0.249 | 0.246 | 0.233 | 0.242 | 0.241 | 2.6 |
| 60) | TM | Tetrachloroethene | | 0.306 | 0.310 | 0.289 | 0.280 | 0.287 | 0.291 | 4.8 |
| 61) | TM | Dibromochloromethan | 0.156 | 0.168 | 0.199 | 0.182 | 0.176 | 0.193 | 0.180 | 8.2 |
| 62) | TM | 1,2-Dibromoethane | 0.100 | 0.121 | 0.125 | 0.120 | 0.117 | 0.127 | 0.119 | 7.4 |
| 63) | I | d5-Chlorobenzene | ----------ISTD---------- | | | | | | | |
| 64) | TMP | Chlorobenzene | | 0.982 | 1.054 | 1.011 | 0.953 | 0.945 | 0.972 | 5.9 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.417 | 0.331 | 0.376 | 0.354 | 0.337 | 0.337 | 0.352 | 9.7 |
| 66) | TMC | Ethylbenzene | | 1.974 | 2.150 | 2.003 | 1.937 | 1.865 | 1.935 | 8.0 |
| 67) | TM | m,p-Xylene | | 0.691 | 0.734 | 0.676 | 0.646 | 0.621 | 0.654 | 9.4 |
| 68) | TM | o-Xylene | | 0.620 | 0.680 | 0.635 | 0.614 | 0.617 | 0.624 | 5.1 |
| 69) | TM | Styrene | 1.060 | 0.892 | 1.007 | 0.997 | 0.945 | 0.967 | 0.969 | 5.9 |
| 70) | TMP | Bromoform | 0.142 | 0.130 | 0.137 | 0.136 | 0.134 | 0.138 | 0.135 | 3.1 |
| 71) | TM | Isopropylbenzene | | 1.800 | 1.963 | 1.850 | 1.748 | 1.720 | 1.779 | 7.0 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.213 | 0.205 | 0.220 | 0.207 | 0.201 | 0.208 | 0.208 | 3.2 |
| 73) | S | 1,2-Dichlorobenzene | 0.351 | 0.378 | 0.363 | 0.360 | 0.380 | 0.369 | 0.368 | 2.7 |
| 74) | TM | 1,2,3-Trichloroprop | | 0.151 | 0.174 | 0.156 | 0.146 | 0.151 | 0.155 | 6.2 |
| 75) | T | trans-1,4-Dichloro- | | 0.082 | 0.082 | 0.082 | 0.081 | 0.081 | 0.081 | 2.9 |
| 76) | TM | n-Propylbenzene | | 2.279 | 2.399 | 2.299 | 2.205 | 2.162 | 2.220 | 6.5 |
| 77) | TM | Bromobenzene | | 0.365 | 0.372 | 0.364 | 0.352 | 0.348 | 0.355 | 4.0 |
| 78) | TM | 1,3,5-Trimethylbenz | | 1.443 | 1.595 | 1.544 | 1.474 | 1.421 | 1.458 | 7.6 |
| 79) | TM | 2-Chlorotoluene | | 1.547 | 1.633 | 1.538 | 1.421 | 1.426 | 1.472 | 8.7 |
| 80) | TM | 4-Chlorotoluene | | 1.320 | 1.382 | 1.343 | 1.301 | 1.266 | 1.303 | 4.6 |
| 81) | TM | tert-butylbenzene | | 1.249 | 1.298 | 1.269 | 1.205 | 1.203 | 1.224 | 5.2 |
| 82) | TM | 1,2,4-Trimethylbenz | | 1.423 | 1.575 | 1.521 | 1.452 | 1.428 | 1.451 | 6.3 |
| 83) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 84) | TM | sec-butylbenzene | | 1.807 | 1.882 | 1.802 | 1.744 | 1.714 | 1.760 | 5.2 |
| 85) | TM | p-isopropyltoluene | | 1.391 | 1.507 | 1.461 | 1.427 | 1.409 | 1.420 | 4.3 |

(#) = Out of Range ### Number of calibration levels exceeded format ###



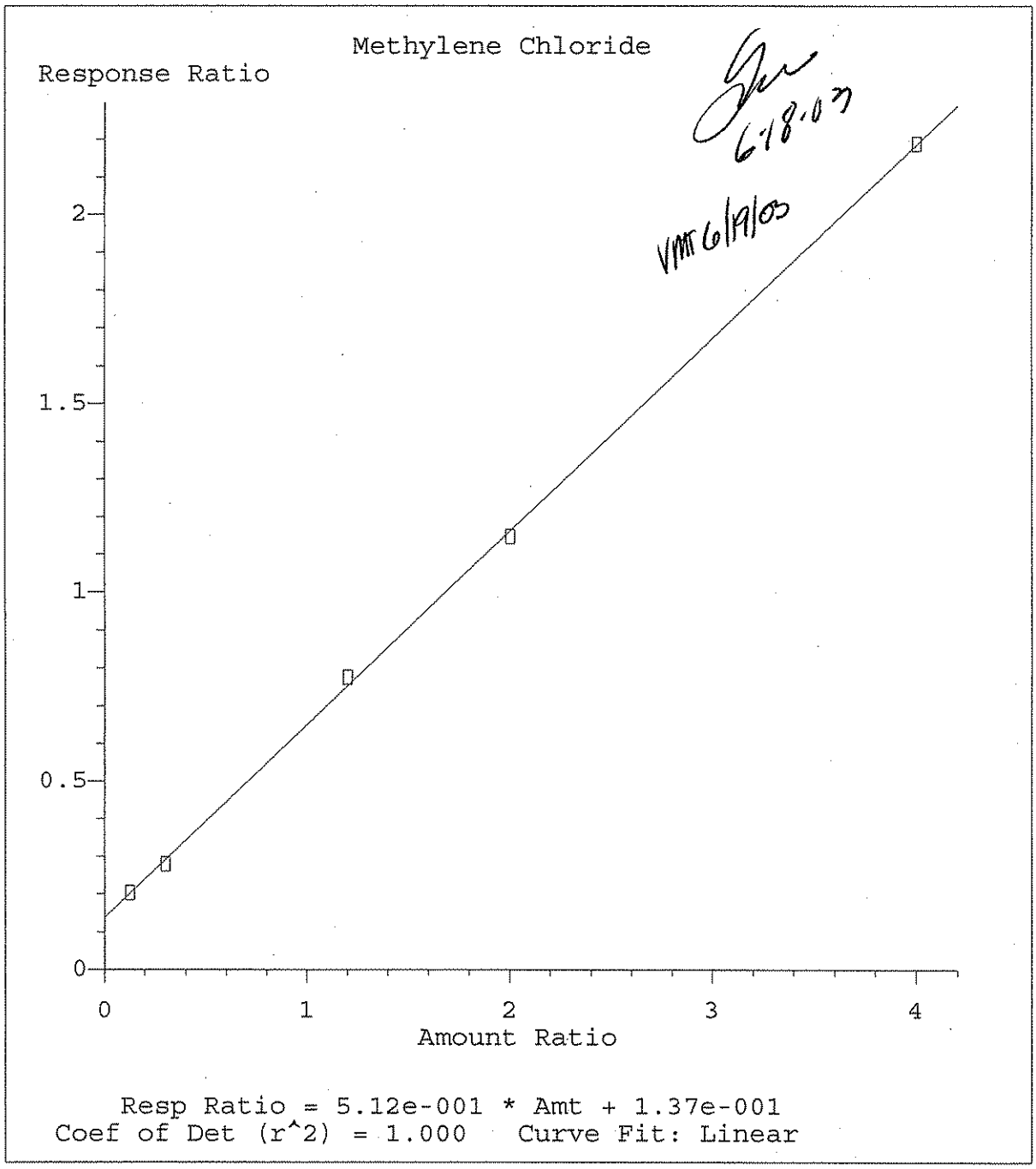
000026

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | | 0.714 | 0.747 | 0.715 | 0.690 | 0.685 | 0.702 | 4.3 |
| 87) | I | 1,4-Dichlorobenzene-d | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | | |
| 88) | TM | 1,4-Dichlorobenzene | | 1.470 | 1.597 | 1.474 | 1.378 | 1.386 | 1.439 | 6.6 |
| 89) | TM | n-butylbenzene | | 3.031 | 3.195 | 3.082 | 2.978 | 2.921 | 3.001 | 4.5 |
| 90) | TM | 1,2-Dichlorobenzene | 1.463 | 1.202 | 1.282 | 1.204 | 1.157 | 1.124 | 1.221 | 9.9 |
| 91) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | | 0.055 | 0.065 | 0.059 | 0.058 | 0.062 | 0.061 | 6.2 |
| 93) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | | 0.462 | 0.627 | 0.677 | 0.708 | 0.721 | 0.656 | 15.6 |
| 95) | TM | Hexachlorobutadiene | | 0.400 | 0.431 | 0.421 | 0.420 | 0.405 | 0.415 | 2.7 |
| 96) | TM | Naphthalene | 0.284 | 0.375 | 0.576 | 0.740 | 0.808 | 0.872 | 0.609 | 39.3Q |
| 97) | TM | 1,2,3-Trichlorobenz | | 0.328 | 0.443 | 0.512 | 0.543 | 0.552 | 0.493 | 19.0 |
| 98) | TM | 1,3,5-Trichlorobenz | 1.228 | 1.028 | 1.134 | 1.097 | 1.097 | 1.061 | 1.098 | 6.1 |

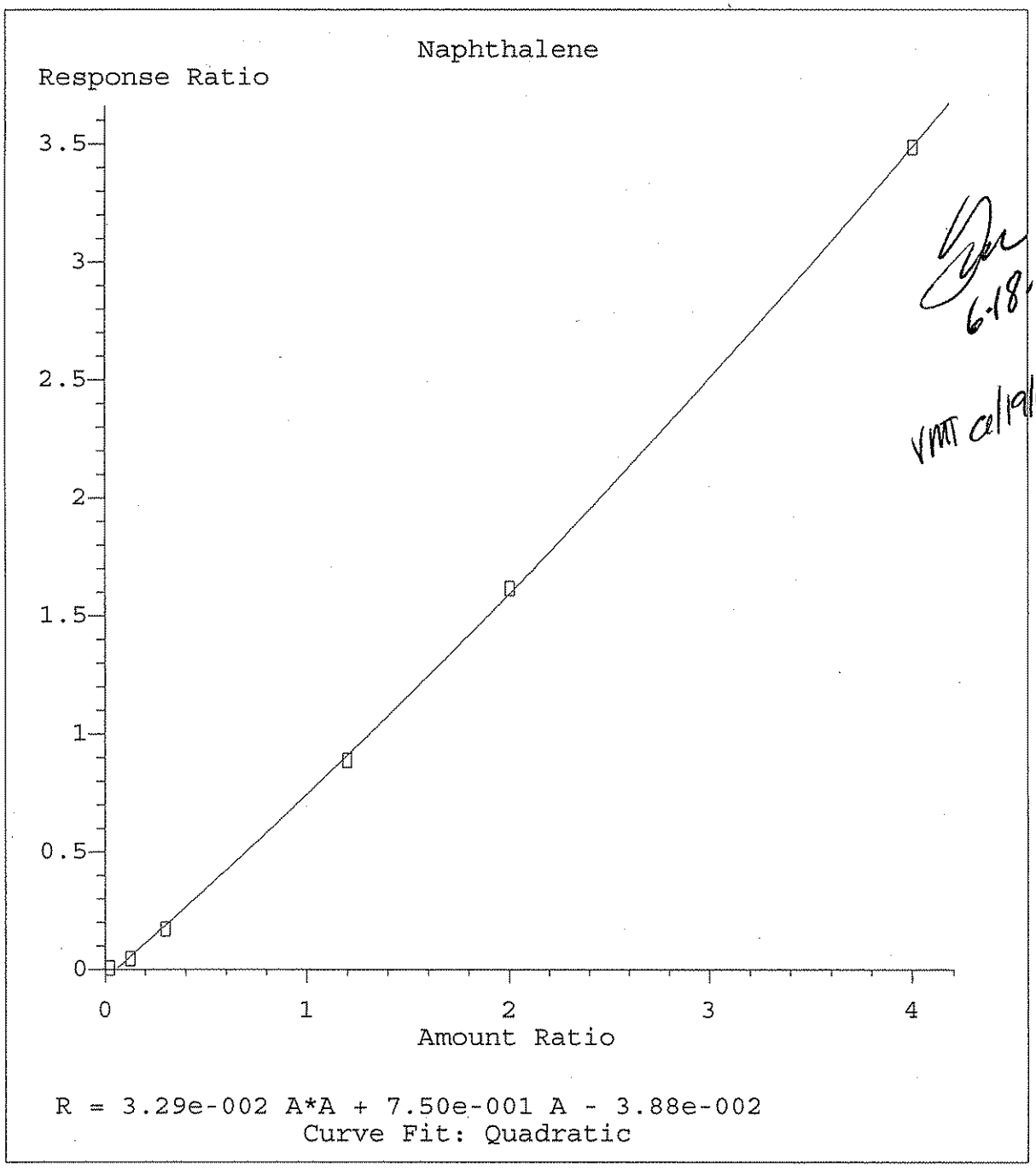
(#) = Out of Range ### Number of calibration levels exceeded format ###




6.18.03

VMT 6/19/03

Method Name: C:\HPCHEM\1\METHODS\V506183I.M
Calibration Table Last Updated: Wed Jun 18 15:04:27 2003




6-18-03

VMT 6/19/03

Method Name: C:\HPCHEM\1\METHODS\V506183I.M
Calibration Table Last Updated: Wed Jun 18 15:04:27 2003

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6-18-03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 576551 | 4.00 | ug/L | | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1101944 | 4.00 | ug/L | | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 652480 | 4.00 | ug/L | | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 297945 | 4.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 870031 | 3.92 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 98.00% | | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 314598 | 3.79 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 94.75% | | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 229331 | 3.80 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 95.00% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 15980 | 0.11 | ug/L | | 85 |
| 3) Chloromethane | 2.25 | 50 | 15945 | 0.17 | ug/L | | 87 |
| 4) Vinyl Chloride | 2.37 | 62 | 10298 | 0.16 | ug/L | | 93 |
| 5) Bromomethane | 2.92 | 94 | 7226 | 0.15 | ug/L | | 100 |
| 6) Chloroethane | 3.02 | 64 | 7437 | 0.17 | ug/L | | 89 |
| 7) t-Butyl alcohol | 4.49 | 59 | 426 | 0.40 | ug/L | # | 76 |
| 8) Trichlorofluoromethane | 3.38 | 101 | 12712 | 0.11 | ug/L | | 78 |
| 9) Diethyl ether | 3.84 | 74 | 1315 | 0.07 | ug/L | # | 1 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 7526 | 0.12 | ug/L | # | 85 |
| 11) Acrolein | 4.03 | 56 | 3363 | 0.90 | ug/L | | 89 |
| 12) Acetone | 4.14 | 43 | 9010 | 1.40 | ug/L | | 90 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 7168 | 0.14 | ug/L | # | 87 |
| 14) Methyl iodide | 4.80 | 142 | 6951 | 0.11 | ug/L | # | 86 |
| 15) Di-isopropyl ether | 6.19 | 45 | 25688 | 0.10 | ug/L | # | 91 |
| 16) Methylene Chloride | 5.11 | 84 | 81977 | 0.03 | ug/L | | 94 |
| 17) Carbon Disulfide | 5.08 | 76 | 21457 | 0.15 | ug/L | | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 1303 | 0.13 | ug/L | # | 57 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 6846 | 0.09 | ug/L | | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 12098 | 0.16 | ug/L | | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 20608 | 0.14 | ug/L | | 96 |
| 22) Vinyl acetate | 6.35 | 86 | 337 | 0.06 | ug/L | # | 1 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 1077 | 0.47 | ug/L | # | 76 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 12278 | 0.10 | ug/L | # | 56 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 12303 | 0.12 | ug/L | | 82 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 9934 | 0.13 | ug/L | # | 74 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 8102 | 0.10 | ug/L | # | 43 |
| 29) Chloroform | 7.51 | 83 | 25404 | 0.16 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.76 | 128 | 2802 | 0.10 | ug/L | # | 91 |
| 31) | Tetrahydrofuran | 7.87 | 71 | 310 | 0.12 | ug/L | | 97 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 16770 | 0.13 | ug/L | | 95 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 16218 | 0.13 | ug/L | | 88 |
| 35) | Carbon Tetrachloride | 8.53 | 119 | 14784 | 0.12 | ug/L | | 93 |
| 37) | 1,2-Dichloroethane | 8.76 | 62 | 9580 | 0.11 | ug/L | | 81 |
| 38) | Benzene | 8.78 | 78 | 41063 | 0.14 | ug/L | | 97 |
| 40) | Trichloroethene | 9.72 | 95 | 11709 | 0.14 | ug/L | # | 79 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 7581 | 0.11 | ug/L | | 93 |
| 42) | Methylmethacrylate | 10.12 | 69 | 2067 | 0.10 | ug/L | | 83 |
| 45) | Bromodichloromethane | 10.35 | 83 | 10606 | 0.11 | ug/L | | 97 |
| 46) | Dibromomethane | 10.43 | 93 | 3670 | 0.12 | ug/L | # | 60 |
| 51) | 2-Hexanone | 12.26 | 58 | 2977 | 0.35 | ug/L | | 94 |
| 52) | Methyl isobutyl ketone | 10.91 | 58 | 3627 | 0.36 | ug/L | # | 84 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 8744 | 0.10 | ug/L | | 83 |
| 55) | Toluene | 11.68 | 92 | 23019 | 0.13 | ug/L | | 93 |
| 56) | trans-1,3-Dichloropropene | 11.97 | 75 | 5287 | 0.08 | ug/L | | 95 |
| 58) | 1,1,2-Trichloroethane | 12.21 | 83 | 3462 | 0.11 | ug/L | | 93 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 6663 | 0.10 | ug/L | | 92 |
| 60) | Tetrachloroethene | 12.70 | 166 | 10147 | 0.12 | ug/L | | 96 |
| 61) | Dibromochloromethane | 12.98 | 129 | 4291 | 0.09 | ug/L | # | 74 |
| 62) | 1,2-Dibromoethane | 13.31 | 107 | 2765 | 0.08 | ug/L | | 87 |
| 64) | Chlorobenzene | 13.97 | 112 | 20908 | 0.13 | ug/L | # | 79 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 6794 | 0.12 | ug/L | | 89 |
| 66) | Ethylbenzene | 14.06 | 91 | 46201 | 0.14 | ug/L | | 98 |
| 67) | m,p-Xylene | 14.18 | 106 | 30409 | 0.27 | ug/L | | 96 |
| 68) | o-Xylene | 14.86 | 106 | 13785 | 0.13 | ug/L | | 94 |
| 69) | Styrene | 14.92 | 104 | 17293 | 0.11 | ug/L | | 85 |
| 70) | Bromoform | 15.43 | 173 | 2316 | 0.11 | ug/L | | 94 |
| 71) | Isopropylbenzene | 15.45 | 105 | 38653 | 0.13 | ug/L | | 100 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 3476 | 0.10 | ug/L | | 91 |
| 75) | trans-1,4-Dichloro-2-buten | 16.05 | 53 | 888 | 0.07 | ug/L | # | 34 |
| 76) | n-Propylbenzene | 16.09 | 91 | 50409 | 0.13 | ug/L | | 98 |
| 77) | Bromobenzene | 16.14 | 156 | 7573 | 0.13 | ug/L | # | 70 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 30985 | 0.13 | ug/L | | 89 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 32953 | 0.13 | ug/L | | 99 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 27458 | 0.13 | ug/L | | 95 |
| 81) | tert-butylbenzene | 16.91 | 119 | 27845 | 0.14 | ug/L | | 96 |
| 82) | 1,2,4-Trimethylbenzene | 16.97 | 105 | 29708 | 0.12 | ug/L | | 95 |
| 84) | sec-butylbenzene | 17.26 | 105 | 39137 | 0.13 | ug/L | | 92 |
| 85) | p-isopropyltoluene | 17.50 | 119 | 29567 | 0.13 | ug/L | | 87 |

(#) = qualifier out of range (m) = manual integration



000031

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

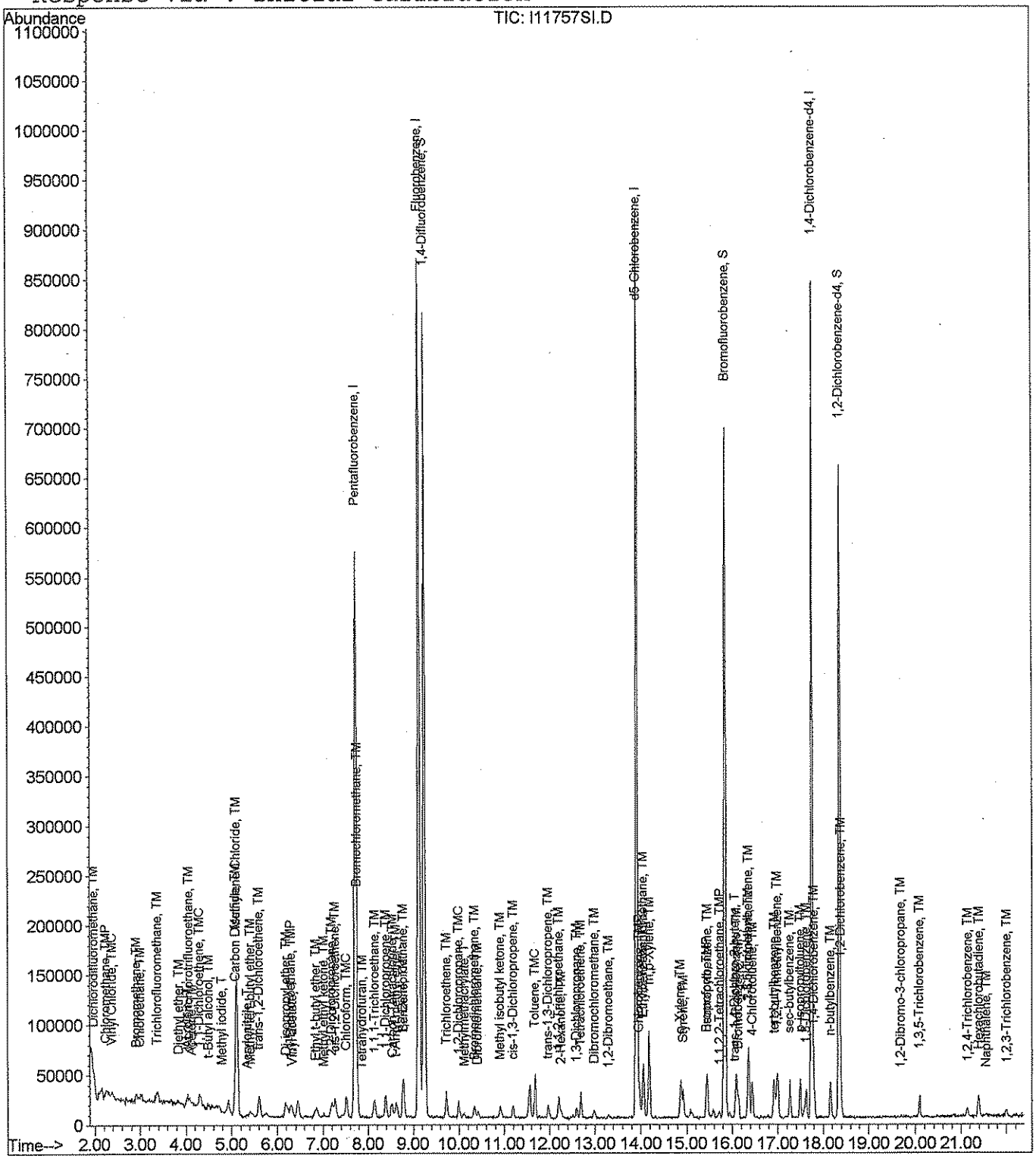
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 86) 1,3-Dichlorobenzene | 17.62 | 146 | 14667 | 0.13 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 13606 | 0.12 ug/L | 89 |
| 89) n-butylbenzene | 18.16 | 91 | 28842 | 0.13 ug/L | 91 |
| 90) 1,2-Dichlorobenzene | 18.39 | 146 | 10899 | 0.12 ug/L | 85 |
| 92) 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 572 | 0.13 ug/L # | 45 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 3119 | 0.18 ug/L | 94 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 5836 | 0.19 ug/L | 94 |
| 96) Naphthalene | 21.56 | 128 | 2118 | 0.28 ug/L | 87 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 2106 | 0.22 ug/L # | 77 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 9149 | 0.11 ug/L # | 71 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration






000033

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 575502 | 4.00 | ug/L | 0.03 |
| 39) Fluorobenzene | 9.12 | 96 | 1098669 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 722418 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 332913 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 888425 | 4.04 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.00% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 344208 | 3.97 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 272730 | 4.15 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 103.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 75176 | 0.60 | ug/L | 95 |
| 3) Chloromethane | 2.25 | 50 | 51147 | 0.59 | ug/L | 92 |
| 4) Vinyl Chloride | 2.38 | 62 | 39394 | 0.66 | ug/L | 89 |
| 5) Bromomethane | 2.92 | 94 | 26381 | 0.55 | ug/L | 79 |
| 6) Chloroethane | 3.01 | 64 | 22305 | 0.50 | ug/L | 93 |
| 7) t-Butyl alcohol | 4.50 | 59 | 3021m | 2.39 | ug/L | |
| 8) Trichlorofluoromethane | 3.37 | 101 | 63526 | 0.55 | ug/L | 100 |
| 9) Diethyl ether | 3.82 | 74 | 11040 | 0.63 | ug/L | 93 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 33970 | 0.57 | ug/L | 95 |
| 11) Acrolein | 4.01 | 56 | 11252 | 3.07 | ug/L | 93 |
| 12) Acetone | 4.13 | 43 | 20929 | 3.15 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 29313 | 0.60 | ug/L | 89 |
| 14) Methyl iodide | 4.79 | 142 | 22330 | 0.31 | ug/L | 98 |
| 15) Di-isopropyl ether | 6.19 | 45 | 117068 | 0.49 | ug/L | 98 |
| 16) Methylene Chloride | 5.11 | 84 | 116998 | 0.56 | ug/L | 96 |
| 17) Carbon Disulfide | 5.08 | 76 | 70267 | 0.48 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 5247 | 0.48 | ug/L | 97 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 39073 | 0.46 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 36643 | 0.49 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 71380 | 0.48 | ug/L | 94 |
| 22) Vinyl acetate | 6.35 | 86 | 2748 | 0.81 | ug/L | 91 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 5587 | 2.37 | ug/L | 89 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 55542 | 0.46 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 49796 | 0.50 | ug/L | 85 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 38325 | 0.54 | ug/L | 96 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 38478 | 0.51 | ug/L | 91 |
| 29) Chloroform | 7.51 | 83 | 81716 | 0.55 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.76 | 128 | 13443 | 0.52 | ug/L | # | 71 |
| 31) | Tetrahydrofuran | 7.85 | 71 | 1409 | 0.60 | ug/L | # | 63 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 64469 | 0.52 | ug/L | | 92 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 59392 | 0.54 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 57166 | 0.52 | ug/L | | 92 |
| 37) | 1,2-Dichloroethane | 8.77 | 62 | 42248 | 0.52 | ug/L | | 96 |
| 38) | Benzene | 8.79 | 78 | 150087 | 0.54 | ug/L | | 99 |
| 40) | Trichloroethene | 9.73 | 95 | 42851 | 0.53 | ug/L | | 98 |
| 41) | 1,2-Dichloropropane | 10.00 | 63 | 34101 | 0.50 | ug/L | | 100 |
| 42) | Methylmethacrylate | 10.13 | 69 | 9599 | 0.47 | ug/L | | 89 |
| 45) | Bromodichloromethane | 10.35 | 83 | 44466 | 0.49 | ug/L | | 90 |
| 46) | Dibromomethane | 10.42 | 93 | 16368 | 0.53 | ug/L | | 97 |
| 51) | 2-Hexanone | 12.25 | 58 | 19383 | 2.25 | ug/L | | 93 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 23920 | 2.47 | ug/L | | 94 |
| 53) | cis-1,3-Dichloropropene | 11.19 | 75 | 40341 | 0.46 | ug/L | | 87 |
| 55) | Toluene | 11.68 | 92 | 90099 | 0.54 | ug/L | | 94 |
| 56) | trans-1,3-Dichloropropene | 11.97 | 75 | 27853 | 0.46 | ug/L | | 94 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 15676 | 0.51 | ug/L | # | 83 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 33413 | 0.53 | ug/L | | 97 |
| 60) | Tetrachloroethene | 12.69 | 166 | 42057 | 0.55 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.98 | 129 | 23037 | 0.48 | ug/L | | 93 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 16610 | 0.51 | ug/L | | 84 |
| 64) | Chlorobenzene | 13.97 | 112 | 88639 | 0.52 | ug/L | | 94 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 29914 | 0.52 | ug/L | | 90 |
| 66) | Ethylbenzene | 14.06 | 91 | 178219 | 0.53 | ug/L | | 99 |
| 67) | m,p-Xylene | 14.18 | 106 | 124857 | 1.10 | ug/L | | 96 |
| 68) | o-Xylene | 14.87 | 106 | 56008 | 0.51 | ug/L | # | 84 |
| 69) | Styrene | 14.93 | 104 | 80507 | 0.49 | ug/L | | 99 |
| 70) | Bromoform | 15.43 | 173 | 11710 | 0.50 | ug/L | | 81 |
| 71) | Isopropylbenzene | 15.45 | 105 | 162525 | 0.53 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.70 | 83 | 18516 | 0.51 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 13678 | 0.53 | ug/L | | 94 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 7369 | 0.51 | ug/L | | 97 |
| 76) | n-Propylbenzene | 16.09 | 91 | 205808 | 0.53 | ug/L | | 93 |
| 77) | Bromobenzene | 16.14 | 156 | 32969 | 0.53 | ug/L | # | 86 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 130343 | 0.52 | ug/L | | 94 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 139678 | 0.54 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 119201 | 0.52 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.92 | 119 | 112776 | 0.53 | ug/L | | 98 |
| 82) | 1,2,4-Trimethylbenzene | 16.99 | 105 | 128500 | 0.50 | ug/L | | 98 |
| 84) | sec-butylbenzene | 17.27 | 105 | 163195 | 0.53 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration



000035

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 85) | p-isopropyltoluene | 17.49 | 119 | 125599 | 0.51 | ug/L | | 95 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 64444 | 0.52 | ug/L | | 95 |
| 88) | 1,4-Dichlorobenzene | 17.79 | 146 | 61188 | 0.52 | ug/L | | 90 |
| 89) | n-butylbenzene | 18.16 | 91 | 126152 | 0.53 | ug/L | | 92 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 50023 | 0.52 | ug/L | | 93 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 2308 | 0.47 | ug/L | # | 71 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 19234 | 0.50 | ug/L | | 85 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 16655 | 0.49 | ug/L | | 87 |
| 96) | Naphthalene | 21.55 | 128 | 15626 | 0.50 | ug/L | | 98 |
| 97) | 1,2,3-Trichlorobenzene | 22.00 | 180 | 13646 | 0.53 | ug/L | | 87 |
| 98) | 1,3,5-Trichlorobenzene | 20.09 | 180 | 42793 | 0.50 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

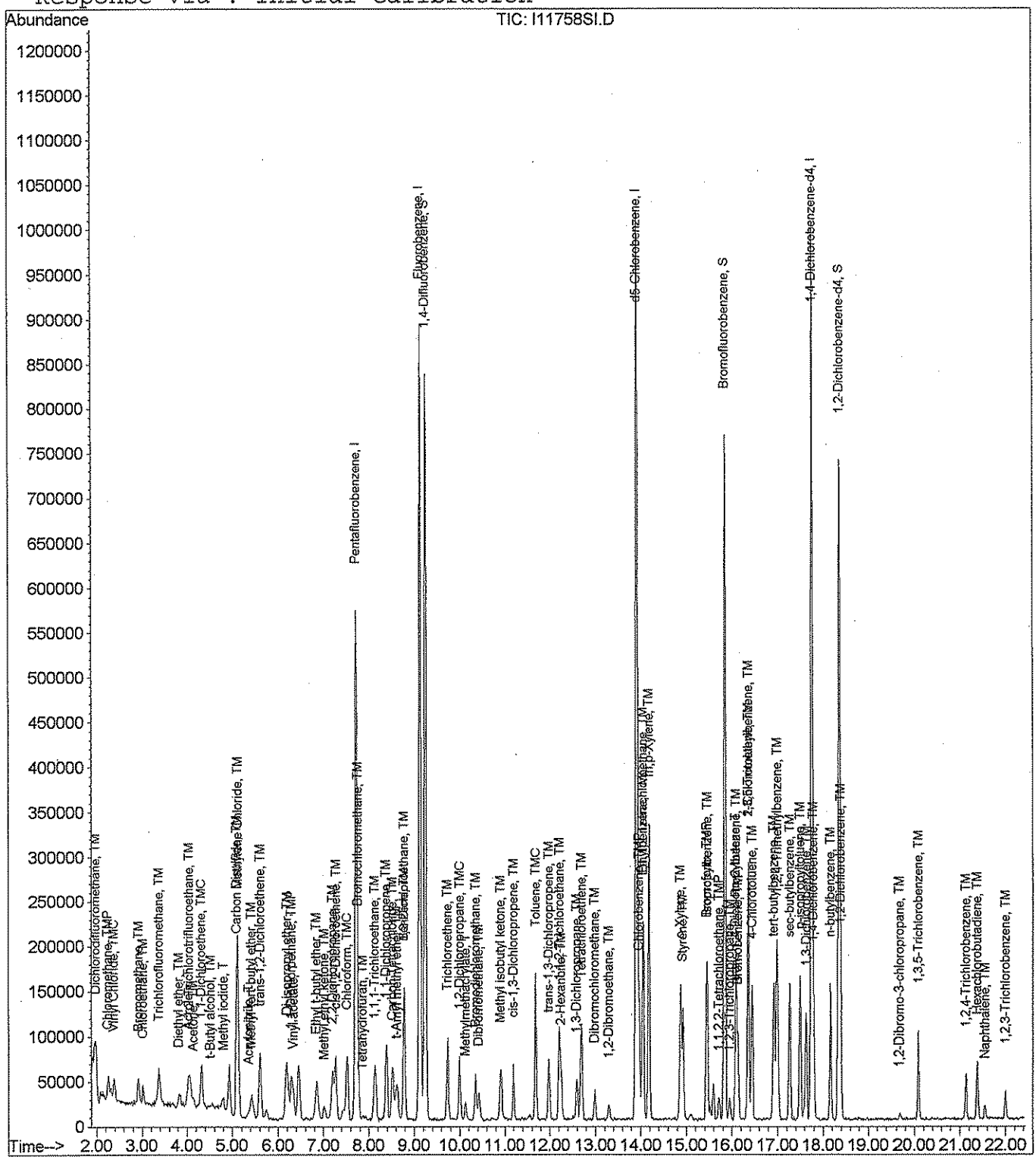


000036

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration






000037

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D Vial: 5
Acq On : 18 Jun 2003 11:50 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03 VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 603203 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.12 | 96 | 1172581 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 743404 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 337661 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 930927 | 4.04 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.00% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 348081 | 3.76 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 94.00% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 269796 | 3.99 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 189403 | 1.44 | ug/L | 97 |
| 3) Chloromethane | 2.25 | 50 | 128255 | 1.42 | ug/L | 97 |
| 4) Vinyl Chloride | 2.38 | 62 | 96600 | 1.54 | ug/L | 90 |
| 5) Bromomethane | 2.91 | 94 | 68024 | 1.36 | ug/L | 99 |
| 6) Chloroethane | 3.02 | 64 | 60450 | 1.30 | ug/L | 96 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 144884 | 1.19 | ug/L | 94 |
| 9) Diethyl ether | 3.84 | 74 | 24567 | 1.33 | ug/L | 81 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 74159 | 1.19 | ug/L | 97 |
| 12) Acetone | 4.13 | 43 | 39629 | 5.69 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 4.32 | 96 | 62717 | 1.22 | ug/L | 95 |
| 15) Di-isopropyl ether | 6.19 | 45 | 325492 | 1.30 | ug/L | 95 |
| 16) Methylene Chloride | 5.11 | 84 | 168405 | 1.13 | ug/L | 94 |
| 17) Carbon Disulfide | 5.08 | 76 | 184235 | 1.21 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 102832 | 1.15 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 100974 | 1.30 | ug/L | 98 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 202230 | 1.31 | ug/L | 95 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 15619 | 6.33 | ug/L | 96 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 157166 | 1.24 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.20 | 77 | 125165 | 1.21 | ug/L | 88 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 102858 | 1.37 | ug/L | 92 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 106720 | 1.34 | ug/L | 95 |
| 29) Chloroform | 7.51 | 83 | 211787 | 1.35 | ug/L | 98 |
| 30) Bromochloromethane | 7.76 | 128 | 36612 | 1.35 | ug/L # | 85 |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 172707 | 1.33 | ug/L | 94 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 165795 | 1.43 | ug/L | 99 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 160182 | 1.38 | ug/L | 99 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 123256 | 1.44 | ug/L | 91 |

(#) = qualifier out of range (m) = manual integration



000938

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D Vial: 5
Acq On : 18 Jun 2003 11:50 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 38) | Benzene | 8.79 | 78 | 407490 | 1.40 | ug/L | | 99 |
| 40) | Trichloroethene | 9.73 | 95 | 116669 | 1.36 | ug/L | | 96 |
| 41) | 1,2-Dichloropropane | 10.00 | 63 | 97724 | 1.35 | ug/L | | 99 |
| 45) | Bromodichloromethane | 10.34 | 83 | 124242 | 1.29 | ug/L | | 93 |
| 46) | Dibromomethane | 10.42 | 93 | 42073 | 1.27 | ug/L | | 98 |
| 51) | 2-Hexanone | 12.24 | 58 | 59437 | 6.47 | ug/L | | 99 |
| 52) | Methyl isobutyl ketone | 10.91 | 58 | 65785 | 6.36 | ug/L | | 99 |
| 53) | cis-1,3-Dichloropropene | 11.19 | 75 | 119089 | 1.28 | ug/L | | 100 |
| 55) | Toluene | 11.68 | 92 | 236990 | 1.34 | ug/L | | 98 |
| 56) | trans-1,3-Dichloropropene | 11.97 | 75 | 82607 | 1.27 | ug/L | | 92 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 46368 | 1.42 | ug/L | | 98 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 87525 | 1.30 | ug/L | | 98 |
| 60) | Tetrachloroethene | 12.69 | 166 | 109027 | 1.33 | ug/L | | 98 |
| 61) | Dibromochloromethane | 12.98 | 129 | 70019 | 1.36 | ug/L | | 86 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 44080 | 1.27 | ug/L | | 97 |
| 64) | Chlorobenzene | 13.97 | 112 | 235154 | 1.34 | ug/L | | 97 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 83956 | 1.42 | ug/L | | 96 |
| 66) | Ethylbenzene | 14.06 | 91 | 479402 | 1.38 | ug/L | | 99 |
| 67) | m,p-Xylene | 14.19 | 106 | 327577 | 2.80 | ug/L | | 94 |
| 68) | o-Xylene | 14.87 | 106 | 151609 | 1.33 | ug/L | # | 86 |
| 69) | Styrene | 14.93 | 104 | 224590 | 1.34 | ug/L | | 100 |
| 70) | Bromoform | 15.44 | 173 | 30446 | 1.25 | ug/L | | 92 |
| 71) | Isopropylbenzene | 15.45 | 105 | 437740 | 1.38 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 49106 | 1.31 | ug/L | | 99 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 38740 | 1.45 | ug/L | | 95 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 18343 | 1.23 | ug/L | # | 88 |
| 76) | n-Propylbenzene | 16.09 | 91 | 534957 | 1.34 | ug/L | | 98 |
| 77) | Bromobenzene | 16.14 | 156 | 82927 | 1.30 | ug/L | # | 84 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 355629 | 1.37 | ug/L | | 99 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 364084 | 1.38 | ug/L | | 93 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 308281 | 1.31 | ug/L | | 98 |
| 81) | tert-butylbenzene | 16.92 | 119 | 289494 | 1.32 | ug/L | | 100 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 351168 | 1.33 | ug/L | | 93 |
| 84) | sec-butylbenzene | 17.26 | 105 | 419742 | 1.33 | ug/L | | 98 |
| 85) | p-isopropyltoluene | 17.49 | 119 | 336120 | 1.33 | ug/L | | 94 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 166707 | 1.31 | ug/L | | 97 |
| 88) | 1,4-Dichlorobenzene | 17.80 | 146 | 161822 | 1.37 | ug/L | | 90 |
| 89) | n-butylbenzene | 18.16 | 91 | 323661 | 1.35 | ug/L | | 99 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 129823 | 1.34 | ug/L | | 95 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 6610 | 1.34 | ug/L | | 87 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 63498 | 1.28 | ug/L | | 92 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D Vial: 5
Acq On : 18 Jun 2003 11:50 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003 Quant Results File: V506183I.

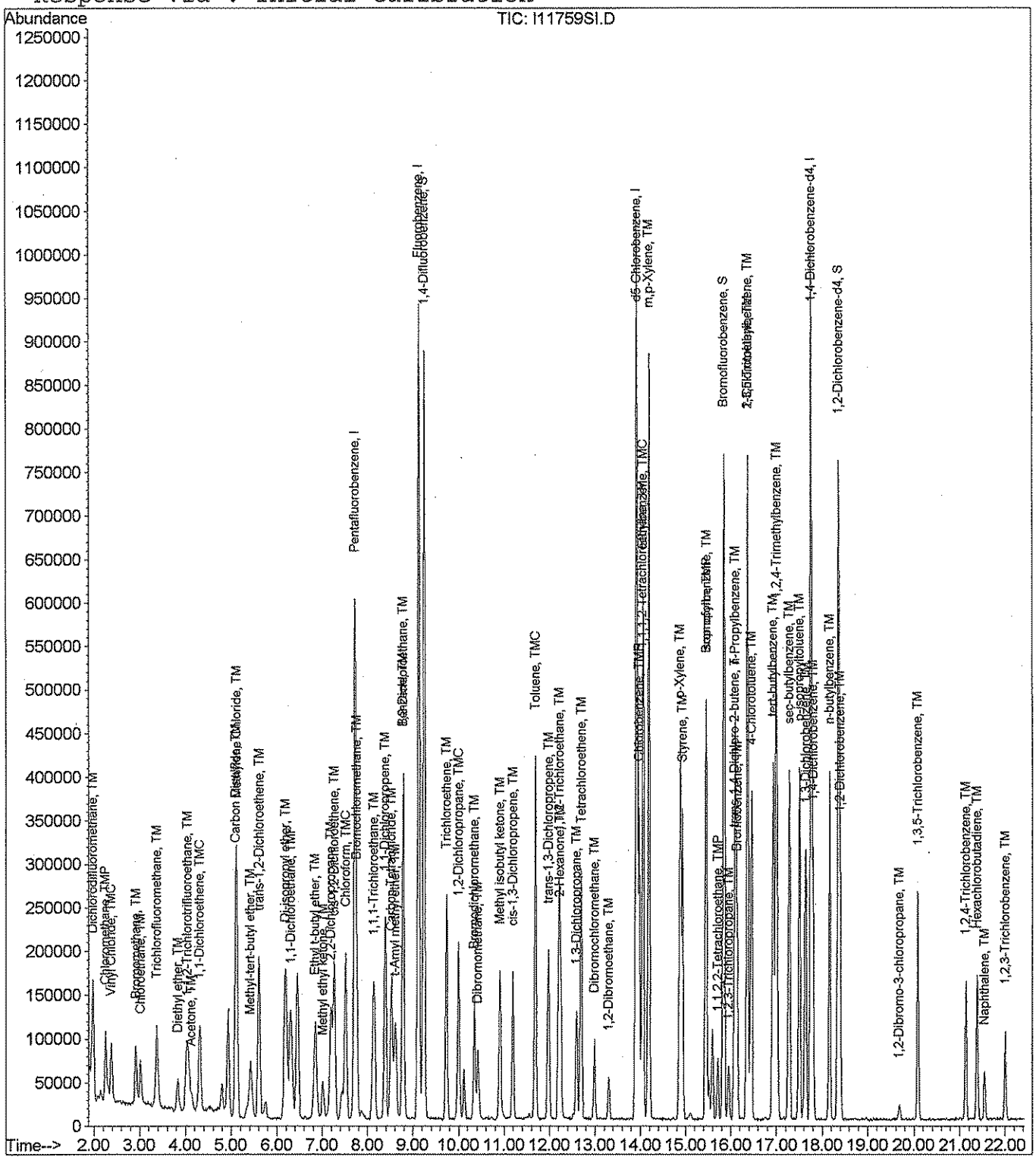
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 95) Hexachlorobutadiene | 21.39 | 225 | 43621 | 1.26 ug/L | 93 |
| 96) Naphthalene | 21.55 | 128 | 58317 | 1.15 ug/L | 93 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 44874 | 1.23 ug/L | 90 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 114903 | 1.33 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D Vial: 5
Acq On : 18 Jun 2003 11:50 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D Vial: 6
Acq On : 18 Jun 2003 12:25 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMR 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 621115 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.12 | 96 | 1202054 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 736657 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.74 | 152 | 343739 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 964049 | 4.07 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.75% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 352046 | 3.71 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 92.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 265261 | 3.96 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 707866 | 5.22 | ug/L | 95 |
| 3) Chloromethane | 2.25 | 50 | 416760 | 4.49 | ug/L | 99 |
| 4) Vinyl Chloride | 2.37 | 62 | 287330 | 4.46 | ug/L | 89 |
| 5) Bromomethane | 2.91 | 94 | 212069 | 4.11 | ug/L | 88 |
| 6) Chloroethane | 3.02 | 64 | 204317 | 4.25 | ug/L | 95 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 563394 | 4.49 | ug/L | 97 |
| 9) Diethyl ether | 3.83 | 74 | 88558 | 4.66 | ug/L | 87 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 307355 | 4.78 | ug/L | 98 |
| 11) Acrolein | 4.01 | 56 | 89068 | 22.55 | ug/L | 99 |
| 12) Acetone | 4.13 | 43 | 145638 | 20.32 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 248566 | 4.70 | ug/L | 95 |
| 14) Methyl iodide | 4.79 | 142 | 399075 | 5.21 | ug/L | 99 |
| 15) Di-isopropyl ether | 6.18 | 45 | 1303153 | 5.04 | ug/L | 95 |
| 16) Methylene Chloride | 5.11 | 84 | 481358 | 4.90 | ug/L | 95 |
| 17) Carbon Disulfide | 5.08 | 76 | 747983 | 4.77 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 419348 | 4.56 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 402649 | 5.02 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 797270 | 5.01 | ug/L | 95 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 58994 | 23.21 | ug/L | 94 |
| 24) Ethyl t-butyl ether | 6.83 | 59 | 639132 | 4.90 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 516364 | 4.85 | ug/L | 98 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 395956 | 5.14 | ug/L # | 85 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 409777 | 5.00 | ug/L | 92 |
| 29) Chloroform | 7.51 | 83 | 820419 | 5.07 | ug/L | 98 |
| 30) Bromochloromethane | 7.76 | 128 | 142307 | 5.10 | ug/L # | 90 |
| 31) Tetrahydrofuran | 7.87 | 71 | 11810 | 4.65 | ug/L # | 1 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 708949 | 5.30 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D Vial: 6
Acq On : 18 Jun 2003 12:25 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 34) 1,1-Dichloropropene | 8.38 | 75 | 652657 | 5.45 ug/L | | 95 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 646624 | 5.40 ug/L | | 96 |
| 37) 1,2-Dichloroethane | 8.76 | 62 | 470830 | 5.35 ug/L | | 95 |
| 38) Benzene | 8.77 | 78 | 1569120 | 5.24 ug/L | | 99 |
| 40) Trichloroethene | 9.73 | 95 | 451325 | 5.14 ug/L | | 95 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 369521 | 4.97 ug/L | | 97 |
| 45) Bromodichloromethane | 10.34 | 83 | 493171 | 4.98 ug/L | | 99 |
| 46) Dibromomethane | 10.42 | 93 | 160410 | 4.73 ug/L | | 90 |
| 51) 2-Hexanone | 12.23 | 58 | 225747 | 23.96 ug/L | | 95 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 265743 | 25.07 ug/L | | 95 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 486324 | 5.10 ug/L | | 96 |
| 55) Toluene | 11.68 | 92 | 912175 | 5.04 ug/L | | 98 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 342403 | 5.14 ug/L | | 95 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 162818 | 4.87 ug/L | | 98 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 354696 | 5.15 ug/L | | 98 |
| 60) Tetrachloroethene | 12.69 | 166 | 416793 | 4.97 ug/L | | 100 |
| 61) Dibromochloromethane | 12.98 | 129 | 262663 | 4.97 ug/L | | 90 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 172513 | 4.86 ug/L | | 97 |
| 64) Chlorobenzene | 13.96 | 112 | 893725 | 5.14 ug/L | | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 312957 | 5.35 ug/L | | 90 |
| 66) Ethylbenzene | 14.06 | 91 | 1770508 | 5.16 ug/L | | 100 |
| 67) m,p-Xylene | 14.18 | 106 | 1195760 | 10.32 ug/L | | 99 |
| 68) o-Xylene | 14.87 | 106 | 561095 | 4.98 ug/L | # | 79 |
| 69) Styrene | 14.93 | 104 | 881265 | 5.31 ug/L | | 96 |
| 70) Bromoform | 15.44 | 173 | 120420 | 5.00 ug/L | | 98 |
| 71) Isopropylbenzene | 15.45 | 105 | 1635640 | 5.21 ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.71 | 83 | 183376 | 4.95 ug/L | | 97 |
| 74) 1,2,3-Trichloropropane | 15.94 | 75 | 137986 | 5.22 ug/L | | 96 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 72572 | 4.89 ug/L | | 92 |
| 76) n-Propylbenzene | 16.09 | 91 | 2032374 | 5.15 ug/L | | 95 |
| 77) Bromobenzene | 16.14 | 156 | 322046 | 5.10 ug/L | | 91 |
| 78) 1,3,5-Trimethylbenzene | 16.34 | 105 | 1364643 | 5.32 ug/L | | 98 |
| 79) 2-Chlorotoluene | 16.35 | 91 | 1359994 | 5.20 ug/L | | 96 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 1187239 | 5.10 ug/L | | 99 |
| 81) tert-butylbenzene | 16.92 | 119 | 1122147 | 5.17 ug/L | | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.98 | 105 | 1344399 | 5.13 ug/L | | 99 |
| 84) sec-butylbenzene | 17.26 | 105 | 1592985 | 5.08 ug/L | | 99 |
| 85) p-isopropyltoluene | 17.49 | 119 | 1291772 | 5.14 ug/L | | 98 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 631926 | 5.01 ug/L | | 96 |
| 88) 1,4-Dichlorobenzene | 17.79 | 146 | 607845 | 5.05 ug/L | | 94 |
| 89) n-butylbenzene | 18.16 | 91 | 1271099 | 5.19 ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D Vial: 6
Acq On : 18 Jun 2003 12:25 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

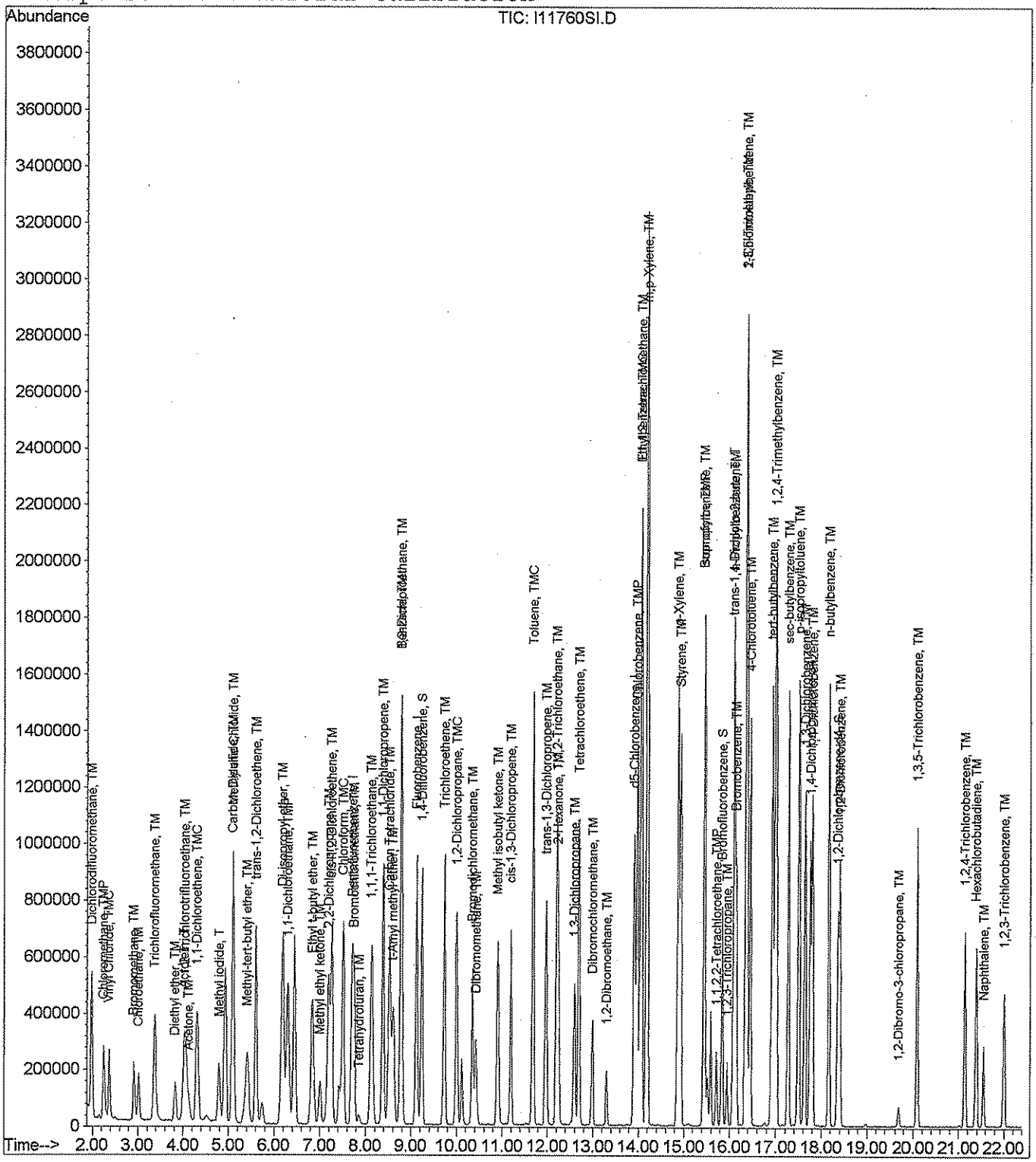
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 496728 | 5.05 | ug/L | | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 24476 | 4.86 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 279065 | 4.87 | ug/L | | 96 |
| 95) Hexachlorobutadiene | 21.38 | 225 | 173812 | 4.95 | ug/L | | 95 |
| 96) Naphthalene | 21.55 | 128 | 305391 | 4.59 | ug/L | | 99 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 211129 | 4.75 | ug/L | | 87 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 452525 | 5.16 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D Vial: 6
Acq On : 18 Jun 2003 12:25 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 607336 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.13 | 96 | 1157947 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 719531 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 348332 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.23 | 114 | 921999 | 3.98 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.50% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 351391 | 3.85 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 96.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 273531 | 4.18 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 104.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 1182156 | 8.91 | ug/L | 98 |
| 3) Chloromethane | 2.24 | 50 | 690340 | 7.60 | ug/L | 99 |
| 4) Vinyl Chloride | 2.36 | 62 | 449282 | 7.13 | ug/L | 91 |
| 5) Bromomethane | 2.91 | 94 | 356911 | 7.07 | ug/L | 89 |
| 6) Chloroethane | 3.01 | 64 | 346667 | 7.38 | ug/L | 98 |
| 7) t-Butyl alcohol | 4.50 | 59 | 36139 | 27.11 | ug/L # | 65 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 948758 | 7.73 | ug/L | 97 |
| 9) Diethyl ether | 3.82 | 74 | 135012 | 7.26 | ug/L | 86 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 478310 | 7.60 | ug/L | 96 |
| 11) Acrolein | 4.01 | 56 | 144517 | 37.41 | ug/L | 95 |
| 12) Acetone | 4.13 | 43 | 226844 | 32.37 | ug/L | 91 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 389504 | 7.53 | ug/L | 96 |
| 14) Methyl iodide | 4.79 | 142 | 562366 | 7.51 | ug/L | 98 |
| 15) Di-isopropyl ether | 6.18 | 45 | 1994086 | 7.89 | ug/L | 95 |
| 16) Methylene Chloride | 5.10 | 84 | 696098 | 7.72 | ug/L | 94 |
| 17) Carbon Disulfide | 5.07 | 76 | 1211571 | 7.90 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 665916 | 7.41 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 625580 | 7.98 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 1237219 | 7.95 | ug/L | 96 |
| 22) Vinyl acetate | 6.34 | 86 | 41653 | 11.70 | ug/L | 69 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 94307 | 37.94 | ug/L | 98 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 979224 | 7.68 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 801835 | 7.70 | ug/L | 95 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 616344 | 8.18 | ug/L | 89 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 632624 | 7.89 | ug/L | 94 |
| 29) Chloroform | 7.51 | 83 | 1241970 | 7.85 | ug/L | 97 |
| 30) Bromochloromethane | 7.76 | 128 | 215944 | 7.91 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 31) | Tetrahydrofuran | 7.85 | 71 | 19431 | 7.82 | ug/L | # | 1 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 1093524 | 8.36 | ug/L | | 99 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 1002112 | 8.56 | ug/L | | 99 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 1008413 | 8.62 | ug/L | | 98 |
| 37) | 1,2-Dichloroethane | 8.76 | 62 | 720705 | 8.38 | ug/L | | 95 |
| 38) | Benzene | 8.78 | 78 | 2409415 | 8.22 | ug/L | | 98 |
| 40) | Trichloroethene | 9.73 | 95 | 688311 | 8.13 | ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 559255 | 7.81 | ug/L | | 100 |
| 45) | Bromodichloromethane | 10.35 | 83 | 774825 | 8.13 | ug/L | | 96 |
| 46) | Dibromomethane | 10.42 | 93 | 251770 | 7.70 | ug/L | | 92 |
| 51) | 2-Hexanone | 12.24 | 58 | 357890 | 39.43 | ug/L | | 100 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 411712 | 40.32 | ug/L | | 96 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 752858 | 8.19 | ug/L | | 92 |
| 55) | Toluene | 11.68 | 92 | 1391600 | 7.98 | ug/L | | 98 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 535408 | 8.35 | ug/L | | 97 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 250776 | 7.78 | ug/L | | 98 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 539204 | 8.13 | ug/L | | 98 |
| 60) | Tetrachloroethene | 12.69 | 166 | 648276 | 8.02 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.99 | 129 | 408579 | 8.03 | ug/L | | 97 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 270807 | 7.93 | ug/L | | 98 |
| 64) | Chlorobenzene | 13.97 | 112 | 1371393 | 8.07 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 484348 | 8.47 | ug/L | | 94 |
| 66) | Ethylbenzene | 14.05 | 91 | 2787659 | 8.31 | ug/L | | 97 |
| 67) | m,p-Xylene | 14.18 | 106 | 1859144 | 16.42 | ug/L | | 91 |
| 68) | o-Xylene | 14.87 | 106 | 883245 | 8.03 | ug/L | # | 85 |
| 69) | Styrene | 14.92 | 104 | 1360342 | 8.39 | ug/L | | 100 |
| 70) | Bromoform | 15.43 | 173 | 192671 | 8.18 | ug/L | | 100 |
| 71) | Isopropylbenzene | 15.44 | 105 | 2515789 | 8.20 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 289514 | 8.01 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 210255 | 8.14 | ug/L | | 97 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 116989 | 8.07 | ug/L | | 91 |
| 76) | n-Propylbenzene | 16.09 | 91 | 3173112 | 8.22 | ug/L | | 95 |
| 77) | Bromobenzene | 16.14 | 156 | 505920 | 8.21 | ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 2120603 | 8.46 | ug/L | | 98 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 2044748 | 8.01 | ug/L | | 97 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 1872549 | 8.24 | ug/L | | 99 |
| 81) | tert-butylbenzene | 16.92 | 119 | 1733973 | 8.18 | ug/L | | 95 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 2090094 | 8.17 | ug/L | | 100 |
| 84) | sec-butylbenzene | 17.27 | 105 | 2510160 | 8.19 | ug/L | | 100 |
| 85) | p-isopropyltoluene | 17.49 | 119 | 2053433 | 8.37 | ug/L | | 95 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 992637 | 8.05 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

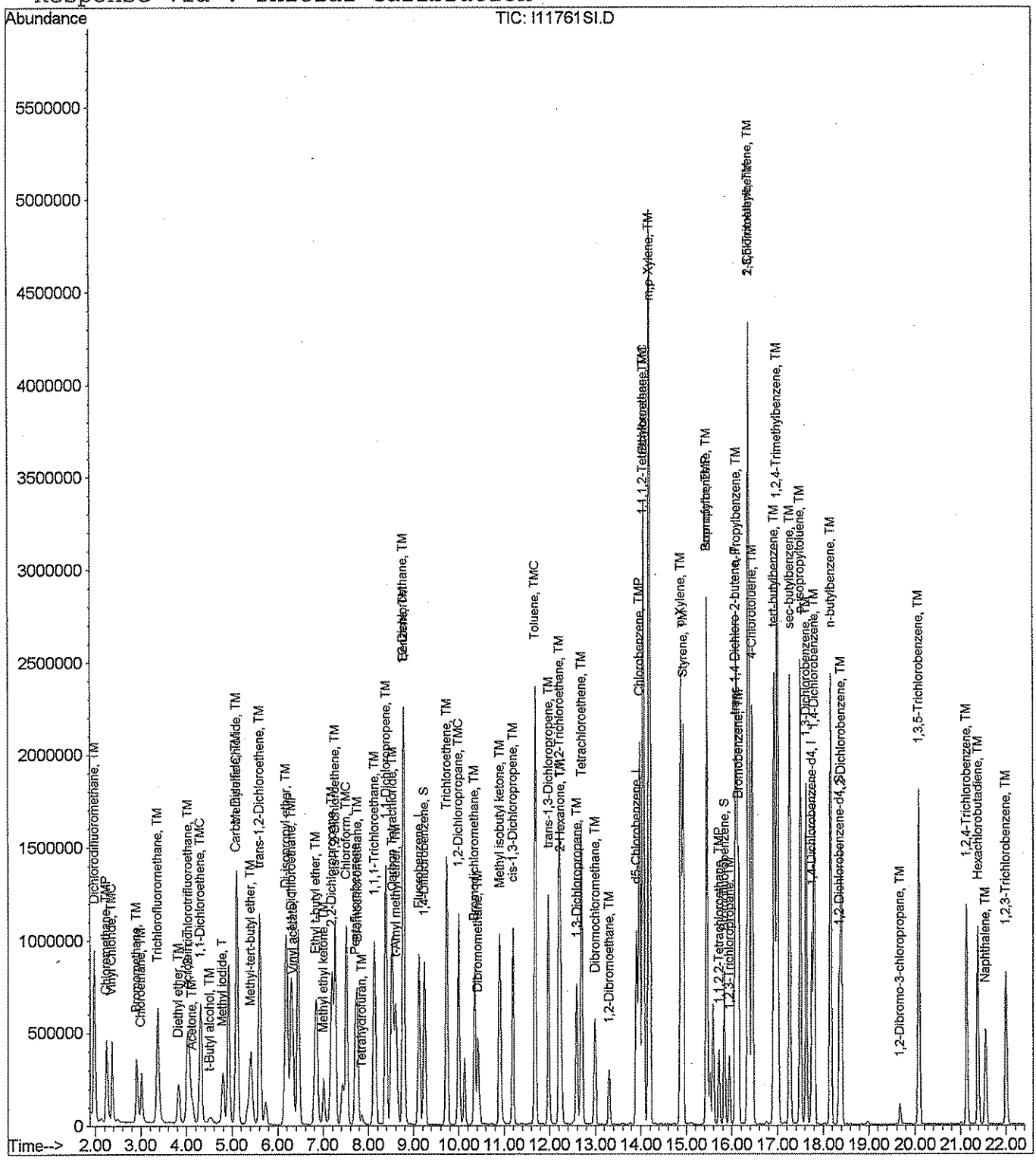
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 88) | 1,4-Dichlorobenzene | 17.80 | 146 | 959865 | 7.87 | ug/L | 96 |
| 89) | n-butylbenzene | 18.16 | 91 | 2074690 | 8.36 | ug/L | 96 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 806024 | 8.08 | ug/L | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 40589 | 7.96 | ug/L | 90 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 493117 | 8.14 | ug/L | 95 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 292542 | 8.22 | ug/L | 96 |
| 96) | Naphthalene | 21.55 | 128 | 563004 | 7.79 | ug/L | 98 |
| 97) | 1,2,3-Trichlorobenzene | 22.01 | 180 | 378090 | 8.01 | ug/L | 87 |
| 98) | 1,3,5-Trichlorobenzene | 20.09 | 180 | 764446 | 8.59 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration






000049

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMR 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 603287 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 1172654 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 772336 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 374322 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 952902 | 4.12 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 103.00% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 381931 | 4.37 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 109.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 284837 | 4.03 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 2635144 | 17.05 | ug/L | 100 |
| 3) Chloromethane | 2.24 | 50 | 1574287 | 16.39 | ug/L | 97 |
| 4) Vinyl Chloride | 2.36 | 62 | 965449 | 13.94 | ug/L | 97 |
| 5) Bromomethane | 2.91 | 94 | 816081 | 16.38 | ug/L | 90 |
| 6) Chloroethane | 3.01 | 64 | 791390 | 17.44 | ug/L | 96 |
| 7) t-Butyl alcohol | 4.50 | 59 | 81950 | 73.43 | ug/L # | 92 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 2180400 | 17.62 | ug/L | 96 |
| 9) Diethyl ether | 3.83 | 74 | 329233 | 16.82 | ug/L | 90 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 1083346 | 16.25 | ug/L | 96 |
| 11) Acrolein | 4.02 | 56 | 332510 | 73.13 | ug/L | 92 |
| 12) Acetone | 4.14 | 43 | 532744 | 95.88 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 882454 | 16.62 | ug/L | 96 |
| 14) Methyl iodide | 4.79 | 142 | 1613377 | 24.43 | ug/L | 97 |
| 15) Di-isopropyl ether | 6.19 | 45 | 4031460 | 15.54 | ug/L | 97 |
| 16) Methylene Chloride | 5.10 | 84 | 1319720 | 16.07 | ug/L | 92 |
| 17) Carbon Disulfide | 5.08 | 76 | 2498140 | 16.58 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 187784 | 16.78 | ug/L # | 75 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 1344258 | 16.52 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 1232234 | 15.40 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 2455860 | 15.52 | ug/L | 99 |
| 22) Vinyl acetate | 6.34 | 86 | 86446 | 15.79 | ug/L | 85 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 184342 | 77.26 | ug/L | 94 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 1985200 | 15.84 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 1623394 | 15.73 | ug/L | 92 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 1206869 | 14.96 | ug/L | 95 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 1348035 | 16.21 | ug/L | 96 |
| 29) Chloroform | 7.52 | 83 | 2504429 | 15.00 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.75 | 128 | 435490 | 15.16 | ug/L | 94 |
| 31) | Tetrahydrofuran | 7.85 | 71 | 38624 | 14.79 | ug/L | 98 |
| 32) | 1,1,1-Trichloroethane | 8.14 | 97 | 2257953 | 15.38 | ug/L | 95 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 2008964 | 15.48 | ug/L | 98 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 2068980 | 16.25 | ug/L | 100 |
| 37) | 1,2-Dichloroethane | 8.77 | 62 | 1430000 | 15.01 | ug/L | 97 |
| 38) | Benzene | 8.78 | 78 | 4785582 | 15.06 | ug/L | 97 |
| 40) | Trichloroethene | 9.73 | 95 | 1419019 | 15.44 | ug/L | 97 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 1180303 | 15.50 | ug/L | 98 |
| 42) | Methylmethacrylate | 10.12 | 69 | 374444 | 16.86 | ug/L | 99 |
| 45) | Bromodichloromethane | 10.35 | 83 | 1620197 | 15.90 | ug/L | 98 |
| 46) | Dibromomethane | 10.42 | 93 | 526504 | 15.17 | ug/L | 94 |
| 51) | 2-Hexanone | 12.24 | 58 | 783797 | 86.09 | ug/L | 100 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 897739 | 84.69 | ug/L | 96 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 1637478 | 17.33 | ug/L | 98 |
| 55) | Toluene | 11.68 | 92 | 2858498 | 15.22 | ug/L | 98 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 1154608 | 17.93 | ug/L | 92 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 517546 | 14.89 | ug/L | 97 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 1137149 | 15.99 | ug/L | 100 |
| 60) | Tetrachloroethene | 12.69 | 166 | 1345019 | 15.49 | ug/L | 98 |
| 61) | Dibromochloromethane | 12.99 | 129 | 904690 | 17.51 | ug/L | 91 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 596258 | 17.44 | ug/L | 95 |
| 64) | Chlorobenzene | 13.96 | 112 | 2920757 | 15.13 | ug/L | 99 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 1042598 | 14.88 | ug/L | 91 |
| 66) | Ethylbenzene | 14.06 | 91 | 5761648 | 14.80 | ug/L | 100 |
| 67) | m,p-Xylene | 14.18 | 106 | 3839409 | 28.94 | ug/L | 96 |
| 68) | o-Xylene | 14.87 | 106 | 1905243 | 15.49 | ug/L | 100 |
| 69) | Styrene | 14.92 | 104 | 2987784 | 15.79 | ug/L | 100 |
| 70) | Bromoform | 15.43 | 173 | 427443 | 16.32 | ug/L | 91 |
| 71) | Isopropylbenzene | 15.44 | 105 | 5313875 | 14.95 | ug/L | 97 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 641574 | 15.87 | ug/L | 94 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 467711 | 15.44 | ug/L | 93 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 249155 | 15.77 | ug/L | 99 |
| 76) | n-Propylbenzene | 16.09 | 91 | 6678130 | 15.07 | ug/L | 97 |
| 77) | Bromobenzene | 16.14 | 156 | 1074939 | 15.33 | ug/L | 92 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 4391345 | 15.02 | ug/L | 99 |
| 79) | 2-Chlorotoluene | 16.37 | 91 | 4404645 | 14.86 | ug/L | 93 |
| 80) | 4-Chlorotoluene | 16.45 | 91 | 3911809 | 15.16 | ug/L | 100 |
| 81) | tert-butylbenzene | 16.92 | 119 | 3716883 | 15.33 | ug/L | 99 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 4411606 | 15.31 | ug/L | 95 |
| 84) | sec-butylbenzene | 17.27 | 105 | 5295460 | 15.16 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

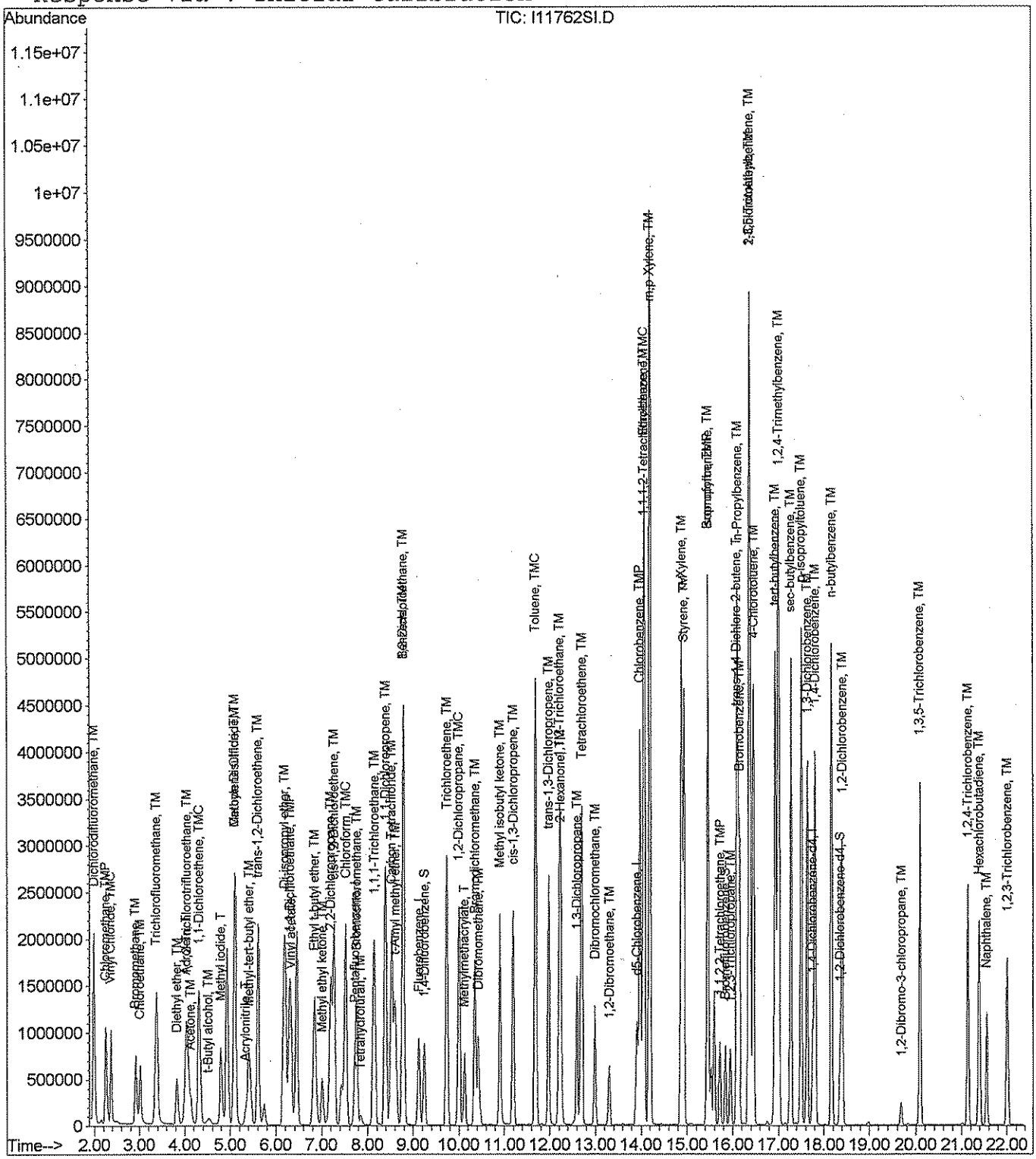
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 85) | p-isopropyltoluene | 17.49 | 119 | 4352012 | 15.58 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 2117048 | 15.30 | ug/L | | 96 |
| 88) | 1,4-Dichlorobenzene | 17.80 | 146 | 2075244 | 14.99 | ug/L | | 94 |
| 89) | n-butylbenzene | 18.16 | 91 | 4374210 | 15.22 | ug/L | | 98 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 1683224 | 14.26 | ug/L | | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 92711 | 16.63 | ug/L | # | 86 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 1079486 | 18.66 | ug/L | | 99 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 607040 | 15.52 | ug/L | | 99 |
| 96) | Naphthalene | 21.55 | 128 | 1305040 | 14.66 | ug/L | | 96 |
| 97) | 1,2,3-Trichlorobenzene | 22.01 | 180 | 827086 | 19.37 | ug/L | | 95 |
| 98) | 1,3,5-Trichlorobenzene | 20.10 | 180 | 1588461 | 15.20 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration





000053

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6-18-03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 664359 | 4.00 | ug/L | | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1243355 | 4.00 | ug/L | | 0.00 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 797012 | 4.00 | ug/L | | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 378332 | 4.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 1015163 | 3.97 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.25% | | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 393104 | 4.17 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 104.25% | | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 296132 | 4.05 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.25% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 4521195 | 26.28 | ug/L | | 100 |
| 3) Chloromethane | 2.24 | 50 | 2741967 | 25.80 | ug/L | | 98 |
| 4) Vinyl Chloride | 2.36 | 62 | 1471967 | 19.81 | ug/L | | 99 |
| 5) Bromomethane | 2.89 | 94 | 1487478 | 26.99 | ug/L | | 87 |
| 6) Chloroethane | 3.00 | 64 | 1357559 | 26.68 | ug/L | | 94 |
| 7) t-Butyl alcohol | 4.52 | 59 | 161959 | 141.33 | ug/L | # | 88 |
| 8) Trichlorofluoromethane | 3.36 | 101 | 3900742 | 28.15 | ug/L | | 97 |
| 9) Diethyl ether | 3.82 | 74 | 591238 | 27.15 | ug/L | | 89 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 2043266 | 27.76 | ug/L | | 98 |
| 11) Acrolein | 4.01 | 56 | 596338 | 136.38 | ug/L | | 90 |
| 12) Acetone | 4.13 | 43 | 977080 | 132.16 | ug/L | | 95 |
| 13) 1,1-Dichloroethene | 4.30 | 96 | 1663043 | 28.22 | ug/L | | 94 |
| 14) Methyl iodide | 4.79 | 142 | 3453920 | 43.66 | ug/L | | 99 |
| 15) Di-isopropyl ether | 6.18 | 45 | 8477679 | 29.82 | ug/L | | 98 |
| 16) Methylene Chloride | 5.10 | 84 | 2572393 | 29.17 | ug/L | | 95 |
| 17) Carbon Disulfide | 5.07 | 76 | 5033498 | 30.12 | ug/L | | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 393192 | 31.64 | ug/L | # | 79 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 2998050 | 33.28 | ug/L | | 100 |
| 20) trans-1,2-Dichloroethene | 5.59 | 96 | 2594120 | 29.66 | ug/L | | 99 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 5279611 | 30.47 | ug/L | | 97 |
| 22) Vinyl acetate | 6.34 | 86 | 184958 | 30.76 | ug/L | | 86 |
| 23) Methyl ethyl ketone | 7.00 | 72 | 416582 | 159.46 | ug/L | | 99 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 4385570 | 31.82 | ug/L | | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 3544984 | 31.30 | ug/L | | 93 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 2574877 | 29.36 | ug/L | | 98 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 2956141 | 32.21 | ug/L | | 93 |
| 29) Chloroform | 7.52 | 83 | 5310498 | 29.24 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration



000054

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.75 | 128 | 940811 | 30.00 | ug/L | 97 |
| 31) | Tetrahydrofuran | 7.84 | 71 | 85836 | 30.30 | ug/L | 90 |
| 32) | 1,1,1-Trichloroethane | 8.14 | 97 | 4908193 | 30.56 | ug/L | 94 |
| 34) | 1,1-Dichloropropene | 8.38 | 75 | 4220786 | 29.72 | ug/L | 98 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 4489016 | 31.91 | ug/L | 98 |
| 37) | 1,2-Dichloroethane | 8.77 | 62 | 2929242 | 28.21 | ug/L | 95 |
| 38) | Benzene | 8.78 | 78 | 9739011 | 28.16 | ug/L | 97 |
| 40) | Trichloroethene | 9.72 | 95 | 2893036 | 29.90 | ug/L | 98 |
| 41) | 1,2-Dichloropropane | 10.00 | 63 | 2410840 | 30.01 | ug/L | 97 |
| 42) | Methylmethacrylate | 10.12 | 69 | 804016 | 33.84 | ug/L | 99 |
| 45) | Bromodichloromethane | 10.34 | 83 | 3349119 | 31.02 | ug/L | 98 |
| 46) | Dibromomethane | 10.41 | 93 | 1098405 | 30.11 | ug/L | 92 |
| 51) | 2-Hexanone | 12.24 | 58 | 1616278 | 164.92 | ug/L | 98 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 1872742 | 164.69 | ug/L | 97 |
| 53) | cis-1,3-Dichloropropene | 11.19 | 75 | 3351173 | 32.99 | ug/L | 96 |
| 55) | Toluene | 11.69 | 92 | 5776258 | 29.29 | ug/L | 95 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 2414428 | 34.67 | ug/L | 95 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 1020168 | 28.01 | ug/L | 98 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 2310663 | 30.65 | ug/L | 98 |
| 60) | Tetrachloroethene | 12.69 | 166 | 2738157 | 29.93 | ug/L | 95 |
| 61) | Dibromochloromethane | 12.99 | 129 | 1846321 | 33.19 | ug/L | 90 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 1213884 | 32.99 | ug/L | 98 |
| 64) | Chlorobenzene | 13.96 | 112 | 5661805 | 28.73 | ug/L | 99 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 2006572 | 28.07 | ug/L | 87 |
| 66) | Ethylbenzene | 14.06 | 91 | 10734730 | 27.13 | ug/L | 98 |
| 67) | m,p-Xylene | 14.19 | 106 | 7100893 | 52.88 | ug/L | 92 |
| 68) | o-Xylene | 14.87 | 106 | 3705793 | 29.38 | ug/L | 99 |
| 69) | Styrene | 14.93 | 104 | 5826794 | 29.90 | ug/L | 97 |
| 70) | Bromoform | 15.43 | 173 | 833722 | 30.74 | ug/L | 93 |
| 71) | Isopropylbenzene | 15.45 | 105 | 10167131 | 28.09 | ug/L | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 1285529 | 30.85 | ug/L | 96 |
| 74) | 1,2,3-Trichloropropane | 15.94 | 75 | 964771 | 31.09 | ug/L | 94 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 484410 | 29.80 | ug/L | 97 |
| 76) | n-Propylbenzene | 16.09 | 91 | 12583846 | 27.84 | ug/L | 94 |
| 77) | Bromobenzene | 16.14 | 156 | 2118334 | 29.52 | ug/L | 96 |
| 78) | 1,3,5-Trimethylbenzene | 16.36 | 105 | 8113171 | 27.23 | ug/L | 98 |
| 79) | 2-Chlorotoluene | 16.37 | 91 | 8080294 | 26.81 | ug/L | 91 |
| 80) | 4-Chlorotoluene | 16.45 | 91 | 7701298 | 29.22 | ug/L | 100 |
| 81) | tert-butylbenzene | 16.92 | 119 | 7126073 | 28.73 | ug/L | 94 |
| 82) | 1,2,4-Trimethylbenzene | 16.99 | 105 | 8326048 | 28.24 | ug/L | 96 |
| 84) | sec-butylbenzene | 17.26 | 105 | 10282071 | 28.83 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

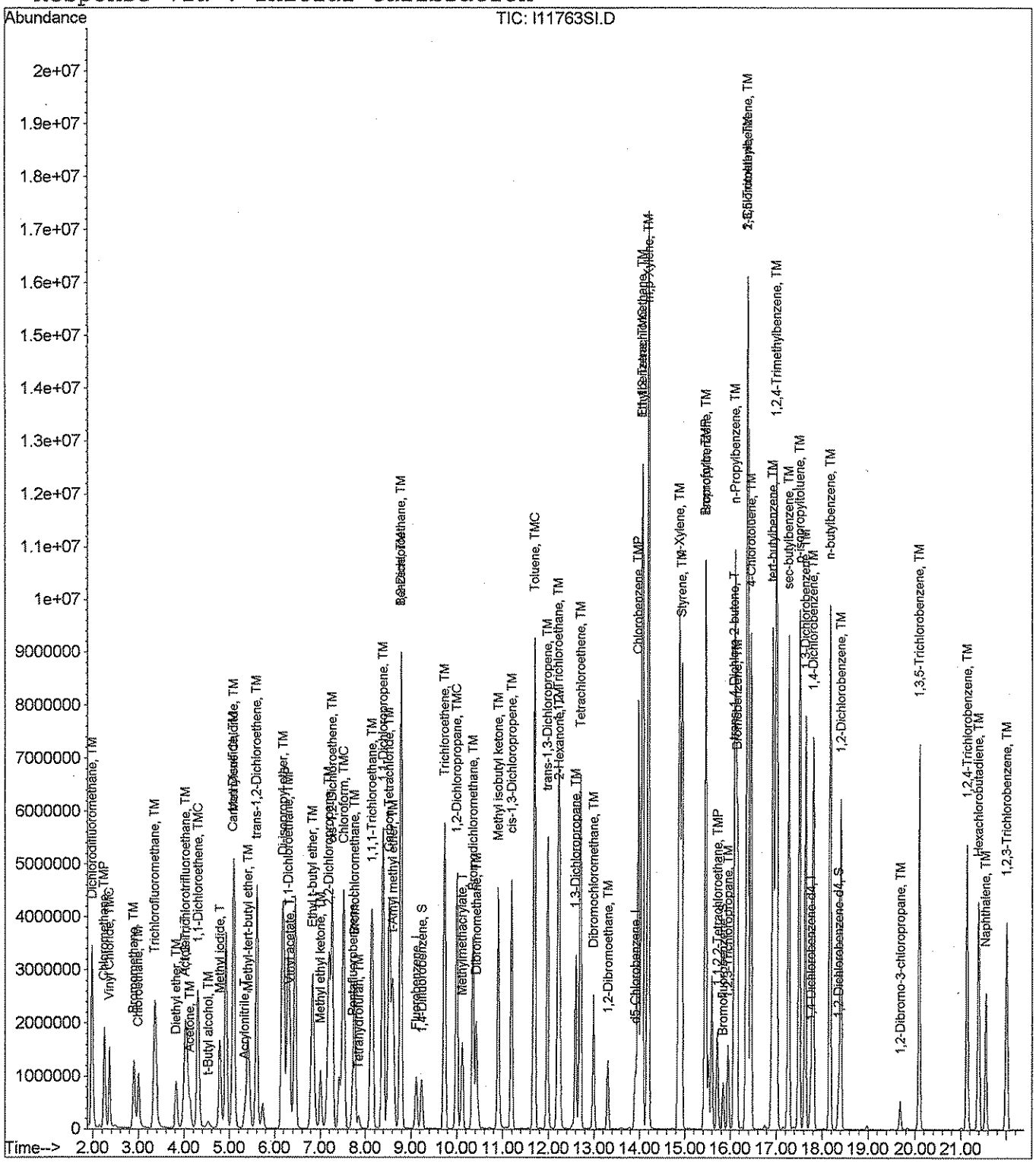
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.50 | 119 | 8452032 | 29.48 | ug/L | | 97 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 4204593 | 29.71 | ug/L | | 98 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 4030559 | 29.17 | ug/L | | 94 |
| 89) n-butylbenzene | 18.16 | 91 | 8472257 | 29.45 | ug/L | | 97 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 3364571 | 28.72 | ug/L | | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 195586 | 34.44 | ug/L | # | 73 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 2236227 | 37.01 | ug/L | | 96 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 1240242 | 31.56 | ug/L | | 95 |
| 96) Naphthalene | 21.55 | 128 | 2864132 | 30.41 | ug/L | | 95 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 1762040 | 39.17 | ug/L | | 97 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 3157322 | 30.14 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration






000057

## 524 RECOVERY

Data File Name: I11792Q.D
Sample Name: L506193I
Date: 19 Jun 2003 12:21 pm

MT 6/19/03

6-20-03

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.16 | 1.2 | 96% | OK |
| Chloromethane | 1.29 | 1.2 | 108% | OK |
| Vinyl Chloride | 1.32 | 1.2 | 110% | OK |
| Bromomethane | 1.28 | 1.2 | 106% | OK |
| Chloroethane | 1.17 | 1.2 | 97% | OK |
| t-Butyl alcohol | 7.26 | 6.0 | 121% | OK |
| Trichlorofluoromethane | 1.21 | 1.2 | 101% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.19 | 1.2 | 99% | OK |
| Acetone | 2.13 | 1.2 | 178% | * |
| 1,1-Dichloroethene | 1.20 | 1.2 | 100% | OK |
| Di-isopropyl ether | 1.21 | 1.2 | 101% | OK |
| Methylene Chloride | 1.01 | 1.2 | 84% | OK |
| Methyl-tert-butyl ether | 2.26 | 2.4 | 94% | OK |
| trans-1,2-Dichloroethene | 1.28 | 1.2 | 106% | OK |
| 1,1-Dichloroethane | 1.26 | 1.2 | 105% | OK |
| Methyl ethyl ketone | 1.23 | 1.2 | 102% | OK |
| Ethyl t-butyl ether | 1.17 | 1.2 | 97% | OK |
| 2,2-Dichloropropane | 1.22 | 1.2 | 102% | OK |
| cis-1,2-Dichloroethene | 1.35 | 1.2 | 112% | OK |
| t-Amyl methyl ether | 1.14 | 1.2 | 95% | OK |
| Chloroform | 1.38 | 1.2 | 115% | OK |
| Bromochloromethane | 1.22 | 1.2 | 102% | OK |
| Tetrahydrofuran | 1.29 | 1.2 | 108% | OK |
| 1,1,1-Trichloroethane | 1.17 | 1.2 | 97% | OK |
| 1,1-Dichloropropene | 1.35 | 1.2 | 112% | OK |
| Carbon Tetrachloride | 1.23 | 1.2 | 103% | OK |
| 1,2-Dichloroethane | 1.35 | 1.2 | 112% | OK |
| Benzene | 1.31 | 1.2 | 109% | OK |
| Trichloroethene | 1.41 | 1.2 | 118% | OK |
| 1,2-Dichloropropane | 1.29 | 1.2 | 108% | OK |
| Bromodichloromethane | 1.29 | 1.2 | 107% | OK |
| Dibromomethane | 1.25 | 1.2 | 104% | OK |
| 2-Hexanone | 1.13 | 1.2 | 94% | OK |
| Methyl isobutyl ketone | 1.15 | 1.2 | 96% | OK |
| cis-1,3-Dichloropropene | 1.31 | 1.2 | 109% | OK |
| Toluene | 1.30 | 1.2 | 108% | OK |
| trans-1,3-Dichloropropene | 1.24 | 1.2 | 104% | OK |
| 1,1,2-Trichloroethane | 1.32 | 1.2 | 110% | OK |
| 1,3-Dichloropropane | 1.30 | 1.2 | 109% | OK |
| Tetrachloroethene | 1.46 | 1.2 | 121% | OK |
| Dibromochloromethane | 1.25 | 1.2 | 104% | OK |
| 1,2-Dibromoethane | 1.23 | 1.2 | 102% | OK |
| Chlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,1,1,2-Tetrachloroethane | 1.31 | 1.2 | 109% | OK |
| Ethylbenzene | 1.34 | 1.2 | 112% | OK |
| m,p-Xylene | 2.66 | 2.4 | 111% | OK |
| o-Xylene | 1.34 | 1.2 | 111% | OK |
| Styrene | 1.25 | 1.2 | 104% | OK |

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.26 | 1.2 | 105% | OK |
| Isopropylbenzene | 1.24 | 1.2 | 103% | OK |
| 1,1,2,2-Tetrachloroethane | 1.24 | 1.2 | 103% | OK |
| 1,2,3-Trichloropropane | 1.28 | 1.2 | 107% | OK |
| n-Propylbenzene | 1.29 | 1.2 | 107% | OK |
| Bromobenzene | 1.31 | 1.2 | 109% | OK |
| 1,3,5-Trimethylbenzene | 1.32 | 1.2 | 110% | OK |
| 2-Chlorotoluene | 1.32 | 1.2 | 110% | OK |
| 4-Chlorotoluene | 1.29 | 1.2 | 107% | OK |
| tert-butylbenzene | 1.25 | 1.2 | 104% | OK |
| 1,2,4-Trimethylbenzene | 1.31 | 1.2 | 109% | OK |
| sec-butylbenzene | 1.28 | 1.2 | 106% | OK |
| p-isopropyltoluene | 1.21 | 1.2 | 101% | OK |
| 1,3-Dichlorobenzene | 1.28 | 1.2 | 106% | OK |
| 1,4-Dichlorobenzene | 1.29 | 1.2 | 108% | OK |
| n-butylbenzene | 1.25 | 1.2 | 104% | OK |
| 1,2-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,2-Dibromo-3-chloropropane | 1.39 | 1.2 | 116% | OK |
| 1,2,4-Trichlorobenzene | 0.95 | 1.2 | 79% | OK |
| Hexachlorobutadiene | 1.42 | 1.2 | 119% | OK |
| Naphthalene | 0.89 | 1.2 | 74% | OK |
| 1,2,3-Trichlorobenzene | 0.92 | 1.2 | 76% | OK |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-I\I11793B.D Vial: 4
Acq On : 19 Jun 2003 1:13 pm Operator: JMR
Sample : B506193I Inst : Instrumen
Misc : 25000,,VIAL BLANK JB 6/19/03 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 13:52 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

MTI 6/19/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.74 | 168 | 619841 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.14 | 96 | 1168880 | 4.00 | ug/L | 0.02 |
| 63) d5-Chlorobenzene | 13.93 | 117 | 718359 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.77 | 152 | 316823 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.26 | 114 | 936551 | 3.93 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 98.25% | | | |
| 54) Bromofluorobenzene | 15.86 | 95 | 326463 | 3.66 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 91.50% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 241452 | 3.66 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 91.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| ~~74~~) 1,2,3-Trichloropropane | 15.86 | 75 | 204446 | ~~7.34~~ | ug/L | # 47 |

ND

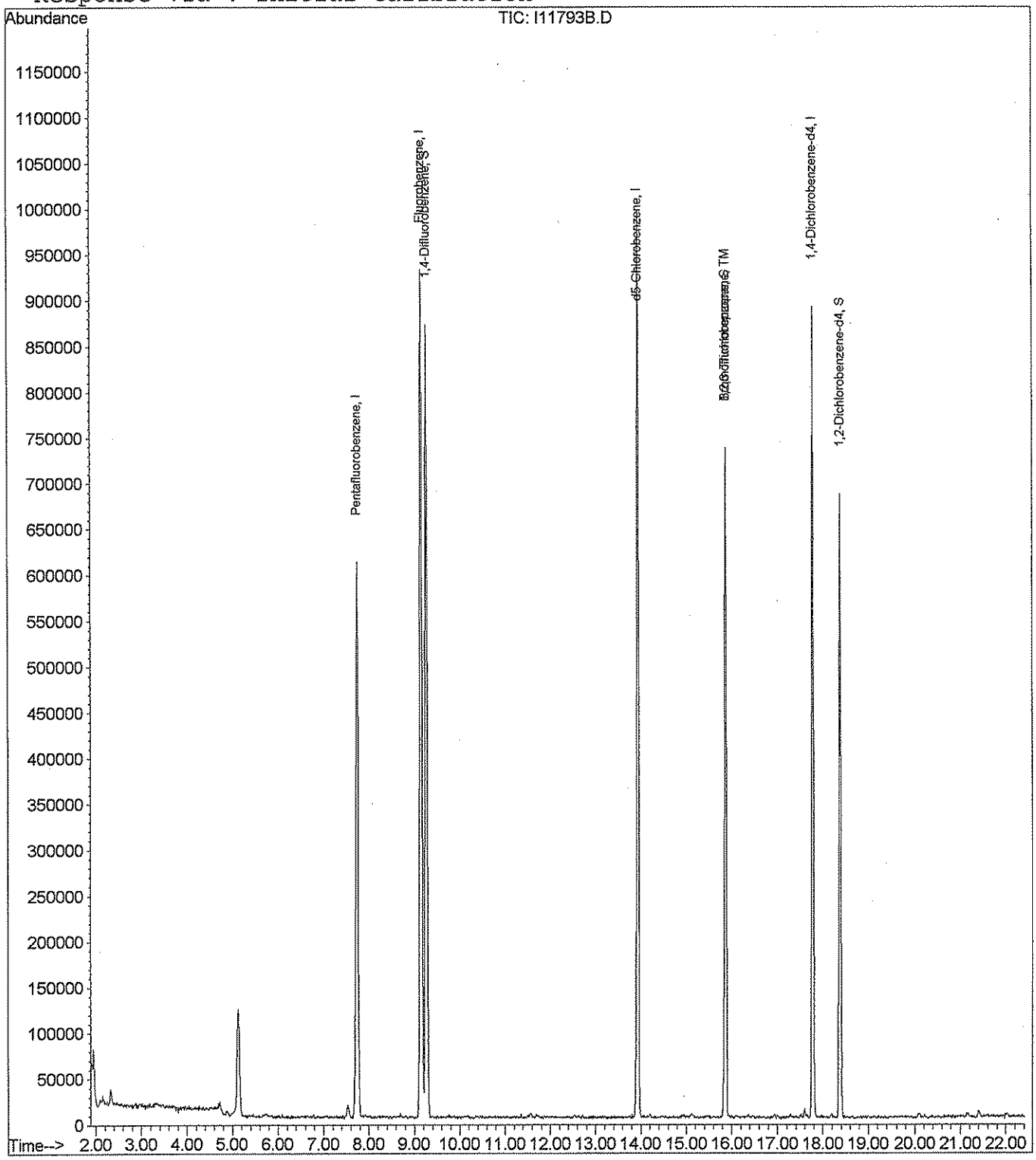
(#) = qualifier out of range (m) = manual integration
I11793B.D V506183I.M Thu Jun 19 13:52:47 2003 Page 1

000060

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903-I\I11793B.D Vial: 4
Acq On : 19 Jun 2003 1:13 pm Operator: JMR
Sample : B506193I Inst : Instrumen
Misc : 25000,,VIAL BLANK JB 6/19/03 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 13:52 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration





000061

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903-I\I11792Q.D  Vial: 3
Acq On : 19 Jun 2003 12:21 pm  Operator: JMR
Sample : L506193I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

MT 6/19/03

Min. RRF : 0.000  Min. Rel. Area : 50%  Max. R.T. Dev 0.50min
Max. RRF Dev : 30%  Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 102 | 0.02 | |
| 2 | TM | Dichlorodifluoromethane | 1.009 | 0.974 | 3.5 | 95 | 0.00 | |
| 3 | TMP | Chloromethane | 0.619 | 0.667 | -7.8 | 96 | 0.01 | |
| 4 | TMC | Vinyl Chloride | 0.447 | 0.492 | -10.1 | 94 | 0.00 | |
| 5 | TM | Bromomethane | 0.323 | 0.343 | -6.2 | 93 | 0.02 | |
| 6 | TM | Chloroethane | 0.298 | 0.290 | 2.7 | 89 | 0.01 | |
| 7 | TM | t-Butyl alcohol | 0.007 | 0.008 | -14.3 | 109 | 0.03 | |
| 8 | TM | Trichlorofluoromethane | 0.820 | 0.828 | -1.0 | 106 | 0.01 | |
| 9 | TM | Diethyl ether | 0.128 | 0.119 | 7.0 | 89 | 0.00 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.435 | 0.432 | 0.7 | 107 | 0.01 | |
| 11 | T | Acrolein | ~~0.026~~ | ~~0.007~~ | ~~73.1#~~ | ~~30#~~ | ~~0.00~~ | NT |
| 12 | TM | Acetone | 0.045 | 0.016 | 64.4# | 37# | 0.01 | see RPT |
| 13 | TMC | 1,1-Dichloroethene | 0.348 | 0.348 | 0.0 | 102 | 0.00 | |
| 14 | T | Methyl iodide | ~~0.501~~ | ~~0.298~~ | ~~40.5#~~ | ~~76~~ | ~~0.00~~ | NT |
| 15 | TM | Di-isopropyl ether | 1.695 | 1.706 | -0.6 | 97 | 0.00 | |
| 16 | TM | Methylene Chloride | 0.865 | 0.886 | -2.4 | 97 | 0.01 | |
| 17 | TM | Carbon Disulfide | 0.996 | 1.118 | -12.2 | 112 | 0.02 | |
| 18 | T | Acrylonitrile | 0.075 | 0.064 | 14.7 | 102 | 0.03 | |
| 19 | TM | Methyl-tert-butyl ether | 0.545 | 1.029 | -88.8# | 185 | 0.02 | see RPT |
| 20 | TM | trans-1,2-Dichloroethene | 0.520 | 0.553 | -6.3 | 101 | 0.02 | |
| 21 | TMP | 1,1-Dichloroethane | 1.035 | 1.088 | -5.1 | 99 | 0.01 | |
| 22 | T | Vinyl acetate | ~~0.036~~ | ~~0.053~~ | ~~-47.2#~~ | ~~153~~ | ~~0.01~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.016 | 0.003 | 81.3# | 19# | 0.01 | see RPT |
| 24 | TM | Ethyl t-butyl ether | 0.829 | 0.805 | 2.9 | 95 | 0.02 | |
| 25 | TM | 2,2-Dichloropropane | 0.679 | 0.691 | -1.8 | 102 | 0.01 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.521 | 0.586 | -12.5 | 105 | 0.02 | |
| 27 | TM | t-Amyl methyl ether | 0.553 | 0.524 | 5.2 | 91 | 0.01 | |
| 28 | T | NO COUMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.24~~ | NT |
| 29 | TMC | Chloroform | 1.078 | 1.236 | -14.7 | 108 | 0.02 | |
| 30 | TM | Bromochloromethane | 0.187 | 0.191 | -2.1 | 96 | 0.02 | |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.018 | -5.9 | 104 | 0.03 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.961 | 0.935 | 2.7 | 100 | 0.01 | |
| 33 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 34 | TM | 1,1-Dichloropropene | 0.845 | 0.947 | -12.1 | 105 | 0.02 | |
| 35 | TM | Carbon Tetrachloride | 0.847 | 0.868 | -2.5 | 100 | 0.01 | |
| 36 | S | 1,4-Difluorobenzene | 1.539 | 1.537 | 0.1 | 102 | 0.02 | |
| 37 | TM | 1,2-Dichloroethane | 0.615 | 0.691 | -12.4 | 103 | 0.02 | |
| 38 | TM | Benzene | 2.040 | 2.228 | -9.2 | 101 | 0.01 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 100 | 0.02 | |
| 40 | TM | Trichloroethene | 0.308 | 0.363 | -17.9 | 110 | 0.02 | |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903-I\I11792Q.D  Vial: 3
Acq On : 19 Jun 2003 12:21 pm  Operator: JMR
Sample : L506193I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.256 | 0.276 | -7.8 | 100 | 0.01 |
| 42 | T | Methylmethacrylate | 0.077 | 0.075 | 2.6 | 94 | 0.01 |
| 43 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 44 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 45 | TM | Bromodichloromethane | 0.346 | 0.371 | -7.2 | 105 | 0.02 |
| 46 | TM | Dibromomethane | 0.116 | 0.121 | -4.3 | 102 | 0.01 |
| 47 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.06~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 NT |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~0.50~~ |
| 51 | TM | 2-Hexanone | 0.032 | 0.006 | 81.3# | 18# | 0.03 |
| 52 | TM | Methyl isobutyl ketone | 0.037 | 0.007 | 81.1# | 19# | 0.02 |
| 53 | TM | cis-1,3-Dichloropropene | 0.328 | 0.358 | -9.1 | 106 | 0.02 |
| 54 | S | Bromofluorobenzene | 0.305 | 0.293 | 3.9 | 99 | 0.02 |
| 55 | TMC | Toluene | 0.626 | 0.677 | -8.1 | 101 | 0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.227 | 0.235 | -3.5 | 100 | 0.01 |
| 57 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.115 | 0.127 | -10.4 | 97 | 0.02 |
| 59 | TM | 1,3-Dichloropropane | 0.241 | 0.262 | -8.7 | 106 | 0.02 |
| 60 | TM | Tetrachloroethene | 0.291 | 0.353 | -21.3 | 114 | 0.02 |
| 61 | TM | Dibromochloromethane | 0.180 | 0.187 | -3.9 | 95 | 0.02 |
| 62 | TM | 1,2-Dibromoethane | 0.119 | 0.122 | -2.5 | 97 | 0.02 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 100 | 0.02 |
| 64 | TMP | Chlorobenzene | 0.972 | 1.070 | -10.1 | 101 | 0.01 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.352 | 0.384 | -9.1 | 102 | 0.02 |
| 66 | TMC | Ethylbenzene | 1.935 | 2.164 | -11.8 | 100 | 0.01 |
| 67 | TM | m,p-Xylene | 0.654 | 0.724 | -10.7 | 98 | 0.01 |
| 68 | TM | o-Xylene | 0.624 | 0.695 | -11.4 | 102 | 0.02 |
| 69 | TM | Styrene | 0.969 | 1.010 | -4.2 | 100 | 0.01 |
| 70 | TMP | Bromoform | 0.135 | 0.143 | -5.9 | 104 | 0.01 |
| 71 | TM | Isopropylbenzene | 1.779 | 1.833 | -3.0 | 93 | 0.01 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.208 | 0.214 | -2.9 | 97 | 0.01 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.368 | 0.356 | 3.3 | 98 | 0.01 |
| 74 | TM | 1,2,3-Trichloropropane | 0.155 | 0.165 | -6.5 | 95 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.081 | 0.084 | -3.7 | 102 | 0.02 |
| 76 | TM | n-Propylbenzene | 2.220 | 2.386 | -7.5 | 99 | 0.02 |
| 77 | TM | Bromobenzene | 0.355 | 0.388 | -9.3 | 104 | 0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.458 | 1.607 | -10.2 | 100 | 0.02 |
| 79 | TM | 2-Chlorotoluene | 1.472 | 1.621 | -10.1 | 99 | 0.02 |
| 80 | TM | 4-Chlorotoluene | 1.303 | 1.396 | -7.1 | 101 | 0.01 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\061903-I\I11792Q.D  Vial: 3
Acq On : 19 Jun 2003 12:21 pm  Operator: JMR
Sample : L506193I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.224 | 1.278 | -4.4 | 98 | 0.02 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.451 | 1.584 | -9.2 | 100 | 0.02 | |
| 83 | T | No Compound | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.760 | 1.874 | -6.5 | 99 | 0.02 | |
| 85 | TM | p-isopropyltoluene | 1.420 | 1.435 | -1.1 | 95 | 0.02 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.702 | 0.746 | -6.3 | 99 | 0.02 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | ✓99 | 0.02 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.439 | 1.553 | -7.9 | 96 | 0.02 | |
| 89 | TM | n-butylbenzene | 3.001 | 3.134 | -4.4 | 97 | 0.02 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.221 | 1.343 | -10.0 | 104 | 0.01 | |
| 91 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.061 | 0.070 | -14.8 | 107 | 0.01 | |
| 93 | T | NO COMPOUND | ~~0.000~~ | ~~0.000~~ | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 4 | TM | 1,2,4-Trichlorobenzene | 0.656 | 0.520 | 20.7 | 82 | 0.02 | |
| 95 | TM | Hexachlorobutadiene | 0.415 | 0.492 | -18.6 | 113 | 0.01 | |
| 96 | TM | Naphthalene | 0.609 | 0.432 | 29.1 | 74 | 0.02 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.493 | 0.377 | 23.5 | 84 | 0.02 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.098 | 1.041 | 5.2 | 91 | 0.01 | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: 111756T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/18/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0952

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 603203 | | 7.71 | | 1172581 | | 9.12 | | 743404 | | 13.90 | | 337661 | | 17.75 | |
| | UPPER LIMIT | 784164 | | 8.17 | | 1524355 | | 9.67 | | 966425 | | 14.73 | | 438959 | | 18.82 | |
| | LOWER LIMIT | 422242 | | 7.25 | | 820807 | | 8.57 | | 520383 | | 13.07 | | 236363 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 0.1PPB STD | 576551 | | 7.72 | | 1101944 | | 9.12 | | 652480 | | 13.91 | | 297945 | | 17.75 | |
| 02 | 0.5PPB STD | 575502 | | 7.72 | | 1098669 | | 9.12 | | 722418 | | 13.90 | | 332913 | | 17.75 | |
| 03 | 1.2PPB STD | 603203 | | 7.71 | | 1172581 | | 9.12 | | 743404 | | 13.90 | | 337661 | | 17.75 | |
| 04 | 4.8PPB STD | 621115 | | 7.71 | | 1202054 | | 9.12 | | 736657 | | 13.90 | | 343739 | | 17.74 | |
| 05 | 8PPB STD | 607336 | | 7.72 | | 1157947 | | 9.13 | | 719531 | | 13.91 | | 348332 | | 17.75 | |
| 06 | 16PPB STD | 603287 | | 7.72 | | 1172654 | | 9.13 | | 772336 | | 13.91 | | 374322 | | 17.75 | |
| 07 | 32PPB STD | 664359 | | 7.71 | | 1243355 | | 9.12 | | 797012 | | 13.90 | | 378332 | | 17.75 | |
| 08 | | | | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | | | | |

IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

## VOLATILE ORGANIC
## INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: 111791T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/19/2003

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1146

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 615338 | | 7.73 | | 1177208 | | 9.14 | | 740102 | | 13.92 | | 334395 | | 17.77 | |
| | UPPER LIMIT | 799939 | | 8.19 | | 1530370 | | 9.69 | | 962133 | | 14.76 | | 434714 | | 18.84 | |
| | LOWER LIMIT | 430737 | | 7.27 | | 824046 | | 8.59 | | 518071 | | 13.08 | | 234077 | | 16.70 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | L506193I | 615338 | | 7.73 | | 1177208 | | 9.14 | | 740102 | | 13.92 | | 334395 | | 17.77 | |
| 02 | B506193I | 619841 | | 7.74 | | 1168880 | | 9.14 | | 718359 | | 13.93 | | 316823 | | 17.77 | |
| 03 | 49878-13 | 751332 | | 7.72 | | 1392742 | | 9.13 | | 891218 | | 13.91 | | 391339 | | 17.76 | |
| 04 | 49878-13,MS | 702257 | | 7.73 | | 1319916 | | 9.13 | | 861643 | | 13.92 | | 428743 | | 17.76 | |
| 05 | 49878-13,MSD | 689529 | | 7.73 | | 1300574 | | 9.13 | | 849121 | | 13.92 | | 423072 | | 17.77 | |
| 06 | ZZZZZ | 638370 | | 7.73 | | 1181845 | | 9.14 | | 759624 | | 13.92 | | 333884 | | 17.77 | |
| 07 | ZZZZZ | 611263 | | 7.73 | | 1149612 | | 9.14 | | 735966 | | 13.92 | | 329399 | | 17.77 | |
| 08 | ZZZZZ | 603360 | | 7.74 | | 1127698 | | 9.14 | | 715903 | | 13.93 | | 310077 | | 17.77 | |
| 09 | ZZZZZ | 666552 | | 7.73 | | 1277625 | | 9.14 | | 818225 | | 13.92 | | 349333 | | 17.77 | |
| 10 | ZZZZZ | 606014 | | 7.73 | | 1113905 | | 9.14 | | 707212 | | 13.92 | | 313834 | | 17.77 | |
| 11 | ZZZZZ | 622583 | | 7.73 | | 1155402 | | 9.13 | | 739462 | | 13.93 | | 317823 | | 17.77 | |
| 12 | | | | | | | | | | | | | | | | | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806203B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 99 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

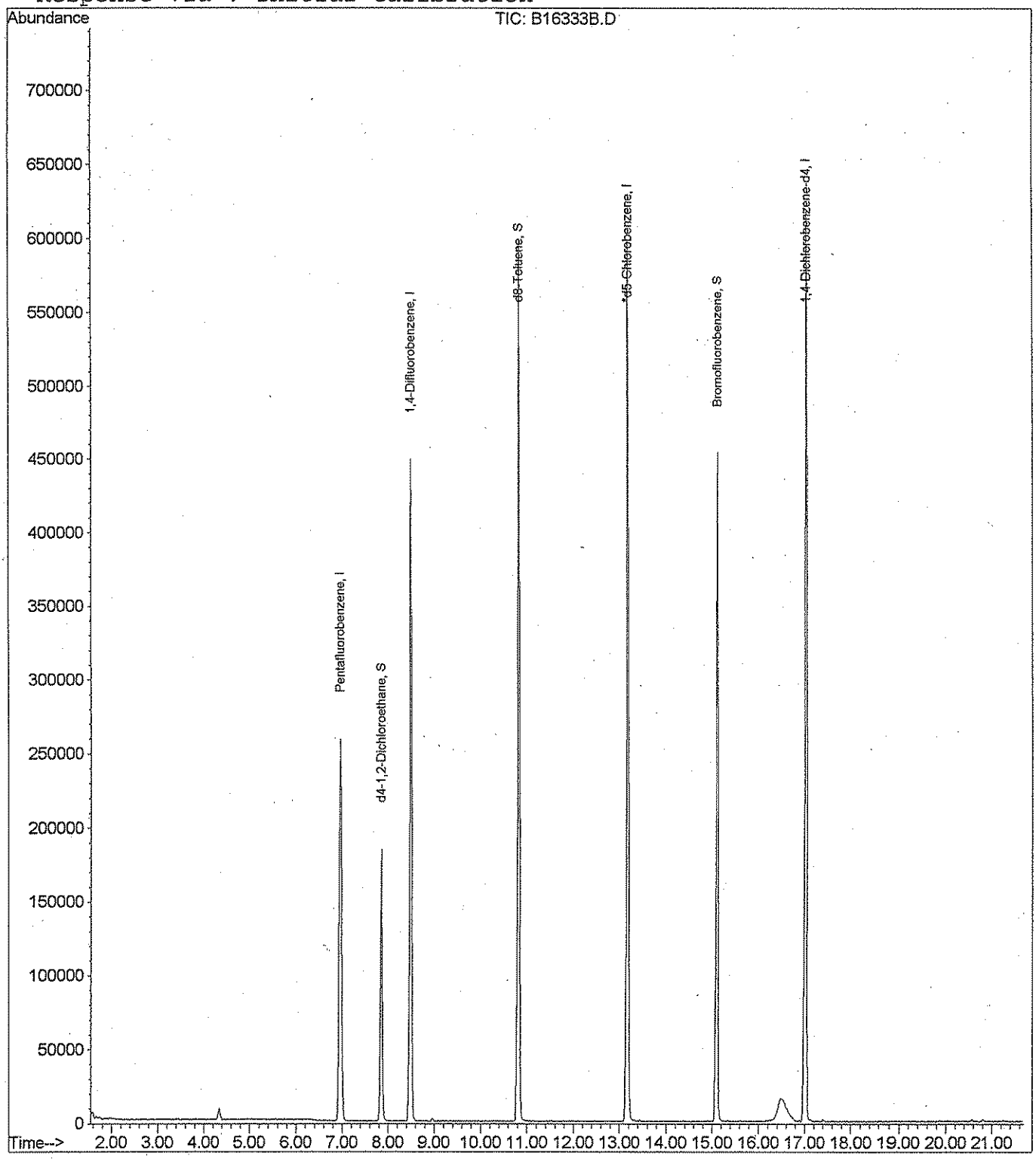
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16333B.D Vial: 7
Acq On : 20 Jun 2003 11:50 am Operator: JR
Sample : B806203B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 12:12 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806233B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

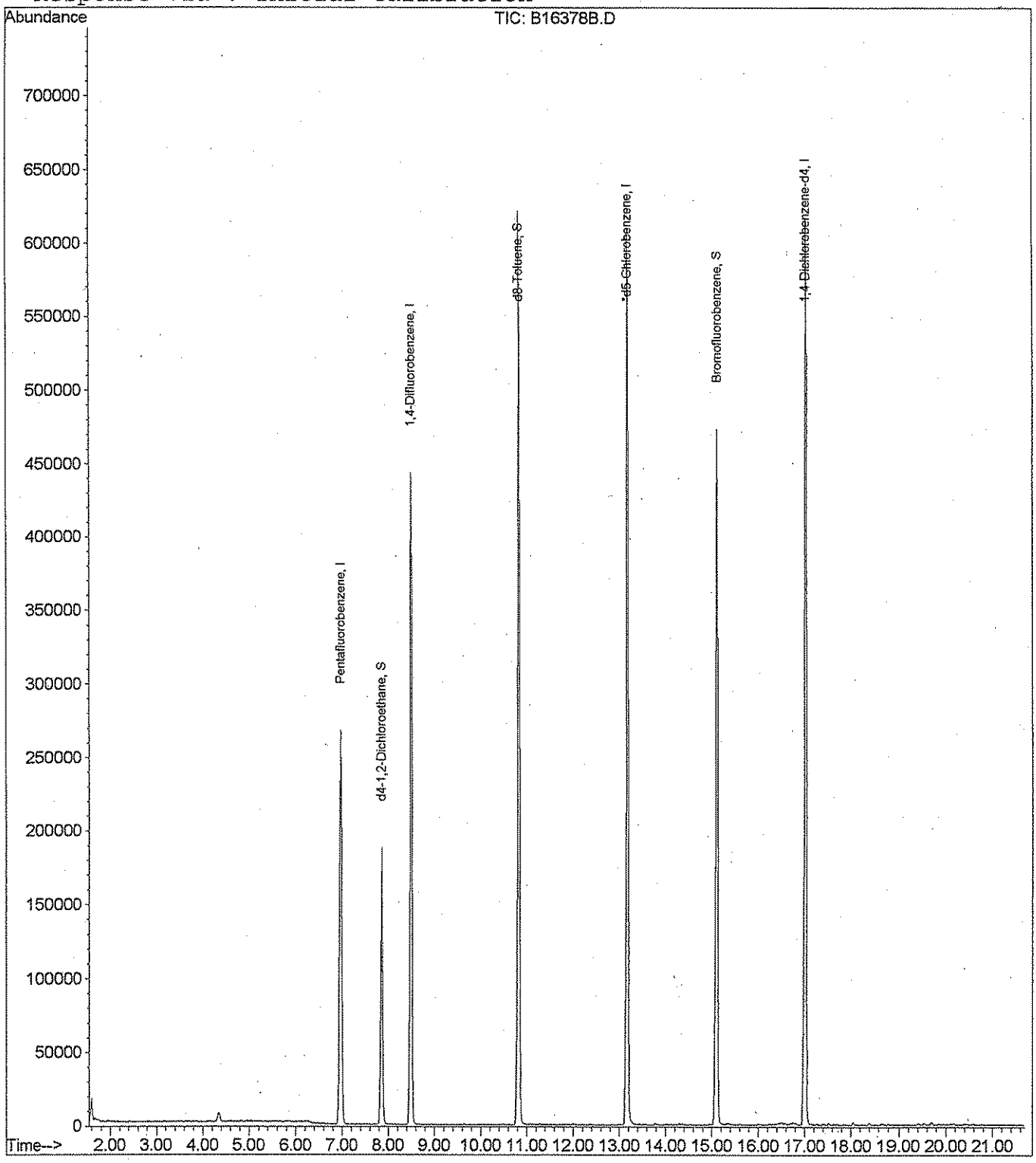
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16378B.D Vial: 26
Acq On : 23 Jun 2003 11:29 am Operator: JR
Sample : B806233B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 11:51 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806243B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 96 % | d8-Toluene | 99 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

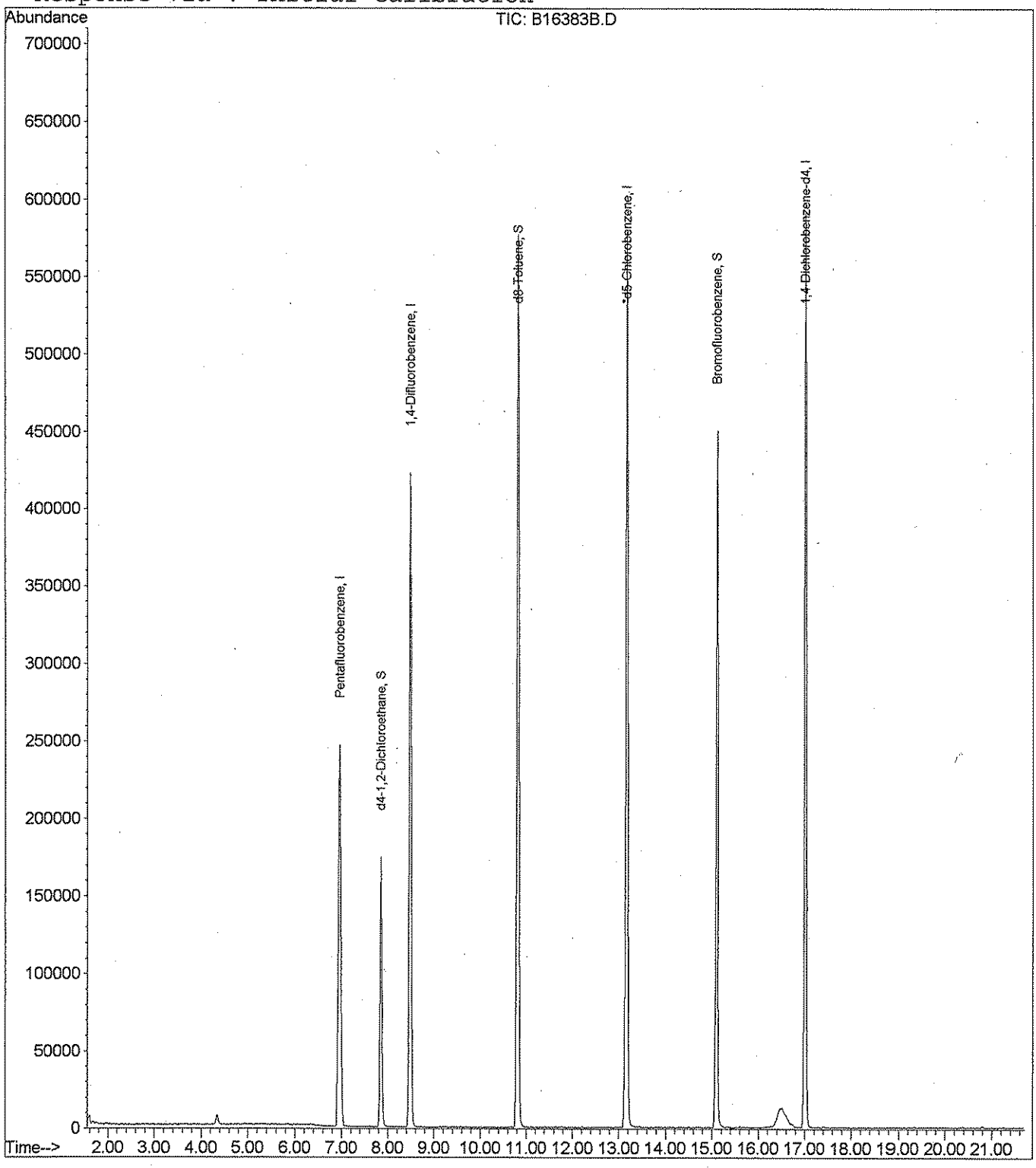
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16383B.D Vial: 6
Acq On : 24 Jun 2003 11:00 am Operator: JR
Sample : B806243B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 11:22 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B806253B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 96 % | d8-Toluene | 98 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:**

**COMMENTS:**

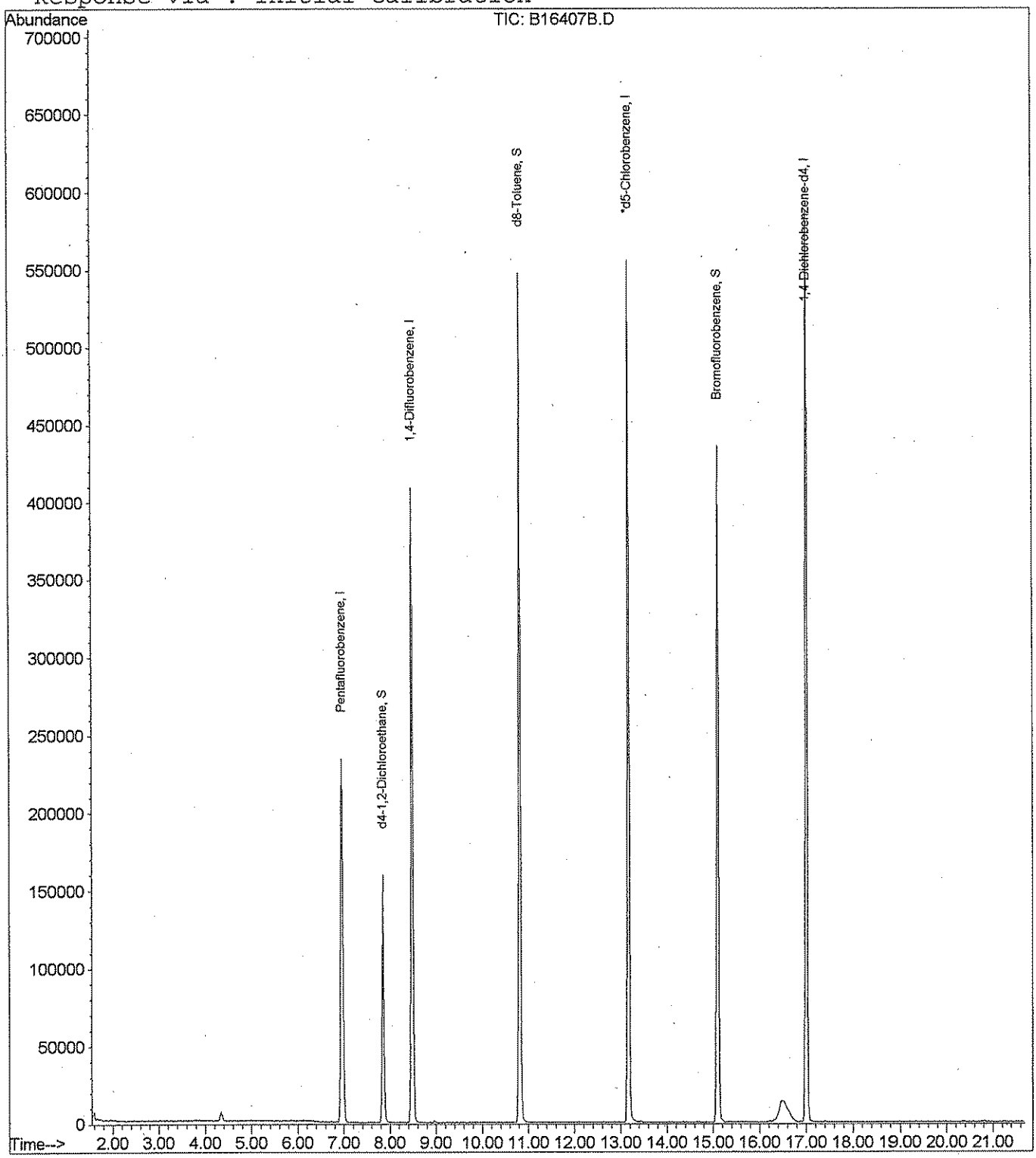
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16407B.D Vial: 6
Acq On : 25 Jun 2003 8:59 am Operator: JR
Sample : B806253B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 9:21 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TB-061603-01

**SAMPLE DATA**

**Lab Sample ID:** 49878-1
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 99 % | d8-Toluene | 98 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

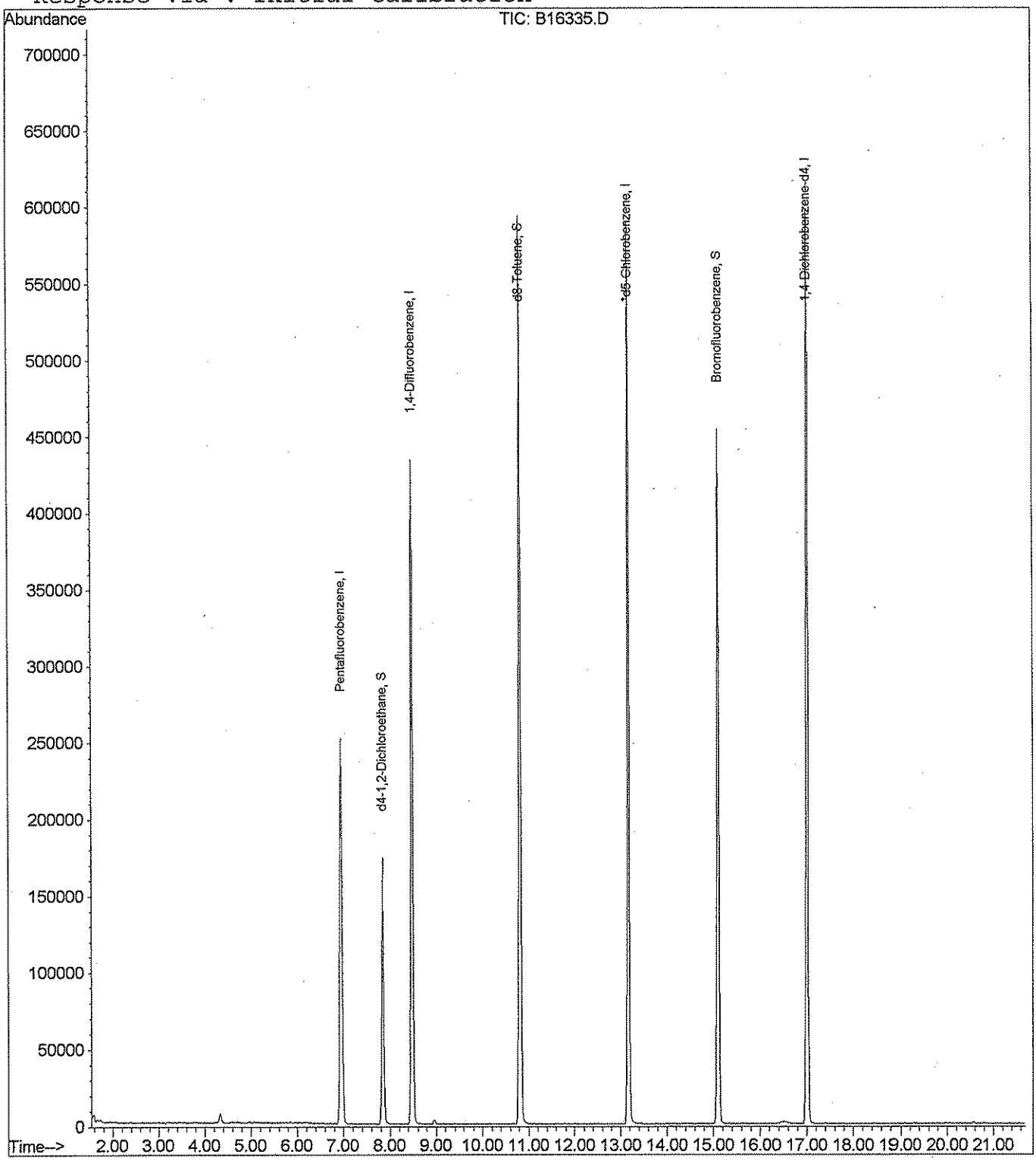
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16335.D Vial: 9
Acq On : 20 Jun 2003 12:52 pm Operator: JR
Sample : 49878-1 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 13:14 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW12-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **1 J** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **215 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **13** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 97 % | d8-Toluene | 98 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

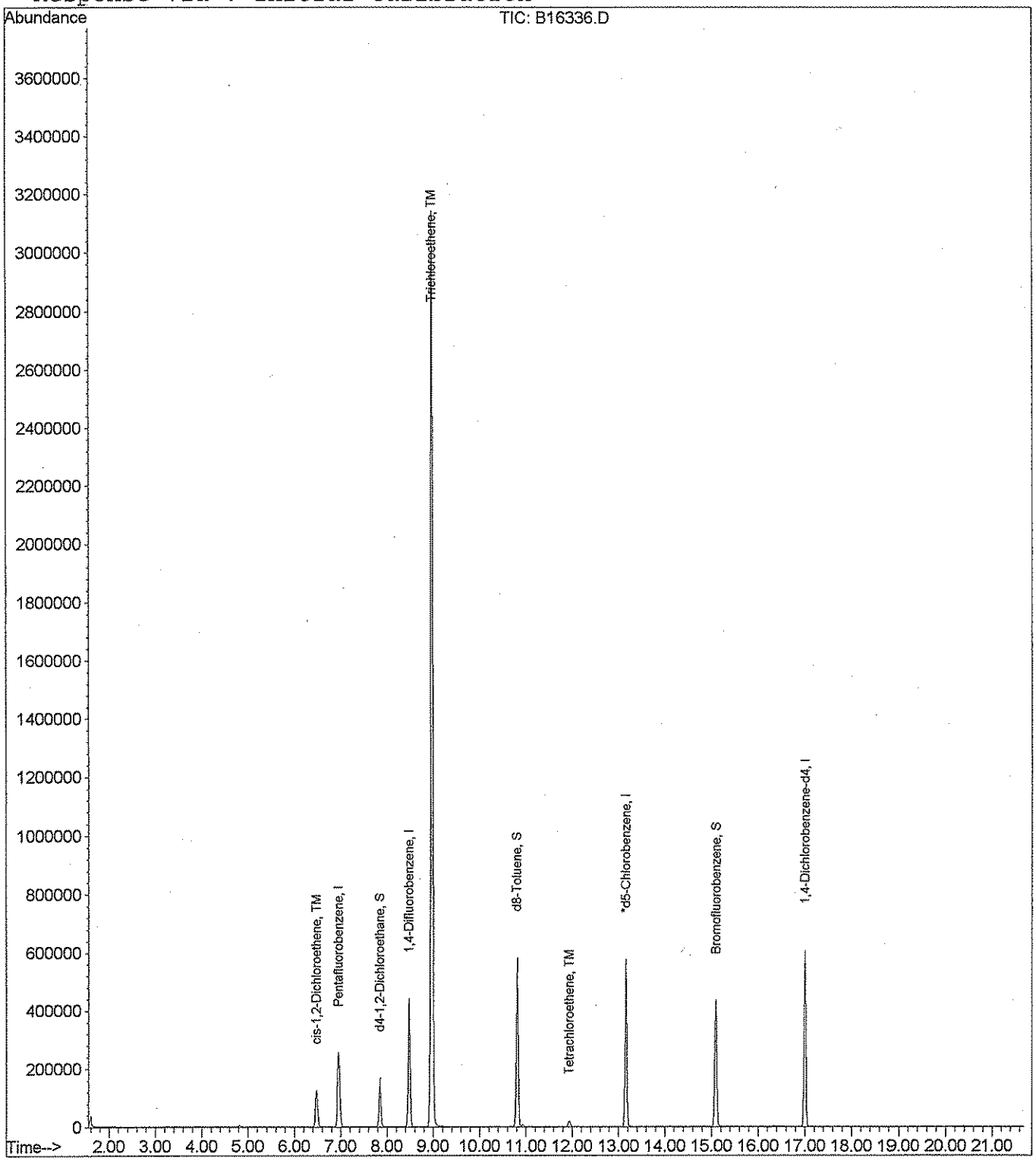
8260 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16336.D Vial: 10
Acq On : 20 Jun 2003 1:23 pm Operator: JR
Sample : 49878-2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 13:45 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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1 Wall Street
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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW12-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-2 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 5.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 10 | U | 1,3-Dichloropropane | 10 | U |
| Bromobenzene | 10 | U | cis-1,3-Dichloropropene | 10 | U |
| Bromochloromethane | 10 | U | trans-1,3-Dichloropropene | 10 | U |
| Bromodichloromethane | 10 | U | 2,2-Dichloropropane | 10 | U |
| Bromoform | 10 | U | 1,1-Dichloropropene | 10 | U |
| Bromomethane | 10 | U | Ethylbenzene | 10 | U |
| n-butylbenzene | 10 | U | Hexachlorobutadiene | 10 | U |
| sec-butylbenzene | 10 | U | Isopropylbenzene | 10 | U |
| tert-butylbenzene | 10 | U | p-isopropyltoluene | 10 | U |
| Carbon Tetrachloride | 10 | U | Methylene Chloride | 25 | U |
| Chlorobenzene | 10 | U | Methyl-tert-butyl ether (MTBE) | 10 | U |
| Chloroethane | 10 | U | Naphthalene | 10 | U |
| Chloroform | 10 | U | n-Propylbenzene | 10 | U |
| Chloromethane | 10 | U | Styrene | 10 | U |
| 2-Chlorotoluene | 10 | U | 1,1,1,2-Tetrachloroethane | 10 | U |
| 4-Chlorotoluene | 10 | U | 1,1,2,2-Tetrachloroethane | 10 | U |
| Dibromochloromethane | 10 | U | Tetrachloroethene | 10 | U |
| 1,2-Dibromo-3-chloropropane | 10 | U | Toluene | 10 | U |
| 1,2-Dibromoethane | 10 | U | 1,2,3-Trichlorobenzene | 10 | U |
| Dibromomethane | 10 | U | 1,2,4-Trichlorobenzene | 10 | U |
| 1,2-Dichlorobenzene | 10 | U | 1,1,1-Trichloroethane | 10 | U |
| 1,3-Dichlorobenzene | 10 | U | 1,1,2-Trichloroethane | 10 | U |
| 1,4-Dichlorobenzene | 10 | U | Trichloroethene | 10 | **192** |
| Dichlorodifluoromethane | 10 | U | Trichlorofluoromethane | 10 | U |
| 1,1-Dichloroethane | 10 | U | 1,2,3-Trichloropropane | 10 | U |
| 1,2-Dichloroethane | 10 | U | 1,2,4-Trimethylbenzene | 10 | U |
| 1,1-Dichloroethene | 10 | U | 1,3,5-Trimethylbenzene | 10 | U |
| cis-1,2-Dichloroethene | 10 | **12** | Vinyl Chloride | 10 | U |
| trans-1,2-Dichloroethene | 10 | U | o-Xylene | 10 | U |
| 1,2-Dichloropropane | 10 | U | m,p-Xylene | 10 | U |
| Acetone | 50 | U | Diethyl ether | 10 | U |
| Carbon Disulfide | 10 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether (DIPE) | 10 | U |
| t-Butyl alcohol (TBA) | 100 | U | Ethyl t-butyl ether (ETBE) | 10 | U |
| t-Amyl methyl ether (TAME) | 10 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 98 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

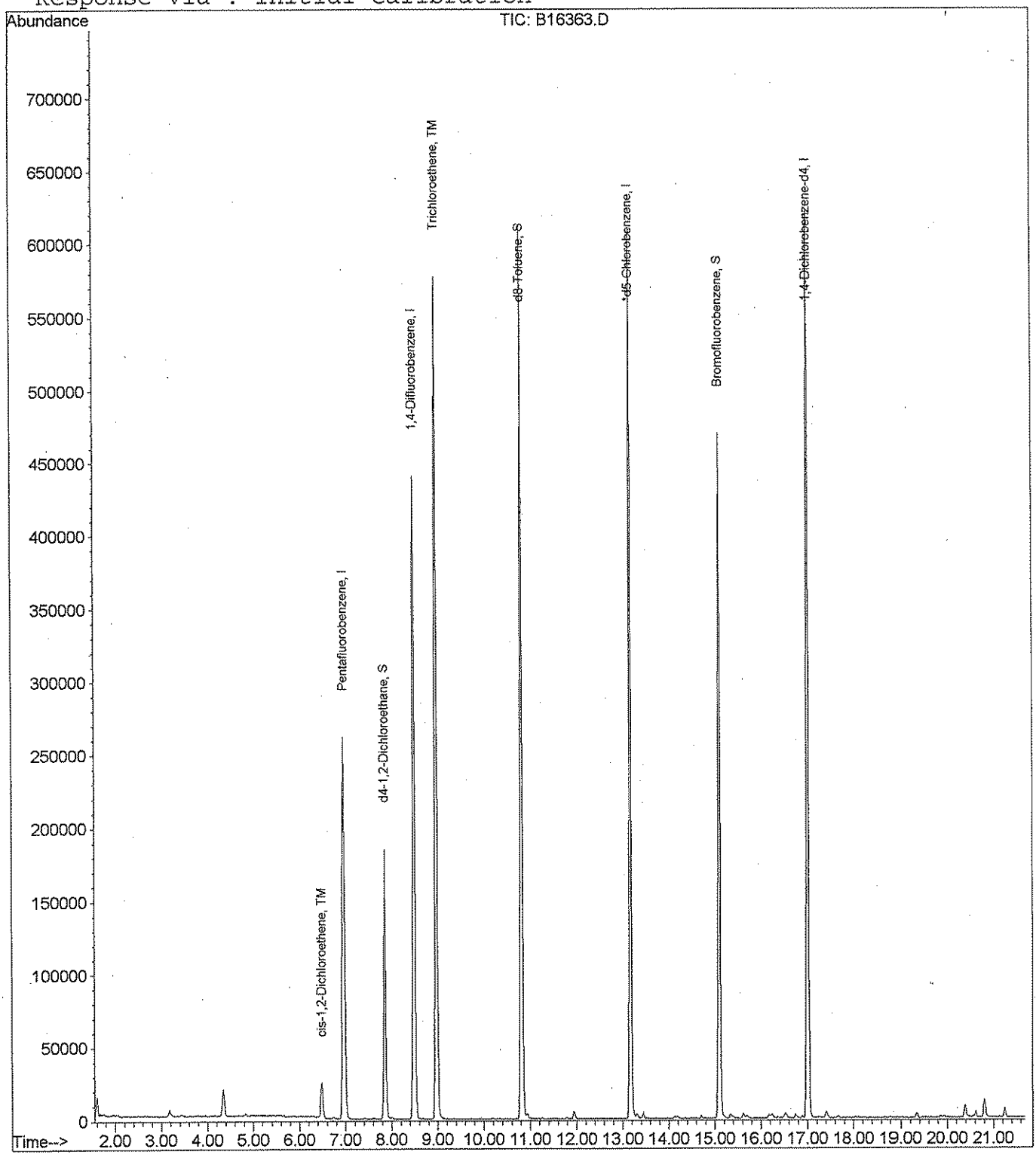
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16363.D Vial: 11
Acq On : 23 Jun 2003 1:32 pm Operator: JR
Sample : 49878-2,DL Inst : Instrumen
Misc : 1000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 13:54 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW11-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

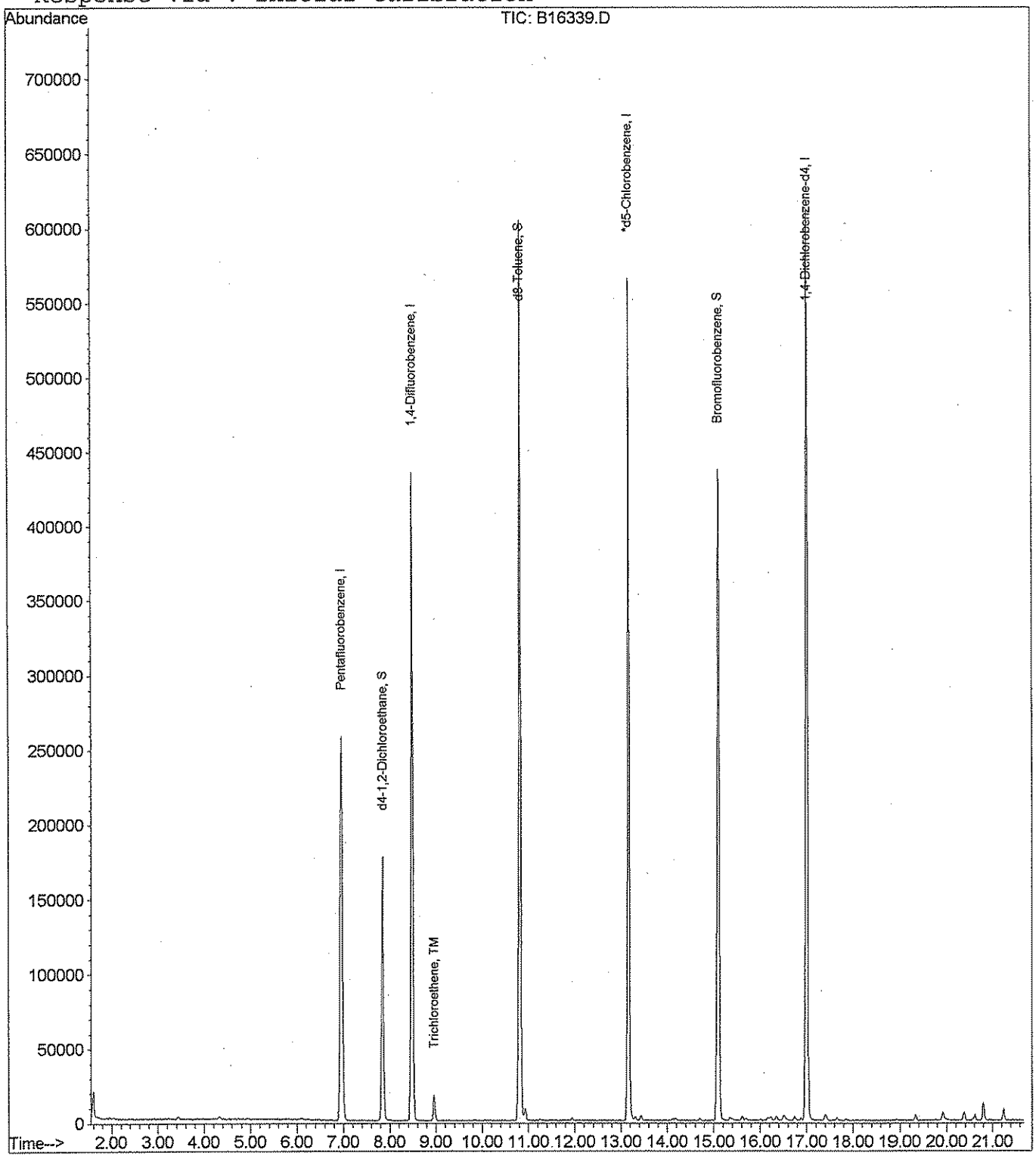
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16339.D Vial: 13
Acq On : 20 Jun 2003 2:55 pm Operator: JR
Sample : 49878-3 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 15:17 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW13-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | **4** |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | **20** |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **61** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | **2** | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **23** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

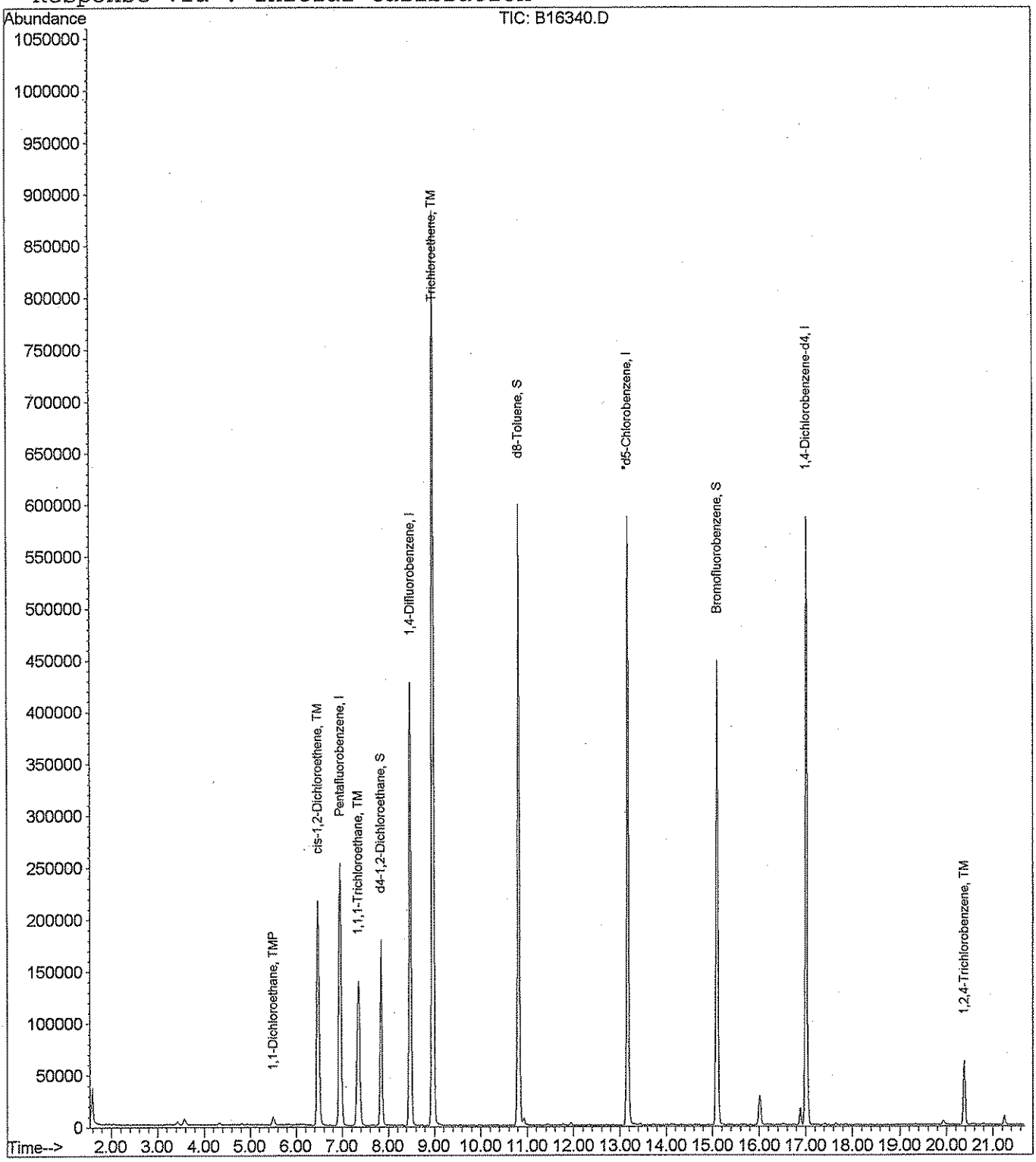
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16340.D Vial: 14
Acq On : 20 Jun 2003 3:25 pm Operator: JR
Sample : 49878-4 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 15:47 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** GAMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1 J** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 100 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

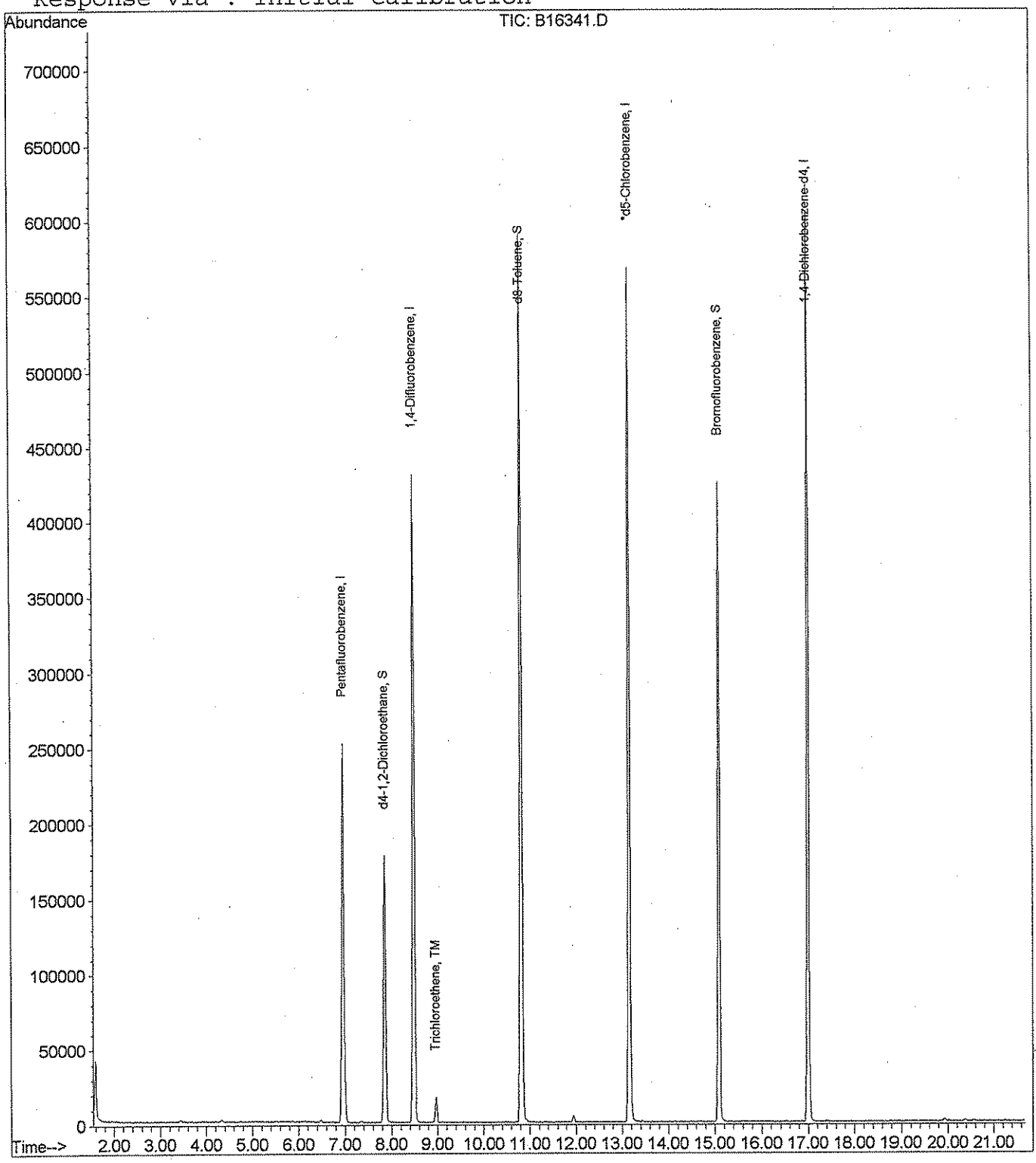
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16341.D Vial: 15
Acq On : 20 Jun 2003 3:56 pm Operator: JR
Sample : 49878-5 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 16:18 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration




B16341.D V806193B.M Fri Jun 20 16:18:42 2003 Page 1

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW14-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

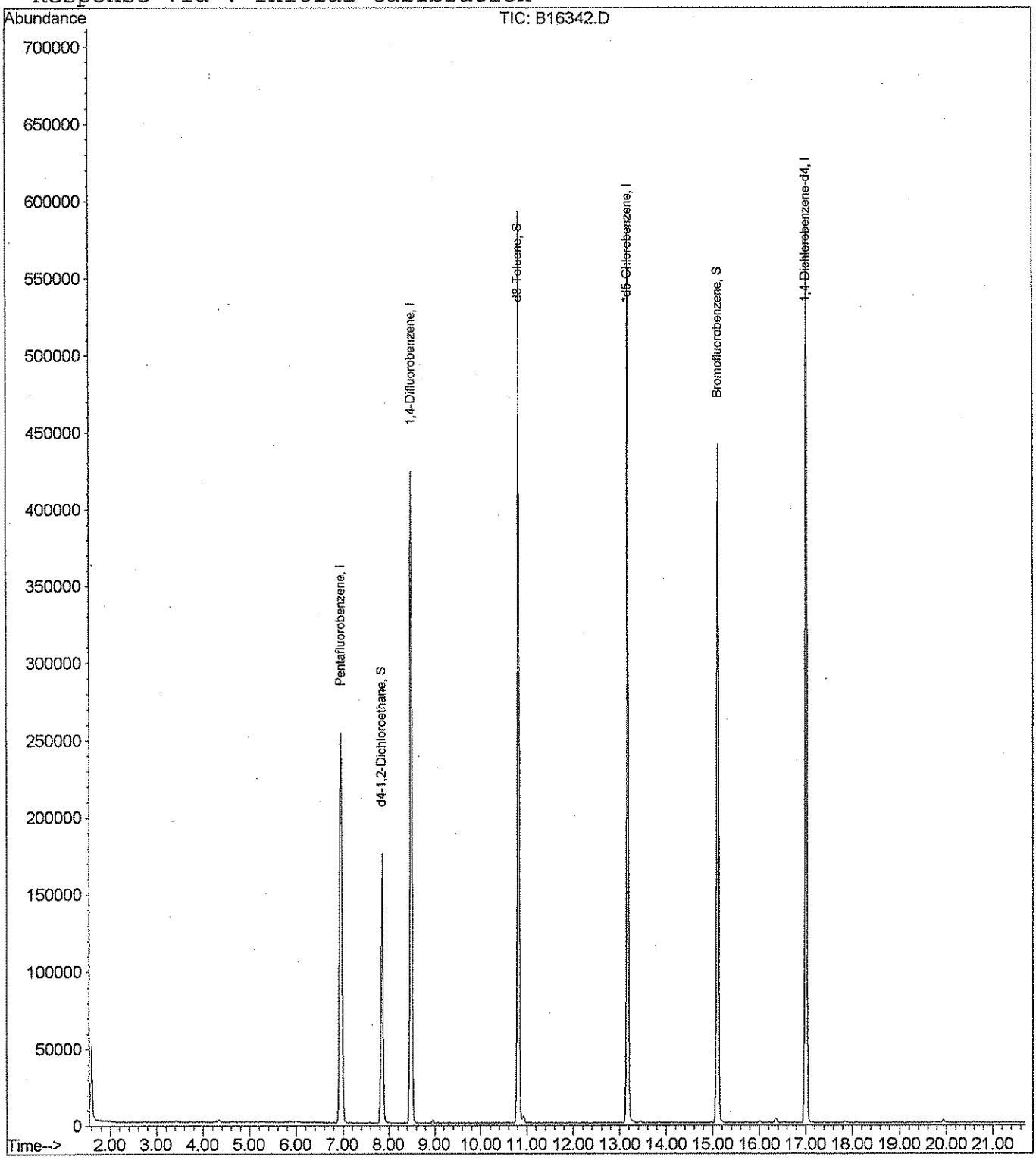
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16342.D Vial: 16
Acq On : 20 Jun 2003 4:27 pm Operator: JR
Sample : 49878-6 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 16:49 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **7** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **9** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

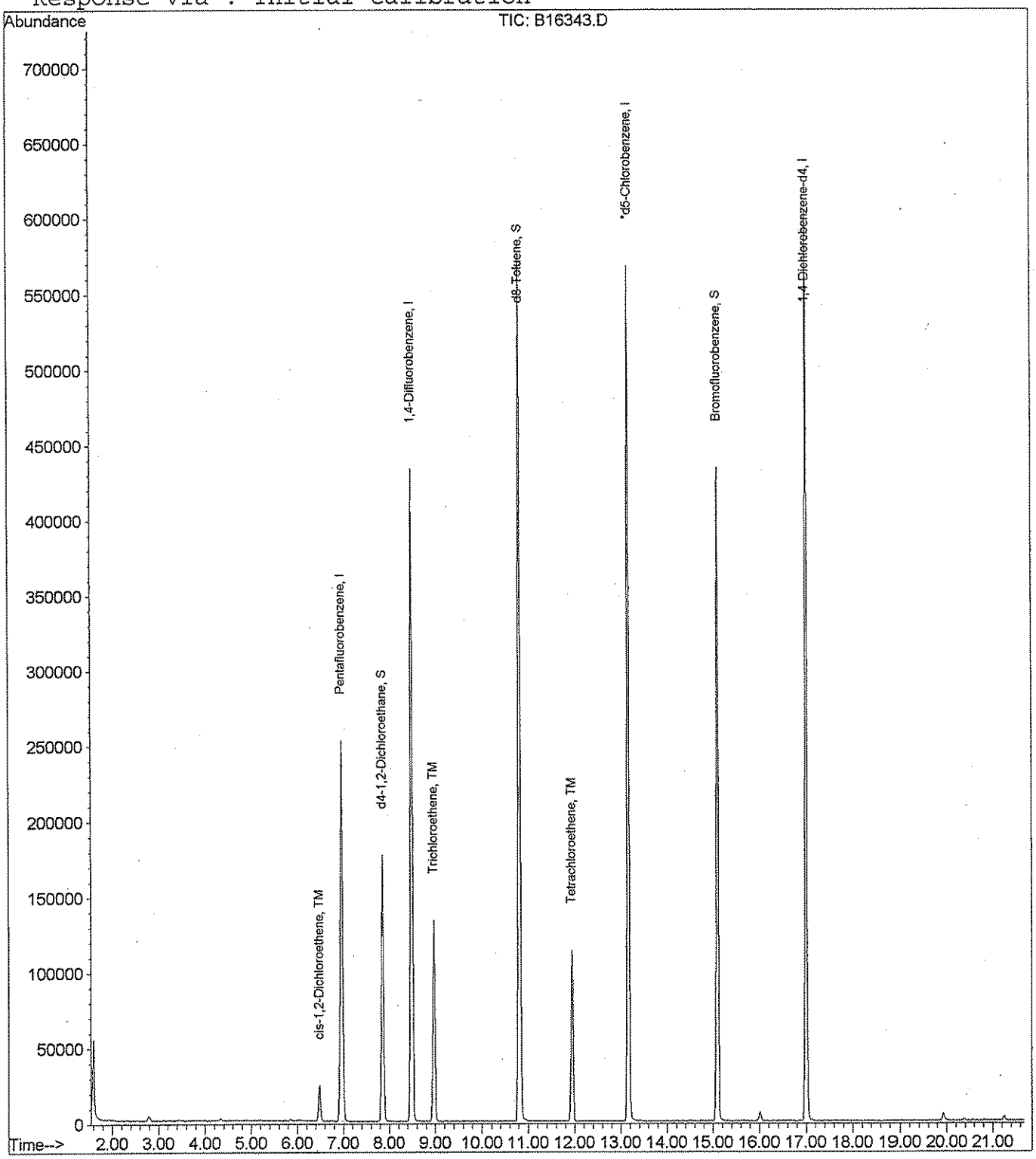
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16343.D  Vial: 17
Acq On : 20 Jun 2003 4:57 pm  Operator: JR
Sample : 49878-7  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 17:19 2003  Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW9-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-8
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

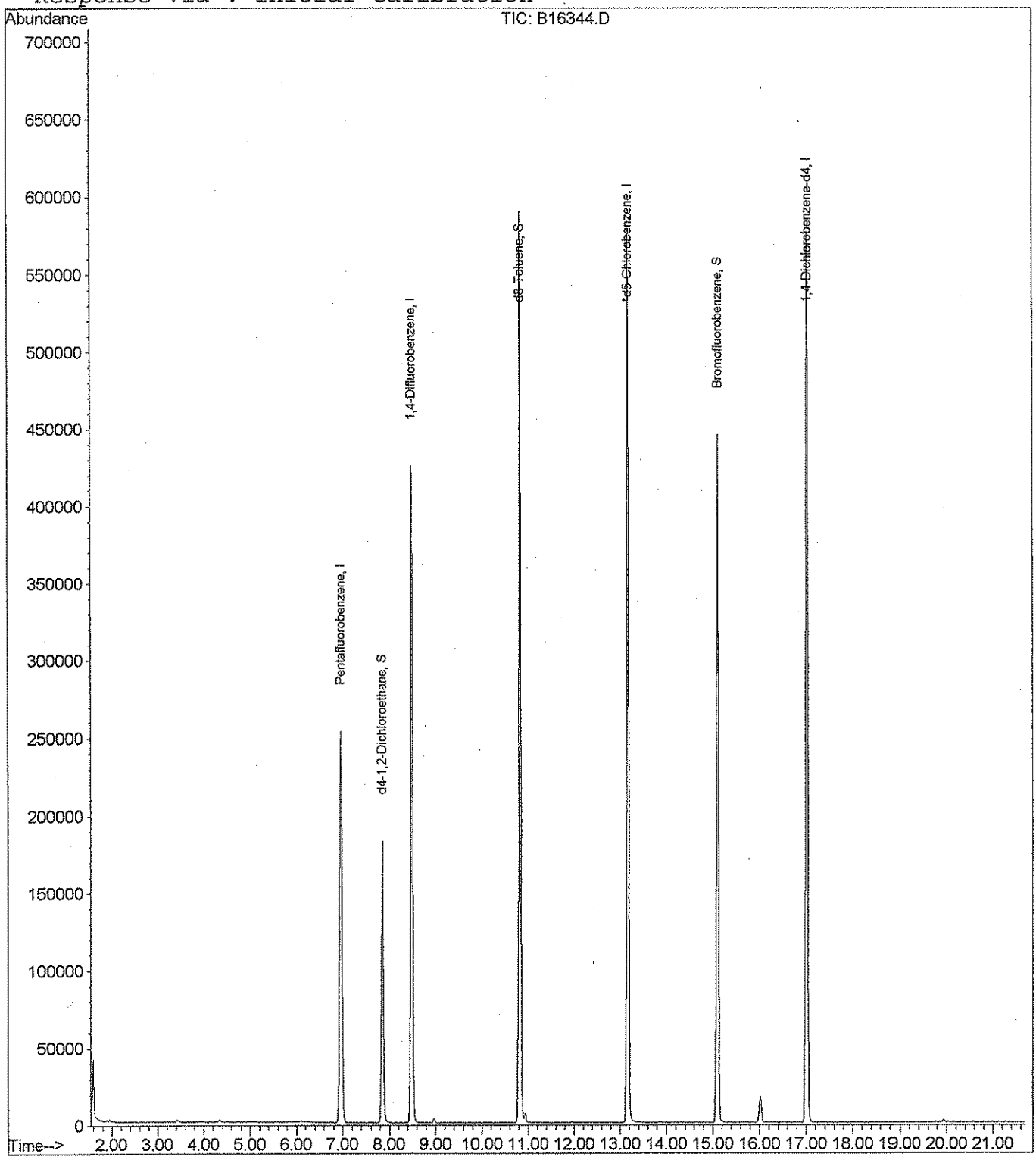
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16344.D Vial: 18
Acq On : 20 Jun 2003 5:28 pm Operator: JR
Sample : 49878-8 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 17:50 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW105-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1 J** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **14** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

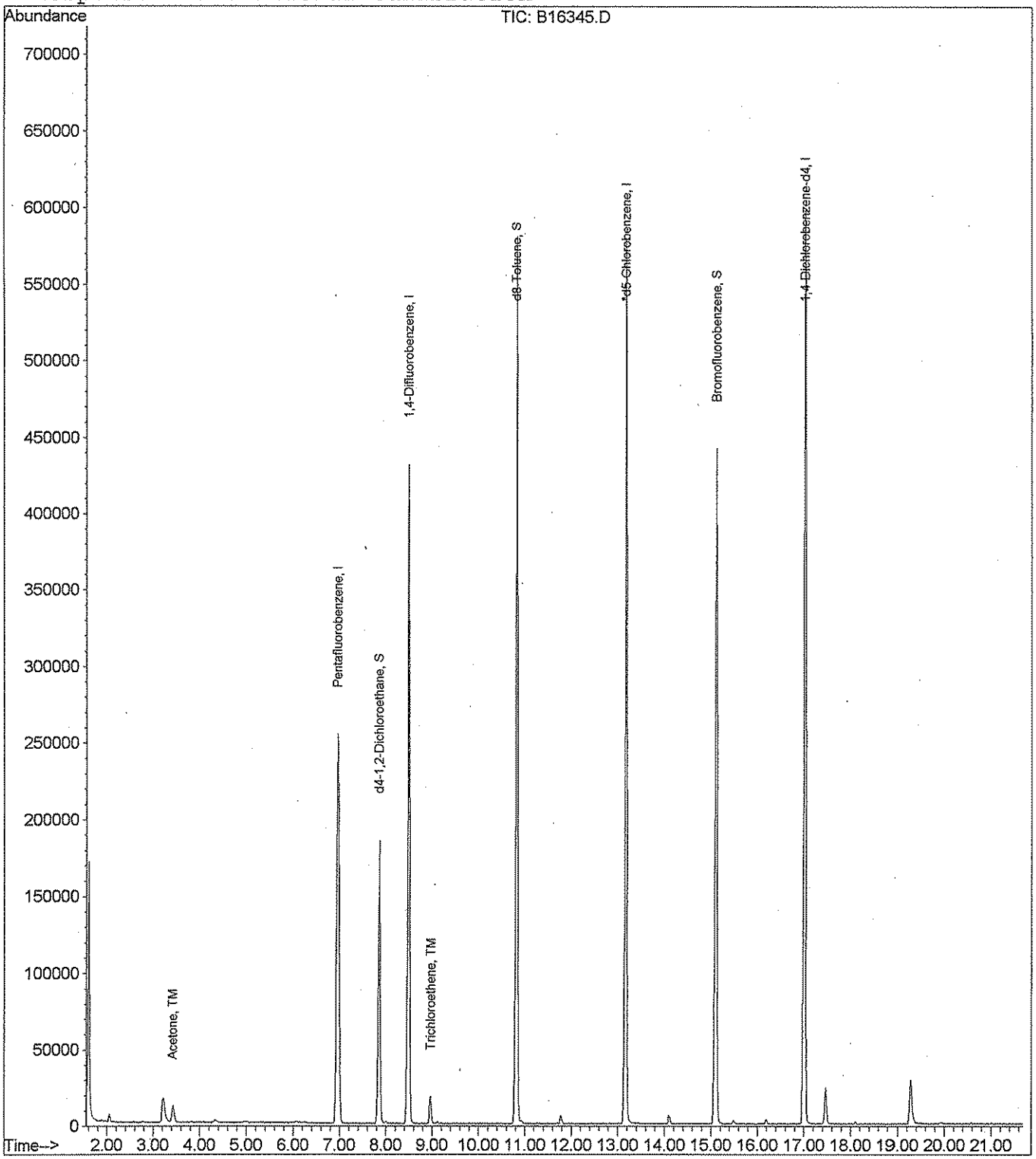
8260 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16345.D Vial: 19
Acq On : 20 Jun 2003 5:59 pm Operator: JR
Sample : 49878-9 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 18:21 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW140-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-10
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | 4 |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 107 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

Authorized signature Melissa A Kalb

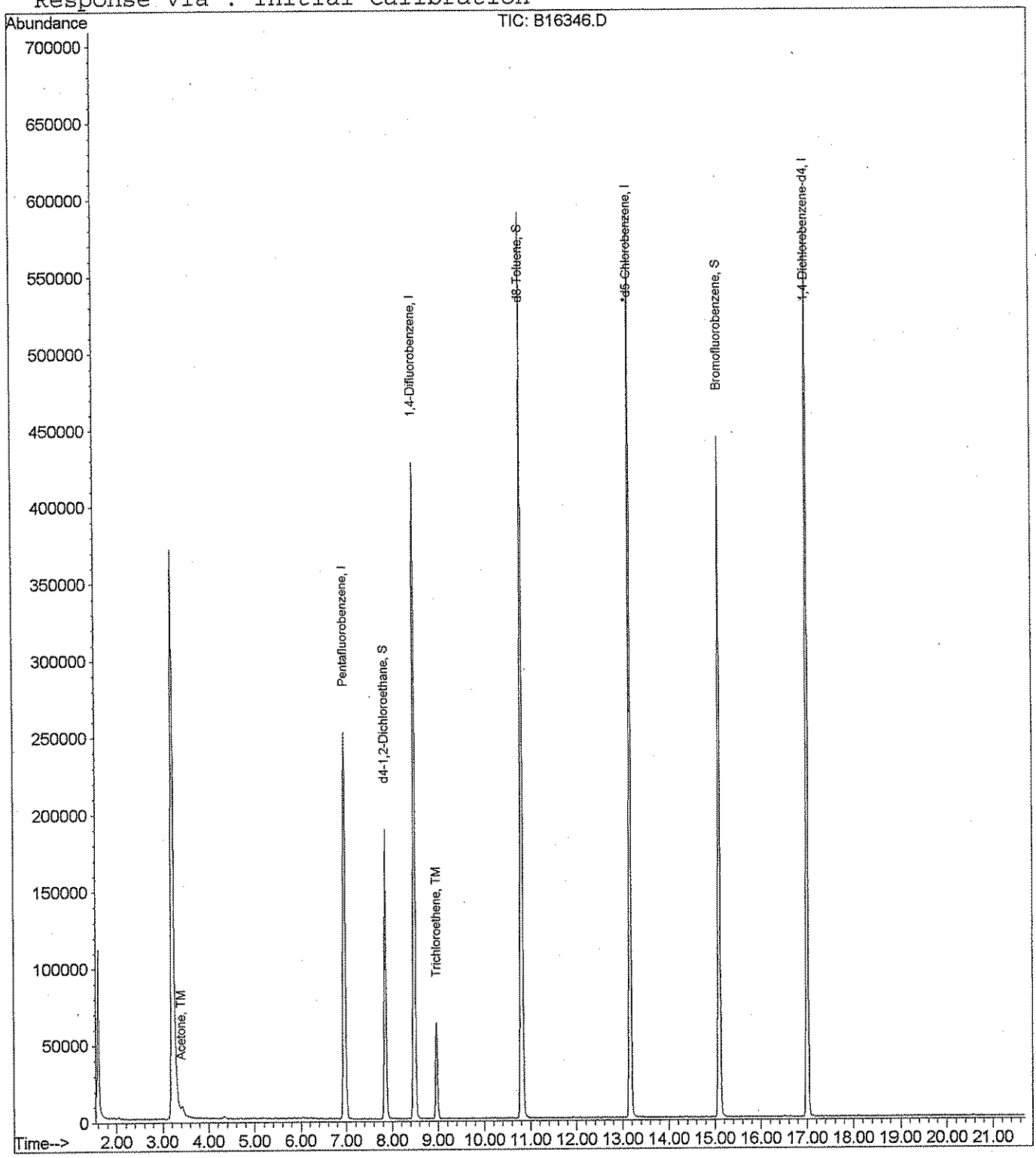
Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16346.D
Acq On : 20 Jun 2003 6:30 pm
Sample : 49878-10
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 20 18:51 2003

Vial: 20
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW101-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-11
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | 1 J |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

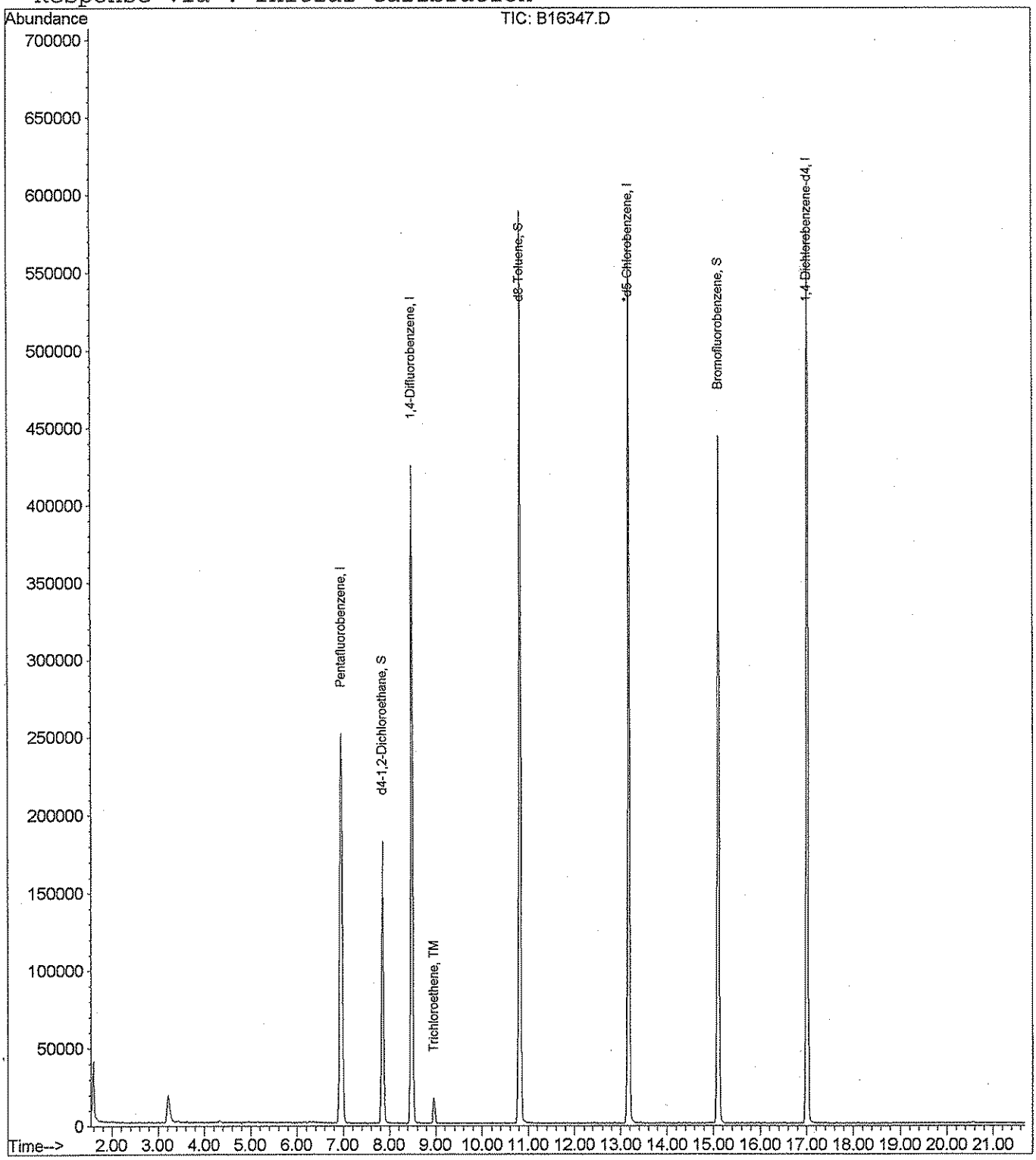
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16347.D Vial: 21
Acq On : 20 Jun 2003 7:00 pm Operator: JR
Sample : 49878-11 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 19:22 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW002-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-12
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1 J** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **12** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 107 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

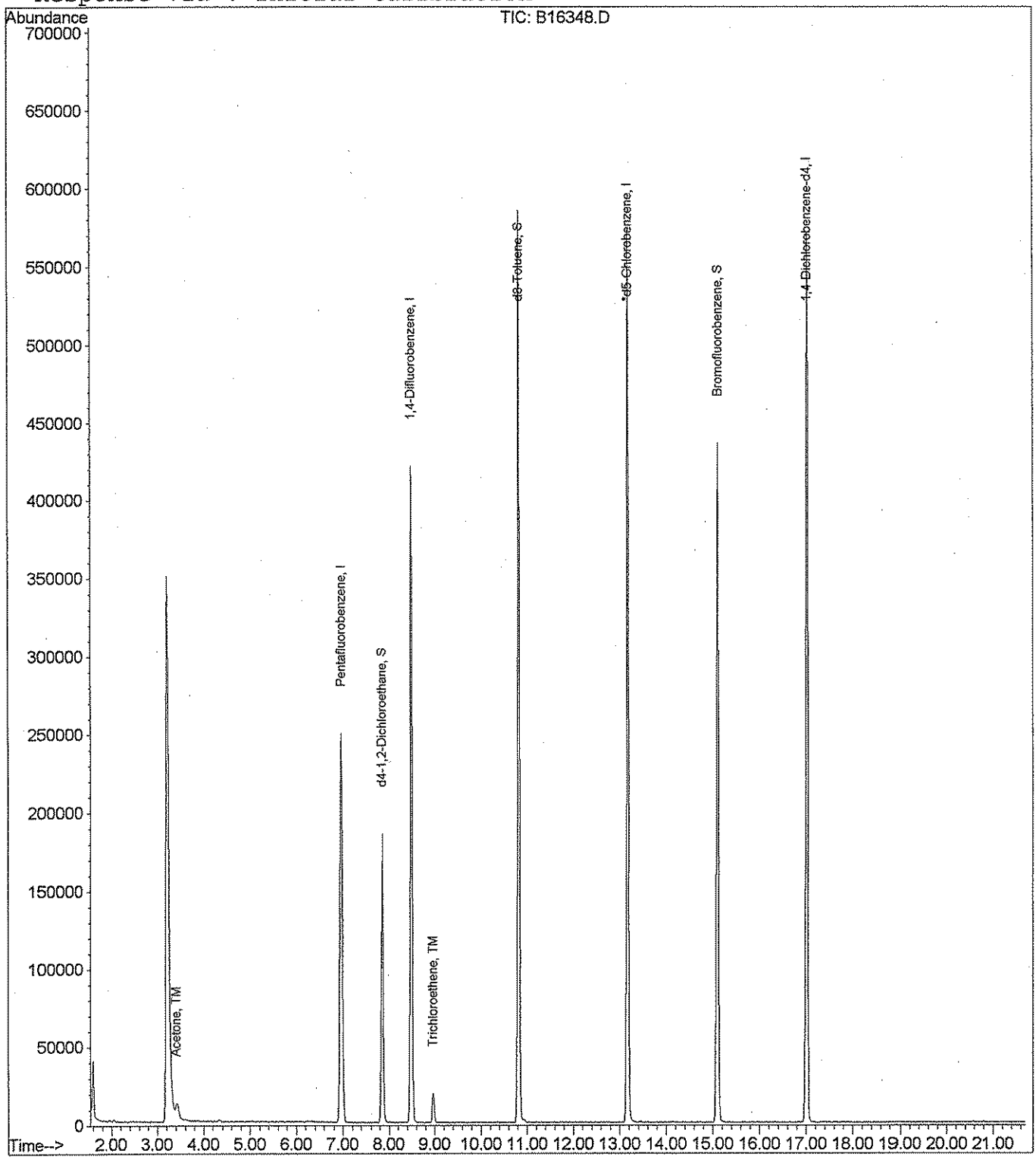
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16348.D Vial: 22
Acq On : 20 Jun 2003 7:31 pm Operator: JR
Sample : 49878-12 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 19:53 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW003-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-14
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

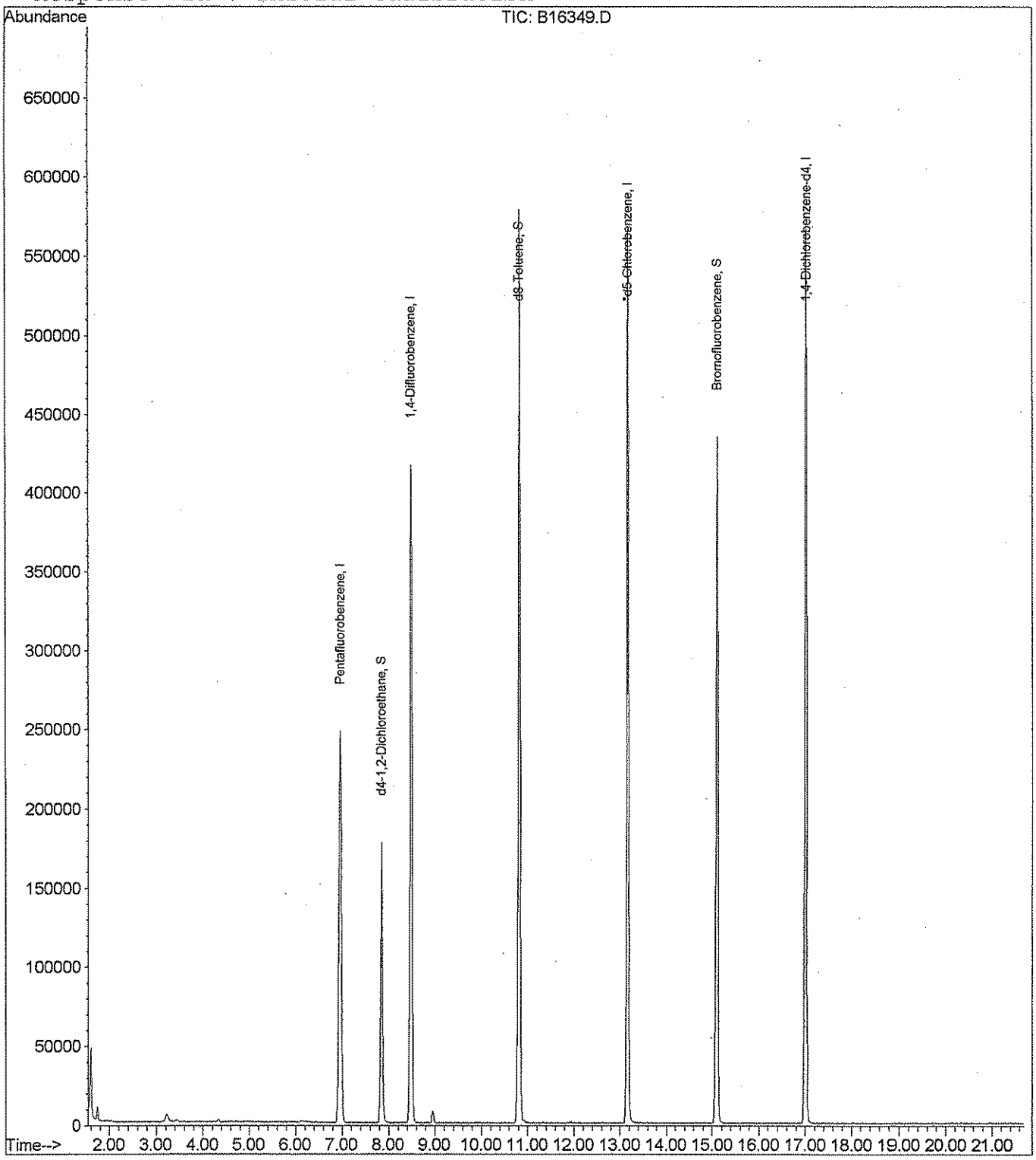
8260 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16349.D Vial: 23
Acq On : 20 Jun 2003 8:02 pm Operator: JR
Sample : 49878-14 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 20:24 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** RB-061603-01

**SAMPLE DATA**

**Lab Sample ID:** 49878-15
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 105 % | d8-Toluene | 98 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

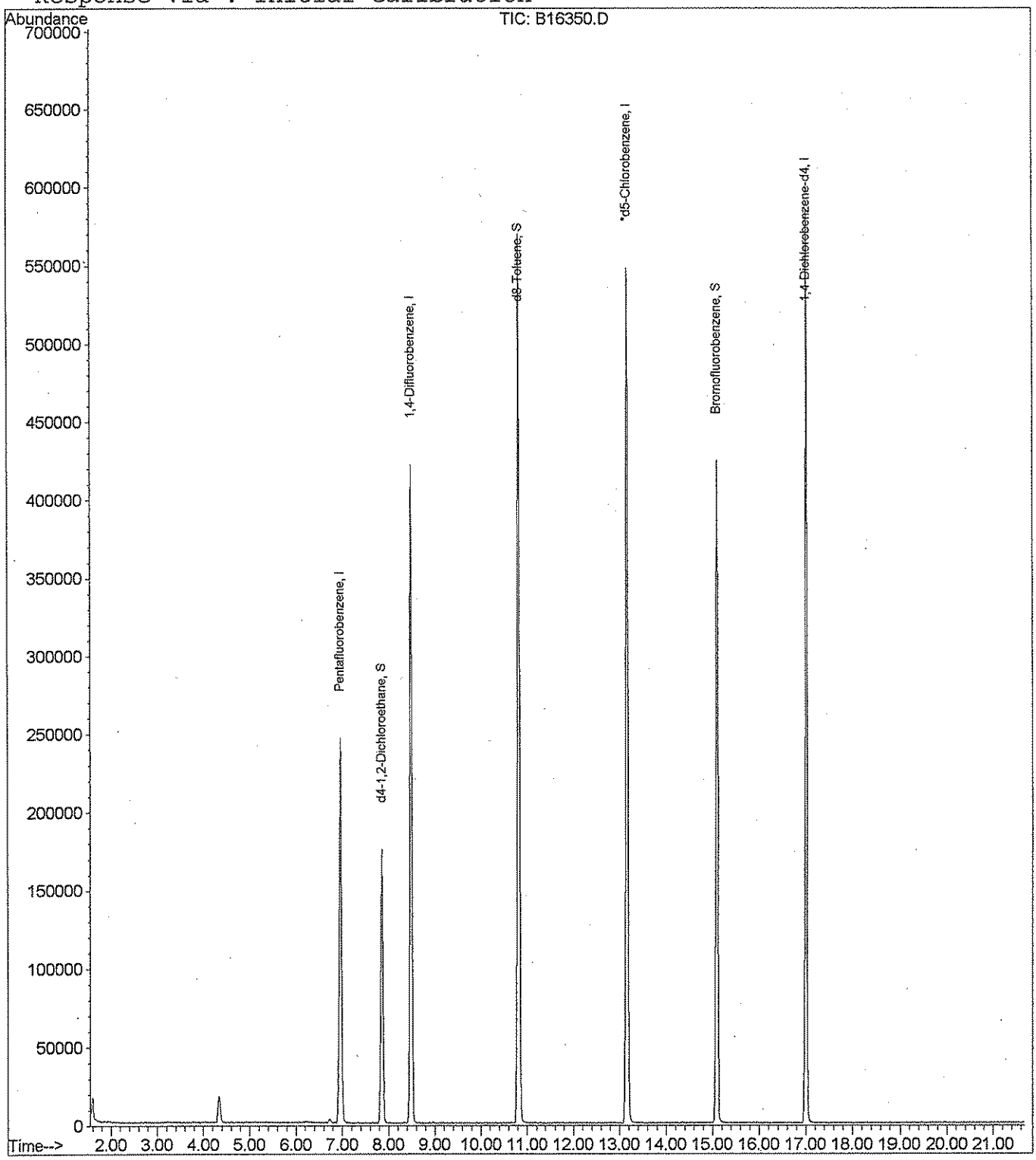
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16350.D Vial: 24
Acq On : 20 Jun 2003 8:32 pm Operator: JR
Sample : 49878-15 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 20:54 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW004-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-16
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

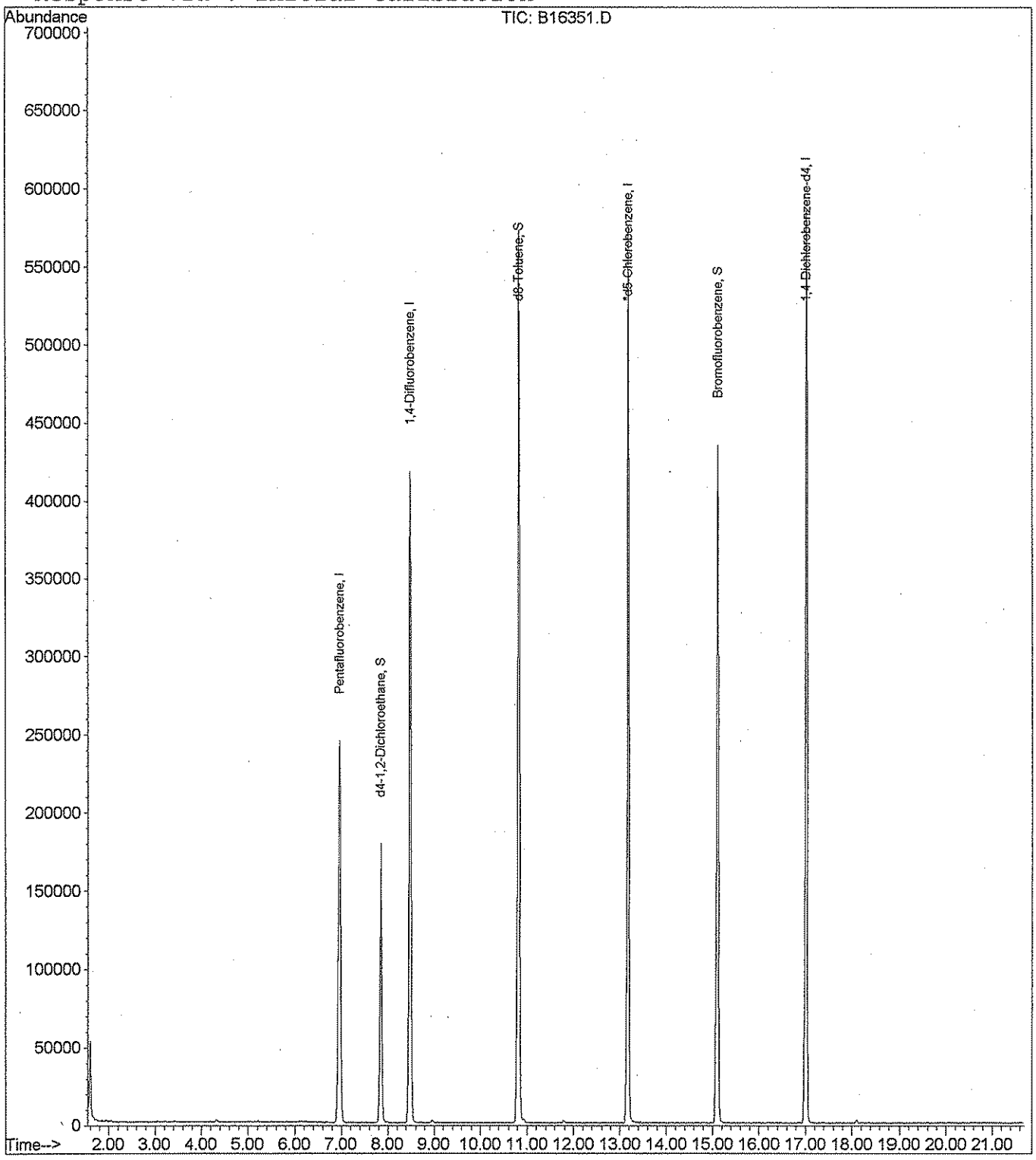
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16351.D Vial: 25
Acq On : 20 Jun 2003 9:03 pm Operator: JR
Sample : 49878-16 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 21:25 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW102-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-17
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 107 % | d8-Toluene | 100 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

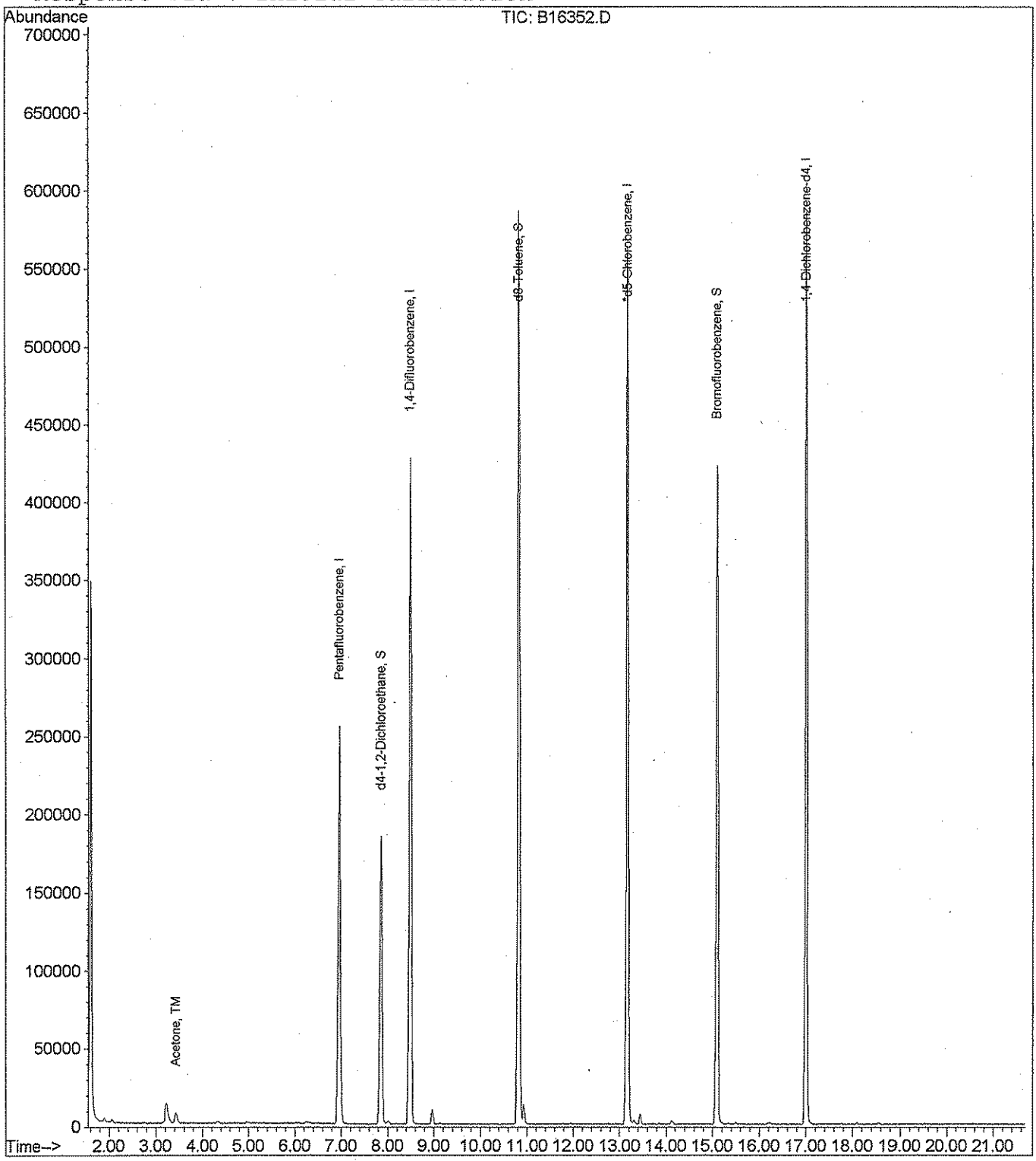
8260 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\data\062003-B\B16352.D Vial: 26
Acq On : 20 Jun 2003 9:33 pm Operator: JR
Sample : 49878-17 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 20 21:55 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW103-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-18
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 101 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

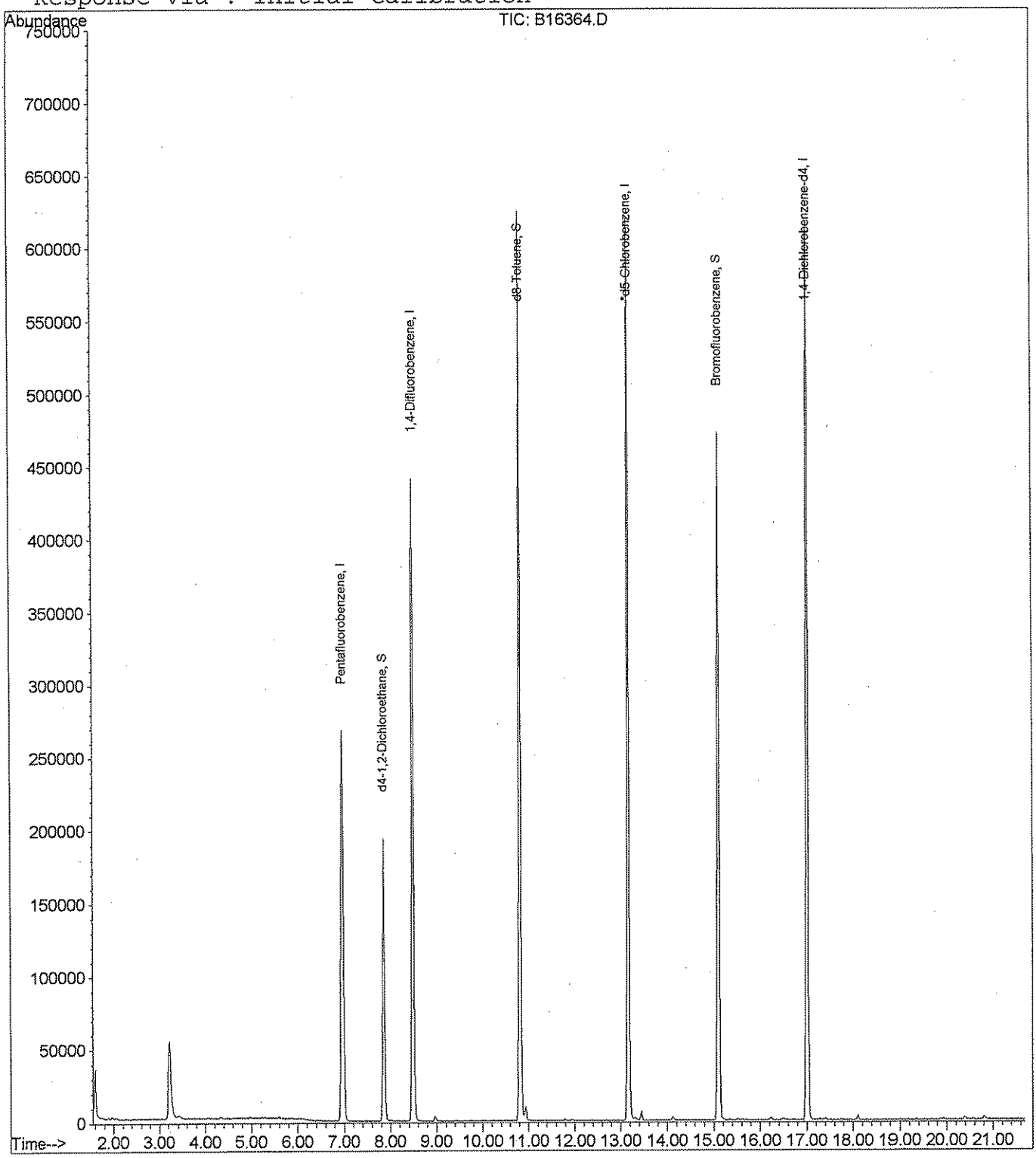
8260 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16364.D Vial: 12
Acq On : 23 Jun 2003 2:03 pm Operator: JR
Sample : 49878-18 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 14:25 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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Manchester NH 03101-1501

June 24, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW8-0603

**Lab Sample ID:** 49878-19
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

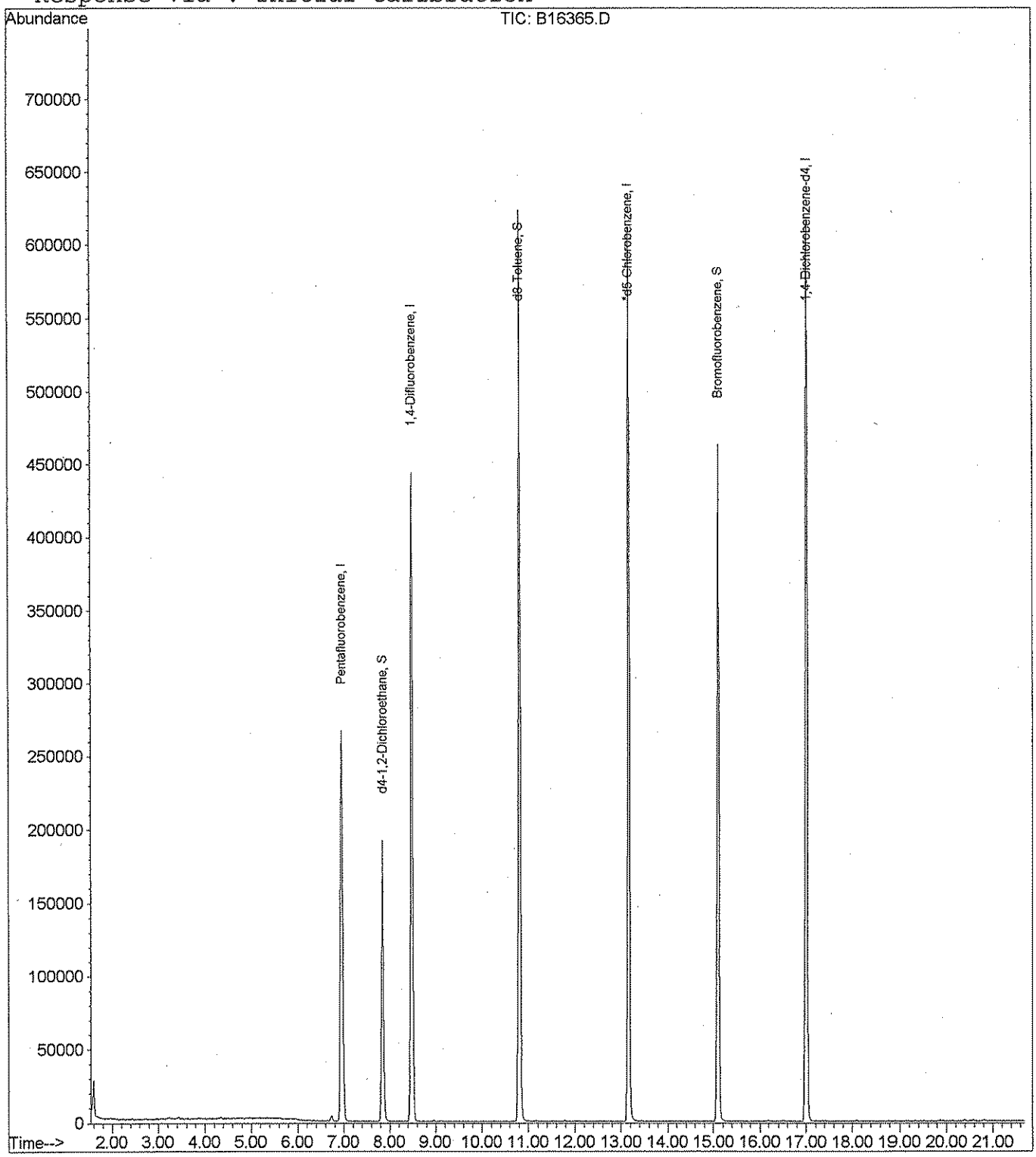
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16365.D Vial: 13
Acq On : 23 Jun 2003 2:33 pm Operator: JR
Sample : 49878-19 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 14:55 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW5-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-20
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **153 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **2** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

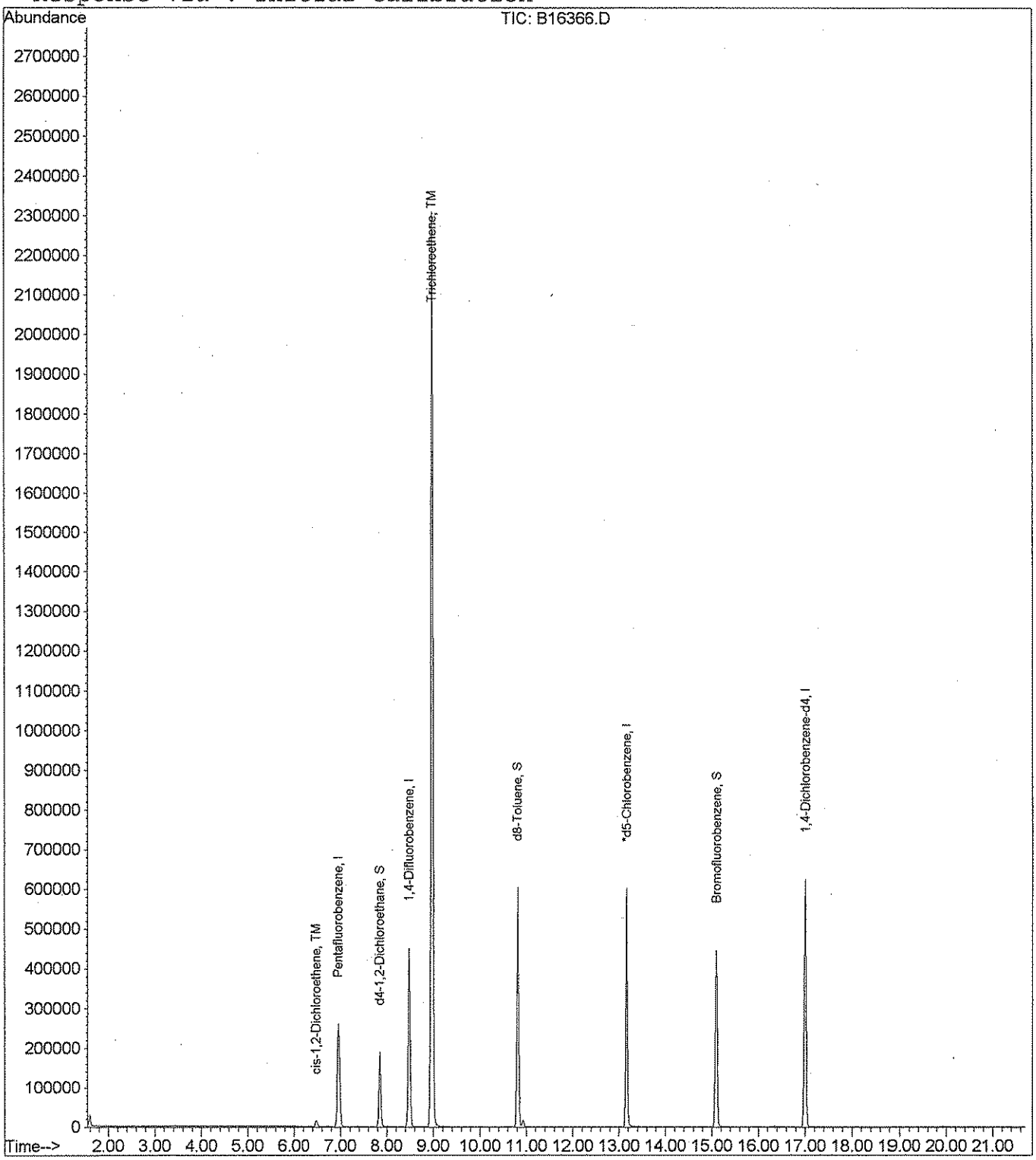
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16366.D Vial: 14
Acq On : 23 Jun 2003 3:04 pm Operator: JR
Sample : 49878-20 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 15:26 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW5-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-20 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 5.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

**ANALYTICAL RESULTS VOLATILE ORGANICS**

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 10 | U | 1,3-Dichloropropane | 10 | U |
| Bromobenzene | 10 | U | cis-1,3-Dichloropropene | 10 | U |
| Bromochloromethane | 10 | U | trans-1,3-Dichloropropene | 10 | U |
| Bromodichloromethane | 10 | U | 2,2-Dichloropropane | 10 | U |
| Bromoform | 10 | U | 1,1-Dichloropropene | 10 | U |
| Bromomethane | 10 | U | Ethylbenzene | 10 | U |
| n-butylbenzene | 10 | U | Hexachlorobutadiene | 10 | U |
| sec-butylbenzene | 10 | U | Isopropylbenzene | 10 | U |
| tert-butylbenzene | 10 | U | p-isopropyltoluene | 10 | U |
| Carbon Tetrachloride | 10 | U | Methylene Chloride | 25 | U |
| Chlorobenzene | 10 | U | Methyl-tert-butyl ether (MTBE) | 10 | U |
| Chloroethane | 10 | U | Naphthalene | 10 | U |
| Chloroform | 10 | U | n-Propylbenzene | 10 | U |
| Chloromethane | 10 | U | Styrene | 10 | U |
| 2-Chlorotoluene | 10 | U | 1,1,1,2-Tetrachloroethane | 10 | U |
| 4-Chlorotoluene | 10 | U | 1,1,2,2-Tetrachloroethane | 10 | U |
| Dibromochloromethane | 10 | U | Tetrachloroethene | 10 | U |
| 1,2-Dibromo-3-chloropropane | 10 | U | Toluene | 10 | U |
| 1,2-Dibromoethane | 10 | U | 1,2,3-Trichlorobenzene | 10 | U |
| Dibromomethane | 10 | U | 1,2,4-Trichlorobenzene | 10 | U |
| 1,2-Dichlorobenzene | 10 | U | 1,1,1-Trichloroethane | 10 | U |
| 1,3-Dichlorobenzene | 10 | U | 1,1,2-Trichloroethane | 10 | U |
| 1,4-Dichlorobenzene | 10 | U | Trichloroethene | 10 | **156** |
| Dichlorodifluoromethane | 10 | U | Trichlorofluoromethane | 10 | U |
| 1,1-Dichloroethane | 10 | U | 1,2,3-Trichloropropane | 10 | U |
| 1,2-Dichloroethane | 10 | U | 1,2,4-Trimethylbenzene | 10 | U |
| 1,1-Dichloroethene | 10 | U | 1,3,5-Trimethylbenzene | 10 | U |
| cis-1,2-Dichloroethene | 10 | U | Vinyl Chloride | 10 | U |
| trans-1,2-Dichloroethene | 10 | U | o-Xylene | 10 | U |
| 1,2-Dichloropropane | 10 | U | m,p-Xylene | 10 | U |
| Acetone | 50 | U | Diethyl ether | 10 | U |
| Carbon Disulfide | 10 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether (DIPE) | 10 | U |
| t-Butyl alcohol (TBA) | 100 | U | Ethyl t-butyl ether (ETBE) | 10 | U |
| t-Amyl methyl ether (TAME) | 10 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

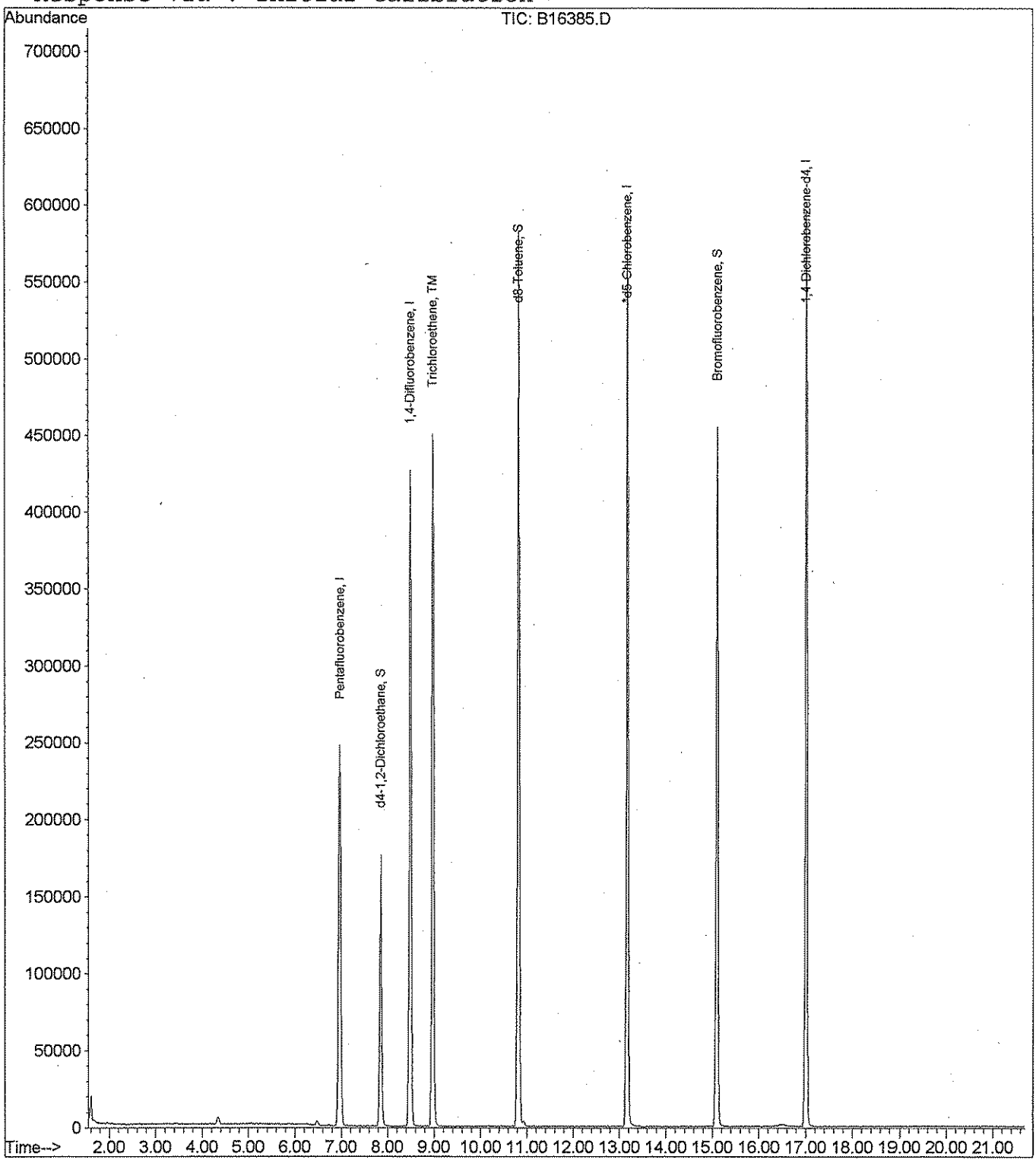
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16385.D Vial: 8
Acq On : 24 Jun 2003 12:04 pm Operator: JR
Sample : 49878-20,DL Inst : Instrumen
Misc : 1000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 12:26 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW5-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-21
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **154 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **2** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

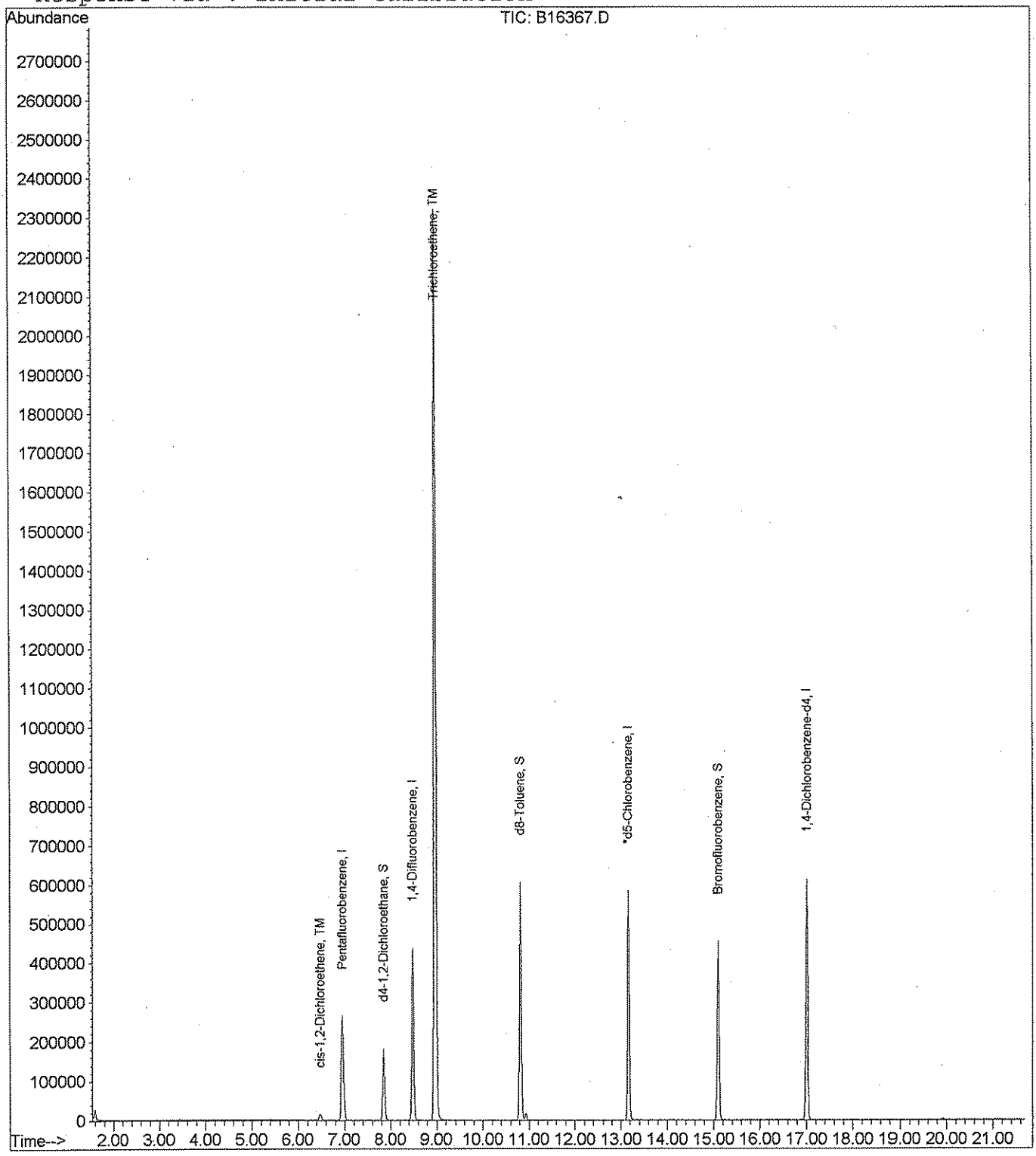
8260 full

Authorized signature Melissa A Kallis

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16367.D Vial: 15
Acq On : 23 Jun 2003 3:35 pm Operator: JR
Sample : 49878-21 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 15:56 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW5-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-21 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 5.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 10 | U | 1,3-Dichloropropane | 10 | U |
| Bromobenzene | 10 | U | cis-1,3-Dichloropropene | 10 | U |
| Bromochloromethane | 10 | U | trans-1,3-Dichloropropene | 10 | U |
| Bromodichloromethane | 10 | U | 2,2-Dichloropropane | 10 | U |
| Bromoform | 10 | U | 1,1-Dichloropropene | 10 | U |
| Bromomethane | 10 | U | Ethylbenzene | 10 | U |
| n-butylbenzene | 10 | U | Hexachlorobutadiene | 10 | U |
| sec-butylbenzene | 10 | U | Isopropylbenzene | 10 | U |
| tert-butylbenzene | 10 | U | p-isopropyltoluene | 10 | U |
| Carbon Tetrachloride | 10 | U | Methylene Chloride | 25 | U |
| Chlorobenzene | 10 | U | Methyl-tert-butyl ether (MTBE) | 10 | U |
| Chloroethane | 10 | U | Naphthalene | 10 | U |
| Chloroform | 10 | U | n-Propylbenzene | 10 | U |
| Chloromethane | 10 | U | Styrene | 10 | U |
| 2-Chlorotoluene | 10 | U | 1,1,1,2-Tetrachloroethane | 10 | U |
| 4-Chlorotoluene | 10 | U | 1,1,2,2-Tetrachloroethane | 10 | U |
| Dibromochloromethane | 10 | U | Tetrachloroethene | 10 | U |
| 1,2-Dibromo-3-chloropropane | 10 | U | Toluene | 10 | U |
| 1,2-Dibromoethane | 10 | U | 1,2,3-Trichlorobenzene | 10 | U |
| Dibromomethane | 10 | U | 1,2,4-Trichlorobenzene | 10 | U |
| 1,2-Dichlorobenzene | 10 | U | 1,1,1-Trichloroethane | 10 | U |
| 1,3-Dichlorobenzene | 10 | U | 1,1,2-Trichloroethane | 10 | U |
| 1,4-Dichlorobenzene | 10 | U | Trichloroethene | 10 | **161** |
| Dichlorodifluoromethane | 10 | U | Trichlorofluoromethane | 10 | U |
| 1,1-Dichloroethane | 10 | U | 1,2,3-Trichloropropane | 10 | U |
| 1,2-Dichloroethane | 10 | U | 1,2,4-Trimethylbenzene | 10 | U |
| 1,1-Dichloroethene | 10 | U | 1,3,5-Trimethylbenzene | 10 | U |
| cis-1,2-Dichloroethene | 10 | U | Vinyl Chloride | 10 | U |
| trans-1,2-Dichloroethene | 10 | U | o-Xylene | 10 | U |
| 1,2-Dichloropropane | 10 | U | m,p-Xylene | 10 | U |
| Acetone | 50 | U | Diethyl ether | 10 | U |
| Carbon Disulfide | 10 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether (DIPE) | 10 | U |
| t-Butyl alcohol (TBA) | 100 | U | Ethyl t-butyl ether (ETBE) | 10 | U |
| t-Amyl methyl ether (TAME) | 10 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

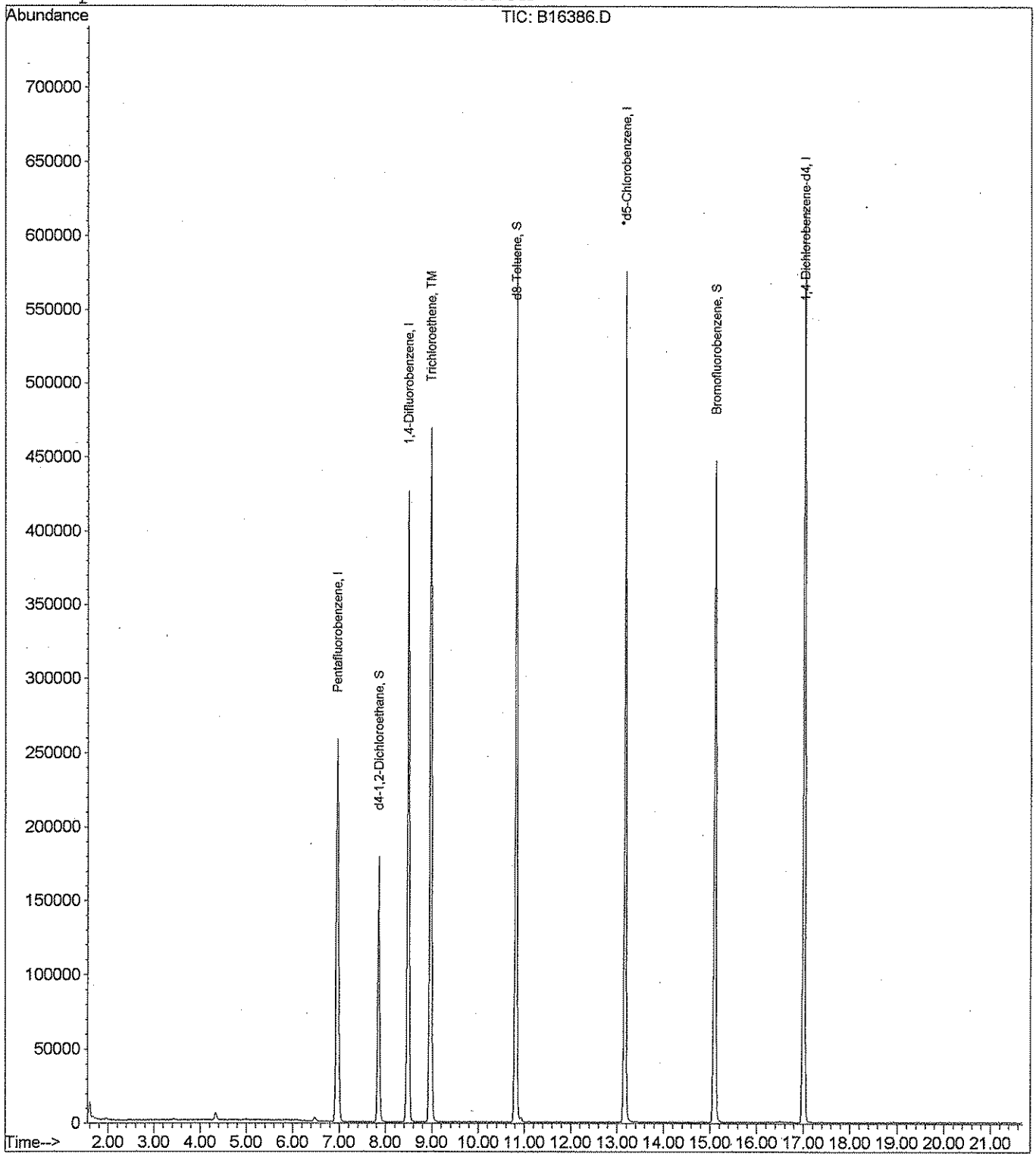
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16386.D Vial: 9
Acq On : 24 Jun 2003 12:37 pm Operator: JR
Sample : 49878-21,DL Inst : Instrumen
Misc : 1000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 12:59 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW1-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-22
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 105 % | d8-Toluene | 100 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

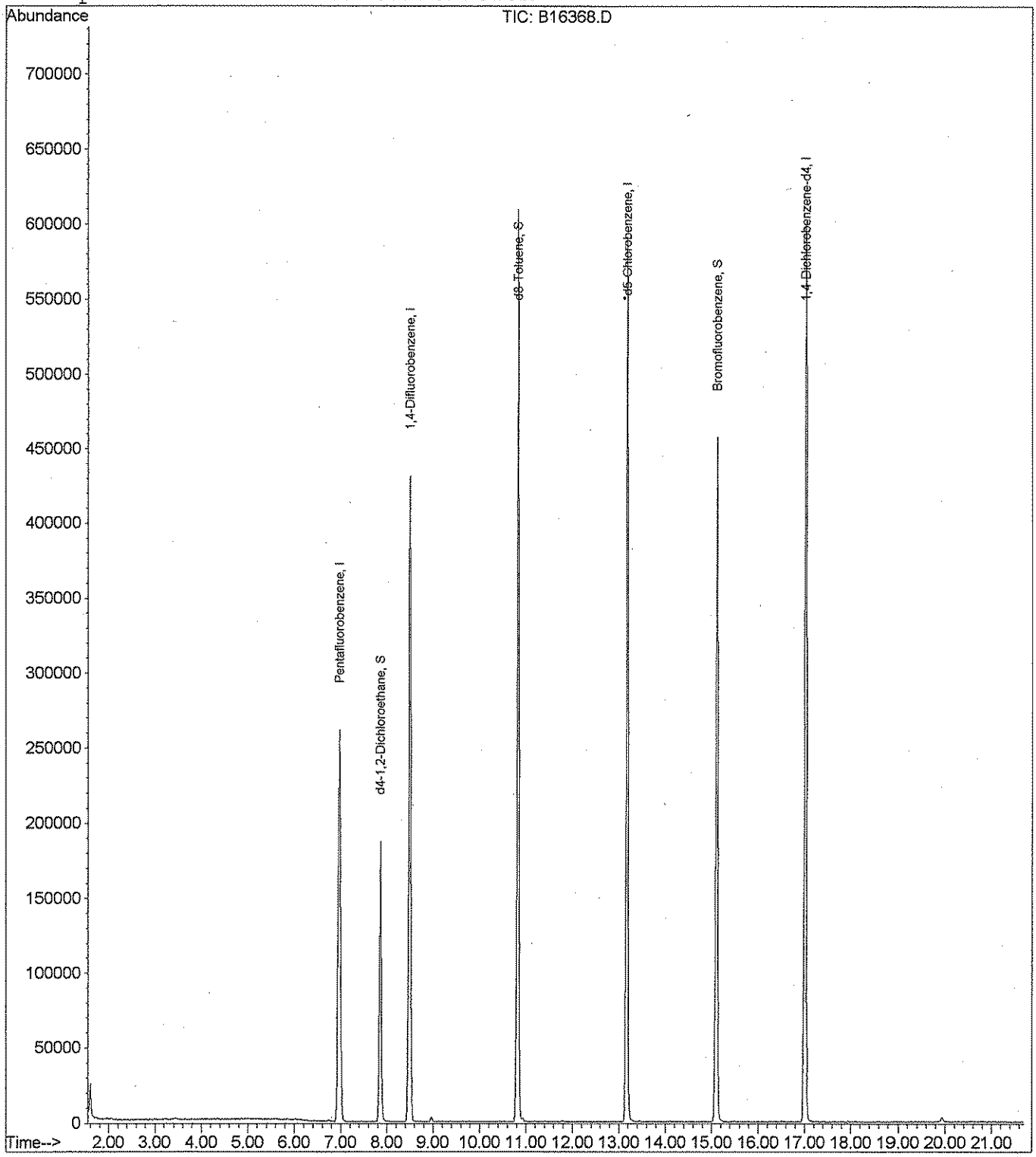
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16368.D Vial: 16
Acq On : 23 Jun 2003 4:05 pm Operator: JR
Sample : 49878-22 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 16:27 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW6-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-23
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

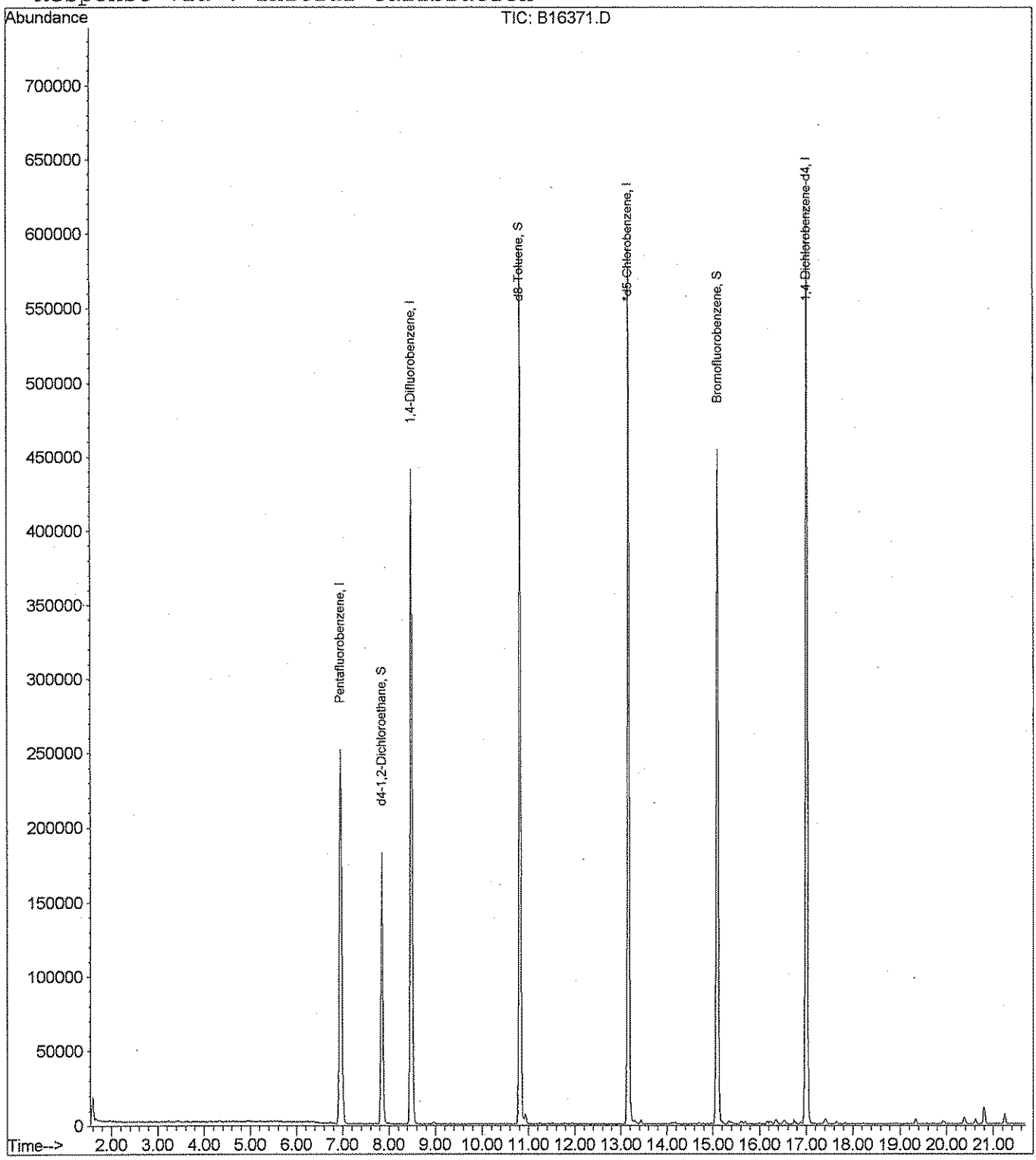
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16371.D Vial: 19
Acq On : 23 Jun 2003 5:38 pm Operator: JR
Sample : 49878-23 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 17:59 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** RB-061703-01

**SAMPLE DATA**

**Lab Sample ID:** 49878-24
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

Authorized signature

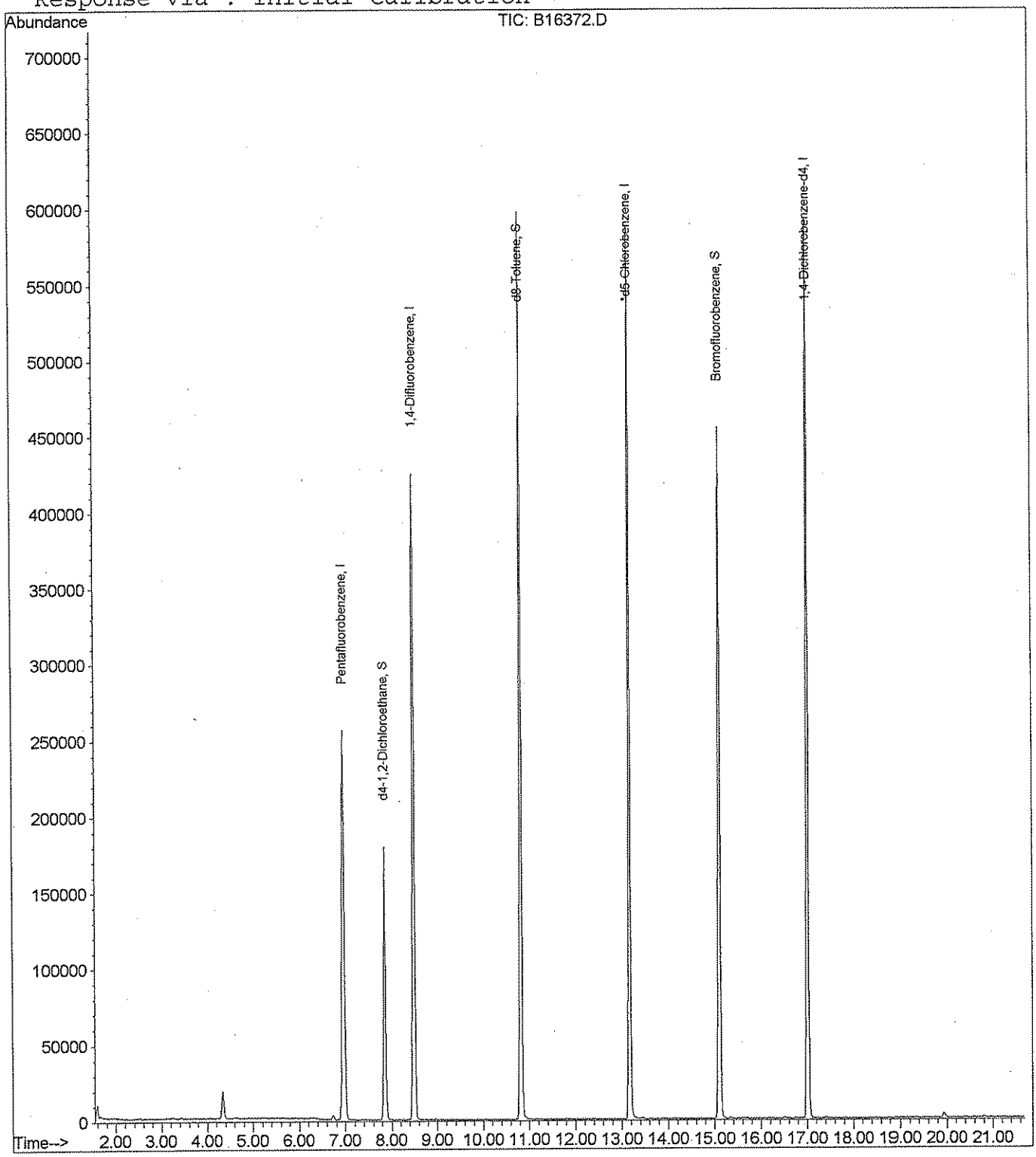
Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16372.D
Acq On : 23 Jun 2003 6:08 pm
Sample : 49878-24
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 23 18:30 2003

Vial: 20
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** FAMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-25
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

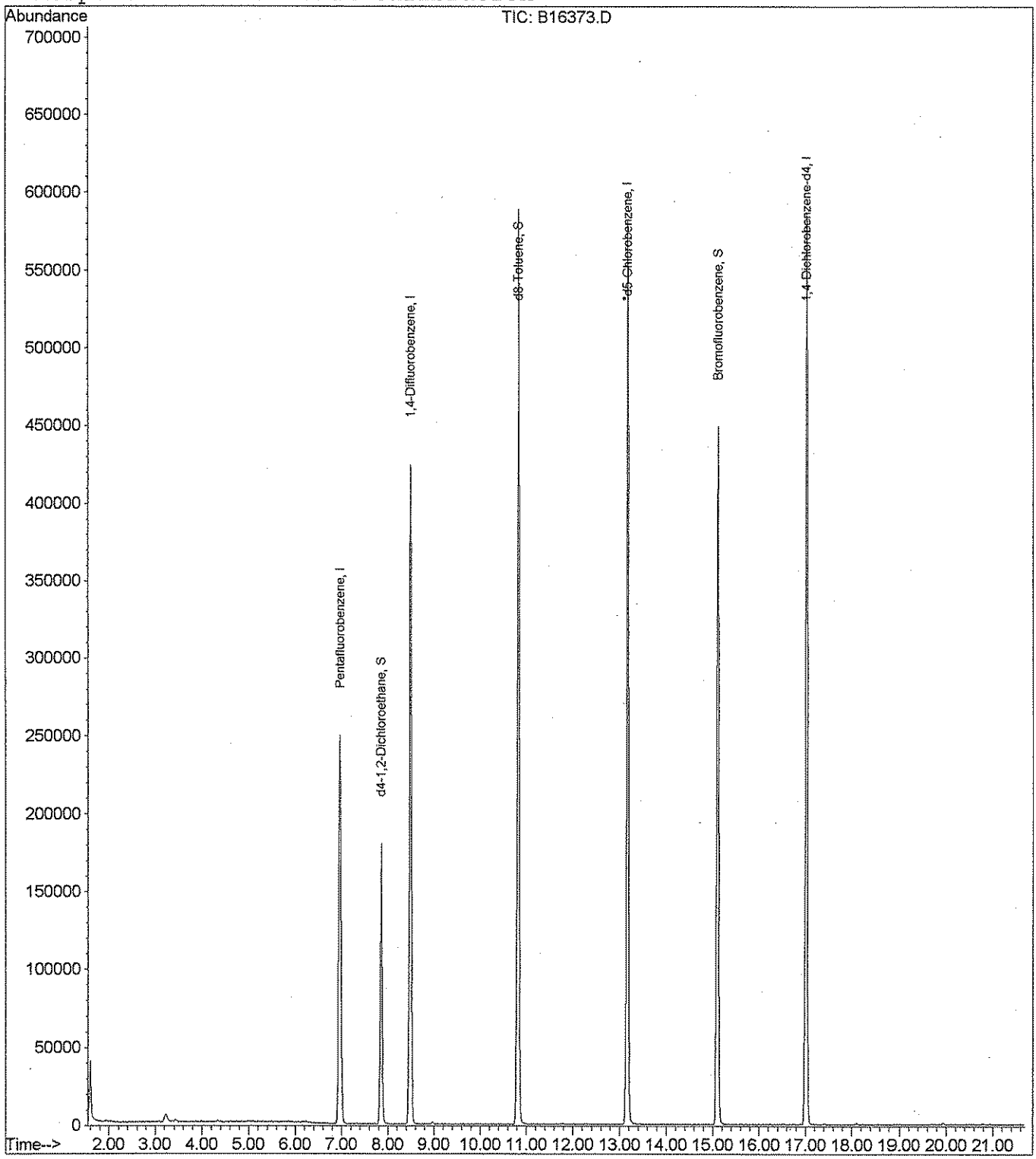
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16373.D Vial: 21
Acq On : 23 Jun 2003 6:39 pm Operator: JR
Sample : 49878-25 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 19:01 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** FAMW002-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-26
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

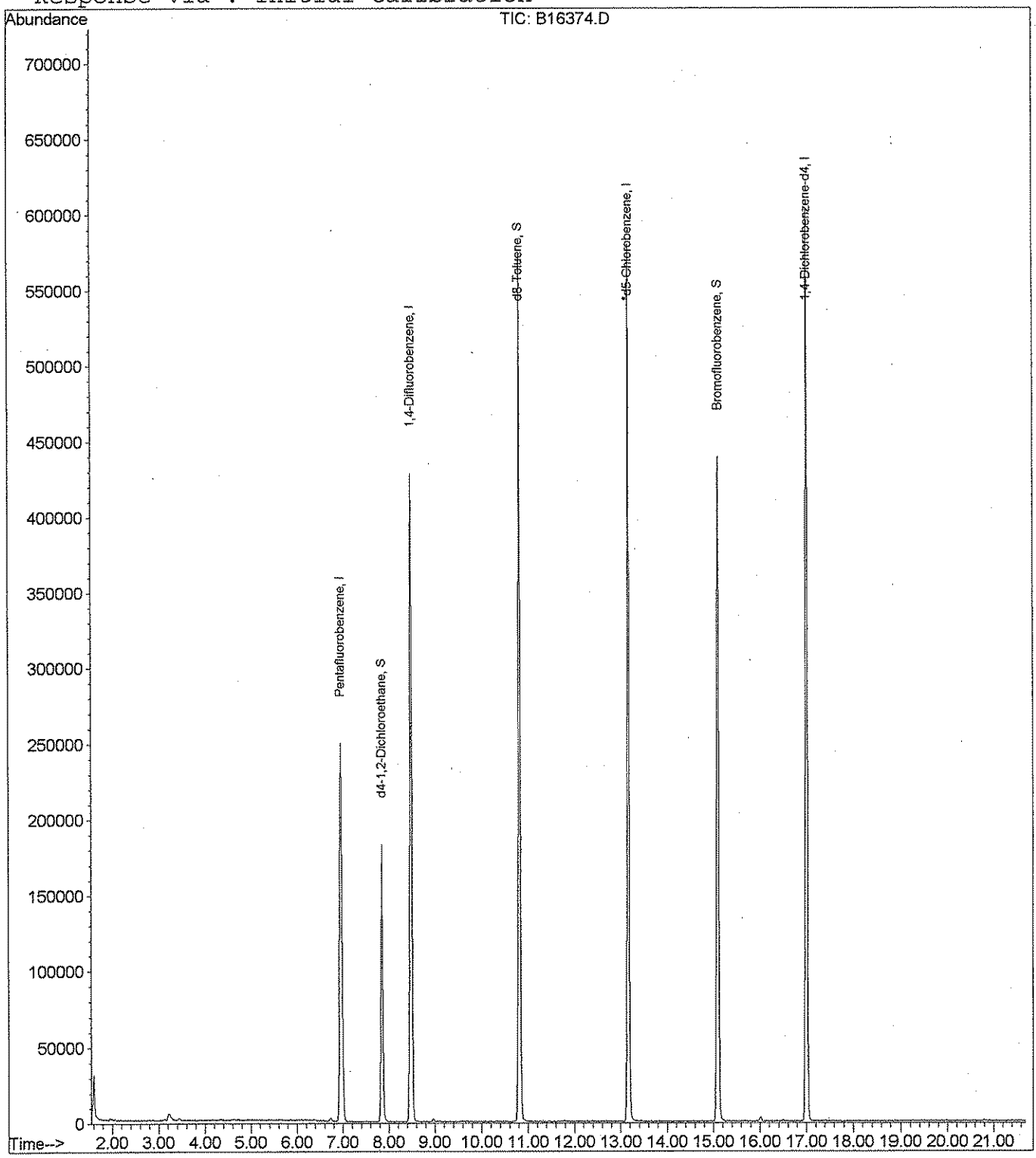
8260 full

Authorized signature Melissa A Kull

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16374.D Vial: 22
Acq On : 23 Jun 2003 7:10 pm Operator: JR
Sample : 49878-26 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 19:32 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** BPMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-27
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

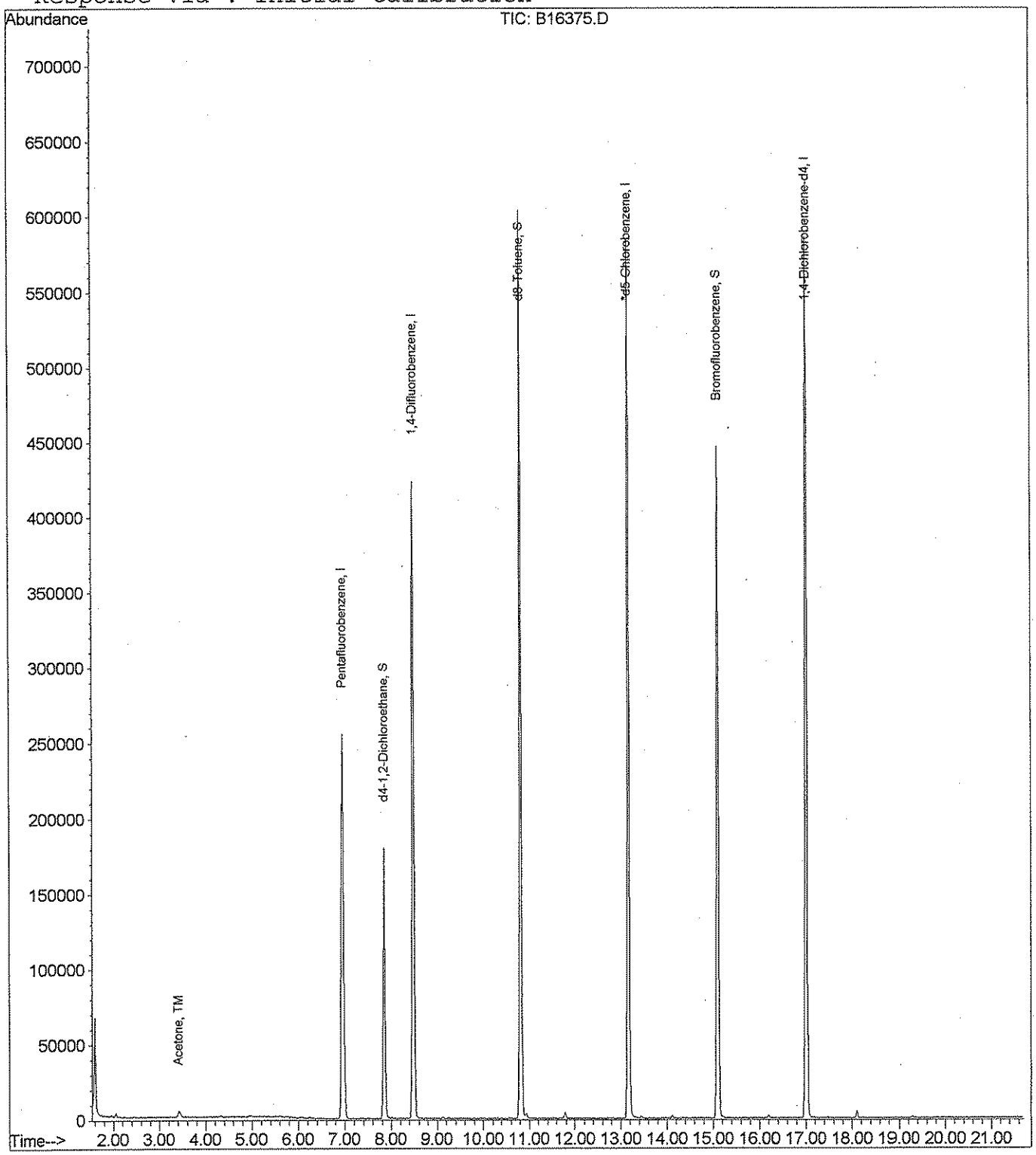
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16375.D Vial: 23
Acq On : 23 Jun 2003 7:40 pm Operator: JR
Sample : 49878-27 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 23 20:02 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 24, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** GTMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-28
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/23/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1 J** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 101 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

Authorized signature

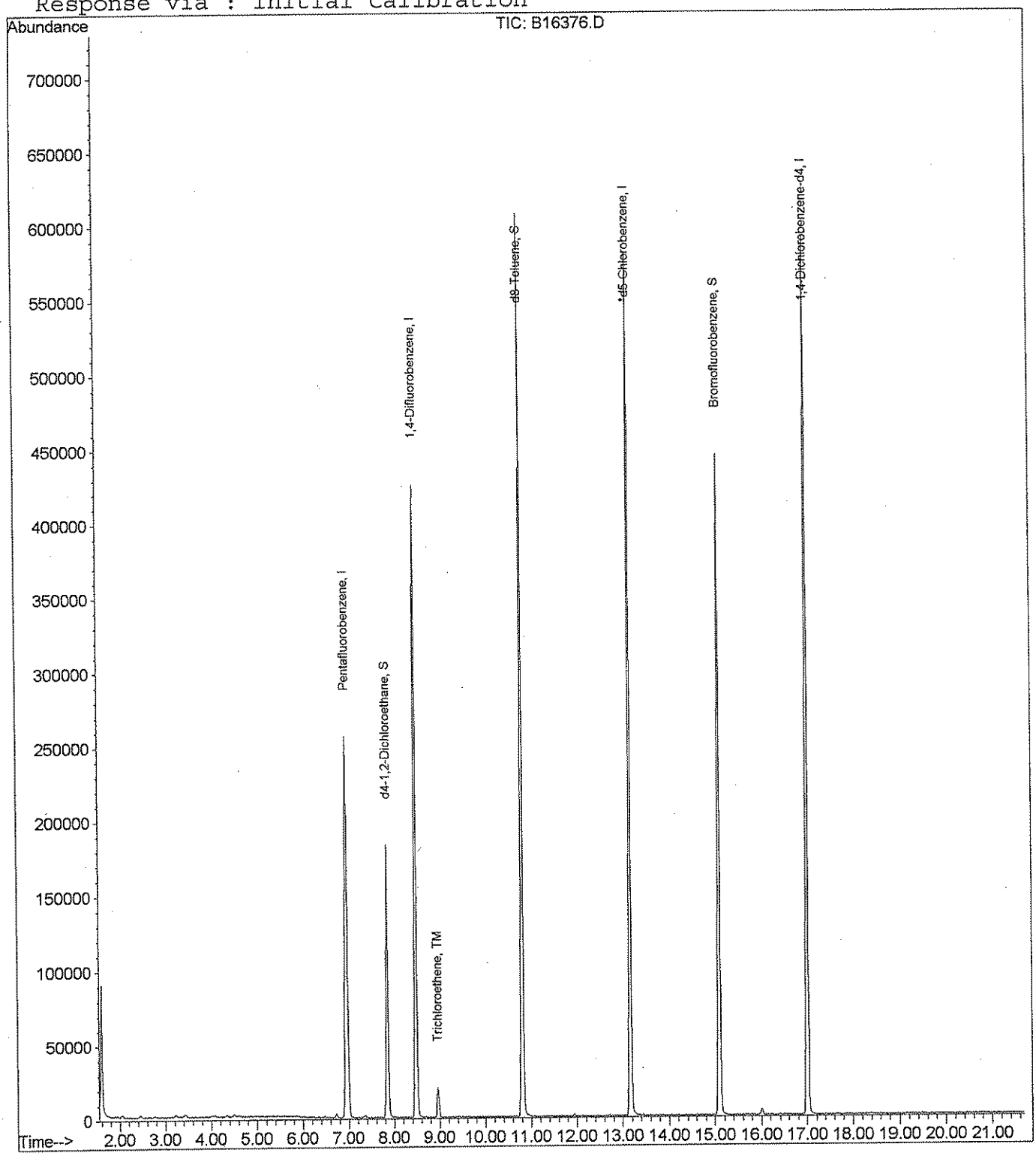
Quantitation Report

Data File : C:\HPCHEM\1\data\062303-B\B16376.D
Acq On : 23 Jun 2003 8:11 pm
Sample : 49878-28
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 23 20:33 2003

Vial: 24
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TSMW001-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-29
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 99 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

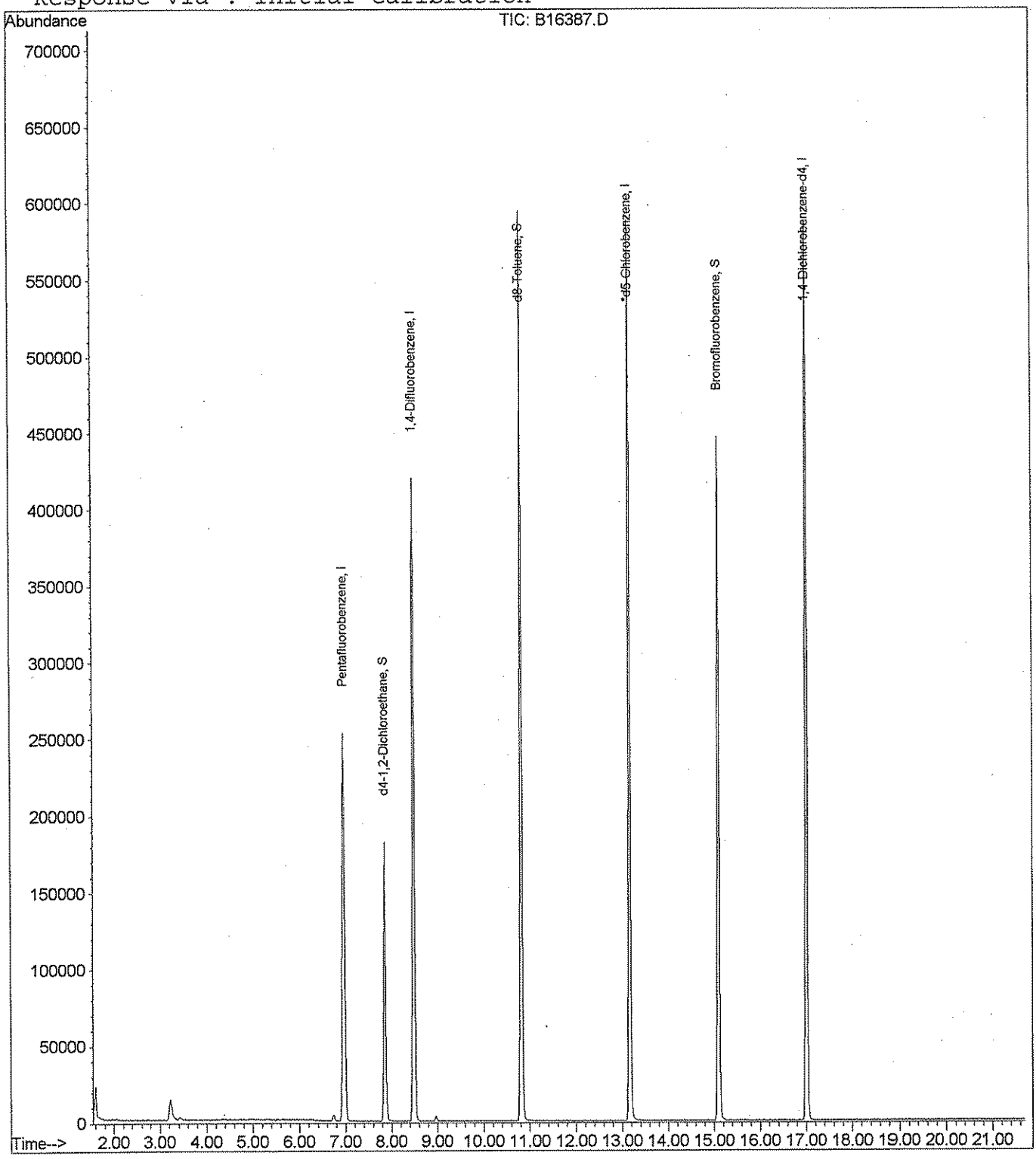
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16387.D Vial: 10
Acq On : 24 Jun 2003 1:08 pm Operator: JR
Sample : 49878-29 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 13:30 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TSMW002-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-30
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1 J** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

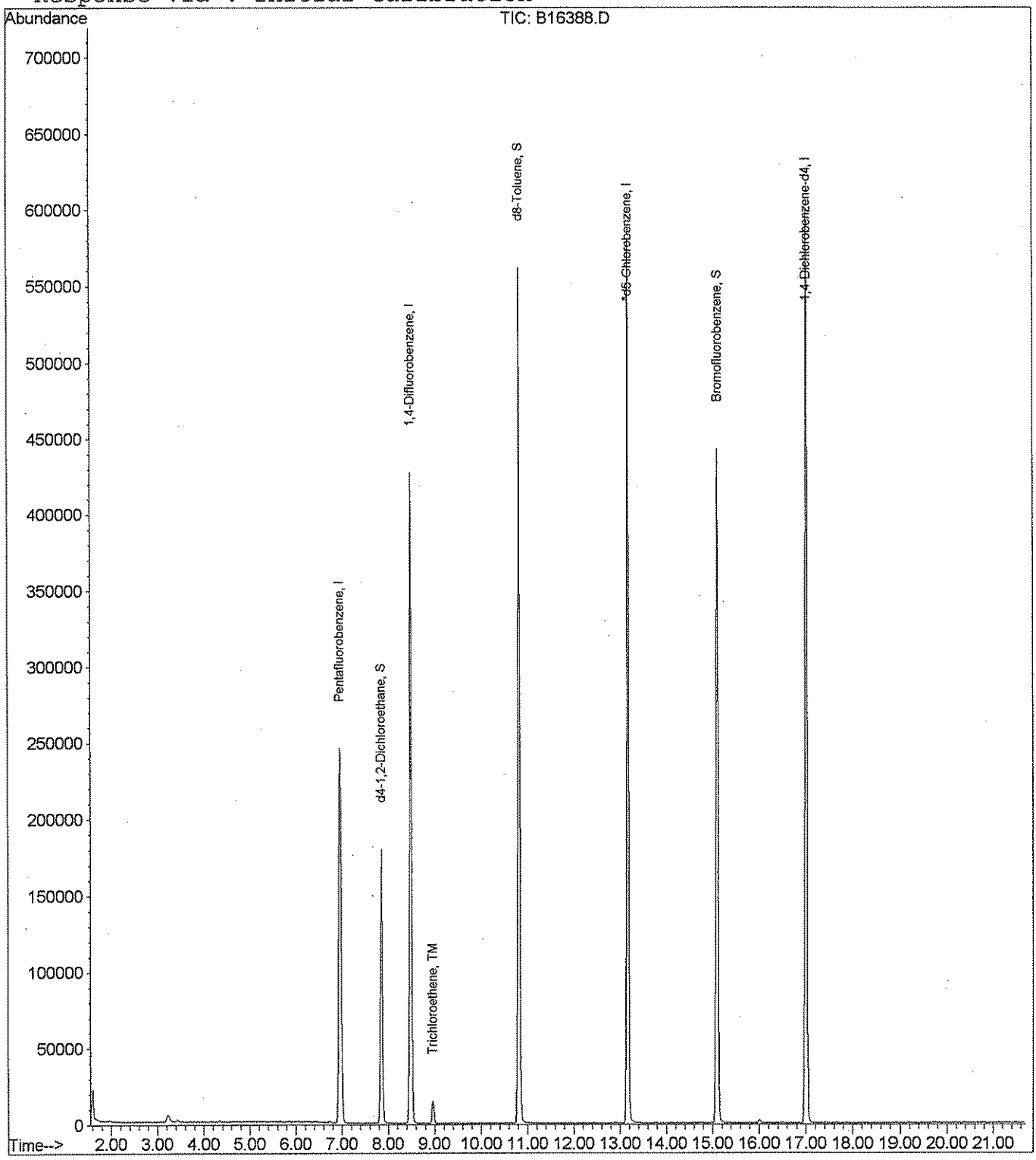
8260 full

Authorized signature Melissa A Kelly

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16388.D Vial: 11
Acq On : 24 Jun 2003 1:39 pm Operator: JR
Sample : 49878-30 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 14:00 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration






000138

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Ms. Kathleen Soukup
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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** TSMW003-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-31
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | **3** | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | **2** | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | **3** | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 100 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

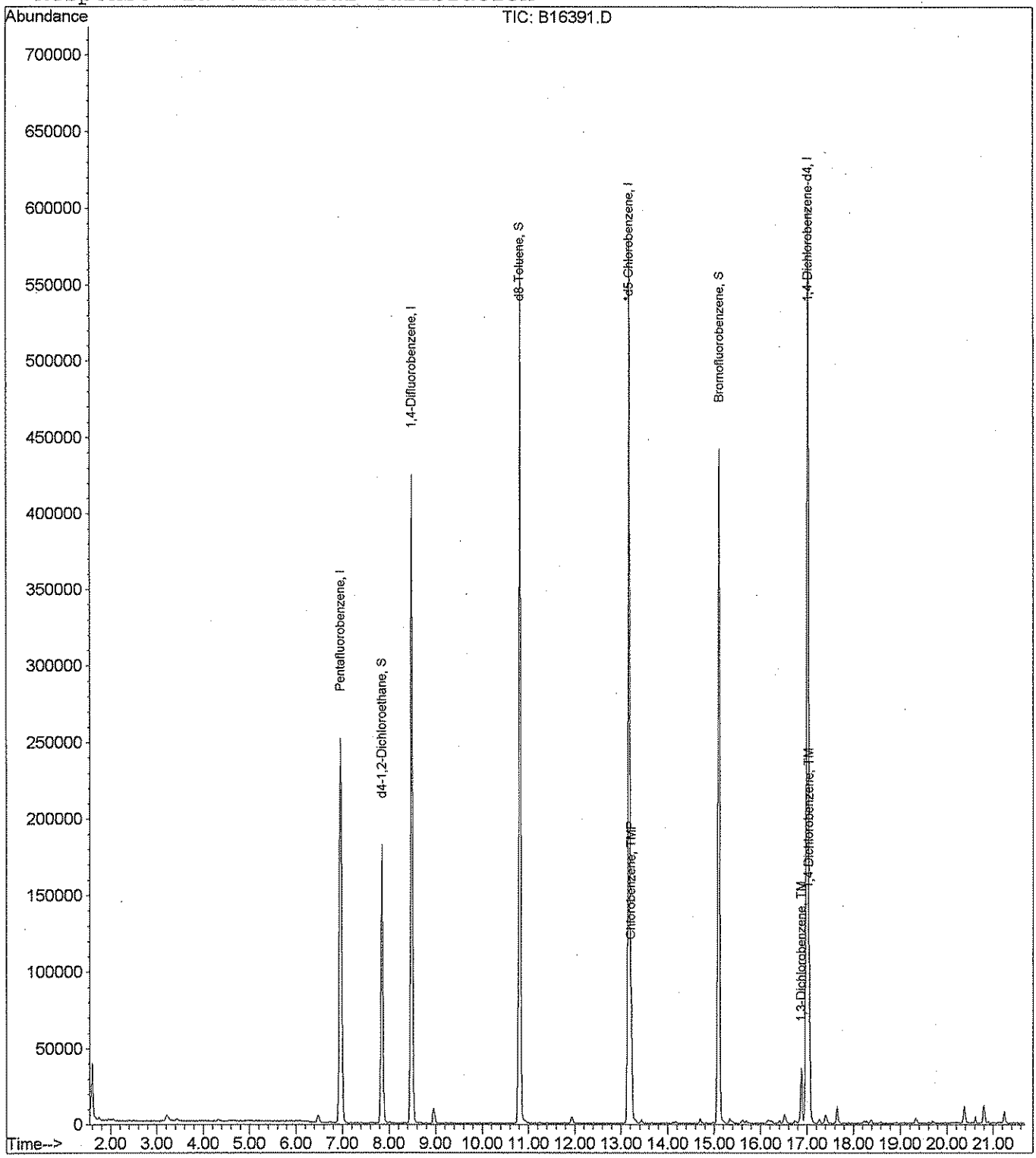
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16391.D Vial: 14
Acq On : 24 Jun 2003 3:11 pm Operator: JR
Sample : 49878-31 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 15:33 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW3-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-32
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

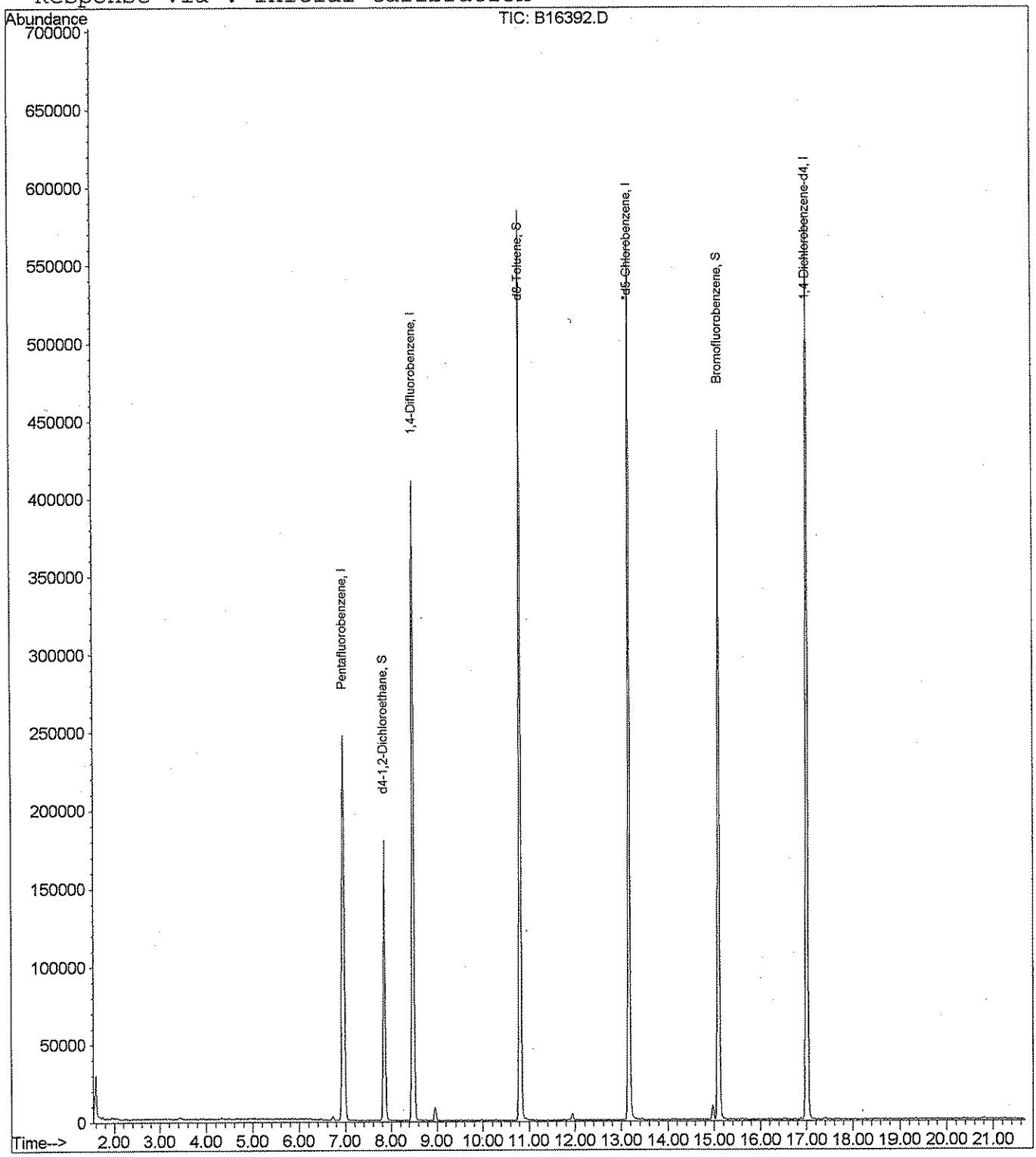
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16392.D Vial: 15
Acq On : 24 Jun 2003 3:42 pm Operator: JR
Sample : 49878-32 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:04 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration




B16392.D V806193B.M Tue Jun 24 16:04:10 2003 Page 1

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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW2-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-33
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **220 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 101 % | d8-Toluene | 98 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

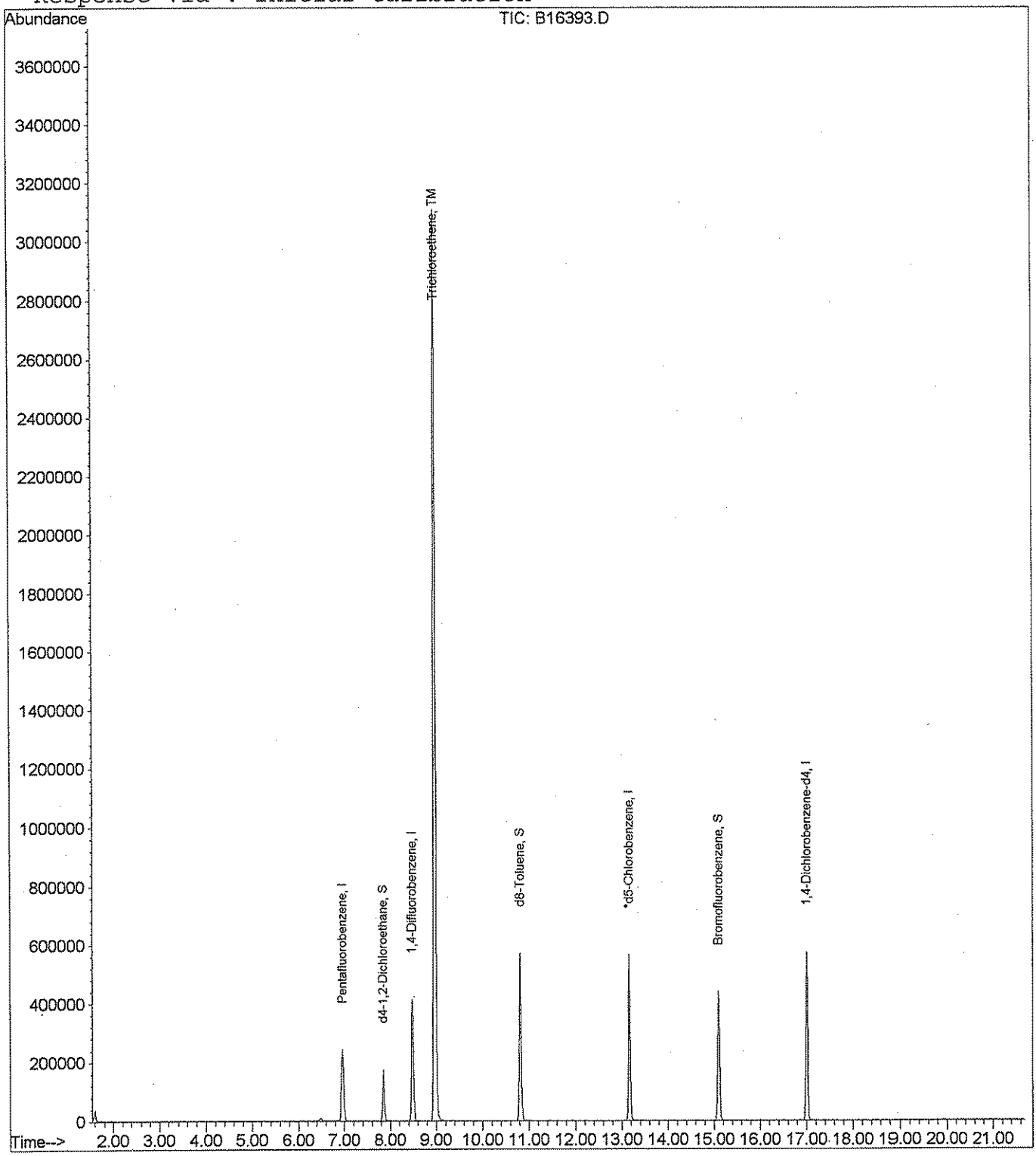
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16393.D Vial: 16
Acq On : 24 Jun 2003 4:12 pm Operator: JR
Sample : 49878-33 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:34 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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1 Wall Street
Manchester NH 03101-1501

June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW2-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-33 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 5.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 10 | U | 1,3-Dichloropropane | 10 | U |
| Bromobenzene | 10 | U | cis-1,3-Dichloropropene | 10 | U |
| Bromochloromethane | 10 | U | trans-1,3-Dichloropropene | 10 | U |
| Bromodichloromethane | 10 | U | 2,2-Dichloropropane | 10 | U |
| Bromoform | 10 | U | 1,1-Dichloropropene | 10 | U |
| Bromomethane | 10 | U | Ethylbenzene | 10 | U |
| n-butylbenzene | 10 | U | Hexachlorobutadiene | 10 | U |
| sec-butylbenzene | 10 | U | Isopropylbenzene | 10 | U |
| tert-butylbenzene | 10 | U | p-isopropyltoluene | 10 | U |
| Carbon Tetrachloride | 10 | U | Methylene Chloride | 25 | U |
| Chlorobenzene | 10 | U | Methyl-tert-butyl ether (MTBE) | 10 | U |
| Chloroethane | 10 | U | Naphthalene | 10 | U |
| Chloroform | 10 | U | n-Propylbenzene | 10 | U |
| Chloromethane | 10 | U | Styrene | 10 | U |
| 2-Chlorotoluene | 10 | U | 1,1,1,2-Tetrachloroethane | 10 | U |
| 4-Chlorotoluene | 10 | U | 1,1,2,2-Tetrachloroethane | 10 | U |
| Dibromochloromethane | 10 | U | Tetrachloroethene | 10 | U |
| 1,2-Dibromo-3-chloropropane | 10 | U | Toluene | 10 | U |
| 1,2-Dibromoethane | 10 | U | 1,2,3-Trichlorobenzene | 10 | U |
| Dibromomethane | 10 | U | 1,2,4-Trichlorobenzene | 10 | U |
| 1,2-Dichlorobenzene | 10 | U | 1,1,1-Trichloroethane | 10 | U |
| 1,3-Dichlorobenzene | 10 | U | 1,1,2-Trichloroethane | 10 | U |
| 1,4-Dichlorobenzene | 10 | U | Trichloroethene | 10 | **191** |
| Dichlorodifluoromethane | 10 | U | Trichlorofluoromethane | 10 | U |
| 1,1-Dichloroethane | 10 | U | 1,2,3-Trichloropropane | 10 | U |
| 1,2-Dichloroethane | 10 | U | 1,2,4-Trimethylbenzene | 10 | U |
| 1,1-Dichloroethene | 10 | U | 1,3,5-Trimethylbenzene | 10 | U |
| cis-1,2-Dichloroethene | 10 | U | Vinyl Chloride | 10 | U |
| trans-1,2-Dichloroethene | 10 | U | o-Xylene | 10 | U |
| 1,2-Dichloropropane | 10 | U | m,p-Xylene | 10 | U |
| Acetone | 50 | U | Diethyl ether | 10 | U |
| Carbon Disulfide | 10 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether (DIPE) | 10 | U |
| t-Butyl alcohol (TBA) | 100 | U | Ethyl t-butyl ether (ETBE) | 10 | U |
| t-Amyl methyl ether (TAME) | 10 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 97 % | d8-Toluene | 98 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

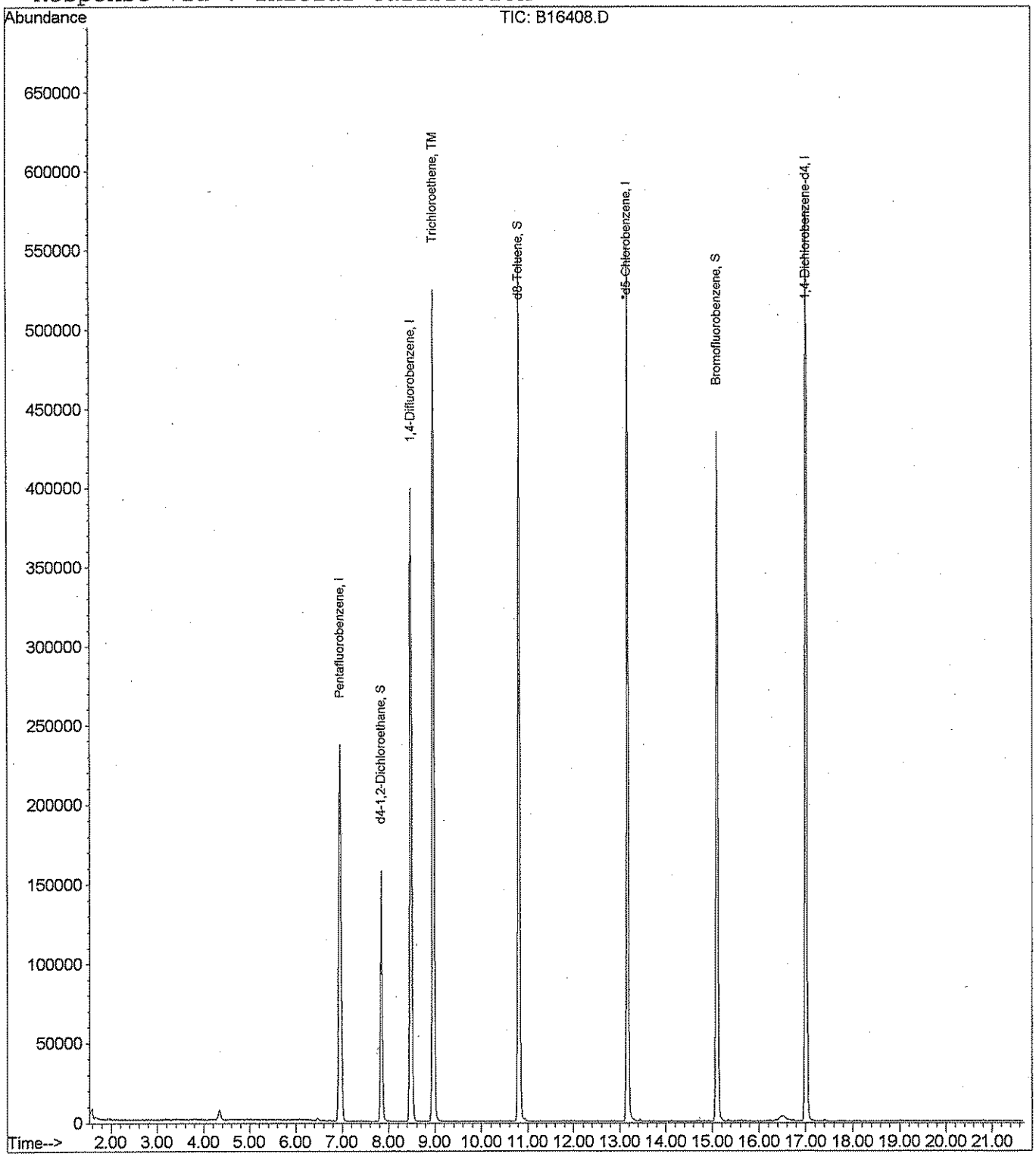
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16408.D Vial: 7
Acq On : 25 Jun 2003 9:29 am Operator: JR
Sample : 49878-33,DL Inst : Instrumen
Misc : 1000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 9:51 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW7-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-34
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **397 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

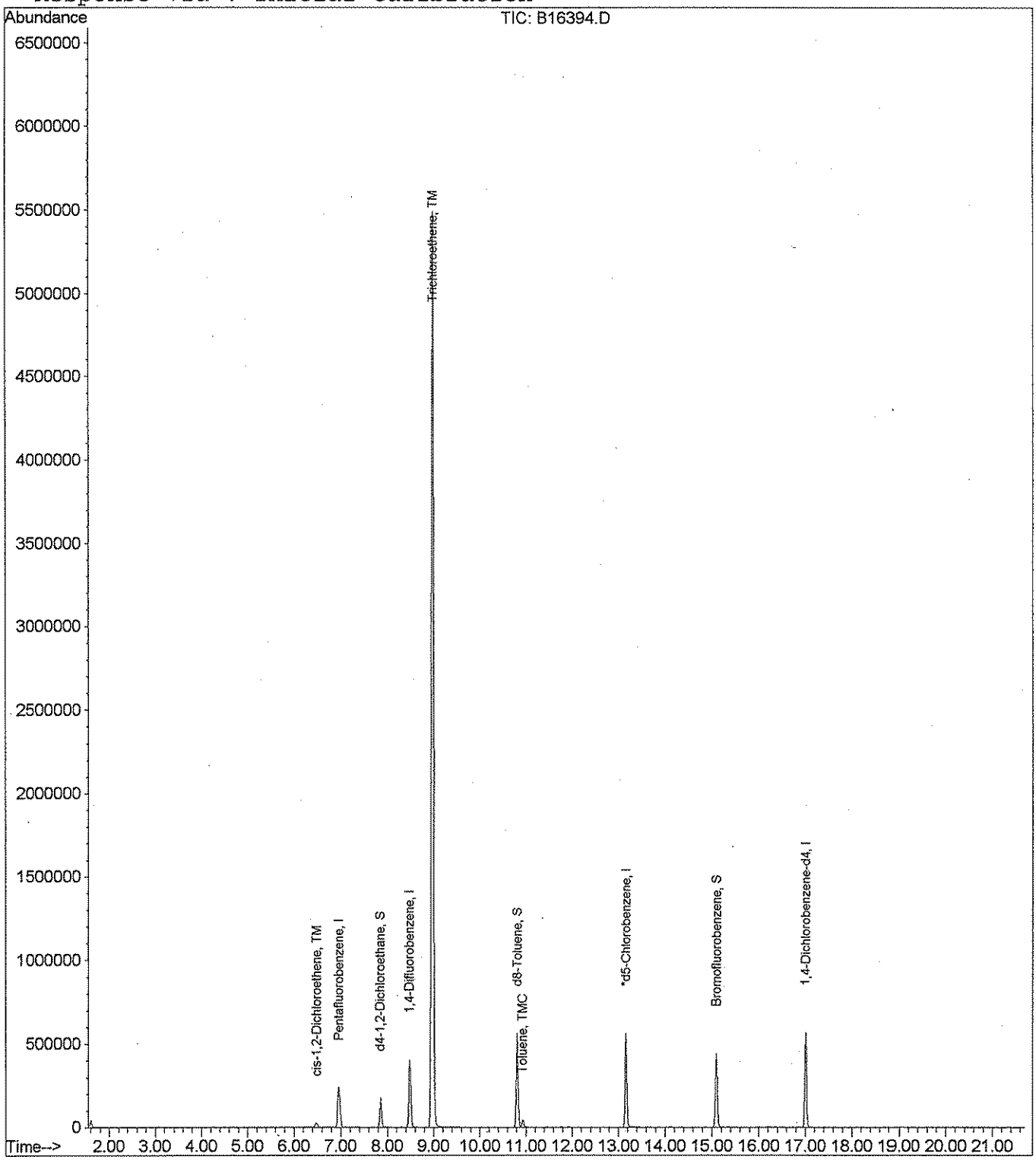
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16394.D Vial: 17
Acq On : 24 Jun 2003 4:43 pm Operator: JR
Sample : 49878-34 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 17:05 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW7-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-34 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **351** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 100 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

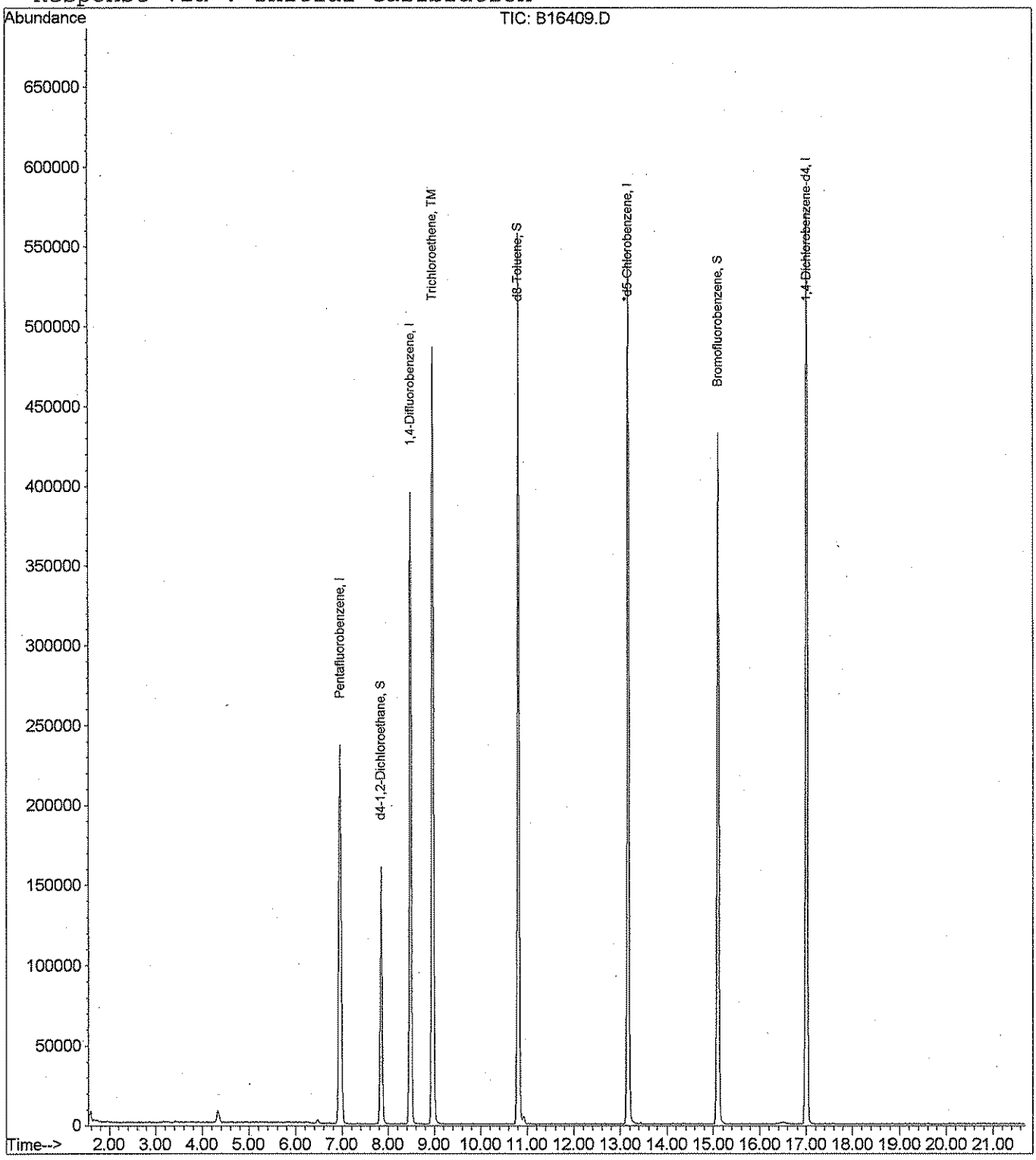
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16409.D Vial: 8
Acq On : 25 Jun 2003 10:00 am Operator: JR
Sample : 49878-34,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:22 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW7-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-35
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **1 J** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **405 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 105 % | d8-Toluene | 100 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

Authorized signature

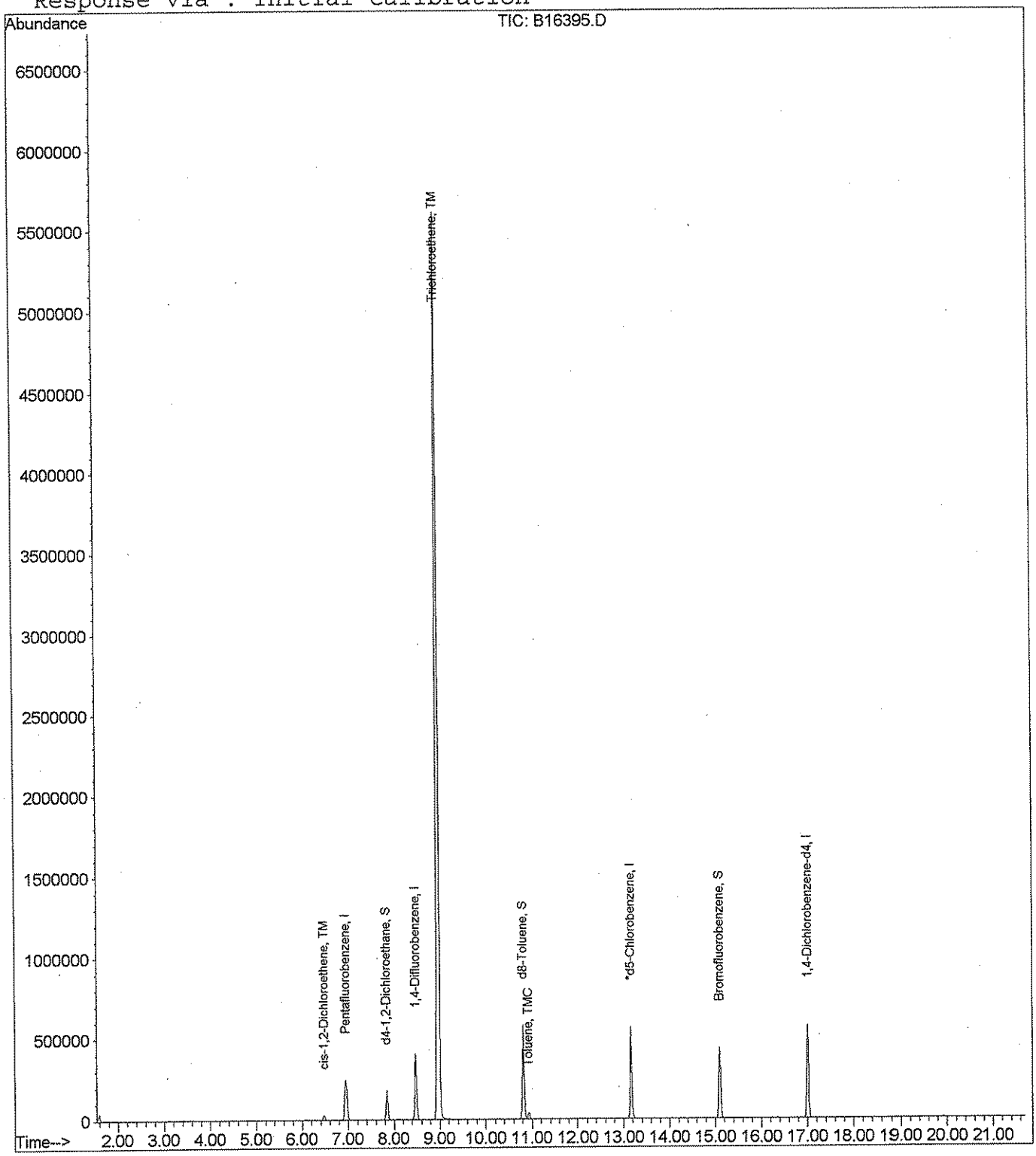
Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16395.D
Acq On : 24 Jun 2003 5:14 pm
Sample : 49878-35
Misc : 5000
MS Integration Params: rteint.p
Quant Time: Jun 24 17:36 2003

Vial: 18
Operator: JR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW7-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-35 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **360** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 100 % | d8-Toluene | 98 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

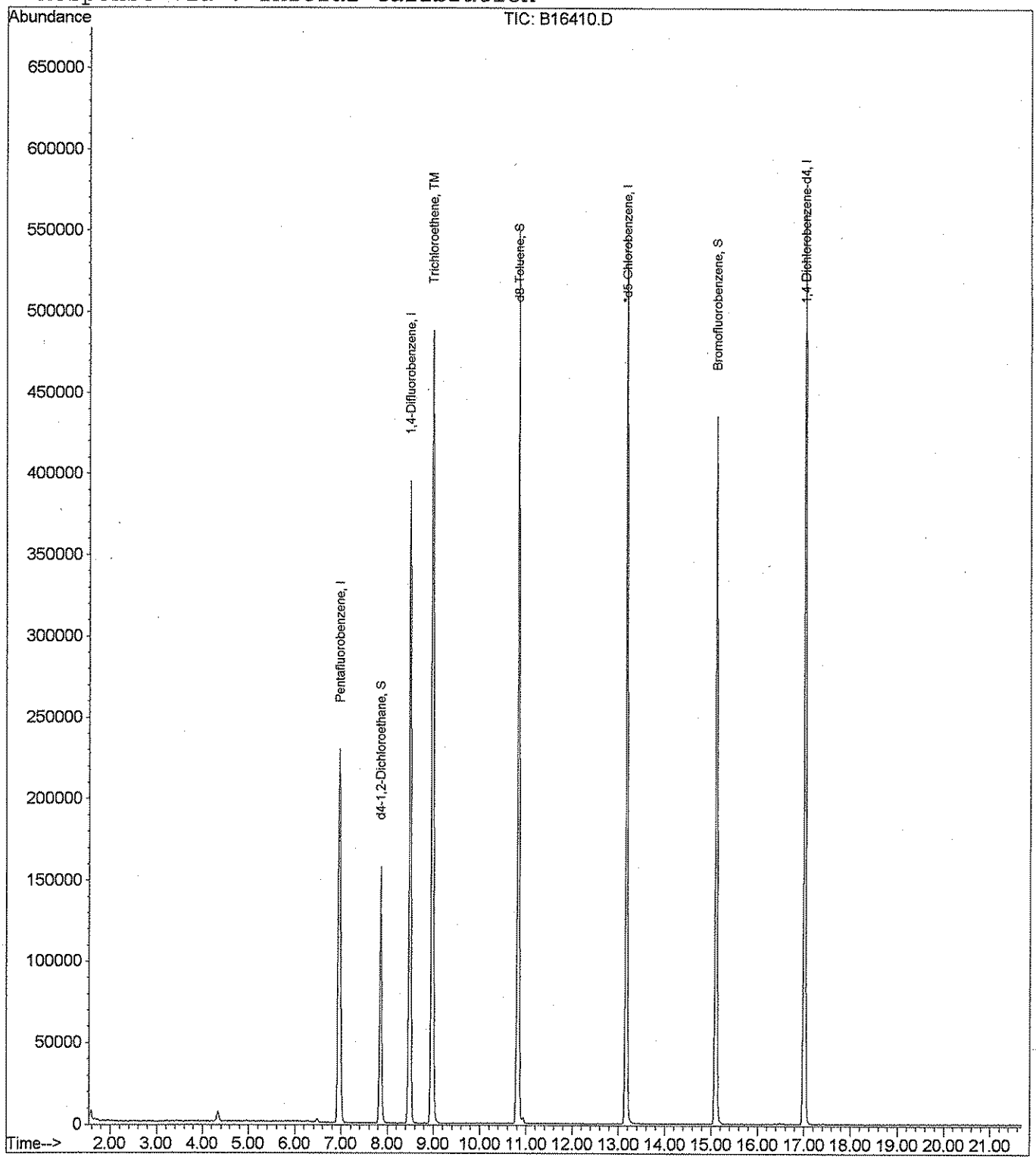
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16410.D Vial: 9
Acq On : 25 Jun 2003 10:31 am Operator: JR
Sample : 49878-35,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:53 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW4-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-36
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

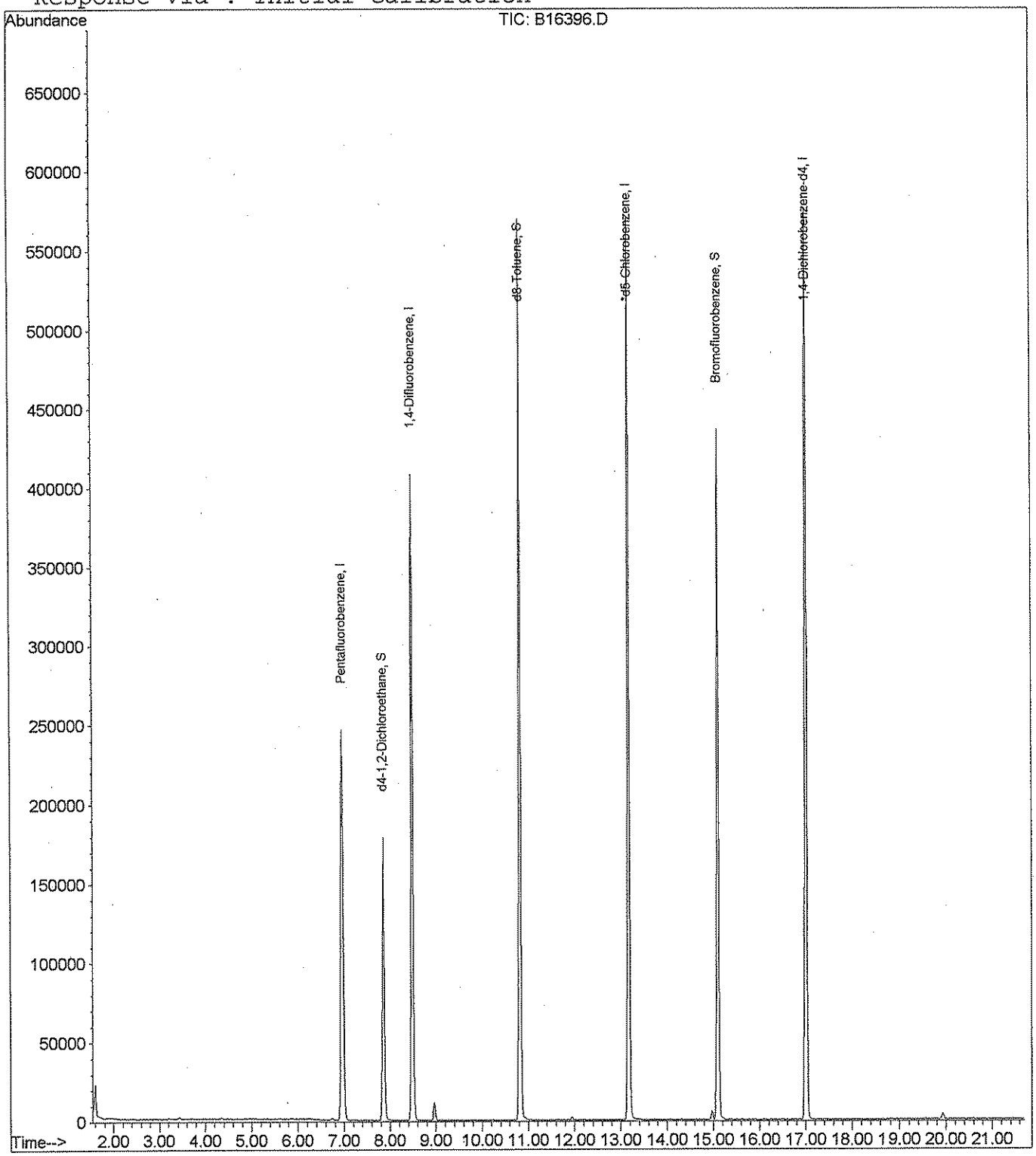
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16396.D Vial: 19
Acq On : 24 Jun 2003 5:44 pm Operator: JR
Sample : 49878-36 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 18:06 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW10-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-37
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **12** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1330 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **49** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **1 J** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 104 % | d8-Toluene | 99 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

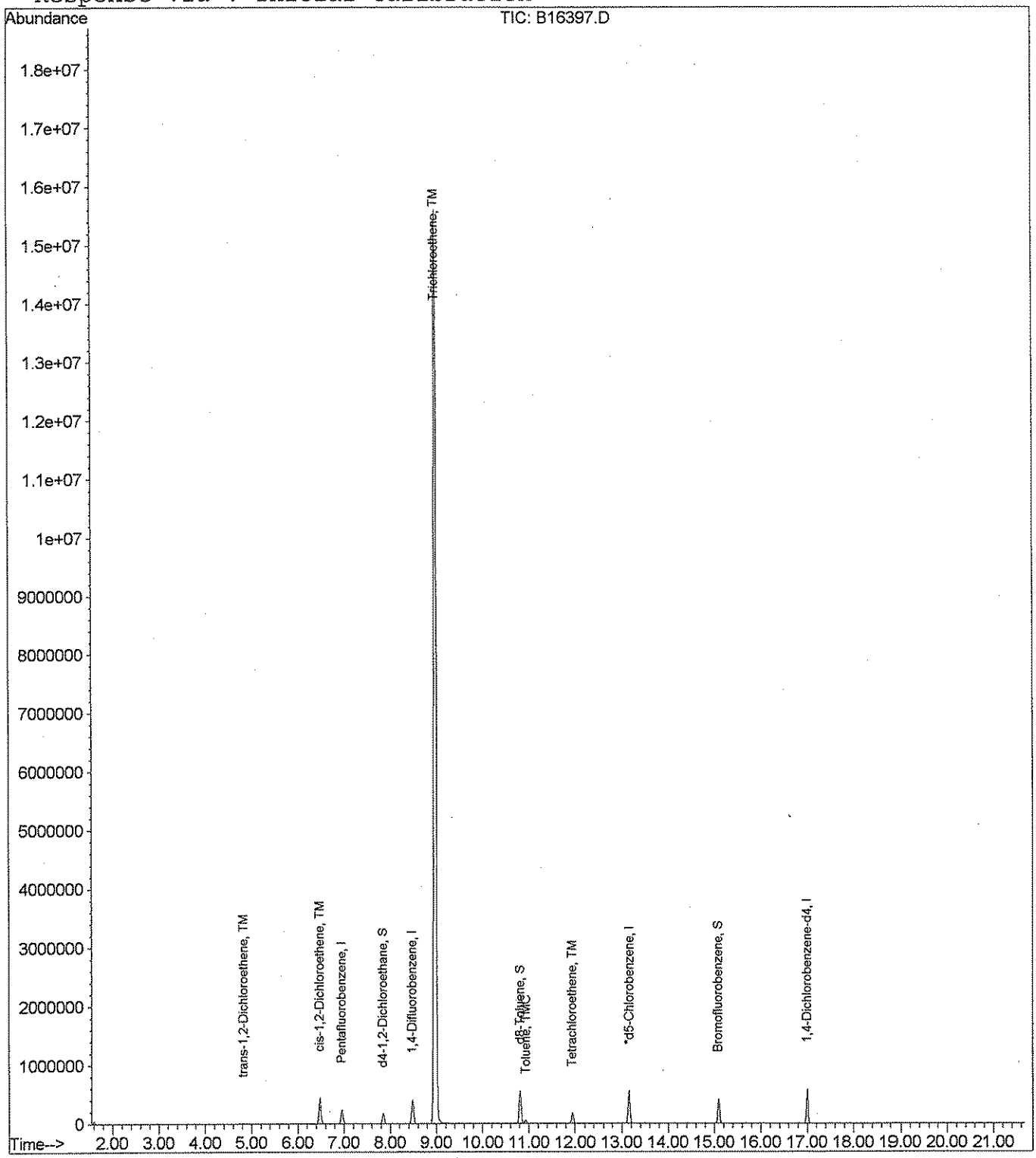
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16397.D Vial: 20
Acq On : 24 Jun 2003 6:15 pm Operator: JR
Sample : 49878-37 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 18:37 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW10-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-37 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 50
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 100 | U | 1,3-Dichloropropane | 100 | U |
| Bromobenzene | 100 | U | cis-1,3-Dichloropropene | 100 | U |
| Bromochloromethane | 100 | U | trans-1,3-Dichloropropene | 100 | U |
| Bromodichloromethane | 100 | U | 2,2-Dichloropropane | 100 | U |
| Bromoform | 100 | U | 1,1-Dichloropropene | 100 | U |
| Bromomethane | 100 | U | Ethylbenzene | 100 | U |
| n-butylbenzene | 100 | U | Hexachlorobutadiene | 100 | U |
| sec-butylbenzene | 100 | U | Isopropylbenzene | 100 | U |
| tert-butylbenzene | 100 | U | p-isopropyltoluene | 100 | U |
| Carbon Tetrachloride | 100 | U | Methylene Chloride | 250 | U |
| Chlorobenzene | 100 | U | Methyl-tert-butyl ether (MTBE) | 100 | U |
| Chloroethane | 100 | U | Naphthalene | 100 | U |
| Chloroform | 100 | U | n-Propylbenzene | 100 | U |
| Chloromethane | 100 | U | Styrene | 100 | U |
| 2-Chlorotoluene | 100 | U | 1,1,1,2-Tetrachloroethane | 100 | U |
| 4-Chlorotoluene | 100 | U | 1,1,2,2-Tetrachloroethane | 100 | U |
| Dibromochloromethane | 100 | U | Tetrachloroethene | 100 | U |
| 1,2-Dibromo-3-chloropropane | 100 | U | Toluene | 100 | U |
| 1,2-Dibromoethane | 100 | U | 1,2,3-Trichlorobenzene | 100 | U |
| Dibromomethane | 100 | U | 1,2,4-Trichlorobenzene | 100 | U |
| 1,2-Dichlorobenzene | 100 | U | 1,1,1-Trichloroethane | 100 | U |
| 1,3-Dichlorobenzene | 100 | U | 1,1,2-Trichloroethane | 100 | U |
| 1,4-Dichlorobenzene | 100 | U | Trichloroethene | 100 | **1820** |
| Dichlorodifluoromethane | 100 | U | Trichlorofluoromethane | 100 | U |
| 1,1-Dichloroethane | 100 | U | 1,2,3-Trichloropropane | 100 | U |
| 1,2-Dichloroethane | 100 | U | 1,2,4-Trimethylbenzene | 100 | U |
| 1,1-Dichloroethene | 100 | U | 1,3,5-Trimethylbenzene | 100 | U |
| cis-1,2-Dichloroethene | 100 | U | Vinyl Chloride | 100 | U |
| trans-1,2-Dichloroethene | 100 | U | o-Xylene | 100 | U |
| 1,2-Dichloropropane | 100 | U | m,p-Xylene | 100 | U |
| Acetone | 500 | U | Diethyl ether | 100 | U |
| Carbon Disulfide | 100 | U | 2-Hexanone | 500 | U |
| Tetrahydrofuran | 250 | U | Methyl isobutyl ketone | 500 | U |
| Methyl ethyl ketone | 500 | U | Di-isopropyl ether (DIPE) | 100 | U |
| t-Butyl alcohol (TBA) | 1000 | U | Ethyl t-butyl ether (ETBE) | 100 | U |
| t-Amyl methyl ether (TAME) | 100 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 96 % | d8-Toluene | 98 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

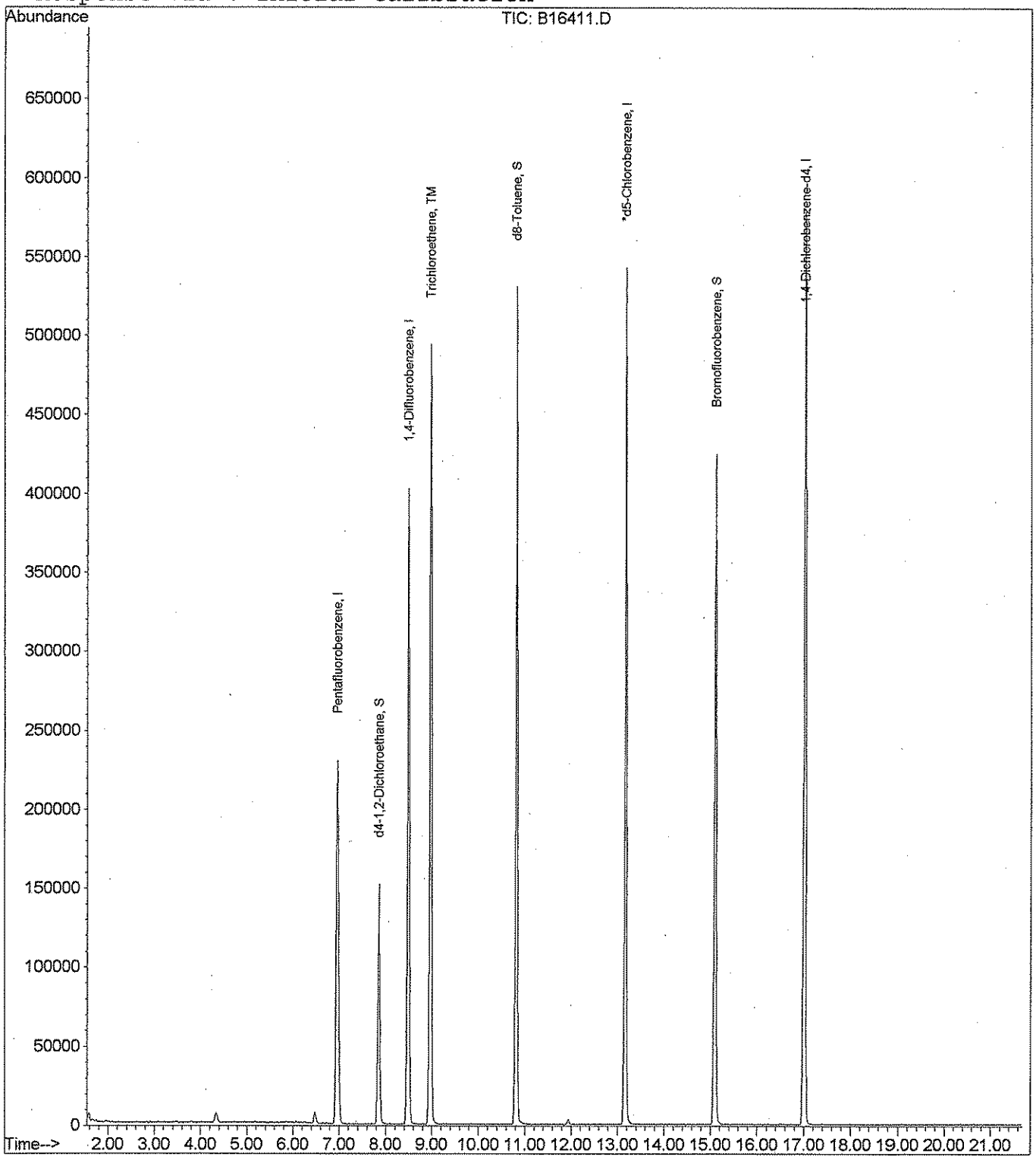
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16411.D Vial: 10
Acq On : 25 Jun 2003 11:02 am Operator: JR
Sample : 49878-37,DL Inst : Instrumen
Misc : 100 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 11:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW10-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-38
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **12** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1320 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **49** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **1 J** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 106 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

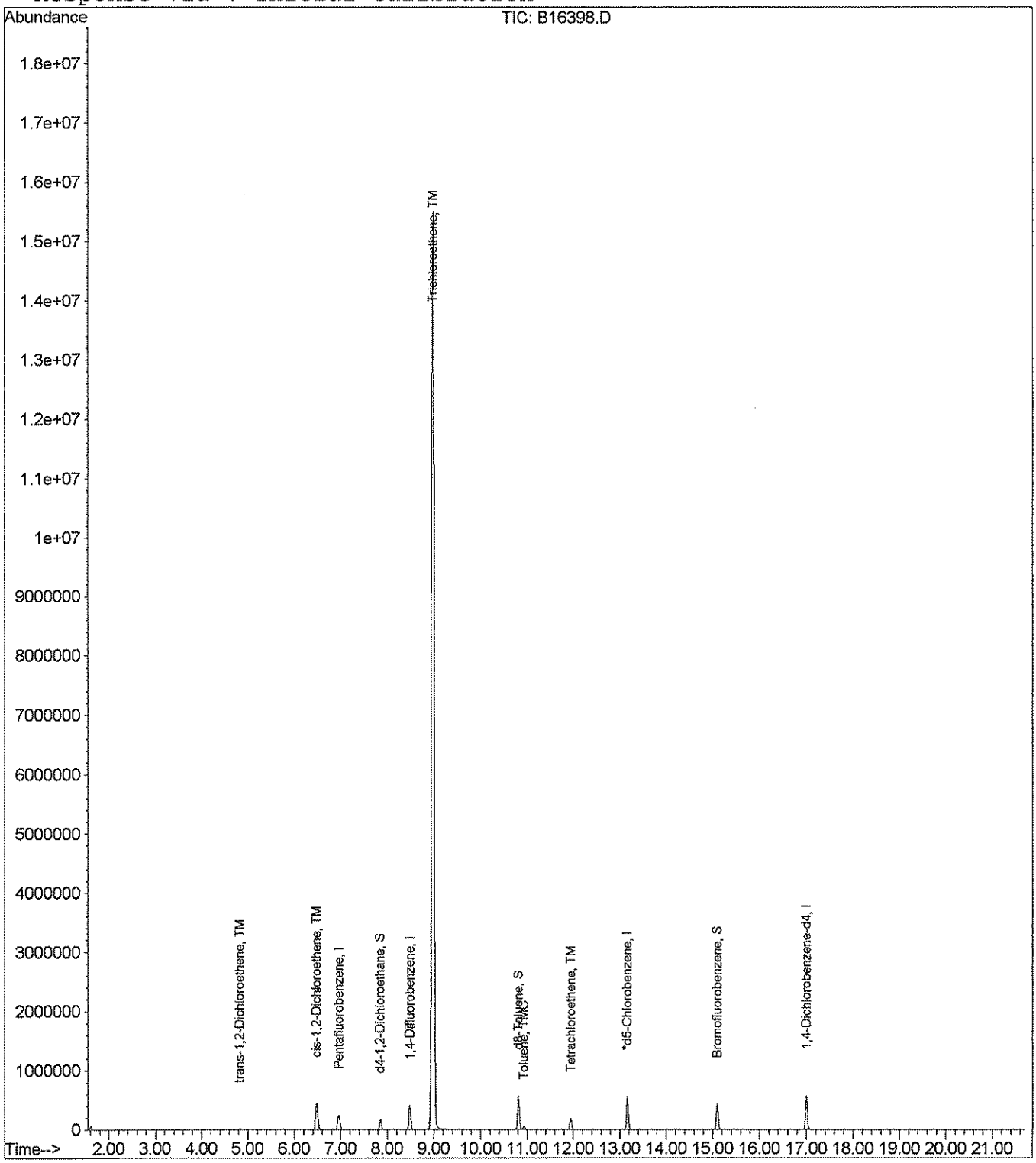
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16398.D Vial: 21
Acq On : 24 Jun 2003 6:46 pm Operator: JR
Sample : 49878-38 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 19:08 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration





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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** MW10-0603-E

**SAMPLE DATA**

**Lab Sample ID:** 49878-38 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 50
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 100 | U | 1,3-Dichloropropane | 100 | U |
| Bromobenzene | 100 | U | cis-1,3-Dichloropropene | 100 | U |
| Bromochloromethane | 100 | U | trans-1,3-Dichloropropene | 100 | U |
| Bromodichloromethane | 100 | U | 2,2-Dichloropropane | 100 | U |
| Bromoform | 100 | U | 1,1-Dichloropropene | 100 | U |
| Bromomethane | 100 | U | Ethylbenzene | 100 | U |
| n-butylbenzene | 100 | U | Hexachlorobutadiene | 100 | U |
| sec-butylbenzene | 100 | U | Isopropylbenzene | 100 | U |
| tert-butylbenzene | 100 | U | p-isopropyltoluene | 100 | U |
| Carbon Tetrachloride | 100 | U | Methylene Chloride | 250 | U |
| Chlorobenzene | 100 | U | Methyl-tert-butyl ether (MTBE) | 100 | U |
| Chloroethane | 100 | U | Naphthalene | 100 | U |
| Chloroform | 100 | U | n-Propylbenzene | 100 | U |
| Chloromethane | 100 | U | Styrene | 100 | U |
| 2-Chlorotoluene | 100 | U | 1,1,1,2-Tetrachloroethane | 100 | U |
| 4-Chlorotoluene | 100 | U | 1,1,2,2-Tetrachloroethane | 100 | U |
| Dibromochloromethane | 100 | U | Tetrachloroethene | 100 | U |
| 1,2-Dibromo-3-chloropropane | 100 | U | Toluene | 100 | U |
| 1,2-Dibromoethane | 100 | U | 1,2,3-Trichlorobenzene | 100 | U |
| Dibromomethane | 100 | U | 1,2,4-Trichlorobenzene | 100 | U |
| 1,2-Dichlorobenzene | 100 | U | 1,1,1-Trichloroethane | 100 | U |
| 1,3-Dichlorobenzene | 100 | U | 1,1,2-Trichloroethane | 100 | U |
| 1,4-Dichlorobenzene | 100 | U | Trichloroethene | 100 | **1880** |
| Dichlorodifluoromethane | 100 | U | Trichlorofluoromethane | 100 | U |
| 1,1-Dichloroethane | 100 | U | 1,2,3-Trichloropropane | 100 | U |
| 1,2-Dichloroethane | 100 | U | 1,2,4-Trimethylbenzene | 100 | U |
| 1,1-Dichloroethene | 100 | U | 1,3,5-Trimethylbenzene | 100 | U |
| cis-1,2-Dichloroethene | 100 | U | Vinyl Chloride | 100 | U |
| trans-1,2-Dichloroethene | 100 | U | o-Xylene | 100 | U |
| 1,2-Dichloropropane | 100 | U | m,p-Xylene | 100 | U |
| Acetone | 500 | U | Diethyl ether | 100 | U |
| Carbon Disulfide | 100 | U | 2-Hexanone | 500 | U |
| Tetrahydrofuran | 250 | U | Methyl isobutyl ketone | 500 | U |
| Methyl ethyl ketone | 500 | U | Di-isopropyl ether (DIPE) | 100 | U |
| t-Butyl alcohol (TBA) | 1000 | U | Ethyl t-butyl ether (ETBE) | 100 | U |
| t-Amyl methyl ether (TAME) | 100 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 98 % | d8-Toluene | 98 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

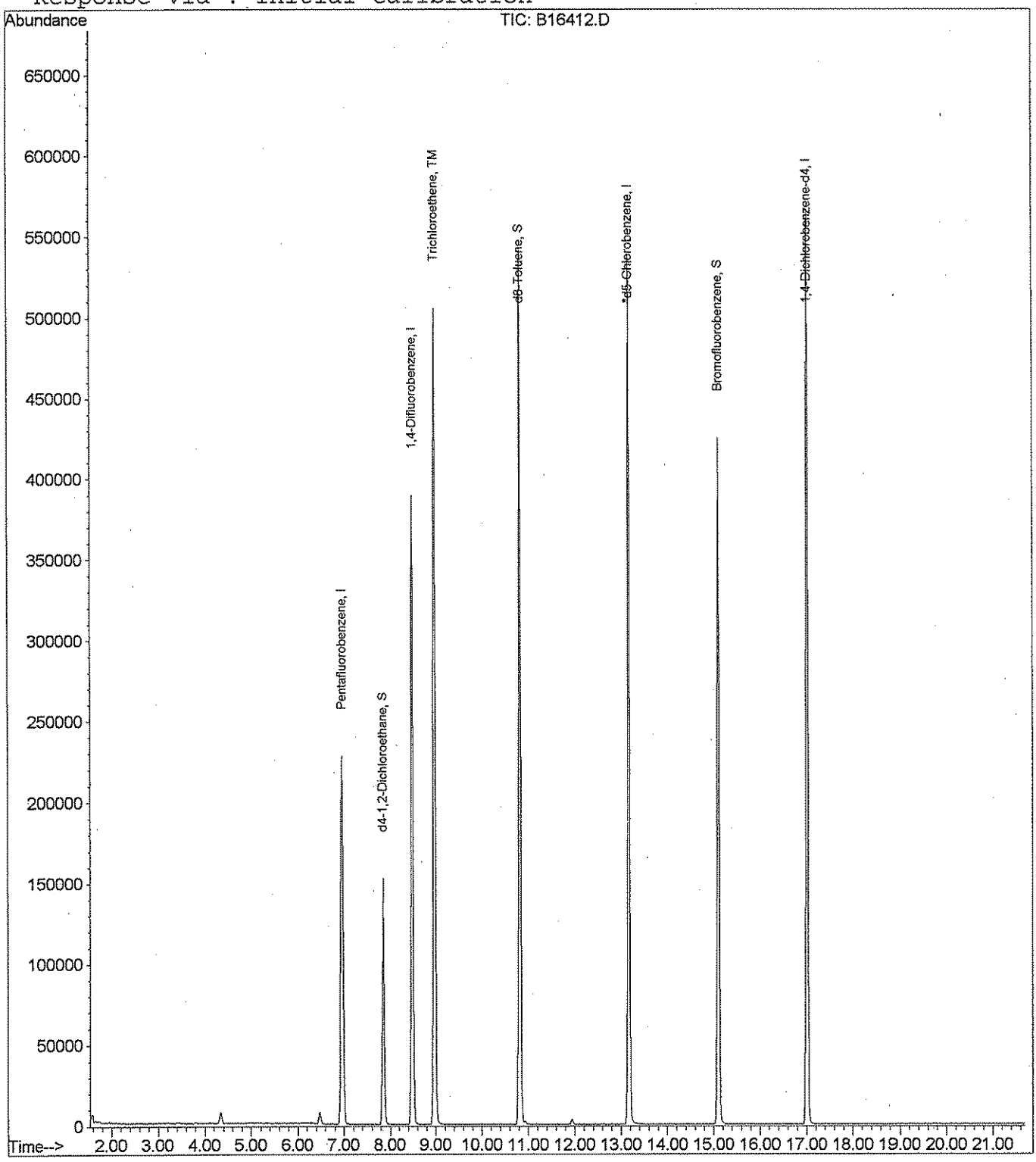
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16412.D Vial: 11
Acq On : 25 Jun 2003 11:32 am Operator: JR
Sample : 49878-38,DL Inst : Instrumen
Misc : 100 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 11:54 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 27, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW005-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-39
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/25/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 100 % | d8-Toluene | 98 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

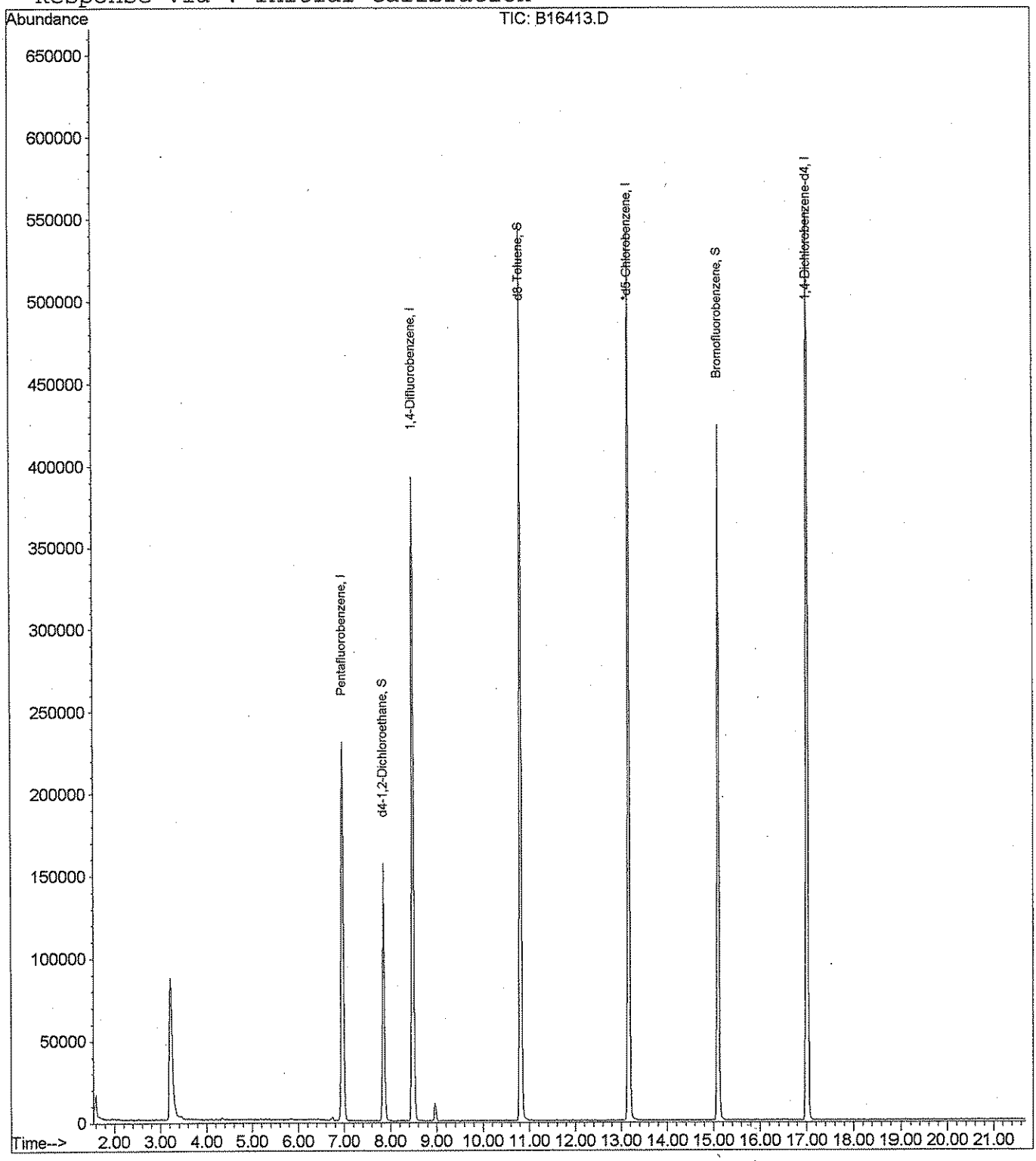
8260 full

Authorized signature Melissa G Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\062503-B\B16413.D Vial: 12
Acq On : 25 Jun 2003 12:03 pm Operator: JR
Sample : 49878-39 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 12:25 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** STMW006-0603

**SAMPLE DATA**

**Lab Sample ID:** 49878-40
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 102 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

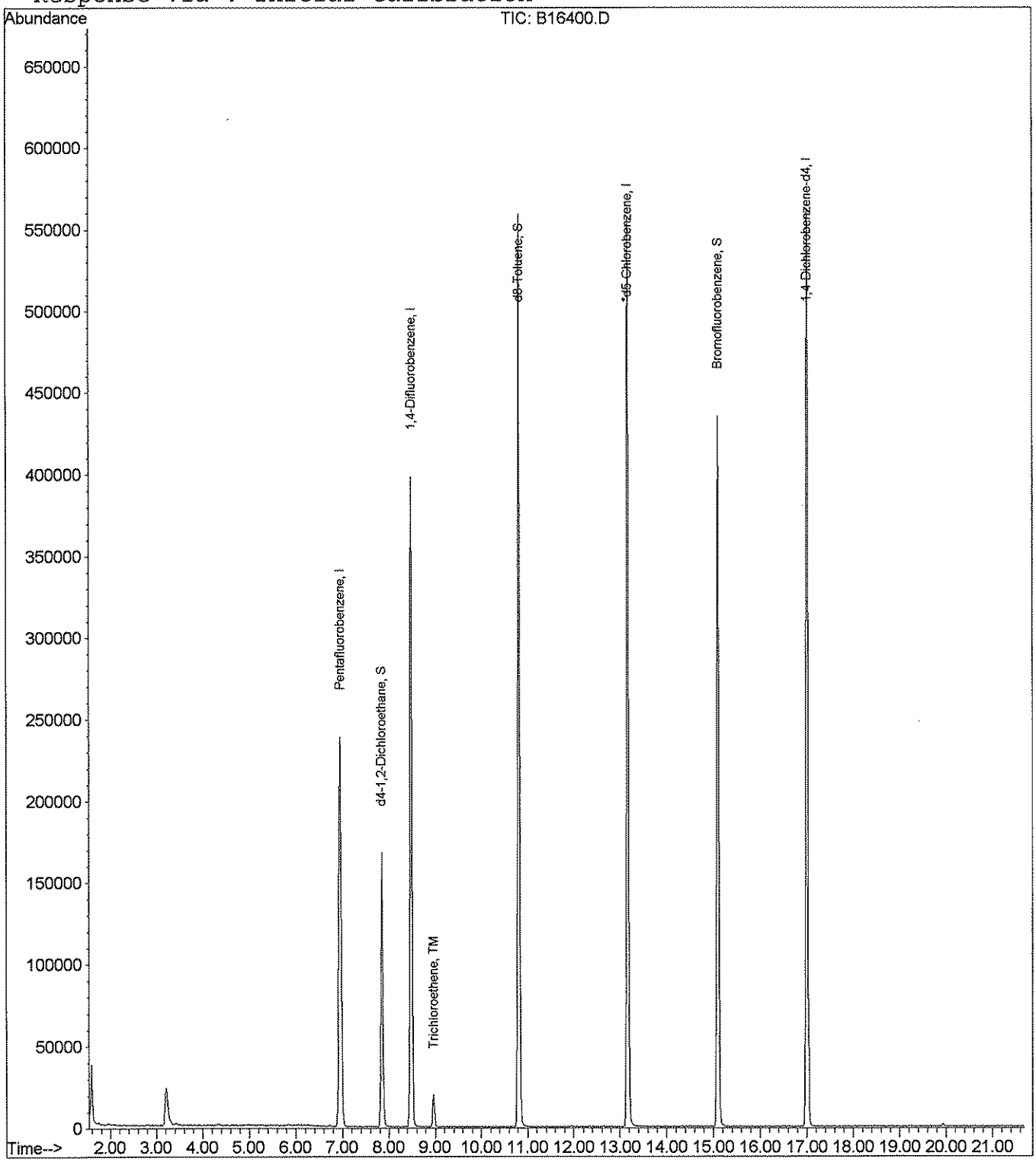
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16400.D Vial: 23
Acq On : 24 Jun 2003 7:47 pm Operator: JR
Sample : 49878-40 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 20:09 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** RB-061803-01

**SAMPLE DATA**

**Lab Sample ID:** 49878-41
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/24/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| d4-1,2-Dichloroethane | 103 % | d8-Toluene | 99 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

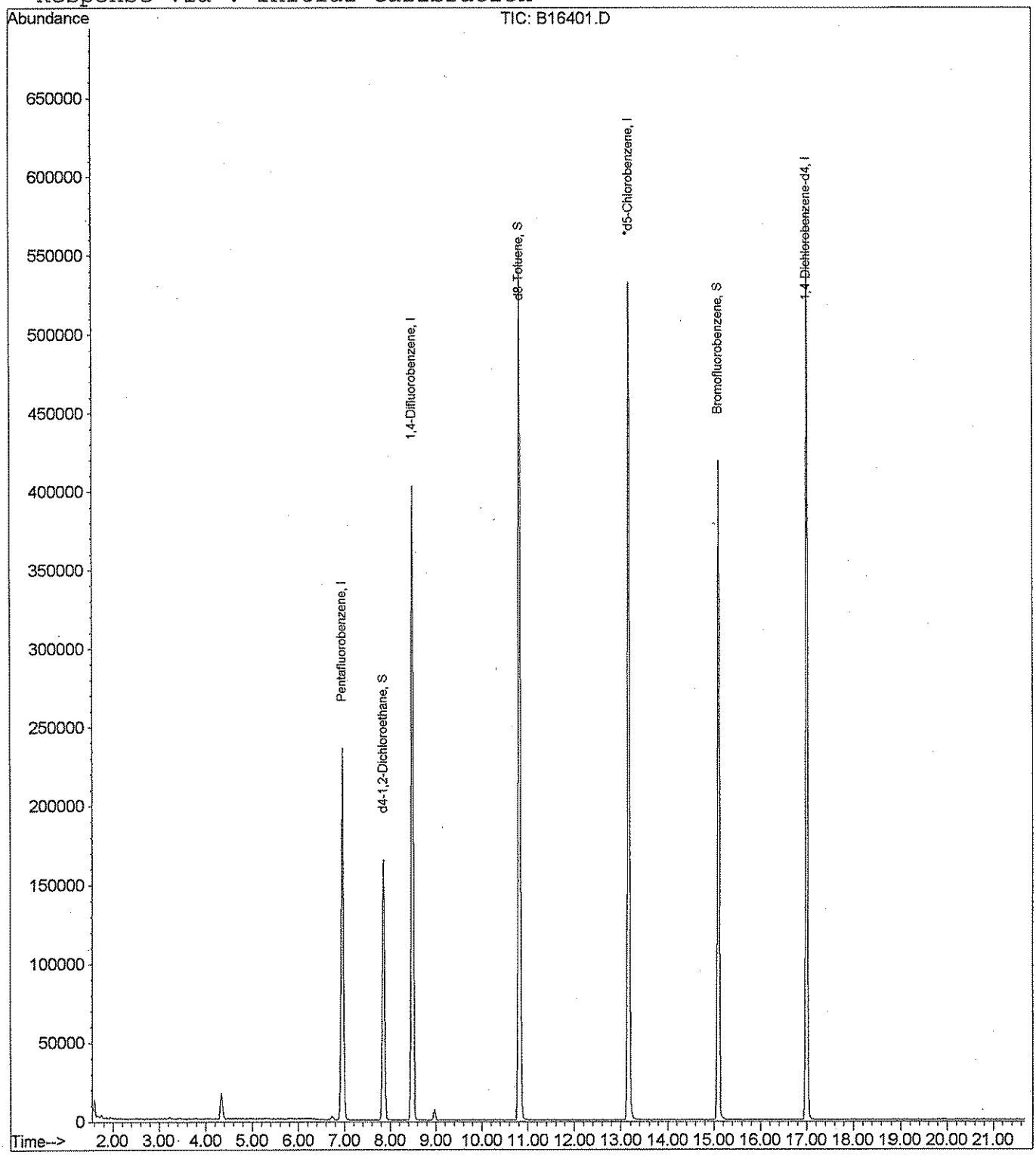
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\062403-B\B16401.D Vial: 24
Acq On : 24 Jun 2003 8:18 pm Operator: JR
Sample : 49878-41 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 20:40 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration



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# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B46304T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1157

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 1 PPB | 95 | 95 | 94 | 0 |
| 02 | 2 PPB | 95 | 95 | 95 | 0 |
| 03 | 5 PPB | 92 | 95 | 95 | 0 |
| 04 | 20 PPB | 93 | 95 | 95 | 0 |
| 05 | 50 PPB | 89 | 96 | 94 | 0 |
| 06 | 100 PPB | 95 | 97 | 95 | 0 |
| 07 | ZZZZZ | 96 | 98 | 100 | 0 |
| 08 | ZZZZZ | 96 | 100 | 100 | 0 |
| 09 | ZZZZZ | 101 | 100 | 100 | 0 |
| 10 | ZZZZZ | 100 | 99 | 99 | 0 |
| 11 | ZZZZZ | 98 | 99 | 98 | 0 |
| 12 | ZZZZZ | 102 | 98 | 100 | 0 |
| 13 | ZZZZZ | 102 | 100 | 98 | 0 |
| 14 | ZZZZZ | 98 | 99 | 98 | 0 |
| 15 | ZZZZZ | 101 | 99 | 98 | 0 |
| 16 | ZZZZZ | 103 | 99 | 98 | 0 |
| 17 | ZZZZZ | 93 | 96 | 99 | 0 |
| 18 | ZZZZZ | 106 | 100 | 99 | 0 |
| 19 | ZZZZZ | 105 | 101 | 99 | 0 |
| 20 | ZZZZZ | 107 | 101 | 100 | 0 |
| 21 | ZZZZZ | 107 | 101 | 97 | 0 |
| 22 | ZZZZZ | 109 | 97 | 97 | 0 |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16329T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0947

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 101 | 100 | 101 | 0 |
| 02 | L806203B | 100 | 100 | 100 | 0 |
| 03 | ZZZZZ | 103 | 99 | 99 | 0 |
| 04 | B806203B | 101 | 99 | 99 | 0 |
| 05 | ZZZZZ | 101 | 98 | 98 | 0 |
| 06 | 49878-1 | 99 | 98 | 99 | 0 |
| 07 | 49878-2 | 97 | 98 | 99 | 0 |
| 08 | 49878-2.MS | 100 | 100 | 101 | 0 |
| 09 | 49878-2.MSD | 100 | 100 | 100 | 0 |
| 10 | 49878-3 | 102 | 99 | 98 | 0 |
| 11 | 49878-4 | 102 | 99 | 98 | 0 |
| 12 | 49878-5 | 100 | 99 | 98 | 0 |
| 13 | 49878-6 | 101 | 99 | 98 | 0 |
| 14 | 49878-7 | 102 | 99 | 98 | 0 |
| 15 | 49878-8 | 106 | 99 | 97 | 0 |
| 16 | 49878-9 | 106 | 100 | 98 | 0 |
| 17 | 49878-10 | 107 | 100 | 97 | 0 |
| 18 | 49878-11 | 104 | 99 | 97 | 0 |
| 19 | 49878-12 | 107 | 99 | 98 | 0 |
| 20 | 49878-14 | 104 | 99 | 97 | 0 |
| 21 | 49878-15 | 105 | 98 | 97 | 0 |
| 22 | 49878-16 | 104 | 99 | 97 | 0 |
| 23 | 49878-17 | 107 | 100 | 96 | 0 |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16354T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/23/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0825

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 101 | 100 | 99 | 0 |
| 02 | L806233B | 101 | 100 | 100 | 0 |
| 03 | ZZZZZ | 96 | 99 | 99 | 0 |
| 04 | ZZZZZ | 98 | 99 | 99 | 0 |
| 05 | ZZZZZ | 101 | 101 | 100 | 0 |
| 06 | B806233B2 | 101 | 99 | 98 | 0 |
| 07 | ZZZZZ | 98 | 99 | 100 | 0 |
| 08 | ZZZZZ | 100 | 100 | 99 | 0 |
| 09 | ZZZZZ | 101 | 100 | 101 | 0 |
| 10 | 49878-2,DL | 102 | 98 | 98 | 0 |
| 11 | 49878-18 | 106 | 101 | 98 | 0 |
| 12 | 49878-19 | 104 | 101 | 97 | 0 |
| 13 | 49878-20 | 103 | 100 | 98 | 0 |
| 14 | 49878-21 | 102 | 100 | 98 | 0 |
| 15 | 49878-22 | 105 | 100 | 99 | 0 |
| 16 | 49878-22,MS | 107 | 100 | 100 | 0 |
| 17 | 49878-22,MSD | 100 | 101 | 99 | 0 |
| 18 | 49878-23 | 103 | 100 | 98 | 0 |
| 19 | 49878-24 | 102 | 99 | 98 | 0 |
| 20 | 49878-25 | 104 | 99 | 97 | 0 |
| 21 | 49878-26 | 103 | 100 | 97 | 0 |
| 22 | 49878-27 | 104 | 100 | 97 | 0 |
| 23 | 49878-28 | 106 | 101 | 96 | 0 |
| 24 | ZZZZZ | 104 | 100 | 98 | 0 |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16379T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/24/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0851

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 100 | 99 | 100 | 0 |
| 02 | L806243B | 98 | 99 | 100 | 0 |
| 03 | ZZZZZ | 100 | 99 | 98 | 0 |
| 04 | B806243B | 96 | 99 | 99 | 0 |
| 05 | ZZZZZ | 103 | 100 | 98 | 0 |
| 06 | 49878-20,DL | 102 | 99 | 98 | 0 |
| 07 | 49878-21,DL | 102 | 100 | 97 | 0 |
| 08 | 49878-29 | 106 | 99 | 96 | 0 |
| 09 | 49878-30 | 104 | 99 | 97 | 0 |
| 10 | 49878-30,MS | 104 | 101 | 98 | 0 |
| 11 | 49878-30,MSD | 101 | 100 | 99 | 0 |
| 12 | 49878-31 | 104 | 100 | 96 | 0 |
| 13 | 49878-32 | 106 | 99 | 97 | 0 |
| 14 | 49878-33 | 101 | 98 | 97 | 0 |
| 15 | 49878-34 | 104 | 99 | 97 | 0 |
| 16 | 49878-35 | 105 | 100 | 96 | 0 |
| 17 | 49878-36 | 104 | 99 | 97 | 0 |
| 18 | 49878-37 | 104 | 99 | 96 | 0 |
| 19 | 49878-38 | 106 | 99 | 97 | 0 |
| 20 | ZZZZZ | 103 | 100 | 96 | 0 |
| 21 | 49878-40 | 102 | 99 | 97 | 0 |
| 22 | 49878-41 | 103 | 99 | 97 | 0 |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16403T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/25/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0856

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 103 | 99 | 99 | 0 |
| 02 | L806253B | 97 | 99 | 100 | 0 |
| 03 | ZZZZZ | 97 | 98 | 97 | 0 |
| 04 | B806253B | 96 | 98 | 98 | 0 |
| 05 | 49878-33,DL | 97 | 98 | 98 | 0 |
| 06 | 49878-34,DL | 100 | 99 | 98 | 0 |
| 07 | 49878-35,DL | 100 | 98 | 98 | 0 |
| 08 | 49878-37,DL | 96 | 98 | 99 | 0 |
| 09 | 49878-38,DL | 98 | 98 | 99 | 0 |
| 10 | 49878-39 | 100 | 98 | 98 | 0 |
| 11 | ZZZZZ | 100 | 99 | 98 | 0 |
| 12 | ZZZZZ | 99 | 97 | 99 | 0 |
| 13 | ZZZZZ | 99 | 99 | 98 | 0 |
| 14 | ZZZZZ | 98 | 99 | 98 | 0 |
| 15 | ZZZZZ | 105 | 98 | 95 | 0 |
| 16 | ZZZZZ | 104 | 98 | 97 | 0 |
| 17 | ZZZZZ | 99 | 98 | 98 | 0 |
| 18 | ZZZZZ | 103 | 99 | 97 | 0 |
| 19 | ZZZZZ | 102 | 98 | 96 | 0 |
| 20 | ZZZZZ | 103 | 98 | 97 | 0 |
| 21 | ZZZZZ | 105 | 100 | 97 | 0 |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC2 = Toluene-d8 | 70-130% |
| SMC3 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806203B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 22.6 | 113 | | 70-130 |
| Chloromethane | 20 | 21.5 | 108 | | 70-130 |
| Vinyl Chloride | 20 | 21.6 | 108 | | 70-130 |
| Bromomethane | 20 | 21.2 | 106 | | 70-130 |
| Chloroethane | 20 | 20.6 | 103 | | 70-130 |
| t-Butyl alcohol | 100 | 102.7 | 103 | | 70-130 |
| Trichlorofluoromethane | 20 | 21.1 | 105 | | 70-130 |
| Diethyl ether | 20 | 20.0 | 100 | | 70-130 |
| Acetone | 20 | 22.0 | 110 | | 70-130 |
| 1,1-Dichloroethene | 20 | 20.3 | 101 | | 70-130 |
| Di-isopropyl ether | 20 | 20.7 | 104 | | 70-130 |
| Methylene Chloride | 20 | 17.6 | 88 | | 70-130 |
| Carbon Disulfide | 20 | 20.8 | 104 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 41.3 | 103 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 19.9 | 99 | | 70-130 |
| 1,1-Dichloroethane | 20 | 20.4 | 102 | | 70-130 |
| Methyl ethyl ketone | 20 | 24.7 | 123 | | 70-130 |
| Ethyl t-butyl ether | 20 | 20.1 | 100 | | 70-130 |
| 2,2-Dichloropropane | 20 | 24.4 | 122 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 23.3 | 117 | | 70-130 |
| t-Amyl methyl ether | 20 | 21.0 | 105 | | 70-130 |
| Chloroform | 20 | 21.1 | 106 | | 70-130 |
| Bromochloromethane | 20 | 20.9 | 104 | | 70-130 |
| Tetrahydrofuran | 20 | 23.5 | 117 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 22.0 | 110 | | 70-130 |
| 1,1-Dichloropropene | 20 | 21.7 | 109 | | 70-130 |
| Carbon Tetrachloride | 20 | 22.7 | 114 | | 70-130 |
| 1,2-Dichloroethane | 20 | 21.3 | 106 | | 70-130 |
| Benzene | 20 | 20.5 | 102 | | 70-130 |
| Trichloroethene | 20 | 23.0 | 115 | | 70-130 |
| 1,2-Dichloropropane | 20 | 21.8 | 109 | | 70-130 |
| Bromodichloromethane | 20 | 22.6 | 113 | | 70-130 |
| Dibromomethane | 20 | 21.1 | 106 | | 70-130 |
| 2-Hexanone | 20 | 20.8 | 104 | | 70-130 |
| Methyl isobutyl ketone | 20 | 21.1 | 106 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 23.6 | 118 | | 70-130 |
| Toluene | 20 | 20.3 | 102 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 23.7 | 118 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 21.6 | 108 | | 70-130 |
| 1,3-Dichloropropane | 20 | 21.5 | 108 | | 70-130 |
| Tetrachloroethene | 20 | 20.8 | 104 | | 70-130 |
| Dibromochloromethane | 20 | 21.9 | 110 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806203B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 21.8 | 109 | | 70-130 |
| Chlorobenzene | 20 | 20.6 | 103 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 22.8 | 114 | | 70-130 |
| Ethylbenzene | 20 | 20.6 | 103 | | 70-130 |
| M-,P-Xylene | 40 | 41.2 | 103 | | 70-130 |
| O-Xylene | 20 | 20.9 | 105 | | 70-130 |
| Styrene | 20 | 21.3 | 106 | | 70-130 |
| Bromoform | 20 | 23.1 | 116 | | 70-130 |
| Isopropylbenzene | 20 | 20.0 | 100 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 21.2 | 106 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 21.3 | 106 | | 70-130 |
| N-Propylbenzene | 20 | 20.8 | 104 | | 70-130 |
| Bromobenzene | 20 | 20.8 | 104 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 20.8 | 104 | | 70-130 |
| 2-Chlorotoluene | 20 | 20.0 | 100 | | 70-130 |
| 4-Chlorotoluene | 20 | 21.1 | 105 | | 70-130 |
| Tert-Butylbenzene | 20 | 21.0 | 105 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 21.2 | 106 | | 70-130 |
| Sec-Butylbenzene | 20 | 19.7 | 99 | | 70-130 |
| P-Isopropyltoluene | 20 | 20.0 | 100 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 20.4 | 102 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 20.2 | 101 | | 70-130 |
| N-Butylbenzene | 20 | 20.8 | 104 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 20.7 | 104 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 22.7 | 113 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 20.9 | 104 | | 70-130 |
| Hexachlorobutadiene | 20 | 22.2 | 111 | | 70-130 |
| Naphthalene | 20 | 20.6 | 103 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 20.3 | 102 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 19.6 | 98 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 71 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-2

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 22.9 | 115 | | 22.7 | 114 | | 1 | | 15 | 70-130 |
| Chloromethane | 20 | U | 22.6 | 113 | | 22.1 | 111 | | 2 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 22.6 | 113 | | 22.8 | 114 | | 1 | | 15 | 70-130 |
| Bromomethane | 20 | U | 21.4 | 107 | | 22.9 | 114 | | 6 | | 15 | 70-130 |
| Chloroethane | 20 | U | 21.4 | 107 | | 21.4 | 107 | | 0 | | 15 | 70-130 |
| t-Butyl alcohol | 100 | U | 87.3 | 87 | | 88.3 | 88 | | 1 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 22.0 | 110 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 18.6 | 93 | | 19.2 | 96 | | 3 | | 15 | 70-130 |
| Acetone | 20 | U | 20.4 | 102 | | 21.2 | 106 | | 4 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 20.4 | 102 | | 20.8 | 104 | | 2 | | 15 | 70-130 |
| Di-isopropyl ether | 20 | U | 19.7 | 98 | | 20.1 | 101 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 15.9 | 80 | | 16.3 | 81 | | 2 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 20.7 | 103 | | 21.2 | 106 | | 3 | | 15 | 70-130 |
| Methyl-tert-butyl ether | 40 | U | 37.8 | 95 | | 39.1 | 98 | | 3 | | 15 | 70-130 |
| Trans-1,2-Dichloroethene | 20 | U | 19.9 | 99 | | 20.4 | 102 | | 3 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 20.0 | 100 | | 20.5 | 102 | | 2 | | 15 | 70-130 |
| Methyl ethyl ketone | 20 | U | 23.4 | 117 | | 23.1 | 116 | | 1 | | 15 | 70-130 |
| Ethyl t-butyl ether | 20 | U | 23.7 | 118 | | 20.1 | 101 | | 16 | * | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 22.0 | 110 | | 22.1 | 111 | | 1 | | 15 | 70-130 |
| Cis-1,2-Dichloroethene | 20 | **13** | 36.0 | 113 | | 36.2 | 115 | | 1 | | 15 | 70-130 |
| t-Amyl methyl ether | 20 | U | 19.4 | 97 | | 19.7 | 98 | | 1 | | 15 | 70-130 |
| Chloroform | 20 | U | 20.2 | 101 | | 20.5 | 103 | | 1 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 19.9 | 100 | | 19.8 | 99 | | 1 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 20.7 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 21.2 | 106 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 22.1 | 111 | | 22.4 | 112 | | 1 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 19.9 | 100 | | 20.3 | 101 | | 2 | | 15 | 70-130 |
| Benzene | 20 | U | 20.0 | 100 | | 20.1 | 101 | | 0 | | 15 | 70-130 |
| Trichloroethene | 20 | **215** | 235.4 | 105 | | 236.5 | 110 | | 0 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 20.9 | 104 | | 21.2 | 106 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 21.2 | 106 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 19.3 | 97 | | 19.7 | 99 | | 2 | | 15 | 70-130 |
| 2-Hexanone | 20 | U | 17.8 | 89 | | 17.9 | 90 | | 1 | | 15 | 70-130 |
| Methyl isobutyl ketone | 20 | U | 18.1 | 91 | | 18.2 | 91 | | 1 | | 15 | 70-130 |
| Cis-1,3-Dichloropropene | 20 | U | 22.0 | 110 | | 22.3 | 111 | | 1 | | 15 | 70-130 |
| Toluene | 20 | U | 19.6 | 98 | | 19.9 | 99 | | 1 | | 15 | 70-130 |
| Trans-1,3-Dichloropropene | 20 | U | 21.6 | 108 | | 22.0 | 110 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 19.9 | 99 | | 20.2 | 101 | | 2 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 19.9 | 100 | | 20.2 | 101 | | 1 | | 15 | 70-130 |
| Tetrachloroethene | 20 | **1** | 21.2 | 100 | | 21.4 | 101 | | 1 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 20.1 | 101 | | 20.6 | 103 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-2

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 19.9 | 99 | | 20.3 | 101 | | 2 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 19.5 | 97 | | 19.5 | 97 | | 0 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.5 | 107 | | 21.7 | 109 | | 1 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 19.6 | 98 | | 19.9 | 100 | | 1 | | 15 | 70-130 |
| M-,P-Xylene | 40 | U | 39.4 | 98 | | 39.3 | 98 | | 0 | | 15 | 70-130 |
| O-Xylene | 20 | U | 20.0 | 100 | | 20.0 | 100 | | 0 | | 15 | 70-130 |
| Styrene | 20 | U | 20.0 | 100 | | 20.3 | 102 | | 2 | | 15 | 70-130 |
| Bromoform | 20 | U | 20.5 | 103 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 19.2 | 96 | | 19.4 | 97 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 19.0 | 95 | | 19.0 | 95 | | 0 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 19.3 | 97 | | 19.2 | 96 | | 1 | | 15 | 70-130 |
| N-Propylbenzene | 20 | U | 19.8 | 99 | | 19.9 | 99 | | 0 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 19.4 | 97 | | 19.4 | 97 | | 0 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.0 | 100 | | 19.9 | 100 | | 1 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 19.1 | 96 | | 19.1 | 96 | | 0 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 19.9 | 100 | | 20.0 | 100 | | 0 | | 15 | 70-130 |
| Tert-Butylbenzene | 20 | U | 20.1 | 100 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.0 | 100 | | 20.1 | 101 | | 1 | | 15 | 70-130 |
| Sec-Butylbenzene | 20 | U | 18.9 | 95 | | 18.9 | 94 | | 0 | | 15 | 70-130 |
| P-Isopropyltoluene | 20 | U | 19.1 | 96 | | 19.0 | 95 | | 1 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 19.3 | 97 | | 19.2 | 96 | | 0 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 18.9 | 95 | | 19.3 | 96 | | 2 | | 15 | 70-130 |
| N-Butylbenzene | 20 | U | 19.6 | 98 | | 19.9 | 99 | | 1 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 19.3 | 96 | | 19.4 | 97 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 19.8 | 99 | | 20.0 | 100 | | 1 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 19.2 | 96 | | 19.7 | 99 | | 3 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 20.6 | 103 | | 21.4 | 107 | | 4 | | 15 | 70-130 |
| Naphthalene | 20 | U | 17.9 | 89 | | 18.6 | 93 | | 4 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 18.5 | 93 | | 19.0 | 95 | | 3 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 18.2 | 91 | | 18.5 | 91 | | 1 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 71 outside limits

Spike Recovery: 0 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806233B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 23.9 | 120 | | 70-130 |
| Chloromethane | 20 | 24.0 | 120 | | 70-130 |
| Vinyl Chloride | 20 | 23.4 | 117 | | 70-130 |
| Bromomethane | 20 | 20.6 | 103 | | 70-130 |
| Chloroethane | 20 | 21.9 | 110 | | 70-130 |
| t-Butyl alcohol | 100 | 90.6 | 91 | | 70-130 |
| Trichlorofluoromethane | 20 | 23.4 | 117 | | 70-130 |
| Diethyl ether | 20 | 21.3 | 106 | | 70-130 |
| Acetone | 20 | 20.6 | 103 | | 70-130 |
| 1,1-Dichloroethene | 20 | 19.6 | 98 | | 70-130 |
| Di-isopropyl ether | 20 | 19.2 | 96 | | 70-130 |
| Methylene Chloride | 20 | 18.2 | 91 | | 70-130 |
| Carbon Disulfide | 20 | 19.9 | 100 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 40.5 | 101 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 19.6 | 98 | | 70-130 |
| 1,1-Dichloroethane | 20 | 19.5 | 97 | | 70-130 |
| Methyl ethyl ketone | 20 | 25.2 | 126 | | 70-130 |
| Ethyl t-butyl ether | 20 | 27.2 | 136 | * | 70-130 |
| 2,2-Dichloropropane | 20 | 25.5 | 128 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 23.3 | 116 | | 70-130 |
| t-Amyl methyl ether | 20 | 20.3 | 102 | | 70-130 |
| Chloroform | 20 | 21.2 | 106 | | 70-130 |
| Bromochloromethane | 20 | 20.9 | 104 | | 70-130 |
| Tetrahydrofuran | 20 | 21.8 | 109 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 22.7 | 113 | | 70-130 |
| 1,1-Dichloropropene | 20 | 20.7 | 104 | | 70-130 |
| Carbon Tetrachloride | 20 | 23.4 | 117 | | 70-130 |
| 1,2-Dichloroethane | 20 | 21.1 | 106 | | 70-130 |
| Benzene | 20 | 19.3 | 97 | | 70-130 |
| Trichloroethene | 20 | 22.3 | 111 | | 70-130 |
| 1,2-Dichloropropane | 20 | 20.7 | 103 | | 70-130 |
| Bromodichloromethane | 20 | 23.0 | 115 | | 70-130 |
| Dibromomethane | 20 | 21.2 | 106 | | 70-130 |
| 2-Hexanone | 20 | 18.8 | 94 | | 70-130 |
| Methyl isobutyl ketone | 20 | 19.2 | 96 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 23.1 | 116 | | 70-130 |
| Toluene | 20 | 19.6 | 98 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 23.3 | 116 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 20.7 | 104 | | 70-130 |
| 1,3-Dichloropropane | 20 | 20.4 | 102 | | 70-130 |
| Tetrachloroethene | 20 | 20.4 | 102 | | 70-130 |
| Dibromochloromethane | 20 | 22.1 | 110 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806233B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 21.3 | 107 | | 70-130 |
| Chlorobenzene | 20 | 19.6 | 98 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 22.4 | 112 | | 70-130 |
| Ethylbenzene | 20 | 19.7 | 98 | | 70-130 |
| M-,P-Xylene | 40 | 39.8 | 99 | | 70-130 |
| O-Xylene | 20 | 20.2 | 101 | | 70-130 |
| Styrene | 20 | 20.4 | 102 | | 70-130 |
| Bromoform | 20 | 22.7 | 113 | | 70-130 |
| Isopropylbenzene | 20 | 19.3 | 96 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 19.4 | 97 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 19.5 | 98 | | 70-130 |
| N-Propylbenzene | 20 | 19.7 | 99 | | 70-130 |
| Bromobenzene | 20 | 19.7 | 99 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 20.1 | 101 | | 70-130 |
| 2-Chlorotoluene | 20 | 19.5 | 98 | | 70-130 |
| 4-Chlorotoluene | 20 | 19.5 | 98 | | 70-130 |
| Tert-Butylbenzene | 20 | 19.9 | 99 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 20.3 | 101 | | 70-130 |
| Sec-Butylbenzene | 20 | 18.9 | 94 | | 70-130 |
| P-Isopropyltoluene | 20 | 19.2 | 96 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 19.6 | 98 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 19.3 | 97 | | 70-130 |
| N-Butylbenzene | 20 | 19.6 | 98 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 19.8 | 99 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 21.5 | 108 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 20.4 | 102 | | 70-130 |
| Hexachlorobutadiene | 20 | 22.1 | 110 | | 70-130 |
| Naphthalene | 20 | 19.4 | 97 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 19.8 | 99 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 19.2 | 96 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 71 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-22

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 23.3 | 117 | | 22.8 | 114 | | 2 | | 15 | 70-130 |
| Chloromethane | 20 | U | 21.2 | 106 | | 20.8 | 104 | | 2 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 23.3 | 116 | | 23.3 | 116 | | 0 | | 15 | 70-130 |
| Bromomethane | 20 | U | 19.6 | 98 | | 22.1 | 110 | | 12 | | 15 | 70-130 |
| Chloroethane | 20 | U | 22.4 | 112 | | 21.4 | 107 | | 5 | | 15 | 70-130 |
| t-Butyl alcohol | 100 | U | 93.4 | 93 | | 91.5 | 91 | | 2 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 23.1 | 115 | | 22.7 | 114 | | 1 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 20.4 | 102 | | 19.9 | 99 | | 3 | | 15 | 70-130 |
| Acetone | 20 | U | 23.6 | 118 | | 22.6 | 113 | | 4 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 21.3 | 106 | | 20.8 | 104 | | 2 | | 15 | 70-130 |
| Di-isopropyl ether | 20 | U | 19.6 | 98 | | 19.4 | 97 | | 1 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 16.5 | 82 | | 15.9 | 80 | | 3 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 21.5 | 108 | | 20.7 | 103 | | 4 | | 15 | 70-130 |
| Methyl-tert-butyl ether | 40 | U | 41.0 | 103 | | 39.2 | 98 | | 4 | | 15 | 70-130 |
| Trans-1,2-Dichloroethene | 20 | U | 21.4 | 107 | | 19.9 | 99 | | 7 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 20.6 | 103 | | 19.7 | 99 | | 5 | | 15 | 70-130 |
| Methyl ethyl ketone | 20 | U | 24.0 | 120 | | 24.1 | 121 | | 0 | | 15 | 70-130 |
| Ethyl t-butyl ether | 20 | U | 26.1 | 131 | * | 26.2 | 131 | * | 0 | | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 20.4 | 102 | | 19.6 | 98 | | 4 | | 15 | 70-130 |
| Cis-1,2-Dichloroethene | 20 | U | 24.1 | 121 | | 23.1 | 115 | | 4 | | 15 | 70-130 |
| t-Amyl methyl ether | 20 | U | 19.5 | 98 | | 19.5 | 97 | | 0 | | 15 | 70-130 |
| Chloroform | 20 | U | 21.9 | 109 | | 21.1 | 105 | | 4 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 21.1 | 106 | | 20.6 | 103 | | 3 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 21.4 | 107 | | 20.6 | 103 | | 4 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 22.7 | 114 | | 22.2 | 111 | | 2 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 21.5 | 107 | | 21.2 | 106 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 23.6 | 118 | | 23.1 | 115 | | 2 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 21.5 | 107 | | 20.6 | 103 | | 4 | | 15 | 70-130 |
| Benzene | 20 | U | 19.8 | 99 | | 19.6 | 98 | | 1 | | 15 | 70-130 |
| Trichloroethene | 20 | U | 22.0 | 110 | | 22.1 | 111 | | 0 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 20.4 | 102 | | 20.5 | 102 | | 0 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 22.2 | 111 | | 21.8 | 109 | | 2 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 20.7 | 103 | | 20.4 | 102 | | 1 | | 15 | 70-130 |
| 2-Hexanone | 20 | U | 17.9 | 89 | | 18.0 | 90 | | 1 | | 15 | 70-130 |
| Methyl isobutyl ketone | 20 | U | 18.2 | 91 | | 18.6 | 93 | | 2 | | 15 | 70-130 |
| Cis-1,3-Dichloropropene | 20 | U | 21.5 | 108 | | 21.5 | 108 | | 0 | | 15 | 70-130 |
| Toluene | 20 | U | 19.5 | 98 | | 19.7 | 98 | | 1 | | 15 | 70-130 |
| Trans-1,3-Dichloropropene | 20 | U | 21.2 | 106 | | 21.2 | 106 | | 0 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 20.2 | 101 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 19.9 | 100 | | 19.9 | 100 | | 0 | | 15 | 70-130 |
| Tetrachloroethene | 20 | U | 19.8 | 99 | | 20.2 | 101 | | 2 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 20.5 | 102 | | 20.7 | 104 | | 1 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-22

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 20.5 | 102 | | 20.4 | 102 | | 0 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 19.1 | 95 | | 19.4 | 97 | | 2 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.2 | 106 | | 21.5 | 108 | | 2 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 19.4 | 97 | | 19.5 | 98 | | 1 | | 15 | 70-130 |
| M-,P-Xylene | 40 | U | 38.4 | 96 | | 39.1 | 98 | | 2 | | 15 | 70-130 |
| O-Xylene | 20 | U | 19.4 | 97 | | 19.8 | 99 | | 2 | | 15 | 70-130 |
| Styrene | 20 | U | 19.5 | 97 | | 19.9 | 100 | | 2 | | 15 | 70-130 |
| Bromoform | 20 | U | 20.8 | 104 | | 21.2 | 106 | | 2 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 18.7 | 93 | | 19.0 | 95 | | 2 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 18.5 | 93 | | 19.1 | 95 | | 3 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 18.7 | 94 | | 18.9 | 95 | | 1 | | 15 | 70-130 |
| N-Propylbenzene | 20 | U | 18.9 | 94 | | 19.5 | 98 | | 4 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 18.9 | 94 | | 19.2 | 96 | | 2 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 19.3 | 96 | | 19.6 | 98 | | 2 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 18.3 | 91 | | 18.7 | 94 | | 2 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 19.1 | 95 | | 19.6 | 98 | | 3 | | 15 | 70-130 |
| Tert-Butylbenzene | 20 | U | 19.3 | 97 | | 19.8 | 99 | | 2 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 19.4 | 97 | | 19.8 | 99 | | 2 | | 15 | 70-130 |
| Sec-Butylbenzene | 20 | U | 18.0 | 90 | | 18.4 | 92 | | 3 | | 15 | 70-130 |
| P-Isopropyltoluene | 20 | U | 18.0 | 90 | | 18.8 | 94 | | 4 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 18.3 | 92 | | 18.9 | 94 | | 3 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 18.7 | 93 | | 18.8 | 94 | | 1 | | 15 | 70-130 |
| N-Butylbenzene | 20 | U | 19.1 | 95 | | 19.2 | 96 | | 1 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 19.1 | 95 | | 19.0 | 95 | | 0 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 20.1 | 101 | | 20.3 | 101 | | 1 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 19.0 | 95 | | 19.0 | 95 | | 0 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 20.5 | 103 | | 20.7 | 103 | | 1 | | 15 | 70-130 |
| Naphthalene | 20 | U | 18.0 | 90 | | 18.6 | 93 | | 4 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 18.3 | 91 | | 19.1 | 95 | | 4 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 18.1 | 91 | | 18.2 | 91 | | 1 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery: 2 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806243B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 22.6 | 113 | | 70-130 |
| Chloromethane | 20 | 21.8 | 109 | | 70-130 |
| Vinyl Chloride | 20 | 22.5 | 113 | | 70-130 |
| Bromomethane | 20 | 19.5 | 97 | | 70-130 |
| Chloroethane | 20 | 21.5 | 108 | | 70-130 |
| t-Butyl alcohol | 100 | 86.3 | 86 | | 70-130 |
| Trichlorofluoromethane | 20 | 22.1 | 111 | | 70-130 |
| Diethyl ether | 20 | 18.8 | 94 | | 70-130 |
| Acetone | 20 | 20.2 | 101 | | 70-130 |
| 1,1-Dichloroethene | 20 | 19.5 | 97 | | 70-130 |
| Di-isopropyl ether | 20 | 19.6 | 98 | | 70-130 |
| Methylene Chloride | 20 | 16.6 | 83 | | 70-130 |
| Carbon Disulfide | 20 | 19.5 | 97 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 38.5 | 96 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 18.6 | 93 | | 70-130 |
| 1,1-Dichloroethane | 20 | 19.3 | 96 | | 70-130 |
| Methyl ethyl ketone | 20 | 22.3 | 112 | | 70-130 |
| Ethyl t-butyl ether | 20 | 19.6 | 98 | | 70-130 |
| 2,2-Dichloropropane | 20 | 22.9 | 115 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 21.3 | 106 | | 70-130 |
| t-Amyl methyl ether | 20 | 19.2 | 96 | | 70-130 |
| Chloroform | 20 | 19.3 | 97 | | 70-130 |
| Bromochloromethane | 20 | 20.0 | 100 | | 70-130 |
| Tetrahydrofuran | 20 | 19.4 | 97 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 20.6 | 103 | | 70-130 |
| 1,1-Dichloropropene | 20 | 20.0 | 100 | | 70-130 |
| Carbon Tetrachloride | 20 | 21.5 | 107 | | 70-130 |
| 1,2-Dichloroethane | 20 | 19.8 | 99 | | 70-130 |
| Benzene | 20 | 18.9 | 95 | | 70-130 |
| Trichloroethene | 20 | 21.1 | 106 | | 70-130 |
| 1,2-Dichloropropane | 20 | 20.0 | 100 | | 70-130 |
| Bromodichloromethane | 20 | 21.0 | 105 | | 70-130 |
| Dibromomethane | 20 | 19.3 | 96 | | 70-130 |
| 2-Hexanone | 20 | 17.5 | 87 | | 70-130 |
| Methyl isobutyl ketone | 20 | 18.1 | 90 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 21.9 | 109 | | 70-130 |
| Toluene | 20 | 18.7 | 93 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 22.1 | 110 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 20.1 | 101 | | 70-130 |
| 1,3-Dichloropropane | 20 | 19.8 | 99 | | 70-130 |
| Tetrachloroethene | 20 | 20.0 | 100 | | 70-130 |
| Dibromochloromethane | 20 | 20.9 | 105 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806243B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 20.3 | 102 | | 70-130 |
| Chlorobenzene | 20 | 18.7 | 94 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 21.5 | 108 | | 70-130 |
| Ethylbenzene | 20 | 18.7 | 93 | | 70-130 |
| M-,P-Xylene | 40 | 37.6 | 94 | | 70-130 |
| O-Xylene | 20 | 19.1 | 96 | | 70-130 |
| Styrene | 20 | 19.6 | 98 | | 70-130 |
| Bromoform | 20 | 21.4 | 107 | | 70-130 |
| Isopropylbenzene | 20 | 18.2 | 91 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 18.6 | 93 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 18.9 | 95 | | 70-130 |
| N-Propylbenzene | 20 | 18.8 | 94 | | 70-130 |
| Bromobenzene | 20 | 19.2 | 96 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 19.0 | 95 | | 70-130 |
| 2-Chlorotoluene | 20 | 18.1 | 91 | | 70-130 |
| 4-Chlorotoluene | 20 | 19.1 | 96 | | 70-130 |
| Tert-Butylbenzene | 20 | 19.3 | 96 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 19.4 | 97 | | 70-130 |
| Sec-Butylbenzene | 20 | 18.0 | 90 | | 70-130 |
| P-Isopropyltoluene | 20 | 18.4 | 92 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 19.0 | 95 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 18.6 | 93 | | 70-130 |
| N-Butylbenzene | 20 | 18.7 | 94 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 19.0 | 95 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 19.8 | 99 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 19.3 | 96 | | 70-130 |
| Hexachlorobutadiene | 20 | 21.0 | 105 | | 70-130 |
| Naphthalene | 20 | 18.4 | 92 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 18.7 | 94 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 18.4 | 92 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 71 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-30

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 21.5 | 107 | | 21.6 | 108 | | 0 | | 15 | 70-130 |
| Chloromethane | 20 | U | 21.5 | 108 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 22.5 | 113 | | 22.4 | 112 | | 1 | | 15 | 70-130 |
| Bromomethane | 20 | U | 16.8 | 84 | | 18.9 | 95 | | 12 | | 15 | 70-130 |
| Chloroethane | 20 | U | 20.5 | 102 | | 20.7 | 103 | | 1 | | 15 | 70-130 |
| t-Butyl alcohol | 100 | U | 95.8 | 96 | | 97.0 | 97 | | 1 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 21.7 | 108 | | 22.0 | 110 | | 1 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 20.1 | 101 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| Acetone | 20 | U | 22.0 | 110 | | 22.2 | 111 | | 1 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 21.0 | 105 | | 21.0 | 105 | | 0 | | 15 | 70-130 |
| Di-isopropyl ether | 20 | U | 19.3 | 96 | | 19.6 | 98 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 16.0 | 80 | | 16.3 | 82 | | 2 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 20.8 | 104 | | 21.1 | 106 | | 2 | | 15 | 70-130 |
| Methyl-tert-butyl ether | 40 | U | 40.9 | 102 | | 41.0 | 103 | | 0 | | 15 | 70-130 |
| Trans-1,2-Dichloroethene | 20 | U | 20.7 | 104 | | 20.7 | 103 | | 0 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 20.7 | 103 | | 20.9 | 104 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 20 | U | 21.1 | 106 | | 18.6 | 93 | | 13 | | 15 | 70-130 |
| Ethyl t-butyl ether | 20 | U | 18.7 | 94 | | 19.0 | 95 | | 2 | | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 21.5 | 108 | | 21.5 | 107 | | 0 | | 15 | 70-130 |
| Cis-1,2-Dichloroethene | 20 | U | 22.8 | 114 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| t-Amyl methyl ether | 20 | U | 19.0 | 95 | | 19.1 | 96 | | 1 | | 15 | 70-130 |
| Chloroform | 20 | U | 21.2 | 106 | | 21.1 | 106 | | 0 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 20.3 | 101 | | 20.4 | 102 | | 0 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 21.1 | 106 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 21.8 | 109 | | 22.0 | 110 | | 1 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 20.8 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 22.7 | 113 | | 22.8 | 114 | | 1 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 21.0 | 105 | | 20.9 | 104 | | 0 | | 15 | 70-130 |
| Benzene | 20 | U | 19.1 | 96 | | 19.3 | 96 | | 1 | | 15 | 70-130 |
| Trichloroethene | 20 | 1 | 22.7 | 109 | | 23.0 | 110 | | 1 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 20.6 | 103 | | 20.9 | 104 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 21.8 | 109 | | 22.0 | 110 | | 1 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 20.3 | 101 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| 2-Hexanone | 20 | U | 18.4 | 92 | | 18.2 | 91 | | 1 | | 15 | 70-130 |
| Methyl isobutyl ketone | 20 | U | 18.7 | 94 | | 18.6 | 93 | | 1 | | 15 | 70-130 |
| Cis-1,3-Dichloropropene | 20 | U | 21.7 | 109 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Toluene | 20 | U | 19.5 | 97 | | 19.5 | 97 | | 0 | | 15 | 70-130 |
| Trans-1,3-Dichloropropene | 20 | U | 21.5 | 108 | | 21.6 | 108 | | 0 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 20.3 | 101 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 19.8 | 99 | | 20.0 | 100 | | 1 | | 15 | 70-130 |
| Tetrachloroethene | 20 | U | 20.7 | 103 | | 20.7 | 104 | | 0 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 20.8 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49878-30

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 20.3 | 102 | | 20.5 | 103 | | 1 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 18.8 | 94 | | 19.3 | 96 | | 2 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.0 | 105 | | 21.4 | 107 | | 2 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 19.0 | 95 | | 19.3 | 96 | | 2 | | 15 | 70-130 |
| M-,P-Xylene | 40 | U | 37.7 | 94 | | 38.5 | 96 | | 2 | | 15 | 70-130 |
| O-Xylene | 20 | U | 19.0 | 95 | | 19.4 | 97 | | 2 | | 15 | 70-130 |
| Styrene | 20 | U | 19.3 | 96 | | 19.8 | 99 | | 3 | | 15 | 70-130 |
| Bromoform | 20 | U | 20.6 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 18.4 | 92 | | 18.8 | 94 | | 2 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 18.5 | 92 | | 18.8 | 94 | | 1 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 18.7 | 94 | | 19.1 | 96 | | 2 | | 15 | 70-130 |
| N-Propylbenzene | 20 | U | 18.9 | 94 | | 19.2 | 96 | | 2 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 18.9 | 95 | | 19.3 | 96 | | 2 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 19.2 | 96 | | 19.4 | 97 | | 1 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 18.7 | 94 | | 18.5 | 92 | | 1 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 18.5 | 93 | | 19.3 | 96 | | 4 | | 15 | 70-130 |
| Tert-Butylbenzene | 20 | U | 19.0 | 95 | | 19.6 | 98 | | 3 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 19.1 | 96 | | 19.5 | 98 | | 2 | | 15 | 70-130 |
| Sec-Butylbenzene | 20 | U | 18.0 | 90 | | 18.4 | 92 | | 2 | | 15 | 70-130 |
| P-Isopropyltoluene | 20 | U | 18.1 | 91 | | 18.6 | 93 | | 2 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 18.6 | 93 | | 19.0 | 95 | | 2 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 18.2 | 91 | | 18.6 | 93 | | 2 | | 15 | 70-130 |
| N-Butylbenzene | 20 | U | 18.4 | 92 | | 18.6 | 93 | | 1 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 18.7 | 94 | | 18.8 | 94 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 19.2 | 96 | | 20.0 | 100 | | 4 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 18.4 | 92 | | 18.9 | 95 | | 3 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 19.8 | 99 | | 20.6 | 103 | | 4 | | 15 | 70-130 |
| Naphthalene | 20 | U | 17.5 | 88 | | 18.1 | 90 | | 3 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 17.9 | 89 | | 18.7 | 93 | | 4 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 17.5 | 87 | | 17.9 | 91 | | 3 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery: 0 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806253B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | 22.0 | 110 | | 70-130 |
| Chloromethane | 20 | 21.7 | 109 | | 70-130 |
| Vinyl Chloride | 20 | 22.3 | 111 | | 70-130 |
| Bromomethane | 20 | 18.9 | 95 | | 70-130 |
| Chloroethane | 20 | 20.6 | 103 | | 70-130 |
| t-Butyl alcohol | 100 | 107.7 | 108 | | 70-130 |
| Trichlorofluoromethane | 20 | 22.2 | 111 | | 70-130 |
| Diethyl ether | 20 | 19.9 | 100 | | 70-130 |
| Acetone | 20 | 22.6 | 113 | | 70-130 |
| 1,1-Dichloroethene | 20 | 20.7 | 103 | | 70-130 |
| Di-isopropyl ether | 20 | 20.5 | 102 | | 70-130 |
| Methylene Chloride | 20 | 17.4 | 87 | | 70-130 |
| Carbon Disulfide | 20 | 20.5 | 102 | | 70-130 |
| Methyl-tert-butyl ether | 40 | 41.6 | 104 | | 70-130 |
| Trans-1,2-Dichloroethene | 20 | 19.8 | 99 | | 70-130 |
| 1,1-Dichloroethane | 20 | 20.5 | 102 | | 70-130 |
| Methyl ethyl ketone | 20 | 17.7 | 89 | | 70-130 |
| Ethyl t-butyl ether | 20 | 19.9 | 99 | | 70-130 |
| 2,2-Dichloropropane | 20 | 21.9 | 110 | | 70-130 |
| Cis-1,2-Dichloroethene | 20 | 22.1 | 110 | | 70-130 |
| t-Amyl methyl ether | 20 | 20.1 | 100 | | 70-130 |
| Chloroform | 20 | 20.5 | 102 | | 70-130 |
| Bromochloromethane | 20 | 20.7 | 103 | | 70-130 |
| Tetrahydrofuran | 20 | 22.3 | 112 | | 70-130 |
| 1,1,1-Trichloroethane | 20 | 21.5 | 107 | | 70-130 |
| 1,1-Dichloropropene | 20 | 20.7 | 103 | | 70-130 |
| Carbon Tetrachloride | 20 | 22.4 | 112 | | 70-130 |
| 1,2-Dichloroethane | 20 | 20.7 | 104 | | 70-130 |
| Benzene | 20 | 19.5 | 97 | | 70-130 |
| Trichloroethene | 20 | 22.2 | 111 | | 70-130 |
| 1,2-Dichloropropane | 20 | 21.0 | 105 | | 70-130 |
| Bromodichloromethane | 20 | 22.3 | 111 | | 70-130 |
| Dibromomethane | 20 | 20.7 | 104 | | 70-130 |
| 2-Hexanone | 20 | 20.2 | 101 | | 70-130 |
| Methyl isobutyl ketone | 20 | 20.7 | 104 | | 70-130 |
| Cis-1,3-Dichloropropene | 20 | 22.6 | 113 | | 70-130 |
| Toluene | 20 | 19.7 | 98 | | 70-130 |
| Trans-1,3-Dichloropropene | 20 | 23.1 | 115 | | 70-130 |
| 1,1,2-Trichloroethane | 20 | 21.4 | 107 | | 70-130 |
| 1,3-Dichloropropane | 20 | 20.9 | 104 | | 70-130 |
| Tetrachloroethene | 20 | 21.5 | 107 | | 70-130 |
| Dibromochloromethane | 20 | 22.3 | 111 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L806253B

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | 21.7 | 109 | | 70-130 |
| Chlorobenzene | 20 | 19.8 | 99 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | 22.4 | 112 | | 70-130 |
| Ethylbenzene | 20 | 19.6 | 98 | | 70-130 |
| M-,P-Xylene | 40 | 39.8 | 100 | | 70-130 |
| O-Xylene | 20 | 20.1 | 100 | | 70-130 |
| Styrene | 20 | 20.5 | 103 | | 70-130 |
| Bromoform | 20 | 23.5 | 117 | | 70-130 |
| Isopropylbenzene | 20 | 19.3 | 97 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | 20.5 | 102 | | 70-130 |
| 1,2,3-Trichloropropane | 20 | 20.6 | 103 | | 70-130 |
| N-Propylbenzene | 20 | 20.0 | 100 | | 70-130 |
| Bromobenzene | 20 | 20.5 | 102 | | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | 20.2 | 101 | | 70-130 |
| 2-Chlorotoluene | 20 | 19.2 | 96 | | 70-130 |
| 4-Chlorotoluene | 20 | 20.2 | 101 | | 70-130 |
| Tert-Butylbenzene | 20 | 20.4 | 102 | | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | 20.5 | 102 | | 70-130 |
| Sec-Butylbenzene | 20 | 19.1 | 95 | | 70-130 |
| P-Isopropyltoluene | 20 | 19.5 | 97 | | 70-130 |
| 1,3-Dichlorobenzene | 20 | 20.1 | 100 | | 70-130 |
| 1,4-Dichlorobenzene | 20 | 19.3 | 97 | | 70-130 |
| N-Butylbenzene | 20 | 19.3 | 96 | | 70-130 |
| 1,2-Dichlorobenzene | 20 | 19.9 | 99 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | 21.9 | 110 | | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | 20.2 | 101 | | 70-130 |
| Hexachlorobutadiene | 20 | 21.8 | 109 | | 70-130 |
| Naphthalene | 20 | 19.9 | 100 | | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | 19.9 | 100 | | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | 18.8 | 94 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 71 outside limits

Comments: _____

_____

## GC/MS Volatiles Instrument: B

IS only — Exp: —

SS+IS V4518 Exp: 6/30/03

**Voltage** 1918

**Threshold** 150

MT 061903-B

DB

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | W-B-061903-1-MT | | | | | | |
| 1 | V8260B | Blank | 5mL | | | B16299 | MT | NA |
| 2 | | BFB 50ng | | | | B16300T | | |
| 3 | | 20 ppb | | | fails RR | 015C | | |
| 4 | ~~V8260B~~ | ~~BFB~~ | | | | 022 | | |
| 5 | | Bromoform | | | | 03 | | |
| 6 | ~~V8260B~~ | ~~BFB~~ | | | | 04B | | |
| 4 | V8260B | 20 ppb | 5mL | | fails Re Cal | 02SC | | |
| 1 | V8260B | BFB 50ng 2uL V4487 | | ✓ | | 4 03T | | 1157 |
| 2 | | 1 ppb .25uL V4504 V4512 | | ✓ | | 5 04SI | | |
| 3 | | 2 ppb .50uL | | ✓ | | 6 05SI | | |
| 4 | | 5 ppb 1.25uL | | ✓ | | 7 06SI | | |
| 5 | | 20 ppb 5uL | | ✓ | | 8 07SI | | |
| 6 | | 50 ppb 12.5uL | | ✓ | | 9 08SI | | |
| 7 | | 100 ppb 25uL | | ✓ | | 10 09SI | | |
| 8 | | Blank | | | | 11 10 | | |
| 9 | | 180x193B | | ✓ | | 12 11 | | |
| 10 | | Bromoform | | ✓ | | 13 12 | | |
| 11 | | B80x193B | | ✓ | | 14 13 | | |
| 12 | | 49873-3 | | ✓ | | 15 14 | | 2 |
| 13 | | 49863-15 | 500uL | ✓ | | 16 15 | | 2 |
| 14 | | -16 | 5mL | ✓ | | 17 16 | | 2 |
| 15 | | -17 | | ✓ | | 18 17 | | 2 |
| 16 | | -19 | 25mL | ✓ | | 19 18 | | 2 |
| 17 | | -21 | 5mL | ✓ | | 20 19 | | 2 |
| 18 | | -22 | 5mL | | MW 50uL | 21 20 | | 2 |
| 19 | | 49873-1 | 5mL | | CO · MW 5mL | 22 21 | | 2 |
| 20 | | -1MS | | ✓ | CLOSE P | 23 22SP | | 2 |
| 21 | | -1MSD | | ✓ | VS | 24 23SD | | 2 |
| 22 | | -2 | | ✓ | | 25 24 | | 2 |
| 23 | | 49809-1 | 5mL | ✓ | TCLP | 26 25 | | |

Revision: 04/30/02

DB

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4518 Exp 6-30-03

**Voltage** 1918

**Threshold** 100

Sm 062003-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | N-B-062003-1-JR | | | | | | | |
| 1 | V806193B | Blank | 5mL | | | B16327 | Sm | |
| 2 | | Blank | | | | 28 | | |
| 3 | | BFB 50ng 2mL V4487 | | ✓ | | 29 | T | 947 |
| 4 | | 20PPB 5mL V4504 V4512 | | ✓ | | 30 | SC | |
| 5 | | L806203B V4506 V4517 | | ✓ | | 31 | Q | |
| 6 | | Bromoform | | ✓ | | 32 | | |
| 7 | | B806203B | | ✓ | | 33 | B | |
| 8 | | 49863-22 | 50mL | ✓ | | 34 | | <2 |
| 9 | | 49878-1 | 5mL | ✓ | | 35 | | <2 |
| 10 | | -2 | | ✓ | RR 1mL | 36 | | <2 |
| 11 | | -2, MS | | ✓ | | 37 | SP | <2 |
| 12 | | -2, MSD | | ✓ | | 38 | SP | <2 |
| 13 | | -3 | | ✓ | | 39 | | <2 |
| 14 | | -4 | | ✓ | | 40 | | <2 |
| 15 | | -5 | | ✓ | | 41 | | <2 |
| 16 | | -6 | | ✓ | | 42 | | <2 |
| 17 | | -7 | | ✓ | | 43 | | <2 |
| 18 | | -8 | | ✓ | | 44 | | <2 |
| 19 | | -9 | | ✓ | | 45 | | <2 |
| 20 | | -10 | | ✓ | | 46 | | <2 |
| 21 | | -11 | | ✓ | | 47 | | <2 |
| 22 | | -12 | | ✓ | | 48 | | <2 |
| 23 | | -14 | | ✓ | | 49 | | <2 |
| 24 | | -15 | | ✓ | | 50 | | <2 |
| 25 | | -16 | | ✓ | | 51 | | <2 |
| 26 | | -17 | | ✓ | | 52 | | <2 |

Sm 6-23-03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4518 Exp: 6-30-03

**Voltage** 1918

**Threshold** 100

Sys 062303-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | W-B-062303-1-JL | | | | | | |
| 1 | V8260B | Blank | 5mL | | | B16353 | JL | |
| 2 | | BFB 50ng 2mL V4487 | | ✓ | | 54 | T | 8.5 |
| 3 | | 20PPB 5mL V4504 V4512 | | ✓ | | 55 | SC | |
| 4 | | L806233B V4506 V4517 | | ✓ | Extra C136 | 56 | R | |
| 5 | | Bromoform | | ✓ | | 57 | | |
| 6 | | B806233B | | | JF flag MeCl2, Diethyl Ether | 58 | B | |
| 7 | | 49886-1 | 5mL | ✓ | | 59 | | <2 |
| 8 | | 49896-1 | | | MR (-11) Ran Wrong Sample. | 60 | | <2 |
| 9 | | 49864-1 | 50mL | ✓ | TCLP | 61 | | <2 |
| 10 | | -1, MS | | ✓ | | 62 | | <2 |
| 11 | | 49878-2 DL | 1mL | ✓ | | 63 | | <2 |
| 12 | | -18 | 5mL | ✓ | | 64 | | <2 |
| 13 | | -19 | | ✓ | | 65 | | <2 |
| 14 | | -20 | | ✓ | MR 1mL | 66 | | <2 |
| 15 | | -21 | | ✓ | MR 1mL | 67 | | <2 |
| 16 | | -22 | | ✓ | | 68 | | <2 |
| 17 | | -22, MS | | ✓ | Extra 13L | 69 | SB | <2 |
| 18 | | -22, MSD | | ✓ | | 70 | SB | <2 |
| 19 | | -23 | | ✓ | | 71 | | <2 |
| 20 | | -24 | | ✓ | | 72 | | <2 |
| 21 | | -25 | | ✓ | | 73 | | <2 |
| 22 | | -26 | | ✓ | | 74 | | <2 |
| 23 | | -27 | | ✓ | | 75 | | <2 |
| 24 | | -28 | | ✓ | | 76 | | <2 |
| 25 | | -29 | | | *Out of Wkr. MR 5mL | 77 | | <2 |
| 26 | | B806233B2 | | ✓ | Ran prior to 49896-1 (NB) | 78 | | |

Sys 6-24-03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4518 Exp: 6.30.03

**Voltage** 1918

**Threshold** 100

062403-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-062403-1-JR | | | | | | | |
| 1 | V806193B | blank | | | | B16378 | | |
| 2 | | BFB 50ng 2uL V4524 | 5mL | ✓ | | 79 | T | 8.51 |
| 3 | | 200PPB 5mL ✓ V4504 V4512 V4506 | | ✓ | | 80 | SC | |
| 4 | | L806243B V4517 | | ✓ | | 81 | Q | |
| 5 | | Bromoform | | ✓ | | 82 | | |
| 6 | | B806243B | | ✓ | | 83 | B | |
| 7 | | 49896-2 | ↓ | ✓ | | 84 | | L2 |
| 8 | | 49878-20,dl | 1mL | ✓ | | 85 | | L2 |
| 9 | | -21,dl | 1mL | ✓ | | 86 | | L2 |
| 10 | | -29 | 5mL | ✓ | | 87 | | L2 |
| 11 | | -30 | | ✓ | | 88 | | L2 |
| 12 | | -30,MS | | ✓ | | 89 | SP | L2 |
| 13 | | -30,MSD | | ✓ | | 90 | SP | L2 |
| 14 | | -31 | | ✓ | | 91 | | L2 |
| 15 | | -32 | | ✓ | | 92 | | L2 |
| 16 | | -33 | | ✓ | nr 1mL | 93 | | L2 |
| 17 | | -34 | | ✓ | nr 500mL | 94 | | L2 |
| 18 | | -35 | | ✓ | nr 500mL | 95 | | L2 |
| 19 | | -36 | | ✓ | | 96 | | L2 |
| 20 | | -37 | | ✓ | nr 100mL | 97 | | L2 |
| 21 | | -38 | | ✓ | nr 100mL | 98 | | L2 |
| 22 | | -39 | | | nr 5mL Co.? | 99 | | L2 |
| 23 | | -40 | | ✓ | | B16400 | | L2 |
| 24 | | -41 | | ✓ | | 1 | | L2 |

6.25.03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4518 Exp: 6-30-03

**Voltage** 1918

**Threshold** 100

Sam 062503-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | LV-B-062503-1-JL | | | | | | | |
| 1 | V8061935 | blank | 5mL | | | B16402 | Sam | |
| 2 | | BFB 50ng/2mL V4534 | | ✓ | | 3 | T | 1656 |
| 3 | | 20PPB 5mL V4504 V4512 | | ✓ | | 4 | SC | |
| 4 | | L8062535 V4506 V4517 | | ✓ | | 5 | Q | |
| 5 | | Bromoform | | ✓ | | 6 | | |
| 6 | | B8062535 | | ✓ | | 7 | B | |
| 7 | | 49878-33, DL | 1mL | ✓ | | 8 | | <2 |
| 8 | | -34, DL | 500mL | ✓ | | 9 | | <2 |
| 9 | | -35, DL | 500mL | ✓ | | 10 | | <2 |
| 10 | | -37, DL | 100mL | ✓ | | 11 | | <2 |
| 11 | | -38, DL | 100mL | ✓ | | 12 | | <2 |
| 12 | | -39 | 5mL | ✓ | | 13 | | <2 |
| 13 | | 49920-5 | | ✓ | | 14 | | <2 |
| 14 | | -6 | | ✓ | | 15 | | <2 |
| 15 | | -7 | | ✓ | | 16 | | <2 |
| 16 | | -8 | | ✓ | | 17 | | <2 |
| 17 | | 49901-1 | | ✓ | | 18 | | <2 |
| 18 | | -2 | | ✓ | | 19 | | <2 |
| 19 | | -3 | | ✓ | | 20 | | <2 |
| 20 | | -4 | | ✓ | | 21 | | <2 |
| 21 | | -5 | | ✓ | | 22 | | <2 |
| 22 | | -6 | | ✓ | | 23 | | <2 |
| 23 | | -7 | | ✓ | | 24 | | <2 |
| 24 | | | | | | | | |
| 25 | | | | | 6-26-03 | | | |
| 26 | | | | | | | | |

Revision: 04/30/02

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16304T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1157

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.8 |
| 75 | 30.0 - 60.0% of mass 95 | 43.8 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.9 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 67.1 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 7.6 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 64.5 ( 96.2 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.9 ( 7.5 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 1 PPB | 1 PPB | B16305SI.D | 06/19/03 | 12:28 |
| 02 | 2 PPB | 2 PPB | B16306SI.D | 06/19/03 | 12:59 |
| 03 | 5 PPB | 5 PPB | B16307SI.D | 06/19/03 | 13:29 |
| 04 | 20 PPB | 20 PPB | B16308SI.D | 06/19/03 | 14:03 |
| 05 | 50 PPB | 50 PPB | B16309SI.D | 06/19/03 | 14:35 |
| 06 | 100 PPB | 100 PPB | B16310SI.D | 06/19/03 | 15:07 |
| 07 | ZZZZZ | ZZZZZ | B16311.D | 06/19/03 | 15:40 |
| 08 | ZZZZZ | ZZZZZ | B16312Q.D | 06/19/03 | 16:12 |
| 09 | ZZZZZ | ZZZZZ | B16313.D | 06/19/03 | 16:42 |
| 10 | ZZZZZ | ZZZZZ | B16314B.D | 06/19/03 | 17:13 |
| 11 | ZZZZZ | ZZZZZ | B16315.D | 06/19/03 | 17:44 |
| 12 | ZZZZZ | ZZZZZ | B16316.D | 06/19/03 | 18:14 |
| 13 | ZZZZZ | ZZZZZ | B16317.D | 06/19/03 | 18:45 |
| 14 | ZZZZZ | ZZZZZ | B16318.D | 06/19/03 | 19:16 |
| 15 | ZZZZZ | ZZZZZ | B16319.D | 06/19/03 | 19:46 |
| 16 | ZZZZZ | ZZZZZ | B16320.D | 06/19/03 | 20:17 |
| 17 | ZZZZZ | ZZZZZ | B16321.D | 06/19/03 | 20:48 |
| 18 | ZZZZZ | ZZZZZ | B16322.D | 06/19/03 | 21:19 |
| 19 | ZZZZZ | ZZZZZ | B16323SP.D | 06/19/03 | 21:49 |
| 20 | ZZZZZ | ZZZZZ | B16324SP.D | 06/19/03 | 22:20 |
| 21 | ZZZZZ | ZZZZZ | B16325.D | 06/19/03 | 22:50 |
| 22 | ZZZZZ | ZZZZZ | B16326.D | 06/19/03 | 23:21 |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16329T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0947

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.2 |
| 75 | 30.0 - 60.0% of mass 95 | 43.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.7 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 78.3 |
| 175 | 5.0 - 9.0% of mass 174 | 5.0 ( 6.4 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 75.9 ( 96.9 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.5 ( 5.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B16330SC.D | 06/20/03 | 10:18 |
| 02 | L806203B | L806203B | B16331Q.D | 06/20/03 | 10:49 |
| 03 | ZZZZZ | ZZZZZ | B16332.D | 06/20/03 | 11:20 |
| 04 | B806203B | B806203B | B16333B.D | 06/20/03 | 11:50 |
| 05 | ZZZZZ | ZZZZZ | B16334.D | 06/20/03 | 12:21 |
| 06 | 49878-1 | 49878-1 | B16335.D | 06/20/03 | 12:52 |
| 07 | 49878-2 | 49878-2 | B16336.D | 06/20/03 | 13:23 |
| 08 | 49878-2,MS | 49878-2,MS | B16337SP.D | 06/20/03 | 13:53 |
| 09 | 49878-2,MSD | 49878-2,MSD | B16338SP.D | 06/20/03 | 14:24 |
| 10 | 49878-3 | 49878-3 | B16339.D | 06/20/03 | 14:55 |
| 11 | 49878-4 | 49878-4 | B16340.D | 06/20/03 | 15:25 |
| 12 | 49878-5 | 49878-5 | B16341.D | 06/20/03 | 15:56 |
| 13 | 49878-6 | 49878-6 | B16342.D | 06/20/03 | 16:27 |
| 14 | 49878-7 | 49878-7 | B16343.D | 06/20/03 | 16:57 |
| 15 | 49878-8 | 49878-8 | B16344.D | 06/20/03 | 17:28 |
| 16 | 49878-9 | 49878-9 | B16345.D | 06/20/03 | 17:59 |
| 17 | 49878-10 | 49878-10 | B16346.D | 06/20/03 | 18:30 |
| 18 | 49878-11 | 49878-11 | B16347.D | 06/20/03 | 19:00 |
| 19 | 49878-12 | 49878-12 | B16348.D | 06/20/03 | 19:31 |
| 20 | 49878-14 | 49878-14 | B16349.D | 06/20/03 | 20:02 |
| 21 | 49878-15 | 49878-15 | B16350.D | 06/20/03 | 20:32 |
| 22 | 49878-16 | 49878-16 | B16351.D | 06/20/03 | 21:03 |
| 23 | 49878-17 | 49878-17 | B16352.D | 06/20/03 | 21:33 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16354T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/23/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0825

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.8 |
| 75 | 30.0 - 60.0% of mass 95 | 44.1 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 70.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 7.2 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 70.3 ( 99.3 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 3.9 ( 5.6 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B16355SC.D | 06/23/03 | 8:56 |
| 02 | L806233B | L806233B | B16356Q.D | 06/23/03 | 9:26 |
| 03 | ZZZZZ | ZZZZZ | B16357.D | 06/23/03 | 9:57 |
| 04 | ZZZZZ | ZZZZZ | B16358B.D | 06/23/03 | 10:28 |
| 05 | ZZZZZ | ZZZZZ | B16359.D | 06/23/03 | 10:58 |
| 06 | B806233B2 | B806233B2 | B16378B.D | 06/23/03 | 11:29 |
| 07 | ZZZZZ | ZZZZZ | B16360.D | 06/23/03 | 12:00 |
| 08 | ZZZZZ | ZZZZZ | B16361.D | 06/23/03 | 12:30 |
| 09 | ZZZZZ | ZZZZZ | B16362SP.D | 06/23/03 | 13:01 |
| 10 | 49878-2,DL | 49878-2,DL | B16363.D | 06/23/03 | 13:32 |
| 11 | 49878-18 | 49878-18 | B16364.D | 06/23/03 | 14:03 |
| 12 | 49878-19 | 49878-19 | B16365.D | 06/23/03 | 14:33 |
| 13 | 49878-20 | 49878-20 | B16366.D | 06/23/03 | 15:04 |
| 14 | 49878-21 | 49878-21 | B16367.D | 06/23/03 | 15:35 |
| 15 | 49878-22 | 49878-22 | B16368.D | 06/23/03 | 16:05 |
| 16 | 49878-22,MS | 49878-22,MS | B16369SP.D | 06/23/03 | 16:36 |
| 17 | 49878-22,MSD | 49878-22,MSD | B16370SP.D | 06/23/03 | 17:07 |
| 18 | 49878-23 | 49878-23 | B16371.D | 06/23/03 | 17:38 |
| 19 | 49878-24 | 49878-24 | B16372.D | 06/23/03 | 18:08 |
| 20 | 49878-25 | 49878-25 | B16373.D | 06/23/03 | 18:39 |
| 21 | 49878-26 | 49878-26 | B16374.D | 06/23/03 | 19:10 |
| 22 | 49878-27 | 49878-27 | B16375.D | 06/23/03 | 19:40 |
| 23 | 49878-28 | 49878-28 | B16376.D | 06/23/03 | 20:11 |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16379T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/24/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0851

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 20.6 |
| 75 | 30.0 - 60.0% of mass 95 | 44.8 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 65.7 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 7.8 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 64.2 ( 97.8 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.1 ( 6.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B16380SC.D | 06/24/03 | 9:22 |
| 02 | L806243B | L806243B | B16381Q.D | 06/24/03 | 9:58 |
| 03 | ZZZZZ | ZZZZZ | B16382.D | 06/24/03 | 10:29 |
| 04 | B806243B | B806243B | B16383B.D | 06/24/03 | 11:00 |
| 05 | ZZZZZ | ZZZZZ | B16384.D | 06/24/03 | 11:30 |
| 06 | 49878-20,DL | 49878-20,DL | B16385.D | 06/24/03 | 12:04 |
| 07 | 49878-21,DL | 49878-21,DL | B16386.D | 06/24/03 | 12:37 |
| 08 | 49878-29 | 49878-29 | B16387.D | 06/24/03 | 13:08 |
| 09 | 49878-30 | 49878-30 | B16388.D | 06/24/03 | 13:39 |
| 10 | 49878-30,MS | 49878-30,MS | B16389SP.D | 06/24/03 | 14:09 |
| 11 | 49878-30,MSD | 49878-30,MSD | B16390SP.D | 06/24/03 | 14:40 |
| 12 | 49878-31 | 49878-31 | B16391.D | 06/24/03 | 15:11 |
| 13 | 49878-32 | 49878-32 | B16392.D | 06/24/03 | 15:42 |
| 14 | 49878-33 | 49878-33 | B16393.D | 06/24/03 | 16:12 |
| 15 | 49878-34 | 49878-34 | B16394.D | 06/24/03 | 16:43 |
| 16 | 49878-35 | 49878-35 | B16395.D | 06/24/03 | 17:14 |
| 17 | 49878-36 | 49878-36 | B16396.D | 06/24/03 | 17:44 |
| 18 | 49878-37 | 49878-37 | B16397.D | 06/24/03 | 18:15 |
| 19 | 49878-38 | 49878-38 | B16398.D | 06/24/03 | 18:46 |
| 20 | ZZZZZ | ZZZZZ | B16399.D | 06/24/03 | 19:17 |
| 21 | 49878-40 | 49878-40 | B16400.D | 06/24/03 | 19:47 |
| 22 | 49878-41 | 49878-41 | B16401.D | 06/24/03 | 20:18 |
| 23 | | | | | |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16403T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/25/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0656

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.8 |
| 75 | 30.0 - 60.0% of mass 95 | 41.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 5.5 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 80.1 |
| 175 | 5.0 - 9.0% of mass 174 | 5.8 ( 7.2 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 77.0 ( 96.1 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.8 ( 6.2 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B16404SC.D | 06/25/03 | 7:26 |
| 02 | L806253B | L806253B | B16405Q.D | 06/25/03 | 7:57 |
| 03 | ZZZZZ | ZZZZZ | B16406.D | 06/25/03 | 8:28 |
| 04 | B806253B | B806253B | B16407B.D | 06/25/03 | 8:59 |
| 05 | 49878-33,DL | 49878-33,DL | B16408.D | 06/25/03 | 9:29 |
| 06 | 49878-34,DL | 49878-34,DL | B16409.D | 06/25/03 | 10:00 |
| 07 | 49878-35,DL | 49878-35,DL | B16410.D | 06/25/03 | 10:31 |
| 08 | 49878-37,DL | 49878-37,DL | B16411.D | 06/25/03 | 11:02 |
| 09 | 49878-38,DL | 49878-38,DL | B16412.D | 06/25/03 | 11:32 |
| 10 | 49878-39 | 49878-39 | B16413.D | 06/25/03 | 12:03 |
| 11 | ZZZZZ | ZZZZZ | B16414.D | 06/25/03 | 12:34 |
| 12 | ZZZZZ | ZZZZZ | B16415.D | 06/25/03 | 13:05 |
| 13 | ZZZZZ | ZZZZZ | B16416.D | 06/25/03 | 13:36 |
| 14 | ZZZZZ | ZZZZZ | B16417.D | 06/25/03 | 14:07 |
| 15 | ZZZZZ | ZZZZZ | B16418.D | 06/25/03 | 14:37 |
| 16 | ZZZZZ | ZZZZZ | B16419.D | 06/25/03 | 15:08 |
| 17 | ZZZZZ | ZZZZZ | B16420.D | 06/25/03 | 15:39 |
| 18 | ZZZZZ | ZZZZZ | B16421.D | 06/25/03 | 16:10 |
| 19 | ZZZZZ | ZZZZZ | B16422.D | 06/25/03 | 16:41 |
| 20 | ZZZZZ | ZZZZZ | B16423.D | 06/25/03 | 17:12 |
| 21 | ZZZZZ | ZZZZZ | B16424.D | 06/25/03 | 17:43 |
| 22 | | | | | |
| 23 | | | | | |

C:\HPCHE\R1\DATA\061903-B\B16312Q.D
Method File **V806193B**
Level 1 File Name **B16305SI.D**
Level 2 File Name **B16306SI.D**
Level 3 File Name **B16307SI.D**
Level 4 File Name **B16308SI.D**
Level 5 File Name **B16309SI.D**
Level 6 File Name **B16310SI.D**

6-20-03

| Name | LEVEL 1 RF | LEVEL 2 RF | LEVEL 3 RF | LEVEL 4 RF | LEVEL 5 RF | LEVEL 6 RF | AVG RF |
|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 0.635 | 0.615 | 0.607 | 0.597 | 0.577 | 0.550 | 5.0% |
| Chloromethane | 0.614 | 0.546 | 0.519 | 0.470 | 0.461 | 0.461 | 11.9% |
| Vinyl Chloride | 0.308 | 0.283 | 0.223 | 0.217 | 0.196 | -1.000 | 19.4% |
| Bromomethane | 0.291 | 0.226 | 0.196 | 0.177 | 0.170 | 0.170 | 23.1% |
| Chloroethane | 0.244 | 0.223 | 0.214 | 0.195 | 0.195 | 0.172 | 12.1% |
| t-Butyl alcohol (TBA) | 0.031 | 0.026 | 0.027 | 0.034 | 0.038 | 0.036 | 15.2% |
| Trichlorofluoromethane | 0.482 | 0.465 | 0.455 | 0.430 | 0.433 | 0.425 | 5.0% |
| Diethyl ether | 0.172 | 0.164 | 0.160 | 0.150 | 0.145 | 0.153 | 6.2% |
| 1,1,2-Trichlorotrifluoroethane | 0.304 | 0.288 | 0.286 | 0.259 | 0.243 | 0.253 | 8.8% |
| Acrolein | 0.067 | 0.062 | 0.061 | 0.064 | 0.065 | 0.066 | 3.4% |
| Acetone | 0.133 | 0.112 | 0.104 | 0.110 | 0.113 | 0.115 | 8.4% |
| 1,1-Dichloroethene | 0.296 | 0.267 | 0.261 | 0.246 | 0.251 | 0.255 | 6.8% |
| Methyl iodide | 0.468 | 0.461 | 0.480 | 0.451 | 0.494 | 0.494 | 3.7% |
| Di-isopropyl ether (DIPE) | 1.306 | 1.185 | 1.231 | 1.102 | 1.110 | 1.116 | 7.0% |
| Methylene Chloride | 0.460 | 0.400 | 0.330 | 0.325 | 0.329 | -1.000 | 16.2% |
| Carbon Disulfide | 0.803 | 0.759 | 0.794 | 0.795 | 0.824 | 0.861 | 4.2% |
| Acrylonitrile | 0.116 | 0.108 | 0.118 | 0.119 | 0.124 | 0.131 | 6.6% |
| Methyl-tert-butyl ether (MTBE | 0.852 | 0.819 | 0.811 | 0.773 | 0.754 | 0.809 | 4.3% |
| trans-1,2-Dichloroethene | 0.330 | 0.294 | 0.283 | 0.275 | 0.271 | 0.285 | 7.4% |
| 1,1-Dichloroethane | 0.635 | 0.534 | 0.561 | 0.519 | 0.519 | 0.529 | 8.1% |
| Vinyl acetate | 0.037 | 0.048 | 0.050 | 0.047 | 0.050 | 0.053 | 12.0% |
| Methyl ethyl ketone | 0.054 | 0.054 | 0.035 | 0.040 | 0.042 | 0.042 | 18.0% |
| Ethyl t-butyl ether (ETBE) | 1.144 | 1.492 | 1.113 | 1.016 | 1.022 | 1.039 | 15.9% |
| 2,2-Dichloropropane | 0.540 | 0.503 | 0.447 | 0.477 | 0.361 | 0.386 | 15.2% |
| cis-1,2-Dichloroethene | 0.514 | 0.476 | 0.451 | 0.461 | 0.322 | 0.336 | 18.4% |
| t-Amyl methyl ether (TAME) | 1.307 | 1.283 | 1.301 | 1.316 | 1.313 | 1.317 | 1.0% |
| Chloroform | 0.864 | 0.776 | 0.749 | 0.755 | 0.563 | 0.750 | 13.2% |
| Bromochloromethane | 0.258 | 0.259 | 0.253 | 0.254 | 0.245 | 0.254 | 2.0% |
| Tetrahydrofuran | 0.047 | 0.045 | 0.051 | 0.060 | 0.062 | 0.063 | 14.4% |
| 1,1,1-Trichloroethane | 0.565 | 0.546 | 0.533 | 0.537 | 0.523 | 0.559 | 2.9% |
| 1,1-Dichloropropene | 0.705 | 0.651 | 0.655 | 0.636 | 0.615 | 0.634 | 4.7% |
| Carbon Tetrachloride | 0.421 | 0.412 | 0.412 | 0.434 | 0.427 | 0.458 | 4.0% |
| 1,2-Dichloroethane | 0.655 | 0.646 | 0.619 | 0.609 | 0.577 | 0.612 | 4.6% |
| Benzene | 2.223 | 2.067 | 2.011 | 1.941 | 1.878 | 1.849 | 6.9% |
| Trichloroethene | 0.307 | 0.283 | 0.272 | 0.267 | 0.265 | 0.267 | 5.8% |
| 1,2-Dichloropropane | 0.336 | 0.319 | 0.315 | 0.308 | 0.304 | 0.308 | 3.6% |
| Methylmethacrylate | 0.217 | 0.210 | 0.226 | 0.254 | 0.264 | 0.257 | 9.7% |
| Bromodichloromethane | 0.293 | 0.293 | 0.297 | 0.313 | 0.322 | 0.340 | 6.1% |
| Dibromomethane | 0.201 | 0.189 | 0.190 | 0.197 | 0.198 | 0.202 | 2.8% |
| 2-Chloroethylvinyl ether | 0.001 | 0.002 | 0.002 | 0.002 | -1.000 | 0.000 | 30.2% |
| 2-Hexanone | 0.134 | 0.137 | 0.139 | 0.162 | 0.164 | 0.150 | 8.7% |
| Methyl isobutyl ketone | 0.131 | 0.133 | 0.134 | 0.154 | 0.156 | 0.143 | 7.7% |
| cis-1,3-Dichloropropene | 0.411 | 0.422 | 0.431 | 0.449 | 0.460 | 0.477 | 5.6% |
| Toluene | 0.734 | 0.669 | 0.665 | 0.662 | 0.669 | 0.655 | 4.3% |
| trans-1,3-Dichloropropene | 0.309 | 0.329 | 0.348 | 0.391 | 0.406 | 0.414 | 11.9% |
| 1,1,2-Trichloroethane | 0.255 | 0.244 | 0.240 | 0.240 | 0.240 | 0.231 | 3.2% |
| 1,3-Dichloropropane | 0.521 | 0.511 | 0.506 | 0.503 | 0.505 | 0.500 | 1.5% |
| Tetrachloroethene | 0.302 | 0.270 | 0.266 | 0.267 | 0.273 | 0.272 | 4.9% |
| Dibromochloromethane | 0.235 | 0.244 | 0.245 | 0.274 | 0.288 | 0.293 | 9.6% |
| 1,2-Dibromoethane | 0.288 | 0.286 | 0.289 | 0.308 | 0.309 | 0.305 | 3.7% |
| Chlorobenzene | 0.915 | 0.853 | 0.836 | 0.825 | 0.829 | 0.820 | 4.2% |
| 1,1,1,2-Tetrachloroethane | 0.261 | 0.247 | 0.253 | 0.268 | 0.274 | 0.273 | 4.1% |
| Ethylbenzene | 1.549 | 1.441 | 1.419 | 1.411 | 1.390 | 1.358 | 4.6% |
| m,p-Xylene | 0.558 | 0.513 | 0.516 | 0.518 | 0.513 | 0.502 | 3.7% |
| o-Xylene | 0.505 | 0.503 | 0.502 | 0.504 | 0.510 | 0.502 | 0.6% |
| Styrene | 0.926 | 0.883 | 0.901 | 0.902 | 0.907 | 0.898 | 1.6% |
| Bromoform | 0.140 | 0.147 | 0.165 | 0.200 | 0.216 | 0.217 | 19.2% |
| Isopropylbenzene | 1.334 | 1.241 | 1.236 | 1.255 | 1.258 | 1.235 | 3.0% |
| 1,1,2,2-Tetrachloroethane | 0.449 | 0.449 | 0.450 | 0.483 | 0.482 | 0.466 | 3.5% |
| 1,2,3-Trichloropropane | 0.379 | 0.335 | 0.344 | 0.366 | 0.364 | 0.347 | 4.5% |
| trans-1,4-Dichloro-2-butene | 0.132 | 0.127 | 0.135 | 0.154 | 0.156 | 0.149 | 8.8% |
| n-Propylbenzene | 1.733 | 1.596 | 1.602 | 1.609 | 1.625 | 1.601 | 3.2% |
| Bromobenzene | 0.373 | 0.346 | 0.339 | 0.343 | 0.346 | 0.346 | 3.4% |
| 1,3,5-Trimethylbenzene | 1.026 | 0.976 | 0.970 | 0.966 | 0.974 | 0.964 | 2.4% |
| 2-Chlorotoluene | 1.228 | 1.094 | 1.106 | 1.058 | 1.097 | 1.059 | 5.7% |
| 4-Chlorotoluene | 1.080 | 1.008 | 0.980 | 1.000 | 0.983 | 0.983 | 3.8% |
| tert-butylbenzene | 0.878 | 0.802 | 0.786 | 0.814 | 0.815 | 0.811 | 3.8% |
| 1,2,4-Trimethylbenzene | 1.165 | 1.017 | 1.037 | 1.026 | 1.036 | 1.027 | 5.3% |
| sec-butylbenzene | 1.708 | 1.248 | 1.188 | 1.166 | 1.187 | 1.184 | 16.5% |
| p-isopropyltoluene | 1.112 | 0.979 | 0.947 | 0.946 | 0.963 | 0.976 | 6.4% |
| 1,3-Dichlorobenzene | 0.675 | 0.625 | 0.616 | 0.616 | 0.626 | 0.630 | 3.5% |
| 1,4-Dichlorobenzene | 1.408 | 1.297 | 1.262 | 1.249 | 1.262 | 1.269 | 4.6% |
| n-butylbenzene | 2.029 | 1.837 | 1.768 | 1.783 | 1.803 | 1.824 | 5.2% |
| 1,2-Dichlorobenzene | 1.256 | 1.177 | 1.169 | 1.163 | 1.175 | 1.188 | 2.9% |
| 1,2-Dibromo-3-chloropropane | 0.114 | 0.101 | 0.115 | 0.141 | 0.147 | 0.150 | 16.2% |
| 1,2,4-Trichlorobenzene | 0.694 | 0.633 | 0.620 | 0.650 | 0.665 | 0.695 | 4.7% |
| Hexachlorobutadiene | 0.196 | 0.164 | 0.156 | 0.158 | 0.159 | 0.165 | 9.0% |
| Naphthalene | 2.195 | 2.019 | 2.036 | 2.265 | 2.279 | 2.324 | 5.9% |
| 1,2,3-Trichlorobenzene | 0.644 | 0.610 | 0.593 | 0.616 | 0.624 | 0.650 | 3.4% |
| 1,3,5-Trichlorobenzene | 0.753 | 0.684 | 0.684 | 0.691 | 0.708 | 0.731 | 4.0% |

**CURVE AVG RF** 7.5%



000200

Response Factor Report  Instrumen

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration

6-20-03
VJ6130

Calibration Files
1 =B16305SI.D 2 =B16306SI.D 5 =B16307SI.D
20 =B16308SI.D 50 =B16309SI.D 100 =B16310SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 0.635 | 0.615 | 0.607 | 0.597 | 0.577 | 0.550 | 0.597 | 5.0 |
| 3) | TMP | Chloromethane | 0.614 | 0.546 | 0.519 | 0.470 | 0.461 | 0.461 | 0.512 | 11.8 |
| 4) | TMC | Vinyl Chloride | | 0.308 | 0.283 | 0.223 | 0.217 | 0.196 | 0.246 | 19.4 |
| 5) | TM | Bromomethane | 0.291 | 0.226 | 0.196 | 0.177 | 0.170 | 0.170 | 0.205 | 23.0 |
| 6) | TM | Chloroethane | 0.244 | 0.223 | 0.214 | 0.195 | 0.195 | 0.172 | 0.207 | 12.1 |
| 7) | TM | t-Butyl alcohol (TB | 0.031 | 0.026 | 0.027 | 0.034 | 0.038 | 0.036 | 0.032# | 15.1 |
| 8) | TM | Trichlorofluorometh | 0.482 | 0.465 | 0.455 | 0.430 | 0.433 | 0.425 | 0.448 | 5.0 |
| 9) | TM | Diethyl ether | 0.172 | 0.164 | 0.160 | 0.150 | 0.145 | 0.153 | 0.157 | 6.1 |
| 10) | T | 1,1,2-Trichlorotrif | 0.304 | 0.288 | 0.286 | 0.259 | 0.243 | 0.253 | 0.272 | 8.8 |
| 11) | T | Acrolein | 0.067 | 0.062 | 0.061 | 0.064 | 0.065 | 0.066 | 0.064# | 3.3 |
| 12) | TM | Acetone | 0.133 | 0.112 | 0.104 | 0.110 | 0.113 | 0.115 | 0.115 | 8.3 |
| 13) | TMC | 1,1-Dichloroethene | 0.296 | 0.267 | 0.261 | 0.246 | 0.251 | 0.255 | 0.263 | 6.8 |
| 14) | T | Methyl iodide | 0.468 | 0.461 | 0.480 | 0.451 | 0.494 | 0.494 | 0.475 | 3.7 |
| 15) | TM | Di-isopropyl ether | 1.306 | 1.185 | 1.231 | 1.102 | 1.110 | 1.116 | 1.175 | 6.9 |
| 16) | TM | Methylene Chloride | | 0.460 | 0.400 | 0.330 | 0.325 | 0.329 | 0.369 | 16.2 |
| 17) | TM | Carbon Disulfide | 0.803 | 0.759 | 0.794 | 0.795 | 0.824 | 0.861 | 0.806 | 4.2 |
| 18) | T | Acrylonitrile | 0.116 | 0.108 | 0.118 | 0.119 | 0.124 | 0.131 | 0.119 | 6.6 |
| 19) | TM | Methyl-tert-butyl e | 0.852 | 0.819 | 0.811 | 0.773 | 0.754 | 0.809 | 0.803 | 4.3 |
| 20) | TM | trans-1,2-Dichloroe | 0.330 | 0.294 | 0.283 | 0.275 | 0.271 | 0.285 | 0.290 | 7.4 |
| 21) | TMP | 1,1-Dichloroethane | 0.635 | 0.534 | 0.561 | 0.519 | 0.519 | 0.529 | 0.550 | 8.1 |
| 22) | T | Vinyl acetate | 0.037 | 0.048 | 0.050 | 0.047 | 0.050 | 0.053 | 0.047# | 12.0 |
| 23) | TM | Methyl ethyl ketone | 0.054 | 0.054 | 0.035 | 0.040 | 0.042 | 0.042 | 0.044# | 18.0 |
| 24) | TM | Ethyl t-butyl ether | 1.144 | 1.492 | 1.113 | 1.016 | 1.022 | 1.039 | 1.137 | 15.9 |
| 25) | TM | 2,2-Dichloropropane | 0.540 | 0.503 | 0.447 | 0.477 | 0.361 | 0.386 | 0.452 | 15.1 |
| 26) | TM | cis-1,2-Dichloroeth | 0.514 | 0.476 | 0.451 | 0.461 | 0.322 | 0.336 | 0.427 | 18.4 |
| 27) | TM | t-Amyl methyl ether | 1.307 | 1.283 | 1.301 | 1.316 | 1.313 | 1.317 | 1.306 | 0.9 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000# | -1.0 |
| 29) | TMC | Chloroform | 0.864 | 0.776 | 0.749 | 0.755 | 0.563 | 0.750 | 0.743 | 13.2 |
| 30) | TM | Bromochloromethane | 0.258 | 0.259 | 0.253 | 0.254 | 0.245 | 0.254 | 0.254 | 2.0 |
| 31) | TM | Tetrahydrofuran | 0.047 | 0.045 | 0.051 | 0.060 | 0.062 | 0.063 | 0.055# | 14.3 |
| 32) | TM | 1,1,1-Trichloroetha | 0.565 | 0.546 | 0.533 | 0.537 | 0.523 | 0.559 | 0.544 | 2.9 |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 34) | TM | 1,1-Dichloropropene | 0.705 | 0.651 | 0.655 | 0.636 | 0.615 | 0.634 | 0.649 | 4.7 |
| 35) | TM | Carbon Tetrachlorid | 0.421 | 0.412 | 0.412 | 0.434 | 0.427 | 0.458 | 0.427 | 4.0 |
| 36) | S | d4-1,2-Dichloroetha | 0.569 | 0.570 | 0.556 | 0.561 | 0.536 | 0.573 | 0.561 | 2.4 |
| 37) | TM | 1,2-Dichloroethane | 0.655 | 0.646 | 0.619 | 0.609 | 0.577 | 0.612 | 0.620 | 4.5 |
| 38) | TM | Benzene | 2.223 | 2.067 | 2.011 | 1.941 | 1.878 | 1.849 | 1.995 | 6.9 |
| 39) | I | 1,4-Difluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | 0.307 | 0.283 | 0.272 | 0.267 | 0.265 | 0.267 | 0.277 | 5.7 |
| 41) | TMC | 1,2-Dichloropropane | 0.336 | 0.319 | 0.315 | 0.308 | 0.304 | 0.308 | 0.315 | 3.6 |
| 42) | T | Methylmethacrylate | 0.217 | 0.210 | 0.226 | 0.254 | 0.264 | 0.257 | 0.238 | 9.7 |

(#) = Out of Range



000201

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration

Calibration Files
1 =B16305SI.D 2 =B16306SI.D 5 =B16307SI.D
20 =B16308SI.D 50 =B16309SI.D 100 =B16310SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 45) | TM | Bromodichloromethan | 0.293 | 0.293 | 0.297 | 0.313 | 0.322 | 0.340 | 0.310 | 6.1 |
| 46) | TM | Dibromomethane | 0.201 | 0.189 | 0.190 | 0.197 | 0.198 | 0.202 | 0.196 | 2.8 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 50) | T | 2-Chloroethylvinyl | | | 0.001 | 0.002 | 0.002 | 0.002 | 0.002# | 30.2 |
| 51) | TM | 2-Hexanone | 0.134 | 0.137 | 0.139 | 0.162 | 0.164 | 0.150 | 0.148 | 8.7 |
| 52) | TM | Methyl isobutyl ket | 0.131 | 0.133 | 0.134 | 0.154 | 0.156 | 0.143 | 0.142 | 7.7 |
| 53) | TM | cis-1,3-Dichloropro | 0.411 | 0.422 | 0.431 | 0.449 | 0.460 | 0.477 | 0.442 | 5.6 |
| 54) | S | d8-Toluene | 1.116 | 1.124 | 1.119 | 1.120 | 1.139 | 1.143 | 1.127 | 1.0 |
| 55) | TMC | Toluene | 0.734 | 0.669 | 0.665 | 0.662 | 0.669 | 0.655 | 0.676 | 4.3 |
| 56) | TM | trans-1,3-Dichlorop | 0.309 | 0.329 | 0.348 | 0.391 | 0.406 | 0.414 | 0.366 | 11.8 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.255 | 0.244 | 0.240 | 0.240 | 0.240 | 0.231 | 0.242 | 3.2 |
| 59) | TM | 1,3-Dichloropropane | 0.521 | 0.511 | 0.506 | 0.503 | 0.505 | 0.500 | 0.508 | 1.4 |
| 60) | TM | Tetrachloroethene | 0.302 | 0.270 | 0.266 | 0.267 | 0.273 | 0.272 | 0.275 | 4.9 |
| 61) | TM | Dibromochloromethan | 0.235 | 0.244 | 0.245 | 0.274 | 0.288 | 0.293 | 0.263 | 9.5 |
| 62) | TM | 1,2-Dibromoethane | 0.288 | 0.286 | 0.289 | 0.308 | 0.309 | 0.305 | 0.298 | 3.6 |
| 63) | I | *d5-Chlorobenzene | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | | |
| 64) | TMP | Chlorobenzene | 0.915 | 0.853 | 0.836 | 0.825 | 0.829 | 0.820 | 0.846 | 4.2 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.261 | 0.247 | 0.253 | 0.268 | 0.274 | 0.273 | 0.263 | 4.1 |
| 66) | TMC | Ethylbenzene | 1.549 | 1.441 | 1.419 | 1.411 | 1.390 | 1.358 | 1.428 | 4.6 |
| 67) | TM | m,p-Xylene | 0.558 | 0.513 | 0.516 | 0.518 | 0.513 | 0.502 | 0.520 | 3.7 |
| 68) | TM | o-Xylene | 0.505 | 0.503 | 0.502 | 0.504 | 0.510 | 0.502 | 0.504 | 0.6 |
| 69) | TM | Styrene | 0.926 | 0.883 | 0.901 | 0.902 | 0.907 | 0.898 | 0.903 | 1.5 |
| 70) | TMP | Bromoform | 0.140 | 0.147 | 0.165 | 0.200 | 0.216 | 0.217 | 0.181 | 19.1 |
| 71) | TM | Isopropylbenzene | 1.334 | 1.241 | 1.236 | 1.255 | 1.258 | 1.235 | 1.260 | 2.9 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.449 | 0.449 | 0.450 | 0.483 | 0.482 | 0.466 | 0.463 | 3.5 |
| 73) | S | Bromofluorobenzene | 0.513 | 0.514 | 0.516 | 0.518 | 0.511 | 0.517 | 0.515 | 0.5 |
| 74) | TM | 1,2,3-Trichloroprop | 0.379 | 0.335 | 0.344 | 0.366 | 0.364 | 0.347 | 0.356 | 4.5 |
| 75) | T | trans-1,4-Dichloro- | 0.132 | 0.127 | 0.135 | 0.154 | 0.156 | 0.149 | 0.142 | 8.8 |
| 76) | TM | n-Propylbenzene | 1.733 | 1.596 | 1.602 | 1.609 | 1.625 | 1.601 | 1.628 | 3.2 |
| 77) | TM | Bromobenzene | 0.373 | 0.346 | 0.339 | 0.343 | 0.346 | 0.346 | 0.349 | 3.4 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.026 | 0.976 | 0.970 | 0.966 | 0.974 | 0.964 | 0.979 | 2.3 |
| 79) | TM | 2-Chlorotoluene | 1.228 | 1.094 | 1.106 | 1.058 | 1.097 | 1.059 | 1.107 | 5.6 |
| 80) | TM | 4-Chlorotoluene | 1.080 | 1.008 | 0.980 | 1.000 | 0.983 | 0.983 | 1.006 | 3.7 |
| 81) | TM | tert-butylbenzene | 0.878 | 0.802 | 0.786 | 0.814 | 0.815 | 0.811 | 0.818 | 3.8 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.165 | 1.017 | 1.037 | 1.026 | 1.036 | 1.027 | 1.051 | 5.3 |
| 83) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 84) | TM | sec-butylbenzene | 1.708 | 1.248 | 1.188 | 1.166 | 1.187 | 1.184 | 1.280 | 16.5 |
| 85) | TM | p-isopropyltoluene | 1.112 | 0.979 | 0.947 | 0.946 | 0.963 | 0.976 | 0.987 | 6.3 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Initial Calibration

Calibration Files
1 =B16305SI.D 2 =B16306SI.D 5 =B16307SI.D
20 =B16308SI.D 50 =B16309SI.D 100 =B16310SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.675 | 0.625 | 0.616 | 0.616 | 0.626 | 0.630 | 0.632 | 3.5 |
| 87) | I | 1,4-Dichlorobenzene-d | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.408 | 1.297 | 1.262 | 1.249 | 1.262 | 1.269 | 1.291 | 4.6 |
| 89) | TM | n-butylbenzene | 2.029 | 1.837 | 1.768 | 1.783 | 1.803 | 1.824 | 1.841 | 5.2 |
| 90) | TM | 1,2-Dichlorobenzene | 1.256 | 1.177 | 1.169 | 1.163 | 1.175 | 1.188 | 1.188 | 2.8 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.114 | 0.101 | 0.115 | 0.141 | 0.147 | 0.150 | 0.128 | 16.1 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.694 | 0.633 | 0.620 | 0.650 | 0.665 | 0.695 | 0.659 | 4.7 |
| 95) | TM | Hexachlorobutadiene | 0.196 | 0.164 | 0.156 | 0.158 | 0.159 | 0.165 | 0.166 | 9.0 |
| 96) | TM | Naphthalene | 2.195 | 2.019 | 2.036 | 2.265 | 2.279 | 2.324 | 2.186 | 5.9 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.644 | 0.610 | 0.593 | 0.616 | 0.624 | 0.650 | 0.623 | 3.4 |
| 98) | TM | 1,3,5-Trichlorobenz | 0.753 | 0.684 | 0.684 | 0.691 | 0.708 | 0.731 | 0.708 | 4.0 |

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16305SI.D Vial: 2
Acq On : 19 Jun 2003 12:28 pm Operator: JR
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MT 6/19/03 6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 355149 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 629599 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 564509 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 284397 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 202250 | 18.91 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.55% | | | |
| 54) d8-Toluene | 10.81 | 98 | 702901 | 18.90 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.50% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 289849 | 18.87 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.35% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 3) Chloromethane | 1.83 | 50 | 10896 | 1.09 | ug/L | 100 |
| 4) Vinyl Chloride | 1.93 | 62 | 6600 | 1.17 | ug/L | 98 |
| 5) Bromomethane | 2.40 | 94 | 5175 | 1.38 | ug/L | 91 |
| 12) Acetone | 3.42 | 43 | 11767 | 5.57 | ug/L | 94 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 5868 | 1.04 | ug/L # | 82 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 11275 | 1.02 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 4790 | 6.69 | ug/L | 95 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 9587 | 1.03 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 9123 | 1.00 | ug/L | 97 |
| 29) Chloroform | 6.73 | 83 | 15336 | 1.03 | ug/L | 94 |
| 40) Trichloroethene | 8.96 | 95 | 9649 | 1.02 | ug/L | 93 |
| 60) Tetrachloroethene | 11.94 | 166 | 9514 | 1.06 | ug/L | 95 |
| 64) Chlorobenzene | 13.22 | 112 | 25837 | 1.02 | ug/L | 91 |
| 66) Ethylbenzene | 13.31 | 91 | 43732 | 1.00 | ug/L | 99 |
| 67) m,p-Xylene | 13.44 | 106 | 31486 | 1.99 | ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 10684 | 1.01 | ug/L | 99 |
| 77) Bromobenzene | 15.40 | 156 | 10514 | 1.02 | ug/L | 95 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 34669 | 1.05 | ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 32886 | 1.03 | ug/L | 97 |
| 84) sec-butylbenzene | 16.52 | 105 | 48209 | 1.34 | ug/L | 100 |
| 85) p-isopropyltoluene | 16.74 | 119 | 31393 | 1.08 | ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 16.87 | 146 | 19063 | 1.02 | ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 20021 | 1.04 | ug/L | 98 |
| 89) n-butylbenzene | 17.41 | 91 | 28852 | 1.02 | ug/L | 97 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 9864 | 1.00 | ug/L | 92 |
| 95) Hexachlorobutadiene | 20.61 | 225 | 2791 | 1.11 | ug/L | 92 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 9155 | 1.01 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16305SI.D Vial: 2
Acq On : 19 Jun 2003 12:28 pm Operator: JR
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

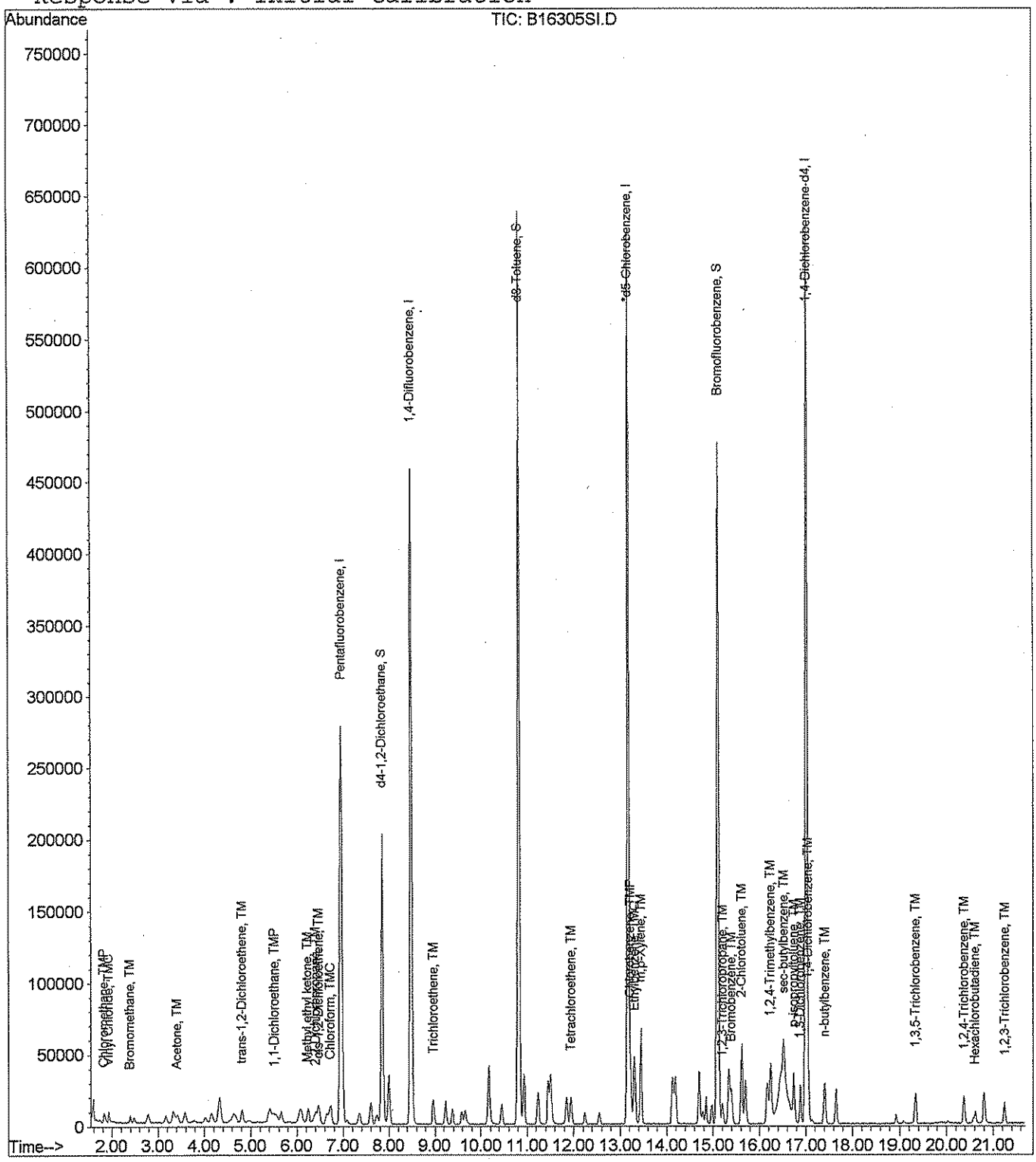
Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 10706 | 1.02 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061903-B\B16305SI.D Vial: 2
Acq On : 19 Jun 2003 12:28 pm Operator: JR
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration






000206

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16306SI.D Vial: 3
Acq On : 19 Jun 2003 12:59 pm Operator: JR
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MT 6/19/03 6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 353476 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 625121 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 563958 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 284993 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 201640 | 18.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.70% | | | |
| 54) d8-Toluene | 10.81 | 98 | 702345 | 19.03 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 95.15% | | | |
| 73) Bromofluorobenzene | 15.10 | 95 | 290018 | 18.90 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 21735 | 1.72 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 19317 | 1.95 | ug/L | 97 |
| 4) Vinyl Chloride | 1.93 | 62 | 10899 | 1.94 | ug/L | 97 |
| 5) Bromomethane | 2.39 | 94 | 7976 | 2.13 | ug/L | 99 |
| 6) Chloroethane | 2.48 | 64 | 7885 | 1.71 | ug/L | 92 |
| 8) Trichlorofluoromethane | 2.79 | 101 | 16454 | 1.73 | ug/L | 94 |
| 9) Diethyl ether | 3.16 | 74 | 5800 | 1.83 | ug/L | 90 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 10175 | 1.78 | ug/L | 97 |
| 12) Acetone | 3.43 | 43 | 19855 | 9.44 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 9436 | 1.75 | ug/L | 97 |
| 14) Methyl iodide | 4.02 | 142 | 16306 | 1.88 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 41886 | 1.77 | ug/L | 98 |
| 17) Carbon Disulfide | 4.31 | 76 | 26826 | 1.71 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 3803 | 1.63 | ug/L | 96 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 28947 | 1.80 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 10400 | 1.85 | ug/L | 98 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 18885 | 1.72 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 9614 | 13.48 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 52723 | 2.44 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.42 | 77 | 17777 | 1.92 | ug/L | 98 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 16810 | 1.86 | ug/L | 94 |
| 27) t-Amyl methyl ether (TAME) | 7.85 | 73 | 45358 | 1.75 | ug/L | 98 |
| 29) Chloroform | 6.72 | 83 | 27423 | 1.84 | ug/L | 99 |
| 30) Bromochloromethane | 6.97 | 128 | 9157 | 1.85 | ug/L | 87 |
| 32) 1,1,1-Trichloroethane | 7.34 | 97 | 19317 | 1.77 | ug/L | 98 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 23018 | 1.75 | ug/L | 98 |
| 35) Carbon Tetrachloride | 7.74 | 119 | 14575 | 1.70 | ug/L | 87 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16306SI.D Vial: 3
Acq On : 19 Jun 2003 12:59 pm Operator: JR
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 37) 1,2-Dichloroethane | 8.00 | 62 | 22836 | 1.86 ug/L | 97 |
| 38) Benzene | 8.01 | 78 | 73048 | 1.82 ug/L | 99 |
| 40) Trichloroethene | 8.96 | 95 | 17673 | 1.88 ug/L | 92 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 19924 | 1.81 ug/L | 97 |
| 42) Methylmethacrylate | 9.39 | 69 | 13099 | 1.65 ug/L | 95 |
| 45) Bromodichloromethane | 9.59 | 83 | 18320 | 1.73 ug/L | 94 |
| 46) Dibromomethane | 9.65 | 93 | 11838 | 1.77 ug/L | 92 |
| 51) 2-Hexanone | 11.51 | 58 | 42876 | 9.11 ug/L | 100 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 41609 | 9.13 ug/L # | 75 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 26387 | 1.73 ug/L | 95 |
| 55) Toluene | 10.93 | 92 | 41848 | 1.82 ug/L | 96 |
| 56) trans-1,3-Dichloropropene | 11.23 | 75 | 20540 | 1.63 ug/L | 94 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 15260 | 1.87 ug/L | 95 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 31974 | 1.85 ug/L | 96 |
| 60) Tetrachloroethene | 11.94 | 166 | 16899 | 1.89 ug/L | 96 |
| 61) Dibromochloromethane | 12.25 | 129 | 15232 | 1.75 ug/L | 96 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 17888 | 1.80 ug/L | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 48118 | 1.91 ug/L | 89 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 13951 | 1.80 ug/L | 94 |
| 66) Ethylbenzene | 13.32 | 91 | 81252 | 1.86 ug/L | 99 |
| 67) m,p-Xylene | 13.44 | 106 | 57859 | 3.66 ug/L | 96 |
| 68) o-Xylene | 14.13 | 106 | 28354 | 1.84 ug/L | 97 |
| 69) Styrene | 14.18 | 104 | 49786 | 1.82 ug/L | 94 |
| 70) Bromoform | 14.69 | 173 | 8264 | 1.60 ug/L | 97 |
| 71) Isopropylbenzene | 14.70 | 105 | 69984 | 1.82 ug/L | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 25301 | 1.84 ug/L | 97 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 18920 | 1.79 ug/L | 96 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 7155 | 1.75 ug/L # | 86 |
| 76) n-Propylbenzene | 15.34 | 91 | 90003 | 1.81 ug/L | 98 |
| 77) Bromobenzene | 15.40 | 156 | 19495 | 1.89 ug/L | 94 |
| 78) 1,3,5-Trimethylbenzene | 15.61 | 105 | 55064 | 1.85 ug/L | 99 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 61680 | 1.87 ug/L | 96 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 56844 | 1.83 ug/L | 100 |
| 81) tert-butylbenzene | 16.17 | 119 | 45225 | 1.82 ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 57382 | 1.80 ug/L | 95 |
| 84) sec-butylbenzene | 16.52 | 105 | 70362 | 1.95 ug/L | 100 |
| 85) p-isopropyltoluene | 16.74 | 119 | 55209 | 1.91 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 35270 | 1.89 ug/L | 99 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 36975 | 1.91 ug/L | 99 |
| 89) n-butylbenzene | 17.40 | 91 | 52349 | 1.85 ug/L | 99 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 33556 | 1.87 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration



000208

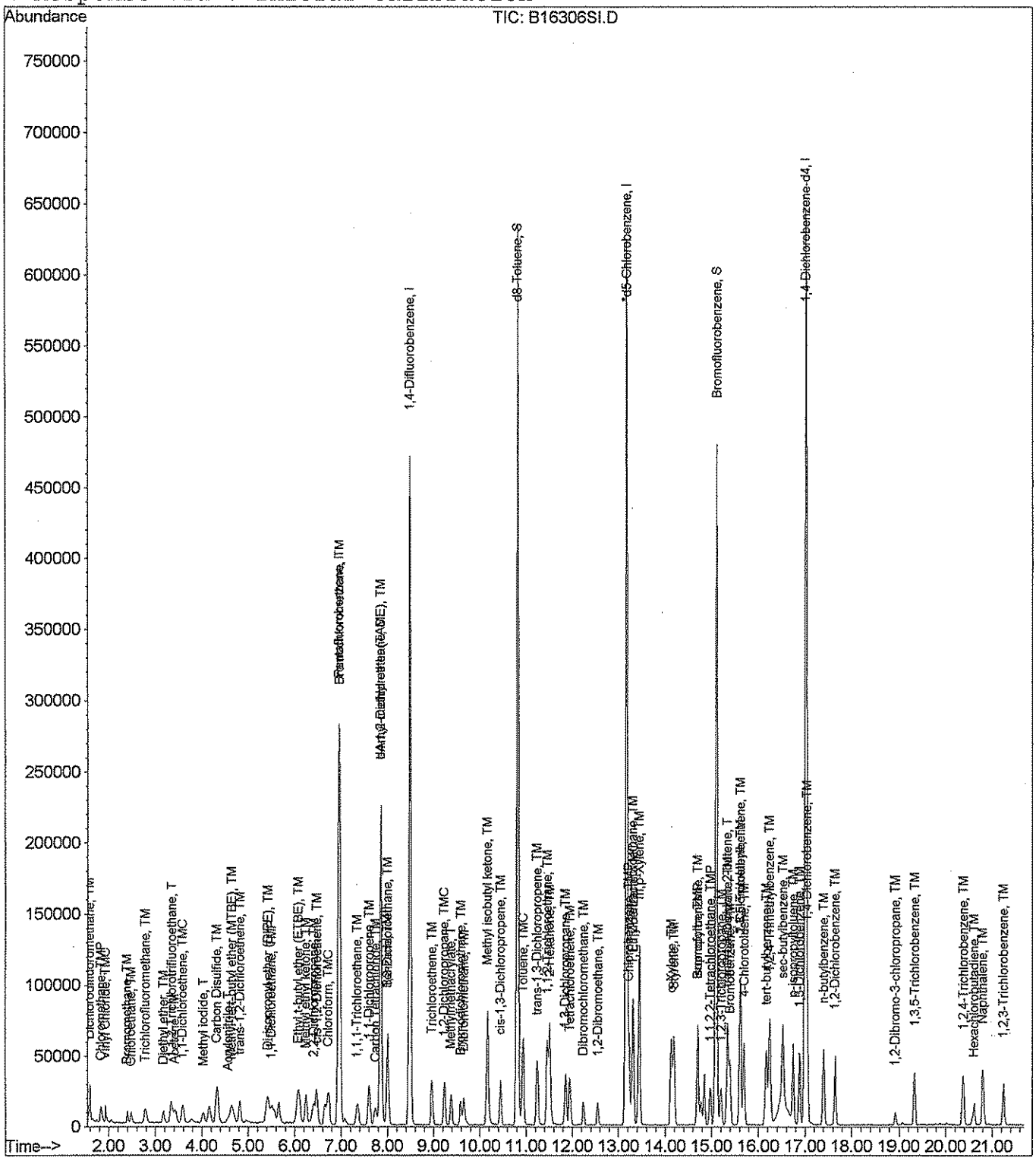
Data File : C:\HPCHEM\1\DATA\061903-B\B16306SI.D Vial: 3
Acq On : 19 Jun 2003 12:59 pm Operator: JR
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 2865 | 1.56 ug/L | 85 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 18026 | 1.83 ug/L | 96 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 4661 | 1.85 ug/L | 96 |
| 96) | Naphthalene | 20.80 | 128 | 57550 | 1.84 ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 17378 | 1.91 ug/L | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.34 | 180 | 19486 | 1.86 ug/L | 99 |

Data File : C:\HPCHEM\1\DATA\061903-B\B16306SI.D Vial: 3
Acq On : 19 Jun 2003 12:59 pm Operator: JR
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration





000210

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16307SI.D Vial: 4
Acq On : 19 Jun 2003 1:29 pm Operator: JR
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MT 6/19/03 6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 352248 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 624798 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 561295 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 286047 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 195812 | 18.46 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 92.30% | | | |
| 54) d8-Toluene | 10.81 | 98 | 699007 | 18.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.70% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 289554 | 18.96 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.80% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 53429 | 4.23 | ug/L | 97 |
| 3) Chloromethane | 1.83 | 50 | 45714 | 4.63 | ug/L | 96 |
| 4) Vinyl Chloride | 1.93 | 62 | 24930 | 4.44 | ug/L | 99 |
| 5) Bromomethane | 2.40 | 94 | 17265 | 4.63 | ug/L | 95 |
| 6) Chloroethane | 2.49 | 64 | 18859 | 4.10 | ug/L | 96 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 12075 | 22.36 | ug/L # | 87 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 40048 | 4.23 | ug/L | 97 |
| 9) Diethyl ether | 3.17 | 74 | 14053 | 4.45 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 25219 | 4.44 | ug/L | 99 |
| 12) Acetone | 3.42 | 43 | 45862 | 21.88 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 22969 | 4.27 | ug/L | 92 |
| 14) Methyl iodide | 4.03 | 142 | 42273 | 4.89 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.43 | 45 | 108363 | 4.59 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 35249 | 4.69 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 69882 | 4.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 10388 | 4.47 | ug/L | 93 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 71462 | 4.47 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 24956 | 4.46 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 49384 | 4.50 | ug/L | 100 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 15350 | 21.60 | ug/L | 96 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 98006 | 4.54 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 39344 | 4.27 | ug/L | 93 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 39756 | 4.42 | ug/L | 97 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 114561 | 4.43 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 65995 | 4.45 | ug/L | 98 |
| 30) Bromochloromethane | 6.97 | 128 | 22302 | 4.52 | ug/L | 98 |
| 31) Tetrahydrofuran | 7.08 | 71 | 4500 | 4.46 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration



000211

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16307SI.D Vial: 4
Acq On : 19 Jun 2003 1:29 pm Operator: JR
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 46963 | 4.32 ug/L | 97 |
| 34) 1,1-Dichloropropene | 7.61 | 75 | 57657 | 4.39 ug/L | 99 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 36247 | 4.24 ug/L | 98 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 54535 | 4.45 ug/L | 99 |
| 38) Benzene | 8.00 | 78 | 177076 | 4.44 ug/L | 98 |
| 40) Trichloroethene | 8.97 | 95 | 42483 | 4.53 ug/L | 99 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 49249 | 4.47 ug/L | 99 |
| 42) Methylmethacrylate | 9.38 | 69 | 35341 | 4.46 ug/L | 98 |
| 45) Bromodichloromethane | 9.59 | 83 | 46453 | 4.38 ug/L | 97 |
| 46) Dibromomethane | 9.66 | 93 | 29620 | 4.43 ug/L | 90 |
| 51) 2-Hexanone | 11.51 | 58 | 108932 | 23.15 ug/L | 99 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 104686 | 22.98 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 10.45 | 75 | 67247 | 4.42 ug/L | 100 |
| 55) Toluene | 10.93 | 92 | 103835 | 4.53 ug/L | 99 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 54398 | 4.32 ug/L | 99 |
| 58) 1,1,2-Trichloroethane | 11.45 | 83 | 37480 | 4.60 ug/L | 97 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 79037 | 4.59 ug/L | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 41592 | 4.65 ug/L | 99 |
| 61) Dibromochloromethane | 12.24 | 129 | 38228 | 4.40 ug/L | 99 |
| 62) 1,2-Dibromoethane | 12.56 | 107 | 45190 | 4.56 ug/L | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 117291 | 4.68 ug/L | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 35523 | 4.62 ug/L | 98 |
| 66) Ethylbenzene | 13.31 | 91 | 199125 | 4.59 ug/L | 100 |
| 67) m,p-Xylene | 13.44 | 106 | 144747 | 9.21 ug/L | 97 |
| 68) o-Xylene | 14.12 | 106 | 70453 | 4.59 ug/L | 98 |
| 69) Styrene | 14.18 | 104 | 126428 | 4.65 ug/L | 99 |
| 70) Bromoform | 14.70 | 173 | 23210 | 4.52 ug/L | 100 |
| 71) Isopropylbenzene | 14.70 | 105 | 173502 | 4.53 ug/L | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 63210 | 4.63 ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 48334 | 4.59 ug/L | 97 |
| 75) trans-1,4-Dichloro-2-buten | 15.32 | 53 | 18993 | 4.66 ug/L | 94 |
| 76) n-Propylbenzene | 15.35 | 91 | 224736 | 4.54 ug/L | 97 |
| 77) Bromobenzene | 15.40 | 156 | 47581 | 4.64 ug/L | 99 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 136083 | 4.59 ug/L | 98 |
| 79) 2-Chlorotoluene | 15.61 | 91 | 155178 | 4.74 ug/L | 99 |
| 80) 4-Chlorotoluene | 15.69 | 91 | 137506 | 4.45 ug/L | 99 |
| 81) tert-butylbenzene | 16.17 | 119 | 110342 | 4.47 ug/L | 96 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 145513 | 4.58 ug/L | 99 |
| 84) sec-butylbenzene | 16.51 | 105 | 166688 | 4.64 ug/L | 99 |
| 85) p-isopropyltoluene | 16.74 | 119 | 132823 | 4.61 ug/L | 99 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 86422 | 4.66 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061903-B\B16307SI.D Vial: 4
Acq On : 19 Jun 2003 1:29 pm Operator: JR
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

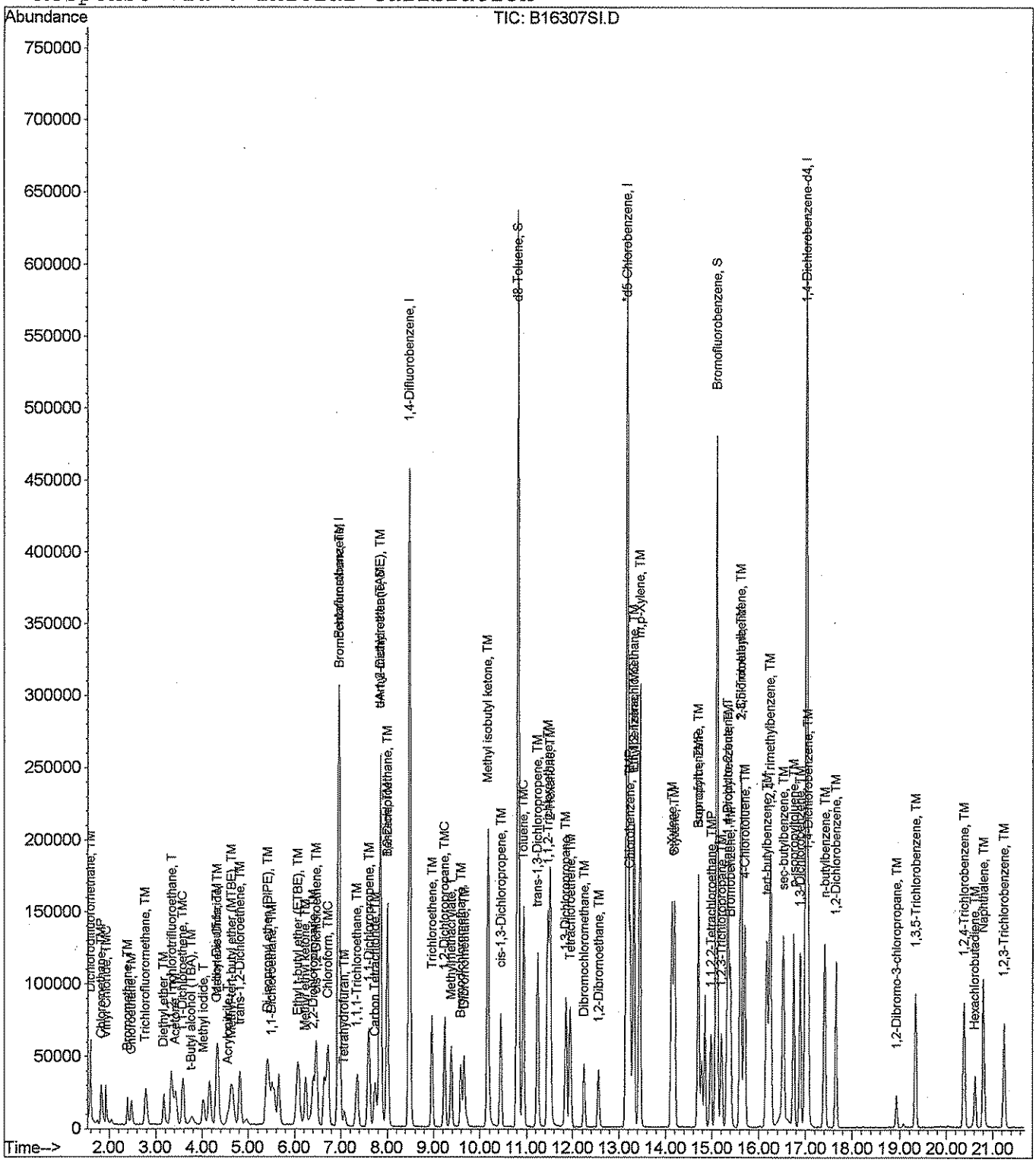
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 90221 | 4.65 | ug/L | 98 |
| 89) | n-butylbenzene | 17.40 | 91 | 126417 | 4.45 | ug/L | 99 |
| 90) | 1,2-Dichlorobenzene | 17.64 | 146 | 83567 | 4.64 | ug/L | 98 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 8257 | 4.49 | ug/L | 88 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 44364 | 4.49 | ug/L | 93 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 11157 | 4.40 | ug/L | 100 |
| 96) | Naphthalene | 20.80 | 128 | 145581 | 4.64 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 42421 | 4.64 | ug/L | 93 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 48904 | 4.64 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903-B\B16307SI.D Vial: 4
Acq On : 19 Jun 2003 1:29 pm Operator: JR
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration






000214

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16308SI.D Vial: 5
Acq On : 19 Jun 2003 2:03 pm Operator: JR
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MT 6/19/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 348273 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 614988 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 556148 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 285216 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.83 | 65 | 195355 | 18.63 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 93.15% | | | |
| 54) d8-Toluene | 10.80 | 98 | 688726 | 18.96 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.80% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 288097 | 19.04 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 95.20% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 207936 | 16.67 | ug/L | 99 |
| 3) Chloromethane | 1.82 | 50 | 163661 | 16.75 | ug/L | 97 |
| 4) Vinyl Chloride | 1.92 | 62 | 77667 | 14.00 | ug/L | 99 |
| 5) Bromomethane | 2.37 | 94 | 61775 | 16.74 | ug/L | 97 |
| 6) Chloroethane | 2.46 | 64 | 67960 | 14.96 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.74 | 59 | 59156 | 110.78 | ug/L | 99 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 149842 | 16.01 | ug/L | 99 |
| 9) Diethyl ether | 3.14 | 74 | 52320 | 16.76 | ug/L | 100 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.32 | 101 | 90031 | 16.02 | ug/L | 98 |
| 11) Acrolein | 3.30 | 56 | 112035 | 82.15 | ug/L | 98 |
| 12) Acetone | 3.40 | 43 | 191457 | 92.38 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.55 | 96 | 85831 | 16.13 | ug/L | 98 |
| 14) Methyl iodide | 4.00 | 142 | 157151 | 18.37 | ug/L | 100 |
| 15) Di-isopropyl ether (DIPE) | 5.39 | 45 | 383628 | 16.42 | ug/L | 99 |
| 16) Methylene Chloride | 4.31 | 84 | 114790 | 15.43 | ug/L | 99 |
| 17) Carbon Disulfide | 4.27 | 76 | 276928 | 17.92 | ug/L | 100 |
| 18) Acrylonitrile | 4.53 | 53 | 41470 | 18.07 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.62 | 73 | 269347 | 17.04 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.80 | 96 | 95825 | 17.33 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 5.49 | 63 | 180845 | 16.67 | ug/L | 98 |
| 22) Vinyl acetate | 5.54 | 86 | 16463 | 26.88 | ug/L | 88 |
| 23) Methyl ethyl ketone | 6.22 | 72 | 69472 | 98.89 | ug/L | 93 |
| 24) Ethyl t-butyl ether (ETBE) | 6.05 | 59 | 353791 | 16.58 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.38 | 77 | 166146 | 18.23 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.45 | 96 | 160489 | 18.03 | ug/L | 98 |
| 27) t-Amyl methyl ether (TAME) | 7.82 | 73 | 458495 | 17.92 | ug/L | 99 |
| 29) Chloroform | 6.71 | 83 | 262800 | 17.94 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16308SI.D Vial: 5
Acq On : 19 Jun 2003 2:03 pm Operator: JR
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 6.96 | 128 | 88603 | 18.16 | ug/L | | 98 |
| 31) | Tetrahydrofuran | 7.06 | 71 | 20757 | 20.82 | ug/L | | 97 |
| 32) | 1,1,1-Trichloroethane | 7.33 | 97 | 187143 | 17.40 | ug/L | | 96 |
| 34) | 1,1-Dichloropropene | 7.59 | 75 | 221507 | 17.07 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 151006 | 17.88 | ug/L | | 97 |
| 37) | 1,2-Dichloroethane | 7.97 | 62 | 212107 | 17.51 | ug/L | | 99 |
| 38) | Benzene | 7.98 | 78 | 676071 | 17.13 | ug/L | | 99 |
| 40) | Trichloroethene | 8.95 | 95 | 163980 | 17.76 | ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.22 | 63 | 189480 | 17.47 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.37 | 69 | 156099 | 20.00 | ug/L | | 98 |
| 45) | Bromodichloromethane | 9.58 | 83 | 192281 | 18.44 | ug/L | | 99 |
| 46) | Dibromomethane | 9.64 | 93 | 121382 | 18.45 | ug/L | | 99 |
| 50) | 2-Chloroethylvinyl ether | 10.15 | 63 | 1260 | 24.04 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 499225 | 107.79 | ug/L | | 98 |
| 52) | Methyl isobutyl ketone | 10.15 | 58 | 473759 | 105.67 | ug/L | | 98 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 276323 | 18.45 | ug/L | | 100 |
| 55) | Toluene | 10.92 | 92 | 406981 | 18.02 | ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 240268 | 19.37 | ug/L | | 100 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 147293 | 18.36 | ug/L | | 98 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 309594 | 18.25 | ug/L | | 100 |
| 60) | Tetrachloroethene | 11.94 | 166 | 164405 | 18.67 | ug/L | | 99 |
| 61) | Dibromochloromethane | 12.23 | 129 | 168623 | 19.73 | ug/L | | 99 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 189627 | 19.44 | ug/L | | 100 |
| 64) | Chlorobenzene | 13.22 | 112 | 458813 | 18.47 | ug/L | | 100 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 148948 | 19.54 | ug/L | | 99 |
| 66) | Ethylbenzene | 13.31 | 91 | 784449 | 18.25 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 576285 | 36.99 | ug/L | | 96 |
| 68) | o-Xylene | 14.13 | 106 | 280171 | 18.44 | ug/L | | 100 |
| 69) | Styrene | 14.17 | 104 | 501839 | 18.64 | ug/L | | 100 |
| 70) | Bromoform | 14.69 | 173 | 111423 | 21.89 | ug/L | | 99 |
| 71) | Isopropylbenzene | 14.70 | 105 | 697789 | 18.38 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.96 | 83 | 268877 | 19.88 | ug/L | | 99 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 203377 | 19.51 | ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 85885 | 21.28 | ug/L | | 96 |
| 76) | n-Propylbenzene | 15.34 | 91 | 895010 | 18.27 | ug/L | | 99 |
| 77) | Bromobenzene | 15.39 | 156 | 190705 | 18.78 | ug/L | | 97 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 537031 | 18.28 | ug/L | | 100 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 588452 | 18.13 | ug/L | | 97 |
| 80) | 4-Chlorotoluene | 15.69 | 91 | 556206 | 18.16 | ug/L | | 97 |
| 81) | tert-butylbenzene | 16.17 | 119 | 452878 | 18.50 | ug/L | | 98 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 570849 | 18.12 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16308SI.D Vial: 5
Acq On : 19 Jun 2003 2:03 pm Operator: JR
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.51 | 105 | 648277 | 18.23 | ug/L | 100 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 525904 | 18.40 | ug/L | 99 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 342808 | 18.68 | ug/L | 99 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 356267 | 18.41 | ug/L | 98 |
| 89) | n-butylbenzene | 17.40 | 91 | 508423 | 17.94 | ug/L | 99 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 331662 | 18.48 | ug/L | 98 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 40311 | 21.98 | ug/L | 94 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 185508 | 18.83 | ug/L | 97 |
| 95) | Hexachlorobutadiene | 20.61 | 225 | 45173 | 17.88 | ug/L | 97 |
| 96) | Naphthalene | 20.80 | 128 | 646008 | 20.63 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 175578 | 19.26 | ug/L | 100 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 197013 | 18.77 | ug/L | 99 |

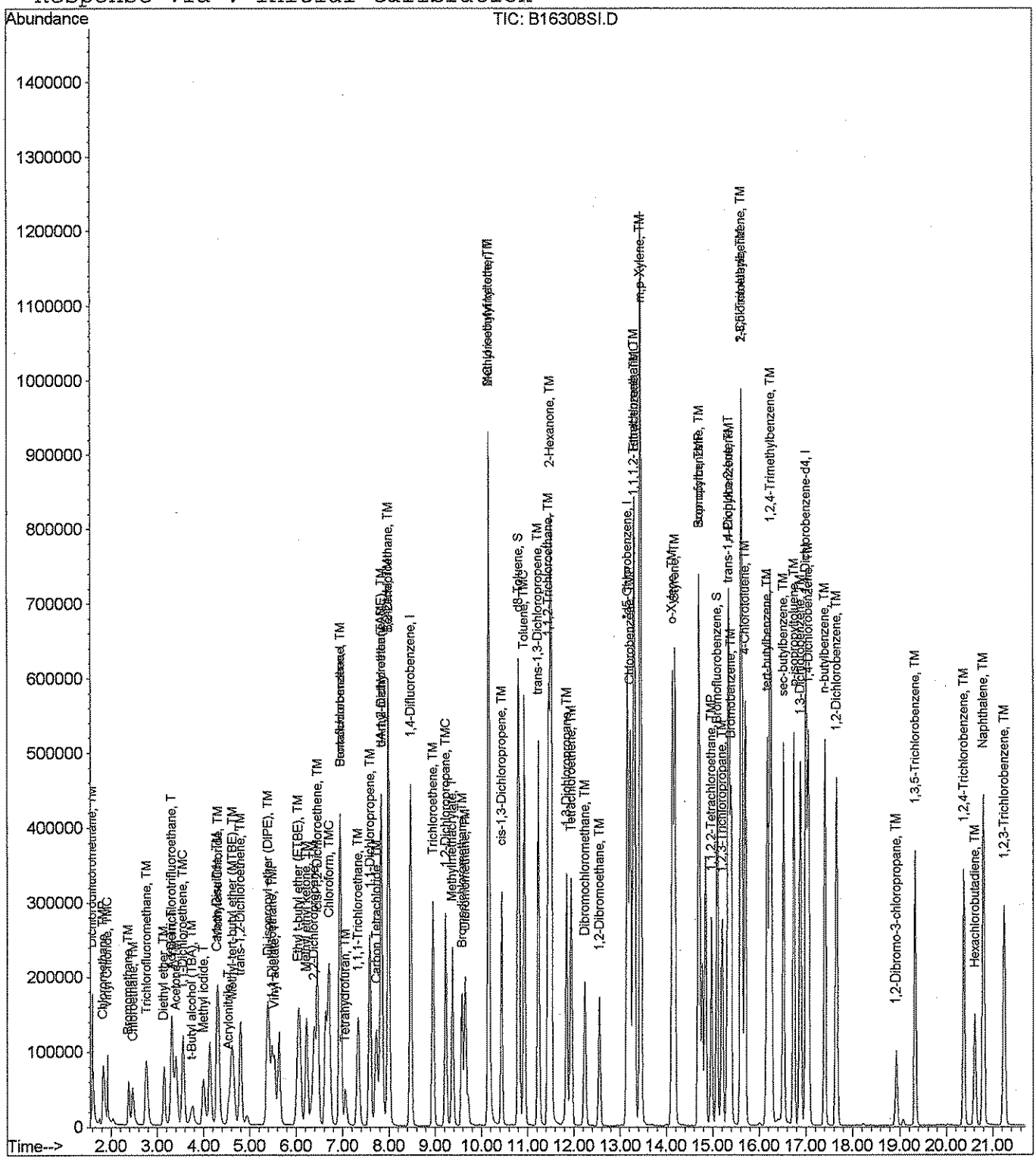
(#) = qualifier out of range (m) = manual integration



000217

Data File : C:\HPCHEM\1\DATA\061903-B\B16308SI.D Vial: 5
Acq On : 19 Jun 2003 2:03 pm Operator: JR
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration






000218

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16309SI.D Vial: 6
Acq On : 19 Jun 2003 2:35 pm Operator: JR
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MTS 6/19/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.96 | 168 | 347478 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 603936 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 554218 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 287518 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 186085 | 17.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 88.90% | | | |
| 54) d8-Toluene | 10.81 | 98 | 688019 | 19.29 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.45% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 283164 | 18.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 93.90% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 501477 | 40.29 | ug/L | 100 |
| 3) Chloromethane | 1.82 | 50 | 400391 | 41.07 | ug/L | 98 |
| 4) Vinyl Chloride | 1.92 | 62 | 188353 | 34.03 | ug/L | 98 |
| 5) Bromomethane | 2.37 | 94 | 147408 | 40.04 | ug/L | 100 |
| 6) Chloroethane | 2.46 | 64 | 169101 | 37.31 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.79 | 59 | 165958 | 311.50 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.76 | 101 | 376261 | 40.29 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 125922 | 40.42 | ug/L | 99 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 210909 | 37.61 | ug/L | 98 |
| 11) Acrolein | 3.32 | 56 | 280717 | 206.30 | ug/L | 99 |
| 12) Acetone | 3.42 | 43 | 492703 | 238.27 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 218021 | 41.08 | ug/L | 97 |
| 14) Methyl iodide | 4.02 | 142 | 428938 | 50.26 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 963993 | 41.36 | ug/L | 99 |
| 16) Methylene Chloride | 4.33 | 84 | 282559 | 38.07 | ug/L | 98 |
| 17) Carbon Disulfide | 4.29 | 76 | 715579 | 46.41 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 107951 | 47.14 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 654639 | 41.51 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 235207 | 42.64 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 451019 | 41.67 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 43425 | 71.06 | ug/L | 98 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 180274 | 257.21 | ug/L | 98 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 887620 | 41.70 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 313763 | 34.50 | ug/L | 98 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 280146 | 31.54 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 1140985 | 44.70 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 489105 | 33.46 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration



000219

Data File : C:\HPCHEM\1\DATA\061903-B\B16309SI.D Vial: 6
Acq On : 19 Jun 2003 2:35 pm Operator: JR
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 6.97 | 128 | 212665 | 43.69 | ug/L | | 94 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 54274 | 54.56 | ug/L | | 95 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 454031 | 42.31 | ug/L | | 95 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 533907 | 41.25 | ug/L | | 99 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 371246 | 44.06 | ug/L | | 100 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 500985 | 41.45 | ug/L | | 100 |
| 38) | Benzene | 8.00 | 78 | 1631672 | 41.43 | ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 399932 | 44.11 | ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 459565 | 43.16 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.38 | 69 | 399000 | 52.06 | ug/L | | 97 |
| 45) | Bromodichloromethane | 9.59 | 83 | 485749 | 47.43 | ug/L | | 100 |
| 46) | Dibromomethane | 9.66 | 93 | 298737 | 46.23 | ug/L | | 93 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 3097 | 60.16 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.51 | 58 | 1236127 | 271.78 | ug/L | | 98 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 1174045 | 266.66 | ug/L | | 97 |
| 53) | cis-1,3-Dichloropropene | 10.45 | 75 | 694647 | 47.24 | ug/L | | 98 |
| 55) | Toluene | 10.93 | 92 | 1009622 | 45.53 | ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.23 | 75 | 612281 | 50.28 | ug/L | | 100 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 362602 | 46.02 | ug/L | | 97 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 761720 | 45.73 | ug/L | | 100 |
| 60) | Tetrachloroethene | 11.94 | 166 | 412187 | 47.67 | ug/L | | 98 |
| 61) | Dibromochloromethane | 12.24 | 129 | 435319 | 51.87 | ug/L | | 99 |
| 62) | 1,2-Dibromoethane | 12.56 | 107 | 466196 | 48.68 | ug/L | | 100 |
| 64) | Chlorobenzene | 13.22 | 112 | 1148944 | 46.40 | ug/L | | 99 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 379422 | 49.95 | ug/L | | 99 |
| 66) | Ethylbenzene | 13.32 | 91 | 1925524 | 44.95 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 1420802 | 91.52 | ug/L | | 94 |
| 68) | o-Xylene | 14.12 | 106 | 706822 | 46.67 | ug/L | | 97 |
| 69) | Styrene | 14.18 | 104 | 1257084 | 46.85 | ug/L | | 99 |
| 70) | Bromoform | 14.70 | 173 | 299386 | 59.02 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 1742593 | 46.05 | ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 667210 | 49.50 | ug/L | | 100 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 504504 | 48.57 | ug/L | | 100 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 216371 | 53.79 | ug/L | | 94 |
| 76) | n-Propylbenzene | 15.35 | 91 | 2251810 | 46.12 | ug/L | | 97 |
| 77) | Bromobenzene | 15.40 | 156 | 479133 | 47.34 | ug/L | | 97 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 1349021 | 46.09 | ug/L | | 99 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 1519452 | 46.97 | ug/L | | 98 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 1362361 | 44.64 | ug/L | | 97 |
| 81) | tert-butylbenzene | 16.17 | 119 | 1128810 | 46.28 | ug/L | | 98 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 1435685 | 45.74 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061903-B\B16309SI.D Vial: 6
Acq On : 19 Jun 2003 2:35 pm Operator: JR
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Thu Jun 12 13:37:38 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

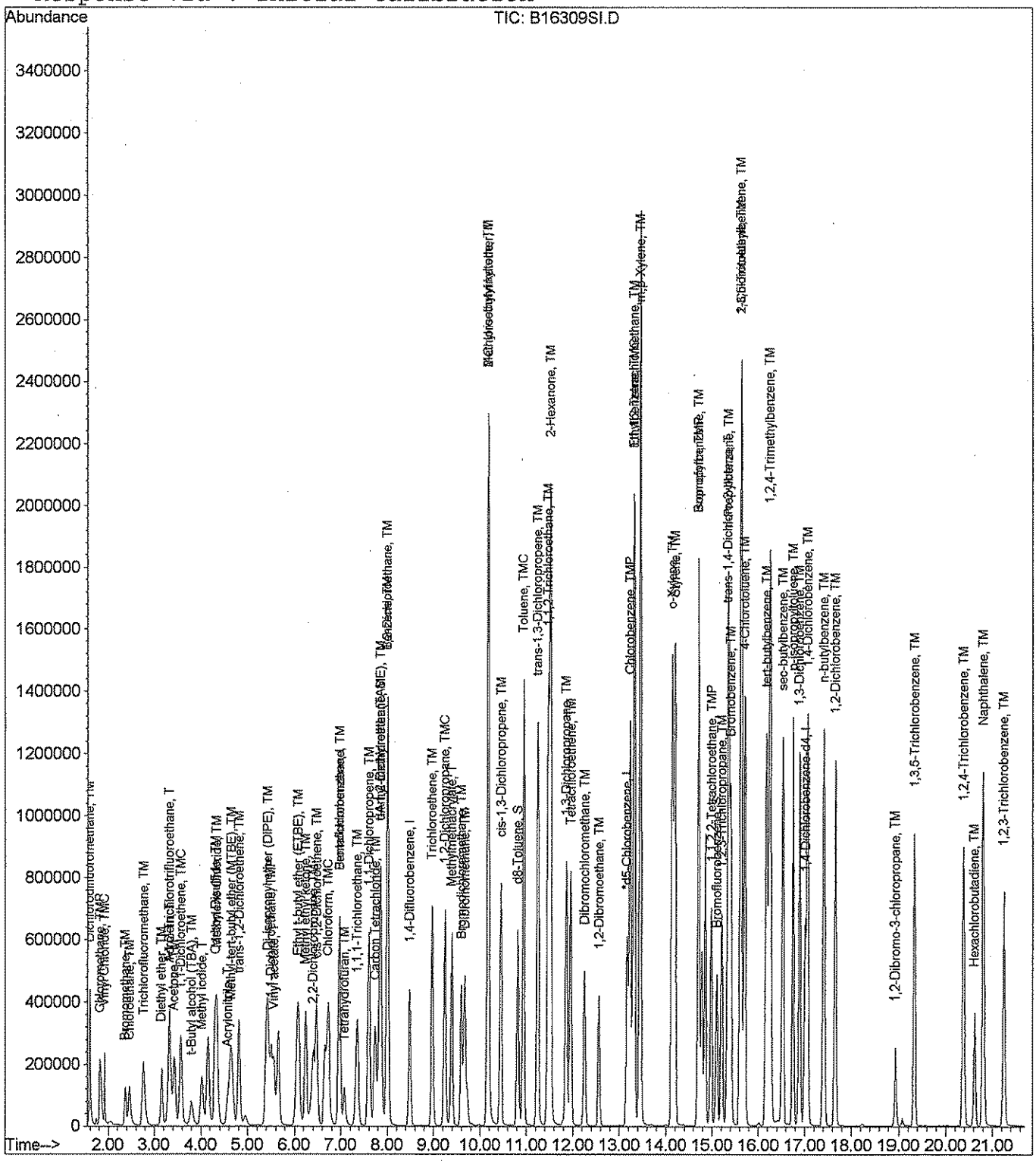
| | Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 1644705 | 46.40 ug/L | 99 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 1334621 | 46.86 ug/L | 99 |
| 86) | 1,3-Dichlorobenzene | 16.89 | 146 | 868040 | 47.45 ug/L | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 907058 | 46.51 ug/L | 99 |
| 89) | n-butylbenzene | 17.40 | 91 | 1296069 | 45.35 ug/L | 99 |
| 90) | 1,2-Dichlorobenzene | 17.64 | 146 | 844875 | 46.70 ug/L | 99 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 106018 | 57.35 ug/L | 98 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 477874 | 48.11 ug/L | 99 |
| 95) | Hexachlorobutadiene | 20.61 | 225 | 114512 | 44.97 ug/L | 97 |
| 96) | Naphthalene | 20.80 | 128 | 1638307 | 51.90 ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 448181 | 48.76 ug/L | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 508706 | 48.07 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903-B\B16309SI.D Vial: 6
Acq On : 19 Jun 2003 2:35 pm Operator: JR
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:23 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration






000222

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16310SI.D Vial: 7
Acq On : 19 Jun 2003 3:07 pm Operator: JR
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:35 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

MT 6/19/03

6.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.94 | 168 | 344533 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.47 | 114 | 601295 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.17 | 117 | 548510 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 284139 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 197330 | 19.02 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 95.10% | | | |
| 54) d8-Toluene | 10.81 | 98 | 687014 | 19.35 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.75% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 283493 | 18.99 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 94.95% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 947699 | 76.80 | ug/L | 100 |
| 3) Chloromethane | 1.82 | 50 | 794871 | 82.22 | ug/L | 99 |
| 4) Vinyl Chloride | 1.92 | 62 | 338414 | 61.66 | ug/L | 99 |
| 5) Bromomethane | 2.35 | 94 | 293666 | 80.44 | ug/L | 100 |
| 6) Chloroethane | 2.45 | 64 | 297071 | 66.11 | ug/L | 100 |
| 7) t-Butyl alcohol (TBA) | 3.85 | 59 | 314271 | 594.92 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.74 | 101 | 732789 | 79.14 | ug/L | 98 |
| 9) Diethyl ether | 3.17 | 74 | 264348 | 85.58 | ug/L | 99 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.32 | 101 | 436116 | 78.44 | ug/L | 98 |
| 11) Acrolein | 3.33 | 56 | 564810 | 418.63 | ug/L | 99 |
| 12) Acetone | 3.44 | 43 | 987330 | 481.56 | ug/L | 99 |
| 13) 1,1-Dichloroethene | 3.55 | 96 | 439894 | 83.59 | ug/L | 98 |
| 14) Methyl iodide | 4.01 | 142 | 851018 | 100.57 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 1923062 | 83.21 | ug/L | 99 |
| 16) Methylene Chloride | 4.32 | 84 | 566972 | 77.05 | ug/L | 99 |
| 17) Carbon Disulfide | 4.28 | 76 | 1482820 | 97.00 | ug/L | 100 |
| 18) Acrylonitrile | 4.57 | 53 | 225544 | 99.34 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 1393023 | 89.09 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 4.80 | 96 | 490566 | 89.70 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 910981 | 84.88 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 91869 | 151.61 | ug/L | 99 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 358051 | 515.22 | ug/L | 98 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 1789005 | 84.77 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 664973 | 73.74 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 578016 | 65.63 | ug/L | 93 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 2268832 | 89.65 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 1292825 | 89.19 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration



090223

Data File : C:\HPCHEM\1\DATA\061903-B\B16310SI.D Vial: 7
Acq On : 19 Jun 2003 3:07 pm Operator: JR
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:35 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 6.96 | 128 | 437118 | 90.56 ug/L | | 98 |
| 31) | Tetrahydrofuran | 7.08 | 71 | 108452 | 109.95 ug/L | | 95 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 963179 | 90.52 ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 1091955 | 85.08 ug/L | | 99 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 788503 | 94.37 ug/L | | 99 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 1053969 | 87.94 ug/L | | 100 |
| 38) | Benzene | 8.00 | 78 | 3185205 | 81.56 ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 804169 | 89.09 ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 927481 | 87.49 ug/L | | 99 |
| 42) | Methylmethacrylate | 9.38 | 69 | 771846 | 101.15 ug/L | | 98 |
| 45) | Bromodichloromethane | 9.59 | 83 | 1022840 | 100.30 ug/L | | 100 |
| 46) | Dibromomethane | 9.66 | 93 | 608799 | 94.63 ug/L | | 92 |
| 50) | 2-Chloroethylvinyl ether | 10.17 | 63 | 5849 | 114.11 ug/L | # | 1 |
| 51) | 2-Hexanone | 11.51 | 58 | 2251872 | 497.28 ug/L | | 98 |
| 52) | Methyl isobutyl ketone | 10.17 | 58 | 2149759 | 490.41 ug/L | | 96 |
| 53) | cis-1,3-Dichloropropene | 10.45 | 75 | 1433397 | 97.91 ug/L | | 97 |
| 55) | Toluene | 10.93 | 92 | 1967849 | 89.13 ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 1244099 | 102.61 ug/L | | 100 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 694337 | 88.51 ug/L | | 98 |
| 59) | 1,3-Dichloropropane | 11.86 | 76 | 1502859 | 90.61 ug/L | | 100 |
| 60) | Tetrachloroethene | 11.94 | 166 | 818340 | 95.05 ug/L | | 97 |
| 61) | Dibromochloromethane | 12.24 | 129 | 880929 | 105.43 ug/L | | 99 |
| 62) | 1,2-Dibromoethane | 12.56 | 107 | 918084 | 96.29 ug/L | | 100 |
| 64) | Chlorobenzene | 13.23 | 112 | 2248422 | 91.75 ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 748018 | 99.50 ug/L | | 99 |
| 66) | Ethylbenzene | 13.32 | 91 | 3724205 | 87.84 ug/L | | 100 |
| 67) | m,p-Xylene | 13.44 | 106 | 2751725 | 179.09 ug/L | | 94 |
| 68) | o-Xylene | 14.12 | 106 | 1376045 | 91.81 ug/L | | 98 |
| 69) | Styrene | 14.18 | 104 | 2463295 | 92.75 ug/L | | 99 |
| 70) | Bromoform | 14.70 | 173 | 595287 | 118.58 ug/L | | 100 |
| 71) | Isopropylbenzene | 14.71 | 105 | 3387625 | 90.46 ug/L | | 98 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 1277663 | 95.77 ug/L | | 99 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 950725 | 92.47 ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 409647 | 102.90 ug/L | | 92 |
| 76) | n-Propylbenzene | 15.35 | 91 | 4389463 | 90.83 ug/L | | 97 |
| 77) | Bromobenzene | 15.40 | 156 | 948033 | 94.65 ug/L | # | 88 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 2644517 | 91.28 ug/L | | 98 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 2903025 | 90.67 ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 2697005 | 89.29 ug/L | | 97 |
| 81) | tert-butylbenzene | 16.17 | 119 | 2225165 | 92.19 ug/L | | 95 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 2815895 | 90.64 ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061903-B\B16310SI.D Vial: 7
Acq On : 19 Jun 2003 3:07 pm Operator: JR
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:35 2003 Quant Results File: V806193B.

Quant Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration
DataAcq Meth : V806193B

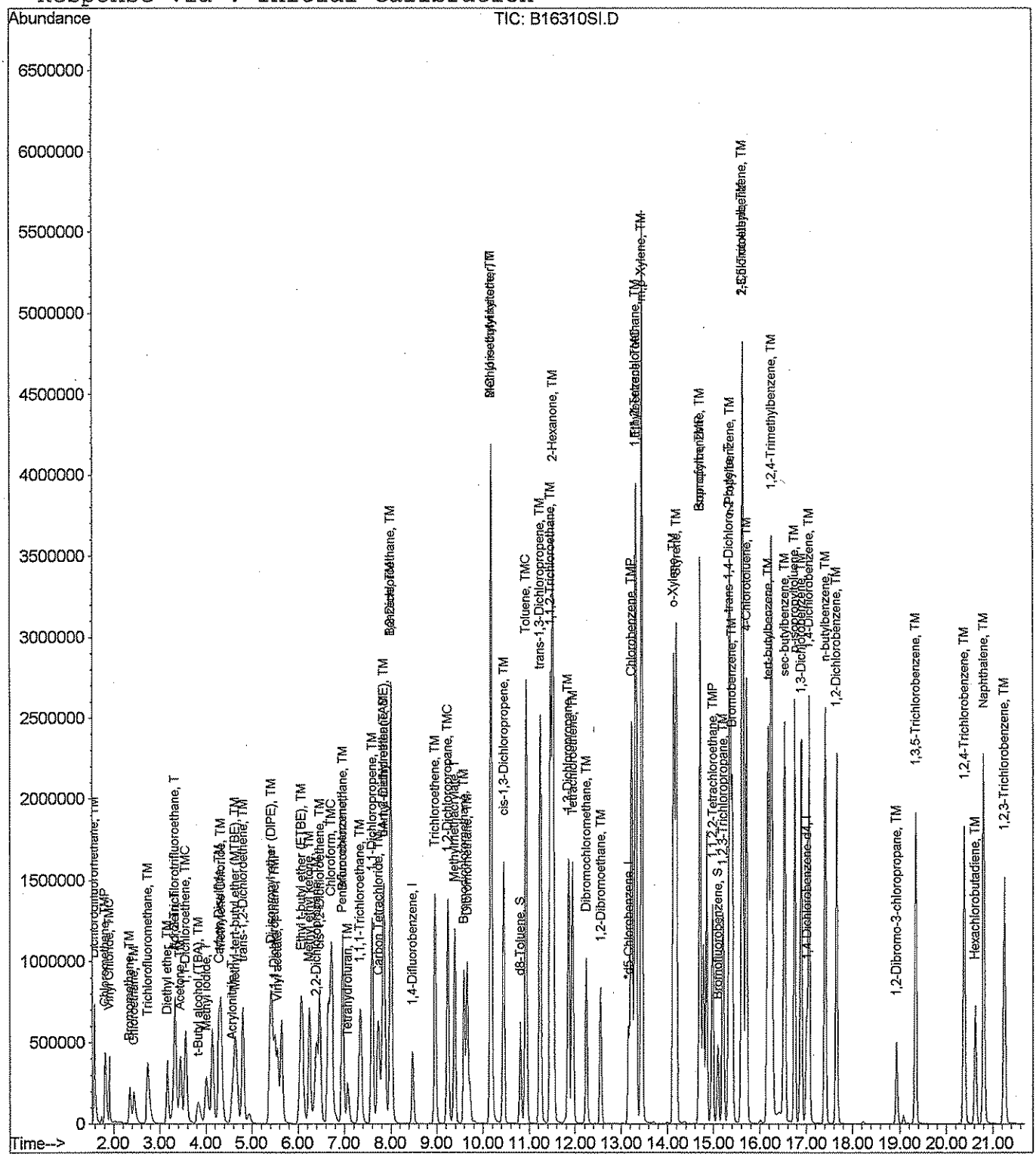
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 3246791 | 92.56 | ug/L | 98 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 2677905 | 95.01 | ug/L | 99 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 1727168 | 95.40 | ug/L | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 1803414 | 93.56 | ug/L | 99 |
| 89) | n-butylbenzene | 17.41 | 91 | 2591626 | 91.77 | ug/L | 97 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 1687749 | 94.39 | ug/L | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 213298 | 116.75 | ug/L | 91 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 987391 | 100.60 | ug/L | 99 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 234318 | 93.11 | ug/L | 99 |
| 96) | Naphthalene | 20.80 | 128 | 3301873 | 105.85 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 922908 | 101.60 | ug/L | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 1038554 | 99.30 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061903-B\B16310SI.D Vial: 7
Acq On : 19 Jun 2003 3:07 pm Operator: JR
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 19 15:35 2003 Quant Results File: V806193B.

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 07:31:55 2003
Response via : Initial Calibration






000226

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062003-B\B16330SC.D  Vial: 4
Acq On : 20 Jun 2003 10:18 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

6.23.07

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.597 | 0.729 | -22.1# | 120 | 0.00 |
| 3 | TMP | Chloromethane | 0.512 | 0.568 | -10.9 | 119 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.246 | 0.284 | -15.4 | 125 | 0.01 |
| 5 | TM | Bromomethane | 0.205 | 0.216 | -5.4 | 120 | 0.02 |
| 6 | TM | Chloroethane | 0.207 | 0.237 | -14.5 | 120 | 0.02 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.032 | 0.037# | -15.6 | 107 | 0.02 |
| 8 | TM | Trichlorofluoromethane | 0.448 | 0.517 | -15.4 | 118 | 0.00 |
| 9 | TM | Diethyl ether | 0.157 | 0.184 | -17.2 | 121 | 0.02 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.272 | 0.326 | -19.9 | 124 | 0.03 |
| 11 | T | Acrolein | 0.064 | 0.079# | -23.4# | 121 | 0.02 |
| 12 | TM | Acetone | 0.115 | 0.123 | -7.0 | 110 | 0.03 |
| 13 | TMC | 1,1-Dichloroethene | 0.263 | 0.302 | -14.8 | 121 | 0.02 |
| 14 | T | Methyl iodide | 0.475 | 0.583 | -22.7# | 127 | 0.02 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.175 | 1.306 | -11.1 | 117 | 0.02 |
| 16 | TM | Methylene Chloride | 0.369 | 0.441 | -19.5 | 132 | 0.02 |
| 17 | TM | Carbon Disulfide | 0.806 | 0.989 | -22.7# | 122 | 0.02 |
| 18 | T | Acrylonitrile | 0.119 | 0.135 | -13.4 | 112 | 0.02 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.803 | 0.912 | -13.6 | 116 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.290 | 0.329 | -13.4 | 118 | 0.02 |
| 21 | TMP | 1,1-Dichloroethane | 0.550 | 0.620 | -12.7 | 118 | 0.02 |
| 22 | T | Vinyl acetate | 0.047 | 0.062# | -31.9# | 128 | 0.03 |
| 23 | TM | Methyl ethyl ketone | 0.044 | 0.045# | -2.3 | 110 | 0.02 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.137 | 1.211 | -6.5 | 117 | 0.02 |
| 25 | TM | 2,2-Dichloropropane | 0.452 | 0.573 | -26.8# | 118 | 0.02 |
| 26 | TM | cis-1,2-Dichloroethene | 0.427 | 0.526 | -23.2# | 112 | 0.02 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.306 | 1.475 | -12.9 | 110 | 0.02 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.42 |
| 29 | TMC | Chloroform | 0.743 | 0.853 | -14.8 | 111 | 0.02 |
| 30 | TM | Bromochloromethane | 0.254 | 0.287 | -13.0 | 111 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.055 | 0.064# | -16.4 | 105 | 0.02 |
| 32 | TM | 1,1,1-Trichloroethane | 0.544 | 0.643 | -18.2 | 118 | 0.02 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.649 | 0.750 | -15.6 | 116 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.427 | 0.521 | -22.0# | 118 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.561 | 0.569 | -1.4 | 100 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.620 | 0.700 | -12.9 | 113 | 0.02 |
| 38 | TM | Benzene | 1.995 | 2.204 | -10.5 | 112 | 0.02 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 40 | TM | Trichloroethene | 0.277 | 0.316 | -14.1 | 116 | 0.00 |

(#) = Out of Range



000227

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062003-B\B16330SC.D  Vial: 4
Acq On : 20 Jun 2003 10:18 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.315 | 0.357 | 13.3 | 113 | 0.00 |
| 42 | T | Methylmethacrylate | 0.238 | 0.280 | -17.6 | 108 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.310 | 0.366 | -18.1 | 115 | 0.00 |
| 46 | TM | Dibromomethane | 0.196 | 0.224 | -14.3 | 111 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 110 | 0.00 |
| 51 | TM | 2-Hexanone | 0.148 | 0.172 | -16.2 | 104 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.142 | 0.166 | -16.9 | 105 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.442 | 0.523 | -18.3 | 114 | 0.00 |
| 54 | S | d8-Toluene | 1.127 | 1.125 | 0.2 | 98 | 0.00 |
| 55 | TMC | Toluene | 0.676 | 0.748 | -10.7 | 111 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.366 | 0.445 | -21.6# | 112 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.242 | 0.268 | -10.7 | 110 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.508 | 0.574 | -13.0 | 111 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.275 | 0.305 | -10.9 | 112 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.263 | 0.316 | -20.2# | 113 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.298 | 0.340 | -14.1 | 108 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.846 | 0.941 | -11.2 | 112 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.263 | 0.305 | -16.0 | 112 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.428 | 1.594 | -11.6 | 111 | 0.00 |
| 67 | TM | m,p-Xylene | 0.520 | 0.580 | -11.5 | 110 | 0.00 |
| 68 | TM | o-Xylene | 0.504 | 0.569 | -12.9 | 111 | 0.00 |
| 69 | TM | Styrene | 0.903 | 1.021 | -13.1 | 111 | 0.00 |
| 70 | TMP | Bromoform | 0.181 | 0.227 | -25.4# | 111 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.260 | 1.423 | -12.9 | 111 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.463 | 0.523 | -13.0 | 106 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.515 | 0.519 | -0.8 | 98 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.356 | 0.400 | -12.4 | 107 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.142 | 0.168 | -18.3 | 106 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.628 | 1.830 | -12.4 | 111 | 0.00 |
| 77 | TM | Bromobenzene | 0.349 | 0.386 | -10.6 | 110 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 0.979 | 1.104 | -12.8 | 112 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.107 | 1.194 | -7.9 | 111 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.006 | 1.127 | -12.0 | 110 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062003-B\B16330SC.D  Vial: 4
Acq On : 20 Jun 2003 10:18 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.818 | 0.931 | -13.8 | 112 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.051 | 1.163 | -10.7 | 111 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.280 | 1.319 | -3.0 | 111 | 0.00 |
| 85 | TM | p-isopropyltoluene | 0.987 | 1.087 | -10.1 | 113 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.632 | 0.696 | -10.1 | 110 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.291 | 1.408 | -9.1 | 110 | 0.00 |
| 89 | TM | n-butylbenzene | 1.841 | 2.052 | -11.5 | 112 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.188 | 1.308 | -10.1 | 110 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.128 | 0.150 | -17.2 | 103 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.659 | 0.736 | -11.7 | 110 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.166 | 0.183 | -10.2 | 113 | 0.00 |
| 96 | TM | Naphthalene | 2.186 | 2.416 | -10.5 | 104 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.623 | 0.674 | -8.2 | 107 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.708 | 0.778 | -9.9 | 110 | 0.00 |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062303-B\B16355SC.D  Vial: 3
Acq On : 23 Jun 2003 8:56 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

6-24-03
VMH 6/24/03

Min. RRF : 0.100  Min. Rel. Area : 50%  Max. R.T. Dev 0.50min
Max. RRF Dev : 20%  Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 103 | 0.02 |
| 2 | TM | Dichlorodifluoromethane | 0.597 | 0.638 | -6.9 | 110 | 0.00 |
| 3 | TMP | Chloromethane | 0.512 | 0.538 | -5.1 | 118 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.246 | 0.249 | -1.2 | 115 | 0.00 |
| 5 | TM | Bromomethane | 0.205 | 0.160 | 22.0# | 93 | 0.02 |
| 6 | TM | Chloroethane | 0.207 | 0.201 | 2.9 | 107 | 0.02 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.032 | 0.030# | 6.3 | 93 | 0.03 |
| 8 | TM | Trichlorofluoromethane | 0.448 | 0.473 | -5.6 | 113 | 0.02 |
| 9 | TM | Diethyl ether | 0.157 | 0.161 | -2.5 | 111 | 0.03 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.272 | 0.301 | -10.7 | 120 | 0.03 |
| 11 | T | Acrolein | 0.064 | 0.069# | -7.8 | 111 | 0.03 |
| 12 | TM | Acetone | 0.115 | 0.108 | 6.1 | 102 | 0.03 |
| 13 | TMC | 1,1-Dichloroethene | 0.263 | 0.272 | -3.4 | 114 | 0.03 |
| 14 | T | Methyl iodide | 0.475 | 0.440 | 7.4 | 101 | 0.03 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.175 | 1.121 | 4.6 | 105 | 0.03 |
| 16 | TM | Methylene Chloride | 0.369 | 0.339 | 8.1 | 106 | 0.03 |
| 17 | TM | Carbon Disulfide | 0.806 | 0.873 | -8.3 | 113 | 0.03 |
| 18 | T | Acrylonitrile | 0.119 | 0.119 | 0.0 | 103 | 0.03 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.803 | 0.826 | -2.9 | 110 | 0.02 |
| 20 | TM | trans-1,2-Dichloroethene | 0.290 | 0.294 | -1.4 | 110 | 0.02 |
| 21 | TMP | 1,1-Dichloroethane | 0.550 | 0.541 | 1.6 | 108 | 0.02 |
| 22 | T | Vinyl acetate | 0.047 | 0.057# | -21.3# | 124 | 0.03 |
| 23 | TM | Methyl ethyl ketone | 0.044 | 0.038# | 13.6 | 98 | 0.02 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.137 | 1.040 | 8.5 | 106 | 0.03 |
| 25 | TM | 2,2-Dichloropropane | 0.452 | 0.548 | -21.2# | 119 | 0.03 |
| 26 | TM | cis-1,2-Dichloroethene | 0.427 | 0.474 | -11.0 | 106 | 0.03 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.306 | 1.279 | 2.1 | 100 | 0.02 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.42 |
| 29 | TMC | Chloroform | 0.743 | 0.758 | -2.0 | 104 | 0.02 |
| 30 | TM | Bromochloromethane | 0.254 | 0.257 | -1.2 | 104 | 0.02 |
| 31 | TM | Tetrahydrofuran | 0.055 | 0.053# | 3.6 | 92 | 0.03 |
| 32 | TM | 1,1,1-Trichloroethane | 0.544 | 0.593 | -9.0 | 114 | 0.02 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.649 | 0.646 | 0.5 | 105 | 0.02 |
| 35 | TM | Carbon Tetrachloride | 0.427 | 0.482 | -12.9 | 115 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.561 | 0.568 | -1.2 | 105 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.620 | 0.626 | -1.0 | 106 | 0.02 |
| 38 | TM | Benzene | 1.995 | 1.873 | 6.1 | 100 | 0.02 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 101 | 0.02 |
| 40 | TM | Trichloroethene | 0.277 | 0.280 | -1.1 | 106 | 0.02 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062303-B\B16355SC.D  Vial: 3
Acq On : 23 Jun 2003 8:56 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.315 | 0.308 | 2.2 | 101 | 0.00 |
| 42 | T | Methylmethacrylate | 0.238 | 0.240 | -0.8 | 95 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.310 | 0.338 | -9.0 | 109 | 0.00 |
| 46 | TM | Dibromomethane | 0.196 | 0.204 | -4.1 | 104 | 0.02 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 100 | 0.00 |
| 51 | TM | 2-Hexanone | 0.148 | 0.145 | 2.0 | 90 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.142 | 0.140 | 1.4 | 92 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.442 | 0.466 | -5.4 | 105 | 0.00 |
| 54 | S | d8-Toluene | 1.127 | 1.130 | -0.3 | 102 | 0.00 |
| 55 | TMC | Toluene | 0.676 | 0.661 | 2.2 | 101 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.366 | 0.403 | -10.1 | 104 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.242 | 0.235 | 2.9 | 99 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.508 | 0.499 | 1.8 | 100 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.275 | 0.269 | 2.2 | 102 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.263 | 0.290 | -10.3 | 107 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.298 | 0.305 | -2.3 | 100 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.846 | 0.810 | 4.3 | 101 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.263 | 0.272 | -3.4 | 105 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.428 | 1.367 | 4.3 | 100 | 0.00 |
| 67 | TM | m,p-Xylene | 0.520 | 0.500 | 3.8 | 100 | 0.00 |
| 68 | TM | o-Xylene | 0.504 | 0.491 | 2.6 | 101 | 0.00 |
| 69 | TM | Styrene | 0.903 | 0.883 | 2.2 | 101 | 0.00 |
| 70 | TMP | Bromoform | 0.181 | 0.206 | -13.8 | 106 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.260 | 1.231 | 2.3 | 101 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.463 | 0.442 | 4.5 | 95 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.515 | 0.510 | 1.0 | 102 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.356 | 0.335 | 5.9 | 95 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.142 | 0.146 | -2.8 | 98 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.628 | 1.567 | 3.7 | 101 | 0.00 |
| 77 | TM | Bromobenzene | 0.349 | 0.337 | 3.4 | 101 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 0.979 | 0.947 | 3.3 | 101 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.107 | 1.056 | 4.6 | 103 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.006 | 0.935 | 7.1 | 97 | 0.00 |

(#) = Out of Range



000231

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062303-B\B16355SC.D Vial: 3
Acq On : 23 Jun 2003 8:56 am Operator: JR
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.818 | 0.795 | 2.8 | 101 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.051 | 1.004 | 4.5 | 101 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.280 | 1.141 | 10.9 | 101 | 0.00 |
| 85 | TM | p-isopropyltoluene | 0.987 | 0.941 | 4.7 | 103 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.632 | 0.596 | 5.7 | 100 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.291 | 1.231 | 4.6 | 101 | 0.00 |
| 89 | TM | n-butylbenzene | 1.841 | 1.751 | 4.9 | 101 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.188 | 1.141 | 4.0 | 101 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.128 | 0.133 | -3.9 | 97 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.659 | 0.638 | 3.2 | 101 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.166 | 0.164 | 1.2 | 106 | 0.00 |
| 96 | TM | Naphthalene | 2.186 | 2.065 | 5.5 | 93 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.623 | 0.597 | 4.2 | 99 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.708 | 0.689 | 2.7 | 102 | 0.00 |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062403-B\B16380SC.D  Vial: 3
Acq On : 24 Jun 2003 9:22 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

6-25-03
VMT 6/25/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.02 |
| 2 | TM | Dichlorodifluoromethane | 0.597 | 0.672 | -12.6 | 107 | 0.00 |
| 3 | TMP | Chloromethane | 0.512 | 0.515 | -0.6 | 104 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.246 | 0.266 | -8.1 | 114 | 0.00 |
| 5 | TM | Bromomethane | 0.205 | 0.181 | 11.7 | 97 | 0.02 |
| 6 | TM | Chloroethane | 0.207 | 0.222 | -7.2 | 108 | 0.02 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.032 | 0.029# | 9.4 | 81 | 0.02 |
| 8 | TM | Trichlorofluoromethane | 0.448 | 0.495 | -10.5 | 109 | 0.02 |
| 9 | TM | Diethyl ether | 0.157 | 0.160 | -1.9 | 101 | 0.03 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.272 | 0.294 | -8.1 | 108 | 0.04 |
| 11 | T | Acrolein | 0.064 | 0.067# | -4.7 | 99 | 0.03 |
| 12 | TM | Acetone | 0.115 | 0.107 | 7.0 | 92 | 0.03 |
| 13 | TMC | 1,1-Dichloroethene | 0.263 | 0.276 | -4.9 | 106 | 0.03 |
| 14 | T | Methyl iodide | 0.475 | 0.485 | -2.1 | 102 | 0.03 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.175 | 1.170 | 0.4 | 101 | 0.02 |
| 16 | TM | Methylene Chloride | 0.369 | 0.353 | 4.3 | 102 | 0.02 |
| 17 | TM | Carbon Disulfide | 0.806 | 0.882 | -9.4 | 105 | 0.03 |
| 18 | T | Acrylonitrile | 0.119 | 0.118 | 0.8 | 95 | 0.03 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.803 | 0.823 | -2.5 | 101 | 0.02 |
| 20 | TM | trans-1,2-Dichloroethene | 0.290 | 0.299 | -3.1 | 103 | 0.02 |
| 21 | TMP | 1,1-Dichloroethane | 0.550 | 0.566 | -2.9 | 104 | 0.02 |
| 22 | T | Vinyl acetate | 0.047 | 0.055# | -17.0 | 110 | 0.03 |
| 23 | TM | Methyl ethyl ketone | 0.044 | 0.038# | 13.6 | 90 | 0.02 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.137 | 1.092 | 4.0 | 102 | 0.02 |
| 25 | TM | 2,2-Dichloropropane | 0.452 | 0.518 | -14.6 | 103 | 0.03 |
| 26 | TM | cis-1,2-Dichloroethene | 0.427 | 0.473 | -10.8 | 98 | 0.02 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.306 | 1.293 | 1.0 | 93 | 0.02 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.42 |
| 29 | TMC | Chloroform | 0.743 | 0.754 | -1.5 | 95 | 0.02 |
| 30 | TM | Bromochloromethane | 0.254 | 0.262 | -3.1 | 98 | 0.02 |
| 31 | TM | Tetrahydrofuran | 0.055 | 0.051# | 7.3 | 82 | 0.02 |
| 32 | TM | 1,1,1-Trichloroethane | 0.544 | 0.579 | -6.4 | 102 | 0.02 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.649 | 0.666 | -2.6 | 99 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.427 | 0.475 | -11.2 | 104 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.561 | 0.561 | 0.0 | 95 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.620 | 0.620 | 0.0 | 97 | 0.02 |
| 38 | TM | Benzene | 1.995 | 1.945 | 2.5 | 95 | 0.02 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 40 | TM | Trichloroethene | 0.277 | 0.275 | 0.7 | 99 | 0.00 |

(#) = Out of Range



000233

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062403-B\B16380SC.D  Vial: 3
Acq On : 24 Jun 2003 9:22 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.315 | 0.309 | 1.9 | 96 | 0.00 |
| 42 | T | Methylmethacrylate | 0.238 | 0.233 | 2.1 | 88 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.310 | 0.323 | -4.2 | 99 | 0.00 |
| 46 | TM | Dibromomethane | 0.196 | 0.198 | -1.0 | 96 | 0.02 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 89 | 0.02 |
| 51 | TM | 2-Hexanone | 0.148 | 0.142 | 4.1 | 84 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.142 | 0.135 | 4.9 | 84 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.442 | 0.459 | -3.8 | 98 | 0.00 |
| 54 | S | d8-Toluene | 1.127 | 1.110 | 1.5 | 95 | 0.00 |
| 55 | TMC | Toluene | 0.676 | 0.648 | 4.1 | 94 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.366 | 0.397 | -8.5 | 97 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.242 | 0.239 | 1.2 | 96 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.508 | 0.498 | 2.0 | 95 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.275 | 0.271 | 1.5 | 97 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.263 | 0.285 | -8.4 | 99 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.298 | 0.304 | -2.0 | 94 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.846 | 0.813 | 3.9 | 96 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.263 | 0.271 | -3.0 | 99 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.428 | 1.372 | 3.9 | 95 | 0.00 |
| 67 | TM | m,p-Xylene | 0.520 | 0.503 | 3.3 | 94 | 0.00 |
| 68 | TM | o-Xylene | 0.504 | 0.488 | 3.2 | 94 | 0.00 |
| 69 | TM | Styrene | 0.903 | 0.886 | 1.9 | 96 | 0.00 |
| 70 | TMP | Bromoform | 0.181 | 0.200 | -10.5 | 97 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.260 | 1.236 | 1.9 | 96 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.463 | 0.441 | 4.8 | 89 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.515 | 0.513 | 0.4 | 96 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.356 | 0.333 | 6.5 | 89 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.142 | 0.144 | -1.4 | 90 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.628 | 1.572 | 3.4 | 95 | 0.00 |
| 77 | TM | Bromobenzene | 0.349 | 0.346 | 0.9 | 98 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 0.979 | 0.949 | 3.1 | 96 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.107 | 1.020 | 7.9 | 94 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.006 | 0.984 | 2.2 | 96 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062403-B\B16380SC.D  Vial: 3
Acq On : 24 Jun 2003 9:22 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.818 | 0.798 | 2.4 | 95 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.051 | 1.012 | 3.7 | 96 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.280 | 1.141 | 10.9 | 95 | 0.00 |
| 85 | TM | p-isopropyltoluene | 0.987 | 0.943 | 4.5 | 97 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.632 | 0.610 | 3.5 | 96 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.291 | 1.229 | 4.8 | 96 | 0.00 |
| 89 | TM | n-butylbenzene | 1.841 | 1.743 | 5.3 | 96 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.188 | 1.144 | 3.7 | 96 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.128 | 0.127 | 0.8 | 88 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.659 | 0.636 | 3.5 | 96 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.166 | 0.158 | 4.8 | 98 | 0.00 |
| 96 | TM | Naphthalene | 2.186 | 2.054 | 6.0 | 89 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.623 | 0.587 | 5.8 | 93 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.708 | 0.689 | 2.7 | 98 | 0.00 |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062503-B\B16404SC.D  Vial: 3
Acq On : 25 Jun 2003 7:26 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

6-26-03 VMT 6/26/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 93 | 0.01 |
| 2 | TM | Dichlorodifluoromethane | 0.597 | 0.666 | -11.6 | 103 | 0.00 |
| 3 | TMP | Chloromethane | 0.512 | 0.543 | -6.1 | 107 | 0.01 |
| 4 | TMC | Vinyl Chloride | 0.246 | 0.278 | -13.0 | 115 | 0.01 |
| 5 | TM | Bromomethane | 0.205 | 0.175 | 14.6 | 91 | 0.01 |
| 6 | TM | Chloroethane | 0.207 | 0.226 | -9.2 | 107 | 0.02 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.032 | 0.031# | 3.1 | 84 | 0.02 |
| 8 | TM | Trichlorofluoromethane | 0.448 | 0.507 | -13.2 | 109 | 0.01 |
| 9 | TM | Diethyl ether | 0.157 | 0.174 | -10.8 | 107 | 0.02 |
| 10 | T | 1,1,2-Trichlorotrifluoroeth | 0.272 | 0.318 | -16.9 | 114 | 0.02 |
| 11 | T | Acrolein | 0.064 | 0.071# | -10.9 | 103 | 0.02 |
| 12 | TM | Acetone | 0.115 | 0.114 | 0.9 | 96 | 0.02 |
| 13 | TMC | 1,1-Dichloroethene | 0.263 | 0.286 | -8.7 | 107 | 0.02 |
| 14 | T | Methyl iodide | 0.475 | 0.507 | -6.7 | 104 | 0.02 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.175 | 1.143 | 2.7 | 96 | 0.02 |
| 16 | TM | Methylene Chloride | 0.369 | 0.353 | 4.3 | 99 | 0.02 |
| 17 | TM | Carbon Disulfide | 0.806 | 0.902 | -11.9 | 105 | 0.02 |
| 18 | T | Acrylonitrile | 0.119 | 0.123 | -3.4 | 95 | 0.02 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.803 | 0.854 | -6.4 | 102 | 0.01 |
| 20 | TM | trans-1,2-Dichloroethene | 0.290 | 0.308 | -6.2 | 104 | 0.02 |
| 21 | TMP | 1,1-Dichloroethane | 0.550 | 0.567 | -3.1 | 101 | 0.02 |
| 22 | T | Vinyl acetate | 0.047 | 0.053# | -12.8 | 104 | 0.02 |
| 23 | TM | Methyl ethyl ketone | 0.044 | 0.054# | -22.7# | 124 | 0.02 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.137 | 1.068 | 6.1 | 97 | 0.02 |
| 25 | TM | 2,2-Dichloropropane | 0.452 | 0.541 | -19.7 | 105 | 0.02 |
| 26 | TM | cis-1,2-Dichloroethene | 0.427 | 0.484 | -13.3 | 97 | 0.02 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.306 | 1.280 | 2.0 | 90 | 0.01 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.42 |
| 29 | TMC | Chloroform | 0.743 | 0.800 | -7.7 | 98 | 0.02 |
| 30 | TM | Bromochloromethane | 0.254 | 0.267 | -5.1 | 97 | 0.01 |
| 31 | TM | Tetrahydrofuran | 0.055 | 0.054# | 1.8 | 83 | 0.02 |
| 32 | TM | 1,1,1-Trichloroethane | 0.544 | 0.606 | -11.4 | 104 | 0.02 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.649 | 0.668 | -2.9 | 97 | 0.01 |
| 35 | TM | Carbon Tetrachloride | 0.427 | 0.497 | -16.4 | 106 | 0.01 |
| 36 | S | d4-1,2-Dichloroethane | 0.561 | 0.577 | -2.9 | 95 | 0.01 |
| 37 | TM | 1,2-Dichloroethane | 0.620 | 0.659 | -6.3 | 100 | 0.01 |
| 38 | TM | Benzene | 1.995 | 1.948 | 2.4 | 93 | 0.01 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 91 | 0.01 |
| 40 | TM | Trichloroethene | 0.277 | 0.287 | -3.6 | 98 | 0.01 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062503-B\B16404SC.D  Vial: 3
Acq On : 25 Jun 2003 7:26 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.315 | 0.321 | -1.9 | 95 | 0.01 |
| 42 | T | Methylmethacrylate | 0.238 | 0.243 | -2.1 | 87 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.310 | 0.341 | -10.0 | 100 | 0.00 |
| 46 | TM | Dibromomethane | 0.196 | 0.208 | -6.1 | 96 | 0.01 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 81 | 0.01 |
| 51 | TM | 2-Hexanone | 0.148 | 0.149 | -0.7 | 84 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.142 | 0.143 | -0.7 | 85 | 0.01 |
| 53 | TM | cis-1,3-Dichloropropene | 0.442 | 0.476 | -7.7 | 97 | 0.00 |
| 54 | S | d8-Toluene | 1.127 | 1.118 | 0.8 | 91 | 0.00 |
| 55 | TMC | Toluene | 0.676 | 0.667 | 1.3 | 92 | 0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.366 | 0.402 | -9.8 | 94 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.242 | 0.243 | -0.4 | 93 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.508 | 0.506 | 0.4 | 92 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.275 | 0.285 | -3.6 | 97 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.263 | 0.296 | -12.5 | 98 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.298 | 0.308 | -3.4 | 91 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.846 | 0.827 | 2.2 | 95 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.263 | 0.270 | -2.7 | 95 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.428 | 1.391 | 2.6 | 93 | 0.00 |
| 67 | TM | m,p-Xylene | 0.520 | 0.507 | 2.5 | 92 | 0.00 |
| 68 | TM | o-Xylene | 0.504 | 0.498 | 1.2 | 94 | 0.00 |
| 69 | TM | Styrene | 0.903 | 0.895 | 0.9 | 94 | 0.00 |
| 70 | TMP | Bromoform | 0.181 | 0.203 | -12.2 | 96 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.260 | 1.256 | 0.3 | 95 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.463 | 0.443 | 4.3 | 87 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.515 | 0.511 | 0.8 | 93 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.356 | 0.338 | 5.1 | 87 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.142 | 0.144 | -1.4 | 88 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.628 | 1.588 | 2.5 | 93 | 0.00 |
| 77 | TM | Bromobenzene | 0.349 | 0.348 | 0.3 | 96 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 0.979 | 0.970 | 0.9 | 95 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.107 | 1.045 | 5.6 | 93 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.006 | 0.980 | 2.6 | 93 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062503-B\B16404SC.D  Vial: 3
Acq On : 25 Jun 2003 7:26 am  Operator: JR
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V806193B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Fri Jun 20 08:18:57 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.818 | 0.818 | 0.0 | 95 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.051 | 1.019 | 3.0 | 94 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.280 | 1.155 | 9.8 | 94 | 0.00 |
| 85 | TM | p-isopropyltoluene | 0.987 | 0.957 | 3.0 | 96 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.632 | 0.623 | 1.4 | 95 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 96 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.291 | 1.248 | 3.3 | 96 | 0.00 |
| 89 | TM | n-butylbenzene | 1.841 | 1.744 | 5.3 | 94 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.188 | 1.151 | 3.1 | 95 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.128 | 0.123 | 3.9 | 83 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 4 | TM | 1,2,4-Trichlorobenzene | 0.659 | 0.637 | 3.3 | 94 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.166 | 0.160 | 3.6 | 97 | 0.00 |
| 96 | TM | Naphthalene | 2.186 | 2.043 | 6.5 | 86 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.623 | 0.590 | 5.3 | 92 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.708 | 0.689 | 2.7 | 95 | 0.00 |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16304T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1157

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 348273 | | 6.94 | | 614988 | | 8.47 | | 556148 | | 13.16 | | 285216 | | 17.00 | |
| | UPPER LIMIT | 696546 | | 7.36 | | 1229976 | | 8.98 | | 1112296 | | 13.95 | | 570432 | | 18.02 | |
| | LOWER LIMIT | 174137 | | 6.52 | | 307494 | | 7.96 | | 278074 | | 12.37 | | 142608 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 1 PPB | 355149 | | 6.95 | | 629599 | | 8.48 | | 564509 | | 13.16 | | 284397 | | 17.00 | |
| 02 | 2 PPB | 353476 | | 6.95 | | 625121 | | 8.48 | | 563958 | | 13.16 | | 284993 | | 17.00 | |
| 03 | 5 PPB | 352248 | | 6.95 | | 624798 | | 8.48 | | 561295 | | 13.16 | | 286047 | | 17.00 | |
| 04 | 20 PPB | 348273 | | 6.94 | | 614988 | | 8.47 | | 556148 | | 13.16 | | 285216 | | 17.00 | |
| 05 | 50 PPB | 347478 | | 6.96 | | 603936 | | 8.47 | | 554218 | | 13.16 | | 287518 | | 17.00 | |
| 06 | 100 PPB | 344533 | | 6.94 | | 601295 | | 8.47 | | 548510 | | 13.17 | | 284139 | | 17.00 | |
| 07 | ZZZZZ | 347638 | | 6.95 | | 616233 | | 8.48 | | 561197 | | 13.16 | | 286907 | | 17.00 | |
| 08 | ZZZZZ | 356673 | | 6.95 | | 624837 | | 8.48 | | 567180 | | 13.16 | | 290784 | | 17.00 | |
| 09 | ZZZZZ | 355950 | | 6.96 | | 623405 | | 8.47 | | 561776 | | 13.16 | | 286865 | | 17.00 | |
| 10 | ZZZZZ | 349898 | | 6.95 | | 620866 | | 8.48 | | 558582 | | 13.16 | | 282829 | | 17.00 | |
| 11 | ZZZZZ | 350030 | | 6.95 | | 616562 | | 8.47 | | 559333 | | 13.16 | | 279502 | | 17.00 | |
| 12 | ZZZZZ | 347690 | | 6.95 | | 613331 | | 8.48 | | 553280 | | 13.16 | | 279638 | | 17.00 | |
| 13 | ZZZZZ | 357192 | | 6.96 | | 616884 | | 8.48 | | 557656 | | 13.16 | | 278892 | | 17.00 | |
| 14 | ZZZZZ | 340748 | | 6.95 | | 600772 | | 8.48 | | 545447 | | 13.16 | | 276501 | | 17.00 | |
| 15 | ZZZZZ | 347238 | | 6.95 | | 611593 | | 8.48 | | 552823 | | 13.16 | | 276442 | | 17.00 | |
| 16 | ZZZZZ | 344087 | | 6.96 | | 602199 | | 8.47 | | 544229 | | 13.16 | | 274101 | | 17.00 | |
| 17 | ZZZZZ | 334784 | | 6.95 | | 603871 | | 8.48 | | 534409 | | 13.16 | | 270543 | | 17.00 | |
| 18 | ZZZZZ | 343635 | | 6.95 | | 600998 | | 8.48 | | 543099 | | 13.16 | | 270187 | | 17.00 | |
| 19 | ZZZZZ | 347016 | | 6.95 | | 602751 | | 8.47 | | 549792 | | 13.16 | | 276030 | | 17.00 | |
| 20 | ZZZZZ | 348222 | | 6.95 | | 607283 | | 8.48 | | 552388 | | 13.16 | | 276728 | | 17.00 | |
| 21 | ZZZZZ | 349927 | | 6.96 | | 604431 | | 8.48 | | 551277 | | 13.16 | | 272866 | | 17.00 | |
| 22 | ZZZZZ | 352280 | | 6.95 | | 634704 | | 8.48 | | 561247 | | 13.16 | | 278539 | | 17.00 | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16329T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0947

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 342815 | | 6.95 | | 601790 | | 8.48 | | 544612 | | 13.16 | | 278206 | | 17.00 | |
| | UPPER LIMIT | 685630 | | 7.37 | | 1203580 | | 8.99 | | 1089224 | | 13.95 | | 556412 | | 18.02 | |
| | LOWER LIMIT | 171408 | | 6.53 | | 300895 | | 7.97 | | 272306 | | 12.37 | | 139103 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 342815 | | 6.95 | | 601790 | | 8.48 | | 544612 | | 13.16 | | 278206 | | 17.00 | |
| 02 | L806203B | 343784 | | 6.95 | | 601717 | | 8.47 | | 544384 | | 13.16 | | 278860 | | 17.00 | |
| 03 | ZZZZZ | 342717 | | 6.95 | | 606878 | | 8.48 | | 550196 | | 13.16 | | 276531 | | 17.00 | |
| 04 | B806203B | 339068 | | 6.95 | | 598480 | | 8.48 | | 540047 | | 13.16 | | 273544 | | 17.00 | |
| 05 | ZZZZZ | 338444 | | 6.95 | | 596434 | | 8.47 | | 535946 | | 13.16 | | 271192 | | 17.00 | |
| 06 | 49878-1 | 330000 | | 6.95 | | 589448 | | 8.48 | | 535223 | | 13.16 | | 270760 | | 17.00 | |
| 07 | 49878-2 | 329065 | | 6.95 | | 584677 | | 8.48 | | 525649 | | 13.16 | | 266909 | | 17.00 | |
| 08 | 49878-2,MS | 330034 | | 6.95 | | 586264 | | 8.47 | | 530432 | | 13.16 | | 272583 | | 17.00 | |
| 09 | 49878-2,MSD | 336113 | | 6.95 | | 595256 | | 8.47 | | 539098 | | 13.16 | | 272265 | | 17.00 | |
| 10 | 49878-3 | 332467 | | 6.95 | | 587634 | | 8.48 | | 533215 | | 13.16 | | 269057 | | 17.00 | |
| 11 | 49878-4 | 330796 | | 6.95 | | 582714 | | 8.48 | | 530226 | | 13.16 | | 266961 | | 17.00 | |
| 12 | 49878-5 | 327169 | | 6.95 | | 575498 | | 8.48 | | 521218 | | 13.16 | | 266958 | | 17.00 | |
| 13 | 49878-6 | 327628 | | 6.95 | | 578134 | | 8.48 | | 524277 | | 13.16 | | 265231 | | 17.00 | |
| 14 | 49878-7 | 324165 | | 6.95 | | 572215 | | 8.48 | | 519247 | | 13.16 | | 264361 | | 17.00 | |
| 15 | 49878-8 | 325905 | | 6.95 | | 574011 | | 8.48 | | 521768 | | 13.16 | | 263135 | | 17.00 | |
| 16 | 49878-9 | 326213 | | 6.96 | | 571355 | | 8.48 | | 521647 | | 13.16 | | 262804 | | 17.00 | |
| 17 | 49878-10 | 330329 | | 6.96 | | 573950 | | 8.47 | | 525041 | | 13.16 | | 261737 | | 16.99 | |
| 18 | 49878-11 | 325216 | | 6.95 | | 575053 | | 8.47 | | 520424 | | 13.16 | | 260774 | | 17.00 | |
| 19 | 49878-12 | 323675 | | 6.96 | | 566812 | | 8.47 | | 513009 | | 13.16 | | 259494 | | 17.00 | |
| 20 | 49878-14 | 320730 | | 6.95 | | 564378 | | 8.48 | | 512095 | | 13.16 | | 259115 | | 17.00 | |
| 21 | 49878-15 | 315987 | | 6.95 | | 562516 | | 8.48 | | 509916 | | 13.16 | | 256505 | | 17.00 | |
| 22 | 49878-16 | 319072 | | 6.95 | | 562812 | | 8.47 | | 512530 | | 13.16 | | 259413 | | 16.99 | |
| 23 | 49878-17 | 327146 | | 6.95 | | 568240 | | 8.48 | | 517052 | | 13.16 | | 256646 | | 17.00 | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16354T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/23/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0825

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 359787 | | 6.95 | | 621142 | | 8.48 | | 574705 | | 13.16 | | 292427 | | 17.00 | |
| | UPPER LIMIT | 719574 | | 7.37 | | 1242284 | | 8.99 | | 1149410 | | 13.95 | | 584854 | | 18.02 | |
| | LOWER LIMIT | 179894 | | 6.53 | | 310571 | | 7.97 | | 287353 | | 12.37 | | 146214 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 359787 | | 6.95 | | 621142 | | 8.48 | | 574705 | | 13.16 | | 292427 | | 17.00 | |
| 02 | L806233B | 352543 | | 6.95 | | 613894 | | 8.48 | | 566636 | | 13.16 | | 289872 | | 17.00 | |
| 03 | ZZZZZ | 349637 | | 6.95 | | 609970 | | 8.48 | | 557920 | | 13.16 | | 289089 | | 17.00 | |
| 04 | ZZZZZ | 343511 | | 6.95 | | 607320 | | 8.48 | | 562223 | | 13.16 | | 283502 | | 17.00 | |
| 05 | ZZZZZ | 352271 | | 6.96 | | 612036 | | 8.48 | | 564141 | | 13.16 | | 284253 | | 17.00 | |
| 06 | B806233B2 | 347323 | | 6.96 | | 610336 | | 8.48 | | 562865 | | 13.16 | | 283321 | | 17.00 | |
| 07 | ZZZZZ | 339431 | | 6.96 | | 606358 | | 8.48 | | 559553 | | 13.16 | | 283926 | | 17.00 | |
| 08 | ZZZZZ | 346196 | | 6.95 | | 608399 | | 8.48 | | 562634 | | 13.16 | | 283461 | | 17.00 | |
| 09 | ZZZZZ | 340364 | | 6.95 | | 610061 | | 8.48 | | 558888 | | 13.16 | | 287119 | | 17.00 | |
| 10 | 49878-2,DL | 343621 | | 6.96 | | 607302 | | 8.48 | | 560811 | | 13.16 | | 280500 | | 17.00 | |
| 11 | 49878-18 | 348413 | | 6.96 | | 609822 | | 8.48 | | 564643 | | 13.16 | | 279970 | | 17.00 | |
| 12 | 49878-19 | 347863 | | 6.95 | | 603196 | | 8.48 | | 559305 | | 13.16 | | 277539 | | 17.00 | |
| 13 | 49878-20 | 342547 | | 6.95 | | 599631 | | 8.48 | | 553702 | | 13.16 | | 276337 | | 17.00 | |
| 14 | 49878-21 | 342051 | | 6.95 | | 596085 | | 8.48 | | 546061 | | 13.17 | | 273047 | | 17.00 | |
| 15 | 49878-22 | 339563 | | 6.96 | | 594169 | | 8.48 | | 544865 | | 13.16 | | 274692 | | 17.00 | |
| 16 | 49878-22,MS | 331506 | | 6.96 | | 593311 | | 8.47 | | 549293 | | 13.16 | | 273024 | | 17.00 | |
| 17 | 49878-22,MSD | 336987 | | 6.96 | | 594861 | | 8.47 | | 548484 | | 13.16 | | 277713 | | 17.00 | |
| 18 | 49878-23 | 332052 | | 6.96 | | 591490 | | 8.48 | | 545333 | | 13.16 | | 270268 | | 17.00 | |
| 19 | 49878-24 | 331718 | | 6.95 | | 587252 | | 8.48 | | 538697 | | 13.16 | | 269927 | | 17.00 | |
| 20 | 49878-25 | 323652 | | 6.96 | | 580705 | | 8.48 | | 534228 | | 13.16 | | 266797 | | 17.00 | |
| 21 | 49878-26 | 330648 | | 6.96 | | 575479 | | 8.48 | | 530595 | | 13.16 | | 266068 | | 17.00 | |
| 22 | 49878-27 | 329479 | | 6.95 | | 578592 | | 8.48 | | 535516 | | 13.16 | | 267499 | | 17.00 | |
| 23 | 49878-28 | 328309 | | 6.95 | | 575144 | | 8.48 | | 535214 | | 13.16 | | 266633 | | 17.00 | |
| 24 | ZZZZZ | 330032 | | 6.95 | | 578857 | | 8.48 | | 533317 | | 13.16 | | 266068 | | 17.00 | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16379T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/24/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0851

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 330948 | | 6.95 | | 588848 | | 8.47 | | 541398 | | 13.16 | | 278691 | | 17.00 | |
| | UPPER LIMIT | 661896 | | 7.37 | | 1177696 | | 8.98 | | 1082796 | | 13.95 | | 557382 | | 18.02 | |
| | LOWER LIMIT | 165474 | | 6.53 | | 294424 | | 7.96 | | 270699 | | 12.37 | | 139346 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 330948 | | 6.95 | | 588848 | | 8.47 | | 541398 | | 13.16 | | 278691 | | 17.00 | |
| 02 | L806243B | 333387 | | 6.95 | | 586421 | | 8.47 | | 543536 | | 13.16 | | 279791 | | 17.00 | |
| 03 | ZZZZZ | 337484 | | 6.95 | | 586135 | | 8.48 | | 540665 | | 13.16 | | 277855 | | 17.00 | |
| 04 | B806243B | 329780 | | 6.96 | | 574381 | | 8.48 | | 531885 | | 13.16 | | 273259 | | 17.01 | |
| 05 | ZZZZZ | 332716 | | 6.96 | | 576787 | | 8.48 | | 534379 | | 13.16 | | 273168 | | 17.00 | |
| 06 | 49878-20,DL | 329415 | | 6.96 | | 575311 | | 8.47 | | 530957 | | 13.16 | | 273407 | | 16.99 | |
| 07 | 49878-21,DL | 331231 | | 6.95 | | 573539 | | 8.48 | | 531653 | | 13.16 | | 270348 | | 17.00 | |
| 08 | 49878-29 | 331433 | | 6.96 | | 574728 | | 8.48 | | 533507 | | 13.16 | | 269758 | | 17.00 | |
| 09 | 49878-30 | 326543 | | 6.96 | | 567817 | | 8.48 | | 524392 | | 13.16 | | 268229 | | 17.00 | |
| 10 | 49878-30,MS | 328412 | | 6.95 | | 569138 | | 8.48 | | 533920 | | 13.16 | | 274449 | | 17.00 | |
| 11 | 49878-30,MSD | 331146 | | 6.95 | | 575797 | | 8.47 | | 534755 | | 13.16 | | 275966 | | 17.00 | |
| 12 | 49878-31 | 328447 | | 6.96 | | 567320 | | 8.48 | | 533396 | | 13.16 | | 270503 | | 17.00 | |
| 13 | 49878-32 | 324394 | | 6.95 | | 563905 | | 8.48 | | 525403 | | 13.16 | | 268547 | | 17.00 | |
| 14 | 49878-33 | 320905 | | 6.96 | | 561948 | | 8.47 | | 518215 | | 13.16 | | 263907 | | 17.00 | |
| 15 | 49878-34 | 319051 | | 6.96 | | 556355 | | 8.48 | | 518007 | | 13.16 | | 264412 | | 17.00 | |
| 16 | 49878-35 | 322152 | | 6.95 | | 553242 | | 8.48 | | 516281 | | 13.16 | | 262494 | | 17.00 | |
| 17 | 49878-36 | 321264 | | 6.96 | | 556662 | | 8.48 | | 514641 | | 13.16 | | 262480 | | 17.00 | |
| 18 | 49878-37 | 315322 | | 6.95 | | 549591 | | 8.48 | | 516020 | | 13.16 | | 261090 | | 17.00 | |
| 19 | 49878-38 | 316021 | | 6.96 | | 551145 | | 8.48 | | 509084 | | 13.16 | | 259303 | | 17.00 | |
| 20 | ZZZZZ | 316075 | | 6.96 | | 546922 | | 8.48 | | 508256 | | 13.16 | | 261274 | | 17.00 | |
| 21 | 49878-40 | 310868 | | 6.95 | | 544519 | | 8.48 | | 506872 | | 13.16 | | 258102 | | 17.00 | |
| 22 | 49878-41 | 309158 | | 6.95 | | 542028 | | 8.48 | | 503899 | | 13.16 | | 257413 | | 17.00 | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

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# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

BFB File ID: B16403T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 6/25/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0656

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 322216 | | 6.95 | | 561189 | | 8.48 | | 525629 | | 13.16 | | 273021 | | 17.00 | |
| | UPPER LIMIT | 644432 | | 7.37 | | 1122378 | | 8.99 | | 1051258 | | 13.95 | | 546042 | | 18.02 | |
| | LOWER LIMIT | 161108 | | 6.53 | | 280595 | | 7.97 | | 262815 | | 12.37 | | 136511 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 322216 | | 6.95 | | 561189 | | 8.48 | | 525629 | | 13.16 | | 273021 | | 17.00 | |
| 02 | L806253B | 321389 | | 6.96 | | 559430 | | 8.47 | | 518174 | | 13.16 | | 272252 | | 17.00 | |
| 03 | ZZZZZ | 314320 | | 6.95 | | 551807 | | 8.48 | | 514605 | | 13.16 | | 268386 | | 17.00 | |
| 04 | B806253B | 312862 | | 6.96 | | 547054 | | 8.48 | | 512340 | | 13.16 | | 266788 | | 17.00 | |
| 05 | 49878-33,DL | 310470 | | 6.95 | | 548501 | | 8.48 | | 508564 | | 13.16 | | 263838 | | 17.00 | |
| 06 | 49878-34,DL | 308988 | | 6.95 | | 545000 | | 8.48 | | 505438 | | 13.16 | | 262910 | | 17.00 | |
| 07 | 49878-35,DL | 301780 | | 6.96 | | 539691 | | 8.48 | | 502795 | | 13.16 | | 260729 | | 17.00 | |
| 08 | 49878-37,DL | 300029 | | 6.95 | | 533551 | | 8.48 | | 495925 | | 13.16 | | 258976 | | 17.00 | |
| 09 | 49878-38,DL | 298799 | | 6.95 | | 535272 | | 8.48 | | 495456 | | 13.16 | | 260061 | | 17.00 | |
| 10 | 49878-39 | 303058 | | 6.96 | | 535927 | | 8.48 | | 499234 | | 13.16 | | 256709 | | 17.00 | |
| 11 | ZZZZZ | 297273 | | 6.95 | | 527645 | | 8.48 | | 491982 | | 13.16 | | 257615 | | 17.00 | |
| 12 | ZZZZZ | 296915 | | 6.95 | | 532840 | | 8.48 | | 491615 | | 13.16 | | 254287 | | 17.00 | |
| 13 | ZZZZZ | 293597 | | 6.95 | | 522571 | | 8.48 | | 489331 | | 13.16 | | 253746 | | 17.00 | |
| 14 | ZZZZZ | 294426 | | 6.95 | | 519290 | | 8.48 | | 485128 | | 13.16 | | 252571 | | 17.00 | |
| 15 | ZZZZZ | 297849 | | 6.96 | | 527354 | | 8.47 | | 498097 | | 13.16 | | 250233 | | 17.00 | |
| 16 | ZZZZZ | 296927 | | 6.96 | | 523405 | | 8.48 | | 490124 | | 13.16 | | 250532 | | 17.00 | |
| 17 | ZZZZZ | 295406 | | 6.95 | | 521080 | | 8.48 | | 482297 | | 13.16 | | 250200 | | 17.00 | |
| 18 | ZZZZZ | 292116 | | 6.95 | | 517451 | | 8.48 | | 485461 | | 13.16 | | 251742 | | 17.00 | |
| 19 | ZZZZZ | 295490 | | 6.95 | | 522464 | | 8.48 | | 485505 | | 13.16 | | 250255 | | 17.00 | |
| 20 | ZZZZZ | 286839 | | 6.96 | | 516081 | | 8.48 | | 483469 | | 13.16 | | 248791 | | 17.00 | |
| 21 | ZZZZZ | 298878 | | 6.95 | | 518595 | | 8.48 | | 485073 | | 13.16 | | 248782 | | 17.00 | |
| 22 | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

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June 25, 2003

**SAMPLE DATA**

**Lab Sample ID:** B06193M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/19/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

Acetylene 113 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

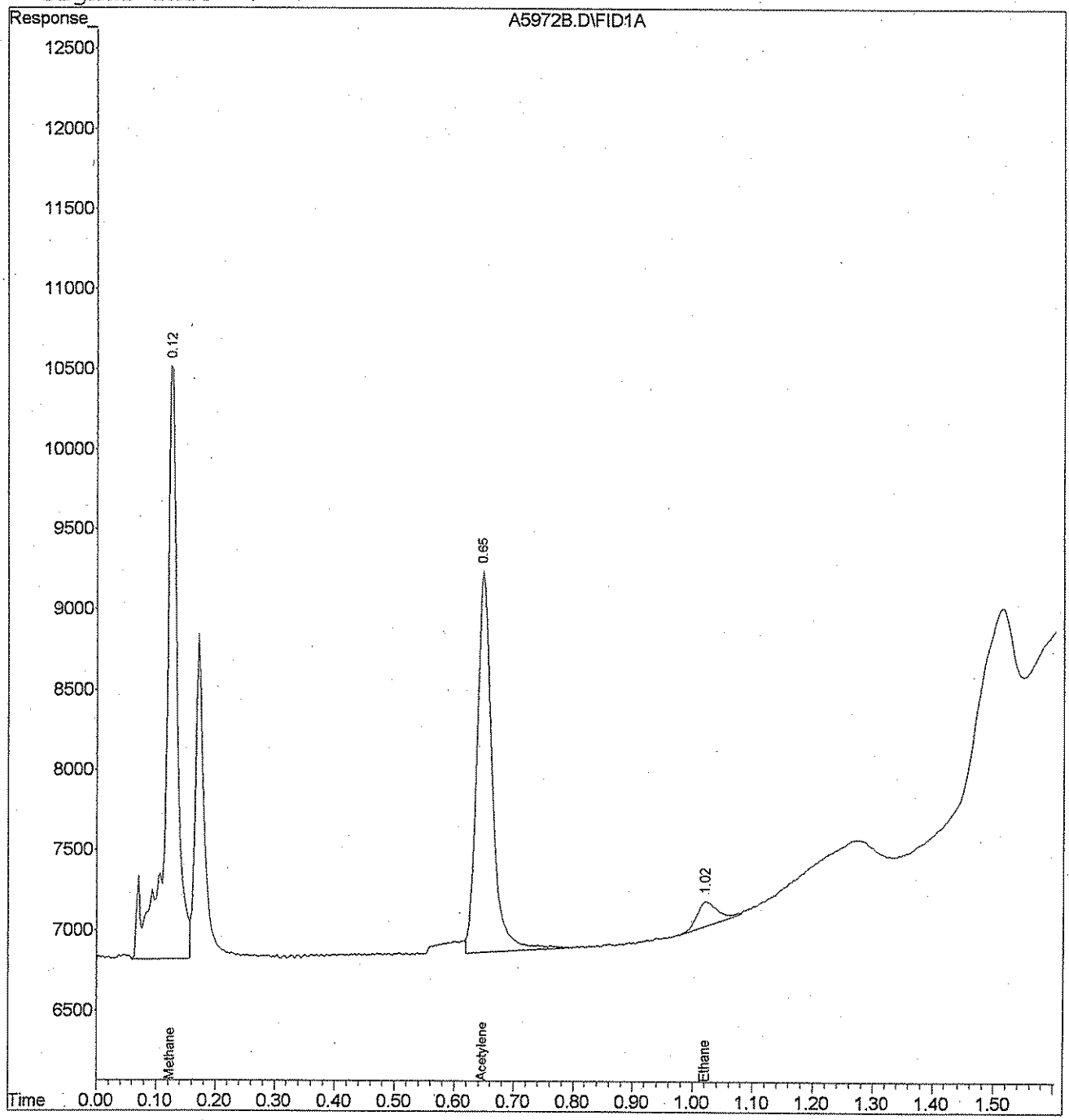
Authorized signature Mylene A Mallin

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5972B.D Vial: 100
Acq On : 19 Jun 2003 9:37 pm Operator:
Sample : B06193M,N,QA061903,IB Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 22:03 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** B06193M2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

Acetylene 120 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

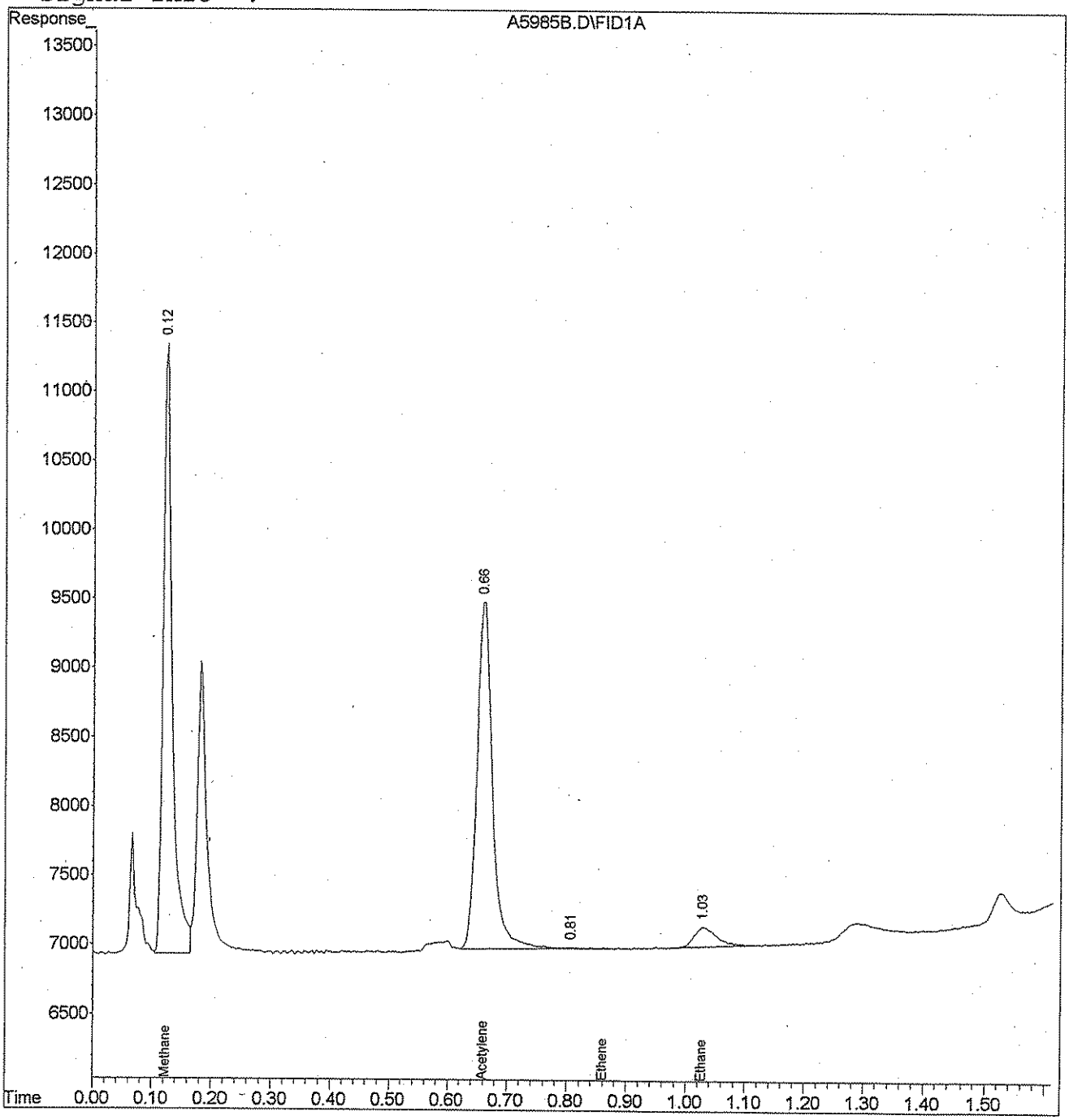
Authorized signature Melena Arbelle

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5985B.D Vial: 100
Acq On : 20 Jun 2003 12:31 am Operator:
Sample : B06193M2,N,QA061903,IB Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 0:34 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** B06203M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 93 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

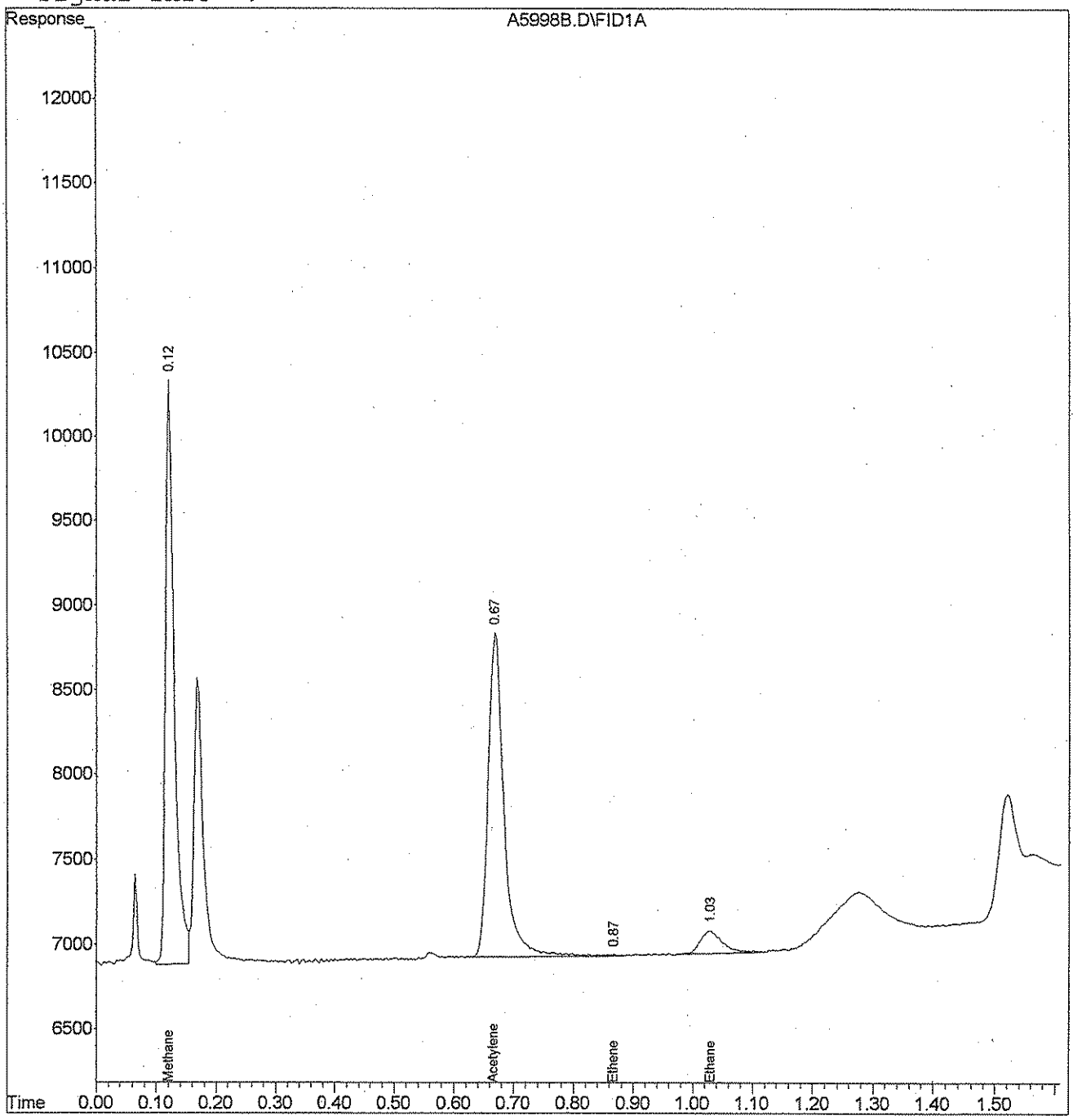
Authorized signature Melena A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A5998B.D Vial: 100
Acq On : 20 Jun 2003 8:42 pm Operator:
Sample : B06203M,N,QA062003,IB Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 20:45 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** B06203M2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 108 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

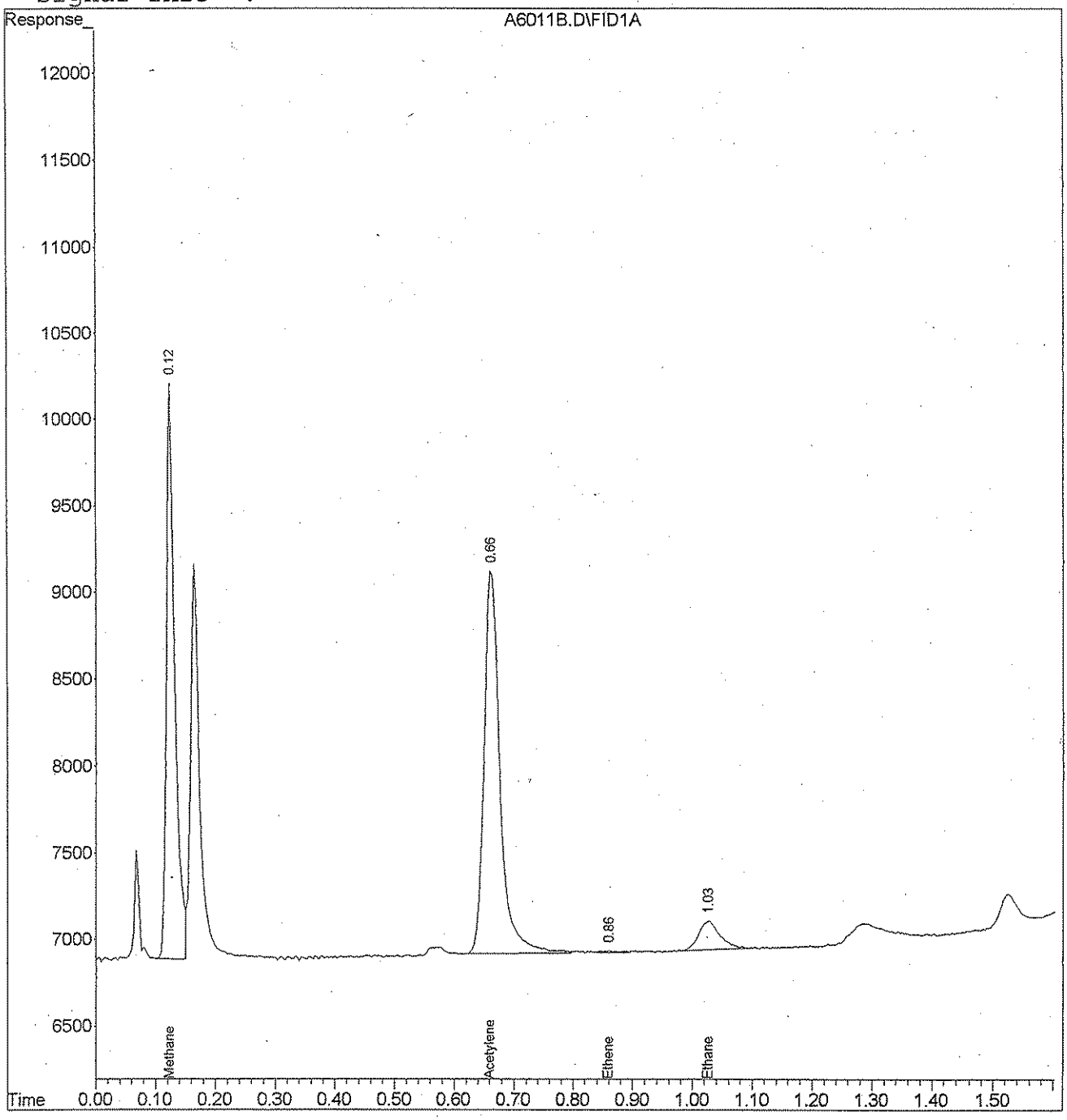
Authorized signature Melissa A. Ladd

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6011B.D Vial: 100
Acq On : 21 Jun 2003 1:44 am Operator:
Sample : B06203M,N,QA062003,IB Inst : Instr. A
Misc : 15000 b6250 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 1:53 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW12-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 98 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

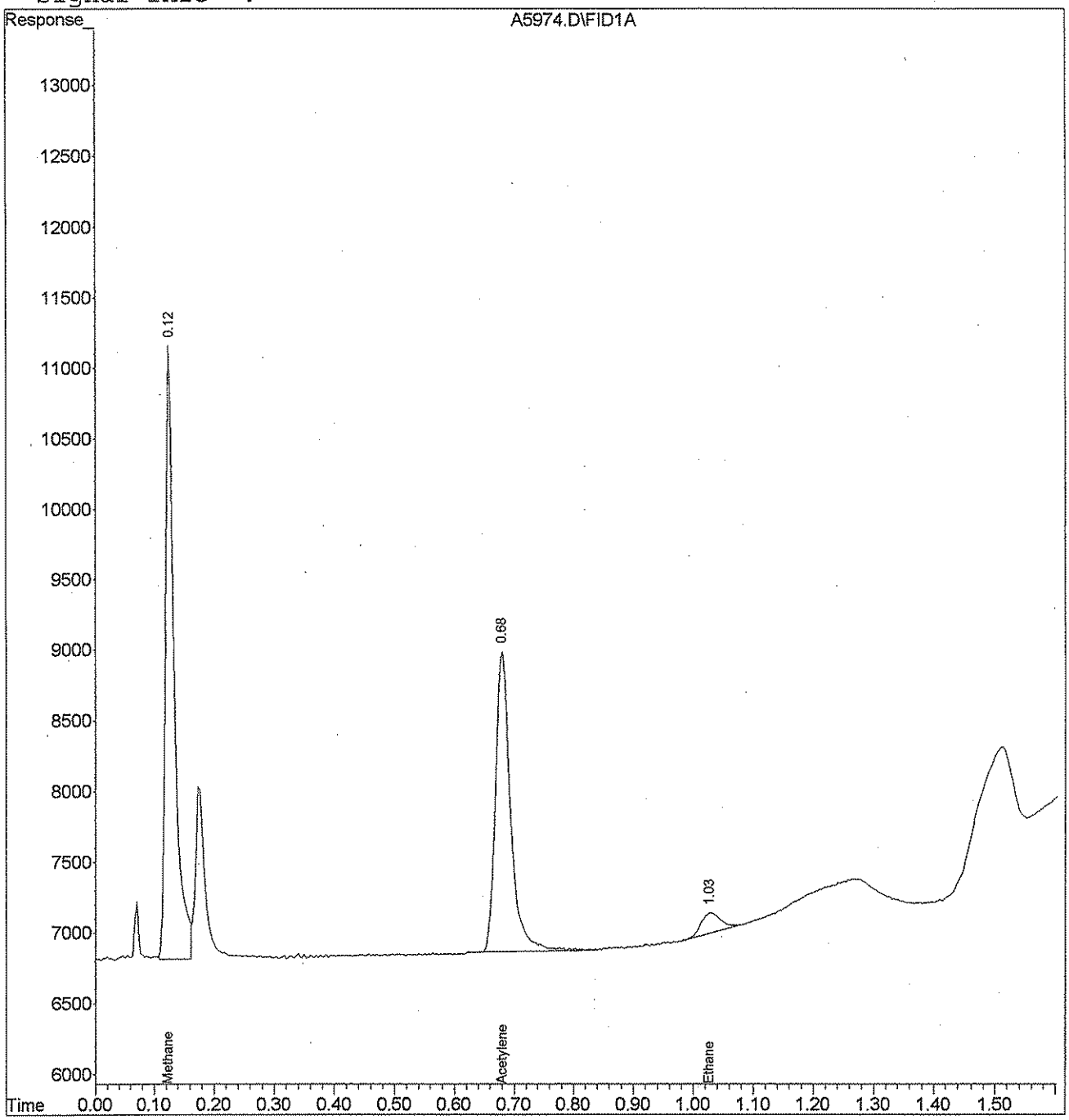
Authorized signature Melissa Arbelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5974.D Vial: 100
Acq On : 19 Jun 2003 10:46 pm Operator:
Sample : 49878-2D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 22:57 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW11-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 98 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

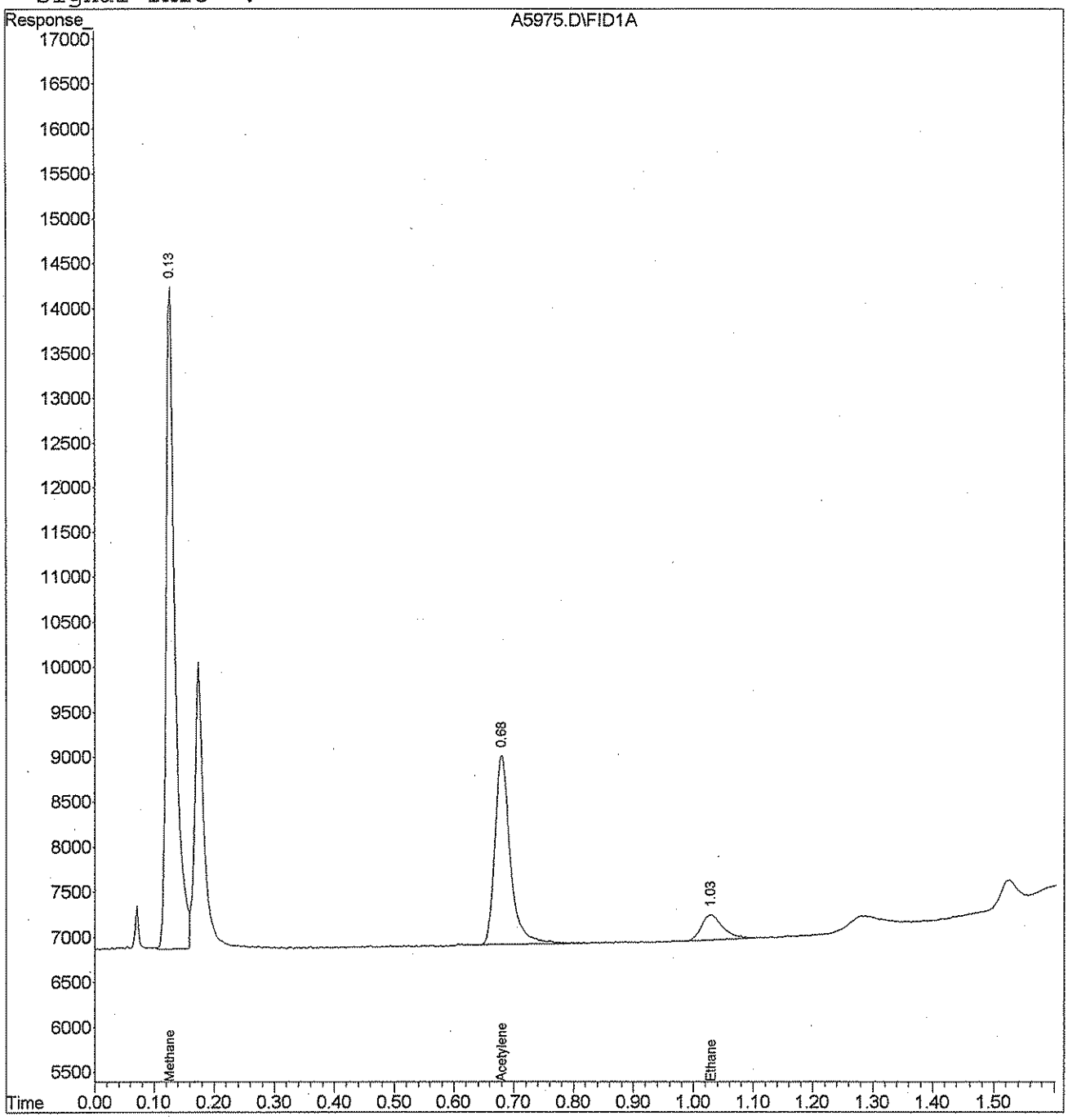
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5975.D Vial: 100
Acq On : 19 Jun 2003 10:52 pm Operator:
Sample : 49878-3D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 22:57 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW13-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 86 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

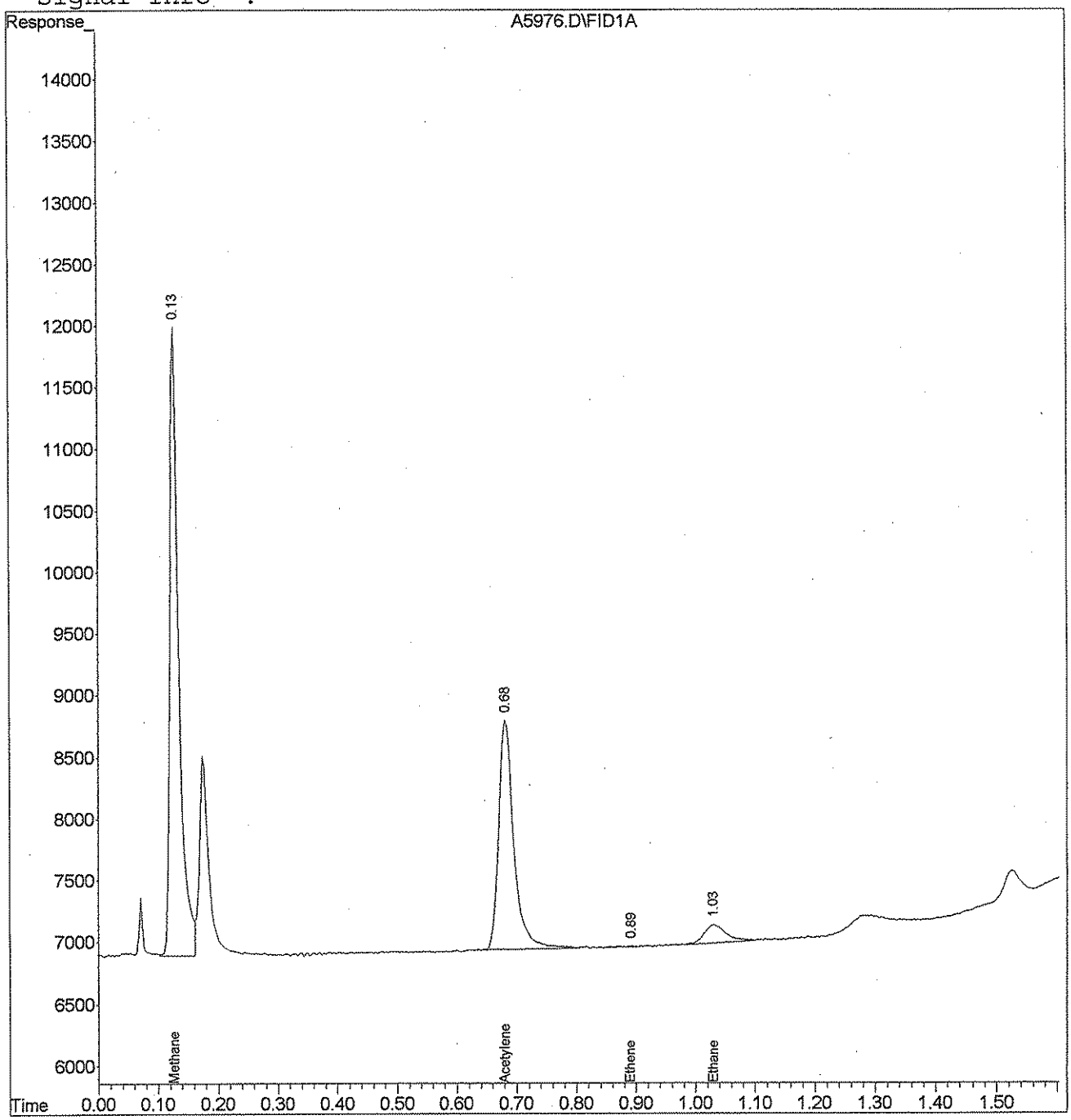
Authorized signature Melissa A Kelly

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5976.D Vial: 100
Acq On : 19 Jun 2003 10:58 pm Operator:
Sample : 49878-4D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:01 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** GAMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 88 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

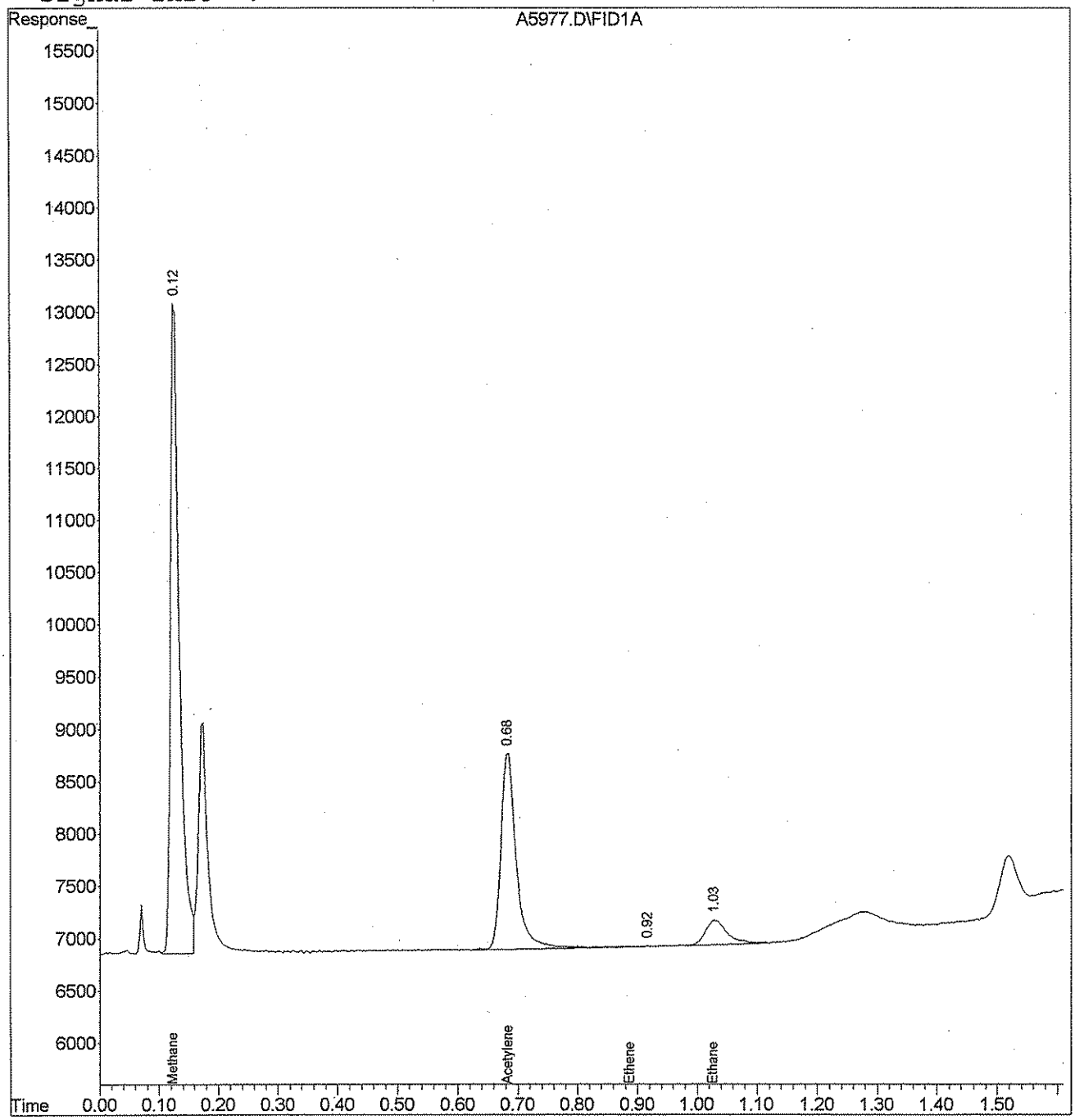
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5977.D Vial: 100
Acq On : 19 Jun 2003 11:14 pm Operator:
Sample : 49878-5D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:23 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW14-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 82 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

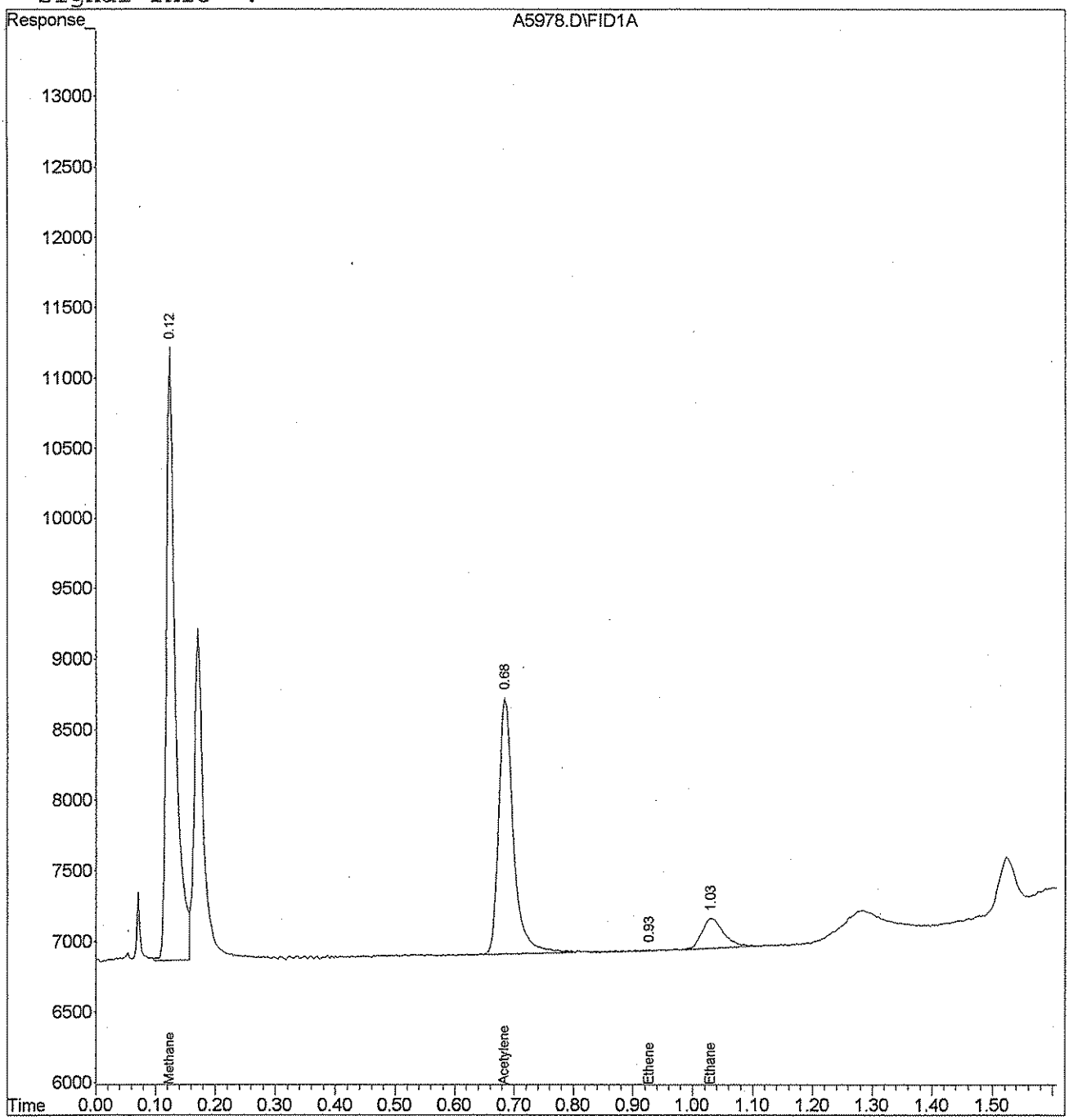
Authorized signature Melinda Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5978.D Vial: 100
Acq On : 19 Jun 2003 11:24 pm Operator:
Sample : 49878-6D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:28 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 83 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

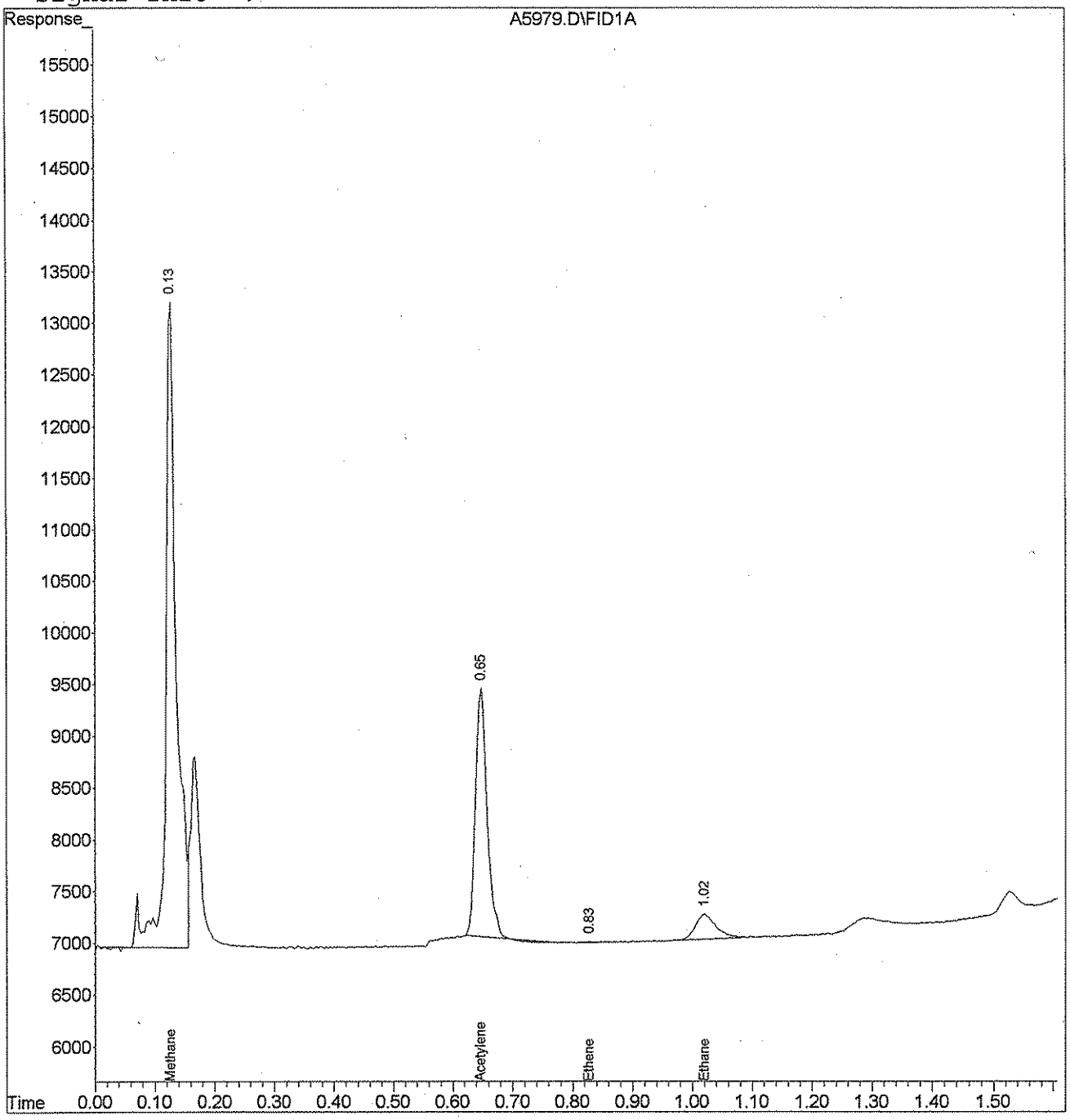
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5979.D Vial: 100
Acq On : 19 Jun 2003 11:29 pm Operator:
Sample : 49878-7D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:34 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW9-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-8
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 81 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

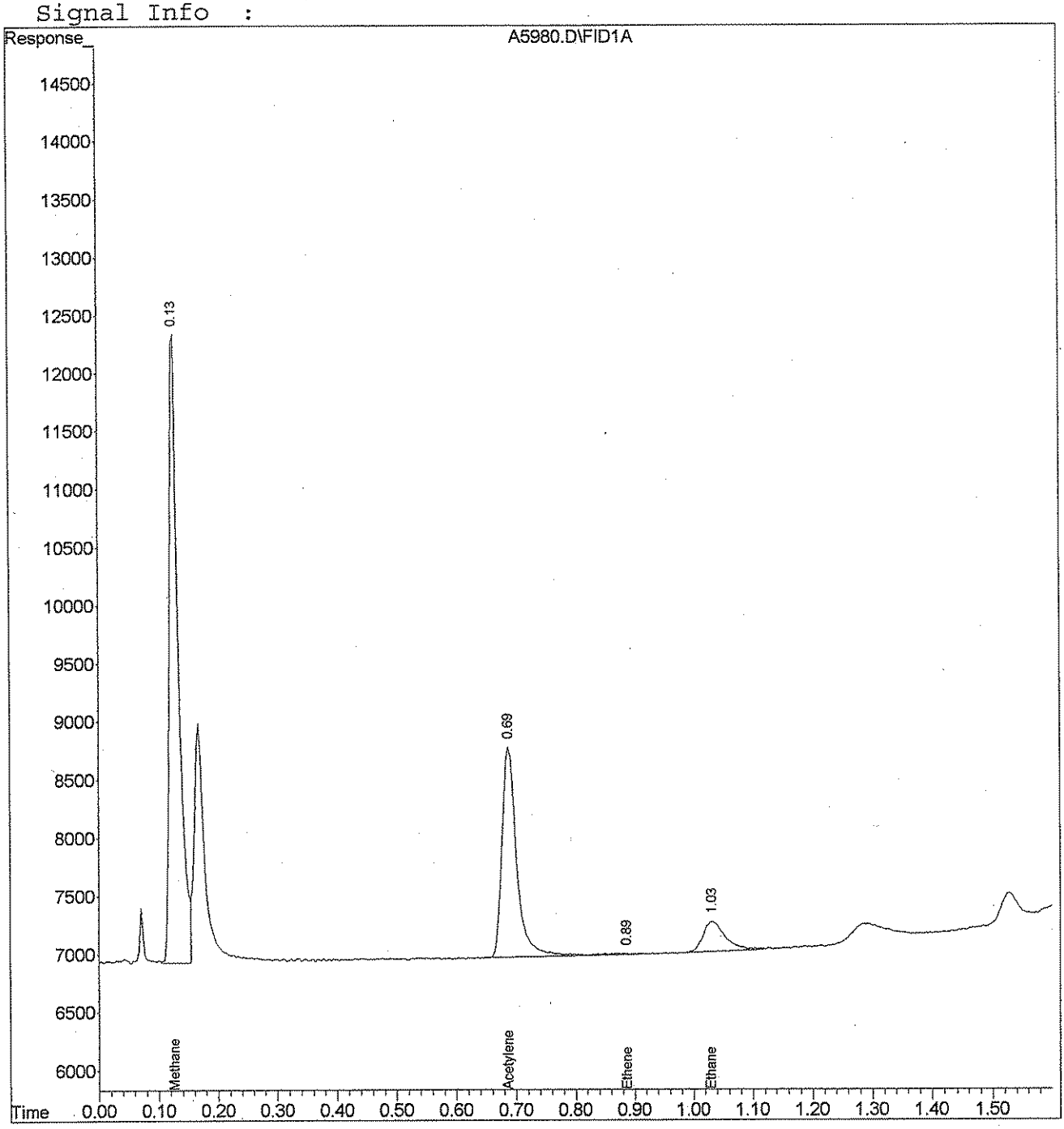
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5980.D Vial: 100
Acq On : 19 Jun 2003 11:34 pm Operator:
Sample : 49878-8D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:41 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW105-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 72 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

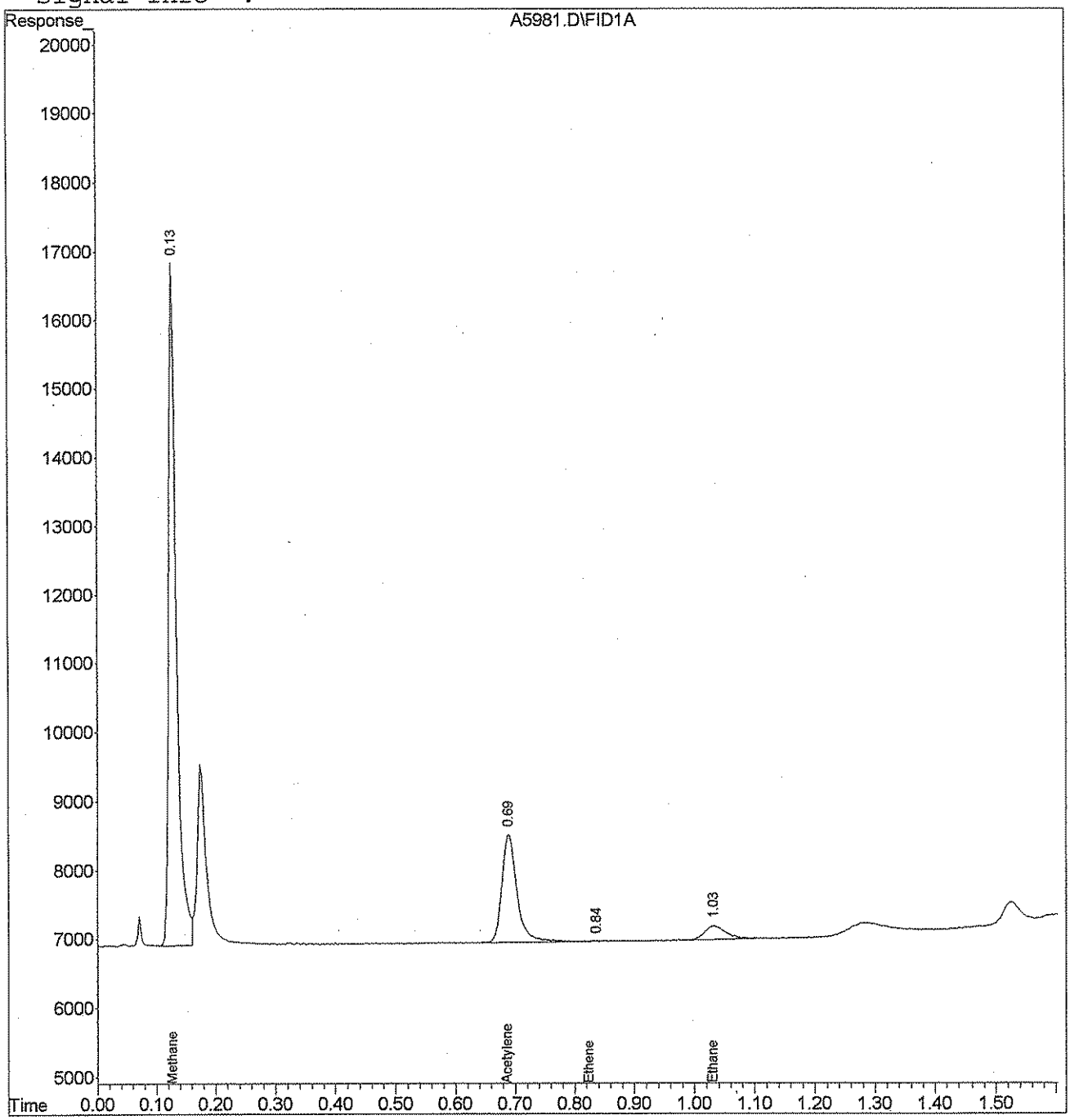
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5981.D Vial: 100
Acq On : 19 Jun 2003 11:42 pm Operator:
Sample : 49878-9D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:46 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW140-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-10
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 78 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

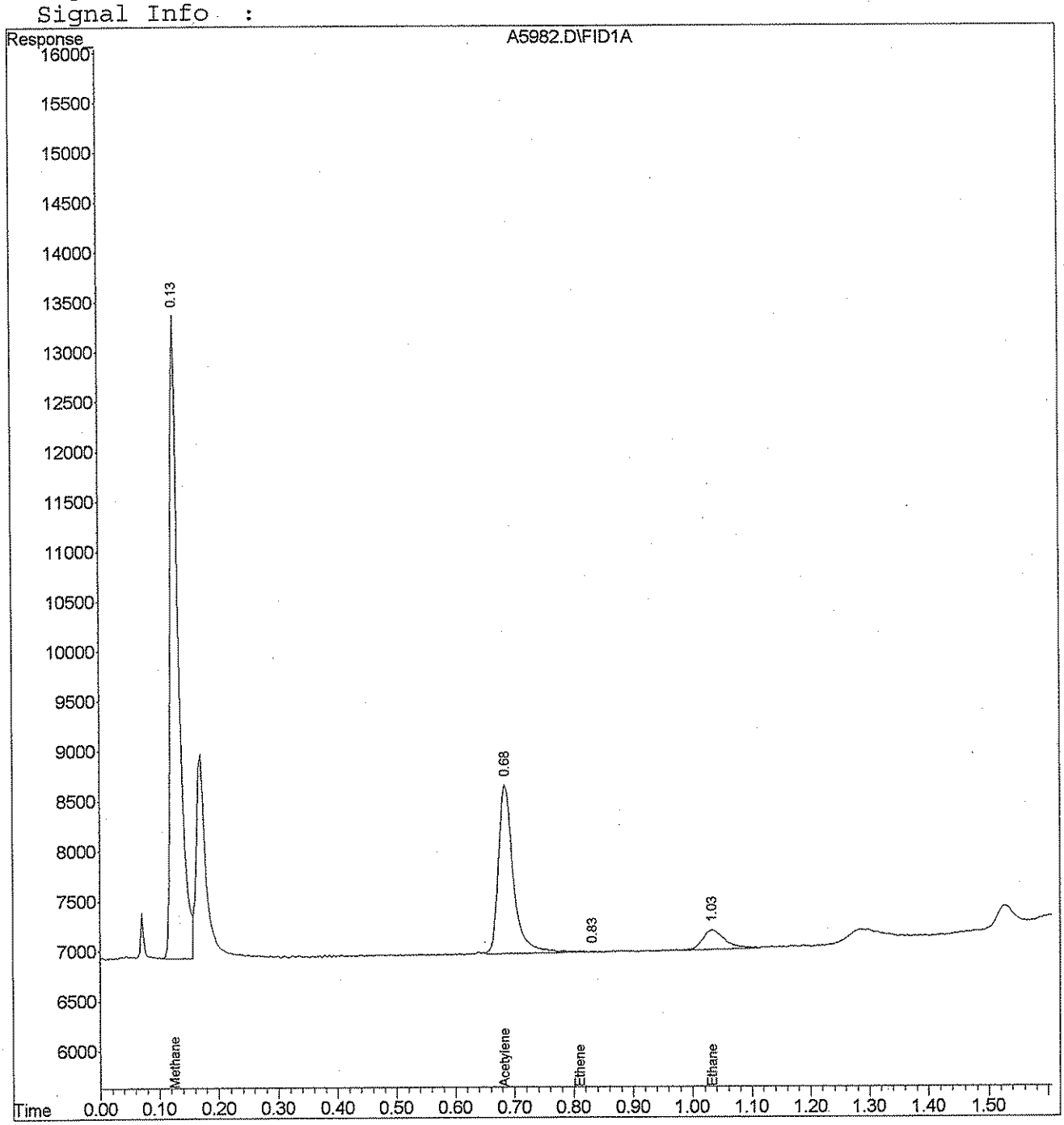
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5982.D Vial: 100
Acq On : 19 Jun 2003 11:47 pm Operator:
Sample : 49878-10D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 19 23:51 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW101-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-11
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 108 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

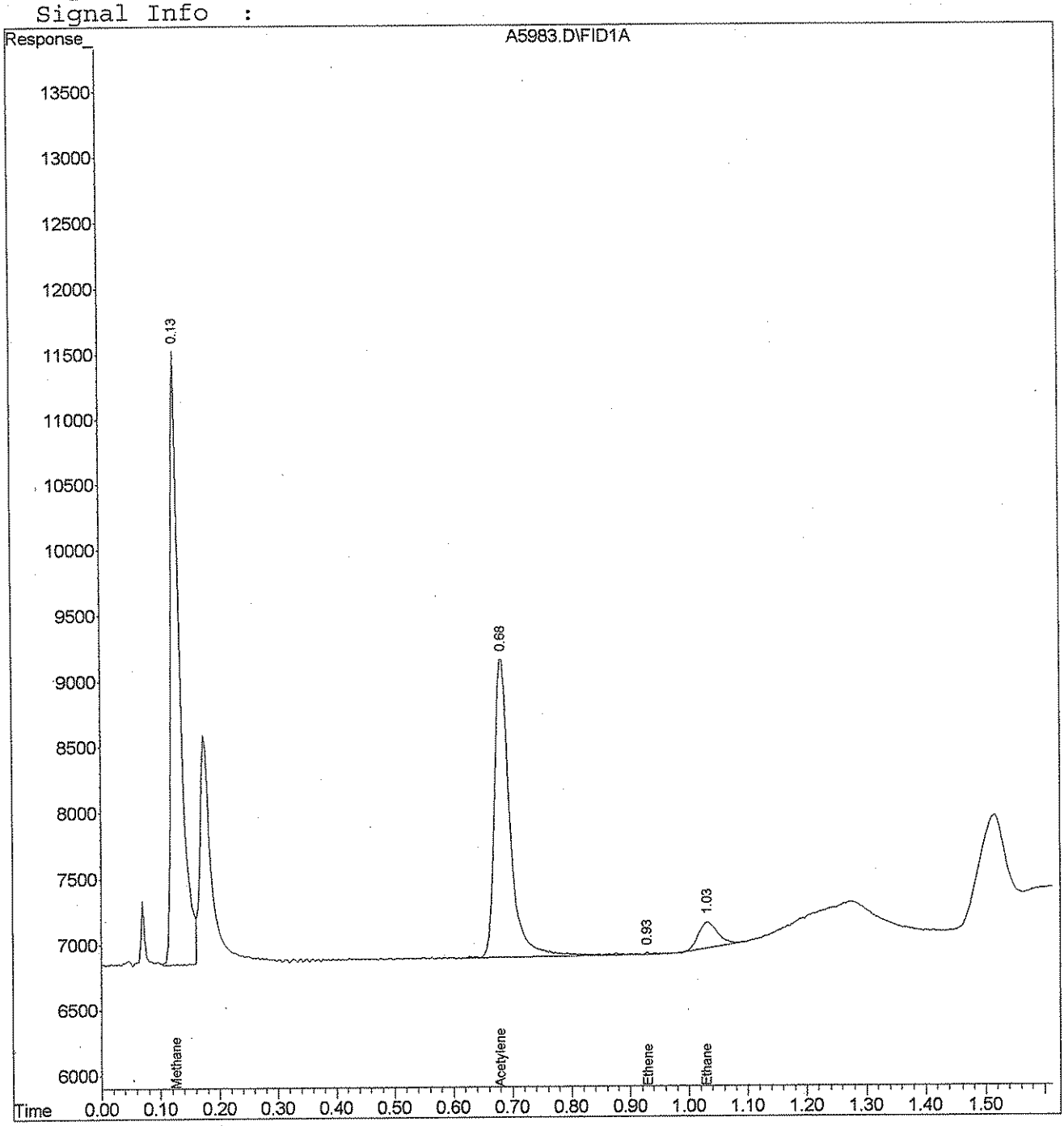
Authorized signature Melissa A Tulli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5983.D Vial: 100
Acq On : 20 Jun 2003 12:18 am Operator:
Sample : 49878-11D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 0:23 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW002-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-12
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 91 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

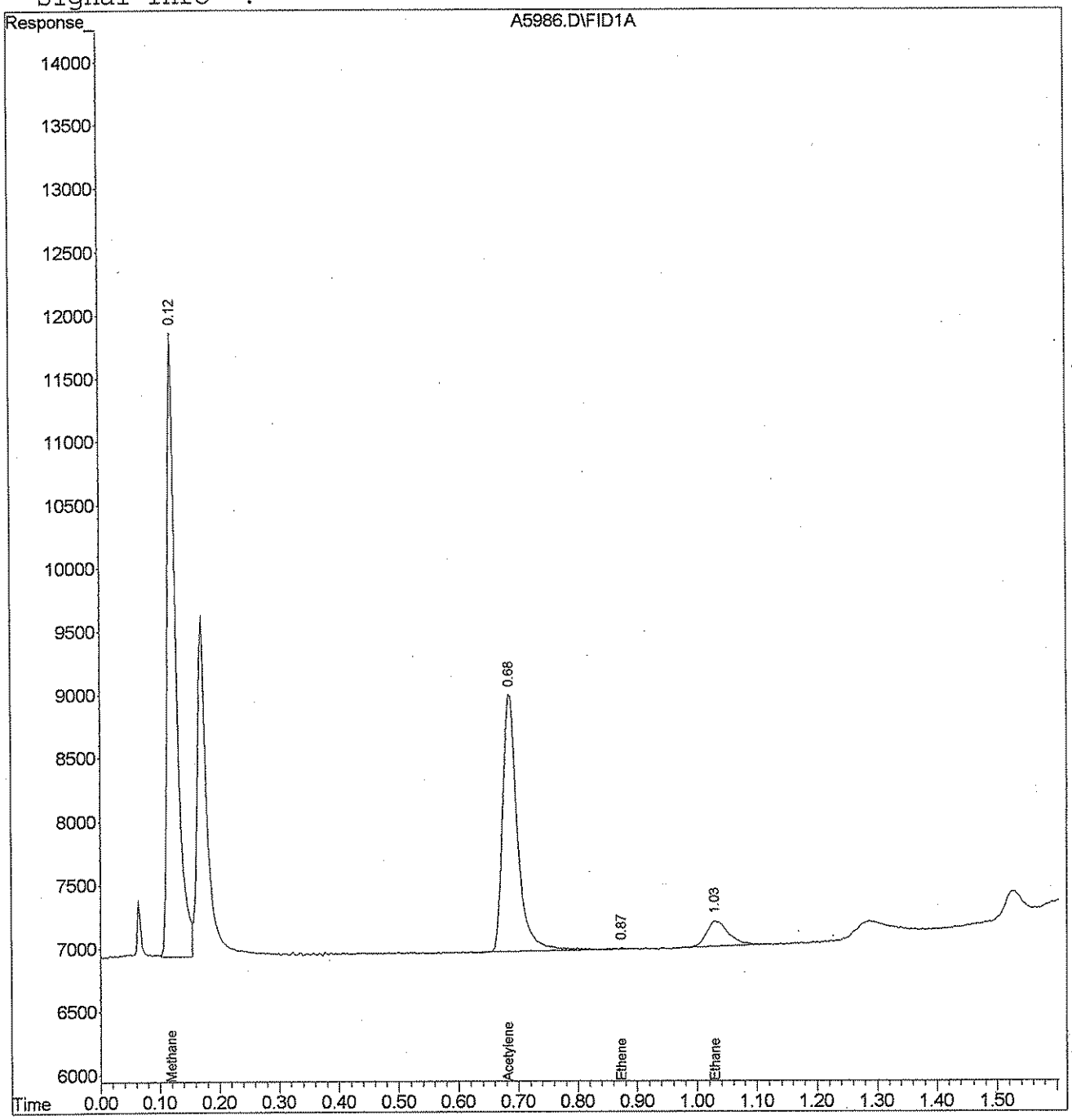
Authorized signature Melissa A. Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5986.D Vial: 100
Acq On : 20 Jun 2003 12:36 am Operator:
Sample : 49878-12D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 0:42 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW003-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-14
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/16/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 88 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

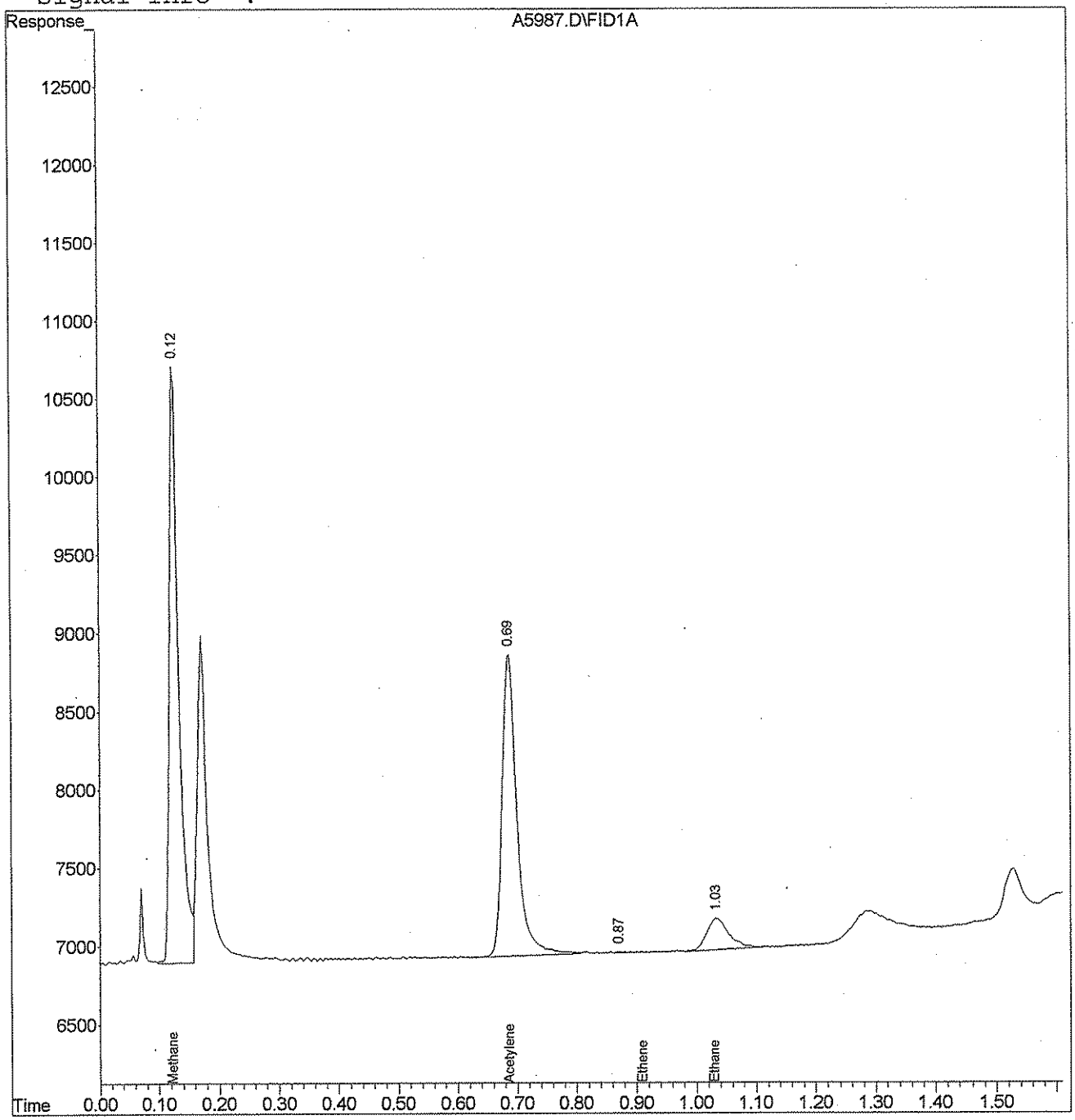
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5987.D Vial: 100
Acq On : 20 Jun 2003 12:43 am Operator:
Sample : 49878-14D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 0:47 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW004-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-16
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 103 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

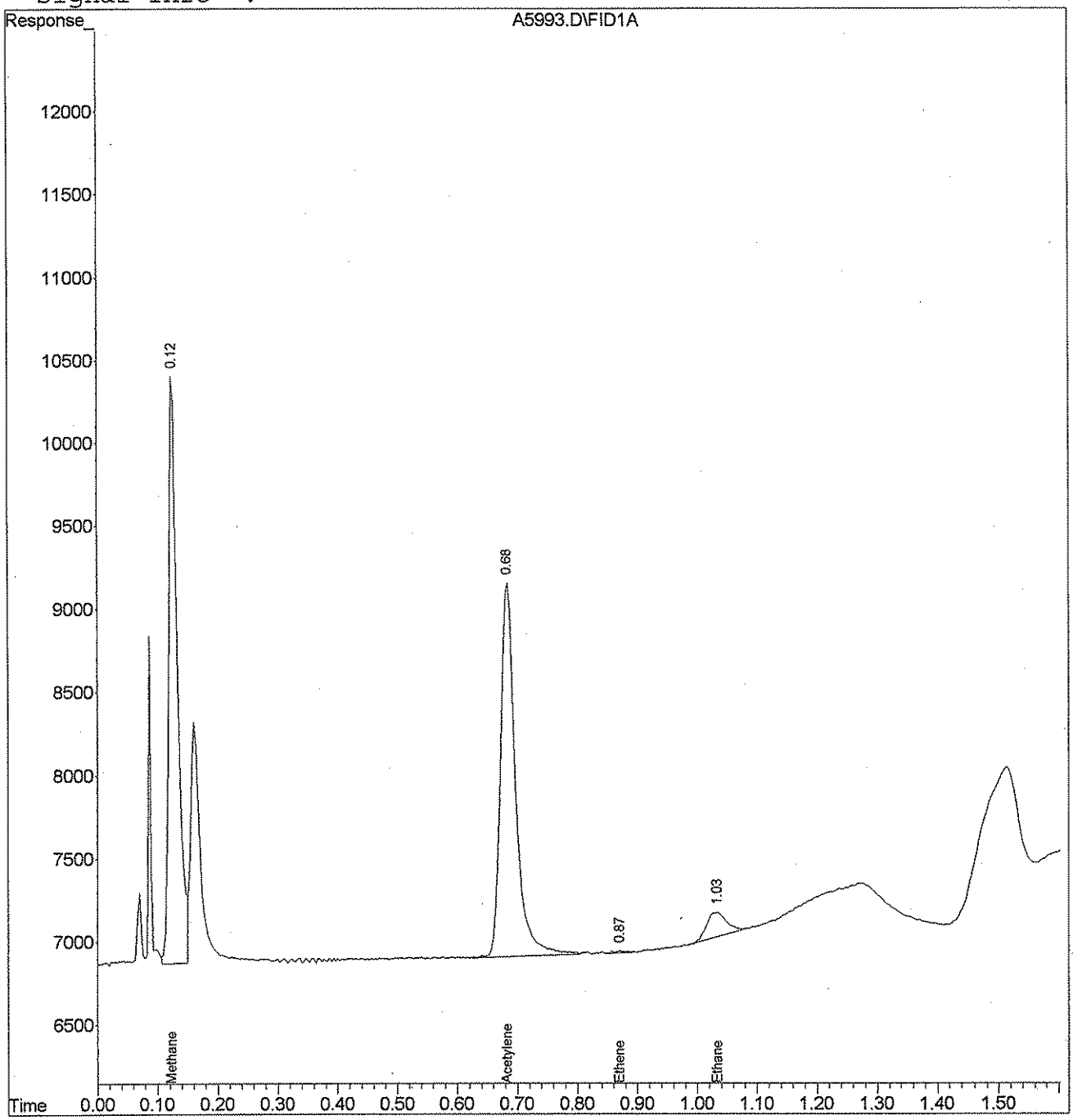
Authorized signature Melissa A Kelly

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5993.D Vial: 100
Acq On : 20 Jun 2003 2:02 am Operator:
Sample : 49878-16D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 2:04 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW102-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-17
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 72 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

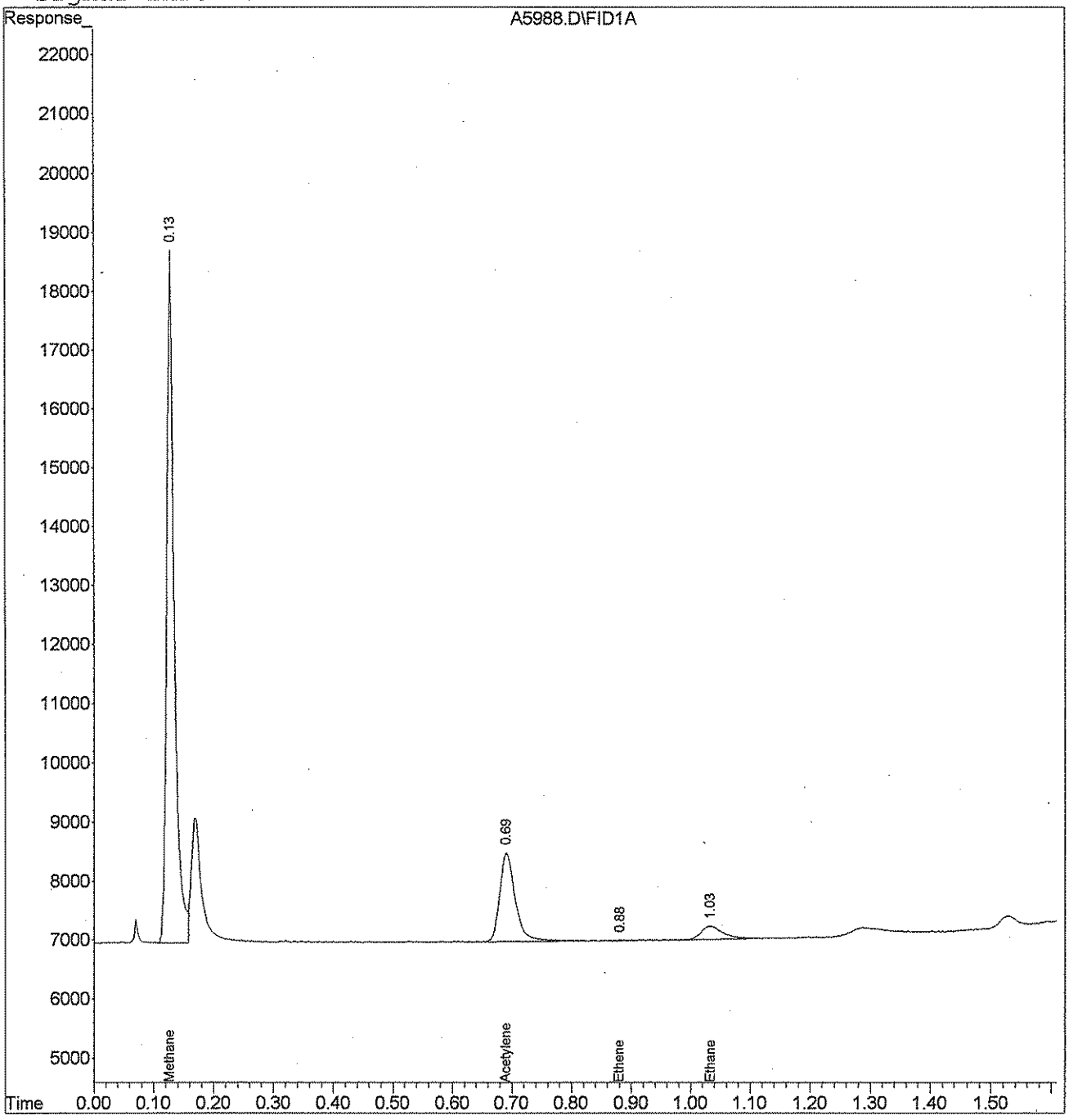
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5988.D Vial: 100
Acq On : 20 Jun 2003 12:48 am Operator:
Sample : 49878-17D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 1:36 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW103-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-18
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 84 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

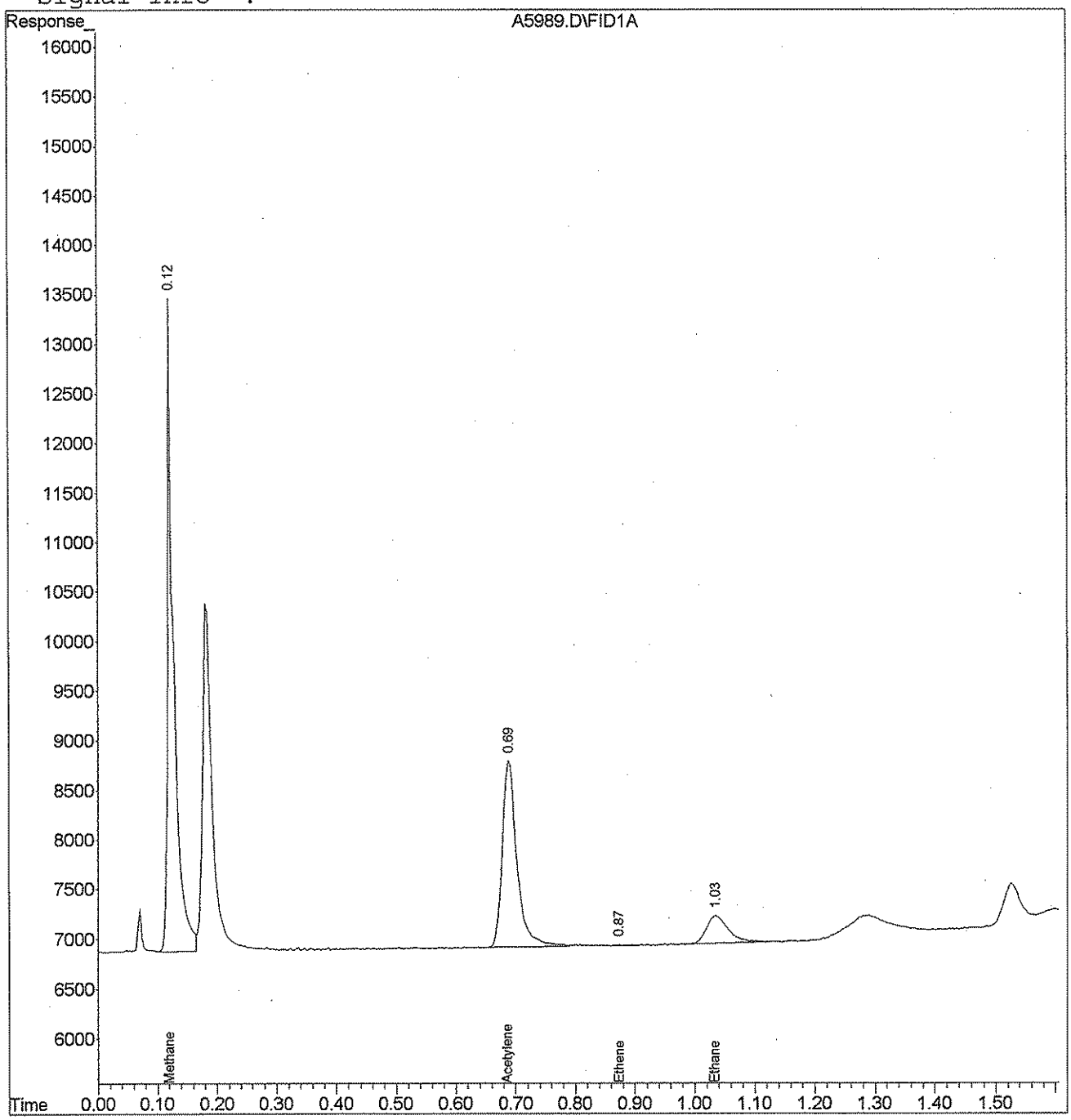
Authorized signature Melissa A Valli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5989.D Vial: 100
Acq On : 20 Jun 2003 12:57 am Operator:
Sample : 49878-18D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 1:36 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW8-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-19
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 84 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

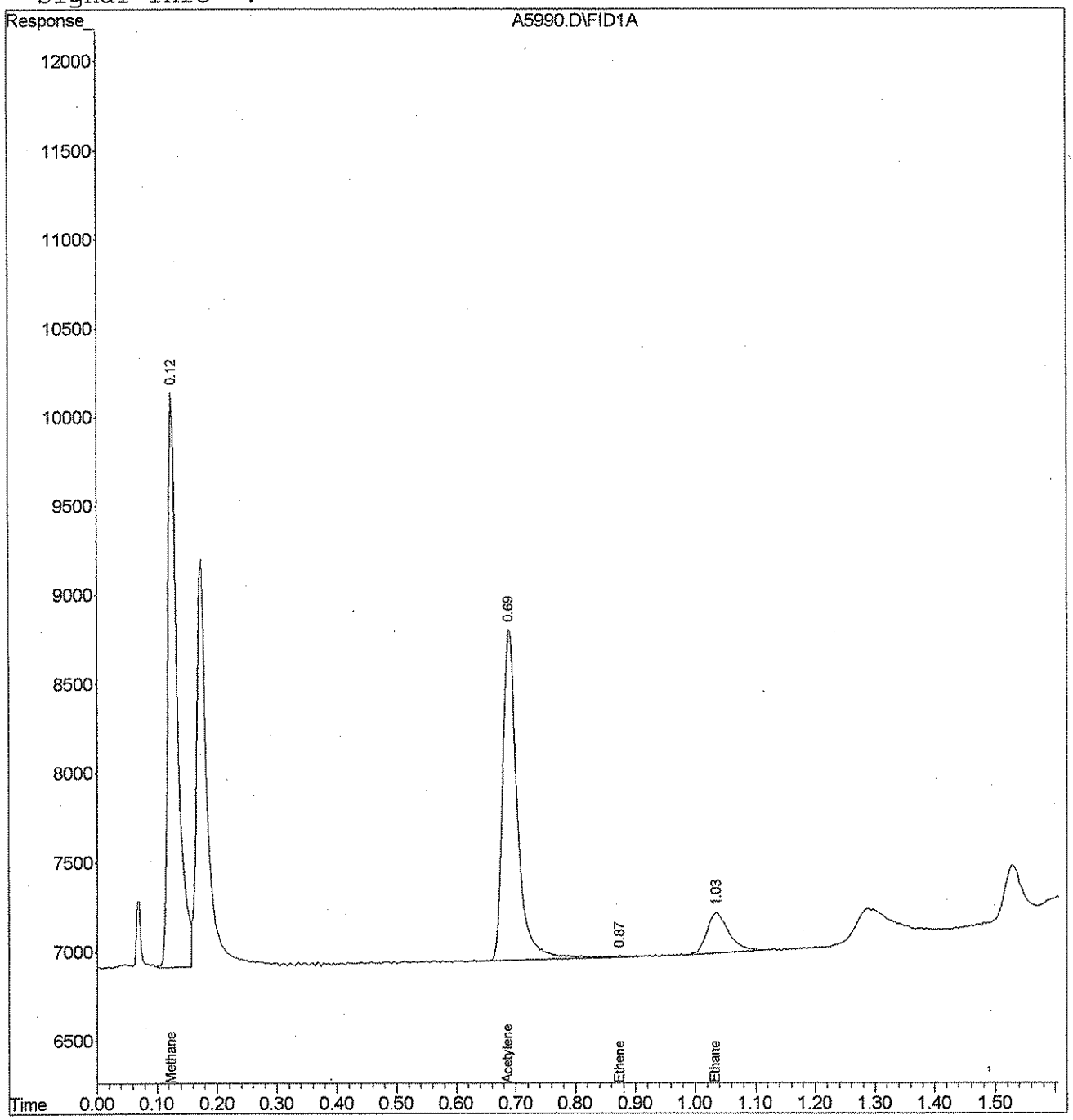
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5990.D Vial: 100
Acq On : 20 Jun 2003 1:02 am Operator:
Sample : 49878-19D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 1:36 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW5-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-20
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 84 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

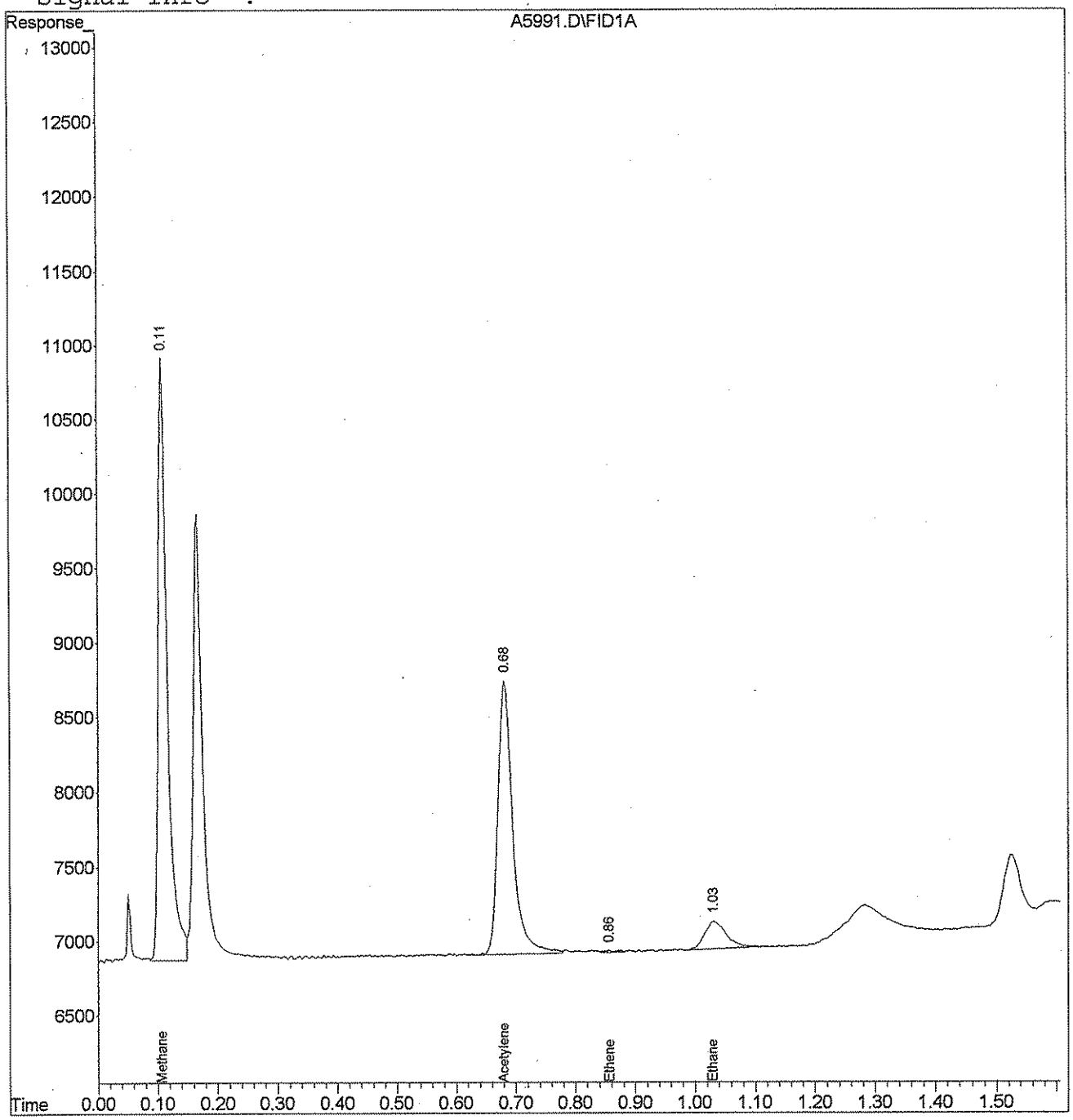
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5991.D Vial: 100
Acq On : 20 Jun 2003 1:13 am Operator:
Sample : 49878-20D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 1:36 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW5-0603-E
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-21
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 80 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

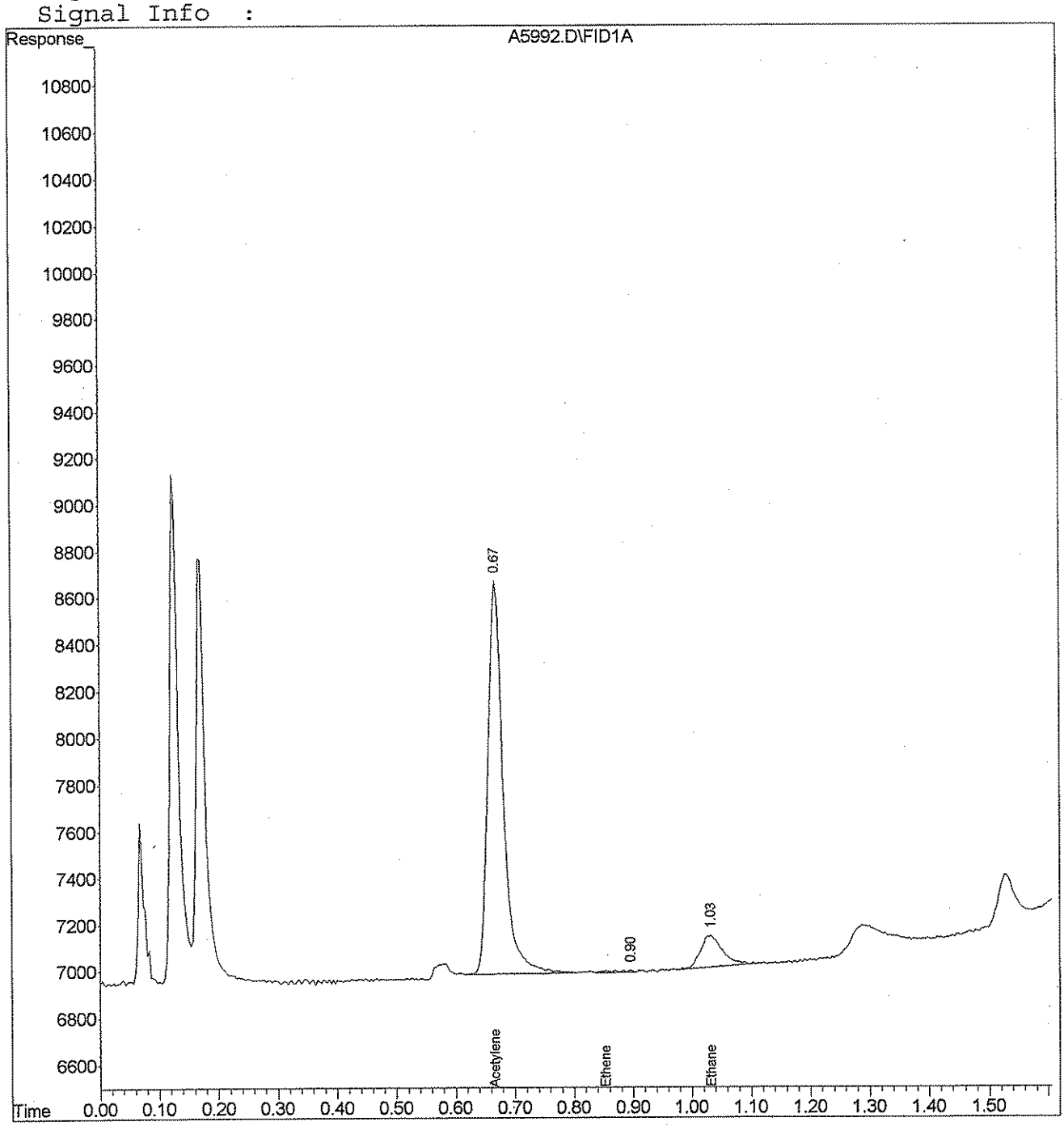
Authorized signature Melissa Arbell

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061903-A\A5992.D Vial: 100
Acq On : 20 Jun 2003 1:17 am Operator:
Sample : 49878-21D,N,QA061903,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 1:36 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW1-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-22
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 93 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

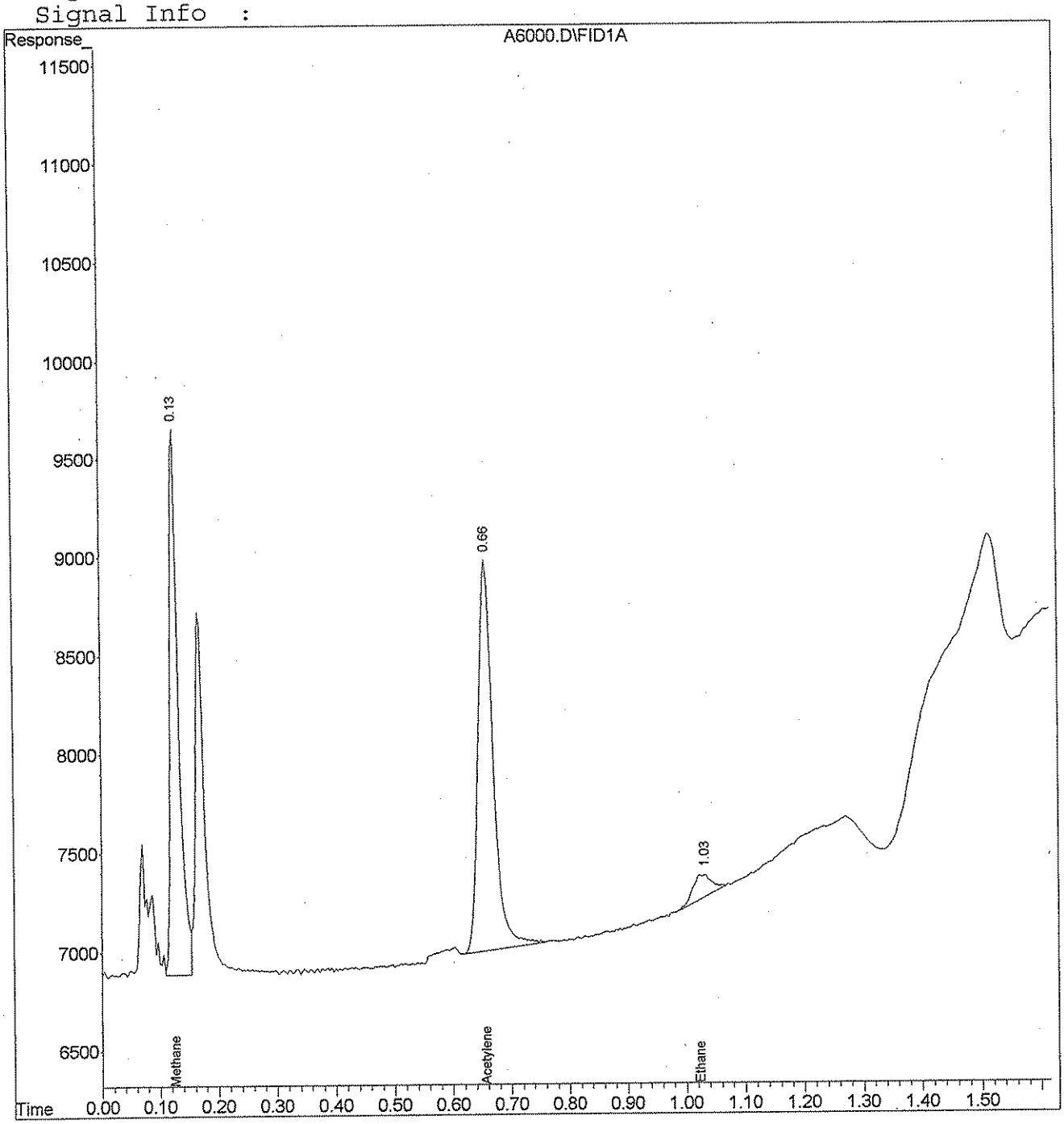
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6000.D Vial: 100
Acq On : 20 Jun 2003 10:17 pm Operator:
Sample : 49878-22D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 22:30 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW6-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-23
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 91 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

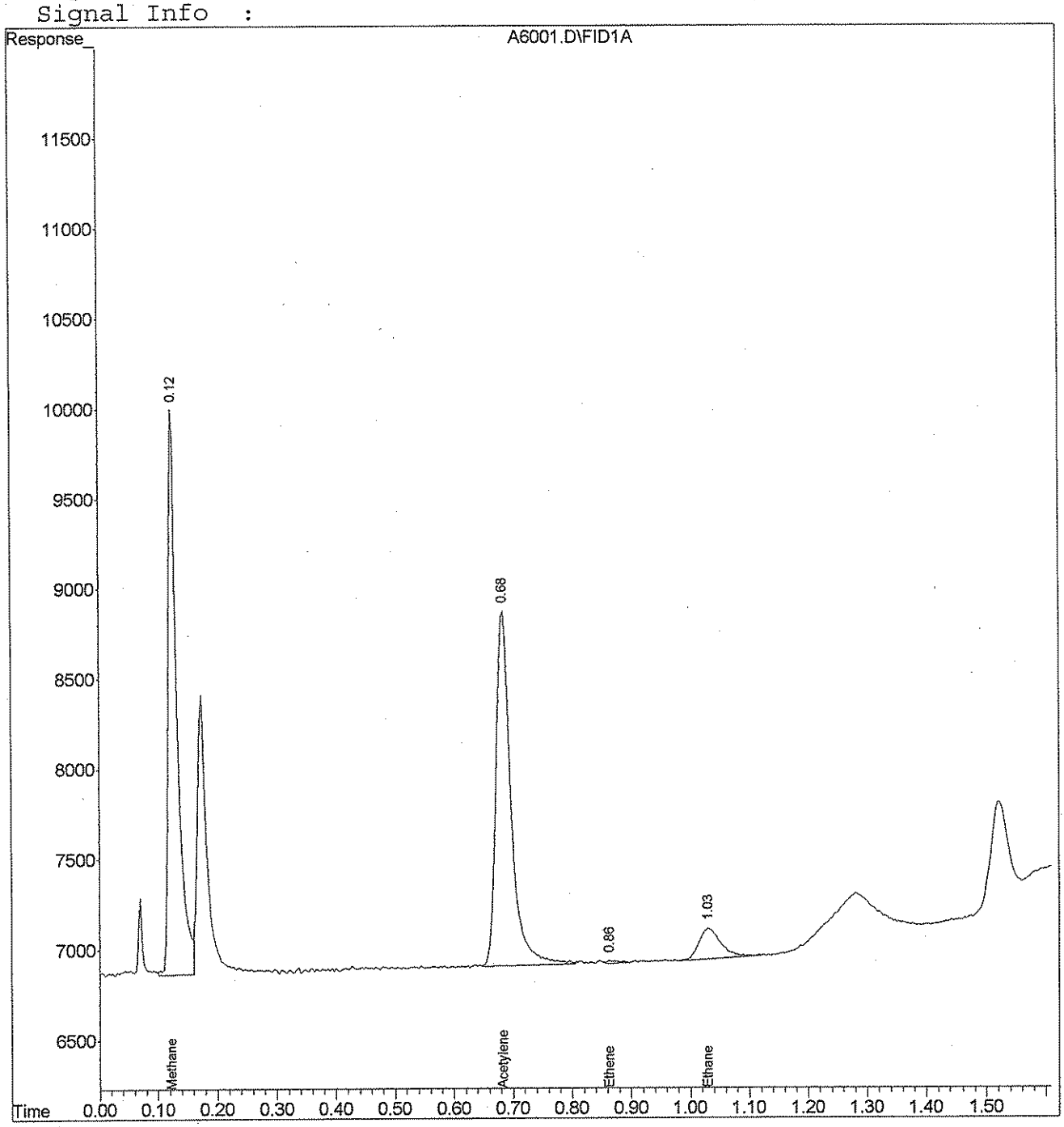
Authorized signature Melissa A. Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6001.D Vial: 100
Acq On : 20 Jun 2003 10:31 pm Operator:
Sample : 49878-23D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 22:33 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** FAMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-25
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 86 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

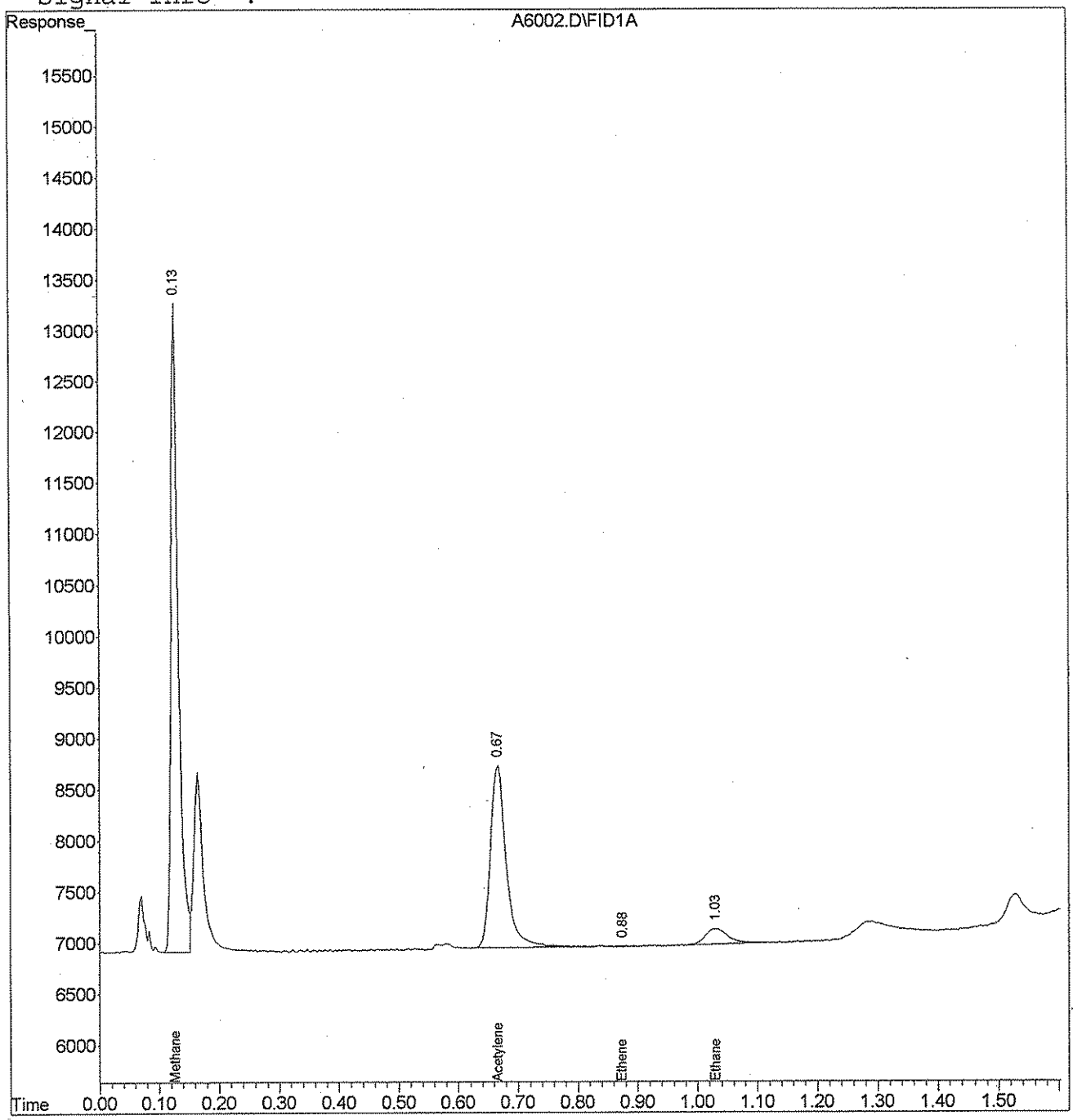
Authorized signature Melissa A Valli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6002.D Vial: 100
Acq On : 20 Jun 2003 10:37 pm Operator:
Sample : 49878-25D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 22:42 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** FAMW002-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-26
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 85 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

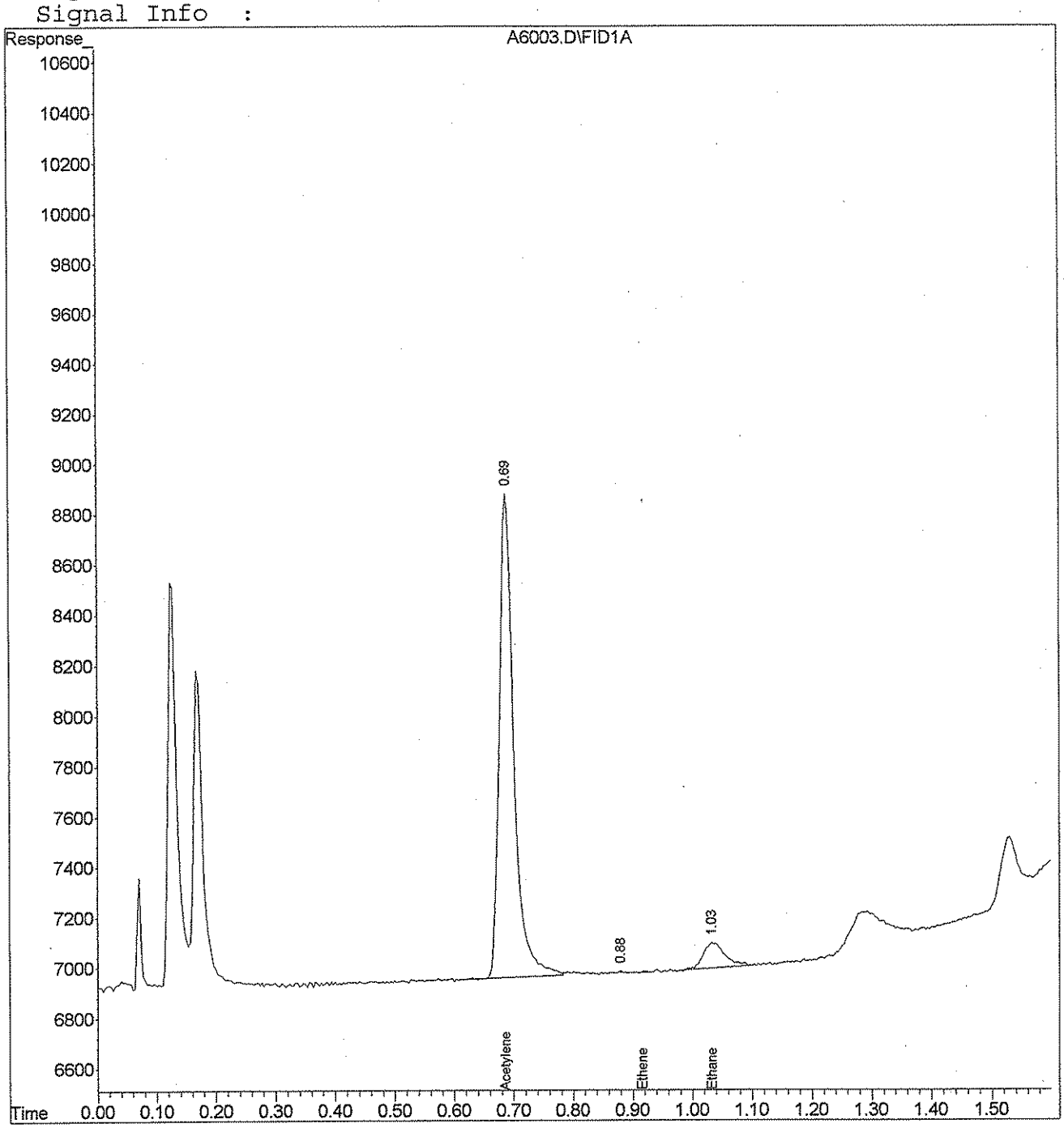
Authorized signature Melissa A Valle

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6003.D Vial: 100
Acq On : 20 Jun 2003 10:43 pm Operator:
Sample : 49878-26D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 22:55 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** BPMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-27
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 82 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

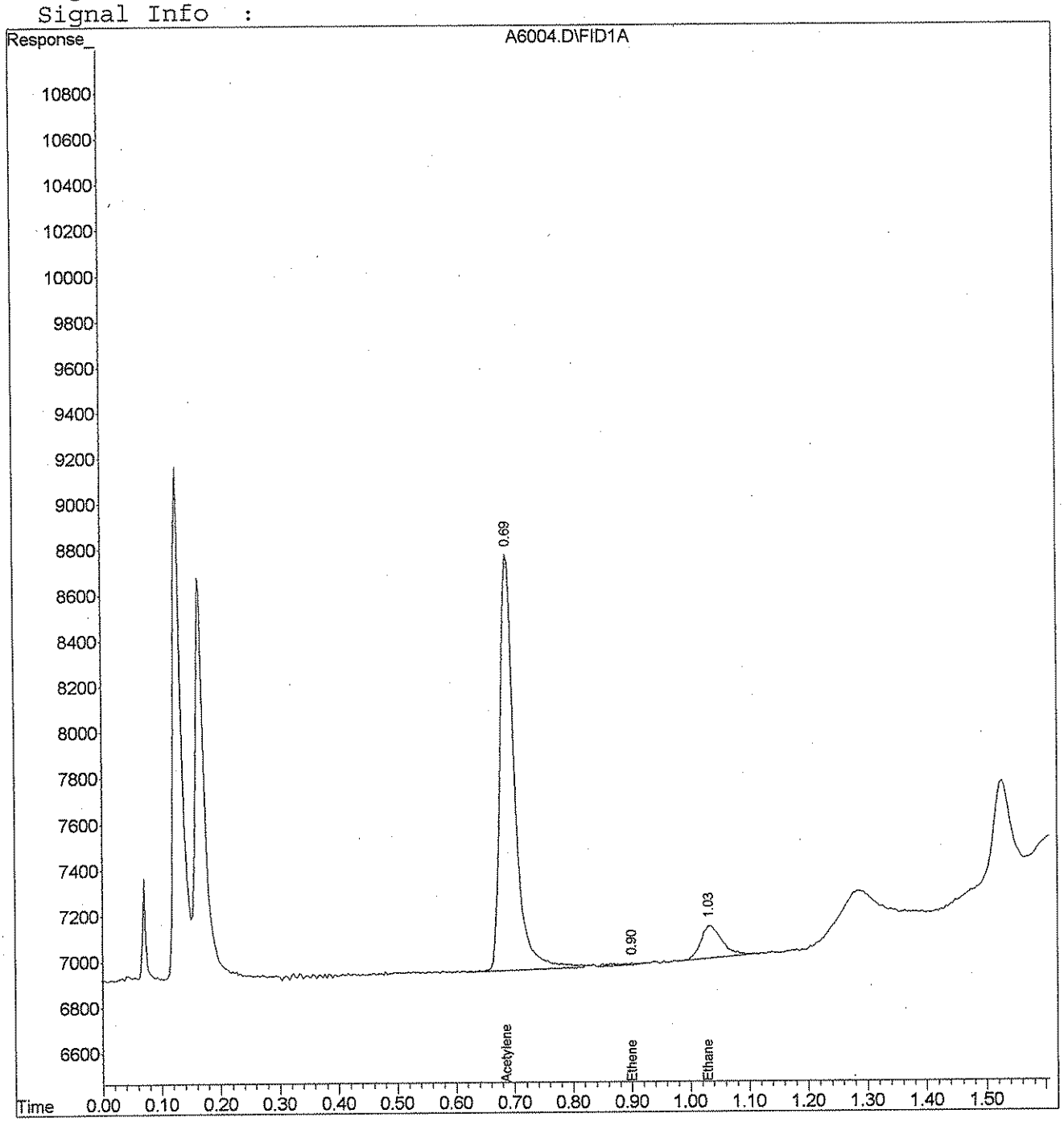
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6004.D Vial: 100
Acq On : 20 Jun 2003 10:52 pm Operator:
Sample : 49878-27D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 22:55 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** GTMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-28
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 81 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

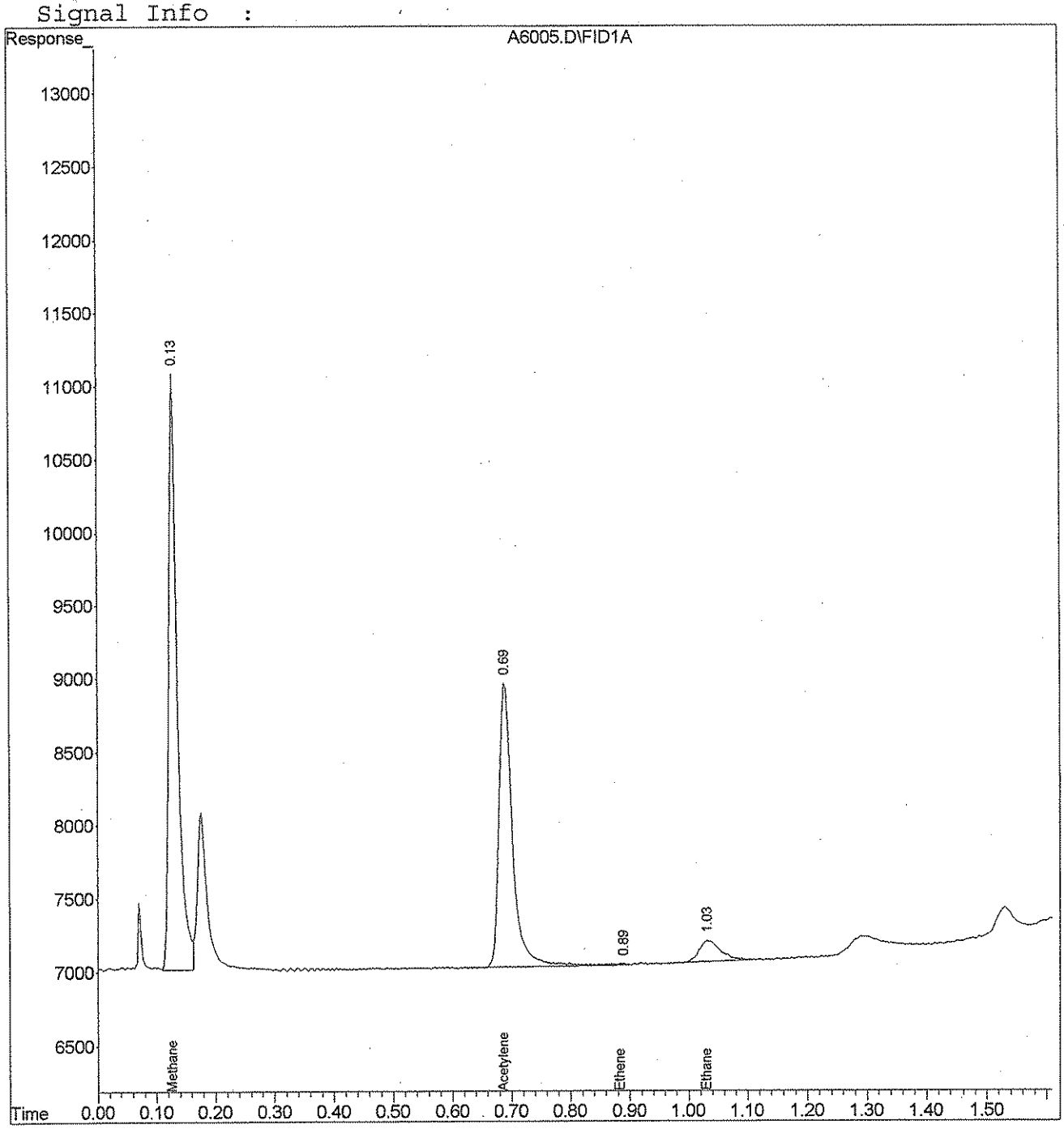
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6005.D Vial: 100
Acq On : 20 Jun 2003 10:56 pm Operator:
Sample : 49878-28D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 23:18 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** TSMW001-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-29
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 82 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

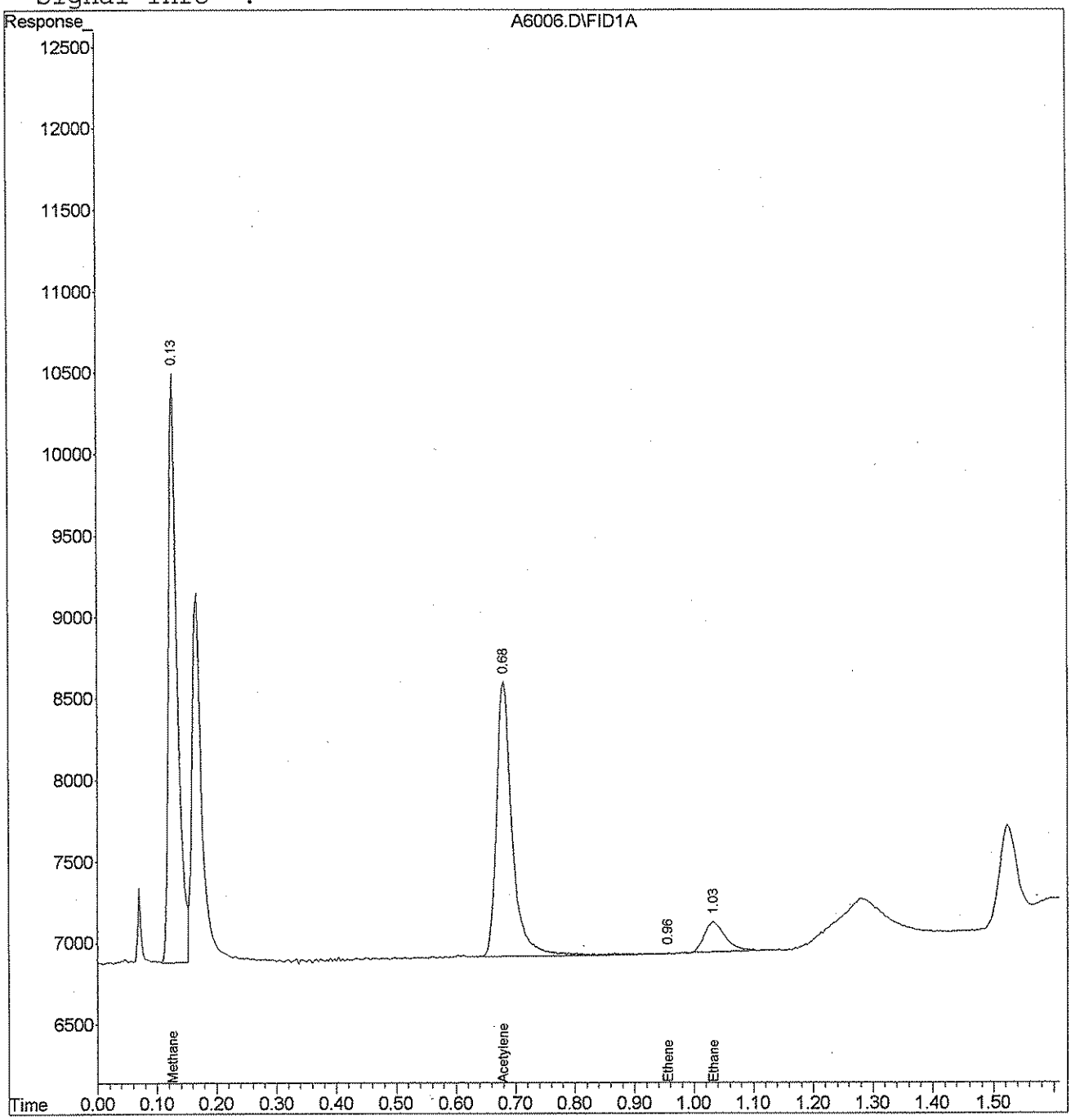
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6006.D Vial: 100
Acq On : 20 Jun 2003 11:10 pm Operator:
Sample : 49878-29D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 23:18 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** TSMW002-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-30
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 82 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

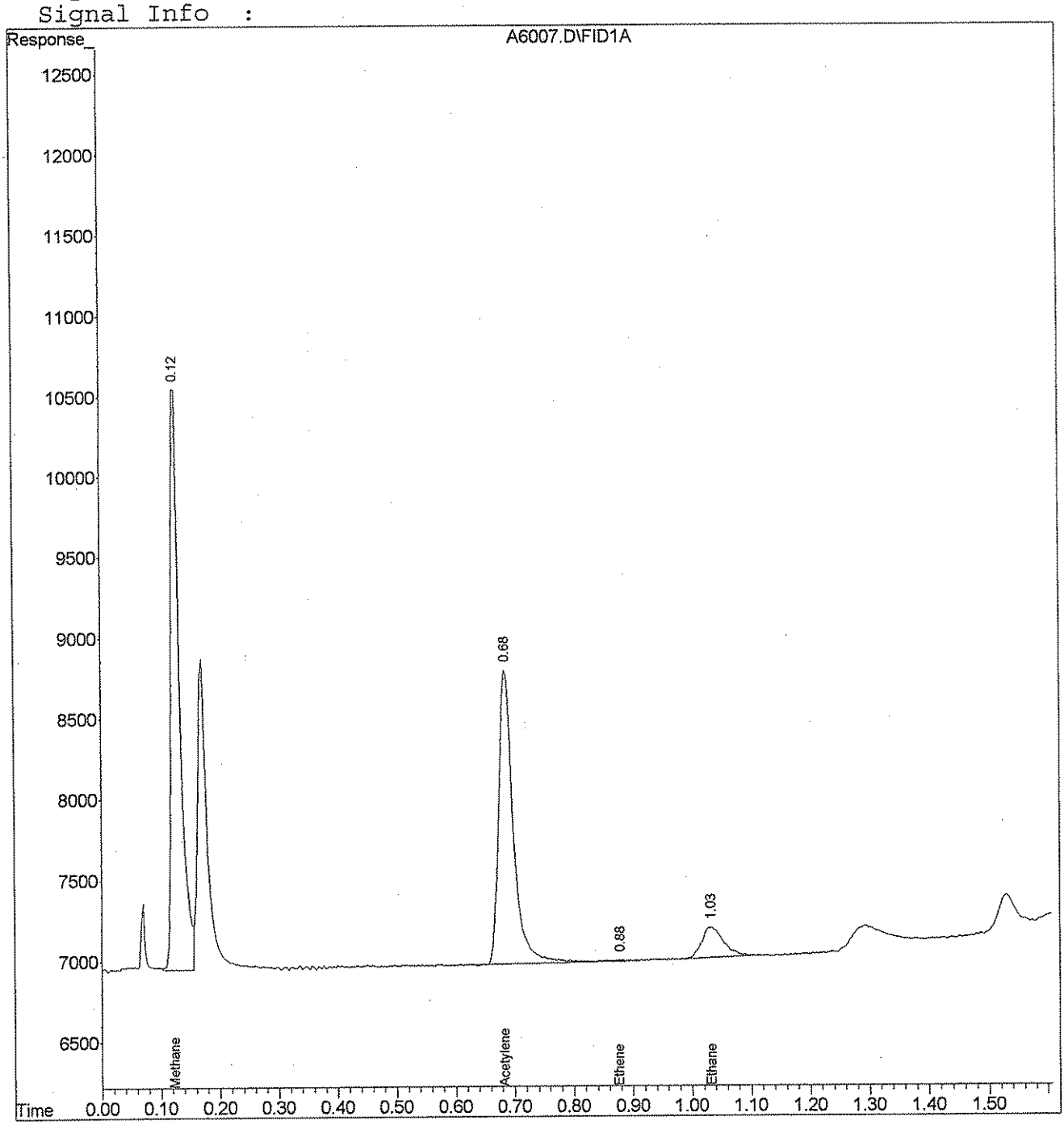
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6007.D Vial: 100
Acq On : 20 Jun 2003 11:15 pm Operator:
Sample : 49878-30D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 23:18 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** TSMW003-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-31
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 81 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

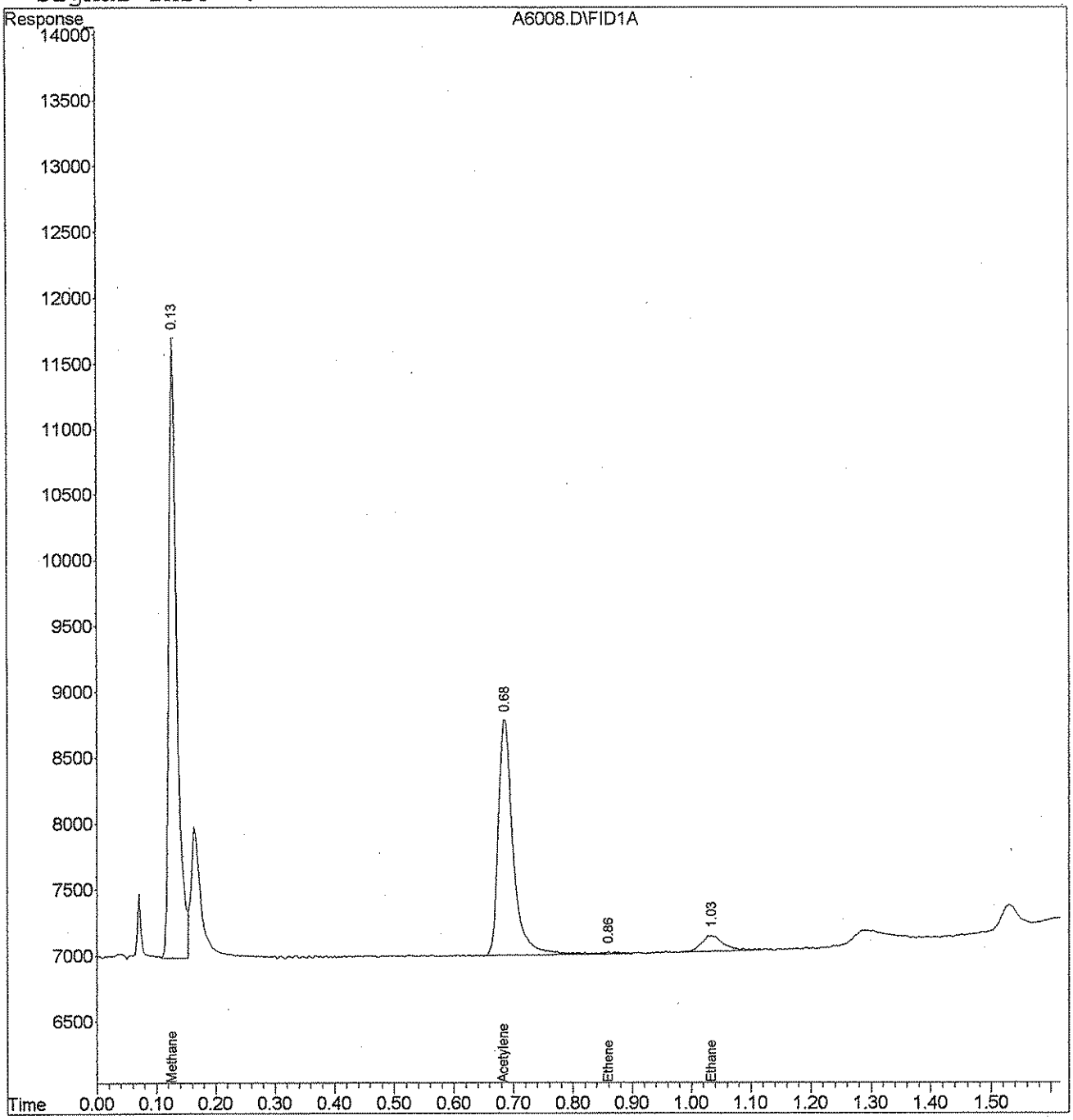
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6008.D Vial: 100
Acq On : 20 Jun 2003 11:19 pm Operator:
Sample : 49878-31D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 20 23:21 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW3-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-32
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

Acetylene 107 %

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

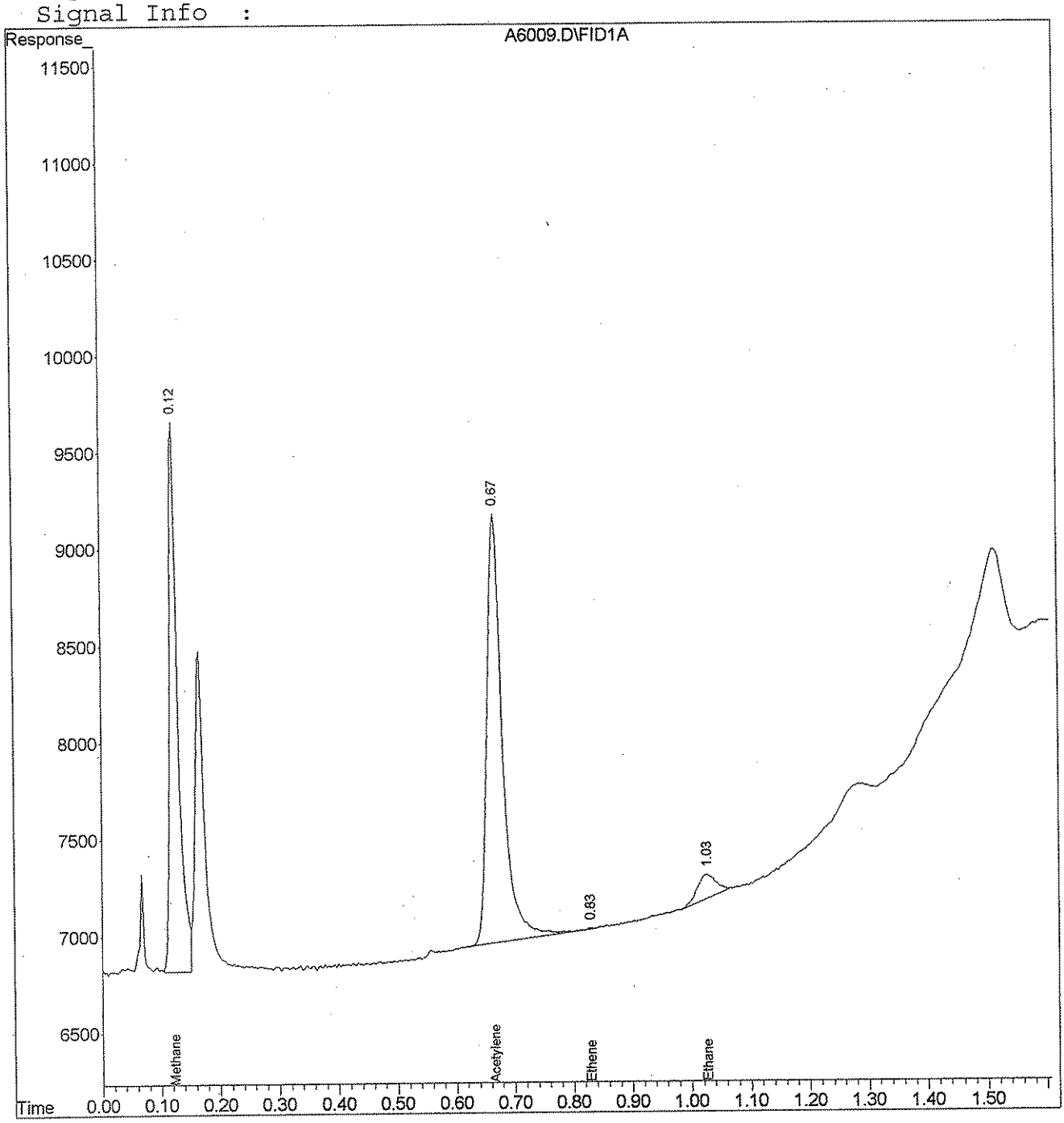
Authorized signature Melissa A. Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6009.D Vial: 100
Acq On : 21 Jun 2003 1:35 am Operator:
Sample : 49878-32D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 1:42 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW2-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-33
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 92 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

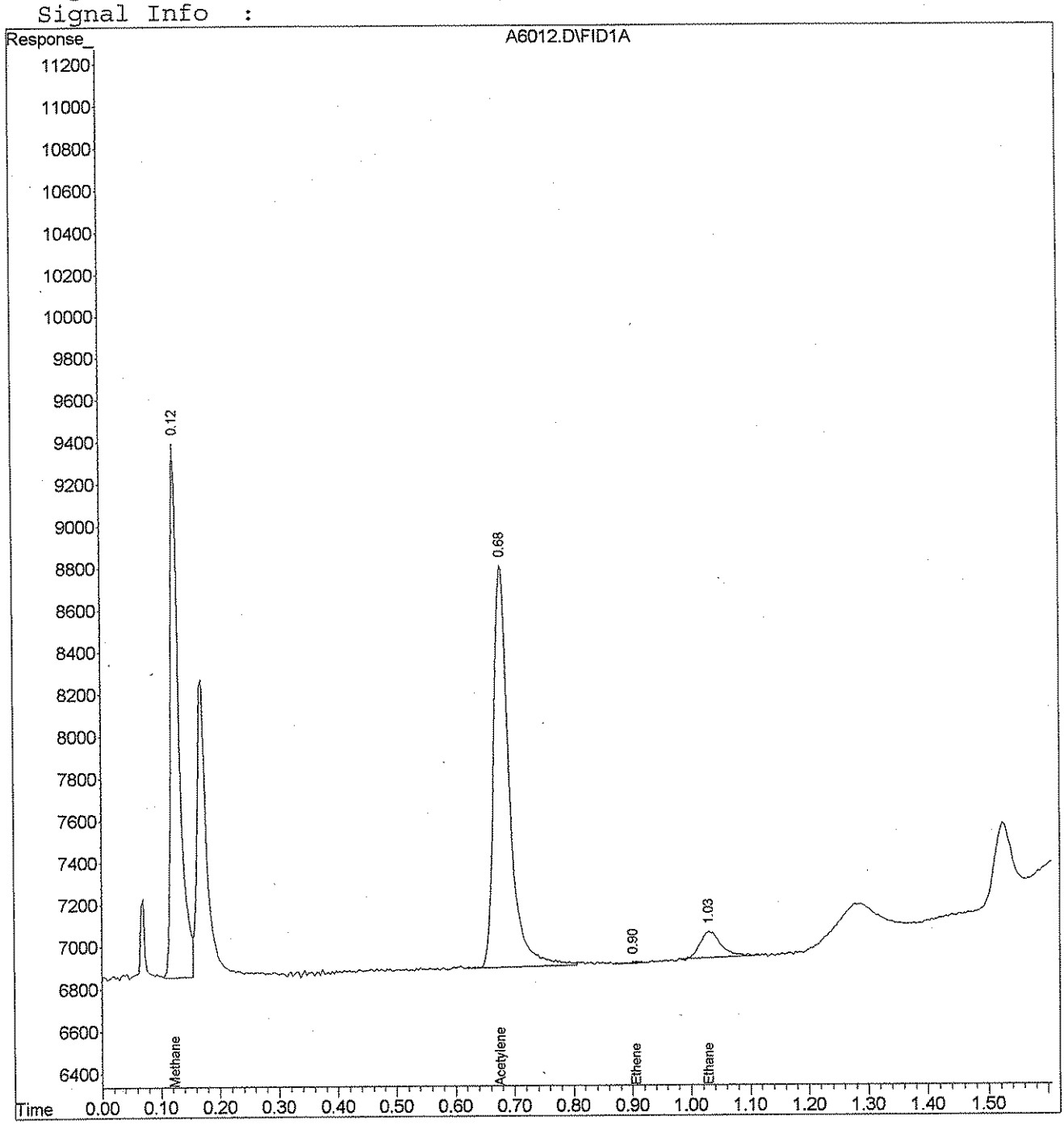
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6012.D Vial: 100
Acq On : 21 Jun 2003 1:54 am Operator:
Sample : 49878-33D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 1:56 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW7-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-34
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 90 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

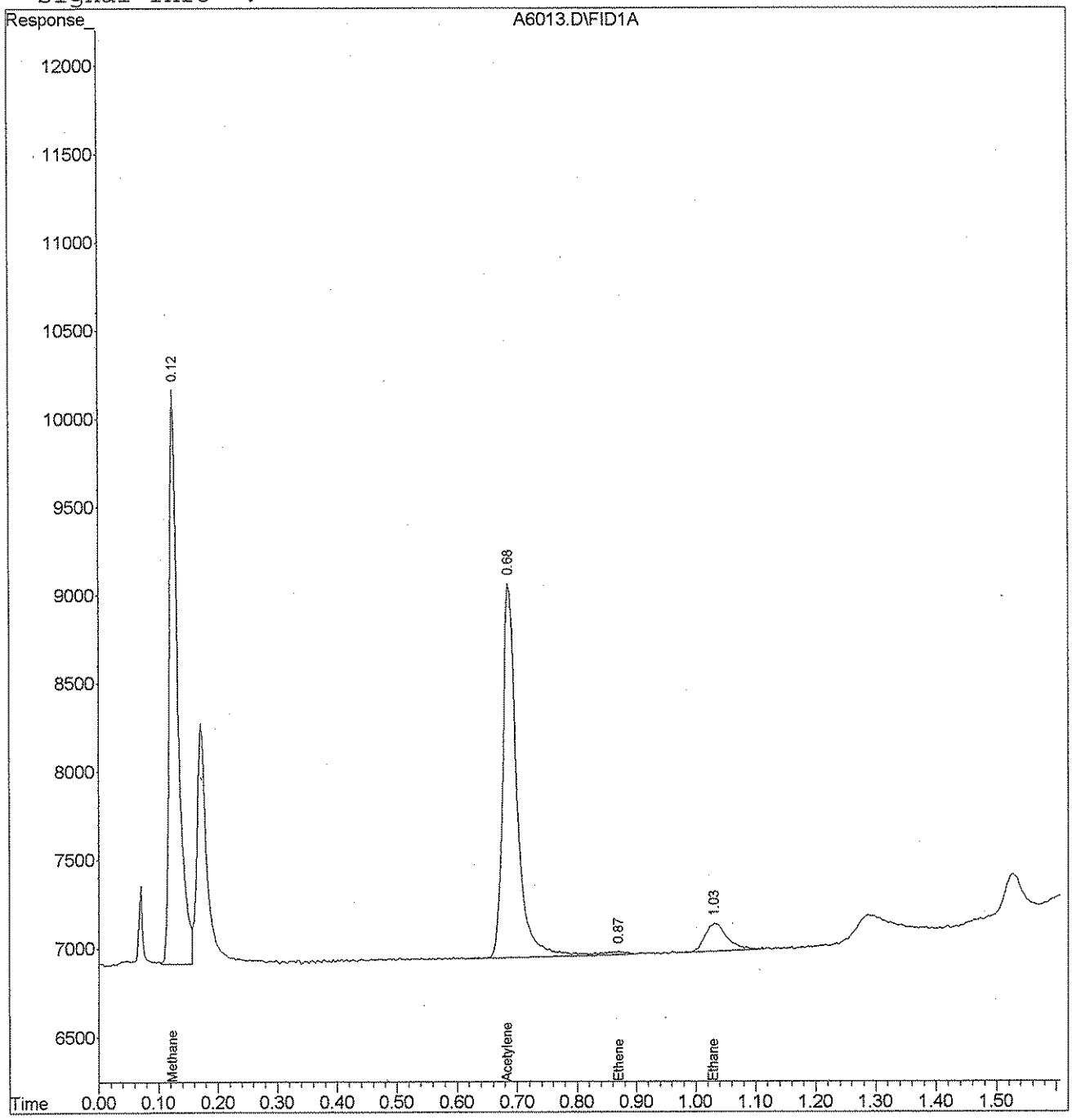
Authorized signature Melissa A. Kalli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6013.D Vial: 100
Acq On : 21 Jun 2003 2:00 am Operator:
Sample : 49878-34D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:23 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW7-0603-E
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-35
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 86 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

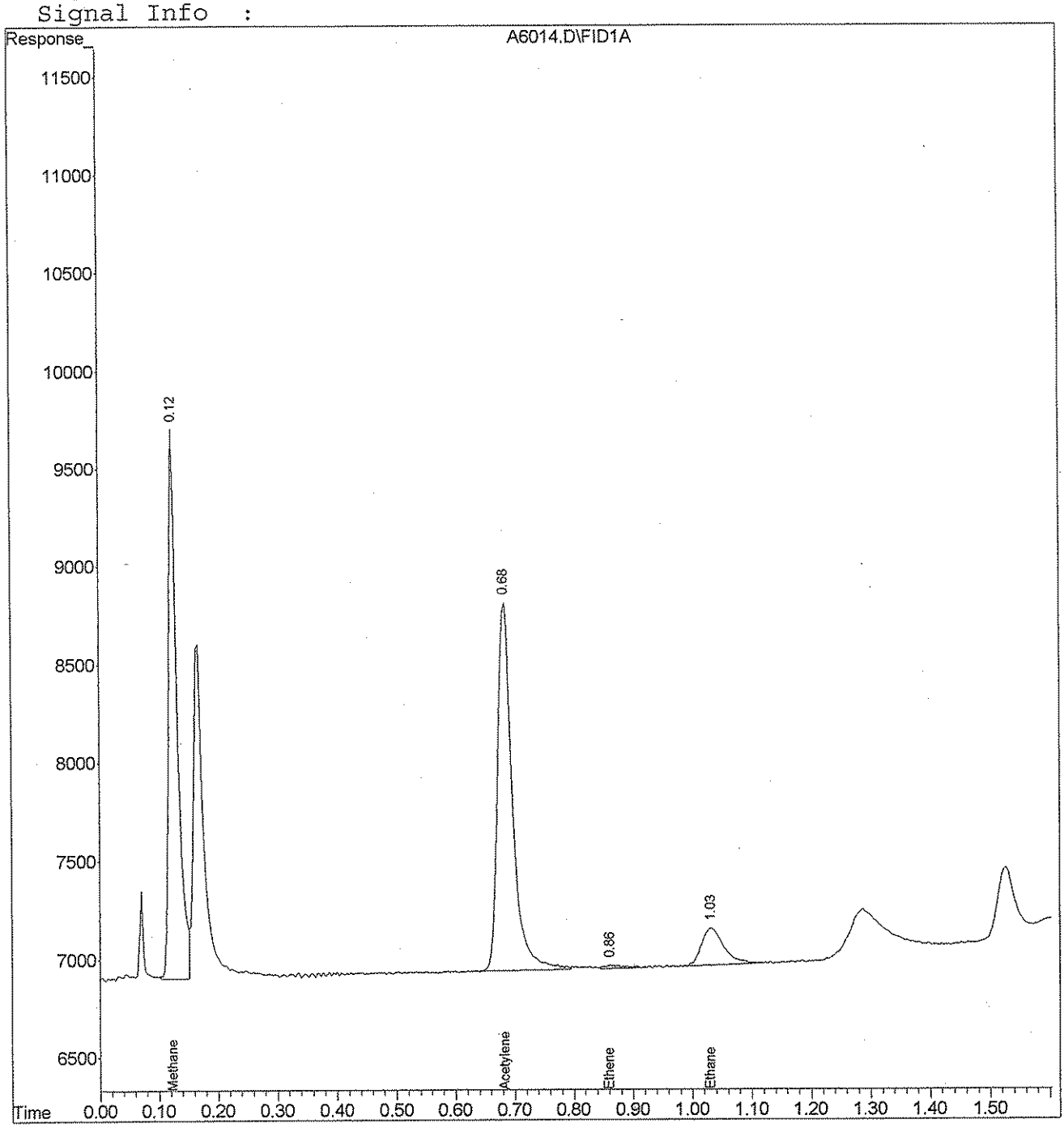
Authorized signature Melissa A Hall

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6014.D Vial: 100
Acq On : 21 Jun 2003 2:07 am Operator:
Sample : 49878-35D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:23 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW4-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-36
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

**ANALYTICAL RESULTS ETHENE, ETHANE**

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 87 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

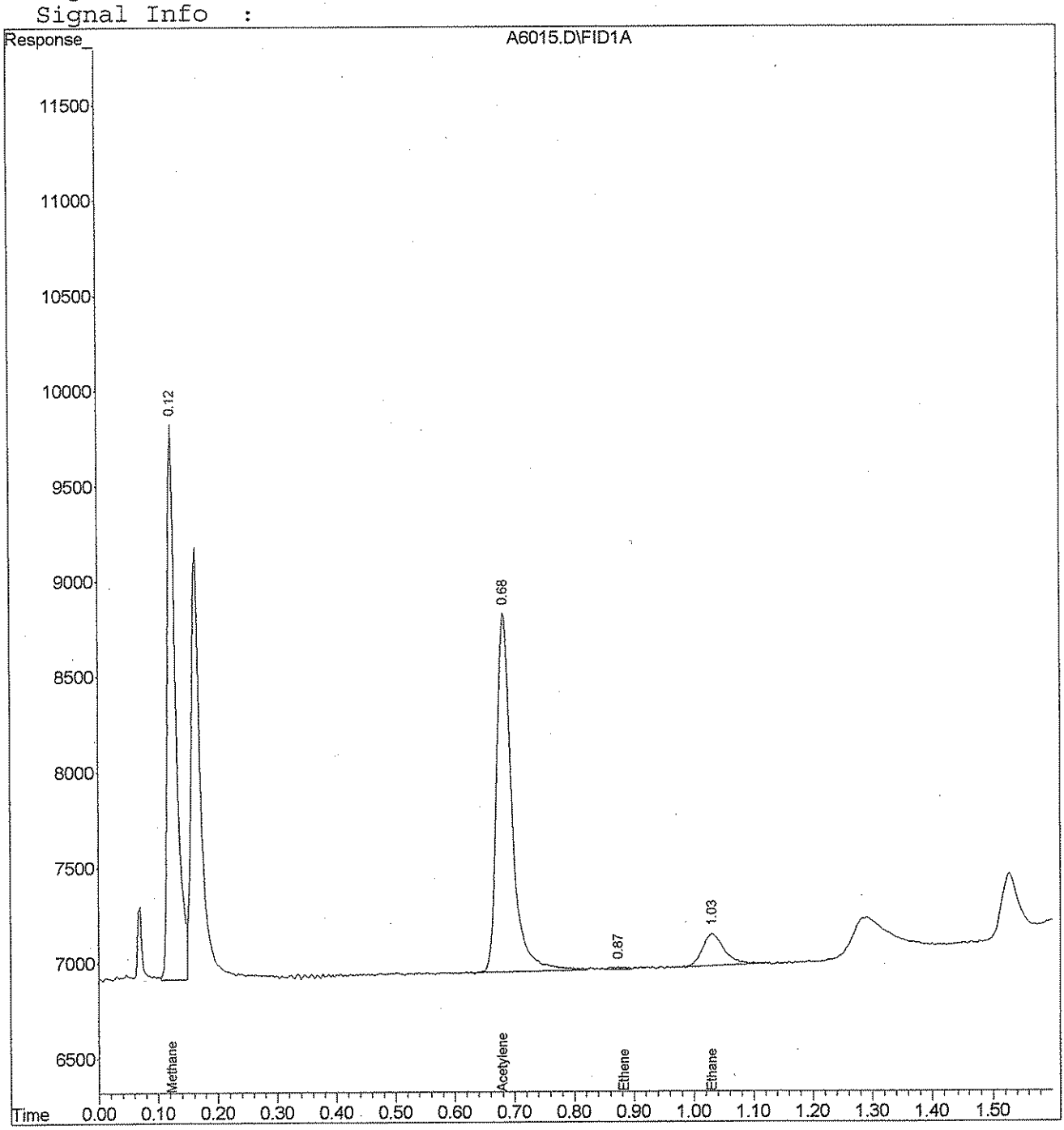
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6015.D Vial: 100
Acq On : 21 Jun 2003 2:12 am Operator:
Sample : 49878-36D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:23 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW10-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-37
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 82 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

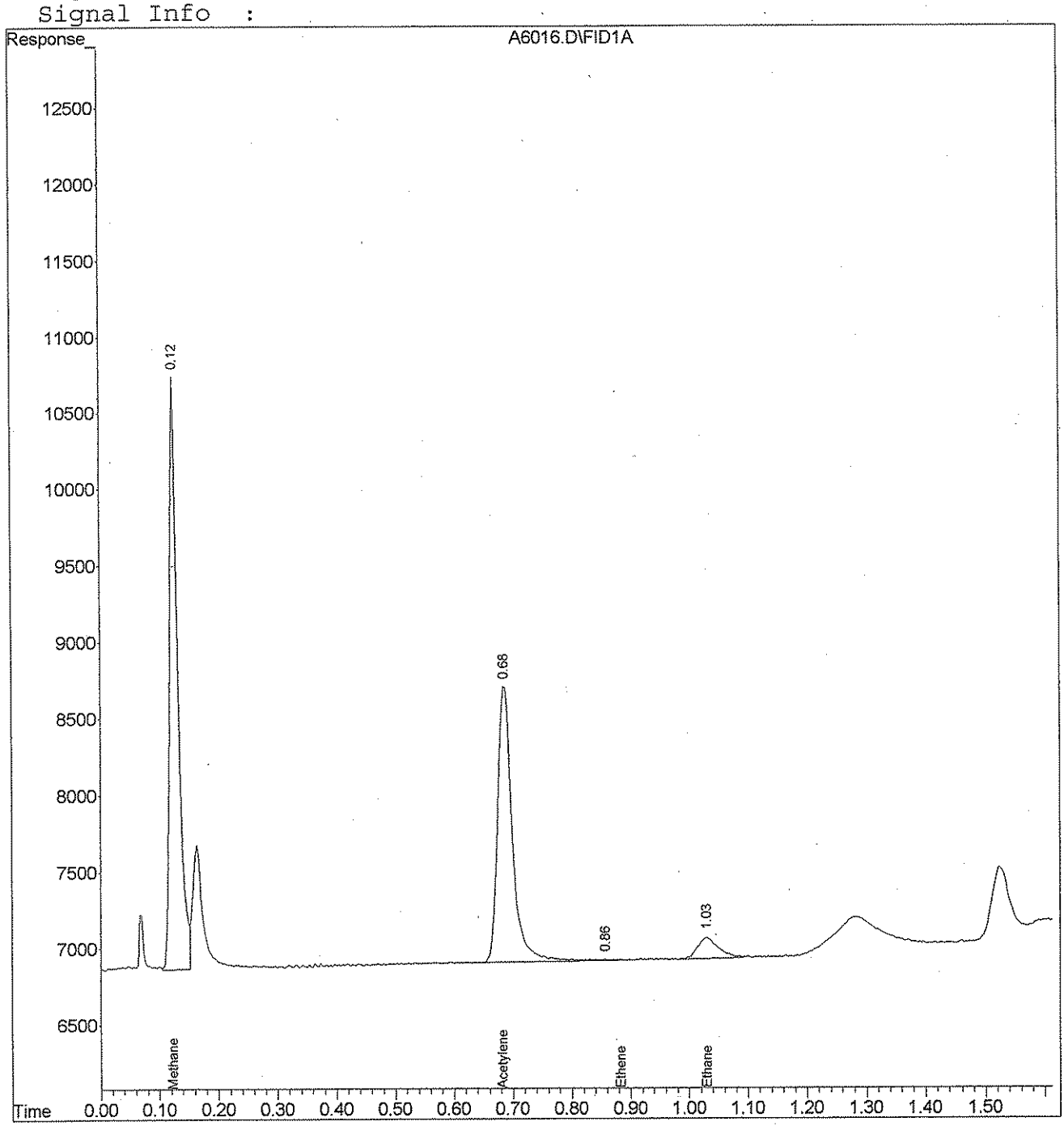
Authorized signature Melissa A Kalli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6016.D Vial: 100
Acq On : 21 Jun 2003 2:23 am Operator:
Sample : 49878-37D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:30 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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June 23, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW10-0603-E
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-38
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 76 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

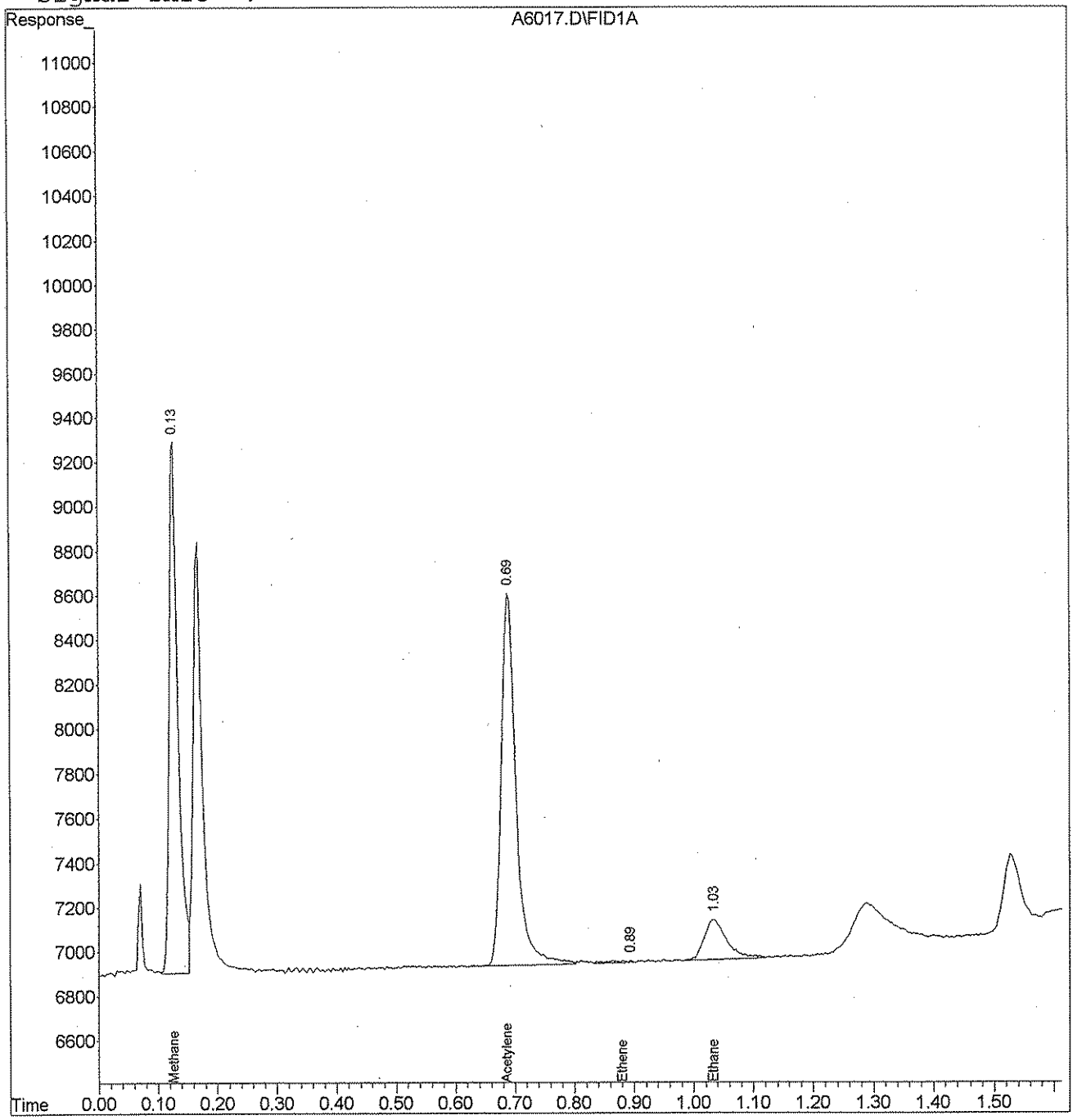
Authorized signature

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6017.D Vial: 100
Acq On : 21 Jun 2003 2:30 am Operator:
Sample : 49878-38D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:42 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW005-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-39
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 113 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

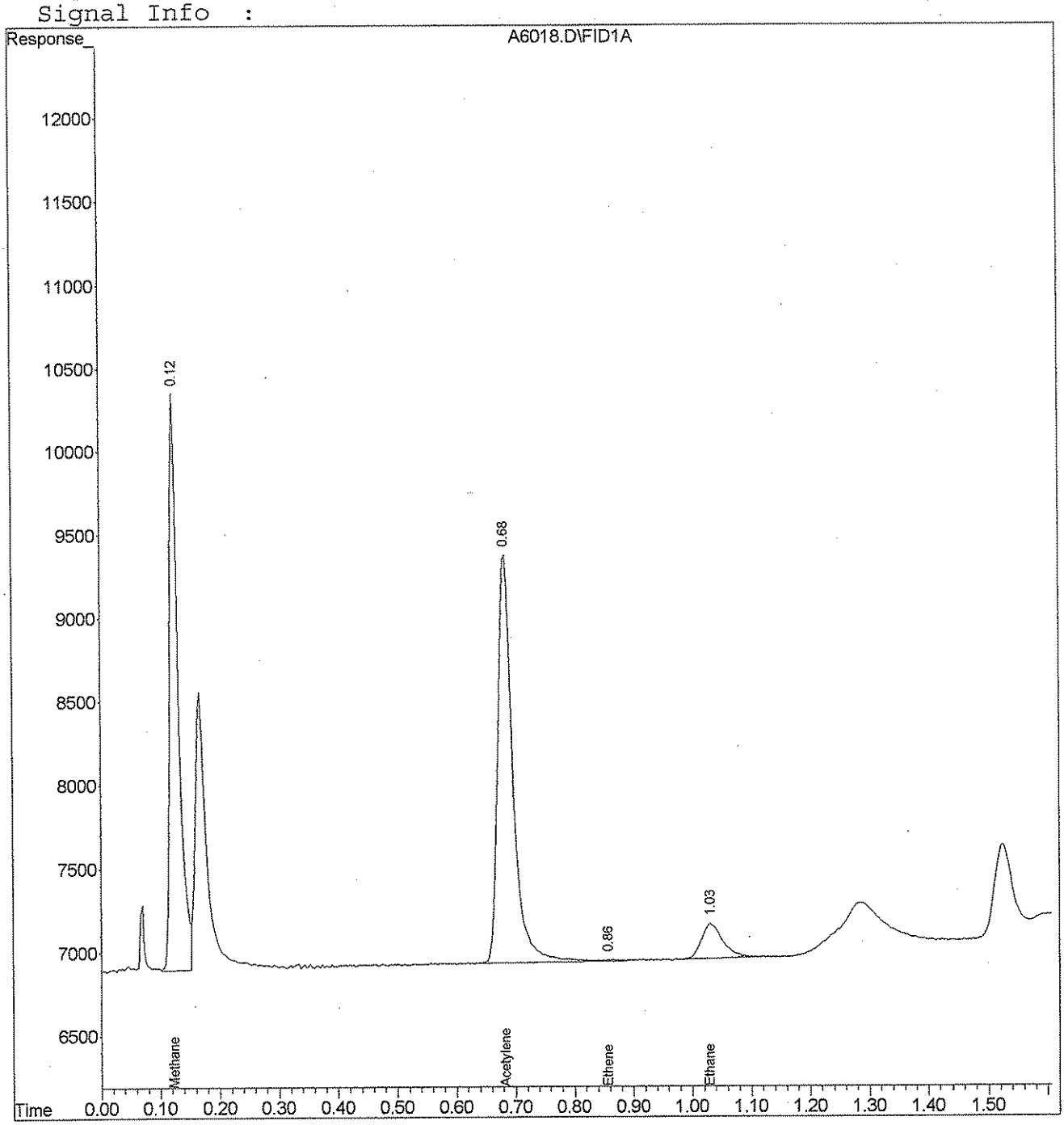
Authorized signature Melissa A Kelli

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6018.D Vial: 100
Acq On : 21 Jun 2003 2:41 am Operator:
Sample : 49878-39D,N,QA062003,REG Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 21 2:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





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**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW006-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-40
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Detection Limit µg/L | Result µg/L |
|---|---|---|---|
| Ethene | 000-12-0 | 50 | U |
| Ethane | 74-84-0 | 50 | U |

**Surrogate Standard Recovery**

| | | |
|---|---|---|
| Acetylene | 95 | % |

U=Not Detected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

Authorized signature Melissa A Kelly

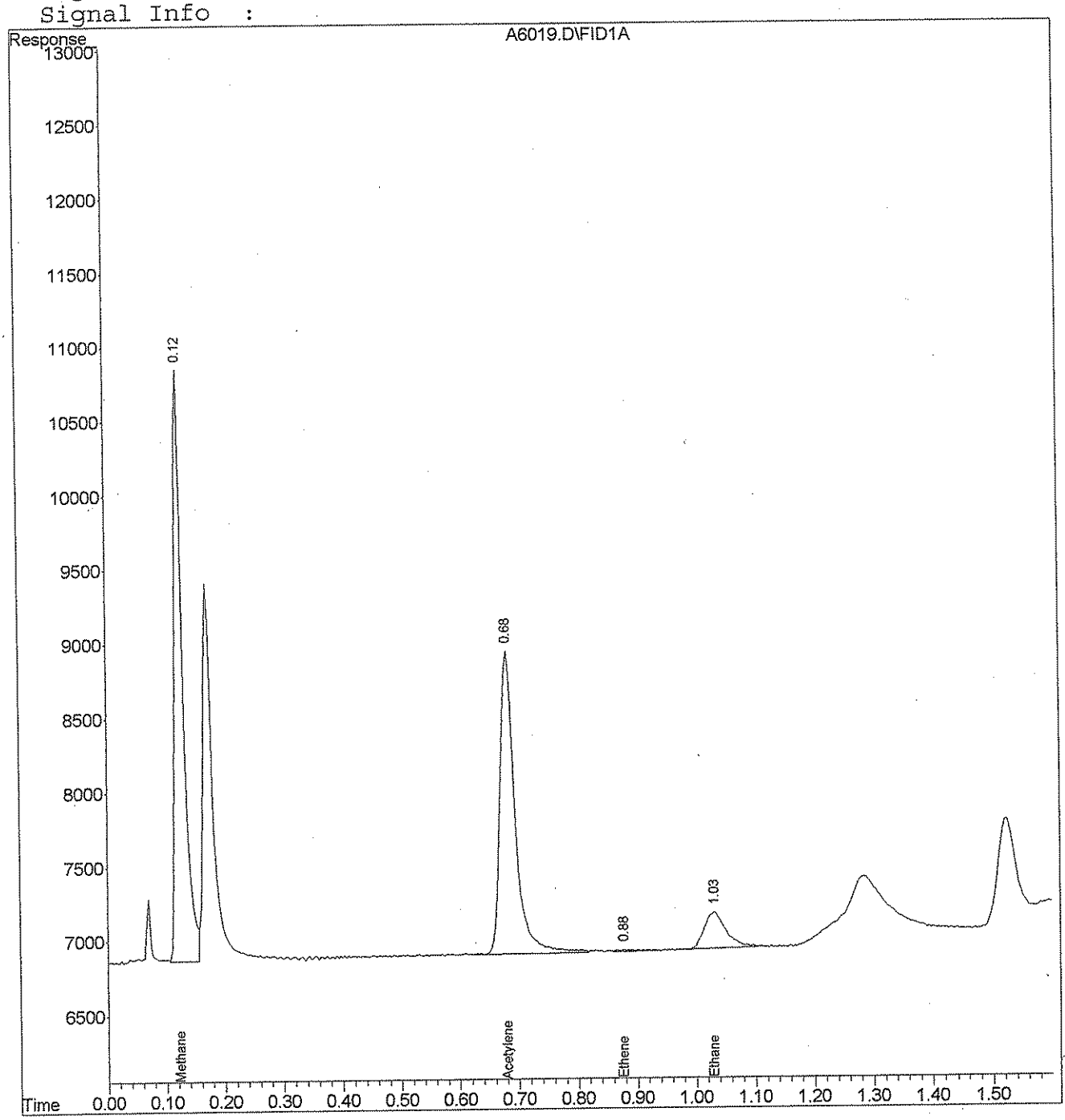
Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\062003-A\A6019.D
Acq On : 21 Jun 2003 2:55 am
Sample : 49878-40D,N,QA062003,REG
Misc : 15000
IntFile : METHANE.E
Quant Time: Jun 21 2:58 2003 Quant Results File: MEE06113.RES

Vial: 100
Operator:
Inst : Instr. A
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



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# ETHENE/ETHANE AQUEOUS
# SYSTEM MONITORING COMPOUND
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06193M | 113 | 0 |
| 02 | L06193M | 85 | 0 |
| 03 | 49878-2 | 98 | 0 |
| 04 | 49878-3 | 98 | 0 |
| 05 | 49878-4 | 86 | 0 |
| 06 | 49878-5 | 88 | 0 |
| 07 | 49878-6 | 82 | 0 |
| 08 | 49878-7 | 83 | 0 |
| 09 | 49878-8 | 81 | 0 |
| 10 | 49878-9 | 72 | 0 |
| 11 | 49878-10 | 78 | 0 |
| 12 | 49878-11 | 108 | 0 |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

QC LIMITS

SMC1 = Acetylene 60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

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# ETHENE/ETHANE AQUEOUS
# SYSTEM MONITORING COMPOUND
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06193M2 | 120 | 0 |
| 02 | 49878-12 | 91 | 0 |
| 03 | 49878-14 | 88 | 0 |
| 04 | 49878-17 | 72 | 0 |
| 05 | 49878-18 | 84 | 0 |
| 06 | 49878-19 | 84 | 0 |
| 07 | 49878-20 | 84 | 0 |
| 08 | 49878-21 | 80 | 0 |
| 09 | 49878-16 | 103 | 0 |
| 10 | 49878-21, MS | 89 | 0 |
| 11 | 49878-21, MSD | 83 | 0 |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

QC LIMITS

SMC1 = Acetylene 60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# ETHENE/ETHANE AQUEOUS
# SYSTEM MONITORING COMPOUND
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06203M | 93 | 0 |
| 02 | L06203M | 83 | 0 |
| 03 | 49878-22 | 93 | 0 |
| 04 | 49878-23 | 91 | 0 |
| 05 | 49878-25 | 86 | 0 |
| 06 | 49878-26 | 85 | 0 |
| 07 | 49878-27 | 82 | 0 |
| 08 | 49878-28 | 81 | 0 |
| 09 | 49878-29 | 82 | 0 |
| 10 | 49878-30 | 82 | 0 |
| 11 | 49878-31 | 81 | 0 |
| 12 | 49878-32 | 107 | 0 |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

QC LIMITS

SMC1 = Acetylene 60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# ETHENE/ETHANE AQUEOUS SYSTEM MONITORING COMPOUND SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A

GC Column: Carboxen 1006 ID: 0.53(mm)

| | SAMPLE ID | SMC1 # | TOTAL OUT |
|---|---|---|---|
| 01 | B06203M2 | 108 | 0 |
| 02 | 49878-33 | 92 | 0 |
| 03 | 49878-34 | 90 | 0 |
| 04 | 49878-35 | 86 | 0 |
| 05 | 49878-36 | 87 | 0 |
| 06 | 49878-37 | 82 | 0 |
| 07 | 49878-38 | 76 | 0 |
| 08 | 49878-39 | 113 | 0 |
| 09 | 49878-40 | 95 | 0 |
| 10 | 49878-40, MS | 98 | 0 |
| 11 | 49878-40, MSD | 89 | 0 |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |

SMC1 = Acetylene

QC LIMITS
60-140%

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

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603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** L06193M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/19/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Result % |
|---|---|---|
| Ethene | 000-12-0 | **93** |
| Ethane | 74-84-0 | **86** |

**Surrogate Standard Recovery**

Acetylene 85 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

Authorized signature

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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** MW5-0603-E
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-21
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/17/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/20/03

## ETHENE, ETHANE MATRIX SPIKE RESULTS

| Compound | Sample Concentration (µg/L) | Spike Added (µg/L) | Matrix Spike Concentration (µg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|---|
| Ethene | U | 134 | 123 | 92 | | **60-140** |
| Ethane | U | 143 | 126 | 88 | | **60-140** |

| Compound | Matrix Spike Duplicate Concentration (µg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| Ethene | 112 | 84 | | 9 | | **30** | **60-140** |
| Ethane | 118 | 83 | | 7 | | **30** | **60-140** |

Authorized signature Malena A Kalli

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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** LABQC
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** L06203M
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 06/20/03

## ANALYTICAL RESULTS ETHENE, ETHANE

| Compound | CAS Number | Result % |
|---|---|---|
| Ethene | 000-12-0 | **84** |
| Ethane | 74-84-0 | **82** |

**Surrogate Standard Recovery**

Acetylene 83 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis conducted according to: "Test Methods for Evaluating Solid Waste, SW-846 Method 3810, 8015."

**COMMENTS:**

Authorized signature Melissa A Kalli

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June 25, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** STMW006-0603
**SDG Number:** 49878

**SAMPLE DATA**

**Lab Sample ID:** 49878-40
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1
**Collection Date:** 06/18/03
**Lab Receipt Date:** 06/18/03
**Analysis Date:** 06/21/03

## ETHENE, ETHANE MATRIX SPIKE RESULTS

| Compound | Sample Concentration (µg/L) | Spike Added (µg/L) | Matrix Spike Concentration (µg/L) | Matrix Spike Percent Recovery | # | QC Limits Percent Recovery |
|---|---|---|---|---|---|---|
| Ethene | U | 134 | 141 | 105 | | **60-140** |
| Ethane | U | 143 | 145 | 101 | | **60-140** |

| Compound | Matrix Spike Duplicate Concentration (µg/L) | Matrix Spike Duplicate Percent Recovery | # | Relative Percent Difference | # | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|
| Ethene | 125 | 93 | | 12 | | **30** | **60-140** |
| Ethane | 126 | 88 | | 14 | | **30** | **60-140** |

Authorized signature

Std ~~M027 x 6/11/03~~ M027 x 12/11/03
SS ~~M026 x 6/11/03~~ AVL 6/11/03
M030 x 12/11/03
Spike M028 x 9/28/03

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Date: 6/11/03
W-A-061103-1-AVR

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| MEE06023 | Std #4 | | A5951SC | ↑CH4 | N/A | AVR |
| | Std #4 | | 52SC | ↑CH4 | | |
| MEE06113 | Std #1 | | 53SI | ✓ | | |
| | Std #2 | | 54 | ✓ | | |
| | Std #3 | | 55 | ✓ | | |
| | Std #4 | | 56 | RR | | |
| | Std #5 | | 57 | ✓ | | |
| | Std #6 | | 58 | ✓ | | |
| | Std #7 | | 59 | ✓ | | |
| | Std #4 | | 60SI | ✓ | | |
| | B06113M | | 61B | ✓ | | |
| | L06113M | | 62Q | ✓ | | |
| | 49828-1D | | 63 | ✓ | <2 | |
| | -2D | | 64 | ✓ | <2 | |
| | E -3D AVL 6/11/03 | | 65 | RR 1:25 | <2 | |
| | F -3E 25X | | 66 ✓ | 600µl + 14400µls | <2 | |
| | -1EMS | | 67SP | ✓ | <2 | |
| | -1EMSD | | 68SP | RR ↑RPD CH4 | <2 | |
| | -1EMSD | | 69SP | ✓ | <2 | |
| | Std #4 | | 70SC | ✓ | N/A | |

AVR 6/11/03

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

Std. M029 x 12/11/03
SS M030 x 12/11/03
Spike M028 x 9/25/03

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Date: 6/19/03

LD-A-061903-1-AUR

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| MSE06113 | Std #4 | 1 | A597ISC | ✓ | N/A | AUR |
| | B06193M | 1 | 72B | ✓ | | |
| | LD61903M | 1 | 73D | ✓ | | |
| | 49878-2D | 1 | 74 | ✓ | <2 | |
| | -3D | 1 | 75 | ✓ | <2 | |
| | -4D | 1 | 76 | ✓ | <2 | |
| | -5D | 1 | 77 | ✓ | <2 | |
| | -6D | 1 | 78 | ✓ | <2 | |
| | -7D | 1 | 79 | ✓ | <2 | |
| | -8D | 1 | 80 | ✓ | <2 | |
| | -9D | 1 | 81 | ✓ | <2 | |
| | -10D | 1 | 82 | ✓ | <2 | |
| | -11D | 1 | 83 | ✓ | <2 | |
| | Std #4 | 1 | 84SC | ✓ | N/A | |
| | B061903M2 | 1 | 85B | ✓ | | |
| | 49878-12D | 1 | 86 | ✓ | <2 | |
| | -14D | 1 | 87 | ✓ | <2 | |
| | -17 ~~-16D~~ | 1 | 88 | ✓ | <2 | |
| | -18 ~~-17D~~ | 1 | 89 | ✓ | <2 | |
| | -19 ~~-18D~~ | 1 | 90 | ✓ | <2 | |
| | -20 ~~-19D~~ | 1 | 91 | ✓ | <2 | |
| | -21 ~~-20D~~ | 1 | 92 | ✓ | <2 | |
| | -16 ~~-21D~~ | 1 | 93 | ✓ | <2 | |
| | -21E MS | 1 | 94SP | ✓ | <2 | |
| | -21E MSD | 1 | 95SP | ✓ | <2 | |
| | Std #4 | 1 | 96SC | ✓ | N/A | |
| | | | AUR 6/19/03 | | | |

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

Std MC29 X12/11/03
SS MC30 X12/11/03
Spike MC28 X9/28/03

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**Instrument A Sequence Logbook:**
**Methane/Ethene/Ethane**

Date: 6/20/03

W-A-062003-1-AVR

| Method | Sample | DF | File# | Comments | pH | Analyst |
|---|---|---|---|---|---|---|
| MSE026113 | Std #4 | — | A49978 | ✓ | N/A | AVR |
| | B06203m | — | 98B | ✓ | ↓ | ↓ |
| | L06203m | — | 99Q | ✓ | ↓ | ↓ |
| | 49878-22D | — | A6000 | ✓ | <2 | AVR |
| | -23D | — | 01 | ✓ | <2 | |
| | -25D | — | 02 | ✓ | <2 | |
| | -26D | — | 03 | ✓ | <2 | |
| | -27D | — | 04 | ✓ | <2 | |
| | -28D | — | 05 | ✓ | <2 | |
| | -29D | — | 06 | ✓ | <2 | |
| | -30D | — | 07 | ✓ | <2 | |
| | -31D | — | 08 | ✓ | <2 | |
| | -32D | — | 09 | ✓ | <2 | |
| | Std #4 | — | 10SC | ✓ | N/A | |
| | B06203m2 | — | 11B | ✓ | ↓ | |
| | 49878-33D | — | 12 | ✓ | <2 | |
| | -34D | — | 13 | ✓ | <2 | |
| | -35D | — | 14 | ✓ | <2 | |
| | -36D | — | 15 | ✓ | <2 | |
| | -37D | — | 16 | ✓ | <2 | |
| | -38D | — | 17 | ✓ | <2 | |
| | -39D | — | 18 | ✓ | <2 | |
| | -40D | — | 19 | ✓ | <2 | |
| | -40EMS | — | 20SP | ✓ | <2 | |
| | -40EMSD | — | 21SP | ✓ | <2 | |
| | Std #4 | — | 22SC | ✓ | N/A | ↓ |
| | | AVR | 6/21/03 | | | |

Standard Dilutions: 1:2- 7.5mL sample +7.5mL D.I. H2O
1:5- 3mL sample +12mL D.I. H2O
1:10- 1.5mL sample +13.5mL D.I. H2O
1:20- 750uL sample +14.25mL D.I. H2O
1:50- 300uL sample +14.7mL D.I. H2O

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# ETHANE, ETHENE
# INITIAL CALIBRATION DATA

Project #: 10971.217.002 Quote #: NA SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/11/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2028

| COMPOUND | RRF= 15.5 | RRF= 31 | RRF= 97 | RRF= 135 | RRF= 193 | RRF= 290 | RRF= 387 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|---|
| ACETYLENE | 3.55E+02 | 3.07E+02 | 2.75E+02 | 3.19E+02 | 2.54E+02 | 2.37E+02 | 2.21E+02 | 2.81E+02 | 17.13 |
| ACETYLENE AREA | 5503 | 9504 | 26713 | 43077 | 48937 | 68833 | 85424 | | |

| COMPOUND | RRF= 15.5 | RRF= 31 | RRF= 95 | RRF= 134 | RRF= 191 | RRF= 287 | RRF= 382 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|---|
| ETHENE | 4.48E+02 | 4.35E+02 | 4.15E+02 | 4.32E+02 | 4.01E+02 | 4.00E+02 | 3.82E+02 | 4.16E+02 | 5.58 |
| ETHENE AREA | 6942 | 13493 | 39421 | 57821 | 76674 | 114890 | 145938 | | |

| COMPOUND | RRF= 16.5 | RRF= 33 | RRF= 102 | RRF= 143 | RRF= 205 | RRF= 308 | RRF= 410 | AVG RF | RSD % |
|---|---|---|---|---|---|---|---|---|---|
| ETHANE | 5.45E+02 | 5.28E+02 | 4.51E+02 | 4.47E+02 | 4.18E+02 | 4.16E+02 | 4.01E+02 | 4.58E+02 | 12.37 |
| ETHANE AREA | 8996 | 17438 | 45985 | 63963 | 85768 | 128218 | 164425 | | |
| FILE # | A5953SI.D | A5954SI.D | A5955SI.D | A5960SI.D | A5957SI.D | A5958SI.D | A5959SI.D | | |

*Compounds must have a %RSD of ≤30% or correlation coefficient of 0.995 or greater.

Comments: _____

# Response Factor Report  Instr. A

Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 21:06:54 2003

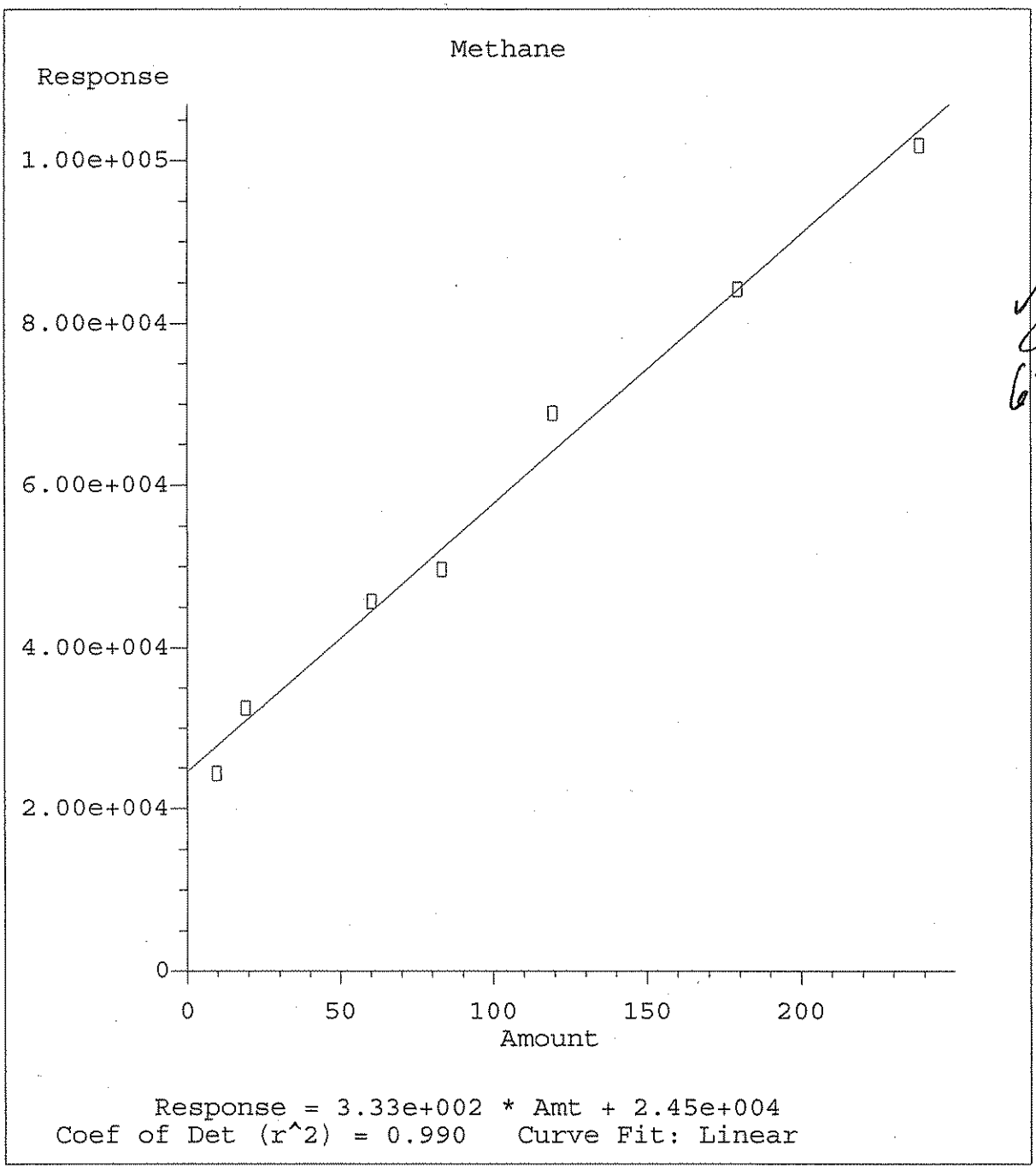
6-12-03

Calibration Files
1 =A5953SI.D 2 =A5954SI.D 3 =A5955SI.D
4 =A5960SI.D 5 =A5957SI.D 6 =A5958SI.D

6/11/03

| | | Compound | 1 | 2 | 3 | 4 | 5 | 6 | Avg | | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | TM | Methane | 2.556 | 1.709 | 0.761 | 0.598 | 0.578 | 0.470 | 1.014 | E3 | 79. |
| 2) | S | Acetylene | 3.550 | 3.066 | 2.754 | 3.191 | 2.536 | 2.374 | 2.811 | E2 | 17. |
| 3) | TM | Ethene | 4.478 | 4.353 | 4.150 | 4.315 | 4.014 | 4.003 | 4.162 | E2 | 5. |
| 4) | TM | Ethane | 5.452 | 5.284 | 4.508 | 4.473 | 4.184 | 4.163 | 4.582 | E2 | 12. |

(#) = Out of Range ### Number of calibration levels exceeded format ###




6/11/03

6-12-03

Method Name: C:\HPCHEM\1\METHODS\MEE06113.M
Calibration Table Last Updated: Wed Jun 11 21:06:21 2003

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5953SI.D Vial: 100
Acq On : 11 Jun 2003 8:28 pm Operator:
Sample : STD #1,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :

6-12-03

6/11/03

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.67 | 5503 | 14.910 UG/L |
| Spiked Amount 135.000 | Range 60 - 140 | Recovery = | 11.04%# |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 24283 | 46.864 UG/L |
| 3) TM Ethene | 0.87 | 6942 | 16.300 UG/L |
| 4) TM Ethane | 1.03 | 8996 | 21.803 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int



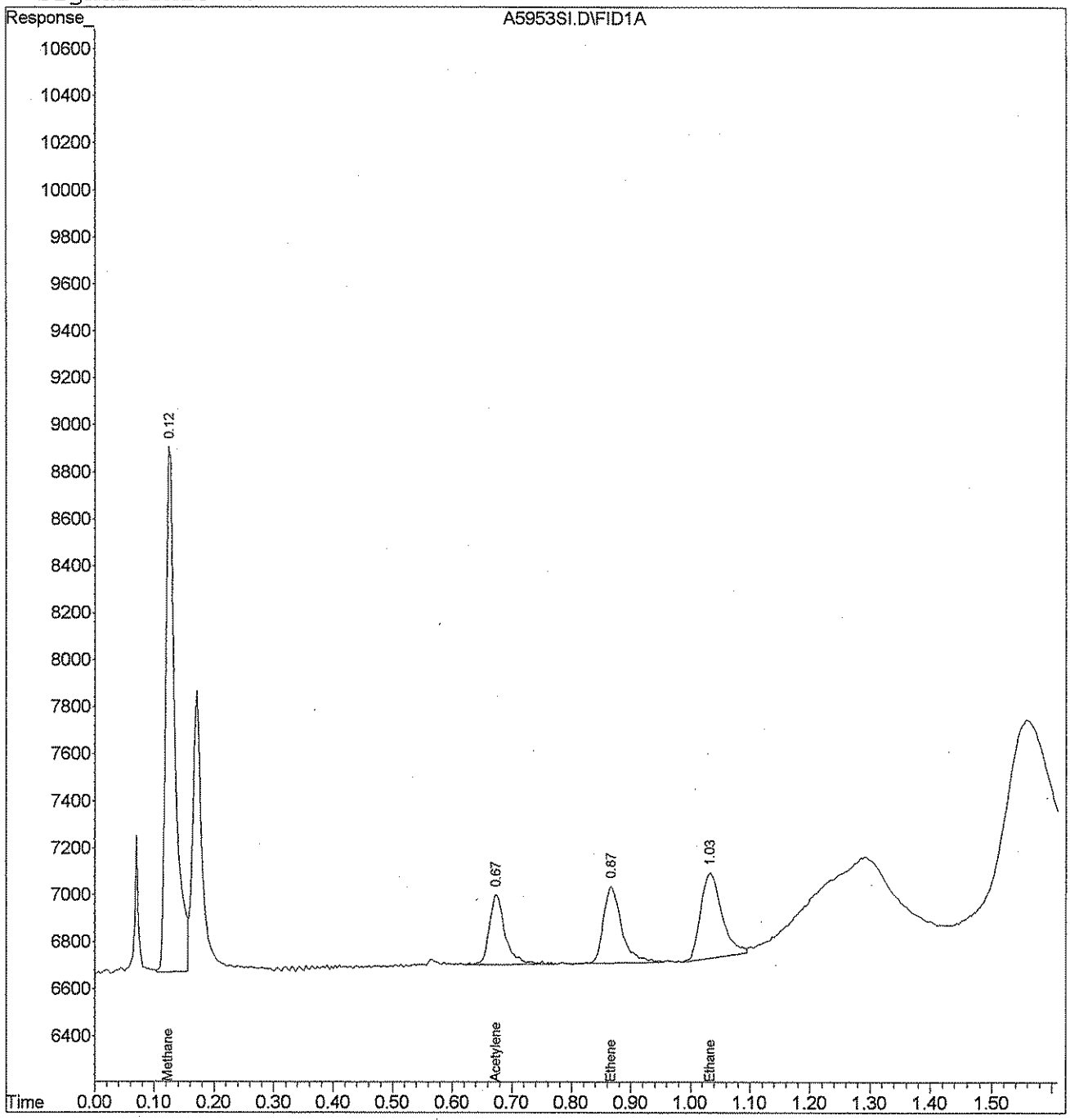
00337

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5953SI.D Vial: 100
Acq On : 11 Jun 2003 8:28 pm Operator:
Sample : STD #1,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000338

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5954SI.D Vial: 100
Acq On : 11 Jun 2003 8:35 pm Operator:
Sample : STD #2,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6.12.03

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.68 | 9504 | 25.752 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = | 19.08%# |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 32464 | 68.206 UG/L |
| 3) TM Ethene | 0.87 | 13493 | 31.684 UG/L |
| 4) TM Ethane | 1.03 | 17438 | 42.263 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



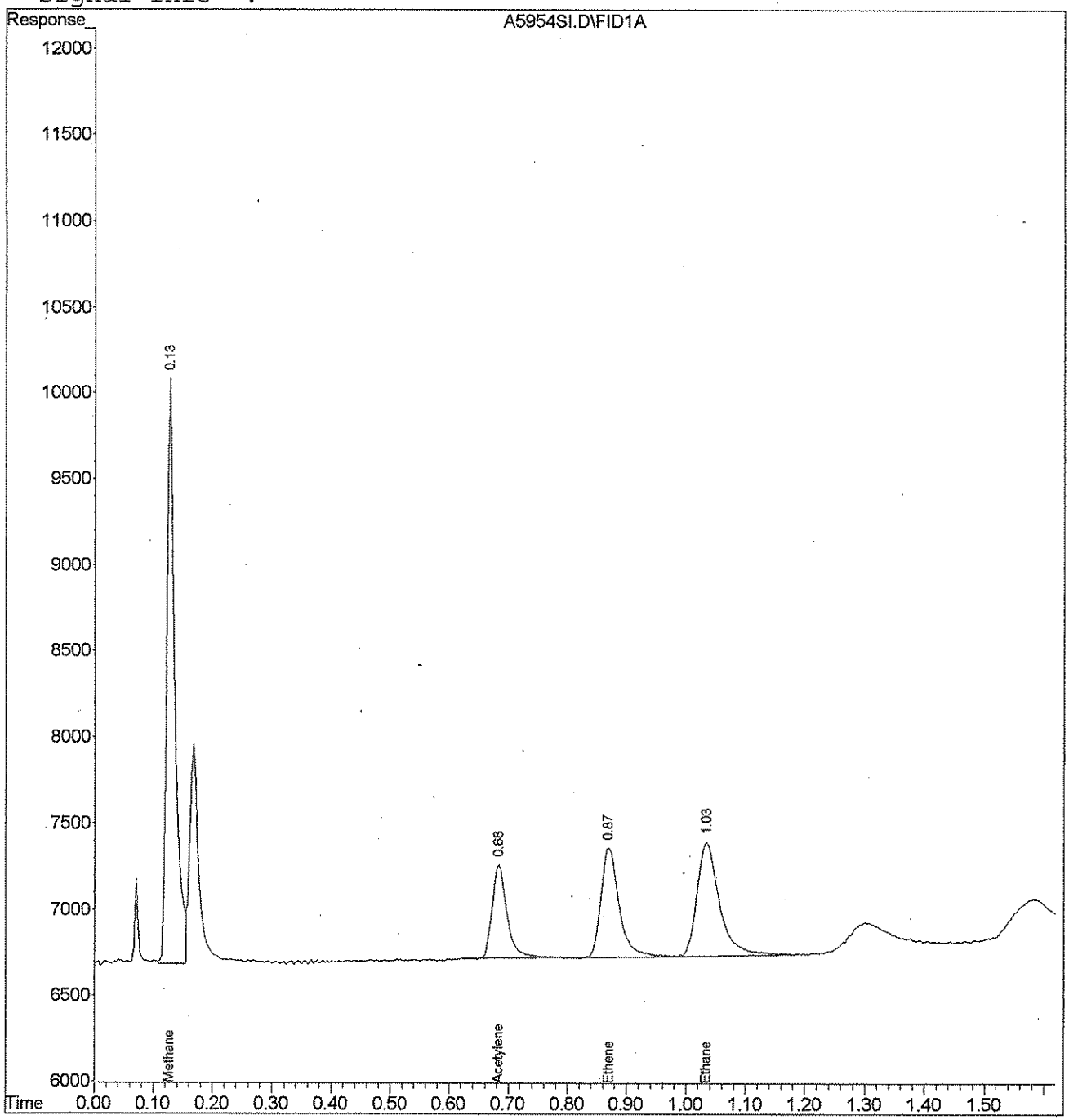
000339

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5954SI.D Vial: 100
Acq On : 11 Jun 2003 8:35 pm Operator:
Sample : STD #2,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





000340

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5955SI.D Vial: 100
Acq On : 11 Jun 2003 8:39 pm Operator:
Sample : STD #3,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

✓ 6-12-03

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.69 | 26713 | 72.381 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = | 53.62%# |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 45678 | 102.680 UG/L |
| 3) TM Ethene | 0.87 | 39421 | 92.567 UG/L |
| 4) TM Ethane | 1.03 | 45985 | 111.448 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



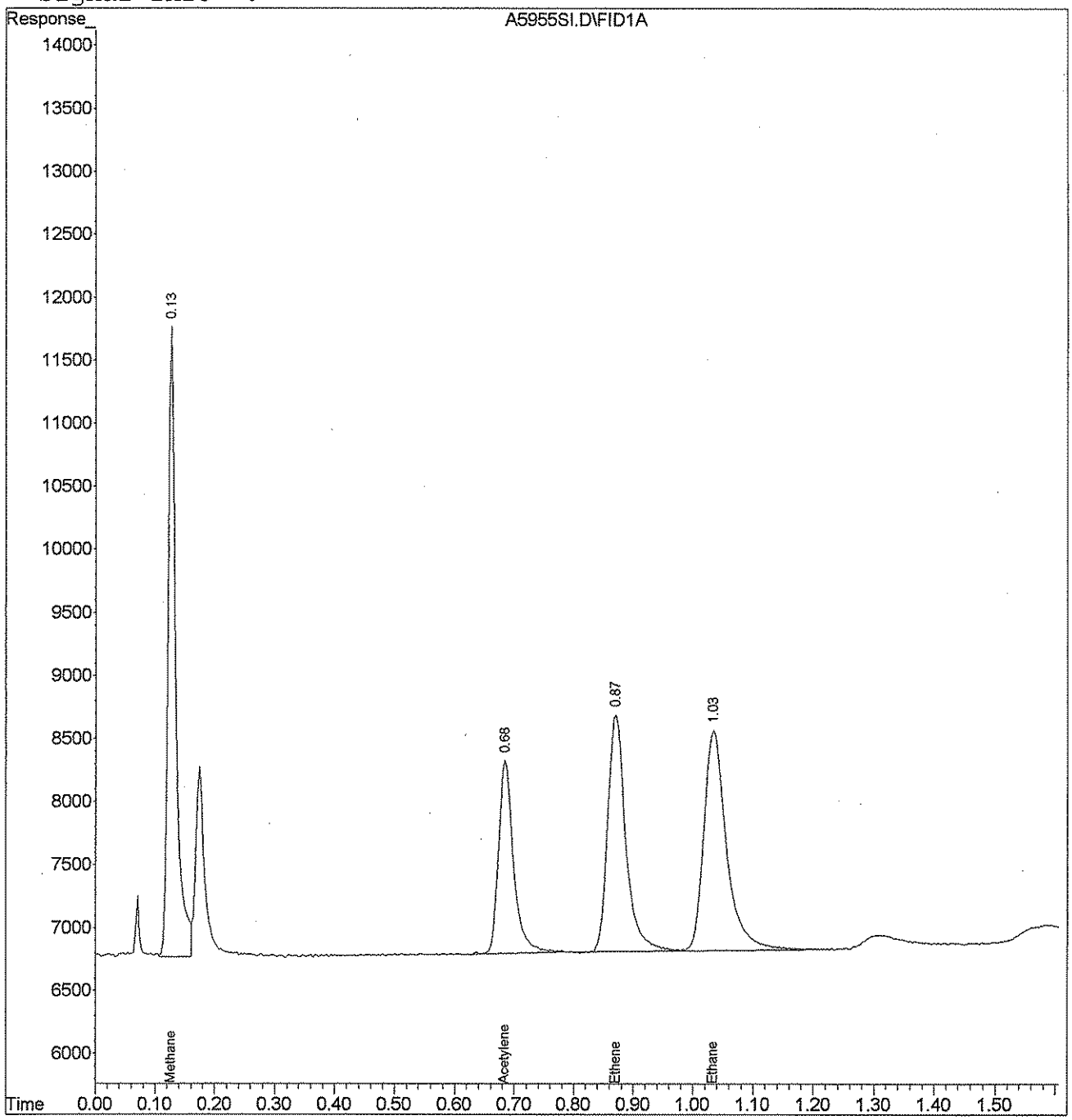
990341

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5955SI.D Vial: 100
Acq On : 11 Jun 2003 8:39 pm Operator:
Sample : STD #3,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:43 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Mon Jun 09 19:49:08 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :






000342

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5960SI.D Vial: 100
Acq On : 11 Jun 2003 9:04 pm Operator:
Sample : STD #4,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 21:06 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:59:23 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6.12.07

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.69 | 43077 | 179.286 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 132.80% | |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 49615 | 74.170 UG/L |
| 3) TM Ethene | 0.87 | 57821 | 139.786 UG/L |
| 4) TM Ethane | 1.04 | 63963 | 140.405 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int



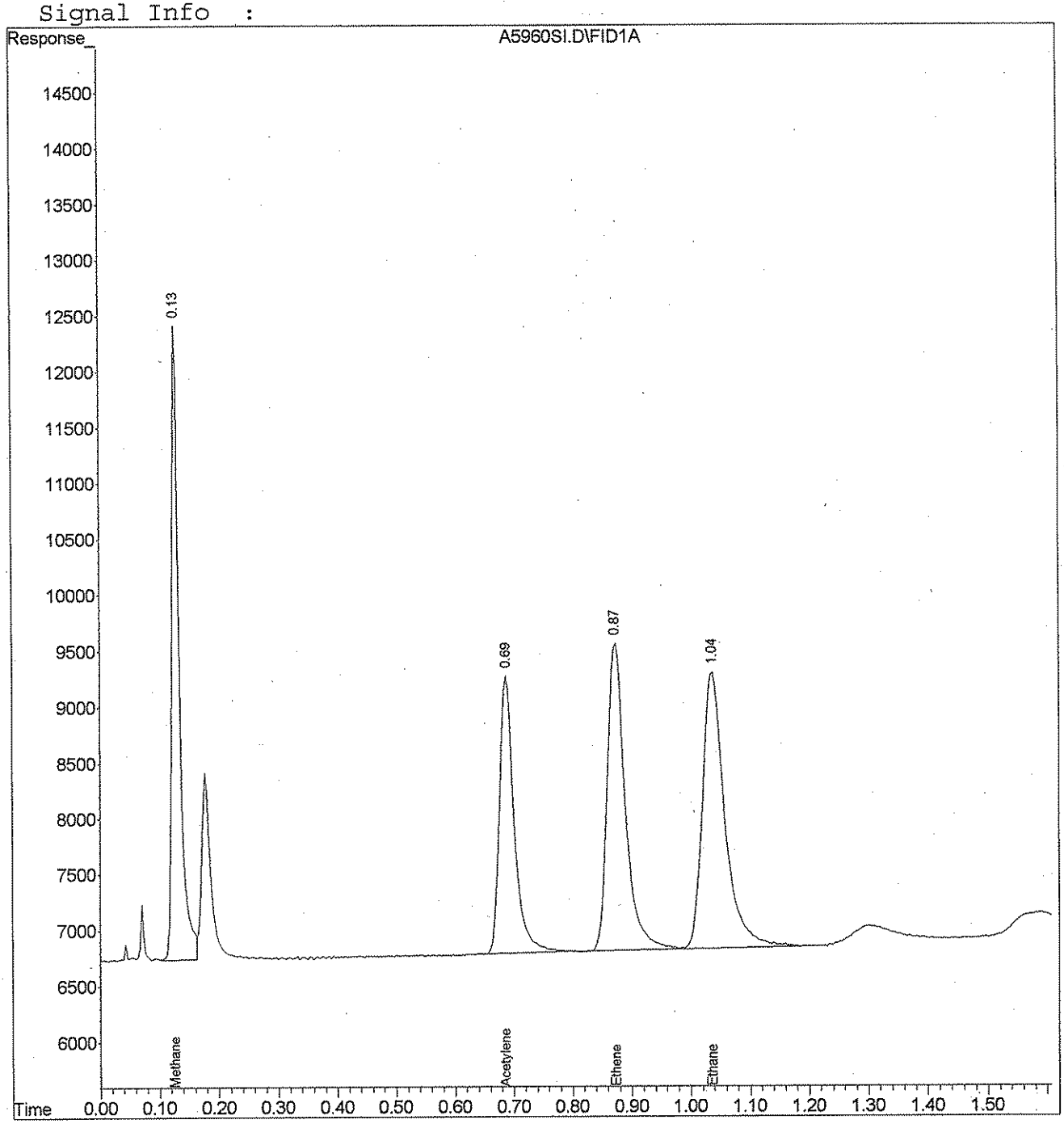
010343

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5960SI.D Vial: 100
Acq On : 11 Jun 2003 9:04 pm Operator:
Sample : STD #4,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 21:06 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:59:23 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5956SI.D Vial: 100
Acq On : 11 Jun 2003 8:43 pm Operator:
Sample : STD #4,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:46 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:44:16 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6.12.03

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.68 | 35620 | 114.044 UG/L |
| Spiked Amount 135.000 Range 60 - 140 Recovery = 84.48% | | | |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 37013 | 36.799 UG/L |
| 3) TM Ethene | 0.87 | 56566 | 130.730 UG/L |
| 4) TM Ethane | 1.03 | 61305 | 120.641 UG/L |

Not used

RR

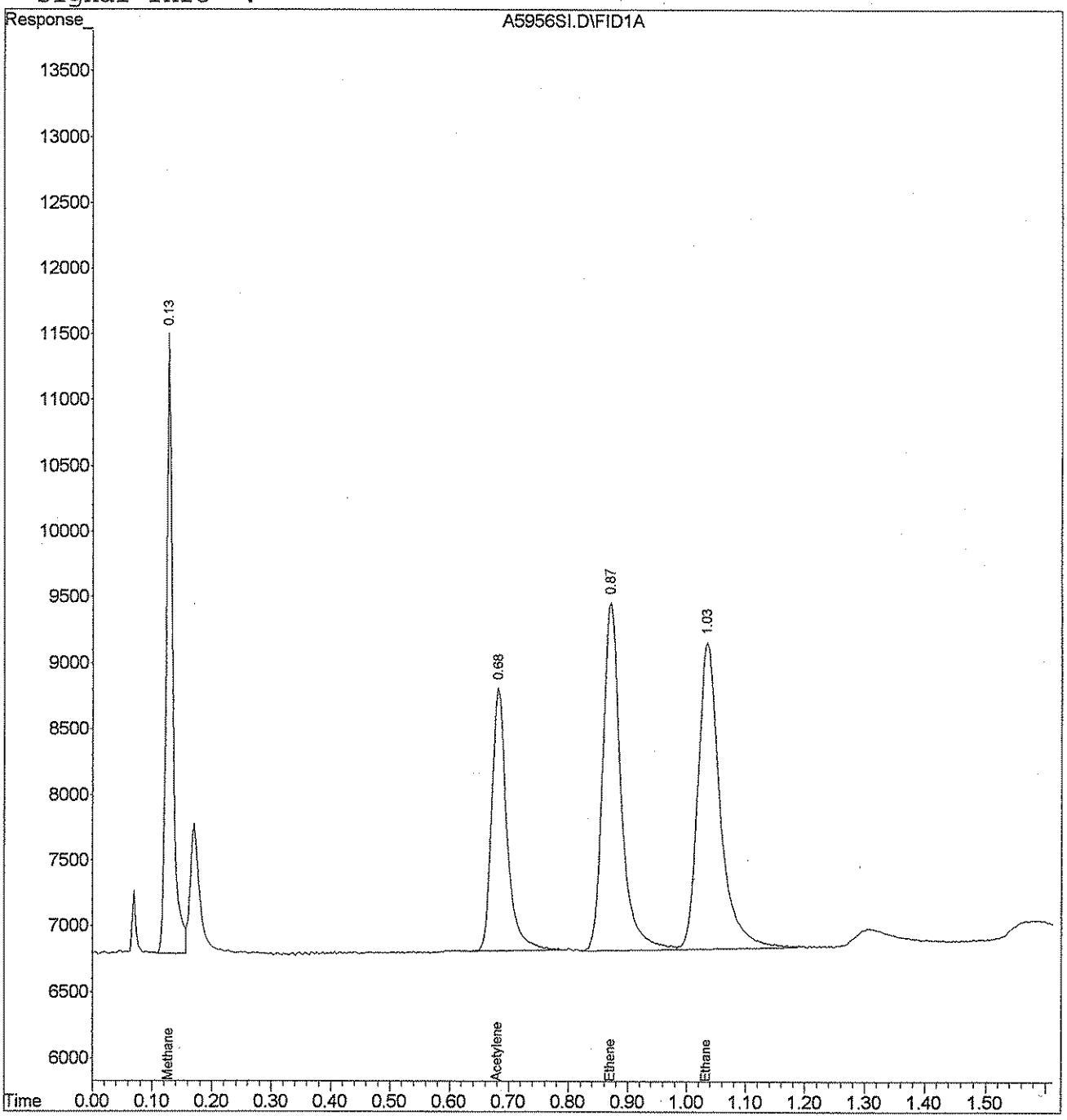
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5956SI.D Vial: 100
Acq On : 11 Jun 2003 8:43 pm Operator:
Sample : STD #4,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:46 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:44:16 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





000346

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5957SI.D Vial: 100
Acq On : 11 Jun 2003 8:47 pm Operator:
Sample : STD #5,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:49 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:46:22 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

✓ 6.12.07

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.69 | 48937 | 163.005 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 120.74% | |
| Target Compounds | | | |
| 1) TM Methane | 0.12 | 68834 | 221.606 UG/L |
| 3) TM Ethene | 0.87 | 76674 | 178.292 UG/L |
| 4) TM Ethane | 1.03 | 85768 | 175.647 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



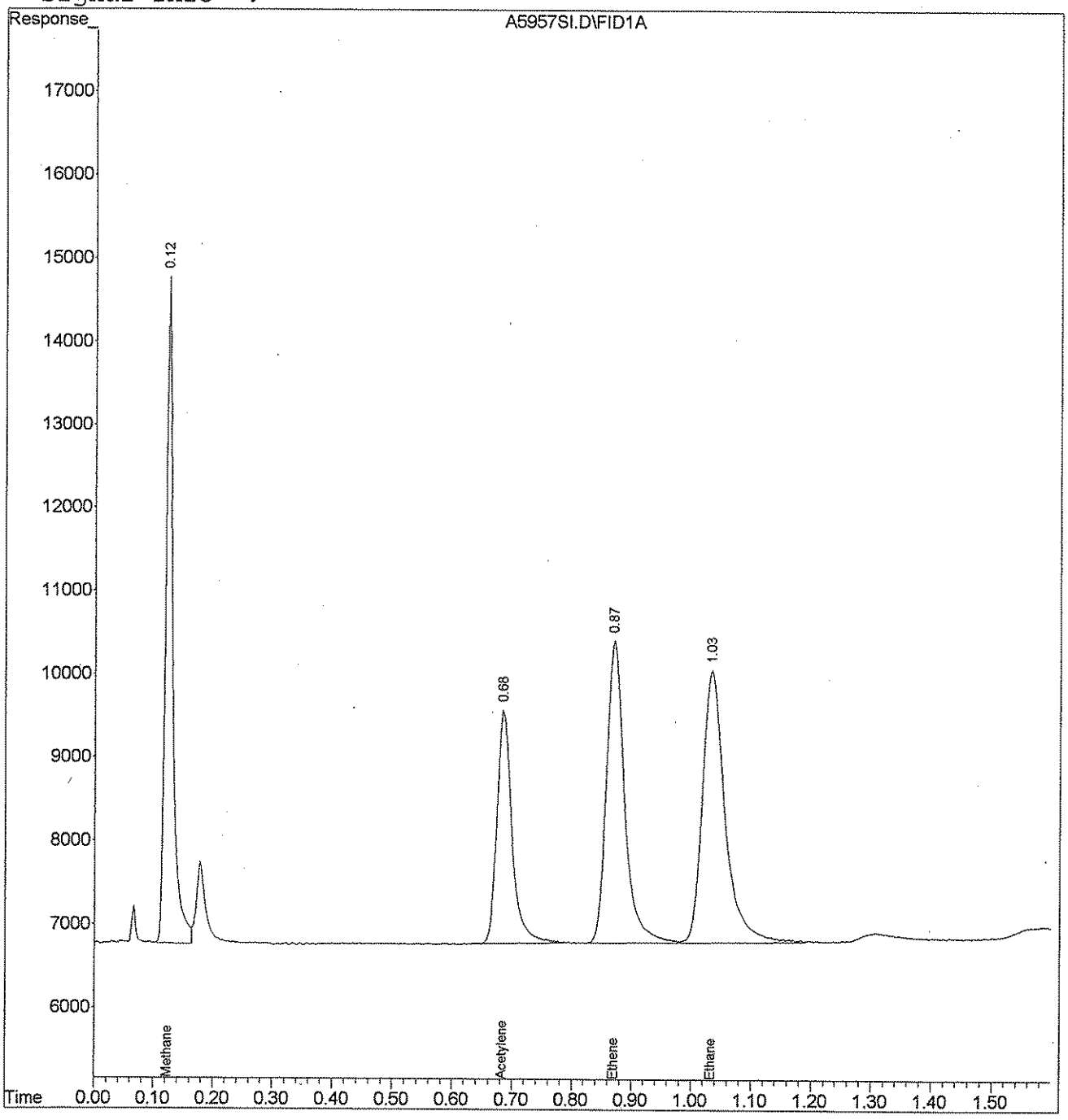
090847

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5957SI.D Vial: 100
Acq On : 11 Jun 2003 8:47 pm Operator:
Sample : STD #5,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:49 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:46:22 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





000348

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5958SI.D Vial: 100
Acq On : 11 Jun 2003 8:51 pm Operator:
Sample : STD #6,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:56 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:49:42 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6-12-03

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.67 | 68833 | 236.632 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 175.28%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 84126 | 158.148 UG/L |
| 3) TM Ethene | 0.87 | 114890 | 270.759 UG/L |
| 4) TM Ethane | 1.03 | 128218 | 270.322 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



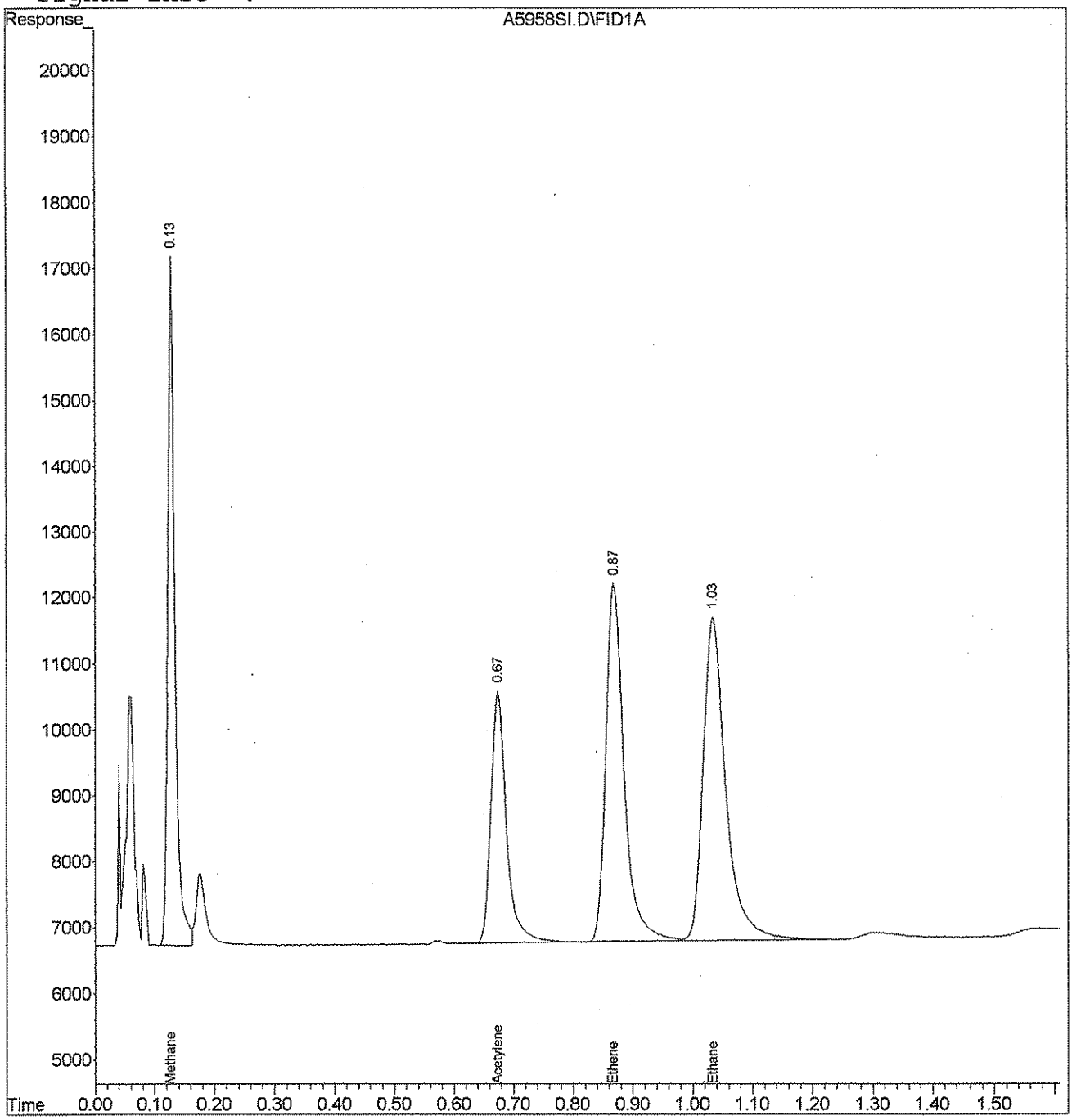
000349

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5958SI.D Vial: 100
Acq On : 11 Jun 2003 8:51 pm Operator:
Sample : STD #6,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:56 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:49:42 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :





000350

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5959SI.D Vial: 100
Acq On : 11 Jun 2003 8:56 pm Operator:
Sample : STD #7,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:58 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:56:59 2003
Response via : Initial Calibration
DataAcq Meth : METHANE.M

6-12-03

6/11/03

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) S Acetylene | 0.69 | 85424 | 302.961 UG/L |
| Spiked Amount 135.000 Range 60 - 140 | | Recovery = 224.42%# | |
| Target Compounds | | | |
| 1) TM Methane | 0.13 | 101811 | 222.972 UG/L |
| 3) TM Ethene | 0.87 | 145938 | 347.202 UG/L |
| 4) TM Ethane | 1.04 | 164425 | 353.871 UG/L |

(f)=RT Delta > 1/2 Window (m)=manual int.



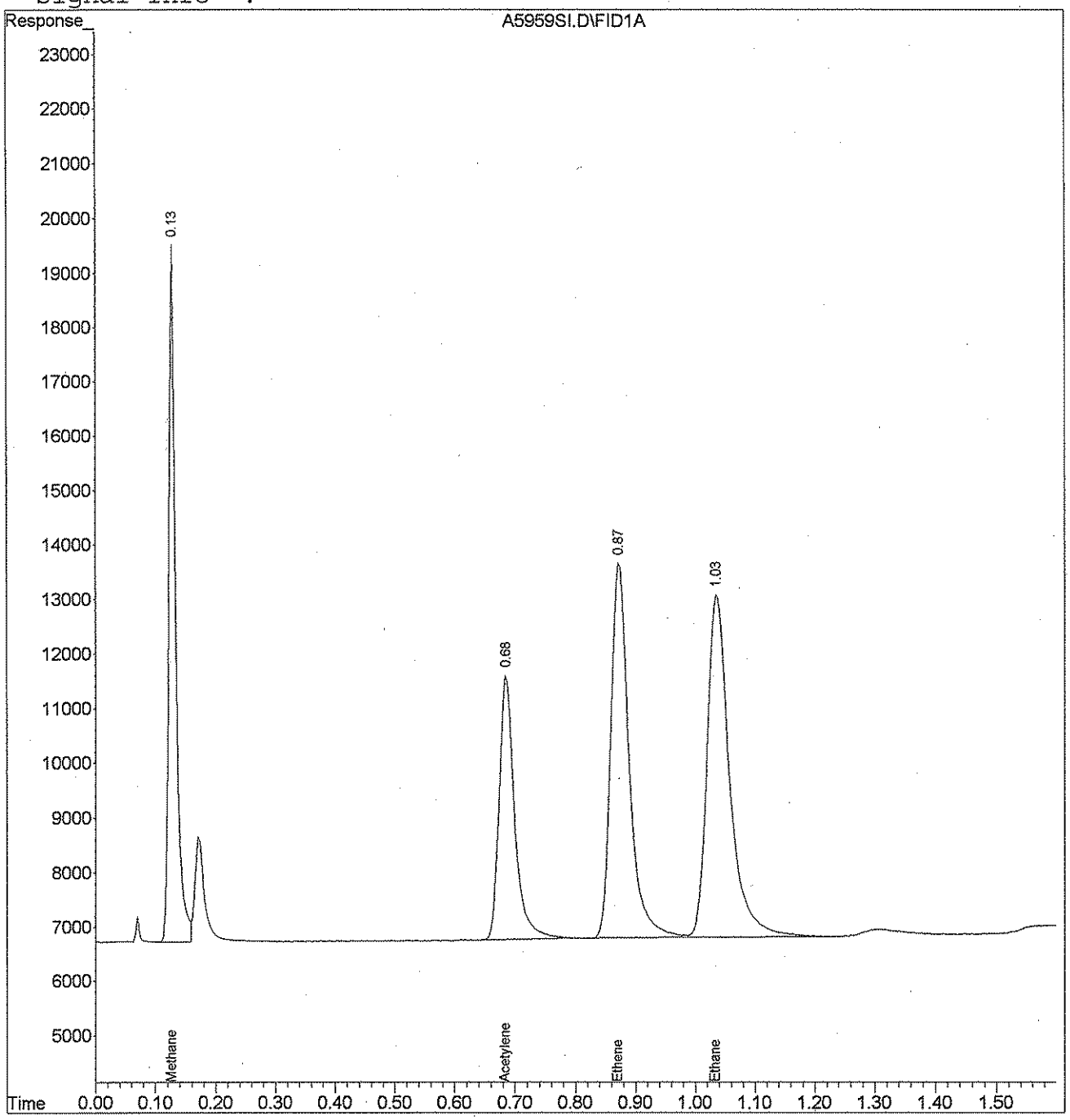
000351

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\3\DATA\061103-A\A5959SI.D Vial: 100
Acq On : 11 Jun 2003 8:56 pm Operator:
Sample : STD #7,N,QA061103,SI Inst : Instr. A
Misc : 15000 Multiplr: 1.00
IntFile : METHANE.E
Quant Time: Jun 11 20:58 2003 Quant Results File: MEE06113.RES

Quant Method : C:\HPCHEM\1\METHODS\MEE06113.M (Chemstation Integrator)
Title : methane
Last Update : Wed Jun 11 20:56:59 2003
Response via : Multiple Level Calibration
DataAcq Meth : METHANE.M

Volume Inj. :
Signal Phase :
Signal Info :



analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A5971SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/19/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 2058

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 119 | 88 | | 60-140 | 0 |
| Ethene | 134 | 102 | 76 | | 70-130 | 0 |
| Ethane | 143 | 106 | 74 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A5984SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/20/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0025

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 126 | 93 | | 60-140 | 0 |
| Ethene | 134 | 131 | 98 | | 70-130 | 0 |
| Ethane | 143 | 131 | 92 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A5996SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/20/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0226

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 119 | 88 | | 60-140 | 0 |
| Ethene | 134 | 126 | 94 | | 70-130 | 0 |
| Ethane | 143 | 125 | 88 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A5997SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/20/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 2029

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 135 | 100 | 60-140 | 0 |
| Ethene | 134 | 121 | 90 | 70-130 | 0 |
| Ethane | 143 | 116 | 81 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A6010SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/21/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0139

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % | # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|---|
| Acetylene | 135 | 131 | 97 | | 60-140 | 0 |
| Ethene | 134 | 127 | 95 | | 70-130 | 0 |
| Ethane | 143 | 124 | 87 | | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

## ETHENE/ETHANE AQUEOUS
## CONTINUING CALIBRATION CHECK

Project #: 10971.217.002 Quote #: SDG#: 49878

Lab File ID: A6022SC.D Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Check Date: 6/21/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Check Time: 0329

| COMPOUND | TRUE VALUE (ug/L) | MEASURED VALUE (ug/L) | RECOVERY % # | QC LIMITS % REC | Total Out |
|---|---|---|---|---|---|
| Acetylene | 135 | 125 | 92 | 60-140 | 0 |
| Ethene | 134 | 128 | 96 | 70-130 | 0 |
| Ethane | 143 | 127 | 89 | 70-130 | 0 |

# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# ETHANE, ETHENE
# RETENTION TIME SUMMARY

Project #: 10971.217.002 Quote #: NA SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/2/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2321

Lab File IDs (Standards): A5971SC Date Analyzed: 6/19/03
A5984SC 6/20/03
A5996SC 6/20/03

| | | ETHENE RT | # | ETHANE RT | # |
|---|---|---|---|---|---|
| | | 0.87 | | 1.03 | |
| | | 0.86 | | 1.03 | |
| | | 0.87 | | 1.03 | |
| | UPPER LIMIT | 0.88 | | 1.03 | |
| | LOWER LIMIT | 0.85 | | 1.03 | |
| | SAMPLE NO. | | | | |
| 01 | L06193M | 0.86 | | 1.03 | |
| 02 | 49878-21, MS | 0.86 | | 1.03 | |
| 03 | 49878-21, MSD | 0.87 | | 1.03 | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
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| 21 | | | | | |
| 22 | | | | | |
| | | | | | |

RT UPPER LIMIT = + 3 std. dev. above the avg. RT
RT LOWER LIMIT = - 3 std. dev. below the avg. RT
Note: If std. dev. = 0.00 then a default window of 0.03 minutes is used

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Comments: _____

analytics environmental laboratory LLC

# ETHANE, ETHENE
# RETENTION TIME SUMMARY

Project #: 10971.217.002 Quote #: NA SDG#: 49878

Site ID: Bucks Harbor Location: Maine

Instrument ID: A Calibration Dates: 6/2/03

GC Column: CARBOXEN 1006 PLOT ID: 0.53(mm) Calibration Times: 2321

Lab File IDs (Standards): A5997SC Date Analyzed: 6/20/03
A6010SC 6/21/03
A6022SC 6/21/03

| | | ETHENE RT | # | ETHANE RT | # |
|---|---|---|---|---|---|
| | | 0.87 | | 1.03 | |
| | | 0.87 | | 1.03 | |
| | | 0.87 | | 1.03 | |
| | UPPER LIMIT | 0.87 | | 1.03 | |
| | LOWER LIMIT | 0.87 | | 1.03 | |
| | SAMPLE NO. | | | | |
| 01 | L06203M | 0.87 | | 1.03 | |
| 02 | 49878-40, MS | 0.87 | | 1.03 | |
| 03 | 49878-40, MSD | 0.87 | | 1.03 | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
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| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| | | | | | |

RT UPPER LIMIT = + 3 std. dev. above the avg. RT
RT LOWER LIMIT = - 3 std. dev. below the avg. RT
Note: If std. dev. = 0.00 then a default window of 0.03 minutes is used

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Comments: _____

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 4°C
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: AM 6/18/03

Project#: 10971.217.002 Project: Bucks Harbor
Company: Weston Solutions
Contact: Kathleen Sankey
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature):

Matrix Key: WW=Wastewater, SW=Surfacewater, GW=Groundwater, DW=Drinkingwater, S=Soil/Sludge, O=Oil, E=Extract, X=Other

Container Key: P=plastic G=glass

| Station Identification | Sample Date | Sample Time | Analysis | Preservation: Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-061603-01 | 6/16/03 | 0700 | VOC 8260B | | | | | X | | | W | 2 | ✓ | | 49878-1 |
| MW12-0603 | | 0700 | VOC 8260B + ethane | | | | | X | | | GW | 6 | ✓ | | -2 |
| MW11-0603 | | 0800 | | | | | | X | | | | 6 | ✓ | | -3 |
| MW13-0603 | | 1010 | | | | | | X | | | | 6 | ✓ | | -4 |
| GAMW001-0603 | | 1050 | | | | | | X | | | | 6 | ✓ | | 5 |
| MW14-0603 | | 1200 | | | | | | X | | | | 6 | ✓ | | 6 |
| STMW001-0603 | | 1350 | | | | | | X | | | | 6 | ✓ | | 7 |
| MW9-0603 | | 1300 | | | | | | X | | | | 6 | ✓ | | 8 |
| MW105-0603 | | 0945 | | | | | | X | | | | 6 | ✓ | | 9 |
| MW140-0603 | | 1015 | | | | | | X | | | | 6 | ✓ | | 10 |
| MW101-0603 | | 1200 | | | | | | X | | | | 6 | ✓ | | 11 |
| STMW002-0603 | | 1305 | | | | | | X | | | | 6 | ✓ | | 12 |

Received By: Time: Date:
Received By: Time: 1520 Date: 6/18/03
Received By: Time: Date:

FAX RESULTS? (YES) NO
Fax # 603 436-5401

Comments / Instructions:
VOC, by 8260B
ethane by 8015 modified
Data package due by 7/2/03 (A)

Turnaround Request
Standard ☐ Due Date 7/2/03
Priority ☐ Due Date

Client Code: WESTONM

Relinquished By Sampler:
Relinquished By: Angela Carter
Relinquished By:



Analytics\AEL Documents\AEL COC

19003

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 10/02

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 4°C
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: 6/18/03

Project#: 1097.217.002 Project: Bucks
Company: Weston Solutions
Contact: Kathleen Sowkeep
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature):

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TW1-0603 | 6/16/03 | 0920 | VOC S24.2 | | | | | X | | | GW | 6 | V | | 49878-13 |
| | | | | | | | | | | | | | | | |
| STMW003-0603 | 6/16/03 | 1410 | VOC 8260B + ethane | | | | | X | | | GW | 6 | V | | 14 |
| RB-061603-01 | 6/16/03 | 1500 | VOC 8260B | | | | | X | | | | 3 | V | | 15 |
| STMW004-0603 | 6/17/03 | 0600 | VOC 8260B + ethane | | | | | X | | | | 6 | V | | 16 |
| MW102-0603 | | 0515 | | | | | | X | | | | 6 | V | | 17 |
| MW103-0603 | | 0500 | | | | | | X | | | | 6 | V | | 18 |
| MW 8-0603 | | 0700 | | | | | | X | | | | 6 | V | | 19 |
| MW 5-0603 | | 0800 | | | | | | X | | | | 6 | V | | 20 |
| MW 5-0603-E | | 0800 | | | | | | X | | | | 6 | V | | 21 |
| MW1-0603 | | 1000 | | | | | | X | | | | 7 | V | | 22 |
| MW 6-0603 | | 1050 | | | | | | X | | | | 6 | V | | 23 |

FAX RESULTS: YES NO
Fax # 6056-5401

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date

Comments / Instructions:
TW1-0603 → MS/MSD for S24.2 (6 vials)
VOC 8260B
ethane 8015 Modified
MW1-0603 → MS/MSD for 8260B (4 vials)
Client Code: WESTONM

Page 2 of 4

Received By: 6/18/03 Time: 1320 Date: 6/18/03
Relinquished By Sampler: Relinquished By: Angela Vaeth

Analytics\AEL Documents\AEL COC

00562

# Chain Of Custody Form

**analytics** environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C 4°C
3) Received in good condition Y or N
4) pH checked by: N/A
5) Labels checked by: [signature] 6/18/03

Project#: 10971.217.002 Project: Bucks
Company: **Weston Solutions**
Contact: Kathleen Sankup
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature): [signature]

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RB-061703-01 | 6/17/03 | 1430 | VOC 8260B | | | | | X | | | W | 3 | V | | 49878-24 |
| FAMW001-0603 | | 0700 | VOC 8260B + ethane | | | | | X | | | GW | 6 | V | | 25 |
| FAMW002-0603 | | 0750 | | | | | | X | | | | 6 | V | | 26 |
| BPMW001-0603 | | 0935 | | | | | | X | | | | 6 | V | | 27 |
| GTMW001-0603 | | 1030 | | | | | | X | | | | 6 | V | | 28 |
| TSMW001-0603 | | 1315 | | | | | | X | | | | 6 | V | | 29 |
| TSMW002-0603 | | 1120 | | | | | | X | | | | 6 | V | | 30 |
| TSMW003-0603 | | 1215 | | | | | | X | | | | 6 | V | | 31 |
| MW3-0603 | | 1145 | | | | | | X | | | | 6 | V | | 32 |
| MW2-0603 | | 1245 | | | | | | X | | | | 6 | V | | 33 |
| MW7-0603 | | 1400 | | | | | | X | | | | 6 | V | | 34 |
| MW7-0603-E | | 1400 | | | | | | X | | | | 6 | V | | 35 |

FAX RESULTS? YES NO
Fax # x5401

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date

Comments / Instructions:
VOC 8260B
ethane 8015 modified

Client Code: WESTONM

Page 3 of 4

Received By: Time: Date: Relinquished By Sampler:
Received By: [signature] Time: 1520 Date: 6/18/03 Relinquished By: Angela Vault
Received By: Time: Date: Relinquished By:

Analytics\AEL Documents\AEL COC

000363

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered 4°C
2) Temp blank °C _____
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: MW 6/18/03

Project#: 10971.217.002 Project: Blacks
Company: **Weston Solutions**
Contact: Kathleen Sackup
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 603 315-4563 PO# 0037759 Quote #
Sampler (Signature): CTP

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
F=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW04-0603 | 6/18/03 | 0920 | VOC 8260B + ethane | | | | | X | | | GW | 6 | V | | 49878-36 |
| MW10-0603 | | 0930 | | | | | | X | | | | 6 | V | | 37 |
| MW10-0603-E | | 0930 | | | | | | X | | | | 6 | V | | 38 |
| STMW005-0603 | | 0915 | | | | | | X | | | | 6 | V | | 39 |
| STMW006-0603 | | 0910 | | | | | | X | | | | 6 | V | | 40 |
| RB-061803-01 | | 0700 | VOC 8260B | | | | | X | | | W | 3 | V | | 41 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Received By: | Time: | Date:
Received By: | Time: 1526 | Date: 6/18/03
Received By: | Time: | Date:
Relinquished By Sampler: | Time: | Date:
Relinquished By: Angela Vautour | Time: | Date:
Relinquished By: | Time: | Date:

FAX RESULTS? YES NO
Fax # 5401

Turnaround Request
Standard ☐ Priority ☐
Due Date 7/2/03 Due Date _____

Comments / Instructions:
VOCs 8260B
Ethane 8015 Modified

Client Code: WESTONM

Page 4 of 4

Analytics\AEL Documents\AEL COC

49878

analytics environmental laboratory LLC

# ANALYTICS SAMPLE RECEIPT CHECKLIST

AEL LAB#: 41978
CLIENT: Weston
PROJECT: Bucks

COOLER NUMBER: —
NUMBER OF COOLERS: 1
DATE RECEIVED: 6/18/03

**A: PRELIMINARY EXAMINATION:**

DATE COOLER OPENED: 6/18/03

1. Cooler received by(initials) JB
2. Did cooler come with a shipping slip? — Date Received: 6/18/03 — Y (N)

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? Y (N)
How many & where: _____ Seal Date: _____ Seal Name: _____

4. Did the custody seals arrive unbroken and intact upon arrival? Y (N/A)

5. COC#: _____

6. Were Custody papers filled out properly (ink,signed, etc)? (Y) N

7. Were custody papers sealed in a plastic bag? Y (N)

8. Did you sign the COC in the appropriate place? (Y) N

9. Was the project identifiable from the COC papers? (Y) N

10. Was enough ice used to chill the cooler? (Y) N — Temp. of cooler: 4°C

**B. Log-In:** Date samples were logged in: 6/18/03 — By: JB

11. Type of packing in cooler(bubble wrap, popcorn) Y (N/A)

12. Were all bottles sealed in separate plastic bags? (Y) ~~N~~ JB 6/18/03

13. Did all bottles arrive unbroken and were labels in good condition? (Y) N

14. Were all bottle labels complete(ID,Date,time,etc.) (Y) N

15. Did all bottle labels agree with custody papers? (Y) N

16. Were the correct containers used for the tests indicated: (Y) N

17. Were samples received at the correct pH? Y (N/A)

18. Was sufficient amount of sample sent for the tests indicated? (Y) N

19. Were bubbles absent in VOA samples? Y (N)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): [signature] — Date: 6/18/03

analytics environmental laboratory LLC

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www.analyticslab.com

August 2, 2003

Ms. Kathleen Soukup
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 49975**

Dear Ms. Soukup:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 524.2.
Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Volatile Organics:**
The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L507023I) had high recovery for Acetone, t-Butyl alcohol, 2,2-Dichloropropane and Hexachlorobutadiene. (See Form III) The LFB/CC (L507053I2) was reanalyzed with Acetone and Hexachlorobutadiene recoveries still high and t-Butyl alcohol and 2,2-Dichloropropane were in control. These analytes were not detected in any samples associated with this QC.

Tetrachloroethene was above the 70-130 % R limits in the MS/MSD analyzed on sample 49975-2 (WY03-0703-01-A) on 07/02/03. (See Form III) This compound was not detected in any samples associated with this QC.

The Laboratory Fortified Blank (LFB)/Continuing calibration (CC) standard (L507093I) had high recoveries for Acetone and Tetrahydrofuran. (See Form III) The LFB/CC (L507093I2) was reanalyzed at a higher concentration, which represents the quantitation limit for these compounds, and their recoveries were in control. These analytes were not detected in any samples associated with this QC.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 49975**

**Revision: Rev. 0**

**Re: Bucks Harbor** **10971.217.002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 02 July 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 49975-1 | 07/01/03 | TB-070103-01 | EPA 524.2 Volatile Organics | |
| 49975-2 | 07/01/03 | WY03-0703-01-A | Electronic Data Deliverable | |
| | 07/01/03 | WY03-0703-01-A | EPA 524.2 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature Melissa A Mulliken

Stephen L. Knollmeyer Lab. Director

Date 07/10/03

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analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 2, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LAB QC

**SAMPLE DATA**

**Lab Sample ID:** B5070231
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 07/02/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 114 % | 1,2-Dichlorobenzene-d4 | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

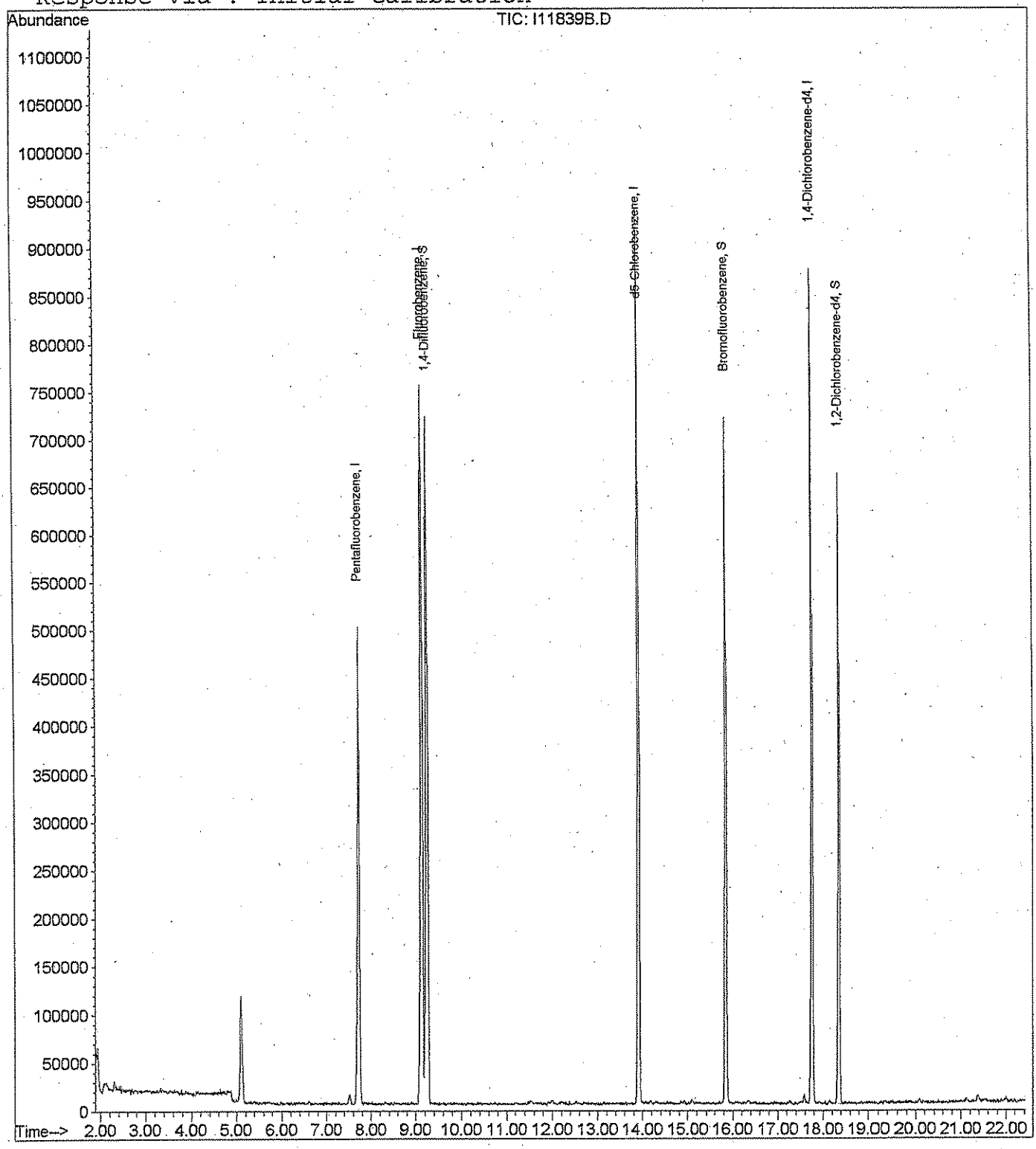
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\070203-i\I11839B.D Vial: 3
Acq On : 2 Jul 2003 11:11 am Operator: JMR
Sample : B507023I Inst : Instrumen
Misc : 25000,,VB JB 063003 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 2 11:34 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 2, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LAB QC

**SAMPLE DATA**

**Lab Sample ID:** B507023I2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 07/02/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 100 % | Bromofluorobenzene | 108 % | 1,2-Dichlorobenzene-d4 | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

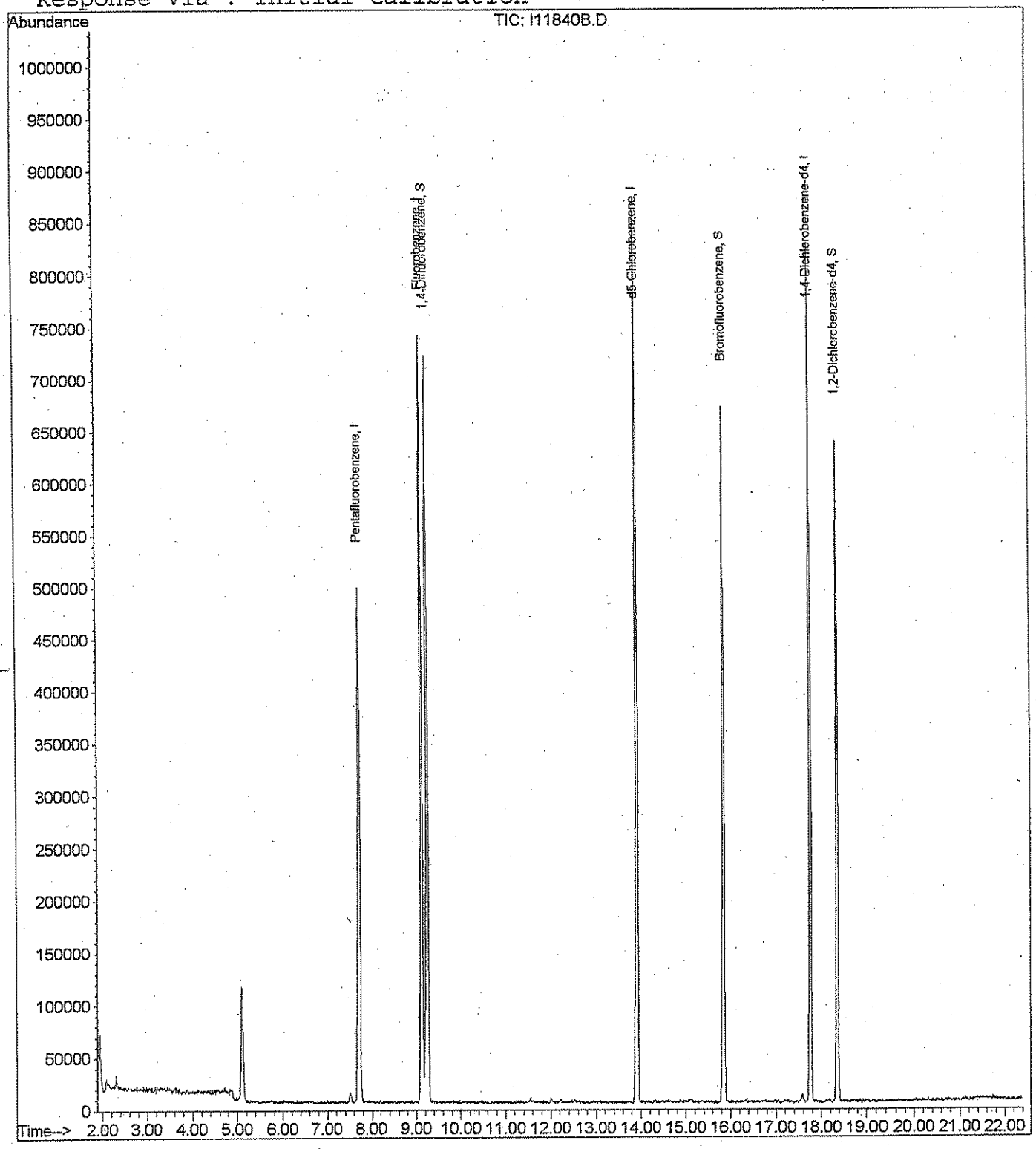
Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\data\070203-i\I11840B.D
Acq On : 2 Jul 2003 11:46 am
Sample : B507023I2
Misc : 25000,,VB JB 062703
MS Integration Params: rteint.p
Quant Time: Jul 2 12:09 2003

Vial: 4
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

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603-436-5111 Fax 603-430-2151
800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 2, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** LAB QC

**SAMPLE DATA**

**Lab Sample ID:** B507093I
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 07/09/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 94 % | 1,2-Dichlorobenzene-d4 | 91 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

NH 524 full

Authorized signature Milena Colelli

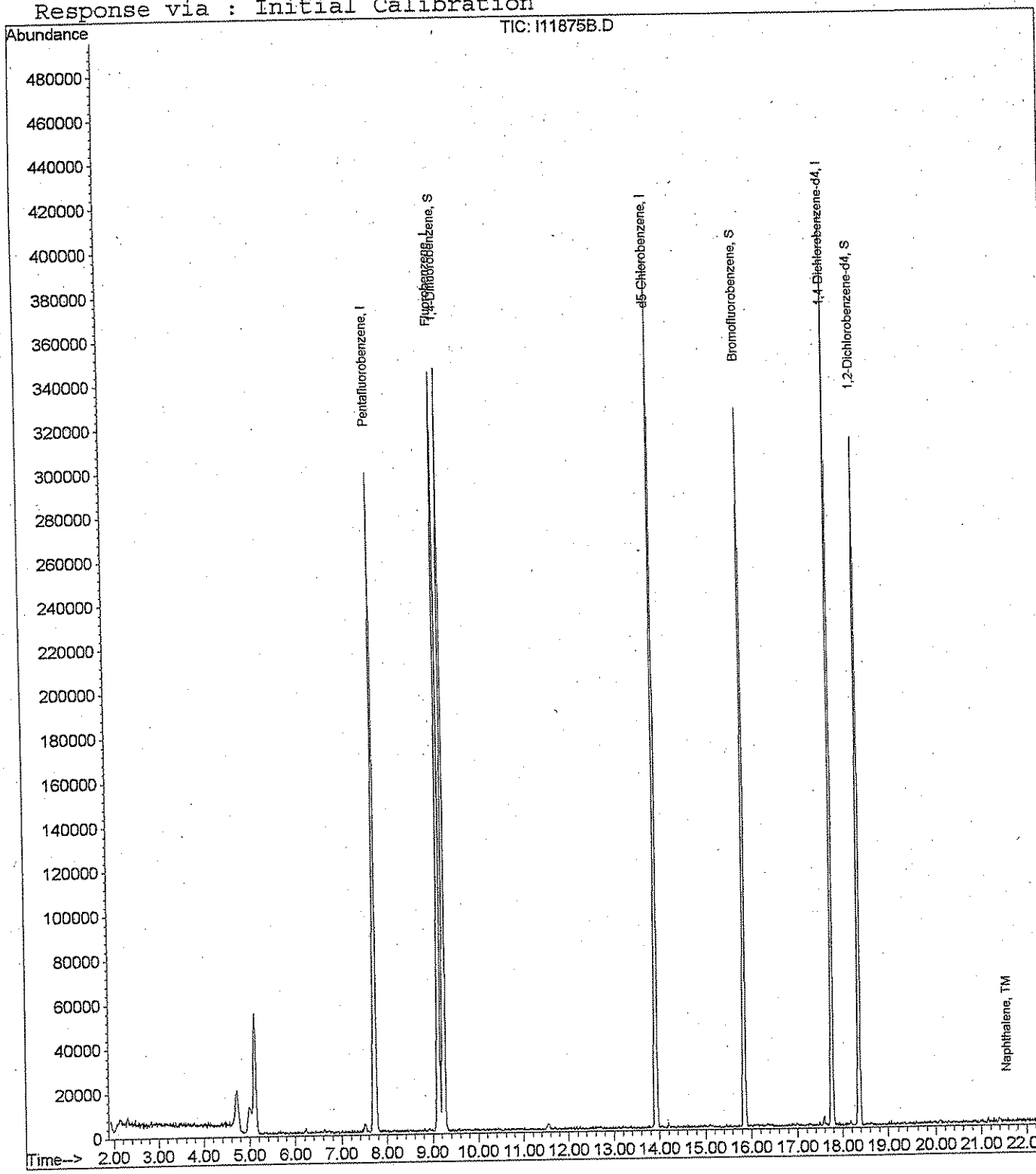
Quantitation Report

Data File : C:\HPCHEM\1\data\070803-i\I11875B.D
Acq On : 9 Jul 2003 12:20 pm
Sample : B507093I
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 12:43 2003

Vial: 6
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



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800-929-9906

Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

July 10, 2003

**SAMPLE DATA**

**Lab Sample ID:** 49975-1
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 07/01/03
**Lab Receipt Date:** 07/02/03
**Analysis Date:** 07/09/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor
**Project Number:** 10971.217.002
**Field Sample ID:** TB-070103-01

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | U |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 102 % | Bromofluorobenzene | 91 % | 1,2-Dichlorobenzene-d4 | 88 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

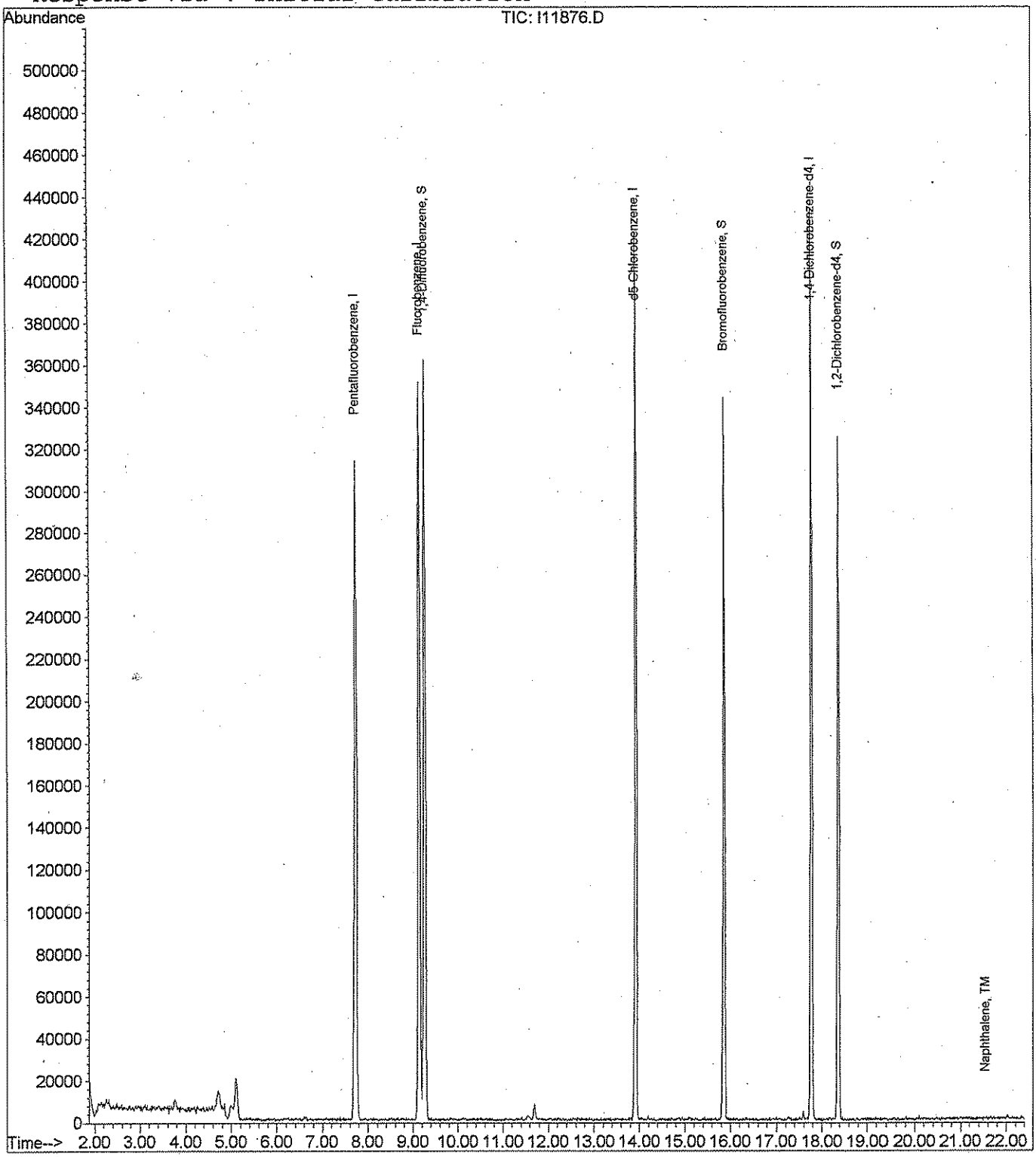
NH 524 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\data\070803-i\I11876.D Vial: 7
Acq On : 9 Jul 2003 12:56 pm Operator: JMR
Sample : 49975-1 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 13:18 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



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Ms. Kathleen Soukup
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

July 10, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor

**Project Number:** 10971.217.002

**Field Sample ID:** WY03-0703-01-A

**SAMPLE DATA**

**Lab Sample ID:** 49975-2
**Matrix:** Aqueous
**Percent Solid:** NA
**Dilution Factor:** 1.0
**Collection Date:** 07/01/03
**Lab Receipt Date:** 07/02/03
**Analysis Date:** 07/09/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 0.5 | U | 1,3-Dichloropropane | 0.5 | U |
| Bromobenzene | 0.5 | U | cis-1,3-Dichloropropene | 0.5 | U |
| Bromochloromethane | 0.5 | U | trans-1,3-Dichloropropene | 0.5 | U |
| Bromodichloromethane | 0.5 | U | 2,2-Dichloropropane | 0.5 | U |
| Bromoform | 0.5 | U | 1,1-Dichloropropene | 0.5 | U |
| Bromomethane | 0.5 | U | Ethylbenzene | 0.5 | U |
| n-butylbenzene | 0.5 | U | Hexachlorobutadiene | 0.5 | U |
| sec-butylbenzene | 0.5 | U | Isopropylbenzene | 0.5 | U |
| tert-butylbenzene | 0.5 | U | p-isopropyltoluene | 0.5 | U |
| Carbon Tetrachloride | 0.5 | U | Methylene Chloride | 0.5 | U |
| Chlorobenzene | 0.5 | U | Methyl-tert-butyl ether | 0.5 | U |
| Chloroethane | 0.5 | U | Naphthalene | 0.5 | U |
| Chloroform | 0.5 | U | n-Propylbenzene | 0.5 | U |
| Chloromethane | 0.5 | U | Styrene | 0.5 | U |
| 2-Chlorotoluene | 0.5 | U | 1,1,1,2-Tetrachloroethane | 0.5 | U |
| 4-Chlorotoluene | 0.5 | U | 1,1,2,2-Tetrachloroethane | 0.5 | U |
| Dibromochloromethane | 0.5 | U | Tetrachloroethene | 0.5 | U |
| 1,2-Dibromo-3-chloropropane | 0.5 | U | Toluene | 0.5 | U |
| 1,2-Dibromoethane | 0.5 | U | 1,2,3-Trichlorobenzene | 0.5 | U |
| Dibromomethane | 0.5 | U | 1,2,4-Trichlorobenzene | 0.5 | U |
| 1,2-Dichlorobenzene | 0.5 | U | 1,1,1-Trichloroethane | 0.5 | U |
| 1,3-Dichlorobenzene | 0.5 | U | 1,1,2-Trichloroethane | 0.5 | U |
| 1,4-Dichlorobenzene | 0.5 | U | Trichloroethene | 0.5 | **0.70** |
| Dichlorodifluoromethane | 0.5 | U | Trichlorofluoromethane | 0.5 | U |
| 1,1-Dichloroethane | 0.5 | U | 1,2,3-Trichloropropane | 0.5 | U |
| 1,2-Dichloroethane | 0.5 | U | 1,2,4-Trimethylbenzene | 0.5 | U |
| 1,1-Dichloroethene | 0.5 | U | 1,3,5-Trimethylbenzene | 0.5 | U |
| cis-1,2-Dichloroethene | 0.5 | U | Vinyl Chloride | 0.1 | U |
| trans-1,2-Dichloroethene | 0.5 | U | o-Xylene | 0.5 | U |
| 1,2-Dichloropropane | 0.5 | U | m,p-Xylene | 0.5 | U |
| Acetone | 5 | U | Diethyl ether | 0.5 | U |
| Carbon Disulfide | 0.5 | U | 2-Hexanone | 5 | U |
| Tetrahydrofuran | 2.5 | U | Methyl isobutyl ketone | 5 | U |
| Methyl ethyl ketone | 5 | U | Di-isopropyl ether | 0.5 | U |
| t-Butyl alcohol | 10 | U | Ethyl t-butyl ether | 0.5 | U |
| t-Amyl methyl ether | 0.5 | U | | | |

**Surrogate Standard Recovery**

| | | | | | |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 103 % | Bromofluorobenzene | 91 % | 1,2-Dichlorobenzene-d4 | 90 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to EPA 600, Method 524.2

**COMMENTS:**

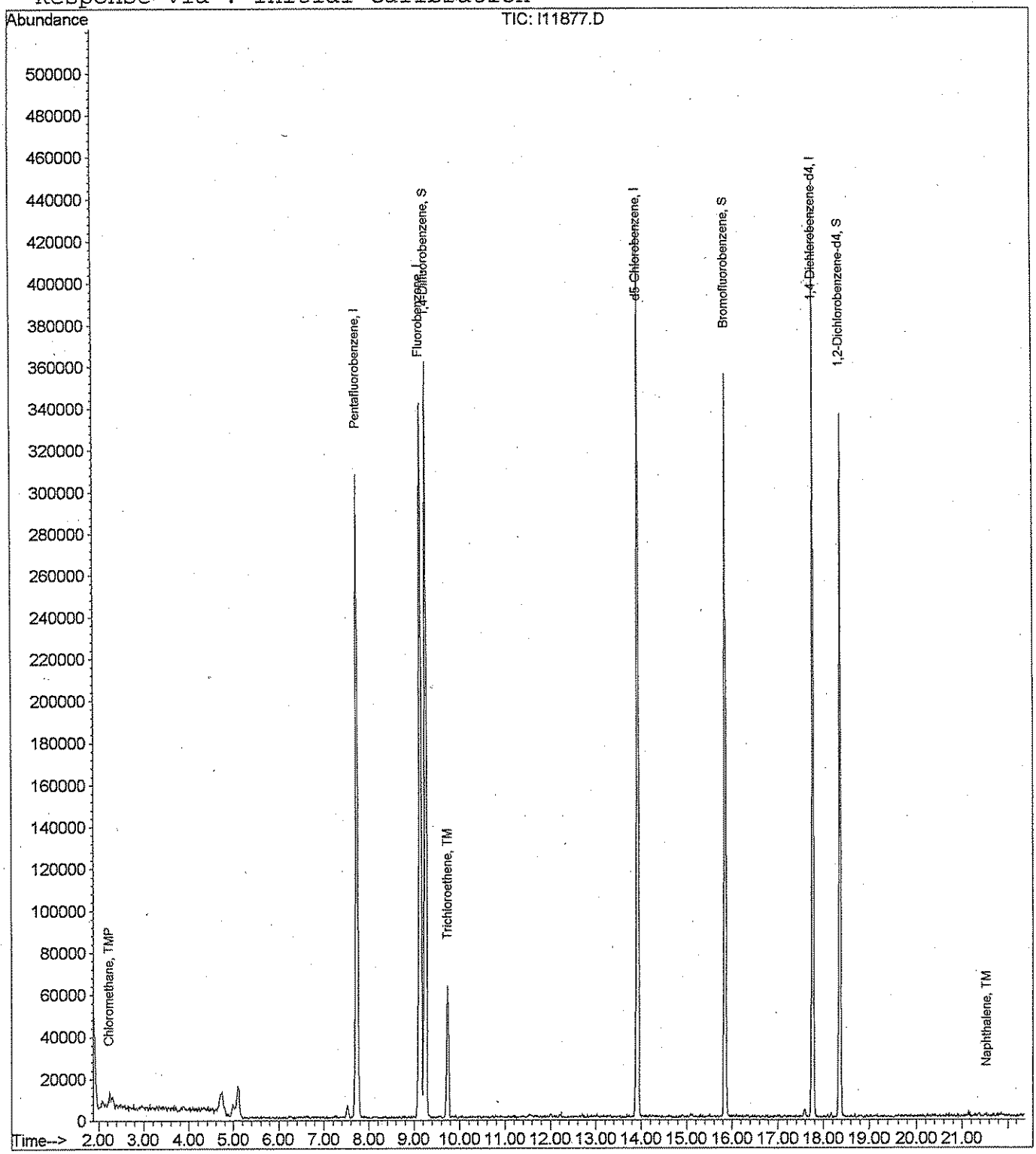
NH 524 full

Authorized signature Melissa A Valli

Quantitation Report

Data File : C:\HPCHEM\1\data\070803-i\I11877.D Vial: 8
Acq On : 9 Jul 2003 1:31 pm Operator: JMR
Sample : 49975-2 Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 13:53 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11756T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0952

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 98 | 95 | 95 | 0 |
| 02 | 0.5PPB STD | 101 | 99 | 104 | 0 |
| 03 | 1.2PPB STD | 101 | 94 | 100 | 0 |
| 04 | 4.8PPB STD | 102 | 93 | 99 | 0 |
| 05 | 8PPB STD | 99 | 96 | 104 | 0 |
| 06 | 16PPB STD | 103 | 109 | 101 | 0 |
| 07 | 32PPB STD | 99 | 104 | 101 | 0 |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
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| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L507023I | 99 | 110 | 100 | 0 |
| 02 | L507023I2 | 102 | 109 | 101 | 0 |
| 03 | B507023I | 100 | 114 | 99 | 0 |
| 04 | B507023I2 | 100 | 108 | 100 | 0 |
| 05 | ZZZZZ | 98 | 107 | 98 | 0 |
| 06 | ZZZZZ | 100 | 107 | 100 | 0 |
| 07 | ZZZZZ | 100 | 108 | 101 | 0 |
| 08 | ZZZZZ | 101 | 111 | 105 | 0 |
| 09 | ZZZZZ | 98 | 110 | 106 | 0 |
| 10 | ZZZZZ | 100 | 108 | 98 | 0 |
| 11 | ZZZZZ | 98 | 107 | 99 | 0 |
| 12 | ZZZZZ | 98 | 108 | 99 | 0 |
| 13 | 49975-2,MS | 101 | 114 | 108 | 0 |
| 14 | 49975-2,MSD | 99 | 112 | 100 | 0 |
| 15 | ZZZZZ | 98 | 108 | 97 | 0 |
| 16 | ZZZZZ | 99 | 114 | 99 | 0 |
| 17 | ZZZZZ | 97 | 105 | 98 | 0 |
| 18 | ZZZZZ | 104 | 108 | 101 | 0 |
| 19 | ZZZZZ | 99 | 107 | 100 | 0 |
| 20 | ZZZZZ | 99 | 107 | 98 | 0 |
| 21 | ZZZZZ | 98 | 105 | 96 | 0 |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS
# SYSTEM MONITORING COMPOUNDS
# SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11861T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/8/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1410

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 86 | 109 | 113 | 0 |
| 02 | 0.5PPB STD | 86 | 110 | 114 | 0 |
| 03 | 1.2PPB STD | 99 | 100 | 100 | 0 |
| 04 | 4.8PPB STD | 101 | 100 | 100 | 0 |
| 05 | 8PPB STD | 101 | 104 | 102 | 0 |
| 06 | 16PPB STD | 100 | 101 | 102 | 0 |
| 07 | 32PPB STD | 100 | 101 | 100 | 0 |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
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| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | OUT |
|---|---|---|---|---|---|
| 01 | L507093I | 100 | 96 | 96 | 0 |
| 02 | L507093I2.,4.8PPB | 101 | 93 | 94 | 0 |
| 03 | L507093I3..1.2PPB | 102 | 94 | 100 | 0 |
| 04 | B507093I | 103 | 94 | 91 | 0 |
| 05 | 49975-1 | 102 | 91 | 88 | 0 |
| 06 | 49975-2 | 103 | 91 | 90 | 0 |
| 07 | ZZZZZ | 104 | 96 | 93 | 0 |
| 08 | ZZZZZ | 104 | 94 | 95 | 0 |
| 09 | ZZZZZ | 102 | 93 | 94 | 0 |
| 10 | ZZZZZ | 102 | 92 | 94 | 0 |
| 11 | ZZZZZ | 103 | 94 | 97 | 0 |
| 12 | ZZZZZ | 102 | 93 | 94 | 0 |
| 13 | ZZZZZ | 102 | 93 | 93 | 0 |
| 14 | ZZZZZ | 101 | 95 | 101 | 0 |
| 15 | ZZZZZ | 101 | 98 | 101 | 0 |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = 1,4-Difluorobenzene | 70-130% |
| SMC2 = Bromofluorobenzene | 70-130% |
| SMC3 = 1,2-Dichlorobenzene-d4 | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507023I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.0 | 87 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 103 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.2 | 99 | | 70-130 |
| Bromomethane | 1.2 | 1.0 | 79 | | 70-130 |
| Chloroethane | 1.2 | 1.1 | 93 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 8.2 | 136 | * | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 97 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.2 | 99 | | 70-130 |
| Acetone | 1.2 | 1.8 | 153 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 99 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 112 | | 70-130 |
| Methylene Chloride | 1.2 | 1.2 | 103 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.7 | 112 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.4 | 115 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.0 | 87 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.4 | 116 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.6 | 131 | * | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.3 | 112 | | 70-130 |
| Chloroform | 1.2 | 1.4 | 118 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.6 | 129 | | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.3 | 112 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.4 | 118 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.4 | 120 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.4 | 120 | | 70-130 |
| Benzene | 1.2 | 1.4 | 115 | | 70-130 |
| Trichloroethene | 1.2 | 1.5 | 127 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 117 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.4 | 116 | | 70-130 |
| Dibromomethane | 1.2 | 1.4 | 119 | | 70-130 |
| 2-Hexanone | 1.2 | 1.1 | 89 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 103 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 109 | | 70-130 |
| Toluene | 1.2 | 1.4 | 115 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 119 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.4 | 114 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.6 | 129 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.4 | 114 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.4 | 118 | | 70-130 |

VOA FORM 3

49975VOAFORM3.xls

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507023I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 119 | | 70-130 |
| Ethylbenzene | 1.2 | 1.4 | 117 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 111 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 107 | | 70-130 |
| Styrene | 1.2 | 1.2 | 97 | | 70-130 |
| Bromoform | 1.2 | 1.3 | 108 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 108 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.4 | 113 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.4 | 118 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 112 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.4 | 114 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.4 | 118 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.0 | 83 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.6 | 133 | * | 70-130 |
| Naphthalene | 1.2 | 0.9 | 78 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 0.9 | 75 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 4 out of 70 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507023I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.1 | 88 | | 70-130 |
| Chloromethane | 1.2 | 1.2 | 103 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.1 | 95 | | 70-130 |
| Bromomethane | 1.2 | 1.0 | 83 | | 70-130 |
| Chloroethane | 1.2 | 1.1 | 91 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.6 | 110 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 97 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 104 | | 70-130 |
| Acetone | 1.2 | 1.7 | 144 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.2 | 102 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.4 | 115 | | 70-130 |
| Methylene Chloride | 1.2 | 1.3 | 104 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.7 | 112 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.4 | 113 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.4 | 117 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.6 | 130 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.4 | 114 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.3 | 108 | | 70-130 |
| Chloroform | 1.2 | 1.4 | 119 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 105 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.7 | 141 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.4 | 113 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.4 | 117 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.4 | 115 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.4 | 118 | | 70-130 |
| Benzene | 1.2 | 1.4 | 114 | | 70-130 |
| Trichloroethene | 1.2 | 1.6 | 129 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.4 | 114 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.4 | 114 | | 70-130 |
| Dibromomethane | 1.2 | 1.5 | 123 | | 70-130 |
| 2-Hexanone | 1.2 | 1.2 | 102 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 103 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 106 | | 70-130 |
| Toluene | 1.2 | 1.4 | 115 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.4 | 116 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.4 | 116 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.7 | 138 | * | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 99 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.4 | 117 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507023I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.4 | 113 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 116 | | 70-130 |
| Ethylbenzene | 1.2 | 1.4 | 117 | | 70-130 |
| m,p-Xylene | 2.4 | 2.8 | 115 | | 70-130 |
| o-Xylene | 1.2 | 1.3 | 108 | | 70-130 |
| Styrene | 1.2 | 1.3 | 104 | | 70-130 |
| Bromoform | 1.2 | 1.1 | 91 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 108 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 107 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 112 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.4 | 114 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.4 | 114 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.4 | 118 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.4 | 117 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.4 | 114 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.4 | 118 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 106 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.2 | 103 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 102 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.1 | 88 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.6 | 131 | * | 70-130 |
| Naphthalene | 1.2 | 1.0 | 79 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.0 | 80 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 4 out of 70 outside limits

Comments: _____

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49975

BFB File ID: I11836T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49975-2

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | U | 4.4 | 91 | | 4.4 | 91 | | 0 | | 15 | 70-130 |
| Chloromethane | 4.8 | U | 5.4 | 112 | | 5.5 | 114 | | 2 | | 15 | 70-130 |
| Vinyl Chloride | 4.8 | U | 4.2 | 88 | | 4.3 | 89 | | 0 | | 15 | 70-130 |
| Bromomethane | 4.8 | U | 4.0 | 83 | | 4.3 | 90 | | 8 | | 15 | 70-130 |
| Chloroethane | 4.8 | U | 4.5 | 93 | | 4.8 | 99 | | 7 | | 15 | 70-130 |
| t-Butyl alcohol | 24.0 | U | 25.1 | 105 | | 28.2 | 117 | | 11 | | 15 | 70-130 |
| Trichlorofluoromethane | 4.8 | U | 4.9 | 102 | | 5.0 | 104 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | U | 5.0 | 104 | | 5.0 | 104 | | 0 | | 15 | 70-130 |
| Acetone | 4.8 | U | 6.2 | 129 | | 6.1 | 126 | | 2 | | 15 | 70-130 |
| 1,1-Dichloroethene | 4.8 | U | 4.95 | 103 | | 5.0 | 104 | | 1 | | 15 | 70-130 |
| Di-isopropyl ether | 4.8 | U | 5.5 | 110 | | 5.6 | 112 | | 2 | | 15 | 70-130 |
| Methylene Chloride | 4.8 | U | 4.0 | 83 | | 4.0 | 83 | | 1 | | 15 | 70-130 |
| Methyl-tert-butyl ether | 9.6 | U | 10.4 | 108 | | 10.5 | 109 | | 1 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 4.8 | U | 5.3 | 110 | | 5.5 | 114 | | 3 | | 15 | 70-130 |
| 1,1-Dichloroethane | 4.8 | U | 5.5 | 115 | | 5.5 | 115 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 4.8 | U | 5.4 | 113 | | 5.7 | 119 | | 5 | | 15 | 70-130 |
| Ethyl t-butyl ether | 4.8 | U | 5.5 | 114 | | 5.3 | 111 | | 3 | | 15 | 70-130 |
| 2,2-Dichloropropane | 4.8 | U | 5.7 | 119 | | 5.7 | 118 | | 1 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | U | 5.6 | 117 | | 5.6 | 116 | | 1 | | 15 | 70-130 |
| t-Amyl methyl ether | 4.8 | U | 5.2 | 108 | | 5.1 | 106 | | 2 | | 15 | 70-130 |
| Chloroform | 4.8 | U | 5.6 | 117 | | 5.6 | 117 | | 0 | | 15 | 70-130 |
| Bromochloromethane | 4.8 | U | 5.5 | 115 | | 5.5 | 115 | | 1 | | 15 | 70-130 |
| Tetrahydrofuran | 4.8 | U | 5.5 | 114 | | 5.7 | 119 | | 4 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | U | 5.4 | 113 | | 5.5 | 114 | | 1 | | 15 | 70-130 |
| 1,1-Dichloropropene | 4.8 | U | 5.7 | 118 | | 5.7 | 119 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 4.8 | U | 5.6 | 117 | | 5.7 | 119 | | 2 | | 15 | 70-130 |
| 1,2-Dichloroethane | 4.8 | U | 5.8 | 121 | | 5.9 | 122 | | 1 | | 15 | 70-130 |
| Benzene | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| Trichloroethene | 4.8 | 0.70 | 6.8 | 127 | | 6.8 | 128 | | 1 | | 15 | 70-130 |
| 1,2-Dichloropropane | 4.8 | U | 5.6 | 118 | | 5.8 | 121 | | 3 | | 15 | 70-130 |
| Bromodichloromethane | 4.8 | U | 5.5 | 114 | | 5.7 | 119 | | 5 | | 15 | 70-130 |
| Dibromomethane | 4.8 | U | 6.0 | 125 | | 5.6 | 116 | | 7 | | 15 | 70-130 |
| 2-Hexanone | 4.8 | U | 5.9 | 122 | | 5.6 | 117 | | 4 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC AQUEOUS**
**MATRIX SPIKE/DUPLICATE**
**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: NA SDG#: 49975

BFB File ID: I11836T Site ID: Buck Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 49975-2

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE AMT (ug/L) | MS CONC. (ug/L) | MS REC % | # | MSD CONC. (ug/L) | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methyl isobutyl ketone | 4.8 | U | 5.1 | 107 | | 5.3 | 110 | | 2 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | U | 6.0 | 125 | | 6.1 | 127 | | 1 | | 15 | 70-130 |
| Toluene | 4.8 | U | 5.4 | 113 | | 5.6 | 116 | | 3 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | U | 6.0 | 124 | | 6.1 | 127 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | U | 5.9 | 124 | | 5.9 | 123 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 4.8 | U | 5.9 | 122 | | 5.8 | 121 | | 1 | | 15 | 70-130 |
| Tetrachloroethene | 4.8 | U | 6.1 | 127 | | 6.3 | 131 | * | 3 | | 15 | 70-130 |
| Dibromochloromethane | 4.8 | U | 5.0 | 103 | | 5.5 | 114 | | 9 | | 15 | 70-130 |
| 1,2-Dibromoethane | 4.8 | U | 5.8 | 121 | | 5.8 | 121 | | 0 | | 15 | 70-130 |
| Chlorobenzene | 4.8 | U | 5.2 | 108 | | 5.2 | 109 | | 1 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | U | 5.2 | 109 | | 5.6 | 116 | | 6 | | 15 | 70-130 |
| Ethylbenzene | 4.8 | U | 5.4 | 112 | | 5.4 | 113 | | 0 | | 15 | 70-130 |
| m,p-Xylene | 9.6 | U | 10.2 | 106 | | 10.3 | 107 | | 1 | | 15 | 70-130 |
| o-Xylene | 4.8 | U | 5.3 | 110 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| Styrene | 4.8 | U | 4.8 | 101 | | 5.2 | 108 | | 7 | | 15 | 70-130 |
| Bromoform | 4.8 | U | 4.2 | 88 | | 4.7 | 99 | | 11 | | 15 | 70-130 |
| Isopropylbenzene | 4.8 | U | 5.1 | 105 | | 5.1 | 105 | | 0 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | U | 5.3 | 111 | | 5.3 | 110 | | 1 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | U | 5.3 | 110 | | 5.5 | 115 | | 4 | | 15 | 70-130 |
| n-Propylbenzene | 4.8 | U | 5.4 | 113 | | 5.4 | 113 | | 0 | | 15 | 70-130 |
| Bromobenzene | 4.8 | U | 5.4 | 113 | | 5.3 | 110 | | 3 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | U | 5.3 | 110 | | 5.4 | 113 | | 2 | | 15 | 70-130 |
| 2-Chlorotoluene | 4.8 | U | 5.4 | 113 | | 5.5 | 115 | | 2 | | 15 | 70-130 |
| 4-Chlorotoluene | 4.8 | U | 5.4 | 112 | | 5.3 | 110 | | 2 | | 15 | 70-130 |
| tert-butylbenzene | 4.8 | U | 5.3 | 110 | | 5.3 | 111 | | 0 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | U | 5.3 | 111 | | 5.5 | 114 | | 3 | | 15 | 70-130 |
| sec-butylbenzene | 4.8 | U | 5.4 | 113 | | 5.4 | 112 | | 0 | | 15 | 70-130 |
| p-isopropyltoluene | 4.8 | U | 5.1 | 106 | | 5.2 | 109 | | 3 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | U | 5.4 | 113 | | 5.2 | 109 | | 3 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | U | 5.1 | 105 | | 5.1 | 107 | | 1 | | 15 | 70-130 |
| n-butylbenzene | 4.8 | U | 5.2 | 108 | | 5.2 | 108 | | 0 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | U | 4.9 | 101 | | 5.0 | 105 | | 3 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | U | 5.3 | 110 | | 5.3 | 109 | | 1 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | U | 5.1 | 105 | | 5.2 | 108 | | 2 | | 15 | 70-130 |
| Hexachlorobutadiene | 4.8 | U | 6.1 | 126 | | 6.1 | 127 | | 1 | | 15 | 70-130 |
| Naphthalene | 4.8 | U | 4.4 | 91 | | 4.8 | 100 | | 9 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 4.8 | U | 4.9 | 103 | | 5.4 | 113 | | 9 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 0 out of 72 outside limits
Spike Recovery: 1 out of 144 outside limits

Comments: _____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.2 | 99 | | 70-130 |
| Chloromethane | 1.2 | 1.4 | 117 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.2 | 103 | | 70-130 |
| Bromomethane | 1.2 | 1.5 | 123 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 101 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.2 | 104 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 99 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 106 | | 70-130 |
| Acetone | 1.2 | 2.3 | 188 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 109 | | 70-130 |
| Methylene Chloride | 1.2 | 1.1 | 95 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.5 | 103 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.3 | 112 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 106 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.2 | 103 | | 70-130 |
| Chloroform | 1.2 | 1.3 | 112 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.7 | 138 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.3 | 111 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 111 | | 70-130 |
| Benzene | 1.2 | 1.4 | 113 | | 70-130 |
| Trichloroethene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 109 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromomethane | 1.2 | 1.2 | 96 | | 70-130 |
| 2-Hexanone | 1.2 | 1.1 | 89 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 98 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 108 | | 70-130 |
| Toluene | 1.2 | 1.2 | 103 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.2 | 101 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 96 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.1 | 94 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 114 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 112 | | 70-130 |
| o-Xylene | 1.2 | 1.4 | 113 | | 70-130 |
| Styrene | 1.2 | 1.3 | 108 | | 70-130 |
| Bromoform | 1.2 | 1.2 | 102 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 105 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 110 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 109 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.5 | 128 | | 70-130 |
| Naphthalene | 1.2 | 1.1 | 88 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.1 | 94 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 70 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 4.8 | 4.9 | 103 | | 70-130 |
| Chloromethane | 4.8 | 5.4 | 113 | | 70-130 |
| Vinyl Chloride | 4.8 | 4.8 | 100 | | 70-130 |
| Bromomethane | 4.8 | 5.2 | 109 | | 70-130 |
| Chloroethane | 4.8 | 5.3 | 111 | | 70-130 |
| t-Butyl alcohol (TBA) | 24.0 | 20.4 | 85 | | 70-130 |
| Trichlorofluoromethane | 4.8 | 4.9 | 102 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 4.8 | 5.0 | 104 | | 70-130 |
| Acetone | 4.8 | 6.0 | 125 | | 70-130 |
| 1,1-Dichloroethene | 4.8 | 4.9 | 102 | | 70-130 |
| Di-isopropyl ether (DIPE) | 4.8 | 5.0 | 104 | | 70-130 |
| Methylene Chloride | 4.8 | 5.7 | 118 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 4.8 | 5.2 | 109 | | 70-130 |
| trans-1,2-Dichloroethene | 9.6 | 9.2 | 96 | | 70-130 |
| 1,1-Dichloroethane | 4.8 | 4.9 | 101 | | 70-130 |
| Methyl ethyl ketone | 4.8 | 5.0 | 104 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 4.8 | 4.3 | 90 | | 70-130 |
| 2,2-Dichloropropane | 4.8 | 4.8 | 99 | | 70-130 |
| cis-1,2-Dichloroethene | 4.8 | 5.6 | 118 | | 70-130 |
| t-Amyl methyl ether (TAME) | 4.8 | 5.1 | 106 | | 70-130 |
| Chloroform | 4.8 | 4.8 | 99 | | 70-130 |
| Bromochloromethane | 4.8 | 4.9 | 101 | | 70-130 |
| Tetrahydrofuran | 4.8 | 4.9 | 102 | | 70-130 |
| 1,1,1-Trichloroethane | 4.8 | 5.1 | 105 | | 70-130 |
| 1,1-Dichloropropene | 4.8 | 5.1 | 105 | | 70-130 |
| Carbon Tetrachloride | 4.8 | 5.1 | 105 | | 70-130 |
| 1,2-Dichloroethane | 4.8 | 5.0 | 103 | | 70-130 |
| Benzene | 4.8 | 5.0 | 103 | | 70-130 |
| Trichloroethene | 4.8 | 4.9 | 102 | | 70-130 |
| 1,2-Dichloropropane | 4.8 | 5.2 | 108 | | 70-130 |
| Bromodichloromethane | 4.8 | 5.2 | 108 | | 70-130 |
| Dibromomethane | 4.8 | 4.9 | 101 | | 70-130 |
| 2-Hexanone | 4.8 | 4.5 | 94 | | 70-130 |
| Methyl isobutyl ketone | 4.8 | 4.5 | 93 | | 70-130 |
| cis-1,3-Dichloropropene | 4.8 | 4.7 | 98 | | 70-130 |
| Toluene | 4.8 | 5.3 | 111 | | 70-130 |
| trans-1,3-Dichloropropene | 4.8 | 4.7 | 98 | | 70-130 |
| 1,1,2-Trichloroethane | 4.8 | 4.9 | 103 | | 70-130 |
| 1,3-Dichloropropane | 4.8 | 5.0 | 103 | | 70-130 |
| Tetrachloroethene | 4.8 | 4.9 | 101 | | 70-130 |
| Dibromochloromethane | 4.8 | 5.1 | 106 | | 70-130 |
| 1,2-Dibromoethane | 4.8 | 4.5 | 94 | | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I2

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 4.8 | 4.7 | 99 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 4.8 | 4.9 | 101 | | 70-130 |
| Ethylbenzene | 4.8 | 5.2 | 109 | | 70-130 |
| m,p-Xylene | 4.8 | 4.9 | 101 | | 70-130 |
| o-Xylene | 9.6 | 9.7 | 101 | | 70-130 |
| Styrene | 4.8 | 5.0 | 104 | | 70-130 |
| Bromoform | 4.8 | 5.0 | 103 | | 70-130 |
| Isopropylbenzene | 4.8 | 4.7 | 99 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 4.8 | 4.7 | 98 | | 70-130 |
| 1,2,3-Trichloropropane | 4.8 | 4.8 | 99 | | 70-130 |
| n-Propylbenzene | 4.8 | 4.9 | 102 | | 70-130 |
| Bromobenzene | 4.8 | 5.0 | 103 | | 70-130 |
| 1,3,5-Trimethylbenzene | 4.8 | 4.8 | 100 | | 70-130 |
| 2-Chlorotoluene | 4.8 | 4.8 | 101 | | 70-130 |
| 4-Chlorotoluene | 4.8 | 4.9 | 101 | | 70-130 |
| tert-butylbenzene | 4.8 | 4.9 | 101 | | 70-130 |
| 1,2,4-Trimethylbenzene | 4.8 | 4.8 | 99 | | 70-130 |
| sec-butylbenzene | 4.8 | 5.0 | 104 | | 70-130 |
| p-isopropyltoluene | 4.8 | 5.0 | 105 | | 70-130 |
| 1,3-Dichlorobenzene | 4.8 | 4.9 | 101 | | 70-130 |
| 1,4-Dichlorobenzene | 4.8 | 4.7 | 99 | | 70-130 |
| n-butylbenzene | 4.8 | 4.9 | 102 | | 70-130 |
| 1,2-Dichlorobenzene | 4.8 | 5.1 | 106 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 4.8 | 4.8 | 99 | | 70-130 |
| 1,2,4-Trichlorobenzene | 4.8 | 4.5 | 95 | | 70-130 |
| Hexachlorobutadiene | 4.8 | 4.9 | 101 | | 70-130 |
| Naphthalene | 4.8 | 5.2 | 107 | | 70-130 |
| 1,2,3-Trichlorobenzene | 4.8 | 4.0 | 82 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 70 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | 1.2 | 1.2 | 99 | | 70-130 |
| Chloromethane | 1.2 | 1.4 | 117 | | 70-130 |
| Vinyl Chloride | 1.2 | 1.2 | 103 | | 70-130 |
| Bromomethane | 1.2 | 1.5 | 123 | | 70-130 |
| Chloroethane | 1.2 | 1.2 | 101 | | 70-130 |
| t-Butyl alcohol (TBA) | 6.0 | 6.2 | 104 | | 70-130 |
| Trichlorofluoromethane | 1.2 | 1.2 | 99 | | 70-130 |
| 1,1,2-Trichlorotrifluoroethane | 1.2 | 1.3 | 106 | | 70-130 |
| Acetone | 1.2 | 2.3 | 188 | * | 70-130 |
| 1,1-Dichloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| Di-isopropyl ether (DIPE) | 1.2 | 1.3 | 109 | | 70-130 |
| Methylene Chloride | 1.2 | 1.1 | 95 | | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 2.4 | 2.5 | 103 | | 70-130 |
| trans-1,2-Dichloroethene | 1.2 | 1.3 | 112 | | 70-130 |
| 1,1-Dichloroethane | 1.2 | 1.3 | 109 | | 70-130 |
| Methyl ethyl ketone | 1.2 | 1.3 | 112 | | 70-130 |
| Ethyl t-butyl ether (ETBE) | 1.2 | 1.3 | 106 | | 70-130 |
| 2,2-Dichloropropane | 1.2 | 1.4 | 113 | | 70-130 |
| cis-1,2-Dichloroethene | 1.2 | 1.3 | 108 | | 70-130 |
| t-Amyl methyl ether (TAME) | 1.2 | 1.2 | 103 | | 70-130 |
| Chloroform | 1.2 | 1.3 | 112 | | 70-130 |
| Bromochloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Tetrahydrofuran | 1.2 | 1.7 | 138 | * | 70-130 |
| 1,1,1-Trichloroethane | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1-Dichloropropene | 1.2 | 1.3 | 111 | | 70-130 |
| Carbon Tetrachloride | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2-Dichloroethane | 1.2 | 1.3 | 111 | | 70-130 |
| Benzene | 1.2 | 1.4 | 113 | | 70-130 |
| Trichloroethene | 1.2 | 1.3 | 110 | | 70-130 |
| 1,2-Dichloropropane | 1.2 | 1.3 | 109 | | 70-130 |
| Bromodichloromethane | 1.2 | 1.3 | 108 | | 70-130 |
| Dibromomethane | 1.2 | 1.2 | 96 | | 70-130 |
| 2-Hexanone | 1.2 | 1.1 | 89 | | 70-130 |
| Methyl isobutyl ketone | 1.2 | 1.2 | 98 | | 70-130 |
| cis-1,3-Dichloropropene | 1.2 | 1.3 | 108 | | 70-130 |
| Toluene | 1.2 | 1.2 | 103 | | 70-130 |
| trans-1,3-Dichloropropene | 1.2 | 1.2 | 98 | | 70-130 |
| 1,1,2-Trichloroethane | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3-Dichloropropane | 1.2 | 1.2 | 101 | | 70-130 |
| Tetrachloroethene | 1.2 | 1.4 | 113 | | 70-130 |
| Dibromochloromethane | 1.2 | 1.2 | 96 | | 70-130 |
| 1,2-Dibromoethane | 1.2 | 1.1 | 94 | | 70-130 |

VOA FORM 3

49975VOAFORM3.xls

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25 (mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

Laboratory Control Spike Sample ID: L507093I3

| COMPOUND | SPIKE ADDED (ug/L) | LCS CONC. (ug/L) | LCS REC % | # | QC LIMITS % REC. |
|---|---|---|---|---|---|
| Chlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,1,1,2-Tetrachloroethane | 1.2 | 1.4 | 114 | | 70-130 |
| Ethylbenzene | 1.2 | 1.3 | 110 | | 70-130 |
| m,p-Xylene | 2.4 | 2.7 | 112 | | 70-130 |
| o-Xylene | 1.2 | 1.4 | 113 | | 70-130 |
| Styrene | 1.2 | 1.3 | 108 | | 70-130 |
| Bromoform | 1.2 | 1.2 | 102 | | 70-130 |
| Isopropylbenzene | 1.2 | 1.3 | 104 | | 70-130 |
| 1,1,2,2-Tetrachloroethane | 1.2 | 1.3 | 106 | | 70-130 |
| 1,2,3-Trichloropropane | 1.2 | 1.3 | 105 | | 70-130 |
| n-Propylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| Bromobenzene | 1.2 | 1.3 | 105 | | 70-130 |
| 1,3,5-Trimethylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 2-Chlorotoluene | 1.2 | 1.3 | 110 | | 70-130 |
| 4-Chlorotoluene | 1.2 | 1.3 | 109 | | 70-130 |
| tert-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| 1,2,4-Trimethylbenzene | 1.2 | 1.3 | 112 | | 70-130 |
| sec-butylbenzene | 1.2 | 1.3 | 109 | | 70-130 |
| p-isopropyltoluene | 1.2 | 1.3 | 106 | | 70-130 |
| 1,3-Dichlorobenzene | 1.2 | 1.3 | 107 | | 70-130 |
| 1,4-Dichlorobenzene | 1.2 | 1.3 | 108 | | 70-130 |
| n-butylbenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2-Dichlorobenzene | 1.2 | 1.3 | 111 | | 70-130 |
| 1,2-Dibromo-3-chloropropane | 1.2 | 1.2 | 98 | | 70-130 |
| 1,2,4-Trichlorobenzene | 1.2 | 1.2 | 101 | | 70-130 |
| Hexachlorobutadiene | 1.2 | 1.5 | 128 | | 70-130 |
| Naphthalene | 1.2 | 1.1 | 88 | | 70-130 |
| 1,2,3-Trichlorobenzene | 1.2 | 1.1 | 94 | | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 2 out of 70 outside limits

Comments: _____

_____

**GC/MS Volatiles Instrument: I**

IS only V4519 Exp:
Sen 6.18.03 SS+IS ~~V4502~~ Exp: ~~6~~ 7.2.03
**Voltage** 1706
**Threshold** 100

Sen 061803-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-I-061803-1-JR | | | | | | | |
| 1 | V506183 | Blank | 25mL | | | I1755 | Sen | |
| 2 | | BFB 25ng/mL V4487 | | | | 56 | T | |
| 3 | | 0.1PPB 0.125mL V4504 V4512 | | | | 57 | SI | |
| 4 | | 0.5PPB 0.625mL | | | | 58 | SI | |
| 5 | | 1.2PPB 1.5mL | | | | 59 | SI | |
| 6 | | 4.8PPB 6mL | | | | 60 | SI | |
| 7 | | 8PPB 10mL | | | | 61 | SI | |
| 8 | | 16PPB 20mL | | | | 62 | SI | |
| 9 | | 32PPB 40mL | | | | 63 | SI | |
| 10 | | Blank | | | | 64 | | |
| 11 | | BFB 25ng/mL V4487 V4506 | 25mL | | √ | 65 | T | |
| 12 | | LS06183I V4517 | | | √ CM↑, BM↑ | 66 | Q | |
| 13 | | LS06183I2 ↓ | | | √ CM, BM OK | 67 | Q | |
| 14 | | BS06183I | | | √ | 68 | MB | |
| 15 | | 49863-24 | | | √ | 69 | | |
| 16 | | 49836-26 | | | √ | 70 | | |
| 17 | | -31 | | | √ | 71 | | |
| 18 | | -31 MS | | | TBA RPD↑ | 72 | SP | |
| 19 | | -31 MSD | | | All else OK | 73 | SP | |
| 20 | | -33 | | | √ | 74 | | |
| 21 | | -34 | | | √ | 75 | | |
| 22 | | -35 | | | √ | 76 | | |
| 23 | | -36 | | | √ | 77 | | |
| 24 | | -37 | | | √ | 78 | | |
| 25 | | -38 | | | √ | 79 | | |
| 26 | | -39 | | | √ | 80 | | |
| 27 | | -40 | | | √ | 81 | | |
| 28 | | -41 | | | √ | 82 | | |
| 29 | | -42 | | | √ | 83 | | |
| 30 | | 49863-18 | | | √ | 84 | | |
| ~~31~~ | | | | | Sen 6.18.03 | 85 | | |

(Cont.)

Revision: 04/30/02

**GC/MS Volatiles Instrument: I**

IS only Exp:

SS+IS V4519 Exp: 7-2-03

**Voltage** 1706

**Threshold** 100

Sun 061803-I (CONT-)

| Tube | Method | Sample 6.18.03 | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V5061803I | 49863+820 | 25mL | | √ | I11785 | Sun | |
| 32 | | 49862-1 | | | √ | 86 | | |
| 33 | | -2 | | | √ | 87 | | |
| 34 | | -3 | | | √ | 88 | | |
| 35 | | -4 | | | Syringe error RL 25mL | 89 | | |

MTG 6/19/03

Revision: 04/30/02

**GC/MS Volatiles Instrument: I**

IS only Exp:

SS+IS V4519 Exp: 7-2-03

**Voltage** 1706

**Threshold** 100

070203-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-I-070203-1-JR | | | | | | | |
| 1 | V50618I | Blank | 25mL | | System Cond. | I11834 | | |
| 2 | | Blank | | | ↓ | 35 | | |
| 3 | | BFB 25ng/mL V4524 | | | √ | 36 | T | |
| 4 | | LS070203I V4527 V4532 | | | √ TBA, Acetone, 22DCP ↑ HCBD ↑ | 37 | Q | |
| 5 | | LS070203I2 ↓ | | | √ Acetone, HCBD still ↑ | 38 | Q | |
| 6 | | BS070203I | | √ | VBJB060300 3 | 39 | B | |
| 7 | | BS070203I2 | ↓ | √ | VBJB062703 | 40 | B | |
| 8 | | 49953-1 | 25mL | | √ | 41 | | <2 |
| 9 | | 49954-1 | | | √ | 42 | | <2 |
| 10 | | 49952-1 | | | √ | 43 | | <2 |
| 11 | | -1, MS | | | √ Acetone ↑ in both | 44 | SP | <2 |
| 12 | | -1, MSD | | | √ THF, HCBD ↑ in MSD only | 45 | SP | <2 |
| 13 | | Blank | | | | 46 | | |
| ~~14~~ | | ~~49956-1~~ | | | | ~~47~~ | | |
| 15 | | -2 | | | | 48 | | |
| 16 | | -3 | | | | 49 | | |
| 17 | | -4 | | | | 50 | | |
| 18 | | -5 | | | | 51 | | |
| ~~19~~ | | ~~-6~~ | | | | ~~52~~ | | |
| 11 | V50618I | 49975-1 | 25mL | | √ | 47 53 | | <2 |
| 12 | | 49975-2 | | | √ *Instrument error, not sample. 7-8-03 | 48 | | <2 |
| 13 | | -2, MS | | √ | Acetone, PLE ↑ in MSD only All else OK | 49 | SP | <2 |
| 14 | | -2, MSD | | √ | *Pea-sized air bubble observed after spike added. | 50 | SP | <2 |
| 15 | | Blank | | | | 51 | | |
| 16 | | 49956-1 | | | √ | 52 | | <2 |
| 17 | | -2 | | | √ | 53 | | <2 |
| 18 | | -3 | | | √ | 54 | | <2 |
| 19 | | -4 | | | √ | 55 | | <2 |
| 20 | | -5 | | | √ | 56 | | <2 |
| 21 | | -6 | | | √ | 57 | | <2 |

Revision: 04/30/02

**GC/MS Volatiles Instrument: I**

IS only Exp:

SS+IS V4538 Exp: 7·22·03

**Voltage** 1706

**Threshold** 100

Gen 070803-I

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH | |
|---|---|---|---|---|---|---|---|---|---|
| | IV-I-070803-1-JR | | | | | | | | |
| 1 | | Blank | 25mL | | Manual tune adj. | I11858 | Gen | | |
| 2 | | | | | | 59 | | | |
| 3 | | | | | | 60 | | | |
| 1 | V507083I | BFB 25ng/mL V4524 | | ✓ | | 61 | T | | 210 |
| 2 | | Blank | | | | 62 | | | |
| 3 | | 0.1PPB 0.125mL V4531 V4536 | | ✓ | | 63 | S1 | | |
| 4 | | 0.5PPB 0.625mL | | ✓ | | 64 | S1 | | |
| 5 | | 1.2PPB 1.5mL | | ✓ | | 65 | S1 | | |
| 6 | | 4.8PPB 6mL | | ✓ | | 66 | S1 | | |
| 7 | | 8PPB 10mL | | ✓ | | 67 | S1 | | |
| 8 | | 16PPB 20mL | | ✓ | | 68 | S1 | | |
| 9 | | 32PPB 40mL | | | NOT USED - Too much saturation. | 69 | S1 | | |
| 10 | | Blank | | | | 70 | | | |
| 42 | 5mL 7.9.03 | BFB 25ng/mL V4524 | 25mL | ✓ | | 71 | T | | 857 |
| 3 | | L507093I V4537 V4532 | | ✓ | 1.2PPB CH2Cl2, MeOH, Acetone ? | 72 | Q | | |
| 4 | | L507093I 2 | 25mL | ✓ | 4.8PPB All OK | 73 | Q | | |
| 5 | 5mL 7.9.03 | ~~Blank~~ L507093I 3 | | ✓ | 1.2PPB. Acetone THF ? | 74 | Q | | |
| 6 | | V507093I | | ✓ | | 75 | B | | |
| 7 | | 49975-1 | 25mL | ✓ | | 76 | | | <2 |
| 8 | | -2 | | ✓ | | 77 | | | <2 |
| 9 | | 49986-4 | | ✓ | | 78 | | | <2 |
| 10 | | 49990-3 | | ✓ | | 79 | | | <2 |
| 11 | | 49986-1 | | ✓ | | 80 | | | <2 |
| 12 | | -2 | | ✓ | | 81 | | | <2 |
| 13 | | 49986-3 | 25mL | ✓ | | 82 | | | <2 |
| 14 | | 49990-1 | | ✓ | | 83 | | | <2 |
| 15 | | -2 | | ✓ | | 84 | | | <2 |
| 16 | | 49986-2 MS | | ✓ | 8PPB THF @16% | 85 | | | <2 |
| 17 | | -2 MSD | | ✓ | | 86 | | | <2 |
| | | | | | | | | | |

Revision: 04/30/02

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11756T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 6/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0952

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 24.2 |
| 75 | 30.0 - 60.0% of mass 95 | 58.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.0 |
| 173 | Less than 2.0% of mass 174 | 0.3 ( 0.3 )1 |
| 174 | Greater than 50% of mass 95 | 90.8 |
| 175 | 5.0 - 9.0% of mass 174 | 5.4 ( 5.9 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 88.7 ( 97.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.1 ( 5.7 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 0.1PPB STD | I11757SI.D | 06/18/03 | 10:40 |
| 02 | 0.5PPB STD | 0.5PPB STD | I11758SI.D | 06/18/03 | 11:15 |
| 03 | 1.2PPB STD | 1.2PPB STD | I11759SI.D | 06/18/03 | 11:50 |
| 04 | 4.8PPB STD | 4.8PPB STD | I11760SI.D | 06/18/03 | 12:25 |
| 05 | 8PPB STD | 8PPB STD | I11761SI.D | 06/18/03 | 13:00 |
| 06 | 16PPB STD | 16PPB STD | I11762SI.D | 06/18/03 | 13:34 |
| 07 | 32PPB STD | 32PPB STD | I11763SI.D | 06/18/03 | 14:09 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 25.6 |
| 75 | 30.0 - 60.0% of mass 95 | 58.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 5.1 |
| 173 | Less than 2.0% of mass 174 | 1.0 ( 1.2 )1 |
| 174 | Greater than 50% of mass 95 | 85.1 |
| 175 | 5.0 - 9.0% of mass 174 | 6.7 ( 7.8 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 83.8 ( 98.5 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.3 ( 5.1 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L507023I | L507023I | I11837Q.D | 07/02/03 | 9:49 |
| 02 | L507023I2 | L507023I2 | I11838Q.D | 07/02/03 | 10:36 |
| 03 | B507023I | B507023I | I11839B.D | 07/02/03 | 11:11 |
| 04 | B507023I2 | B507023I2 | I11840B.D | 07/02/03 | 11:46 |
| 05 | ZZZZZ | ZZZZZ | I11841.D | 07/02/03 | 12:21 |
| 06 | ZZZZZ | ZZZZZ | I11842.D | 07/02/03 | 12:56 |
| 07 | ZZZZZ | ZZZZZ | I11843.D | 07/02/03 | 13:31 |
| 08 | ZZZZZ | ZZZZZ | I11844SP.D | 07/02/03 | 14:06 |
| 09 | ZZZZZ | ZZZZZ | I11845SP.D | 07/02/03 | 14:41 |
| 10 | ZZZZZ | ZZZZZ | I11846.D | 07/02/03 | 15:16 |
| 11 | ZZZZZ | ZZZZZ | I11847.D | 07/02/03 | 15:51 |
| 12 | ZZZZZ | ZZZZZ | I11848.D | 07/02/03 | 16:27 |
| 13 | 49975-2,MS | 49975-2,MS | I11849SP.D | 07/02/03 | 17:02 |
| 14 | 49975-2,MSD | 49975-2,MSD | I11850SP.D | 07/02/03 | 17:37 |
| 15 | ZZZZZ | ZZZZZ | I11851.D | 07/02/03 | 18:12 |
| 16 | ZZZZZ | ZZZZZ | I11852.D | 07/02/03 | 18:47 |
| 17 | ZZZZZ | ZZZZZ | I11853.D | 07/02/03 | 19:22 |
| 18 | ZZZZZ | ZZZZZ | I11854.D | 07/02/03 | 19:56 |
| 19 | ZZZZZ | ZZZZZ | I11855.D | 07/02/03 | 20:31 |
| 20 | ZZZZZ | ZZZZZ | I11856.D | 07/02/03 | 21:06 |
| 21 | ZZZZZ | ZZZZZ | I11857.D | 07/02/03 | 21:41 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11861T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/8/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1410

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.5 |
| 75 | 30.0 - 60.0% of mass 95 | 52.8 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 93.0 |
| 175 | 5.0 - 9.0% of mass 174 | 6.6 ( 7.1 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 90.9 ( 97.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 6.1 ( 6.7 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 0.1PPB STD | 0.1PPB STD | I11863SI.D | 07/08/03 | 15:20 |
| 02 | 0.5PPB STD | 0.5PPB STD | I11864SI.D | 07/08/03 | 15:56 |
| 03 | 1.2PPB STD | 1.2PPB STD | I11865SI.D | 07/08/03 | 16:31 |
| 04 | 4.8PPB STD | 4.8PPB STD | I11866SI.D | 07/08/03 | 17:07 |
| 05 | 8PPB STD | 8PPB STD | I11867SI.D | 07/08/03 | 17:42 |
| 06 | 16PPB STD | 16PPB STD | I11868SI.D | 07/08/03 | 18:17 |
| 07 | 32PPB STD | 32PPB STD | I11869SI.D | 07/08/03 | 18:52 |
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analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.5 |
| 75 | 30.0 - 60.0% of mass 95 | 51.2 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.3 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 84.8 |
| 175 | 5.0 - 9.0% of mass 174 | 6.4 ( 7.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 81.0 ( 95.5 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.6 ( 7.0 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | L507093I | L507093I | I11872Q.D | 07/09/03 | 9:32 |
| 02 | L507093I2,,4.8PPB | L507093I2,,4.8PPB | I11873Q.D | 07/09/03 | 10:25 |
| 03 | L507093I3,,1.2PPB | L507093I3,,1.2PPB | I11874Q.D | 07/09/03 | 11:00 |
| 04 | B507093I | B507093I | I11875B.D | 07/09/03 | 12:20 |
| 05 | 49975-1 | 49975-1 | I11876.D | 07/09/03 | 12:56 |
| 06 | 49975-2 | 49975-2 | I11877.D | 07/09/03 | 13:31 |
| 07 | ZZZZZ | ZZZZZ | I11878.D | 07/09/03 | 14:06 |
| 08 | ZZZZZ | ZZZZZ | I11879.D | 07/09/03 | 14:41 |
| 09 | ZZZZZ | ZZZZZ | I11880.D | 07/09/03 | 15:16 |
| 10 | ZZZZZ | ZZZZZ | I11881.D | 07/09/03 | 15:51 |
| 11 | ZZZZZ | ZZZZZ | I11882.D | 07/09/03 | 16:26 |
| 12 | ZZZZZ | ZZZZZ | I11883.D | 07/09/03 | 17:01 |
| 13 | ZZZZZ | ZZZZZ | I11884.D | 07/09/03 | 17:36 |
| 14 | ZZZZZ | ZZZZZ | I11885SP.D | 07/09/03 | 18:11 |
| 15 | ZZZZZ | ZZZZZ | I11886SP.D | 07/09/03 | 18:46 |
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Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

6-18-03
VMT 6/19/03

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ---------- | ISTD | ---------- | | | | | |
| 2) | TM | Dichlorodifluoromet | 1.109 | 1.045 | 1.047 | 0.950 | 0.973 | 1.092 | 1.009 | 8.9 |
| 3) | TMP | Chloromethane | | 0.711 | 0.709 | 0.559 | 0.568 | 0.652 | 0.619 | 13.4 |
| 4) | TMC | Vinyl Chloride | | 0.548 | 0.534 | 0.386 | 0.370 | 0.400 | 0.447 | 19.2 |
| 5) | TM | Bromomethane | | 0.367 | 0.376 | 0.285 | 0.294 | 0.338 | 0.323 | 13.2 |
| 6) | TM | Chloroethane | | 0.310 | 0.334 | 0.274 | 0.285 | 0.328 | 0.298 | 10.4 |
| 7) | TM | t-Butyl alcohol | | 0.008 | 0.008 | 0.006 | 0.006 | 0.007 | 0.007 | 15.9 |
| 8) | TM | Trichlorofluorometh | 0.882 | 0.883 | 0.801 | 0.756 | 0.781 | 0.904 | 0.820 | 8.3 |
| 9) | TM | Diethyl ether | | 0.153 | 0.136 | 0.119 | 0.111 | 0.136 | 0.128 | 13.2 |
| 10) | TM | 1,1,2-Trichlorotrif | 0.522 | 0.472 | 0.410 | 0.412 | 0.394 | 0.449 | 0.435 | 11.3 |
| 11) | T | Acrolein | | 0.031 | 0.025 | 0.024 | 0.024 | 0.028 | 0.026 | 12.6 |
| 12) | TM | Acetone | | 0.058 | 0.044 | 0.039 | 0.037 | 0.044 | 0.045 | 18.4 |
| 13) | TMC | 1,1-Dichloroethene | | 0.407 | 0.347 | 0.333 | 0.321 | 0.366 | 0.348 | 9.9 |
| 14) | T | Methyl iodide | 0.482 | 0.310 | 0.398 | 0.535 | 0.463 | 0.669 | 0.501 | 25.7M |
| 15) | TM | Di-isopropyl ether | 1.782 | 1.627 | 1.799 | 1.748 | 1.642 | 1.671 | 1.695 | 4.7 |
| 16) | TM | Methylene Chloride | | 1.626 | 0.931 | 0.646 | 0.573 | 0.547 | 0.865 | 52.3U |
| 17) | TM | Carbon Disulfide | | 0.977 | 1.018 | 1.004 | 0.997 | 1.035 | 0.996 | 3.1 |
| 18) | T | Acrylonitrile | 0.090 | 0.073 | 0.064 | 0.067 | 0.077 | 0.078 | 0.075 | 11.4 |
| 19) | TM | Methyl-tert-butyl e | 0.475 | 0.543 | 0.568 | 0.563 | 0.548 | 0.557 | 0.545 | 5.9 |
| 20) | TM | trans-1,2-Dichloroe | | 0.509 | 0.558 | 0.540 | 0.515 | 0.511 | 0.520 | 4.7 |
| 21) | TMP | 1,1-Dichloroethane | | 0.992 | 1.118 | 1.070 | 1.019 | 1.018 | 1.035 | 4.7 |
| 22) | T | Vinyl acetate | | 0.038 | 0.035 | 0.038 | 0.034 | 0.036 | 0.036 | 4.4 |
| 23) | TM | Methyl ethyl ketone | 0.015 | 0.016 | 0.017 | 0.016 | 0.016 | 0.015 | 0.016 | 4.6 |
| 24) | TM | Ethyl t-butyl ether | 0.852 | 0.772 | 0.869 | 0.858 | 0.806 | 0.823 | 0.829 | 4.0 |
| 25) | TM | 2,2-Dichloropropane | | 0.692 | 0.692 | 0.693 | 0.660 | 0.673 | 0.679 | 2.1 |
| 26) | TM | cis-1,2-Dichloroeth | | 0.533 | 0.568 | 0.531 | 0.507 | 0.500 | 0.521 | 5.7 |
| 27) | TM | t-Amyl methyl ether | 0.562 | 0.535 | 0.590 | 0.550 | 0.521 | 0.559 | 0.553 | 3.9 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000 | -1.0 |
| 29) | TMC | Chloroform | | 1.136 | 1.170 | 1.101 | 1.022 | 1.038 | 1.078 | 6.3 |
| 30) | TM | Bromochloromethane | 0.194 | 0.187 | 0.202 | 0.191 | 0.178 | 0.180 | 0.187 | 5.0 |
| 31) | TM | Tetrahydrofuran | | 0.020 | 0.018 | 0.016 | 0.016 | 0.016 | 0.017 | 8.9 |
| 32) | TM | 1,1,1-Trichloroetha | 1.163 | 0.896 | 0.954 | 0.951 | 0.900 | 0.936 | 0.961 | 9.6 |
| 33) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 34) | TM | 1,1-Dichloropropene | | 0.826 | 0.916 | 0.876 | 0.825 | 0.833 | 0.845 | 5.1 |
| 35) | TM | Carbon Tetrachlorid | | 0.795 | 0.885 | 0.868 | 0.830 | 0.857 | 0.847 | 3.7 |
| 36) | S | 1,4-Difluorobenzene | 1.509 | 1.544 | 1.543 | 1.552 | 1.518 | 1.580 | 1.539 | 1.5 |
| 37) | TM | 1,2-Dichloroethane | 0.665 | 0.587 | 0.681 | 0.632 | 0.593 | 0.593 | 0.615 | 7.5 |
| 38) | TM | Benzene | | 2.086 | 2.252 | 2.105 | 1.984 | 1.983 | 2.040 | 6.9 |
| 39) | I | Fluorobenzene | ---------- | ISTD | ---------- | | | | | |
| 40) | TM | Trichloroethene | | 0.312 | 0.332 | 0.313 | 0.297 | 0.303 | 0.308 | 4.6 |
| 41) | TMC | 1,2-Dichloropropane | 0.275 | 0.248 | 0.278 | 0.256 | 0.241 | 0.252 | 0.256 | 5.7 |
| 42) | T | Methylmethacrylate | 0.075 | 0.070 | 0.080 | 0.078 | 0.075 | 0.080 | 0.077 | 5.1 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 45) | TM | Bromodichloromethan | 0.385 | 0.324 | 0.353 | 0.342 | 0.335 | 0.345 | 0.346 | 5.6 |
| 46) | TM | Dibromomethane | 0.133 | 0.119 | 0.120 | 0.111 | 0.109 | 0.112 | 0.116 | 7.3 |
| 47) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 50) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 51) | TM | 2-Hexanone | | 0.028 | 0.034 | 0.031 | 0.031 | 0.033 | 0.032 | 6.4 |
| 52) | TM | Methyl isobutyl ket | | 0.035 | 0.037 | 0.037 | 0.036 | 0.038 | 0.037 | 3.5 |
| 53) | TM | cis-1,3-Dichloropro | 0.317 | 0.294 | 0.339 | 0.337 | 0.325 | 0.349 | 0.328 | 5.5 |
| 54) | S | Bromofluorobenzene | 0.285 | 0.313 | 0.297 | 0.293 | 0.303 | 0.326 | 0.305 | 4.6 |
| 55) | TMC | Toluene | | 0.656 | 0.674 | 0.632 | 0.601 | 0.609 | 0.626 | 5.6 |
| 56) | TM | trans-1,3-Dichlorop | 0.192 | 0.203 | 0.235 | 0.237 | 0.231 | 0.246 | 0.227 | 9.2 |
| 57) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | 0.126 | 0.114 | 0.132 | 0.113 | 0.108 | 0.110 | 0.115 | 8.8 |
| 59) | TM | 1,3-Dichloropropane | 0.242 | 0.243 | 0.249 | 0.246 | 0.233 | 0.242 | 0.241 | 2.6 |
| 60) | TM | Tetrachloroethene | | 0.306 | 0.310 | 0.289 | 0.280 | 0.287 | 0.291 | 4.8 |
| 61) | TM | Dibromochloromethan | 0.156 | 0.168 | 0.199 | 0.182 | 0.176 | 0.193 | 0.180 | 8.2 |
| 62) | TM | 1,2-Dibromoethane | 0.100 | 0.121 | 0.125 | 0.120 | 0.117 | 0.127 | 0.119 | 7.4 |
| 63) | I | d5-Chlorobenzene | ISTD | | | | | | | |
| 64) | TMP | Chlorobenzene | | 0.982 | 1.054 | 1.011 | 0.953 | 0.945 | 0.972 | 5.9 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.417 | 0.331 | 0.376 | 0.354 | 0.337 | 0.337 | 0.352 | 9.7 |
| 66) | TMC | Ethylbenzene | | 1.974 | 2.150 | 2.003 | 1.937 | 1.865 | 1.935 | 8.0 |
| 67) | TM | m,p-Xylene | | 0.691 | 0.734 | 0.676 | 0.646 | 0.621 | 0.654 | 9.4 |
| 68) | TM | o-Xylene | | 0.620 | 0.680 | 0.635 | 0.614 | 0.617 | 0.624 | 5.1 |
| 69) | TM | Styrene | 1.060 | 0.892 | 1.007 | 0.997 | 0.945 | 0.967 | 0.969 | 5.9 |
| 70) | TMP | Bromoform | 0.142 | 0.130 | 0.137 | 0.136 | 0.134 | 0.138 | 0.135 | 3.1 |
| 71) | TM | Isopropylbenzene | | 1.800 | 1.963 | 1.850 | 1.748 | 1.720 | 1.779 | 7.0 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.213 | 0.205 | 0.220 | 0.207 | 0.201 | 0.208 | 0.208 | 3.2 |
| 73) | S | 1,2-Dichlorobenzene | 0.351 | 0.378 | 0.363 | 0.360 | 0.380 | 0.369 | 0.368 | 2.7 |
| 74) | TM | 1,2,3-Trichloroprop | | 0.151 | 0.174 | 0.156 | 0.146 | 0.151 | 0.155 | 6.2 |
| 75) | T | trans-1,4-Dichloro- | | 0.082 | 0.082 | 0.082 | 0.081 | 0.081 | 0.081 | 2.9 |
| 76) | TM | n-Propylbenzene | | 2.279 | 2.399 | 2.299 | 2.205 | 2.162 | 2.220 | 6.5 |
| 77) | TM | Bromobenzene | | 0.365 | 0.372 | 0.364 | 0.352 | 0.348 | 0.355 | 4.0 |
| 78) | TM | 1,3,5-Trimethylbenz | | 1.443 | 1.595 | 1.544 | 1.474 | 1.421 | 1.458 | 7.6 |
| 79) | TM | 2-Chlorotoluene | | 1.547 | 1.633 | 1.538 | 1.421 | 1.426 | 1.472 | 8.7 |
| 80) | TM | 4-Chlorotoluene | | 1.320 | 1.382 | 1.343 | 1.301 | 1.266 | 1.303 | 4.6 |
| 81) | TM | tert-butylbenzene | | 1.249 | 1.298 | 1.269 | 1.205 | 1.203 | 1.224 | 5.2 |
| 82) | TM | 1,2,4-Trimethylbenz | | 1.423 | 1.575 | 1.521 | 1.452 | 1.428 | 1.451 | 6.3 |
| 83) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 84) | TM | sec-butylbenzene | | 1.807 | 1.882 | 1.802 | 1.744 | 1.714 | 1.760 | 5.2 |
| 85) | TM | p-isopropyltoluene | | 1.391 | 1.507 | 1.461 | 1.427 | 1.409 | 1.420 | 4.3 |

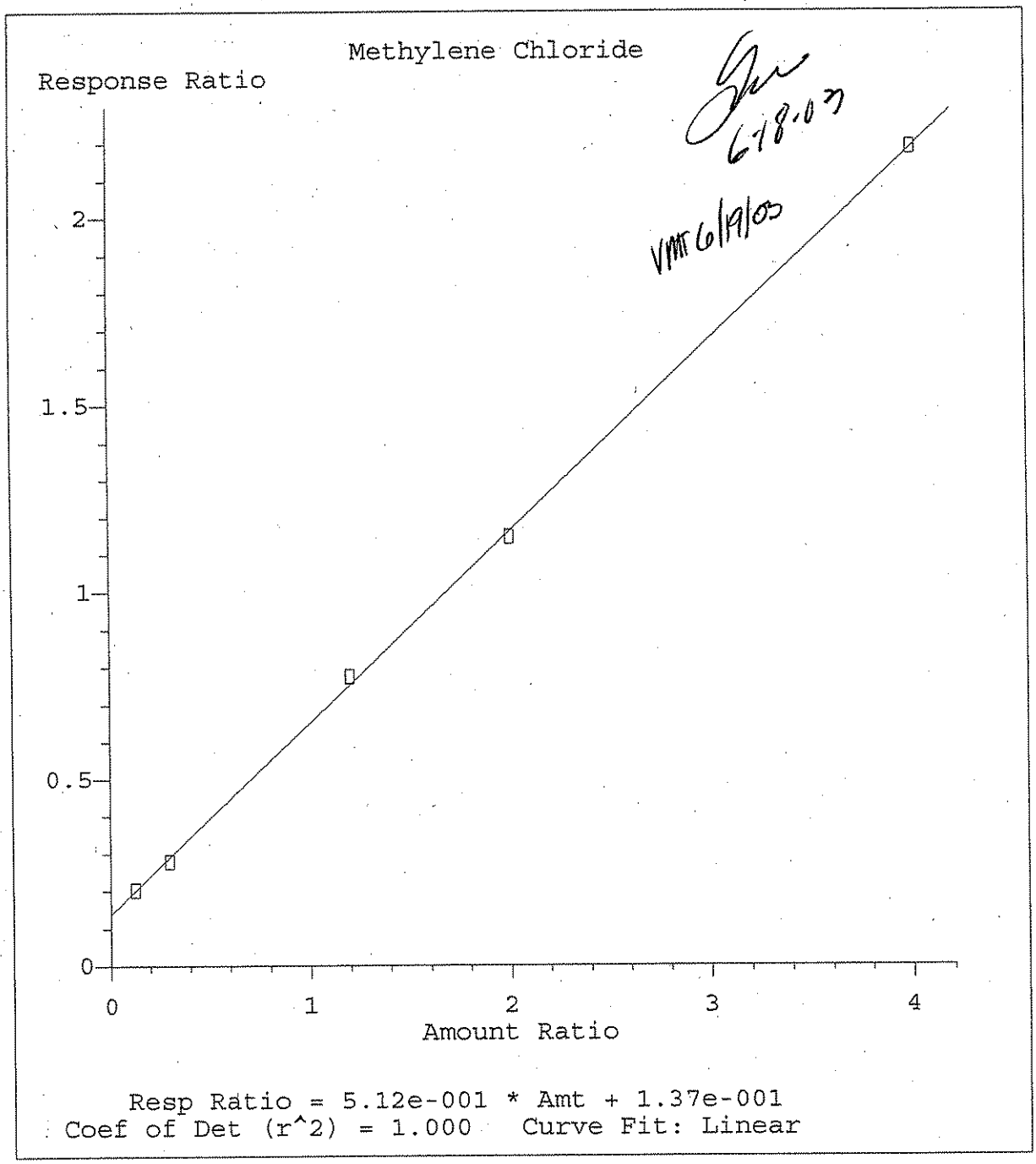
(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11757SI.D 0.5 =I11758SI.D 1.2 =I11759SI.D
4.8 =I11760SI.D 8 =I11761SI.D 16 =I11762SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | | 0.714 | 0.747 | 0.715 | 0.690 | 0.685 | 0.702 | 4.3 |
| 87) | I | 1,4-Dichlorobenzene-d | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | | |
| 88) | TM | 1,4-Dichlorobenzene | | 1.470 | 1.597 | 1.474 | 1.378 | 1.386 | 1.439 | 6.6 |
| 89) | TM | n-butylbenzene | | 3.031 | 3.195 | 3.082 | 2.978 | 2.921 | 3.001 | 4.5 |
| 90) | TM | 1,2-Dichlorobenzene | 1.463 | 1.202 | 1.282 | 1.204 | 1.157 | 1.124 | 1.221 | 9.9 |
| 91) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 92) | TM | 1,2-Dibromo-3-chlor | | 0.055 | 0.065 | 0.059 | 0.058 | 0.062 | 0.061 | 6.2 |
| 93) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 94) | TM | 1,2,4-Trichlorobenz | | 0.462 | 0.627 | 0.677 | 0.708 | 0.721 | 0.656 | 15.6 |
| 95) | TM | Hexachlorobutadiene | | 0.400 | 0.431 | 0.421 | 0.420 | 0.405 | 0.415 | 2.7 |
| 96) | TM | Naphthalene | 0.284 | 0.375 | 0.576 | 0.740 | 0.808 | 0.872 | 0.609 | 39.3 |
| 97) | TM | 1,2,3-Trichlorobenz | | 0.328 | 0.443 | 0.512 | 0.543 | 0.552 | 0.493 | 19.0 |
| 98) | TM | 1,3,5-Trichlorobenz | 1.228 | 1.028 | 1.134 | 1.097 | 1.097 | 1.061 | 1.098 | 6.1 |

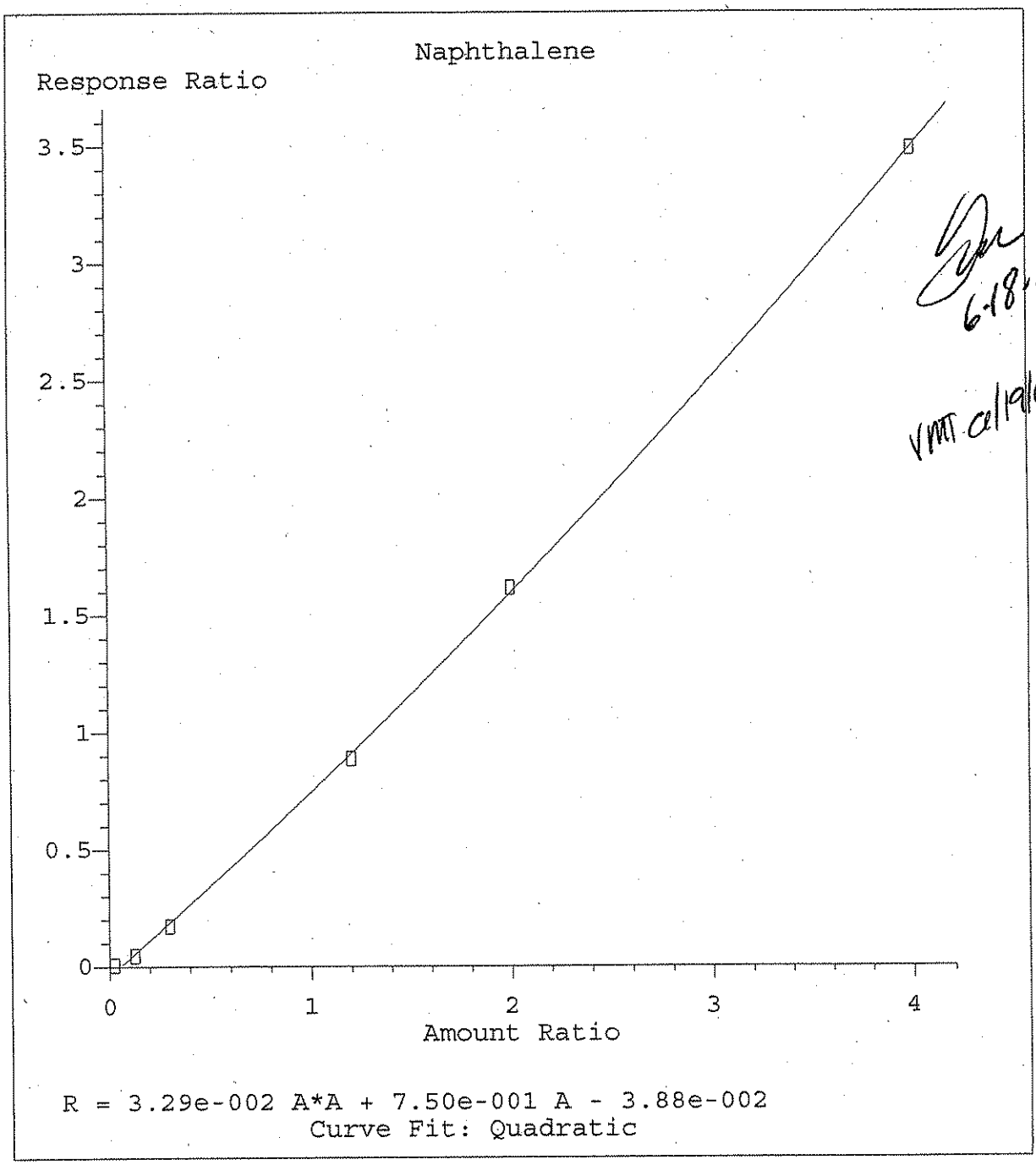
(#) = Out of Range ### Number of calibration levels exceeded format ###




6.18.03

VMT 6/19/03

Method Name: C:\HPCHEM\1\METHODS\V506183I.M
Calibration Table Last Updated: Wed Jun 18 15:04:27 2003




6-18-03

VMT 6/19/03

Method Name: C:\HPCHEM\1\METHODS\V506183I.M
Calibration Table Last Updated: Wed Jun 18 15:04:27 2003

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03 VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 576551 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1101944 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 652480 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 297945 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 870031 | 3.92 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 98.00% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 314598 | 3.79 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 94.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 229331 | 3.80 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 95.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 15980 | 0.11 | ug/L | 85 |
| 3) Chloromethane | 2.25 | 50 | 15945 | 0.17 | ug/L | 87 |
| 4) Vinyl Chloride | 2.37 | 62 | 10298 | 0.16 | ug/L | 93 |
| 5) Bromomethane | 2.92 | 94 | 7226 | 0.15 | ug/L | 100 |
| 6) Chloroethane | 3.02 | 64 | 7437 | 0.17 | ug/L | 89 |
| 7) t-Butyl alcohol | 4.49 | 59 | 426 | 0.40 | ug/L # | 76 |
| 8) Trichlorofluoromethane | 3.38 | 101 | 12712 | 0.11 | ug/L | 78 |
| 9) Diethyl ether | 3.84 | 74 | 1315 | 0.07 | ug/L # | 1 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 7526 | 0.12 | ug/L # | 85 |
| 11) Acrolein | 4.03 | 56 | 3363 | 0.90 | ug/L | 89 |
| 12) Acetone | 4.14 | 43 | 9010 | 1.40 | ug/L | 90 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 7168 | 0.14 | ug/L # | 87 |
| 14) Methyl iodide | 4.80 | 142 | 6951 | 0.11 | ug/L # | 86 |
| 15) Di-isopropyl ether | 6.19 | 45 | 25688 | 0.10 | ug/L # | 91 |
| 16) Methylene Chloride | 5.11 | 84 | 81977 | 0.03 | ug/L | 94 |
| 17) Carbon Disulfide | 5.08 | 76 | 21457 | 0.15 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 1303 | 0.13 | ug/L # | 57 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 6846 | 0.09 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 12098 | 0.16 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 20608 | 0.14 | ug/L | 96 |
| 22) Vinyl acetate | 6.35 | 86 | 337 | 0.06 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 1077 | 0.47 | ug/L # | 76 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 12278 | 0.10 | ug/L # | 56 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 12303 | 0.12 | ug/L | 82 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 9934 | 0.13 | ug/L # | 74 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 8102 | 0.10 | ug/L # | 43 |
| 29) Chloroform | 7.51 | 83 | 25404 | 0.16 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.76 | 128 | 2802 | 0.10 ug/L # | 91 |
| 31) Tetrahydrofuran | 7.87 | 71 | 310 | 0.12 ug/L | 97 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 16770 | 0.13 ug/L | 95 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 16218 | 0.13 ug/L | 88 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 14784 | 0.12 ug/L | 93 |
| 37) 1,2-Dichloroethane | 8.76 | 62 | 9580 | 0.11 ug/L | 81 |
| 38) Benzene | 8.78 | 78 | 41063 | 0.14 ug/L | 97 |
| 40) Trichloroethene | 9.72 | 95 | 11709 | 0.14 ug/L # | 79 |
| 41) 1,2-Dichloropropane | 9.99 | 63 | 7581 | 0.11 ug/L | 93 |
| 42) Methylmethacrylate | 10.12 | 69 | 2067 | 0.10 ug/L | 83 |
| 45) Bromodichloromethane | 10.35 | 83 | 10606 | 0.11 ug/L | 97 |
| 46) Dibromomethane | 10.43 | 93 | 3670 | 0.12 ug/L # | 60 |
| 51) 2-Hexanone | 12.26 | 58 | 2977 | 0.35 ug/L | 94 |
| 52) Methyl isobutyl ketone | 10.91 | 58 | 3627 | 0.36 ug/L # | 84 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 8744 | 0.10 ug/L | 83 |
| 55) Toluene | 11.68 | 92 | 23019 | 0.13 ug/L | 93 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 5287 | 0.08 ug/L | 95 |
| 58) 1,1,2-Trichloroethane | 12.21 | 83 | 3462 | 0.11 ug/L | 93 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 6663 | 0.10 ug/L | 92 |
| 60) Tetrachloroethene | 12.70 | 166 | 10147 | 0.12 ug/L | 96 |
| 61) Dibromochloromethane | 12.98 | 129 | 4291 | 0.09 ug/L # | 74 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 2765 | 0.08 ug/L | 87 |
| 64) Chlorobenzene | 13.97 | 112 | 20908 | 0.13 ug/L # | 79 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 6794 | 0.12 ug/L | 89 |
| 66) Ethylbenzene | 14.06 | 91 | 46201 | 0.14 ug/L | 98 |
| 67) m,p-Xylene | 14.18 | 106 | 30409 | 0.27 ug/L | 96 |
| 68) o-Xylene | 14.86 | 106 | 13785 | 0.13 ug/L | 94 |
| 69) Styrene | 14.92 | 104 | 17293 | 0.11 ug/L | 85 |
| 70) Bromoform | 15.43 | 173 | 2316 | 0.11 ug/L | 94 |
| 71) Isopropylbenzene | 15.45 | 105 | 38653 | 0.13 ug/L | 100 |
| 72) 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 3476 | 0.10 ug/L | 91 |
| 75) trans-1,4-Dichloro-2-buten | 16.05 | 53 | 888 | 0.07 ug/L # | 34 |
| 76) n-Propylbenzene | 16.09 | 91 | 50409 | 0.13 ug/L | 98 |
| 77) Bromobenzene | 16.14 | 156 | 7573 | 0.13 ug/L # | 70 |
| 78) 1,3,5-Trimethylbenzene | 16.35 | 105 | 30985 | 0.13 ug/L | 89 |
| 79) 2-Chlorotoluene | 16.36 | 91 | 32953 | 0.13 ug/L | 99 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 27458 | 0.13 ug/L | 95 |
| 81) tert-butylbenzene | 16.91 | 119 | 27845 | 0.14 ug/L | 96 |
| 82) 1,2,4-Trimethylbenzene | 16.97 | 105 | 29708 | 0.12 ug/L | 95 |
| 84) sec-butylbenzene | 17.26 | 105 | 39137 | 0.13 ug/L | 92 |
| 85) p-isopropyltoluene | 17.50 | 119 | 29567 | 0.13 ug/L | 87 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

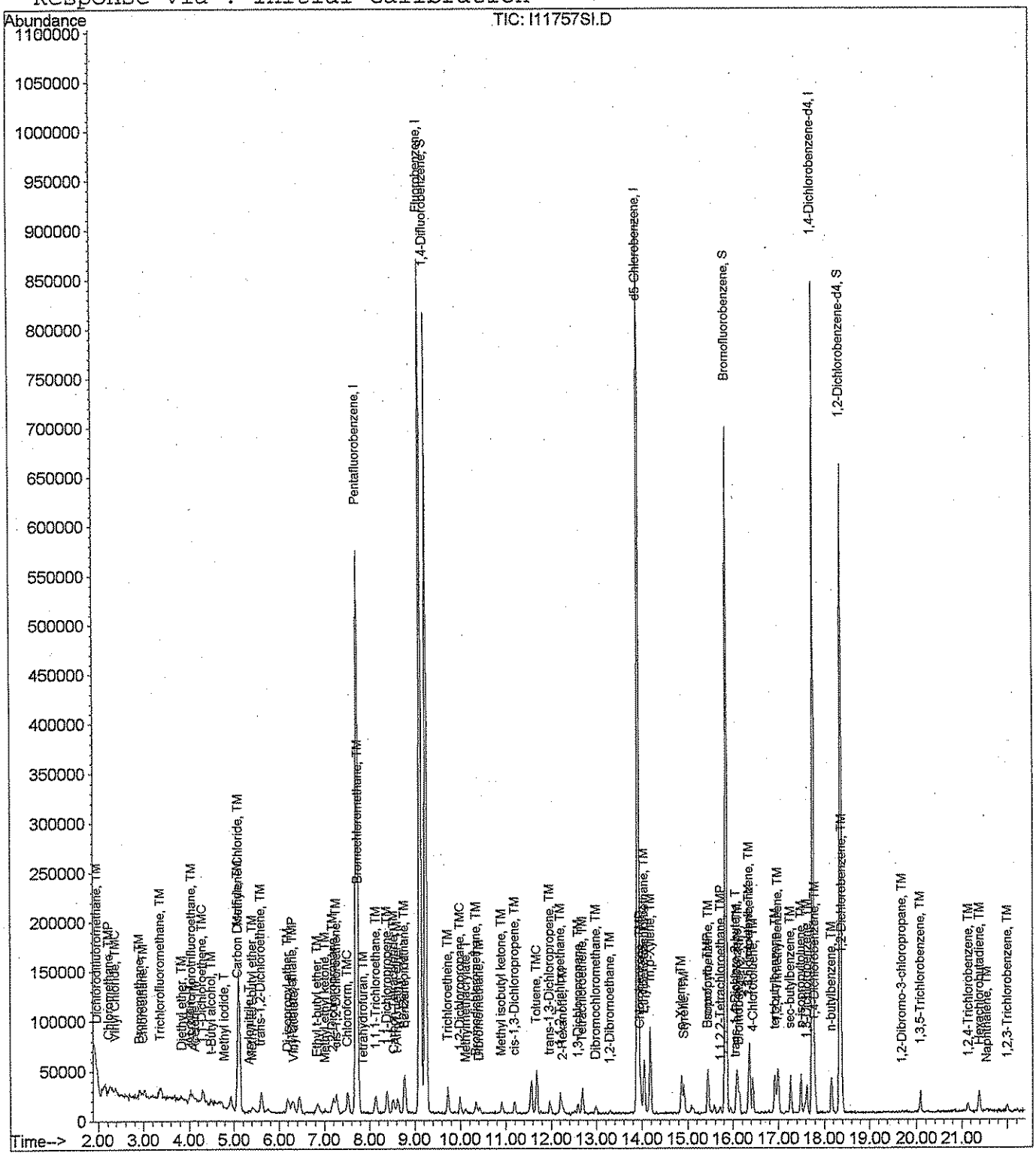
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:41:54 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 86) 1,3-Dichlorobenzene | 17.62 | 146 | 14667 | 0.13 | ug/L | | 98 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 13606 | 0.12 | ug/L | | 89 |
| 89) n-butylbenzene | 18.16 | 91 | 28842 | 0.13 | ug/L | | 91 |
| 90) 1,2-Dichlorobenzene | 18.39 | 146 | 10899 | 0.12 | ug/L | | 85 |
| 92) 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 572 | 0.13 | ug/L | # | 45 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 3119 | 0.18 | ug/L | | 94 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 5836 | 0.19 | ug/L | | 94 |
| 96) Naphthalene | 21.56 | 128 | 2118 | 0.28 | ug/L | | 87 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 2106 | 0.22 | ug/L | # | 77 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 9149 | 0.11 | ug/L | # | 71 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11757SI.D Vial: 3
Acq On : 18 Jun 2003 10:40 am Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:44 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D
Acq On : 18 Jun 2003 11:15 am
Sample : 0.5PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003

Vial: 4
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMI 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 575502 | 4.00 | ug/L | 0.03 |
| 39) Fluorobenzene | 9.12 | 96 | 1098669 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 722418 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 332913 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 888425 | 4.04 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.00% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 344208 | 3.97 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 272730 | 4.15 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 103.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 75176 | 0.60 | ug/L | 95 |
| 3) Chloromethane | 2.25 | 50 | 51147 | 0.59 | ug/L | 92 |
| 4) Vinyl Chloride | 2.38 | 62 | 39394 | 0.66 | ug/L | 89 |
| 5) Bromomethane | 2.92 | 94 | 26381 | 0.55 | ug/L | 79 |
| 6) Chloroethane | 3.01 | 64 | 22305 | 0.50 | ug/L | 93 |
| 7) t-Butyl alcohol | 4.50 | 59 | 3021m | 2.39 | ug/L | |
| 8) Trichlorofluoromethane | 3.37 | 101 | 63526 | 0.55 | ug/L | 100 |
| 9) Diethyl ether | 3.82 | 74 | 11040 | 0.63 | ug/L | 93 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 33970 | 0.57 | ug/L | 95 |
| 11) Acrolein | 4.01 | 56 | 11252 | 3.07 | ug/L | 93 |
| 12) Acetone | 4.13 | 43 | 20929 | 3.15 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 29313 | 0.60 | ug/L | 89 |
| 14) Methyl iodide | 4.79 | 142 | 22330 | 0.31 | ug/L | 98 |
| 15) Di-isopropyl ether | 6.19 | 45 | 117068 | 0.49 | ug/L | 98 |
| 16) Methylene Chloride | 5.11 | 84 | 116998 | 0.56 | ug/L | 96 |
| 17) Carbon Disulfide | 5.08 | 76 | 70267 | 0.48 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 5247 | 0.48 | ug/L | 97 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 39073 | 0.46 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 36643 | 0.49 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 71380 | 0.48 | ug/L | 94 |
| 22) Vinyl acetate | 6.35 | 86 | 2748 | 0.81 | ug/L | 91 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 5587 | 2.37 | ug/L | 89 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 55542 | 0.46 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 49796 | 0.50 | ug/L | 85 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 38325 | 0.54 | ug/L | 96 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 38478 | 0.51 | ug/L | 91 |
| 29) Chloroform | 7.51 | 83 | 81716 | 0.55 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.76 | 128 | 13443 | 0.52 ug/L # | 71 |
| 31) Tetrahydrofuran | 7.85 | 71 | 1409 | 0.60 ug/L # | 63 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 64469 | 0.52 ug/L | 92 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 59392 | 0.54 ug/L | 98 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 57166 | 0.52 ug/L | 92 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 42248 | 0.52 ug/L | 96 |
| 38) Benzene | 8.79 | 78 | 150087 | 0.54 ug/L | 99 |
| 40) Trichloroethene | 9.73 | 95 | 42851 | 0.53 ug/L | 98 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 34101 | 0.50 ug/L | 100 |
| 42) Methylmethacrylate | 10.13 | 69 | 9599 | 0.47 ug/L | 89 |
| 45) Bromodichloromethane | 10.35 | 83 | 44466 | 0.49 ug/L | 90 |
| 46) Dibromomethane | 10.42 | 93 | 16368 | 0.53 ug/L | 97 |
| 51) 2-Hexanone | 12.25 | 58 | 19383 | 2.25 ug/L | 93 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 23920 | 2.47 ug/L | 94 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 40341 | 0.46 ug/L | 87 |
| 55) Toluene | 11.68 | 92 | 90099 | 0.54 ug/L | 94 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 27853 | 0.46 ug/L | 94 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 15676 | 0.51 ug/L # | 83 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 33413 | 0.53 ug/L | 97 |
| 60) Tetrachloroethene | 12.69 | 166 | 42057 | 0.55 ug/L | 95 |
| 61) Dibromochloromethane | 12.98 | 129 | 23037 | 0.48 ug/L | 93 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 16610 | 0.51 ug/L | 84 |
| 64) Chlorobenzene | 13.97 | 112 | 88639 | 0.52 ug/L | 94 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 29914 | 0.52 ug/L | 90 |
| 66) Ethylbenzene | 14.06 | 91 | 178219 | 0.53 ug/L | 99 |
| 67) m,p-Xylene | 14.18 | 106 | 124857 | 1.10 ug/L | 96 |
| 68) o-Xylene | 14.87 | 106 | 56008 | 0.51 ug/L # | 84 |
| 69) Styrene | 14.93 | 104 | 80507 | 0.49 ug/L | 99 |
| 70) Bromoform | 15.43 | 173 | 11710 | 0.50 ug/L | 81 |
| 71) Isopropylbenzene | 15.45 | 105 | 162525 | 0.53 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.70 | 83 | 18516 | 0.51 ug/L | 96 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 13678 | 0.53 ug/L | 94 |
| 75) trans-1,4-Dichloro-2-buten | 16.06 | 53 | 7369 | 0.51 ug/L | 97 |
| 76) n-Propylbenzene | 16.09 | 91 | 205808 | 0.53 ug/L | 93 |
| 77) Bromobenzene | 16.14 | 156 | 32969 | 0.53 ug/L # | 86 |
| 78) 1,3,5-Trimethylbenzene | 16.35 | 105 | 130343 | 0.52 ug/L | 94 |
| 79) 2-Chlorotoluene | 16.36 | 91 | 139678 | 0.54 ug/L | 94 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 119201 | 0.52 ug/L | 93 |
| 81) tert-butylbenzene | 16.92 | 119 | 112776 | 0.53 ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 128500 | 0.50 ug/L | 98 |
| 84) sec-butylbenzene | 17.27 | 105 | 163195 | 0.53 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

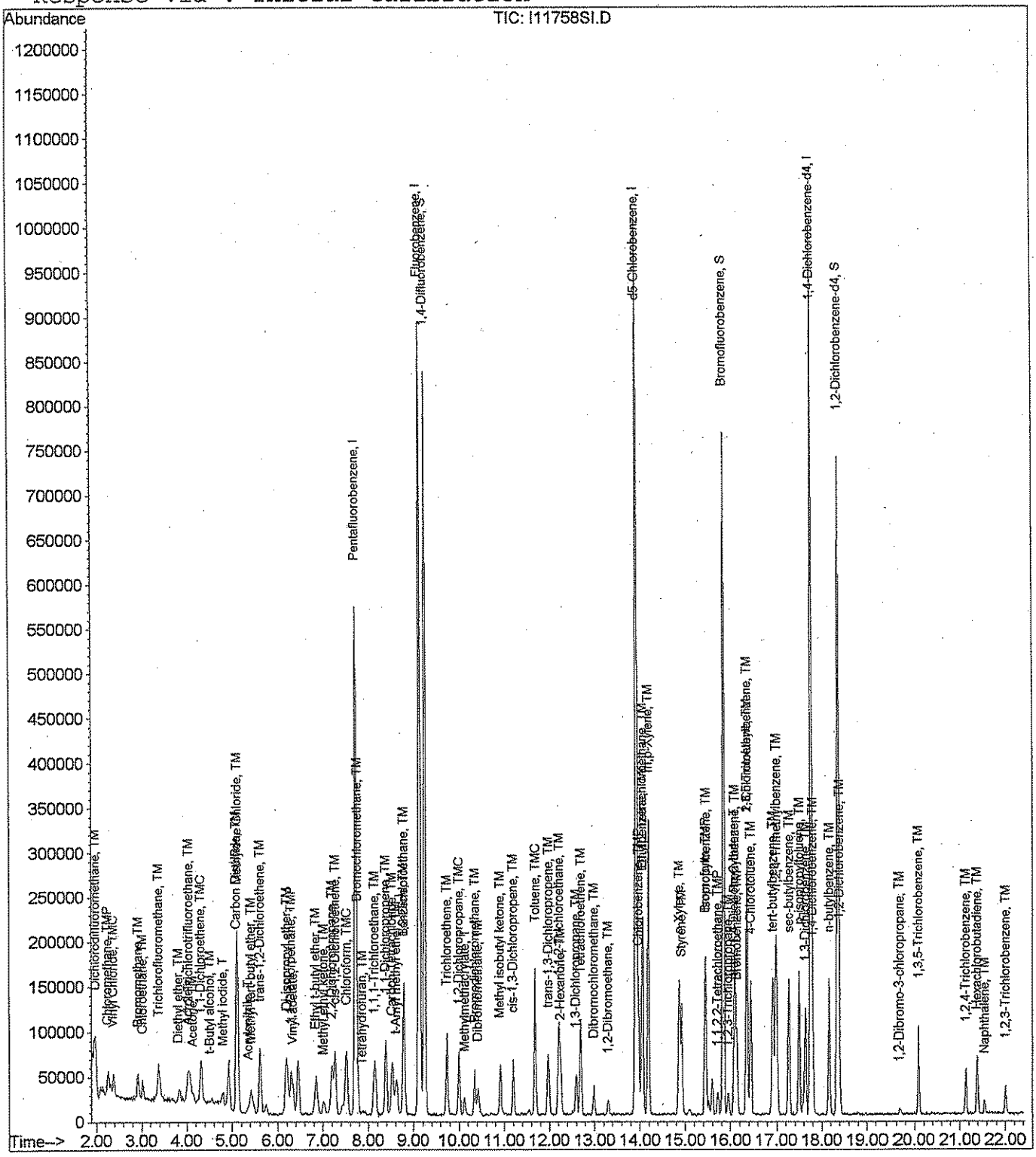
| Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.49 | 119 | 125599 | 0.51 ug/L | | 95 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 64444 | 0.52 ug/L | | 95 |
| 88) 1,4-Dichlorobenzene | 17.79 | 146 | 61188 | 0.52 ug/L | | 90 |
| 89) n-butylbenzene | 18.16 | 91 | 126152 | 0.53 ug/L | | 92 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 50023 | 0.52 ug/L | | 93 |
| 92) 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 2308 | 0.47 ug/L | # | 71 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 19234 | 0.50 ug/L | | 85 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 16655 | 0.49 ug/L | | 87 |
| 96) Naphthalene | 21.55 | 128 | 15626 | 0.50 ug/L | | 98 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 13646 | 0.53 ug/L | | 87 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 42793 | 0.50 ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11758SI.D Vial: 4
Acq On : 18 Jun 2003 11:15 am Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:04 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D
Acq On : 18 Jun 2003 11:50 am
Sample : 1.2PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6-18-07
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 603203 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.12 | 96 | 1172581 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 743404 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 337661 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 930927 | 4.04 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.00% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 348081 | 3.76 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 94.00% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 269796 | 3.99 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 189403 | 1.44 | ug/L | 97 |
| 3) Chloromethane | 2.25 | 50 | 128255 | 1.42 | ug/L | 97 |
| 4) Vinyl Chloride | 2.38 | 62 | 96600 | 1.54 | ug/L | 90 |
| 5) Bromomethane | 2.91 | 94 | 68024 | 1.36 | ug/L | 99 |
| 6) Chloroethane | 3.02 | 64 | 60450 | 1.30 | ug/L | 96 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 144884 | 1.19 | ug/L | 94 |
| 9) Diethyl ether | 3.84 | 74 | 24567 | 1.33 | ug/L | 81 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 74159 | 1.19 | ug/L | 97 |
| 12) Acetone | 4.13 | 43 | 39629 | 5.69 | ug/L | 98 |
| 13) 1,1-Dichloroethene | 4.32 | 96 | 62717 | 1.22 | ug/L | 95 |
| 15) Di-isopropyl ether | 6.19 | 45 | 325492 | 1.30 | ug/L | 95 |
| 16) Methylene Chloride | 5.11 | 84 | 168405 | 1.13 | ug/L | 94 |
| 17) Carbon Disulfide | 5.08 | 76 | 184235 | 1.21 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 102832 | 1.15 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 100974 | 1.30 | ug/L | 98 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 202230 | 1.31 | ug/L | 95 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 15619 | 6.33 | ug/L | 96 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 157166 | 1.24 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.20 | 77 | 125165 | 1.21 | ug/L | 88 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 102858 | 1.37 | ug/L | 92 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 106720 | 1.34 | ug/L | 95 |
| 29) Chloroform | 7.51 | 83 | 211787 | 1.35 | ug/L | 98 |
| 30) Bromochloromethane | 7.76 | 128 | 36612 | 1.35 | ug/L # | 85 |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 172707 | 1.33 | ug/L | 94 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 165795 | 1.43 | ug/L | 99 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 160182 | 1.38 | ug/L | 99 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 123256 | 1.44 | ug/L | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D
Acq On : 18 Jun 2003 11:50 am
Sample : 1.2PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 38) Benzene | 8.79 | 78 | 407490 | 1.40 ug/L | 99 |
| 40) Trichloroethene | 9.73 | 95 | 116669 | 1.36 ug/L | 96 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 97724 | 1.35 ug/L | 99 |
| 45) Bromodichloromethane | 10.34 | 83 | 124242 | 1.29 ug/L | 93 |
| 46) Dibromomethane | 10.42 | 93 | 42073 | 1.27 ug/L | 98 |
| 51) 2-Hexanone | 12.24 | 58 | 59437 | 6.47 ug/L | 99 |
| 52) Methyl isobutyl ketone | 10.91 | 58 | 65785 | 6.36 ug/L | 99 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 119089 | 1.28 ug/L | 100 |
| 55) Toluene | 11.68 | 92 | 236990 | 1.34 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 82607 | 1.27 ug/L | 92 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 46368 | 1.42 ug/L | 98 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 87525 | 1.30 ug/L | 98 |
| 60) Tetrachloroethene | 12.69 | 166 | 109027 | 1.33 ug/L | 98 |
| 61) Dibromochloromethane | 12.98 | 129 | 70019 | 1.36 ug/L | 86 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 44080 | 1.27 ug/L | 97 |
| 64) Chlorobenzene | 13.97 | 112 | 235154 | 1.34 ug/L | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 83956 | 1.42 ug/L | 96 |
| 66) Ethylbenzene | 14.06 | 91 | 479402 | 1.38 ug/L | 99 |
| 67) m,p-Xylene | 14.19 | 106 | 327577 | 2.80 ug/L | 94 |
| 68) o-Xylene | 14.87 | 106 | 151609 | 1.33 ug/L # | 86 |
| 69) Styrene | 14.93 | 104 | 224590 | 1.34 ug/L | 100 |
| 70) Bromoform | 15.44 | 173 | 30446 | 1.25 ug/L | 92 |
| 71) Isopropylbenzene | 15.45 | 105 | 437740 | 1.38 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 49106 | 1.31 ug/L | 99 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 38740 | 1.45 ug/L | 95 |
| 75) trans-1,4-Dichloro-2-buten | 16.06 | 53 | 18343 | 1.23 ug/L # | 88 |
| 76) n-Propylbenzene | 16.09 | 91 | 534957 | 1.34 ug/L | 98 |
| 77) Bromobenzene | 16.14 | 156 | 82927 | 1.30 ug/L # | 84 |
| 78) 1,3,5-Trimethylbenzene | 16.35 | 105 | 355629 | 1.37 ug/L | 99 |
| 79) 2-Chlorotoluene | 16.36 | 91 | 364084 | 1.38 ug/L | 93 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 308281 | 1.31 ug/L | 98 |
| 81) tert-butylbenzene | 16.92 | 119 | 289494 | 1.32 ug/L | 100 |
| 82) 1,2,4-Trimethylbenzene | 16.98 | 105 | 351168 | 1.33 ug/L | 93 |
| 84) sec-butylbenzene | 17.26 | 105 | 419742 | 1.33 ug/L | 98 |
| 85) p-isopropyltoluene | 17.49 | 119 | 336120 | 1.33 ug/L | 94 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 166707 | 1.31 ug/L | 97 |
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 161822 | 1.37 ug/L | 90 |
| 89) n-butylbenzene | 18.16 | 91 | 323661 | 1.35 ug/L | 99 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 129823 | 1.34 ug/L | 95 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 6610 | 1.34 ug/L | 87 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 63498 | 1.28 ug/L | 92 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D Vial: 5
Acq On : 18 Jun 2003 11:50 am Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 95) Hexachlorobutadiene | 21.39 | 225 | 43621 | 1.26 | ug/L | 93 |
| 96) Naphthalene | 21.55 | 128 | 58317 | 1.15 | ug/L | 93 |
| 97) 1,2,3-Trichlorobenzene | 22.00 | 180 | 44874 | 1.23 | ug/L | 90 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 114903 | 1.33 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

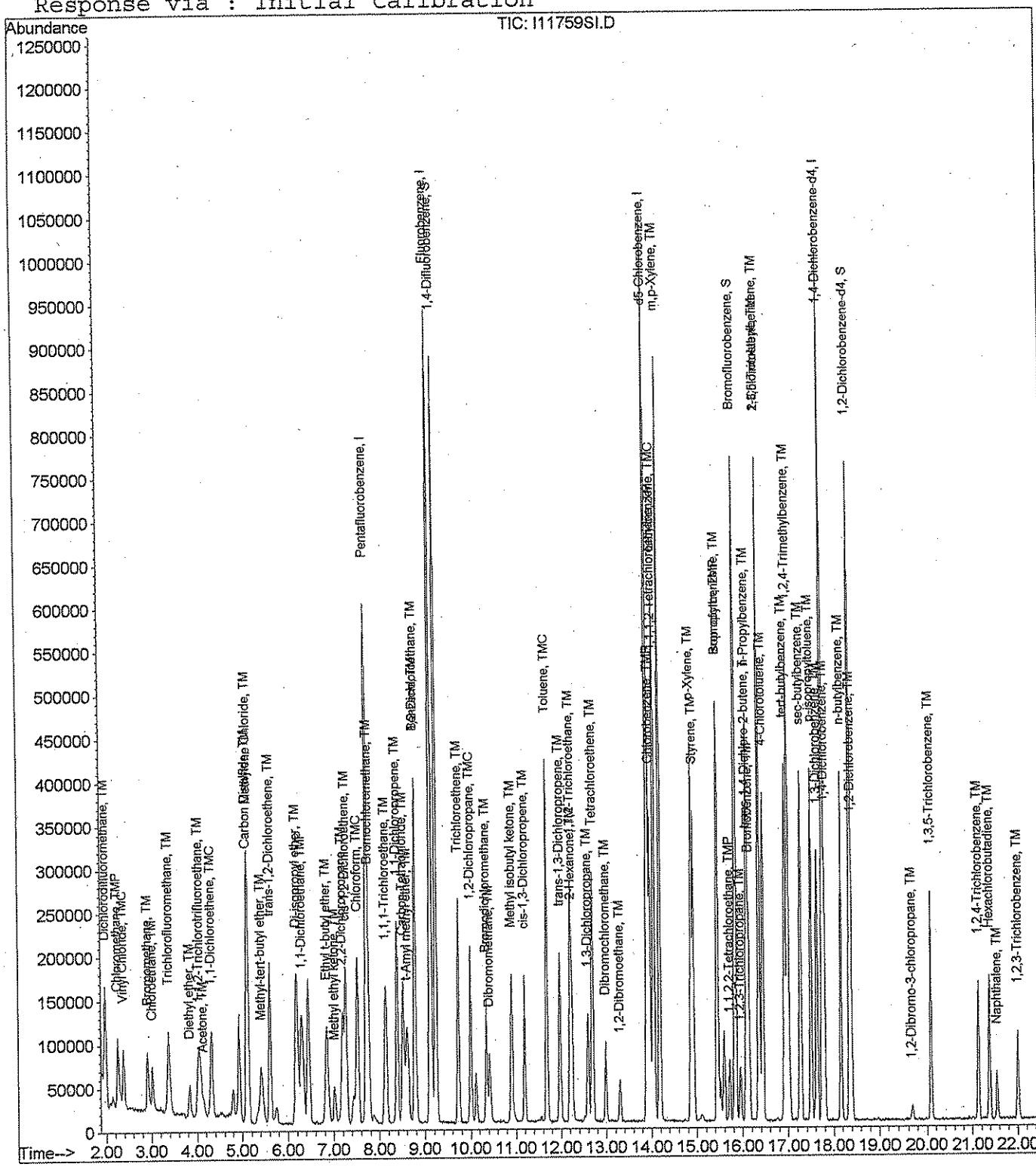
Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11759SI.D
Acq On : 18 Jun 2003 11:50 am
Sample : 1.2PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:27 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D
Acq On : 18 Jun 2003 12:25 pm
Sample : 4.8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003

Vial: 6
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6-18-03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 621115 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.12 | 96 | 1202054 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 736657 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.74 | 152 | 343739 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 964049 | 4.07 | ug/L | 0.03 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.75% | | | |
| 54) Bromofluorobenzene | 15.83 | 95 | 352046 | 3.71 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 92.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 265261 | 3.96 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 707866 | 5.22 | ug/L | 95 |
| 3) Chloromethane | 2.25 | 50 | 416760 | 4.49 | ug/L | 99 |
| 4) Vinyl Chloride | 2.37 | 62 | 287330 | 4.46 | ug/L | 89 |
| 5) Bromomethane | 2.91 | 94 | 212069 | 4.11 | ug/L | 88 |
| 6) Chloroethane | 3.02 | 64 | 204317 | 4.25 | ug/L | 95 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 563394 | 4.49 | ug/L | 97 |
| 9) Diethyl ether | 3.83 | 74 | 88558 | 4.66 | ug/L | 87 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 307355 | 4.78 | ug/L | 98 |
| 11) Acrolein | 4.01 | 56 | 89068 | 22.55 | ug/L | 99 |
| 12) Acetone | 4.13 | 43 | 145638 | 20.32 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 248566 | 4.70 | ug/L | 95 |
| 14) Methyl iodide | 4.79 | 142 | 399075 | 5.21 | ug/L | 99 |
| 15) Di-isopropyl ether | 6.18 | 45 | 1303153 | 5.04 | ug/L | 95 |
| 16) Methylene Chloride | 5.11 | 84 | 481358 | 4.90 | ug/L | 95 |
| 17) Carbon Disulfide | 5.08 | 76 | 747983 | 4.77 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 419348 | 4.56 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 402649 | 5.02 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 797270 | 5.01 | ug/L | 95 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 58994 | 23.21 | ug/L | 94 |
| 24) Ethyl t-butyl ether | 6.83 | 59 | 639132 | 4.90 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 516364 | 4.85 | ug/L | 98 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 395956 | 5.14 | ug/L # | 85 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 409777 | 5.00 | ug/L | 92 |
| 29) Chloroform | 7.51 | 83 | 820419 | 5.07 | ug/L | 98 |
| 30) Bromochloromethane | 7.76 | 128 | 142307 | 5.10 | ug/L # | 90 |
| 31) Tetrahydrofuran | 7.87 | 71 | 11810 | 4.65 | ug/L # | 1 |
| 32) 1,1,1-Trichloroethane | 8.13 | 97 | 708949 | 5.30 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D
Acq On : 18 Jun 2003 12:25 pm
Sample : 4.8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003

Vial: 6
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 34) 1,1-Dichloropropene | 8.38 | 75 | 652657 | 5.45 ug/L | 95 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 646624 | 5.40 ug/L | 96 |
| 37) 1,2-Dichloroethane | 8.76 | 62 | 470830 | 5.35 ug/L | 95 |
| 38) Benzene | 8.77 | 78 | 1569120 | 5.24 ug/L | 99 |
| 40) Trichloroethene | 9.73 | 95 | 451325 | 5.14 ug/L | 95 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 369521 | 4.97 ug/L | 97 |
| 45) Bromodichloromethane | 10.34 | 83 | 493171 | 4.98 ug/L | 99 |
| 46) Dibromomethane | 10.42 | 93 | 160410 | 4.73 ug/L | 90 |
| 51) 2-Hexanone | 12.23 | 58 | 225747 | 23.96 ug/L | 95 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 265743 | 25.07 ug/L | 95 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 486324 | 5.10 ug/L | 96 |
| 55) Toluene | 11.68 | 92 | 912175 | 5.04 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 342403 | 5.14 ug/L | 95 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 162818 | 4.87 ug/L | 98 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 354696 | 5.15 ug/L | 98 |
| 60) Tetrachloroethene | 12.69 | 166 | 416793 | 4.97 ug/L | 100 |
| 61) Dibromochloromethane | 12.98 | 129 | 262663 | 4.97 ug/L | 90 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 172513 | 4.86 ug/L | 97 |
| 64) Chlorobenzene | 13.96 | 112 | 893725 | 5.14 ug/L | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 312957 | 5.35 ug/L | 90 |
| 66) Ethylbenzene | 14.06 | 91 | 1770508 | 5.16 ug/L | 100 |
| 67) m,p-Xylene | 14.18 | 106 | 1195760 | 10.32 ug/L | 99 |
| 68) o-Xylene | 14.87 | 106 | 561095 | 4.98 ug/L # | 79 |
| 69) Styrene | 14.93 | 104 | 881265 | 5.31 ug/L | 96 |
| 70) Bromoform | 15.44 | 173 | 120420 | 5.00 ug/L | 98 |
| 71) Isopropylbenzene | 15.45 | 105 | 1635640 | 5.21 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.71 | 83 | 183376 | 4.95 ug/L | 97 |
| 74) 1,2,3-Trichloropropane | 15.94 | 75 | 137986 | 5.22 ug/L | 96 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 72572 | 4.89 ug/L | 92 |
| 76) n-Propylbenzene | 16.09 | 91 | 2032374 | 5.15 ug/L | 95 |
| 77) Bromobenzene | 16.14 | 156 | 322046 | 5.10 ug/L | 91 |
| 78) 1,3,5-Trimethylbenzene | 16.34 | 105 | 1364643 | 5.32 ug/L | 98 |
| 79) 2-Chlorotoluene | 16.35 | 91 | 1359994 | 5.20 ug/L | 96 |
| 80) 4-Chlorotoluene | 16.44 | 91 | 1187239 | 5.10 ug/L | 99 |
| 81) tert-butylbenzene | 16.92 | 119 | 1122147 | 5.17 ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 16.98 | 105 | 1344399 | 5.13 ug/L | 99 |
| 84) sec-butylbenzene | 17.26 | 105 | 1592985 | 5.08 ug/L | 99 |
| 85) p-isopropyltoluene | 17.49 | 119 | 1291772 | 5.14 ug/L | 98 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 631926 | 5.01 ug/L | 96 |
| 88) 1,4-Dichlorobenzene | 17.79 | 146 | 607845 | 5.05 ug/L | 94 |
| 89) n-butylbenzene | 18.16 | 91 | 1271099 | 5.19 ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D Vial: 6
Acq On : 18 Jun 2003 12:25 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 496728 | 5.05 | ug/L | | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 24476 | 4.86 | ug/L | # | 80 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 279065 | 4.87 | ug/L | | 96 |
| 95) | Hexachlorobutadiene | 21.38 | 225 | 173812 | 4.95 | ug/L | | 95 |
| 96) | Naphthalene | 21.55 | 128 | 305391 | 4.59 | ug/L | | 99 |
| 97) | 1,2,3-Trichlorobenzene | 22.00 | 180 | 211129 | 4.75 | ug/L | | 87 |
| 98) | 1,3,5-Trichlorobenzene | 20.09 | 180 | 452525 | 5.16 | ug/L | | 97 |

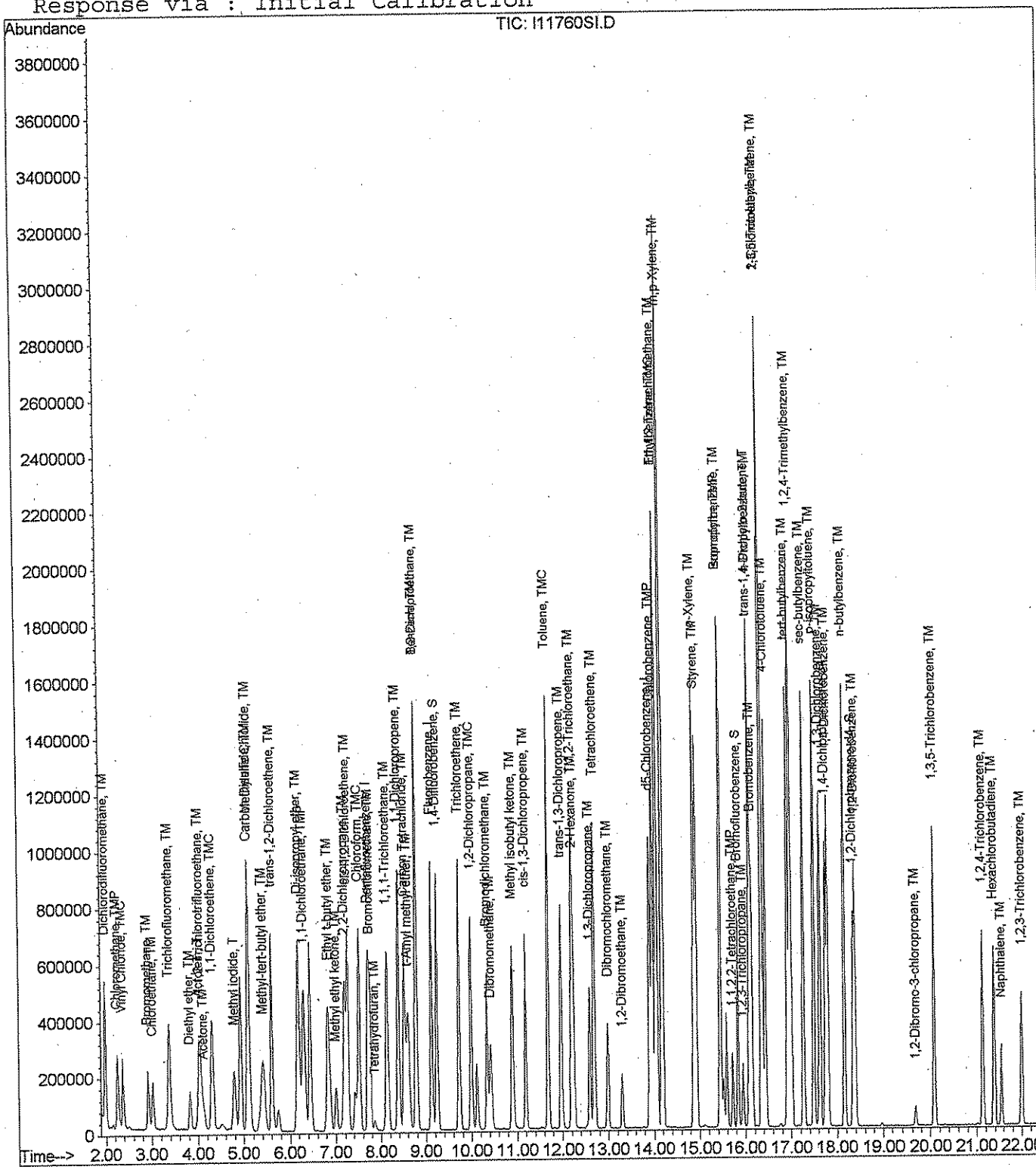
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11760SI.D
Acq On : 18 Jun 2003 12:25 pm
Sample : 4.8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003

Vial: 6
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6-18-03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 607336 | 4.00 | ug/L | 0.02 |
| 39) Fluorobenzene | 9.13 | 96 | 1157947 | 4.00 | ug/L | 0.03 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 719531 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 348332 | 4.00 | ug/L | 0.02 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.23 | 114 | 921999 | 3.98 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.50% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 351391 | 3.85 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 96.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 273531 | 4.18 | ug/L | 0.02 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 104.50% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 1182156 | 8.91 | ug/L | 98 |
| 3) Chloromethane | 2.24 | 50 | 690340 | 7.60 | ug/L | 99 |
| 4) Vinyl Chloride | 2.36 | 62 | 449282 | 7.13 | ug/L | 91 |
| 5) Bromomethane | 2.91 | 94 | 356911 | 7.07 | ug/L | 89 |
| 6) Chloroethane | 3.01 | 64 | 346667 | 7.38 | ug/L | 98 |
| 7) t-Butyl alcohol | 4.50 | 59 | 36139 | 27.11 | ug/L # | 65 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 948758 | 7.73 | ug/L | 97 |
| 9) Diethyl ether | 3.82 | 74 | 135012 | 7.26 | ug/L | 86 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 478310 | 7.60 | ug/L | 96 |
| 11) Acrolein | 4.01 | 56 | 144517 | 37.41 | ug/L | 95 |
| 12) Acetone | 4.13 | 43 | 226844 | 32.37 | ug/L | 91 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 389504 | 7.53 | ug/L | 96 |
| 14) Methyl iodide | 4.79 | 142 | 562366 | 7.51 | ug/L | 98 |
| 15) Di-isopropyl ether | 6.18 | 45 | 1994086 | 7.89 | ug/L | 95 |
| 16) Methylene Chloride | 5.10 | 84 | 696098 | 7.72 | ug/L | 94 |
| 17) Carbon Disulfide | 5.07 | 76 | 1211571 | 7.90 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 665916 | 7.41 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.60 | 96 | 625580 | 7.98 | ug/L | 95 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 1237219 | 7.95 | ug/L | 96 |
| 22) Vinyl acetate | 6.34 | 86 | 41653 | 11.70 | ug/L | 69 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 94307 | 37.94 | ug/L | 98 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 979224 | 7.68 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 801835 | 7.70 | ug/L | 95 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 616344 | 8.18 | ug/L | 89 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 632624 | 7.89 | ug/L | 94 |
| 29) Chloroform | 7.51 | 83 | 1241970 | 7.85 | ug/L | 97 |
| 30) Bromochloromethane | 7.76 | 128 | 215944 | 7.91 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 31) | Tetrahydrofuran | 7.85 | 71 | 19431 | 7.82 ug/L | # | 1 |
| 32) | 1,1,1-Trichloroethane | 8.13 | 97 | 1093524 | 8.36 ug/L | | 99 |
| 34) | 1,1-Dichloropropene | 8.39 | 75 | 1002112 | 8.56 ug/L | | 99 |
| 35) | Carbon Tetrachloride | 8.52 | 119 | 1008413 | 8.62 ug/L | | 98 |
| 37) | 1,2-Dichloroethane | 8.76 | 62 | 720705 | 8.38 ug/L | | 95 |
| 38) | Benzene | 8.78 | 78 | 2409415 | 8.22 ug/L | | 98 |
| 40) | Trichloroethene | 9.73 | 95 | 688311 | 8.13 ug/L | | 95 |
| 41) | 1,2-Dichloropropane | 9.99 | 63 | 559255 | 7.81 ug/L | | 100 |
| 45) | Bromodichloromethane | 10.35 | 83 | 774825 | 8.13 ug/L | | 96 |
| 46) | Dibromomethane | 10.42 | 93 | 251770 | 7.70 ug/L | | 92 |
| 51) | 2-Hexanone | 12.24 | 58 | 357890 | 39.43 ug/L | | 100 |
| 52) | Methyl isobutyl ketone | 10.90 | 58 | 411712 | 40.32 ug/L | | 96 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 752858 | 8.19 ug/L | | 92 |
| 55) | Toluene | 11.68 | 92 | 1391600 | 7.98 ug/L | | 98 |
| 56) | trans-1,3-Dichloropropene | 11.96 | 75 | 535408 | 8.35 ug/L | | 97 |
| 58) | 1,1,2-Trichloroethane | 12.20 | 83 | 250776 | 7.78 ug/L | | 98 |
| 59) | 1,3-Dichloropropane | 12.59 | 76 | 539204 | 8.13 ug/L | | 98 |
| 60) | Tetrachloroethene | 12.69 | 166 | 648276 | 8.02 ug/L | | 95 |
| 61) | Dibromochloromethane | 12.99 | 129 | 408579 | 8.03 ug/L | | 97 |
| 62) | 1,2-Dibromoethane | 13.30 | 107 | 270807 | 7.93 ug/L | | 98 |
| 64) | Chlorobenzene | 13.97 | 112 | 1371393 | 8.07 ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 484348 | 8.47 ug/L | | 94 |
| 66) | Ethylbenzene | 14.05 | 91 | 2787659 | 8.31 ug/L | | 97 |
| 67) | m,p-Xylene | 14.18 | 106 | 1859144 | 16.42 ug/L | | 91 |
| 68) | o-Xylene | 14.87 | 106 | 883245 | 8.03 ug/L | # | 85 |
| 69) | Styrene | 14.92 | 104 | 1360342 | 8.39 ug/L | | 100 |
| 70) | Bromoform | 15.43 | 173 | 192671 | 8.18 ug/L | | 100 |
| 71) | Isopropylbenzene | 15.44 | 105 | 2515789 | 8.20 ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 289514 | 8.01 ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.95 | 75 | 210255 | 8.14 ug/L | | 97 |
| 75) | trans-1,4-Dichloro-2-buten | 16.06 | 53 | 116989 | 8.07 ug/L | | 91 |
| 76) | n-Propylbenzene | 16.09 | 91 | 3173112 | 8.22 ug/L | | 95 |
| 77) | Bromobenzene | 16.14 | 156 | 505920 | 8.21 ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 16.35 | 105 | 2120603 | 8.46 ug/L | | 98 |
| 79) | 2-Chlorotoluene | 16.36 | 91 | 2044748 | 8.01 ug/L | | 97 |
| 80) | 4-Chlorotoluene | 16.44 | 91 | 1872549 | 8.24 ug/L | | 99 |
| 81) | tert-butylbenzene | 16.92 | 119 | 1733973 | 8.18 ug/L | | 95 |
| 82) | 1,2,4-Trimethylbenzene | 16.98 | 105 | 2090094 | 8.17 ug/L | | 100 |
| 84) | sec-butylbenzene | 17.27 | 105 | 2510160 | 8.19 ug/L | | 100 |
| 85) | p-isopropyltoluene | 17.49 | 119 | 2053433 | 8.37 ug/L | | 95 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 992637 | 8.05 ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

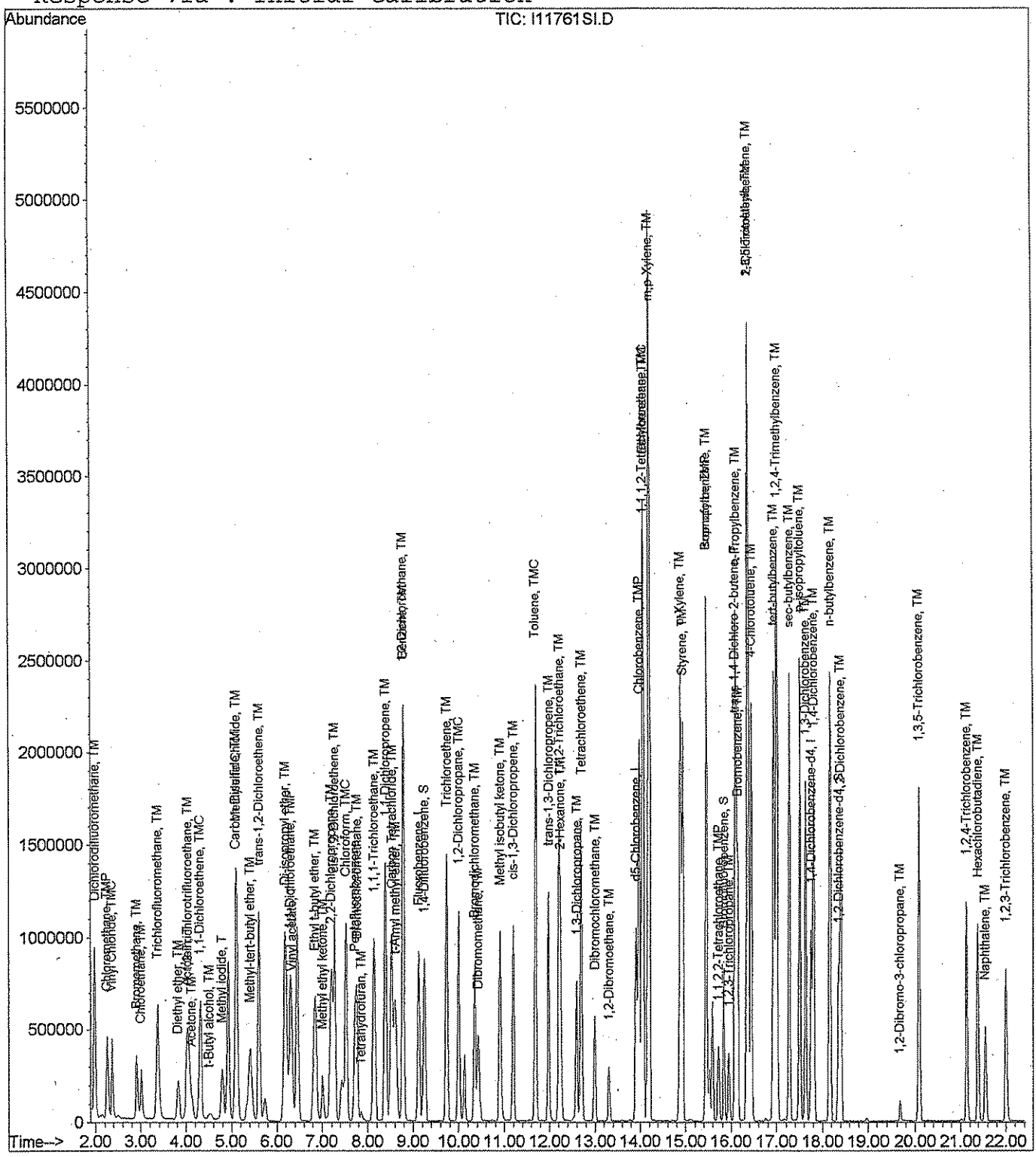
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Jun 17 07:08:48 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 88) 1,4-Dichlorobenzene | 17.80 | 146 | 959865 | 7.87 ug/L | 96 |
| 89) n-butylbenzene | 18.16 | 91 | 2074690 | 8.36 ug/L | 96 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 806024 | 8.08 ug/L | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 40589 | 7.96 ug/L | 90 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 493117 | 8.14 ug/L | 95 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 292542 | 8.22 ug/L | 96 |
| 96) Naphthalene | 21.55 | 128 | 563004 | 7.79 ug/L | 98 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 378090 | 8.01 ug/L | 87 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 764446 | 8.59 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11761SI.D Vial: 7
Acq On : 18 Jun 2003 1:00 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:28 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03
VMT 6/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 603287 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 1172654 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 772336 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 374322 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 952902 | 4.12 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 103.00% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 381931 | 4.37 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 109.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 284837 | 4.03 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 2635144 | 17.05 | ug/L | 100 |
| 3) Chloromethane | 2.24 | 50 | 1574287 | 16.39 | ug/L | 97 |
| 4) Vinyl Chloride | 2.36 | 62 | 965449 | 13.94 | ug/L | 97 |
| 5) Bromomethane | 2.91 | 94 | 816081 | 16.38 | ug/L | 90 |
| 6) Chloroethane | 3.01 | 64 | 791390 | 17.44 | ug/L | 96 |
| 7) t-Butyl alcohol | 4.50 | 59 | 81950 | 73.43 | ug/L # | 92 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 2180400 | 17.62 | ug/L | 96 |
| 9) Diethyl ether | 3.83 | 74 | 329233 | 16.82 | ug/L | 90 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 1083346 | 16.25 | ug/L | 96 |
| 11) Acrolein | 4.02 | 56 | 332510 | 73.13 | ug/L | 92 |
| 12) Acetone | 4.14 | 43 | 532744 | 95.88 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 882454 | 16.62 | ug/L | 96 |
| 14) Methyl iodide | 4.79 | 142 | 1613377 | 24.43 | ug/L | 97 |
| 15) Di-isopropyl ether | 6.19 | 45 | 4031460 | 15.54 | ug/L | 97 |
| 16) Methylene Chloride | 5.10 | 84 | 1319720 | 16.07 | ug/L | 92 |
| 17) Carbon Disulfide | 5.08 | 76 | 2498140 | 16.58 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 187784 | 16.78 | ug/L # | 75 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 1344258 | 16.52 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 1232234 | 15.40 | ug/L | 97 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 2455860 | 15.52 | ug/L | 99 |
| 22) Vinyl acetate | 6.34 | 86 | 86446 | 15.79 | ug/L | 85 |
| 23) Methyl ethyl ketone | 7.01 | 72 | 184342 | 77.26 | ug/L | 94 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 1985200 | 15.84 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 1623394 | 15.73 | ug/L | 92 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 1206869 | 14.96 | ug/L | 95 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 1348035 | 16.21 | ug/L | 96 |
| 29) Chloroform | 7.52 | 83 | 2504429 | 15.00 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.75 | 128 | 435490 | 15.16 ug/L | 94 |
| 31) Tetrahydrofuran | 7.85 | 71 | 38624 | 14.79 ug/L | 98 |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 2257953 | 15.38 ug/L | 95 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 2008964 | 15.48 ug/L | 98 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 2068980 | 16.25 ug/L | 100 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 1430000 | 15.01 ug/L | 97 |
| 38) Benzene | 8.78 | 78 | 4785582 | 15.06 ug/L | 97 |
| 40) Trichloroethene | 9.73 | 95 | 1419019 | 15.44 ug/L | 97 |
| 41) 1,2-Dichloropropane | 9.99 | 63 | 1180303 | 15.50 ug/L | 98 |
| 42) Methylmethacrylate | 10.12 | 69 | 374444 | 16.86 ug/L | 99 |
| 45) Bromodichloromethane | 10.35 | 83 | 1620197 | 15.90 ug/L | 98 |
| 46) Dibromomethane | 10.42 | 93 | 526504 | 15.17 ug/L | 94 |
| 51) 2-Hexanone | 12.24 | 58 | 783797 | 86.09 ug/L | 100 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 897739 | 84.69 ug/L | 96 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 1637478 | 17.33 ug/L | 98 |
| 55) Toluene | 11.68 | 92 | 2858498 | 15.22 ug/L | 98 |
| 56) trans-1,3-Dichloropropene | 11.96 | 75 | 1154608 | 17.93 ug/L | 92 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 517546 | 14.89 ug/L | 97 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 1137149 | 15.99 ug/L | 100 |
| 60) Tetrachloroethene | 12.69 | 166 | 1345019 | 15.49 ug/L | 98 |
| 61) Dibromochloromethane | 12.99 | 129 | 904690 | 17.51 ug/L | 91 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 596258 | 17.44 ug/L | 95 |
| 64) Chlorobenzene | 13.96 | 112 | 2920757 | 15.13 ug/L | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 14.03 | 131 | 1042598 | 14.88 ug/L | 91 |
| 66) Ethylbenzene | 14.06 | 91 | 5761648 | 14.80 ug/L | 100 |
| 67) m,p-Xylene | 14.18 | 106 | 3839409 | 28.94 ug/L | 96 |
| 68) o-Xylene | 14.87 | 106 | 1905243 | 15.49 ug/L | 100 |
| 69) Styrene | 14.92 | 104 | 2987784 | 15.79 ug/L | 100 |
| 70) Bromoform | 15.43 | 173 | 427443 | 16.32 ug/L | 91 |
| 71) Isopropylbenzene | 15.44 | 105 | 5313875 | 14.95 ug/L | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 641574 | 15.87 ug/L | 94 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 467711 | 15.44 ug/L | 93 |
| 75) trans-1,4-Dichloro-2-buten | 16.06 | 53 | 249155 | 15.77 ug/L | 99 |
| 76) n-Propylbenzene | 16.09 | 91 | 6678130 | 15.07 ug/L | 97 |
| 77) Bromobenzene | 16.14 | 156 | 1074939 | 15.33 ug/L | 92 |
| 78) 1,3,5-Trimethylbenzene | 16.35 | 105 | 4391345 | 15.02 ug/L | 99 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 4404645 | 14.86 ug/L | 93 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 3911809 | 15.16 ug/L | 100 |
| 81) tert-butylbenzene | 16.92 | 119 | 3716883 | 15.33 ug/L | 99 |
| 82) 1,2,4-Trimethylbenzene | 16.98 | 105 | 4411606 | 15.31 ug/L | 95 |
| 84) sec-butylbenzene | 17.27 | 105 | 5295460 | 15.16 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

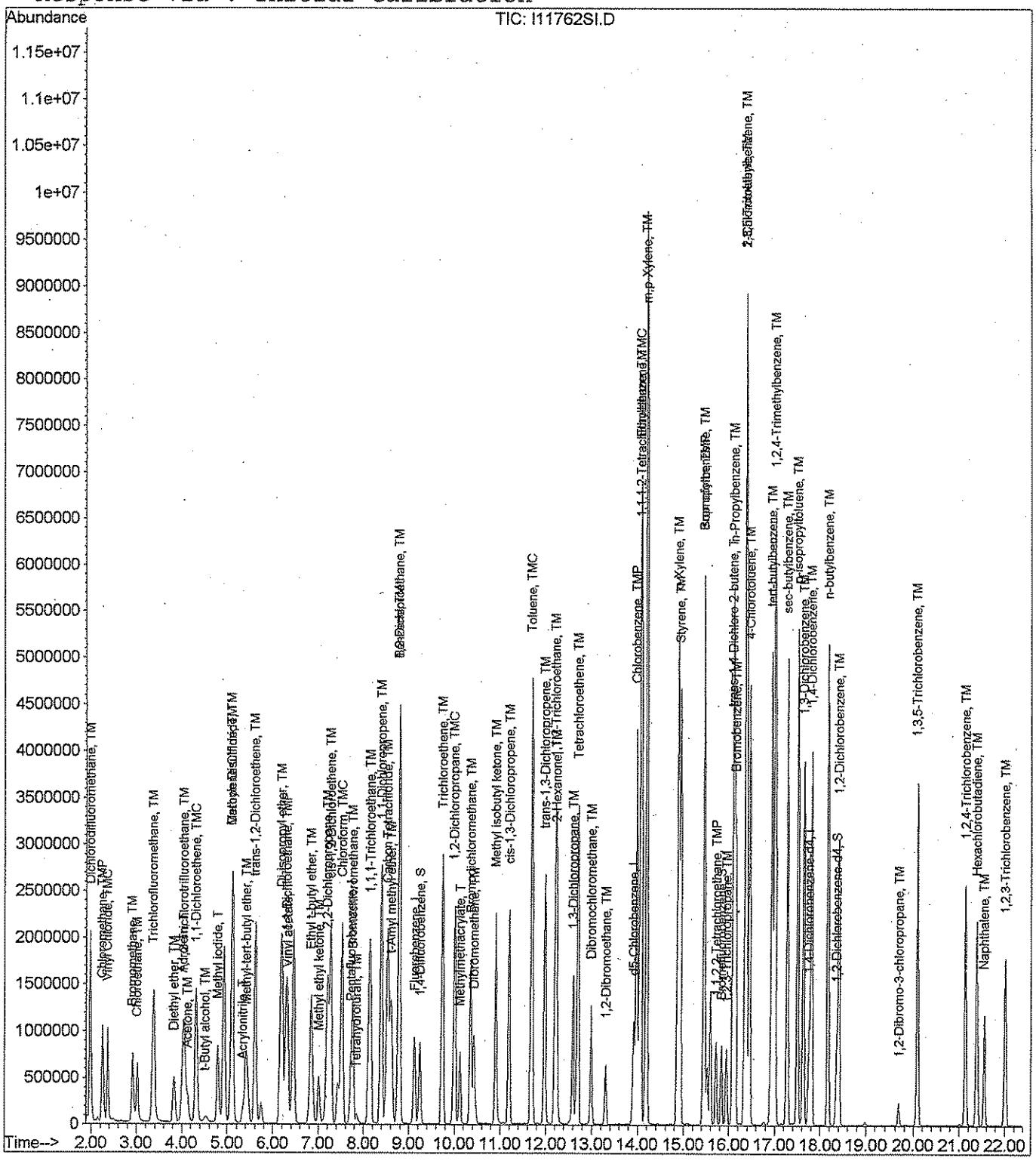
Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 13:53:24 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 85) | p-isopropyltoluene | 17.49 | 119 | 4352012 | 15.58 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 17.63 | 146 | 2117048 | 15.30 | ug/L | | 96 |
| 88) | 1,4-Dichlorobenzene | 17.80 | 146 | 2075244 | 14.99 | ug/L | | 94 |
| 89) | n-butylbenzene | 18.16 | 91 | 4374210 | 15.22 | ug/L | | 98 |
| 90) | 1,2-Dichlorobenzene | 18.40 | 146 | 1683224 | 14.26 | ug/L | | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 19.67 | 75 | 92711 | 16.63 | ug/L | # | 86 |
| 94) | 1,2,4-Trichlorobenzene | 21.14 | 180 | 1079486 | 18.66 | ug/L | | 99 |
| 95) | Hexachlorobutadiene | 21.39 | 225 | 607040 | 15.52 | ug/L | | 99 |
| 96) | Naphthalene | 21.55 | 128 | 1305040 | 14.66 | ug/L | | 96 |
| 97) | 1,2,3-Trichlorobenzene | 22.01 | 180 | 827086 | 19.37 | ug/L | | 95 |
| 98) | 1,3,5-Trichlorobenzene | 20.10 | 180 | 1588461 | 15.20 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11762SI.D Vial: 8
Acq On : 18 Jun 2003 1:34 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 13:58 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

6.18.03 VMT cal/labs

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.71 | 168 | 664359 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.12 | 96 | 1243355 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.90 | 117 | 797012 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.75 | 152 | 378332 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.24 | 114 | 1015163 | 3.97 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.25% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 393104 | 4.17 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 104.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.35 | 152 | 296132 | 4.05 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.25% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 4521195 | 26.28 | ug/L | 100 |
| 3) Chloromethane | 2.24 | 50 | 2741967 | 25.80 | ug/L | 98 |
| 4) Vinyl Chloride | 2.36 | 62 | 1471967 | 19.81 | ug/L | 99 |
| 5) Bromomethane | 2.89 | 94 | 1487478 | 26.99 | ug/L | 87 |
| 6) Chloroethane | 3.00 | 64 | 1357559 | 26.68 | ug/L | 94 |
| 7) t-Butyl alcohol | 4.52 | 59 | 161959 | 141.33 | ug/L # | 88 |
| 8) Trichlorofluoromethane | 3.36 | 101 | 3900742 | 28.15 | ug/L | 97 |
| 9) Diethyl ether | 3.82 | 74 | 591238 | 27.15 | ug/L | 89 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 2043266 | 27.76 | ug/L | 98 |
| 11) Acrolein | 4.01 | 56 | 596338 | 136.38 | ug/L | 90 |
| 12) Acetone | 4.13 | 43 | 977080 | 132.16 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 4.30 | 96 | 1663043 | 28.22 | ug/L | 94 |
| 14) Methyl iodide | 4.79 | 142 | 3453920 | 43.66 | ug/L | 99 |
| 15) Di-isopropyl ether | 6.18 | 45 | 8477679 | 29.82 | ug/L | 98 |
| 16) Methylene Chloride | 5.10 | 84 | 2572393 | 29.17 | ug/L | 95 |
| 17) Carbon Disulfide | 5.07 | 76 | 5033498 | 30.12 | ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 393192 | 31.64 | ug/L # | 79 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 2998050 | 33.28 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.59 | 96 | 2594120 | 29.66 | ug/L | 99 |
| 21) 1,1-Dichloroethane | 6.29 | 63 | 5279611 | 30.47 | ug/L | 97 |
| 22) Vinyl acetate | 6.34 | 86 | 184958 | 30.76 | ug/L | 86 |
| 23) Methyl ethyl ketone | 7.00 | 72 | 416582 | 159.46 | ug/L | 99 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 4385570 | 31.82 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.19 | 77 | 3544984 | 31.30 | ug/L | 93 |
| 26) cis-1,2-Dichloroethene | 7.26 | 96 | 2574877 | 29.36 | ug/L | 98 |
| 27) t-Amyl methyl ether | 8.60 | 73 | 2956141 | 32.21 | ug/L | 93 |
| 29) Chloroform | 7.52 | 83 | 5310498 | 29.24 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.75 | 128 | 940811 | 30.00 ug/L | 97 |
| 31) Tetrahydrofuran | 7.84 | 71 | 85836 | 30.30 ug/L | 90 |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 4908193 | 30.56 ug/L | 94 |
| 34) 1,1-Dichloropropene | 8.38 | 75 | 4220786 | 29.72 ug/L | 98 |
| 35) Carbon Tetrachloride | 8.52 | 119 | 4489016 | 31.91 ug/L | 98 |
| 37) 1,2-Dichloroethane | 8.77 | 62 | 2929242 | 28.21 ug/L | 95 |
| 38) Benzene | 8.78 | 78 | 9739011 | 28.16 ug/L | 97 |
| 40) Trichloroethene | 9.72 | 95 | 2893036 | 29.90 ug/L | 98 |
| 41) 1,2-Dichloropropane | 10.00 | 63 | 2410840 | 30.01 ug/L | 97 |
| 42) Methylmethacrylate | 10.12 | 69 | 804016 | 33.84 ug/L | 99 |
| 45) Bromodichloromethane | 10.34 | 83 | 3349119 | 31.02 ug/L | 98 |
| 46) Dibromomethane | 10.41 | 93 | 1098405 | 30.11 ug/L | 92 |
| 51) 2-Hexanone | 12.24 | 58 | 1616278 | 164.92 ug/L | 98 |
| 52) Methyl isobutyl ketone | 10.90 | 58 | 1872742 | 164.69 ug/L | 97 |
| 53) cis-1,3-Dichloropropene | 11.19 | 75 | 3351173 | 32.99 ug/L | 96 |
| 55) Toluene | 11.69 | 92 | 5776258 | 29.29 ug/L | 95 |
| 56) trans-1,3-Dichloropropene | 11.96 | 75 | 2414428 | 34.67 ug/L | 95 |
| 58) 1,1,2-Trichloroethane | 12.20 | 83 | 1020168 | 28.01 ug/L | 98 |
| 59) 1,3-Dichloropropane | 12.59 | 76 | 2310663 | 30.65 ug/L | 98 |
| 60) Tetrachloroethene | 12.69 | 166 | 2738157 | 29.93 ug/L | 95 |
| 61) Dibromochloromethane | 12.99 | 129 | 1846321 | 33.19 ug/L | 90 |
| 62) 1,2-Dibromoethane | 13.30 | 107 | 1213884 | 32.99 ug/L | 98 |
| 64) Chlorobenzene | 13.96 | 112 | 5661805 | 28.73 ug/L | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 14.04 | 131 | 2006572 | 28.07 ug/L | 87 |
| 66) Ethylbenzene | 14.06 | 91 | 10734730 | 27.13 ug/L | 98 |
| 67) m,p-Xylene | 14.19 | 106 | 7100893 | 52.88 ug/L | 92 |
| 68) o-Xylene | 14.87 | 106 | 3705793 | 29.38 ug/L | 99 |
| 69) Styrene | 14.93 | 104 | 5826794 | 29.90 ug/L | 97 |
| 70) Bromoform | 15.43 | 173 | 833722 | 30.74 ug/L | 93 |
| 71) Isopropylbenzene | 15.45 | 105 | 10167131 | 28.09 ug/L | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.72 | 83 | 1285529 | 30.85 ug/L | 96 |
| 74) 1,2,3-Trichloropropane | 15.94 | 75 | 964771 | 31.09 ug/L | 94 |
| 75) trans-1,4-Dichloro-2-buten | 16.06 | 53 | 484410 | 29.80 ug/L | 97 |
| 76) n-Propylbenzene | 16.09 | 91 | 12583846 | 27.84 ug/L | 94 |
| 77) Bromobenzene | 16.14 | 156 | 2118334 | 29.52 ug/L | 96 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 8113171 | 27.23 ug/L | 98 |
| 79) 2-Chlorotoluene | 16.37 | 91 | 8080294 | 26.81 ug/L | 91 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 7701298 | 29.22 ug/L | 100 |
| 81) tert-butylbenzene | 16.92 | 119 | 7126073 | 28.73 ug/L | 94 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 8326048 | 28.24 ug/L | 96 |
| 84) sec-butylbenzene | 17.26 | 105 | 10282071 | 28.83 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Quant Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 14:04:21 2003
Response via : Initial Calibration
DataAcq Meth : V506183I

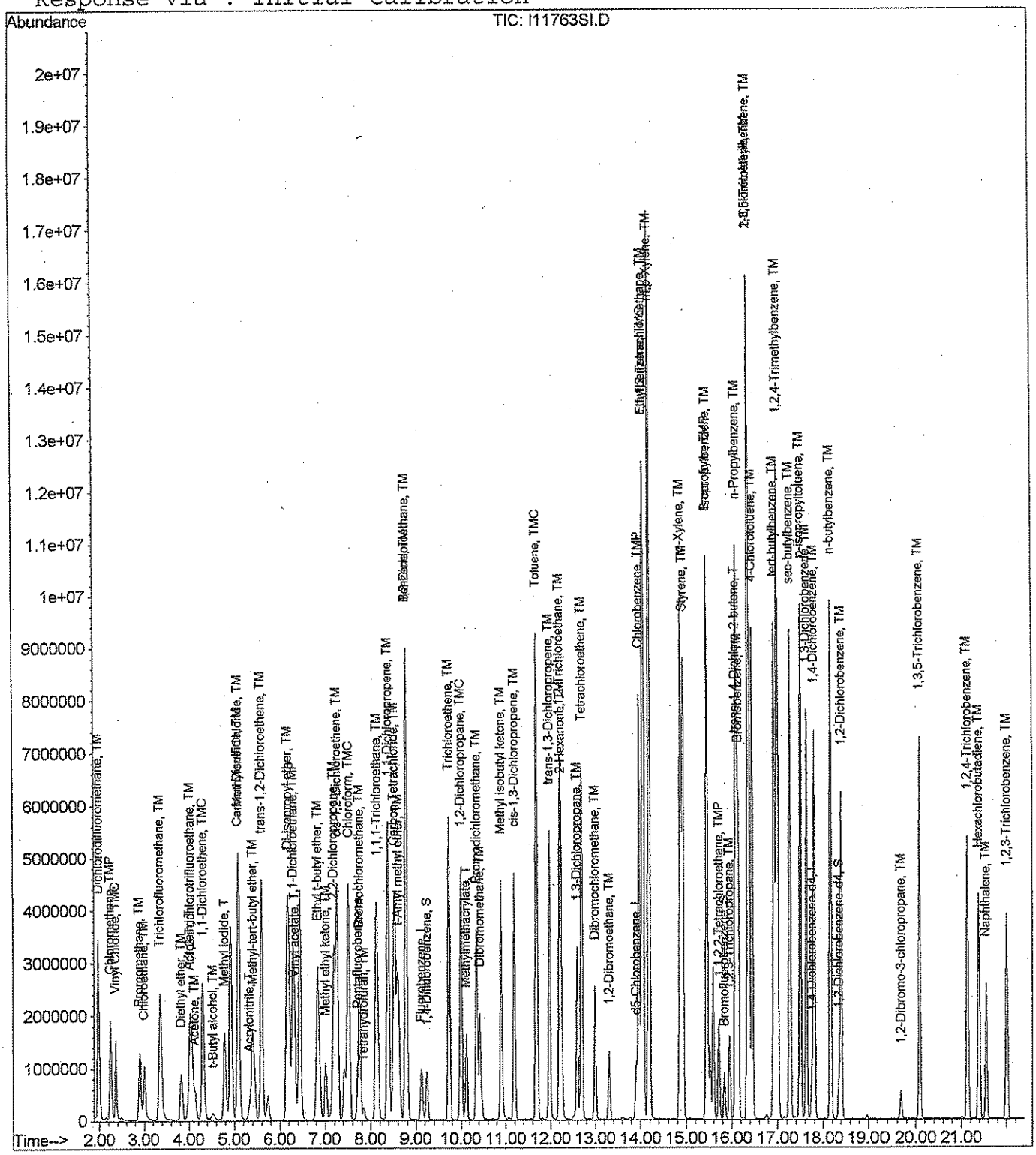
| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.50 | 119 | 8452032 | 29.48 ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 17.63 | 146 | 4204593 | 29.71 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 4030559 | 29.17 ug/L | 94 |
| 89) n-butylbenzene | 18.16 | 91 | 8472257 | 29.45 ug/L | 97 |
| 90) 1,2-Dichlorobenzene | 18.40 | 146 | 3364571 | 28.72 ug/L | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 19.68 | 75 | 195586 | 34.44 ug/L # | 73 |
| 94) 1,2,4-Trichlorobenzene | 21.14 | 180 | 2236227 | 37.01 ug/L | 96 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 1240242 | 31.56 ug/L | 95 |
| 96) Naphthalene | 21.55 | 128 | 2864132 | 30.41 ug/L | 95 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 1762040 | 39.17 ug/L | 97 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 3157322 | 30.14 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061803-I\I11763SI.D Vial: 9
Acq On : 18 Jun 2003 2:09 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 18 14:49 2003 Quant Results File: V506183I.

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration



Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration

7.10.03

Calibration Files
0.1 =I11863SI.D 0.5 =I11864SI.D 1.2 =I11865SI.D
4.8 =I11866SI.D 8 =I11867SI.D 16 =I11868SI.D

VMT 7/10/03

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | | 0.752 | 0.768 | 0.744 | 0.748 | 0.661 | 0.735 | 5.7 |
| 3) | TMP | Chloromethane | | 0.288 | 0.290 | 0.278 | 0.258 | 0.241 | 0.271 | 7.7 |
| 4) | TMC | Vinyl Chloride | 0.309 | 0.254 | 0.254 | 0.216 | 0.202 | 0.179 | 0.236 | 19.6 |
| 5) | TM | Bromomethane | | 0.230 | 0.237 | 0.211 | 0.224 | 0.212 | 0.223 | 5.1 |
| 6) | TM | Chloroethane | | 0.139 | 0.156 | 0.153 | 0.153 | 0.145 | 0.149 | 4.7 |
| 7) | TM | t-Butyl alcohol | | 0.004 | 0.005 | 0.004 | 0.004 | 0.003 | 0.004 | 19.1 |
| 8) | TM | Trichlorofluorometh | | 0.663 | 0.681 | 0.658 | 0.668 | 0.610 | 0.656 | 4.1 |
| 9) | TM | Diethyl ether | | 0.087 | 0.086 | 0.079 | 0.076 | 0.066 | 0.079 | 10.9 |
| 10) | TM | 1,1,2-Trichlorotrif | | 0.331 | 0.354 | 0.348 | 0.334 | 0.307 | 0.335 | 5.5 |
| 11) | T | Acrolein | | 0.008 | 0.007 | 0.006 | 0.006 | 0.005 | 0.006 | 20.2N |
| 12) | TM | Acetone | | 0.027 | 0.021 | 0.018 | 0.019 | 0.017 | 0.021 | 19.9 |
| 13) | TMC | 1,1-Dichloroethene | | 0.248 | 0.275 | 0.273 | 0.268 | 0.240 | 0.261 | 6.1 |
| 14) | T | Methyl iodide | | 0.250 | 0.319 | 0.400 | 0.432 | 0.407 | 0.361 | 20.8N |
| 15) | TM | Di-isopropyl ether | | 0.513 | 0.556 | 0.549 | 0.558 | 0.511 | 0.537 | 4.3 |
| 16) | TM | Methylene Chloride | | 1.118 | 0.618 | 0.363 | 0.328 | 0.271 | 0.540 | 64.8Li |
| 17) | TM | Carbon Disulfide | | 0.416 | 0.429 | 0.444 | 0.465 | 0.416 | 0.434 | 4.8 |
| 18) | T | Acrylonitrile | | 0.016 | 0.021 | 0.023 | 0.022 | 0.025 | 0.021 | 14.3 |
| 19) | TM | Methyl-tert-butyl e | | 0.333 | 0.344 | 0.340 | 0.347 | 0.310 | 0.335 | 4.5 |
| 20) | TM | trans-1,2-Dichloroe | | 0.374 | 0.412 | 0.392 | 0.403 | 0.349 | 0.386 | 6.4 |
| 21) | TMP | 1,1-Dichloroethane | | 0.474 | 0.521 | 0.508 | 0.512 | 0.462 | 0.495 | 5.2 |
| 22) | T | Vinyl acetate | | 0.023 | 0.025 | 0.022 | 0.021 | 0.020 | 0.022 | 8.8 |
| 23) | TM | Methyl ethyl ketone | | 0.010 | 0.010 | 0.008 | 0.009 | 0.008 | 0.009 | 8.3 |
| 24) | TM | Ethyl t-butyl ether | | 0.365 | 0.419 | 0.406 | 0.414 | 0.379 | 0.397 | 5.8 |
| 25) | TM | 2,2-Dichloropropane | | 0.466 | 0.519 | 0.497 | 0.504 | 0.446 | 0.486 | 6.0 |
| 26) | TM | cis-1,2-Dichloroeth | | 0.373 | 0.408 | 0.399 | 0.411 | 0.359 | 0.390 | 5.8 |
| 27) | TM | t-Amyl methyl ether | | 0.288 | 0.329 | 0.318 | 0.329 | 0.297 | 0.312 | 6.0 |
| 28) | T | NO COUMPOUND | | | | | | | 0.000 | -1.0 |
| 29) | TMC | Chloroform | | 0.849 | 0.838 | 0.796 | 0.791 | 0.709 | 0.797 | 6.9 |
| 30) | TM | Bromochloromethane | | 0.172 | 0.194 | 0.184 | 0.181 | 0.164 | 0.179 | 6.3 |
| 31) | TM | Tetrahydrofuran | | | 0.011 | 0.009 | 0.008 | 0.007 | 0.009 | 16.3 |
| 32) | TM | 1,1,1-Trichloroetha | | 0.754 | 0.841 | 0.820 | 0.845 | 0.749 | 0.802 | 5.8 |
| 33) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 34) | TM | 1,1-Dichloropropene | | 0.518 | 0.569 | 0.533 | 0.535 | 0.476 | 0.526 | 6.4 |
| 35) | TM | Carbon Tetrachlorid | | 0.750 | 0.874 | 0.868 | 0.887 | 0.783 | 0.832 | 7.3 |
| 36) | S | 1,4-Difluorobenzene | 1.319 | 1.322 | 1.309 | 1.331 | 1.330 | 1.322 | 1.322 | 0.6 |
| 37) | TM | 1,2-Dichloroethane | | 0.359 | 0.434 | 0.389 | 0.390 | 0.346 | 0.383 | 8.8 |
| 38) | TM | Benzene | | 1.173 | 1.272 | 1.199 | 1.204 | 1.077 | 1.185 | 5.9 |
| 39) | I | Fluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | | 0.338 | 0.360 | 0.338 | 0.333 | 0.294 | 0.333 | 7.2 |
| 41) | TMC | 1,2-Dichloropropane | | 0.135 | 0.155 | 0.143 | 0.151 | 0.133 | 0.143 | 6.9 |
| 42) | T | Methylmethacrylate | | 0.052 | 0.057 | 0.057 | 0.058 | 0.052 | 0.055 | 5.6 |

(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11863SI.D 0.5 =I11864SI.D 1.2 =I11865SI.D
4.8 =I11866SI.D 8 =I11867SI.D 16 =I11868SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 44) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 45) | TM | Bromodichloromethan | | 0.314 | 0.355 | 0.343 | 0.341 | 0.305 | 0.331 | 6.3 |
| 46) | TM | Dibromomethane | | 0.137 | 0.130 | 0.117 | 0.121 | 0.109 | 0.123 | 9.0 |
| 47) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 48) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 49) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 50) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 51) | TM | 2-Hexanone | | 0.017 | 0.016 | 0.019 | 0.019 | 0.017 | 0.018 | 6.1 |
| 52) | TM | Methyl isobutyl ket | | 0.018 | 0.022 | 0.022 | 0.022 | 0.020 | 0.021 | 8.6 |
| 53) | TM | cis-1,3-Dichloropro | | 0.238 | 0.266 | 0.268 | 0.279 | 0.251 | 0.260 | 6.1 |
| 54) | S | Bromofluorobenzene | 0.332 | 0.334 | 0.340 | 0.342 | 0.354 | 0.343 | 0.341 | 2.2 |
| 55) | TMC | Toluene | | 0.615 | 0.697 | 0.633 | 0.639 | 0.569 | 0.631 | 7.2 |
| 56) | TM | trans-1,3-Dichlorop | | 0.175 | 0.202 | 0.208 | 0.218 | 0.196 | 0.200 | 8.0 |
| 57) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 |
| 58) | TM | 1,1,2-Trichloroetha | | 0.099 | 0.110 | 0.101 | 0.100 | 0.088 | 0.100 | 7.6 |
| 59) | TM | 1,3-Dichloropropane | | 0.203 | 0.212 | 0.197 | 0.203 | 0.181 | 0.199 | 5.8 |
| 60) | TM | Tetrachloroethene | | 0.398 | 0.477 | 0.423 | 0.420 | 0.371 | 0.418 | 9.4 |
| 61) | TM | Dibromochloromethan | | 0.227 | 0.255 | 0.247 | 0.260 | 0.229 | 0.243 | 6.1 |
| 62) | TM | 1,2-Dibromoethane | | 0.139 | 0.157 | 0.148 | 0.153 | 0.133 | 0.146 | 6.7 |
| 63) | I | d5-Chlorobenzene | ISTD | | | | | | | |
| 64) | TMP | Chlorobenzene | | 0.964 | 1.098 | 1.047 | 1.041 | 0.914 | 1.013 | 7.2 |
| 65) | TM | 1,1,1,2-Tetrachloro | | 0.365 | 0.423 | 0.418 | 0.418 | 0.372 | 0.399 | 7.1 |
| 66) | TMC | Ethylbenzene | | 1.664 | 1.846 | 1.788 | 1.757 | 1.548 | 1.721 | 6.7 |
| 67) | TM | m,p-Xylene | | 0.623 | 0.702 | 0.675 | 0.658 | 0.570 | 0.646 | 7.9 |
| 68) | TM | o-Xylene | | 0.562 | 0.659 | 0.639 | 0.616 | 0.556 | 0.606 | 7.5 |
| 69) | TM | Styrene | | 0.793 | 0.962 | 0.953 | 0.956 | 0.870 | 0.907 | 8.1 |
| 70) | TMP | Bromoform | | 0.135 | 0.159 | 0.154 | 0.156 | 0.142 | 0.149 | 6.8 |
| 71) | TM | Isopropylbenzene | | 1.666 | 1.914 | 1.837 | 1.820 | 1.617 | 1.771 | 7.0 |
| 72) | TMP | 1,1,2,2-Tetrachloro | | 0.139 | 0.167 | 0.160 | 0.154 | 0.141 | 0.152 | 7.7 |
| 73) | S | 1,2-Dichlorobenzene | 0.417 | 0.418 | 0.425 | 0.426 | 0.434 | 0.435 | 0.426 | 1.8 |
| 74) | TM | 1,2,3-Trichloroprop | | 0.100 | 0.120 | 0.113 | 0.109 | 0.104 | 0.109 | 7.1 |
| 75) | T | trans-1,4-Dichloro- | | 0.052 | 0.056 | 0.048 | 0.050 | 0.044 | 0.050 | 8.8 |
| 76) | TM | n-Propylbenzene | | 1.828 | 2.157 | 2.052 | 2.026 | 1.778 | 1.968 | 8.1 |
| 77) | TM | Bromobenzene | | 0.403 | 0.471 | 0.448 | 0.433 | 0.395 | 0.430 | 7.3 |
| 78) | TM | 1,3,5-Trimethylbenz | | 1.452 | 1.704 | 1.599 | 1.573 | 1.370 | 1.540 | 8.4 |
| 79) | TM | 2-Chlorotoluene | | 1.371 | 1.481 | 1.414 | 1.402 | 1.193 | 1.372 | 7.8 |
| 80) | TM | 4-Chlorotoluene | | 1.136 | 1.282 | 1.276 | 1.212 | 1.103 | 1.202 | 6.7 |
| 81) | TM | tert-butylbenzene | | 1.293 | 1.493 | 1.447 | 1.398 | 1.226 | 1.371 | 8.0 |
| 82) | TM | 1,2,4-Trimethylbenz | | 1.441 | 1.614 | 1.583 | 1.573 | 1.363 | 1.515 | 7.1 |
| 83) | T | No Compound | | | | | | | 0.000 | -1.0 |
| 84) | TM | sec-butylbenzene | | 1.601 | 1.891 | 1.802 | 1.785 | 1.581 | 1.732 | 7.8 |
| 85) | TM | p-isopropyltoluene | | 1.441 | 1.685 | 1.655 | 1.630 | 1.452 | 1.573 | 7.4 |

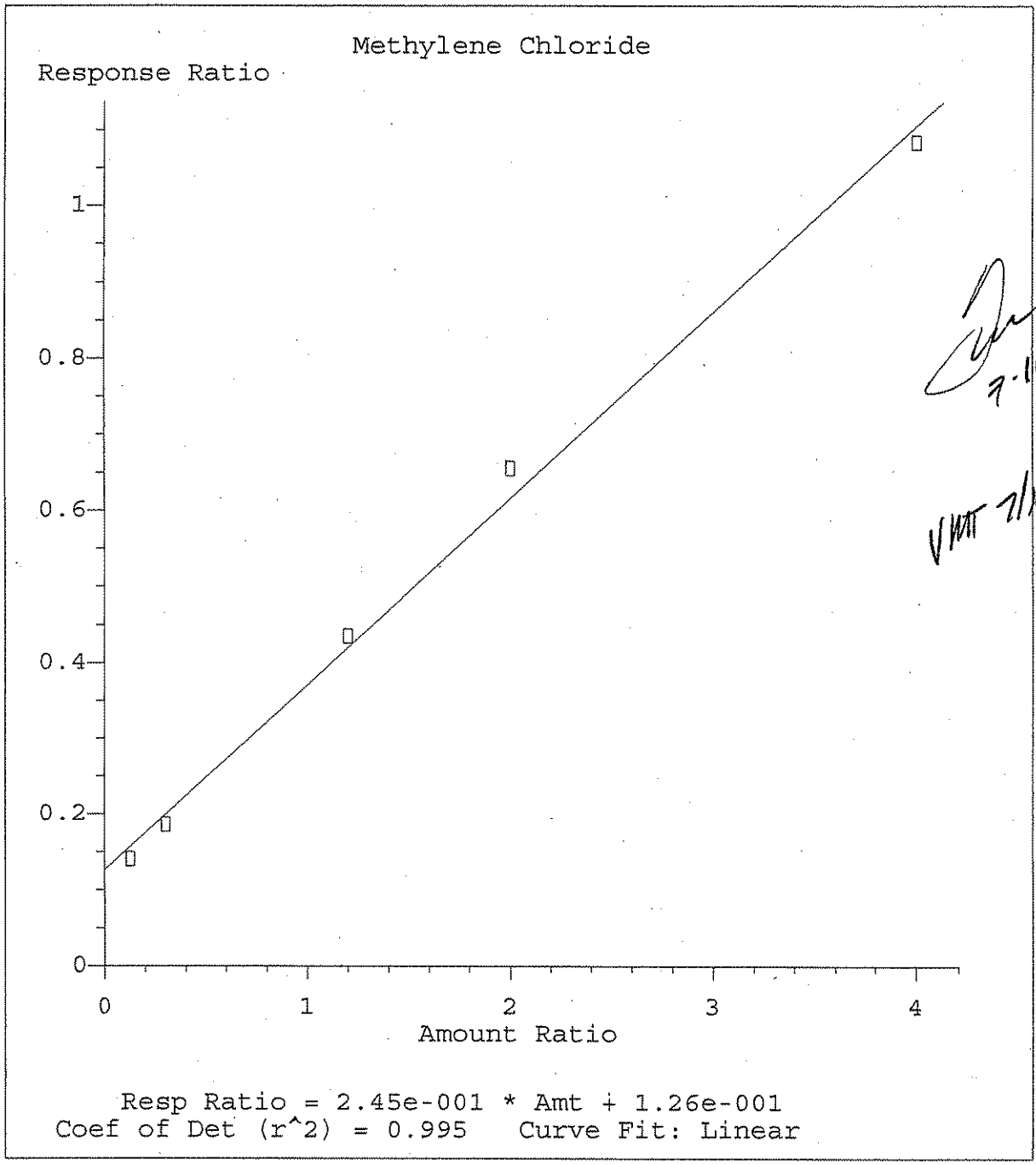
(#) = Out of Range ### Number of calibration levels exceeded format ###

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration

Calibration Files
0.1 =I11863SI.D 0.5 =I11864SI.D 1.2 =I11865SI.D
4.8 =I11866SI.D 8 =I11867SI.D 16 =I11868SI.D

| | | Compound | 0.1 | 0.5 | 1.2 | 4.8 | 8 | 16 | Avg | %R | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | | 0.827 | 0.909 | 0.888 | 0.880 | 0.782 | 0.857 | 6.0 | |
| 87) | I | 1,4-Dichlorobenzene-d | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | | | |
| 88) | TM | 1,4-Dichlorobenzene | | 1.432 | 1.636 | 1.598 | 1.546 | 1.366 | 1.516 | 7.4 | |
| 89) | TM | n-butylbenzene | | 2.114 | 2.444 | 2.477 | 2.445 | 2.130 | 2.322 | 7.9 | |
| 90) | TM | 1,2-Dichlorobenzene | | 1.238 | 1.361 | 1.315 | 1.290 | 1.150 | 1.271 | 6.3 | |
| 91) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 | |
| 92) | TM | 1,2-Dibromo-3-chlor | | 0.047 | 0.052 | 0.045 | 0.046 | 0.044 | 0.047 | 6.6 | |
| 93) | T | NO COMPOUND | | | | | | | 0.000 | -1.0 | |
| 94) | TM | 1,2,4-Trichlorobenz | | 0.452 | 0.616 | 0.702 | 0.756 | 0.712 | 0.648 | 18.5 | |
| 95) | TM | Hexachlorobutadiene | | 0.277 | 0.361 | 0.328 | 0.326 | 0.293 | 0.317 | 10.3 | |
| 96) | TM | Naphthalene | 0.452 | 0.352 | 0.598 | 0.786 | 0.877 | 0.850 | 0.652 | 33.6 | Q |
| 97) | TM | 1,2,3-Trichlorobenz | 0.379 | 0.291 | 0.438 | 0.525 | 0.577 | 0.550 | 0.460 | 24.0 | Q |
| 98) | TM | 1,3,5-Trichlorobenz | | 0.877 | 1.079 | 1.099 | 1.098 | 1.003 | 1.031 | 9.2 | |

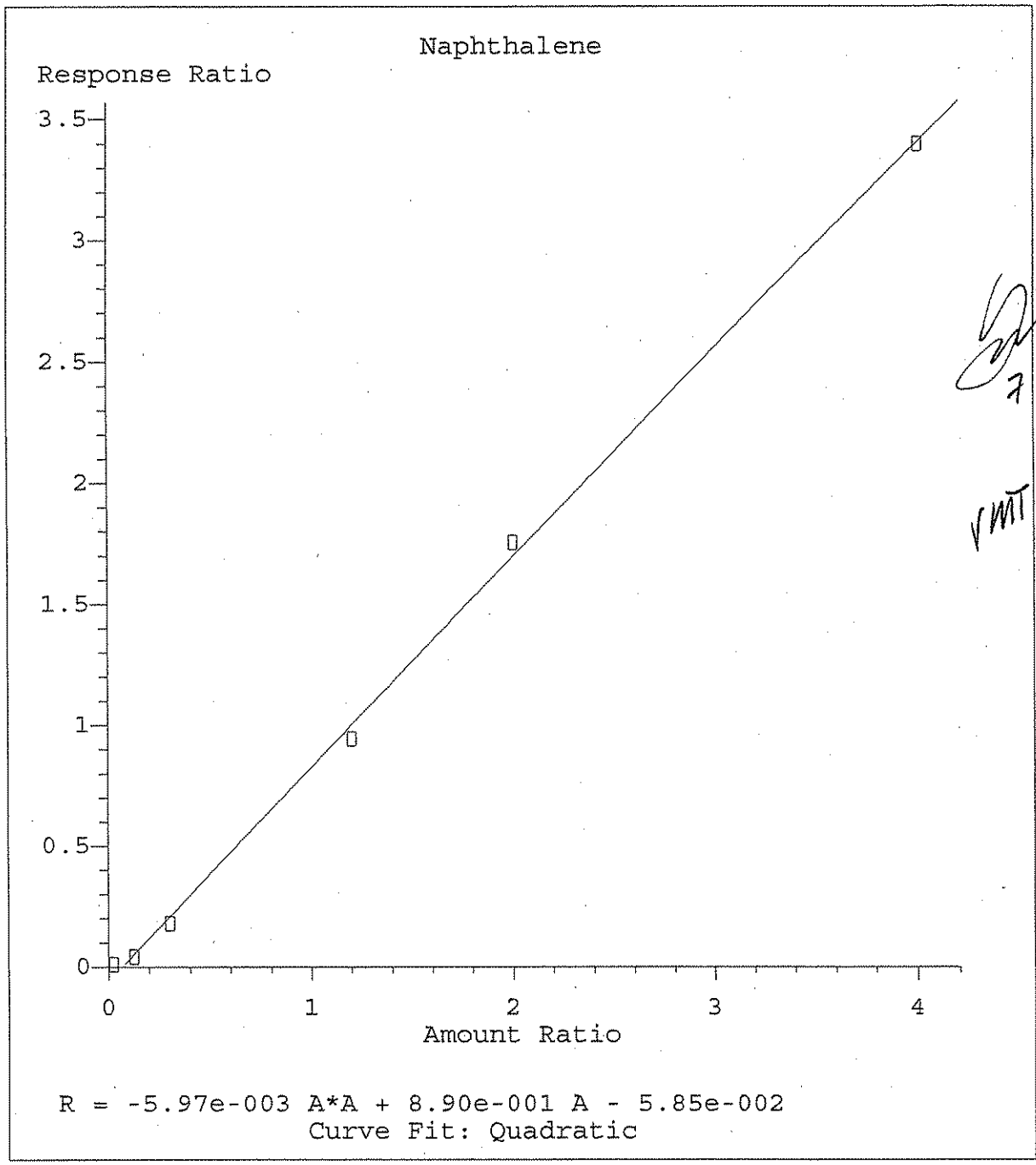
(#) = Out of Range ### Number of calibration levels exceeded format ###




7-10-03

VMT 7/10/03

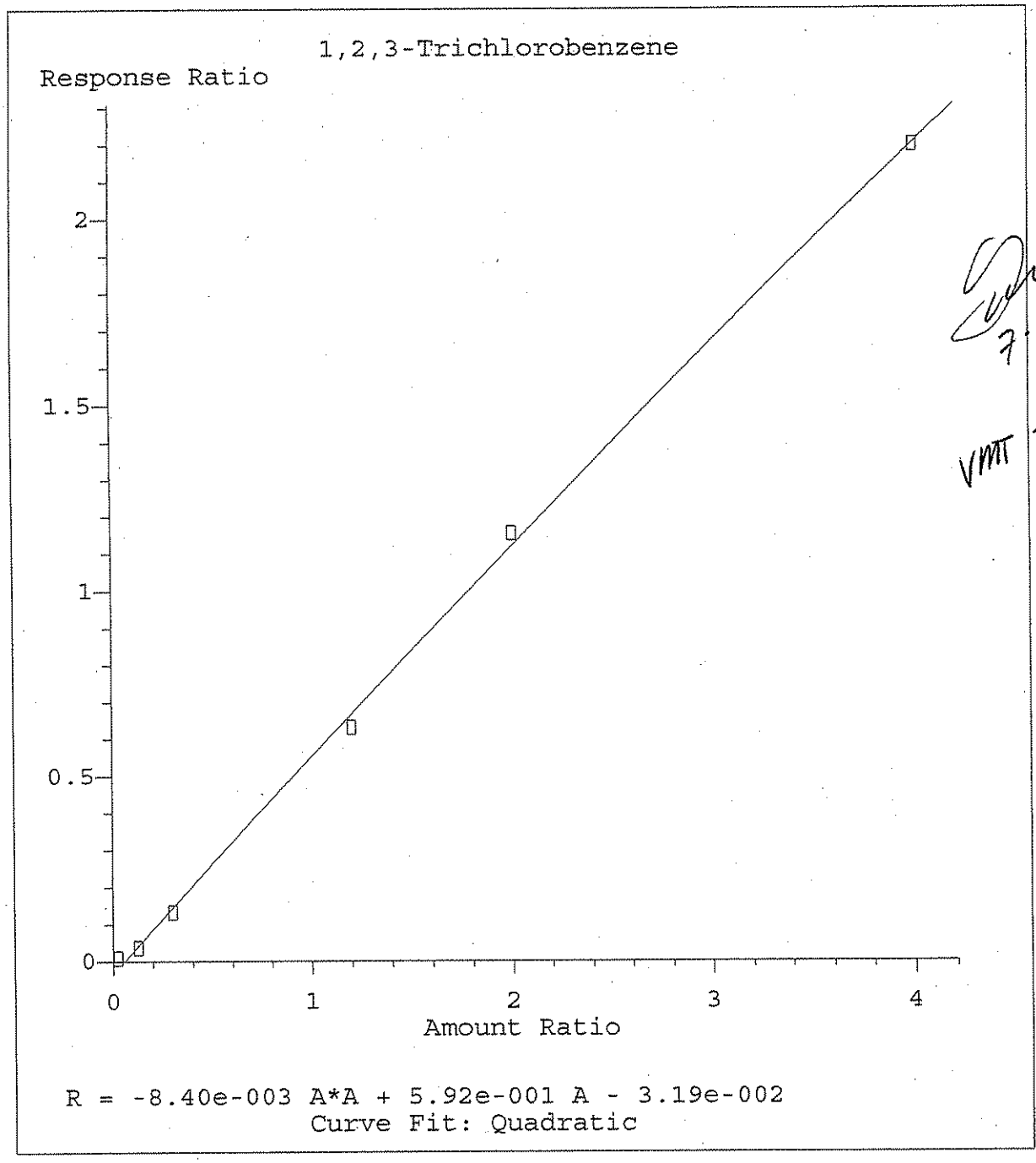
Method Name: C:\HPCHEM\1\METHODS\V507083I.M
Calibration Table Last Updated: Wed Jul 09 08:16:32 2003




7.10.03

VMT 7/10/03

Method Name: C:\HPCHEM\1\METHODS\V507083I.M
Calibration Table Last Updated: Wed Jul 09 08:20:49 2003




7.10.03

VMT 7/10/03

Method Name: C:\HPCHEM\1\METHODS\V507083I.M
Calibration Table Last Updated: Wed Jul 09 08:22:26 2003

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11863SI.D Vial: 3
Acq On : 8 Jul 2003 3:20 pm Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:23 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

7-10-03
VMT 7/10/03

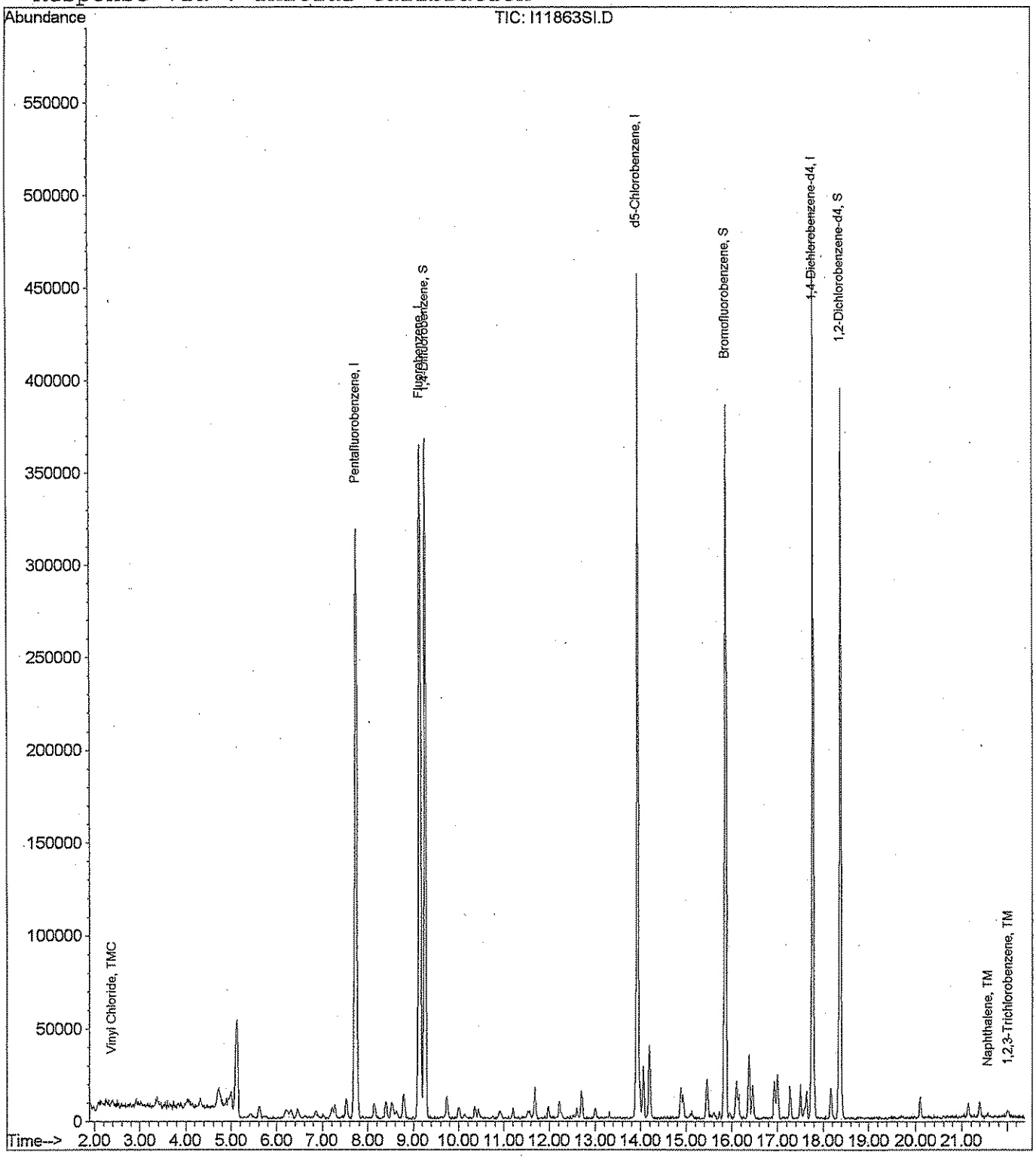
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.73 | 168 | 371633 | 4.00 | ug/L | 0.01 |
| 39) Fluorobenzene | 9.14 | 96 | 536092 | 4.00 | ug/L | 0.01 |
| 63) d5-Chlorobenzene | 13.92 | 117 | 411389 | 4.00 | ug/L | 0.01 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 209563 | 4.00 | ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 490317 | 3.43 | ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 85.75% | | | |
| 54) Bromofluorobenzene | 15.85 | 95 | 177846 | 4.35 | ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 108.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 171393 | 4.53 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 113.25% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 4) Vinyl Chloride | 2.37 | 62 | 2871 | 0.07 | ug/L | 88 |
| 96) Naphthalene | 21.58 | 128 | 2368m | 0.27 | ug/L | |
| 97) 1,2,3-Trichlorobenzene | 22.02 | 180 | 1988m | 0.08 | ug/L | |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11863SI.D Vial: 3
Acq On : 8 Jul 2003 3:20 pm Operator: JMR
Sample : 0.1PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:23 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11864SI.D
Acq On : 8 Jul 2003 3:56 pm
Sample : 0.5PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:08 2003

Vial: 4
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

7.10.03
VMT 7/10/03

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 389286 | 4.00 ug/L | 0.01 |
| 39) Fluorobenzene | 9.13 | 96 | 554207 | 4.00 ug/L | 0.01 |
| 63) d5-Chlorobenzene | 13.91 | 117 | 421678 | 4.00 ug/L | 0.01 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 222465 | 4.00 ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 514633 | 3.44 ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 86.00% | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 185295 | 4.39 ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 109.75% | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.36 | 152 | 176220 | 4.55 ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 113.75% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 36602 | 0.37 ug/L | 93 |
| 3) Chloromethane | 2.25 | 50 | 13993 | 0.23 ug/L | 100 |
| 4) Vinyl Chloride | 2.37 | 62 | 12354 | 0.28 ug/L | 86 |
| 5) Bromomethane | 2.92 | 94 | 11196 | 0.36 ug/L | 96 |
| 6) Chloroethane | 3.02 | 64 | 6767 | 0.23 ug/L | 90 |
| 7) t-Butyl alcohol | 4.53 | 59 | 987 | 1.50 ug/L # | 42 |
| 8) Trichlorofluoromethane | 3.39 | 101 | 32258 | 0.40 ug/L | 90 |
| 9) Diethyl ether | 3.84 | 74 | 4257 | 0.34 ug/L | 86 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 16085 | 0.38 ug/L # | 90 |
| 11) Acrolein | 4.03 | 56 | 2065 | 0.83 ug/L # | 76 |
| 12) Acetone | 4.14 | 43 | 6654 | 1.54 ug/L | 91 |
| 13) 1,1-Dichloroethene | 4.32 | 96 | 12061 | 0.36 ug/L # | 56 |
| 14) Methyl iodide | 4.80 | 142 | 12166 | 0.25 ug/L | 88 |
| 15) Di-isopropyl ether | 6.20 | 45 | 24970 | 0.15 ug/L # | 65 |
| 16) Methylene Chloride | 5.12 | 84 | 54416 | 0.02 ug/L # | 58 |
| 17) Carbon Disulfide | 5.09 | 76 | 20254 | 0.21 ug/L | 100 |
| 18) Acrylonitrile | 5.33 | 53 | 799 | 0.11 ug/L # | 40 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 16192 | 0.31 ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 18201 | 0.36 ug/L # | 64 |
| 21) 1,1-Dichloroethane | 6.31 | 63 | 23074 | 0.23 ug/L | 95 |
| 22) Vinyl acetate | 6.34 | 86 | 1128 | 0.32 ug/L # | 1 |
| 23) Methyl ethyl ketone | 7.03 | 72 | 2325 | 1.52 ug/L # | 22 |
| 24) Ethyl t-butyl ether | 6.86 | 59 | 17767 | 0.22 ug/L # | 78 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 22670 | 0.34 ug/L | 91 |
| 26) cis-1,2-Dichloroethene | 7.28 | 96 | 18148 | 0.36 ug/L # | 63 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 13997 | 0.26 ug/L | 85 |
| 29) Chloroform | 7.53 | 83 | 41333 | 0.39 ug/L | 93 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11864SI.D
Acq On : 8 Jul 2003 3:56 pm
Sample : 0.5PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:08 2003

Vial: 4
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.77 | 128 | 8370 | 0.46 ug/L # | 50 |
| 31) Tetrahydrofuran | 7.89 | 71 | 215m | 0.13 ug/L | |
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 36706 | 0.39 ug/L | 91 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 25213 | 0.31 ug/L | 93 |
| 35) Carbon Tetrachloride | 8.54 | 119 | 36510 | 0.44 ug/L | 85 |
| 37) 1,2-Dichloroethane | 8.78 | 62 | 17447 | 0.29 ug/L | 98 |
| 38) Benzene | 8.80 | 78 | 57085 | 0.29 ug/L | 99 |
| 40) Trichloroethene | 9.74 | 95 | 23437 | 0.55 ug/L # | 77 |
| 41) 1,2-Dichloropropane | 10.01 | 63 | 9330 | 0.26 ug/L | 71 |
| 42) Methylmethacrylate | 10.13 | 69 | 3568 | 0.33 ug/L # | 74 |
| 45) Bromodichloromethane | 10.35 | 83 | 21726 | 0.45 ug/L | 89 |
| 46) Dibromomethane | 10.42 | 93 | 9519 | 0.59 ug/L # | 88 |
| 51) 2-Hexanone | 12.26 | 58 | 5898 | 1.34 ug/L # | 69 |
| 52) Methyl isobutyl ketone | 10.93 | 58 | 6120 | 1.20 ug/L # | 43 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 16514 | 0.36 ug/L | 78 |
| 55) Toluene | 11.70 | 92 | 42605 | 0.49 ug/L | 92 |
| 56) trans-1,3-Dichloropropene | 11.97 | 75 | 12134 | 0.39 ug/L | 97 |
| 58) 1,1,2-Trichloroethane | 12.22 | 83 | 6849 | 0.43 ug/L # | 83 |
| 59) 1,3-Dichloropropane | 12.60 | 76 | 14035 | 0.42 ug/L | 80 |
| 60) Tetrachloroethene | 12.71 | 166 | 27547 | 0.68 ug/L | 93 |
| 61) Dibromochloromethane | 13.00 | 129 | 15725 | 0.63 ug/L | 92 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 9614 | 0.58 ug/L | 98 |
| 64) Chlorobenzene | 13.97 | 112 | 50814 | 0.50 ug/L # | 75 |
| 65) 1,1,1,2-Tetrachloroethane | 14.05 | 131 | 19240 | 0.52 ug/L | 92 |
| 66) Ethylbenzene | 14.07 | 91 | 87710 | 0.43 ug/L | 96 |
| 67) m,p-Xylene | 14.19 | 106 | 65689 | 0.95 ug/L | 99 |
| 68) o-Xylene | 14.88 | 106 | 29612 | 0.45 ug/L | 98 |
| 69) Styrene | 14.93 | 104 | 41781 | 0.41 ug/L | 98 |
| 70) Bromoform | 15.45 | 173 | 7141 | 0.50 ug/L | 96 |
| 71) Isopropylbenzene | 15.46 | 105 | 87810 | 0.47 ug/L | 94 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 7352 | 0.34 ug/L | 89 |
| 74) 1,2,3-Trichloropropane | 15.95 | 75 | 5256 | 0.32 ug/L | 93 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 2760 | 0.32 ug/L | 88 |
| 76) n-Propylbenzene | 16.10 | 91 | 96374 | 0.41 ug/L | 89 |
| 77) Bromobenzene | 16.15 | 156 | 21254 | 0.57 ug/L # | 73 |
| 78) 1,3,5-Trimethylbenzene | 16.36 | 105 | 76559 | 0.50 ug/L | 97 |
| 79) 2-Chlorotoluene | 16.38 | 91 | 72279 | 0.47 ug/L | 74 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 59878 | 0.44 ug/L | 90 |
| 81) tert-butylbenzene | 16.93 | 119 | 68141 | 0.53 ug/L | 81 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 75943 | 0.50 ug/L | 89 |
| 84) sec-butylbenzene | 17.27 | 105 | 84386 | 0.45 ug/L | 90 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11864SI.D Vial: 4
Acq On : 8 Jul 2003 3:56 pm Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:08 2003 Quant Results File: V507083I.

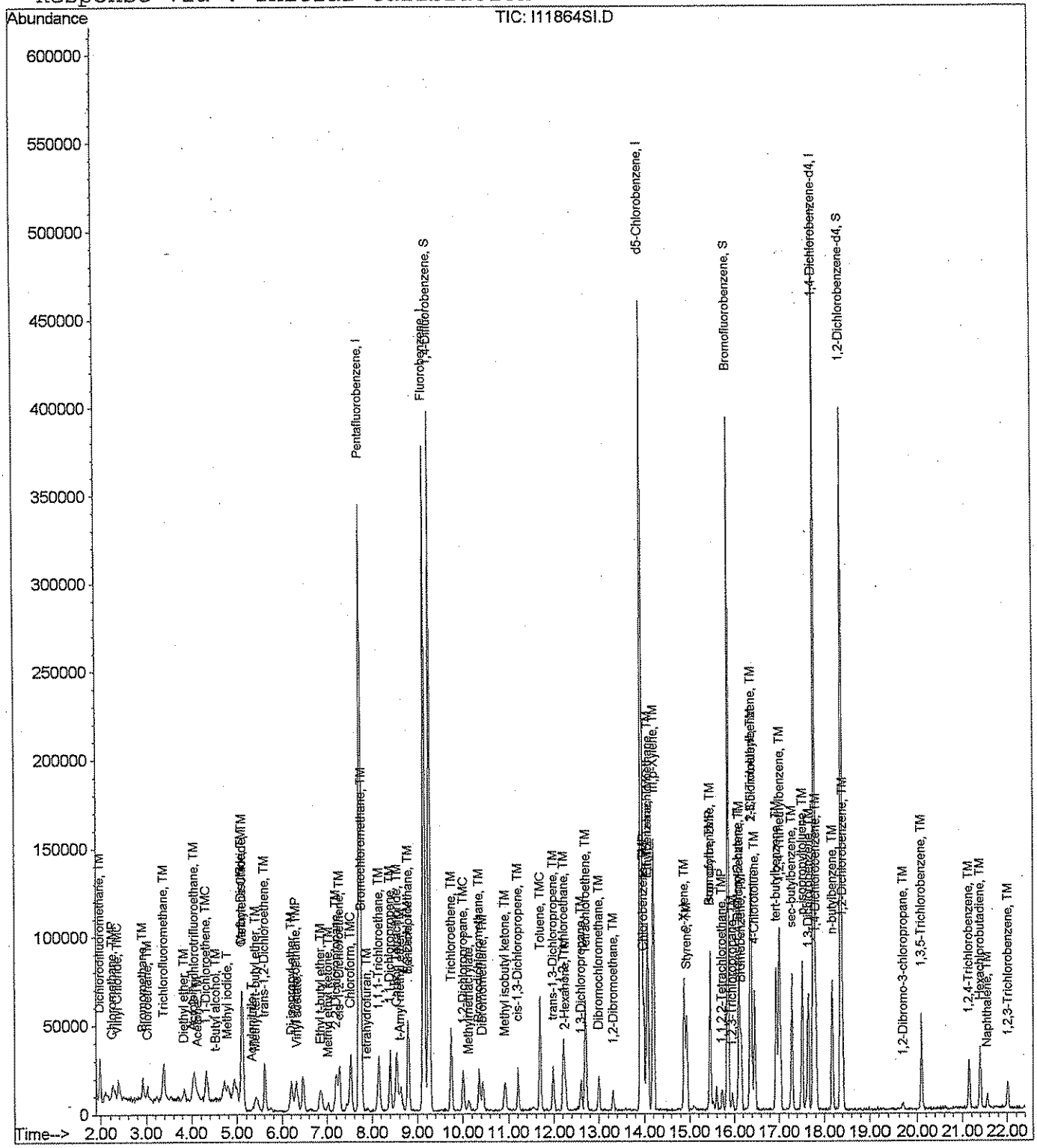
Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.50 | 119 | 75974 | 0.51 | ug/L | | 97 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 43616 | 0.59 | ug/L | | 91 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 39815 | 0.50 | ug/L | | 94 |
| 89) n-butylbenzene | 18.17 | 91 | 58773 | 0.35 | ug/L | | 89 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 34438 | 0.51 | ug/L | | 89 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 1312 | 0.39 | ug/L | # | 69 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 12578 | 0.34 | ug/L | | 96 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 7713 | 0.33 | ug/L | | 87 |
| 96) Naphthalene | 21.56 | 128 | 9786 | 0.44 | ug/L | | 95 |
| 97) 1,2,3-Trichlorobenzene | 22.03 | 180 | 8096 | 0.30 | ug/L | | 81 |
| 98) 1,3,5-Trichlorobenzene | 20.09 | 180 | 24375 | 0.40 | ug/L | | 96 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11864SI.D Vial: 4
Acq On : 8 Jul 2003 3:56 pm Operator: JMR
Sample : 0.5PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:08 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11865SI.D
Acq On : 8 Jul 2003 4:31 pm
Sample : 1.2PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:09 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

7.10.03
VMT 7/10/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 380936 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 534160 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.92 | 117 | 410392 | 4.00 | ug/L | 0.02 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 221583 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 498517 | 3.40 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 85.00% | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 181826 | 4.47 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 111.75% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 174391 | 4.63 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 115.75% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 87791 | 0.91 | ug/L | 97 |
| 3) Chloromethane | 2.25 | 50 | 33166 | 0.56 | ug/L | 94 |
| 4) Vinyl Chloride | 2.37 | 62 | 29068 | 0.68 | ug/L | 92 |
| 5) Bromomethane | 2.92 | 94 | 27122 | 0.88 | ug/L | 98 |
| 6) Chloroethane | 3.02 | 64 | 17832 | 0.63 | ug/L | 87 |
| 7) t-Butyl alcohol | 4.51 | 59 | 2988m | 4.64 | ug/L | |
| 8) Trichlorofluoromethane | 3.37 | 101 | 77819 | 1.00 | ug/L | 100 |
| 9) Diethyl ether | 3.85 | 74 | 9826 | 0.81 | ug/L # | 76 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 40504 | 0.98 | ug/L # | 90 |
| 11) Acrolein | 4.02 | 56 | 3937 | 1.61 | ug/L | 85 |
| 12) Acetone | 4.14 | 43 | 12230 | 2.88 | ug/L # | 89 |
| 13) 1,1-Dichloroethene | 4.32 | 96 | 31434 | 0.95 | ug/L # | 65 |
| 14) Methyl iodide | 4.80 | 142 | 36423 | 0.76 | ug/L | 95 |
| 15) Di-isopropyl ether | 6.18 | 45 | 63496 | 0.39 | ug/L # | 55 |
| 16) Methylene Chloride | 5.12 | 84 | 70660 | 0.38 | ug/L # | 55 |
| 17) Carbon Disulfide | 5.09 | 76 | 49029 | 0.52 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 2377 | 0.33 | ug/L # | 39 |
| 19) Methyl-tert-butyl ether | 5.41 | 73 | 39345 | 0.76 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 47076 | 0.95 | ug/L # | 66 |
| 21) 1,1-Dichloroethane | 6.30 | 63 | 59523 | 0.60 | ug/L | 92 |
| 22) Vinyl acetate | 6.35 | 86 | 2818 | 0.82 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 5460 | 3.65 | ug/L # | 30 |
| 24) Ethyl t-butyl ether | 6.85 | 59 | 47837 | 0.61 | ug/L # | 83 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 59260 | 0.92 | ug/L | 93 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 46601 | 0.94 | ug/L # | 63 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 37566 | 0.71 | ug/L # | 80 |
| 29) Chloroform | 7.52 | 83 | 95795 | 0.93 | ug/L | 94 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11865SI.D
Acq On : 8 Jul 2003 4:31 pm
Sample : 1.2PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:09 2003

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.77 | 128 | 22158 | 1.24 ug/L # | 49 |
| 31) Tetrahydrofuran | 7.87 | 71 | 1250 | 0.78 ug/L # | 48 |
| 32) 1,1,1-Trichloroethane | 8.15 | 97 | 96084 | 1.05 ug/L | 86 |
| 34) 1,1-Dichloropropene | 8.40 | 75 | 64976 | 0.81 ug/L | 87 |
| 35) Carbon Tetrachloride | 8.54 | 119 | 99869 | 1.24 ug/L | 97 |
| 37) 1,2-Dichloroethane | 8.78 | 62 | 49574 | 0.85 ug/L | 99 |
| 38) Benzene | 8.80 | 78 | 145389 | 0.75 ug/L | 87 |
| 40) Trichloroethene | 9.74 | 95 | 57647 | 1.40 ug/L # | 74 |
| 41) 1,2-Dichloropropane | 10.02 | 63 | 24884 | 0.73 ug/L | 96 |
| 42) Methylmethacrylate | 10.13 | 69 | 9151 | 0.89 ug/L # | 64 |
| 45) Bromodichloromethane | 10.35 | 83 | 56830 | 1.23 ug/L | 99 |
| 46) Dibromomethane | 10.43 | 93 | 20801 | 1.34 ug/L # | 85 |
| 51) 2-Hexanone | 12.26 | 58 | 13026 | 3.08 ug/L | 99 |
| 52) Methyl isobutyl ketone | 10.92 | 58 | 17568 | 3.58 ug/L # | 62 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 42647 | 0.97 ug/L | 81 |
| 55) Toluene | 11.69 | 92 | 111631 | 1.34 ug/L | 94 |
| 56) trans-1,3-Dichloropropene | 11.98 | 75 | 32381 | 1.07 ug/L | 98 |
| 58) 1,1,2-Trichloroethane | 12.22 | 83 | 17617 | 1.15 ug/L | 90 |
| 59) 1,3-Dichloropropane | 12.61 | 76 | 34014 | 1.06 ug/L | 89 |
| 60) Tetrachloroethene | 12.71 | 166 | 76512 | 1.97 ug/L | 92 |
| 61) Dibromochloromethane | 12.99 | 129 | 40843 | 1.70 ug/L | 87 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 25137 | 1.58 ug/L | 90 |
| 64) Chlorobenzene | 13.98 | 112 | 135166 | 1.36 ug/L # | 81 |
| 65) 1,1,1,2-Tetrachloroethane | 14.06 | 131 | 52088 | 1.44 ug/L | 91 |
| 66) Ethylbenzene | 14.07 | 91 | 227234 | 1.14 ug/L | 95 |
| 67) m,p-Xylene | 14.20 | 106 | 172903 | 2.58 ug/L | 94 |
| 68) o-Xylene | 14.88 | 106 | 81101 | 1.27 ug/L | 91 |
| 69) Styrene | 14.94 | 104 | 118500 | 1.19 ug/L | 88 |
| 70) Bromoform | 15.45 | 173 | 19627 | 1.41 ug/L | 99 |
| 71) Isopropylbenzene | 15.46 | 105 | 235612 | 1.29 ug/L | 94 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 20504 | 0.96 ug/L # | 82 |
| 74) 1,2,3-Trichloropropane | 15.96 | 75 | 14742 | 0.93 ug/L | 97 |
| 75) trans-1,4-Dichloro-2-buten | 16.07 | 53 | 6837 | 0.83 ug/L | 87 |
| 76) n-Propylbenzene | 16.10 | 91 | 265534 | 1.17 ug/L | 89 |
| 77) Bromobenzene | 16.15 | 156 | 57935 | 1.59 ug/L # | 68 |
| 78) 1,3,5-Trimethylbenzene | 16.37 | 105 | 209769 | 1.40 ug/L | 96 |
| 79) 2-Chlorotoluene | 16.38 | 91 | 182358 | 1.21 ug/L | 83 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 157798 | 1.18 ug/L | 88 |
| 81) tert-butylbenzene | 16.94 | 119 | 183803 | 1.46 ug/L | 85 |
| 82) 1,2,4-Trimethylbenzene | 16.99 | 105 | 198728 | 1.34 ug/L | 94 |
| 84) sec-butylbenzene | 17.28 | 105 | 232828 | 1.29 ug/L | 94 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11865SI.D Vial: 5
Acq On : 8 Jul 2003 4:31 pm Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:09 2003 Quant Results File: V507083I.

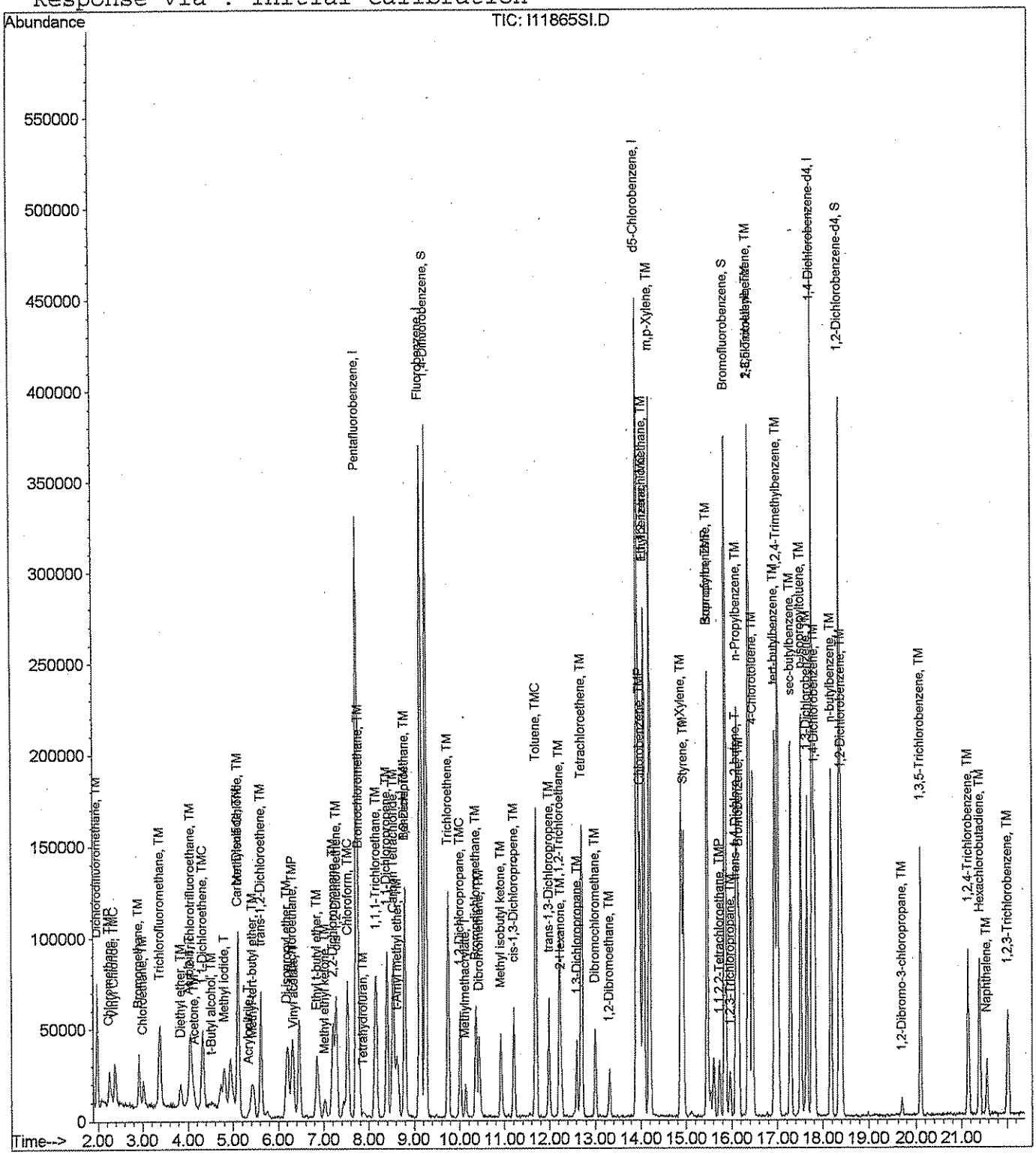
Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.51 | 119 | 207451 | 1.42 ug/L | 91 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 111867 | 1.55 ug/L | 97 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 108777 | 1.36 ug/L | 92 |
| 89) n-butylbenzene | 18.17 | 91 | 162473 | 0.98 ug/L | 91 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 90459 | 1.34 ug/L | 91 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 3454 | 1.03 ug/L # | 36 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 40980 | 1.13 ug/L | 99 |
| 95) Hexachlorobutadiene | 21.39 | 225 | 23983 | 1.04 ug/L | 84 |
| 96) Naphthalene | 21.56 | 128 | 39740 | 1.15 ug/L | 98 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 29148 | 1.07 ug/L | 83 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 71727 | 1.18 ug/L | 90 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11865SI.D Vial: 5
Acq On : 8 Jul 2003 4:31 pm Operator: JMR
Sample : 1.2PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:09 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11866SI.D Vial: 6
Acq On : 8 Jul 2003 5:07 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration
DataAcq Meth : V5070831

7.10.03
VMT 7/10/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 389022 | 4.00 | ug/L | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 567452 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.92 | 117 | 423331 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.77 | 152 | 227795 | 4.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 517620 | 4.03 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.75% | | | |
| 54) Bromofluorobenzene | 15.85 | 95 | 193905 | 4.01 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.25% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 180300 | 4.00 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 347552 | 4.86 | ug/L | 96 |
| 3) Chloromethane | 2.25 | 50 | 129609 | 4.92 | ug/L | 95 |
| 4) Vinyl Chloride | 2.37 | 62 | 100927 | 4.40 | ug/L | 87 |
| 5) Bromomethane | 2.92 | 94 | 98643 | 4.55 | ug/L | 83 |
| 6) Chloroethane | 3.02 | 64 | 71445 | 4.92 | ug/L | 94 |
| 7) t-Butyl alcohol | 4.52 | 59 | 8548 | 22.19 | ug/L # | 70 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 306992 | 4.81 | ug/L | 100 |
| 9) Diethyl ether | 3.85 | 74 | 36672 | 4.78 | ug/L | 98 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.04 | 101 | 162356 | 4.99 | ug/L | 96 |
| 11) Acrolein | 4.01 | 56 | 14193 | 22.53 | ug/L | 98 |
| 12) Acetone | 4.15 | 43 | 42348 | 23.69 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 127469 | 5.03 | ug/L | 99 |
| 14) Methyl iodide | 4.80 | 142 | 186552 | 5.31 | ug/L | 99 |
| 15) Di-isopropyl ether | 6.19 | 45 | 256158 | 4.90 | ug/L | 98 |
| 16) Methylene Chloride | 5.11 | 84 | 169258 | 5.04 | ug/L | 92 |
| 17) Carbon Disulfide | 5.09 | 76 | 207480 | 4.91 | ug/L | 100 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 158593 | 4.87 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 182932 | 4.87 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 6.31 | 63 | 236967 | 4.92 | ug/L | 91 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 19213 | 22.48 | ug/L | 87 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 189649 | 4.92 | ug/L | 99 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 231976 | 4.91 | ug/L | 94 |
| 26) cis-1,2-Dichloroethene | 7.28 | 96 | 186154 | 4.91 | ug/L | 86 |
| 27) t-Amyl methyl ether | 8.62 | 73 | 148462 | 4.89 | ug/L | 97 |
| 29) Chloroform | 7.52 | 83 | 371595 | 4.80 | ug/L | 96 |
| 30) Bromochloromethane | 7.77 | 128 | 85735 | 4.92 | ug/L | 95 |
| 31) Tetrahydrofuran | 7.87 | 71 | 4384 | 4.97 | ug/L | 93 |

(#) = qualifier out of range (m) = manual integration
I11866SI.D V507083I.M Wed Jul 09 09:44:55 2003 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11866SI.D Vial: 6
Acq On : 8 Jul 2003 5:07 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 32) 1,1,1-Trichloroethane | 8.14 | 97 | 382732 | 4.91 | ug/L | | 95 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 248944 | 4.86 | ug/L | | 99 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 405138 | 5.00 | ug/L | | 94 |
| 37) 1,2-Dichloroethane | 8.78 | 62 | 181577 | 4.87 | ug/L | | 99 |
| 38) Benzene | 8.80 | 78 | 559760 | 4.86 | ug/L | | 95 |
| 40) Trichloroethene | 9.74 | 95 | 230320 | 4.88 | ug/L | | 96 |
| 41) 1,2-Dichloropropane | 10.01 | 63 | 97227 | 4.78 | ug/L | | 93 |
| 45) Bromodichloromethane | 10.36 | 83 | 233408 | 4.96 | ug/L | | 97 |
| 46) Dibromomethane | 10.43 | 93 | 79579 | 4.57 | ug/L | | 94 |
| 51) 2-Hexanone | 12.26 | 58 | 64019 | 25.61 | ug/L | | 77 |
| 52) Methyl isobutyl ketone | 10.91 | 58 | 73710 | 25.24 | ug/L | | 99 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 182776 | 4.95 | ug/L | | 99 |
| 55) Toluene | 11.69 | 92 | 431259 | 4.82 | ug/L | | 94 |
| 56) trans-1,3-Dichloropropene | 11.98 | 75 | 141472 | 4.99 | ug/L | | 93 |
| 58) 1,1,2-Trichloroethane | 12.21 | 83 | 68586 | 4.86 | ug/L | | 94 |
| 59) 1,3-Dichloropropane | 12.60 | 76 | 133833 | 4.74 | ug/L | | 81 |
| 60) Tetrachloroethene | 12.71 | 166 | 288039 | 4.86 | ug/L | | 98 |
| 61) Dibromochloromethane | 13.00 | 129 | 167965 | 4.86 | ug/L | | 98 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 100980 | 4.88 | ug/L | | 91 |
| 64) Chlorobenzene | 13.98 | 112 | 531704 | 4.96 | ug/L | | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.05 | 131 | 212329 | 5.03 | ug/L | | 89 |
| 66) Ethylbenzene | 14.07 | 91 | 908351 | 4.99 | ug/L | | 99 |
| 67) m,p-Xylene | 14.20 | 106 | 685917 | 10.04 | ug/L | | 95 |
| 68) o-Xylene | 14.88 | 106 | 324391 | 5.06 | ug/L | | 98 |
| 69) Styrene | 14.94 | 104 | 484199 | 5.05 | ug/L | | 97 |
| 70) Bromoform | 15.45 | 173 | 78391 | 4.96 | ug/L | | 86 |
| 71) Isopropylbenzene | 15.46 | 105 | 933214 | 4.98 | ug/L | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 81454 | 5.05 | ug/L | | 92 |
| 74) 1,2,3-Trichloropropane | 15.96 | 75 | 57247 | 4.96 | ug/L | | 92 |
| 75) trans-1,4-Dichloro-2-buten | 16.08 | 53 | 24210 | 4.59 | ug/L | # | 82 |
| 76) n-Propylbenzene | 16.10 | 91 | 1042596 | 5.01 | ug/L | | 99 |
| 77) Bromobenzene | 16.15 | 156 | 227783 | 5.01 | ug/L | | 95 |
| 78) 1,3,5-Trimethylbenzene | 16.37 | 105 | 812444 | 4.99 | ug/L | | 100 |
| 79) 2-Chlorotoluene | 16.38 | 91 | 718525 | 4.95 | ug/L | | 99 |
| 80) 4-Chlorotoluene | 16.45 | 91 | 648005 | 5.10 | ug/L | | 99 |
| 81) tert-butylbenzene | 16.94 | 119 | 734969 | 5.06 | ug/L | | 99 |
| 82) 1,2,4-Trimethylbenzene | 17.00 | 105 | 804037 | 5.02 | ug/L | | 96 |
| 84) sec-butylbenzene | 17.28 | 105 | 915612 | 4.99 | ug/L | | 94 |
| 85) p-isopropyltoluene | 17.51 | 119 | 840671 | 5.05 | ug/L | | 96 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 450976 | 4.97 | ug/L | | 98 |
| 88) 1,4-Dichlorobenzene | 17.81 | 146 | 436792 | 5.06 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11866SI.D Vial: 6
Acq On : 8 Jul 2003 5:07 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

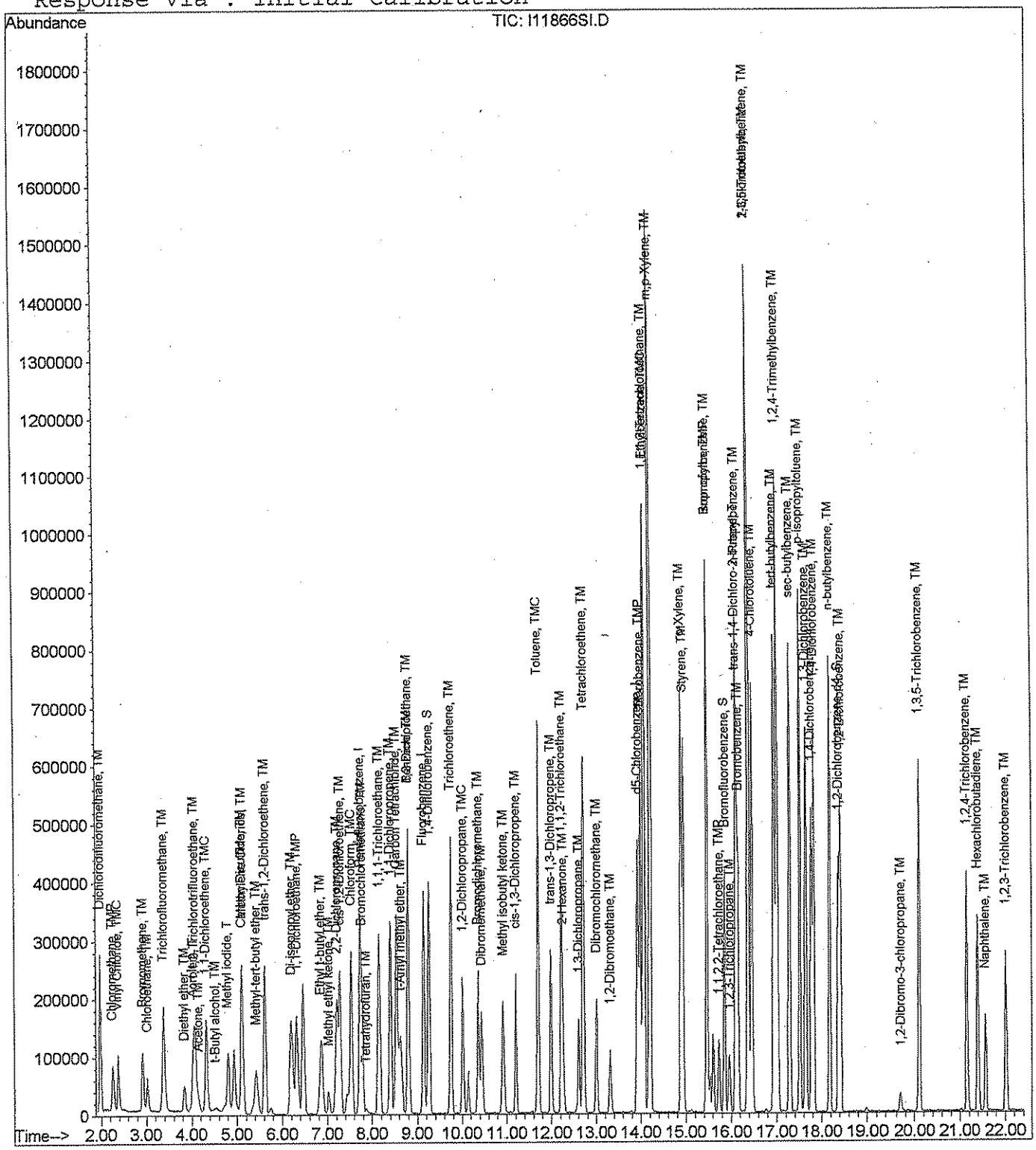
Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:23:44 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 89) n-butylbenzene | 18.17 | 91 | 677112 | 5.12 | ug/L | | 98 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 359404 | 4.97 | ug/L | | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 12378 | 4.64 | ug/L | # | 77 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 191959 | 5.20 | ug/L | | 97 |
| 95) Hexachlorobutadiene | 21.40 | 225 | 89689 | 4.97 | ug/L | | 85 |
| 96) Naphthalene | 21.56 | 128 | 214932 | 4.54 | ug/L | | 96 |
| 97) 1,2,3-Trichlorobenzene | 22.01 | 180 | 143495 | 4.54 | ug/L | | 88 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 300534 | 5.12 | ug/L | | 84 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11866SI.D Vial: 6
Acq On : 8 Jul 2003 5:07 pm Operator: JMR
Sample : 4.8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11867SI.D Vial: 7
Acq On : 8 Jul 2003 5:42 pm Operator: JMR
Sample : 8PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

7.10.03
VMT 7/10/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.72 | 168 | 390526 | 4.00 | ug/L | | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 566503 | 4.00 | ug/L | | 0.00 |
| 63) d5-Chlorobenzene | 13.92 | 117 | 432334 | 4.00 | ug/L | | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.76 | 152 | 235314 | 4.00 | ug/L | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 519450 | 4.02 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.50% | | | | |
| 54) Bromofluorobenzene | 15.84 | 95 | 200451 | 4.15 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 103.75% | | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 187635 | 4.08 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 102.00% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 584175 | 8.14 | ug/L | | 97 |
| 3) Chloromethane | 2.25 | 50 | 201852 | 7.63 | ug/L | | 91 |
| 4) Vinyl Chloride | 2.37 | 62 | 158027 | 6.86 | ug/L | | 92 |
| 5) Bromomethane | 2.91 | 94 | 174871 | 8.04 | ug/L | | 84 |
| 6) Chloroethane | 3.02 | 64 | 119817 | 8.22 | ug/L | | 92 |
| 7) t-Butyl alcohol | 4.52 | 59 | 13849 | 35.81 | ug/L | # | 80 |
| 8) Trichlorofluoromethane | 3.38 | 101 | 521658 | 8.15 | ug/L | | 97 |
| 9) Diethyl ether | 3.83 | 74 | 59505 | 7.73 | ug/L | | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 260531 | 7.97 | ug/L | | 99 |
| 11) Acrolein | 4.02 | 56 | 23159 | 36.63 | ug/L | | 90 |
| 12) Acetone | 4.14 | 43 | 72643 | 41.82 | ug/L | # | 89 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 209552 | 8.23 | ug/L | | 93 |
| 14) Methyl iodide | 4.80 | 142 | 337385 | 9.56 | ug/L | | 98 |
| 15) Di-isopropyl ether | 6.19 | 45 | 435525 | 8.30 | ug/L | | 98 |
| 16) Methylene Chloride | 5.12 | 84 | 255870 | 8.64 | ug/L | | 80 |
| 17) Carbon Disulfide | 5.09 | 76 | 363278 | 8.57 | ug/L | | 100 |
| 19) Methyl-tert-butyl ether | 5.43 | 73 | 271135 | 8.30 | ug/L | | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 314418 | 8.34 | ug/L | | 95 |
| 21) 1,1-Dichloroethane | 6.31 | 63 | 399848 | 8.27 | ug/L | | 94 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 33563 | 39.11 | ug/L | | 86 |
| 24) Ethyl t-butyl ether | 6.86 | 59 | 323330 | 8.35 | ug/L | | 99 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 393358 | 8.29 | ug/L | | 91 |
| 26) cis-1,2-Dichloroethene | 7.28 | 96 | 320853 | 8.43 | ug/L | | 89 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 256920 | 8.43 | ug/L | | 98 |
| 29) Chloroform | 7.53 | 83 | 617758 | 7.94 | ug/L | | 98 |
| 30) Bromochloromethane | 7.77 | 128 | 141624 | 8.10 | ug/L | | 87 |
| 31) Tetrahydrofuran | 7.87 | 71 | 6615 | 7.48 | ug/L | | 90 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11867SI.D
Acq On : 8 Jul 2003 5:42 pm
Sample : 8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 7
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 32) 1,1,1-Trichloroethane | 8.15 | 97 | 660138 | 8.43 ug/L | 97 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 417946 | 8.14 ug/L | 98 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 692524 | 8.52 ug/L | 92 |
| 37) 1,2-Dichloroethane | 8.78 | 62 | 304797 | 8.14 ug/L | 97 |
| 38) Benzene | 8.80 | 78 | 940439 | 8.13 ug/L | 96 |
| 40) Trichloroethene | 9.74 | 95 | 377198 | 8.01 ug/L | 95 |
| 41) 1,2-Dichloropropane | 10.01 | 63 | 171459 | 8.44 ug/L | 91 |
| 45) Bromodichloromethane | 10.36 | 83 | 386801 | 8.24 ug/L | 91 |
| 46) Dibromomethane | 10.43 | 93 | 136533 | 7.85 ug/L | 97 |
| 51) 2-Hexanone | 12.25 | 58 | 105597 | 42.31 ug/L | 88 |
| 52) Methyl isobutyl ketone | 10.92 | 58 | 122028 | 41.85 ug/L | 94 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 315723 | 8.56 ug/L | 95 |
| 55) Toluene | 11.70 | 92 | 724342 | 8.11 ug/L | 93 |
| 56) trans-1,3-Dichloropropene | 11.98 | 75 | 247302 | 8.74 ug/L | 89 |
| 58) 1,1,2-Trichloroethane | 12.22 | 83 | 113085 | 8.02 ug/L | 95 |
| 59) 1,3-Dichloropropane | 12.60 | 76 | 229879 | 8.16 ug/L | 90 |
| 60) Tetrachloroethene | 12.71 | 166 | 475516 | 8.04 ug/L | 100 |
| 61) Dibromochloromethane | 13.01 | 129 | 294355 | 8.54 ug/L | 95 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 173100 | 8.37 ug/L | 84 |
| 64) Chlorobenzene | 13.98 | 112 | 899960 | 8.22 ug/L | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.05 | 131 | 361541 | 8.38 ug/L | 93 |
| 66) Ethylbenzene | 14.07 | 91 | 1519515 | 8.17 ug/L | 100 |
| 67) m,p-Xylene | 14.20 | 106 | 1138025 | 16.31 ug/L | 98 |
| 68) o-Xylene | 14.88 | 106 | 532340 | 8.13 ug/L | 100 |
| 69) Styrene | 14.94 | 104 | 826228 | 8.43 ug/L | 99 |
| 70) Bromoform | 15.45 | 173 | 135007 | 8.36 ug/L | 96 |
| 71) Isopropylbenzene | 15.46 | 105 | 1573729 | 8.22 ug/L | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 133205 | 8.09 ug/L | 92 |
| 74) 1,2,3-Trichloropropane | 15.96 | 75 | 94598 | 8.03 ug/L | 96 |
| 75) trans-1,4-Dichloro-2-buten | 16.08 | 53 | 43027 | 7.98 ug/L # | 84 |
| 76) n-Propylbenzene | 16.10 | 91 | 1751807 | 8.23 ug/L | 99 |
| 77) Bromobenzene | 16.15 | 156 | 374080 | 8.05 ug/L | 97 |
| 78) 1,3,5-Trimethylbenzene | 16.37 | 105 | 1360207 | 8.17 ug/L | 100 |
| 79) 2-Chlorotoluene | 16.38 | 91 | 1212449 | 8.17 ug/L | 100 |
| 80) 4-Chlorotoluene | 16.46 | 91 | 1047996 | 8.07 ug/L | 99 |
| 81) tert-butylbenzene | 16.93 | 119 | 1208879 | 8.16 ug/L | 99 |
| 82) 1,2,4-Trimethylbenzene | 17.00 | 105 | 1360168 | 8.31 ug/L | 98 |
| 84) sec-butylbenzene | 17.27 | 105 | 1543813 | 8.25 ug/L | 98 |
| 85) p-isopropyltoluene | 17.51 | 119 | 1409080 | 8.29 ug/L | 96 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 760577 | 8.21 ug/L | 97 |
| 88) 1,4-Dichlorobenzene | 17.82 | 146 | 727379 | 8.16 ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11867SI.D
Acq On : 8 Jul 2003 5:42 pm
Sample : 8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 7
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 89) n-butylbenzene | 18.17 | 91 | 1150869 | 8.43 | ug/L | | 97 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 606889 | 8.12 | ug/L | | 95 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 21815 | 7.91 | ug/L | # | 87 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 355851 | 9.34 | ug/L | | 96 |
| 95) Hexachlorobutadiene | 21.40 | 225 | 153421 | 8.23 | ug/L | | 88 |
| 96) Naphthalene | 21.56 | 128 | 412887 | 8.26 | ug/L | | 98 |
| 97) 1,2,3-Trichlorobenzene | 22.02 | 180 | 271639 | 8.25 | ug/L | | 88 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 516584 | 8.52 | ug/L | | 92 |

(#) = qualifier out of range (m) = manual integration

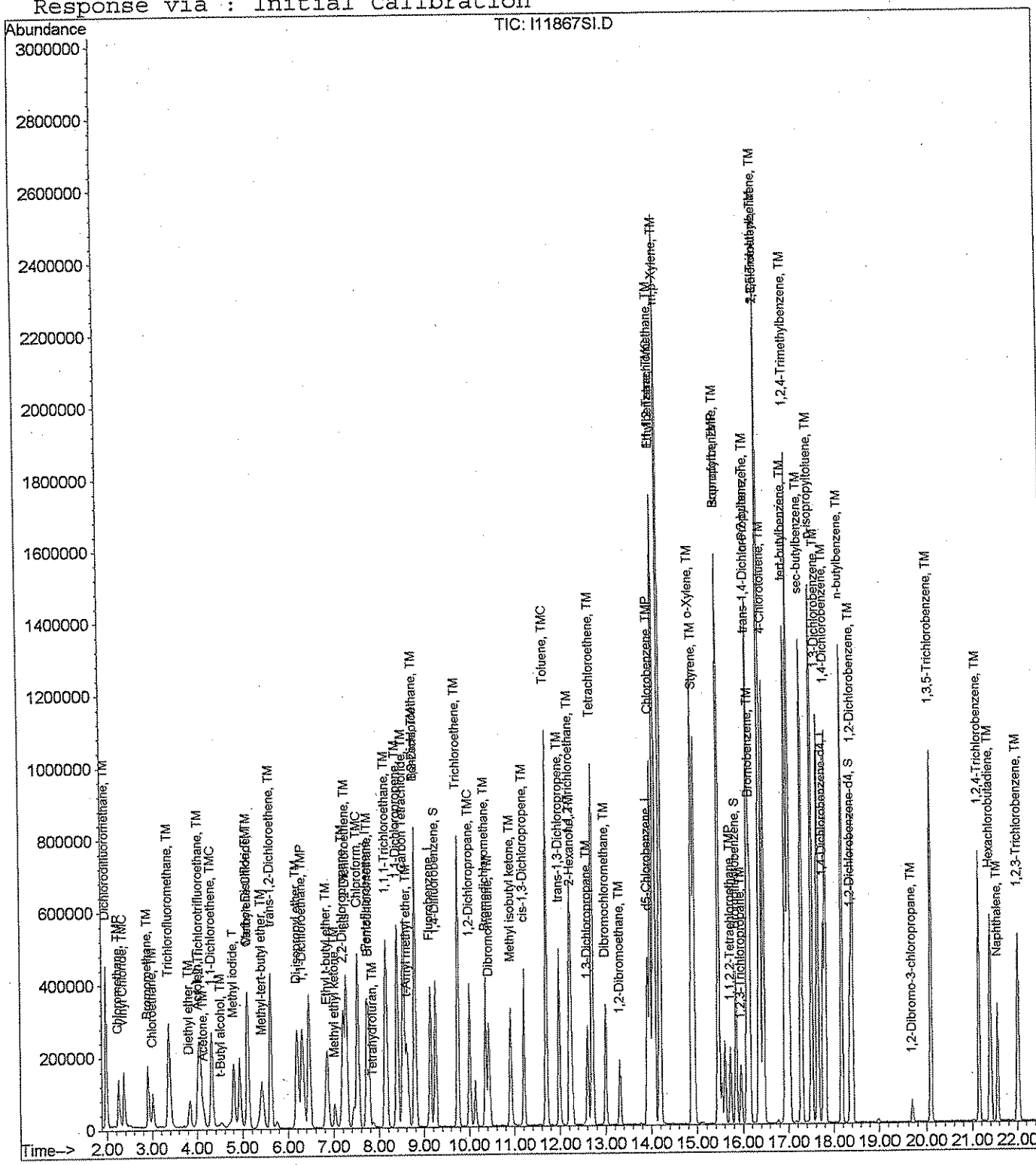
Quantitation Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11867SI.D
Acq On : 8 Jul 2003 5:42 pm
Sample : 8PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 7
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11868SI.D Vial: 8
Acq On : 8 Jul 2003 6:17 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

7.10.03
VMT 1/10/16

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.73 | 168 | 404996 | 4.00 | ug/L | 0.01 |
| 39) Fluorobenzene | 9.13 | 96 | 591513 | 4.00 | ug/L | 0.00 |
| 63) d5-Chlorobenzene | 13.92 | 117 | 442317 | 4.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.77 | 152 | 242452 | 4.00 | ug/L | 0.01 |
| **System Monitoring Compounds** | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 535350 | 4.00 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.00% | | | |
| 54) Bromofluorobenzene | 15.85 | 95 | 202716 | 4.02 | ug/L | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.50% | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 192518 | 4.09 | ug/L | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 102.25% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.98 | 85 | 1070723 | 14.39 | ug/L | 97 |
| 3) Chloromethane | 2.25 | 50 | 389844 | 14.21 | ug/L | 96 |
| 4) Vinyl Chloride | 2.36 | 62 | 289948 | 12.15 | ug/L | 91 |
| 5) Bromomethane | 2.91 | 94 | 343214 | 15.21 | ug/L | 86 |
| 6) Chloroethane | 3.02 | 64 | 234206 | 15.50 | ug/L | 86 |
| 7) t-Butyl alcohol | 4.51 | 59 | 26832 | 66.90 | ug/L # | 84 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 987648 | 14.87 | ug/L | 98 |
| 9) Diethyl ether | 3.83 | 74 | 106767 | 13.38 | ug/L | 89 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 496965 | 14.67 | ug/L | 98 |
| 11) Acrolein | 4.02 | 56 | 40456 | 61.69 | ug/L | 85 |
| 12) Acetone | 4.14 | 43 | 139794 | 79.22 | ug/L # | 87 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 388509 | 14.71 | ug/L | 95 |
| 14) Methyl iodide | 4.79 | 142 | 658949 | 18.01 | ug/L | 100 |
| 15) Di-isopropyl ether | 6.18 | 45 | 828363 | 15.23 | ug/L | 99 |
| 16) Methylene Chloride | 5.11 | 84 | 438870 | 15.63 | ug/L | 84 |
| 17) Carbon Disulfide | 5.09 | 76 | 673178 | 15.32 | ug/L | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 39706 | 18.41 | ug/L # | 66 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 501441 | 14.80 | ug/L | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 566024 | 14.48 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 6.31 | 63 | 747944 | 14.92 | ug/L | 92 |
| 22) Vinyl acetate | 6.34 | 86 | 31949 | 14.35 | ug/L | 76 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 64895 | 72.92 | ug/L | 86 |
| 24) Ethyl t-butyl ether | 6.84 | 59 | 614605 | 15.30 | ug/L | 100 |
| 25) 2,2-Dichloropropane | 7.21 | 77 | 723222 | 14.69 | ug/L | 93 |
| 26) cis-1,2-Dichloroethene | 7.28 | 96 | 581381 | 14.73 | ug/L | 90 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 481332 | 15.23 | ug/L | 98 |
| 29) Chloroform | 7.52 | 83 | 1148614 | 14.24 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11868SI.D Vial: 8
Acq On : 8 Jul 2003 6:17 pm Operator: JMR
Sample : 16PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 30) Bromochloromethane | 7.77 | 128 | 265906 | 14.67 ug/L | 94 |
| 31) Tetrahydrofuran | 7.86 | 71 | 12082 | 13.17 ug/L # | 82 |
| 32) 1,1,1-Trichloroethane | 8.15 | 97 | 1213908 | 14.95 ug/L | 96 |
| 34) 1,1-Dichloropropene | 8.39 | 75 | 770711 | 14.47 ug/L | 97 |
| 35) Carbon Tetrachloride | 8.53 | 119 | 1269068 | 15.06 ug/L | 91 |
| 37) 1,2-Dichloroethane | 8.78 | 62 | 560349 | 14.43 ug/L | 100 |
| 38) Benzene | 8.80 | 78 | 1744904 | 14.54 ug/L | 94 |
| 40) Trichloroethene | 9.74 | 95 | 695565 | 14.14 ug/L | 97 |
| 41) 1,2-Dichloropropane | 10.01 | 63 | 314094 | 14.82 ug/L | 90 |
| 42) Methylmethacrylate | 10.13 | 69 | 123140 | 15.11 ug/L | 95 |
| 45) Bromodichloromethane | 10.36 | 83 | 721830 | 14.72 ug/L | 95 |
| 46) Dibromomethane | 10.43 | 93 | 258141 | 14.22 ug/L | 96 |
| 51) 2-Hexanone | 12.26 | 58 | 205581 | 78.89 ug/L | 83 |
| 52) Methyl isobutyl ketone | 10.92 | 58 | 238477 | 78.33 ug/L | 98 |
| 53) cis-1,3-Dichloropropene | 11.20 | 75 | 592947 | 15.40 ug/L | 96 |
| 55) Toluene | 11.69 | 92 | 1346674 | 14.44 ug/L | 97 |
| 56) trans-1,3-Dichloropropene | 11.98 | 75 | 464373 | 15.71 ug/L | 89 |
| 58) 1,1,2-Trichloroethane | 12.22 | 83 | 209375 | 14.22 ug/L | 91 |
| 59) 1,3-Dichloropropane | 12.61 | 76 | 427457 | 14.53 ug/L | 91 |
| 60) Tetrachloroethene | 12.71 | 166 | 878176 | 14.21 ug/L | 97 |
| 61) Dibromochloromethane | 13.01 | 129 | 541265 | 15.04 ug/L | 98 |
| 62) 1,2-Dibromoethane | 13.31 | 107 | 314890 | 14.59 ug/L | 88 |
| 64) Chlorobenzene | 13.98 | 112 | 1617468 | 14.44 ug/L | 97 |
| 65) 1,1,1,2-Tetrachloroethane | 14.05 | 131 | 657489 | 14.90 ug/L | 97 |
| 66) Ethylbenzene | 14.07 | 91 | 2738919 | 14.40 ug/L | 99 |
| 67) m,p-Xylene | 14.20 | 106 | 2015294 | 28.23 ug/L | 98 |
| 68) o-Xylene | 14.89 | 106 | 983034 | 14.67 ug/L | 99 |
| 69) Styrene | 14.94 | 104 | 1538524 | 15.35 ug/L | 99 |
| 70) Bromoform | 15.45 | 173 | 250776 | 15.18 ug/L | 97 |
| 71) Isopropylbenzene | 15.46 | 105 | 2860028 | 14.61 ug/L | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 250082 | 14.84 ug/L | 91 |
| 74) 1,2,3-Trichloropropane | 15.96 | 75 | 183534 | 15.22 ug/L | 95 |
| 75) trans-1,4-Dichloro-2-buten | 16.08 | 53 | 77805 | 14.11 ug/L # | 78 |
| 76) n-Propylbenzene | 16.10 | 91 | 3145539 | 14.45 ug/L | 100 |
| 77) Bromobenzene | 16.15 | 156 | 698137 | 14.69 ug/L | 95 |
| 78) 1,3,5-Trimethylbenzene | 16.37 | 105 | 2423068 | 14.23 ug/L | 100 |
| 79) 2-Chlorotoluene | 16.38 | 91 | 2110636 | 13.91 ug/L | 100 |
| 80) 4-Chlorotoluene | 16.46 | 91 | 1951245 | 14.68 ug/L | 98 |
| 81) tert-butylbenzene | 16.94 | 119 | 2169995 | 14.31 ug/L | 98 |
| 82) 1,2,4-Trimethylbenzene | 17.00 | 105 | 2411972 | 14.40 ug/L | 96 |
| 84) sec-butylbenzene | 17.28 | 105 | 2797360 | 14.60 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11868SI.D
Acq On : 8 Jul 2003 6:17 pm
Sample : 16PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 8
Operator: JMR
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.51 | 119 | 2569392 | 14.78 | ug/L | 95 |
| 86) 1,3-Dichlorobenzene | 17.65 | 146 | 1383617 | 14.60 | ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.82 | 146 | 1324931 | 14.42 | ug/L | 95 |
| 89) n-butylbenzene | 18.18 | 91 | 2065497 | 14.68 | ug/L | 98 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 1115189 | 14.48 | ug/L | 94 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 42336 | 14.90 | ug/L | 86 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 690279 | 17.58 | ug/L | 100 |
| 95) Hexachlorobutadiene | 21.40 | 225 | 283915 | 14.78 | ug/L | 85 |
| 96) Naphthalene | 21.56 | 128 | 823989 | 15.96 | ug/L | 97 |
| 97) 1,2,3-Trichlorobenzene | 22.02 | 180 | 532999 | 15.96 | ug/L | 88 |
| 98) 1,3,5-Trichlorobenzene | 20.10 | 180 | 972612 | 15.56 | ug/L | 88 |

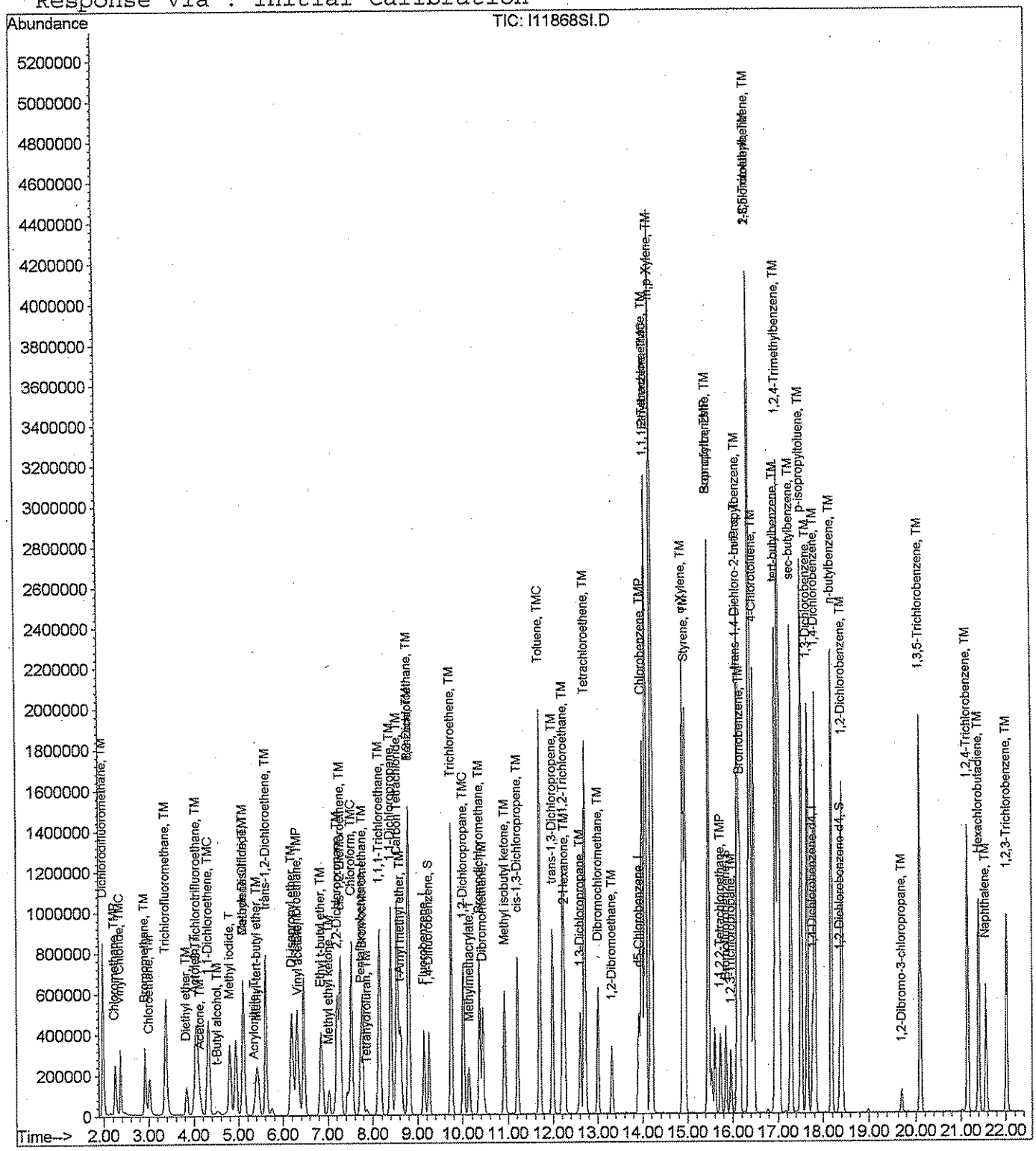
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11868SI.D
Acq On : 8 Jul 2003 6:17 pm
Sample : 16PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 8
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11869SI.D Vial: 9
Acq On : 8 Jul 2003 6:52 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

- NOT USED. - Too much saturation observed. VMT 7/10/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 7.73 | 168 | 408658 | 4.00 | ug/L | | 0.00 |
| 39) Fluorobenzene | 9.13 | 96 | 589053 | 4.00 | ug/L | | 0.00 |
| 63) d5-Chlorobenzene | 13.93 | 117 | 441296 | 4.00 | ug/L | | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.77 | 152 | 244767 | 4.00 | ug/L | | 0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 36) 1,4-Difluorobenzene | 9.25 | 114 | 537851 | 3.98 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 99.50% | | | | |
| 54) Bromofluorobenzene | 15.86 | 95 | 203045 | 4.05 | ug/L | | 0.01 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 101.25% | | | | |
| 73) 1,2-Dichlorobenzene-d4 | 18.37 | 152 | 188744 | 4.02 | ug/L | | 0.00 |
| Spiked Amount 4.000 | Range 70 - 130 | | Recovery = 100.50% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.97 | 85 | 2200223 | 29.31 | ug/L | | 96 |
| 3) Chloromethane | 2.24 | 50 | 830190 | 30.00 | ug/L | | 94 |
| 4) Vinyl Chloride | 2.35 | 62 | 529850 | 21.99 | ug/L | | 93 |
| 5) Bromomethane | 2.90 | 94 | 761046 | 33.42 | ug/L | | 88 |
| 6) Chloroethane | 3.00 | 64 | 490734 | 32.19 | ug/L | | 86 |
| 7) t-Butyl alcohol | 4.52 | 59 | 43107 | 106.51 | ug/L | # | 85 |
| 8) Trichlorofluoromethane | 3.37 | 101 | 2090833 | 31.21 | ug/L | | 98 |
| 9) Diethyl ether | 3.83 | 74 | 169204 | 21.01 | ug/L | | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 4.05 | 101 | 779037 | 22.79 | ug/L | | 98 |
| 11) Acrolein | 4.02 | 56 | 71393 | 107.90 | ug/L | | 97 |
| 12) Acetone | 4.15 | 43 | 207115 | 117.21 | ug/L | | 91 |
| 13) 1,1-Dichloroethene | 4.31 | 96 | 609310 | 22.87 | ug/L | | 93 |
| 14) Methyl iodide | 4.80 | 142 | 1111612 | 30.11 | ug/L | | 99 |
| 15) Di-isopropyl ether | 6.19 | 45 | 1324088 | 24.12 | ug/L | | 95 |
| 16) Methylene Chloride | 5.11 | 84 | 662017 | 24.39 | ug/L | | 85 |
| 17) Carbon Disulfide | 5.08 | 76 | 1058533 | 23.87 | ug/L | | 100 |
| 18) Acrylonitrile | 5.35 | 53 | 53401 | 24.54 | ug/L | # | 77 |
| 19) Methyl-tert-butyl ether | 5.42 | 73 | 790467 | 23.12 | ug/L | | 100 |
| 20) trans-1,2-Dichloroethene | 5.61 | 96 | 897347 | 22.76 | ug/L | | 93 |
| 21) 1,1-Dichloroethane | 6.31 | 63 | 1142036 | 22.57 | ug/L | | 95 |
| 22) Vinyl acetate | 6.35 | 86 | 50489 | 22.47 | ug/L | | 82 |
| 23) Methyl ethyl ketone | 7.02 | 72 | 101511 | 113.04 | ug/L | | 87 |
| 24) Ethyl t-butyl ether | 6.85 | 59 | 927706 | 22.89 | ug/L | | 98 |
| 25) 2,2-Dichloropropane | 7.20 | 77 | 1115666 | 22.46 | ug/L | | 93 |
| 26) cis-1,2-Dichloroethene | 7.27 | 96 | 897492 | 22.53 | ug/L | | 89 |
| 27) t-Amyl methyl ether | 8.61 | 73 | 758412 | 23.79 | ug/L | | 96 |
| 29) Chloroform | 7.53 | 83 | 1715242 | 21.07 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\070803-I\I11869SI.D Vial: 9
Acq On : 8 Jul 2003 6:52 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 30) | Bromochloromethane | 7.77 | 128 | 409101 | 22.37 ug/L | | 98 |
| 31) | Tetrahydrofuran | 7.86 | 71 | 20718 | 22.37 ug/L | # | 89 |
| 32) | 1,1,1-Trichloroethane | 8.15 | 97 | 1888092 | 23.05 ug/L | | 96 |
| 34) | 1,1-Dichloropropene | 8.40 | 75 | 1177277 | 21.90 ug/L | | 99 |
| 35) | Carbon Tetrachloride | 8.53 | 119 | 1934832 | 22.75 ug/L | | 95 |
| 37) | 1,2-Dichloroethane | 8.78 | 62 | 825247 | 21.06 ug/L | | 99 |
| 38) | Benzene | 8.80 | 78 | 2652617 | 21.91 ug/L | | 94 |
| 40) | Trichloroethene | 9.75 | 95 | 1061596 | 21.67 ug/L | | 97 |
| 41) | 1,2-Dichloropropane | 10.01 | 63 | 484736 | 22.96 ug/L | | 91 |
| 42) | Methylmethacrylate | 10.14 | 69 | 186456 | 22.97 ug/L | | 95 |
| 45) | Bromodichloromethane | 10.37 | 83 | 1075809 | 22.04 ug/L | | 94 |
| 46) | Dibromomethane | 10.44 | 93 | 378083 | 20.92 ug/L | | 94 |
| 51) | 2-Hexanone | 12.25 | 58 | 317935 | 122.52 ug/L | | 82 |
| 52) | Methyl isobutyl ketone | 10.92 | 58 | 366004 | 120.72 ug/L | | 99 |
| 53) | cis-1,3-Dichloropropene | 11.20 | 75 | 916130 | 23.89 ug/L | | 97 |
| 55) | Toluene | 11.70 | 92 | 2051541 | 22.09 ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.98 | 75 | 714351 | 24.27 ug/L | | 85 |
| 58) | 1,1,2-Trichloroethane | 12.22 | 83 | 310071 | 21.15 ug/L | | 93 |
| 59) | 1,3-Dichloropropane | 12.60 | 76 | 650037 | 22.18 ug/L | | 91 |
| 60) | Tetrachloroethene | 12.71 | 166 | 1332716 | 21.66 ug/L | | 96 |
| 61) | Dibromochloromethane | 13.01 | 129 | 817953 | 22.82 ug/L | | 97 |
| 62) | 1,2-Dibromoethane | 13.31 | 107 | 481331 | 22.39 ug/L | | 90 |
| 64) | Chlorobenzene | 13.98 | 112 | 2473458 | 22.14 ug/L | | 96 |
| 65) | 1,1,1,2-Tetrachloroethane | 14.05 | 131 | 992817 | 22.54 ug/L | | 90 |
| 66) | Ethylbenzene | 14.07 | 91 | 4142591 | 21.82 ug/L | | 99 |
| 67) | m,p-Xylene | 14.20 | 106 | 3057608 | 42.93 ug/L | | 92 |
| 68) | o-Xylene | 14.88 | 106 | 1523037 | 22.78 ug/L | | 97 |
| 69) | Styrene | 14.94 | 104 | 2340079 | 23.39 ug/L | | 99 |
| 70) | Bromoform | 15.45 | 173 | 388926 | 23.59 ug/L | | 91 |
| 71) | Isopropylbenzene | 15.46 | 105 | 4358397 | 22.31 ug/L | | 99 |
| 72) | 1,1,2,2-Tetrachloroethane | 15.73 | 83 | 384819 | 22.89 ug/L | | 92 |
| 74) | 1,2,3-Trichloropropane | 15.97 | 75 | 283310 | 23.55 ug/L | | 95 |
| 75) | trans-1,4-Dichloro-2-buten | 16.08 | 53 | 113968 | 20.72 ug/L | # | 72 |
| 76) | n-Propylbenzene | 16.10 | 91 | 4845432 | 22.31 ug/L | | 99 |
| 77) | Bromobenzene | 16.15 | 156 | 1070804 | 22.58 ug/L | | 96 |
| 78) | 1,3,5-Trimethylbenzene | 16.37 | 105 | 3672025 | 21.62 ug/L | | 98 |
| 79) | 2-Chlorotoluene | 16.38 | 91 | 3246099 | 21.44 ug/L | | 98 |
| 80) | 4-Chlorotoluene | 16.46 | 91 | 3015704 | 22.75 ug/L | | 98 |
| 81) | tert-butylbenzene | 16.94 | 119 | 3303295 | 21.83 ug/L | | 93 |
| 82) | 1,2,4-Trimethylbenzene | 17.00 | 105 | 3723081 | 22.28 ug/L | | 97 |
| 84) | sec-butylbenzene | 17.29 | 105 | 4360561 | 22.82 ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11869SI.D Vial: 9
Acq On : 8 Jul 2003 6:52 pm Operator: JMR
Sample : 32PPB STD Inst : Instrumen
Misc : 25000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003 Quant Results File: V507083I.

Quant Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration
DataAcq Meth : V507083I

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 85) p-isopropyltoluene | 17.51 | 119 | 4002651 | 23.07 ug/L | 96 |
| 86) 1,3-Dichlorobenzene | 17.64 | 146 | 2127449 | 22.50 ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.82 | 146 | 2045109 | 22.05 ug/L | 96 |
| 89) n-butylbenzene | 18.17 | 91 | 3280895 | 23.09 ug/L | 100 |
| 90) 1,2-Dichlorobenzene | 18.41 | 146 | 1678820 | 21.59 ug/L | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 19.69 | 75 | 67911 | 23.67 ug/L | 92 |
| 94) 1,2,4-Trichlorobenzene | 21.15 | 180 | 1088658 | 27.46 ug/L | 97 |
| 95) Hexachlorobutadiene | 21.41 | 225 | 461155 | 23.77 ug/L | 92 |
| 96) Naphthalene | 21.56 | 128 | 1302920 | 25.25 ug/L | 97 |
| 97) 1,2,3-Trichlorobenzene | 22.02 | 180 | 838827 | 25.69 ug/L | 90 |
| 98) 1,3,5-Trichlorobenzene | 20.11 | 180 | 1527567 | 24.21 ug/L | 87 |

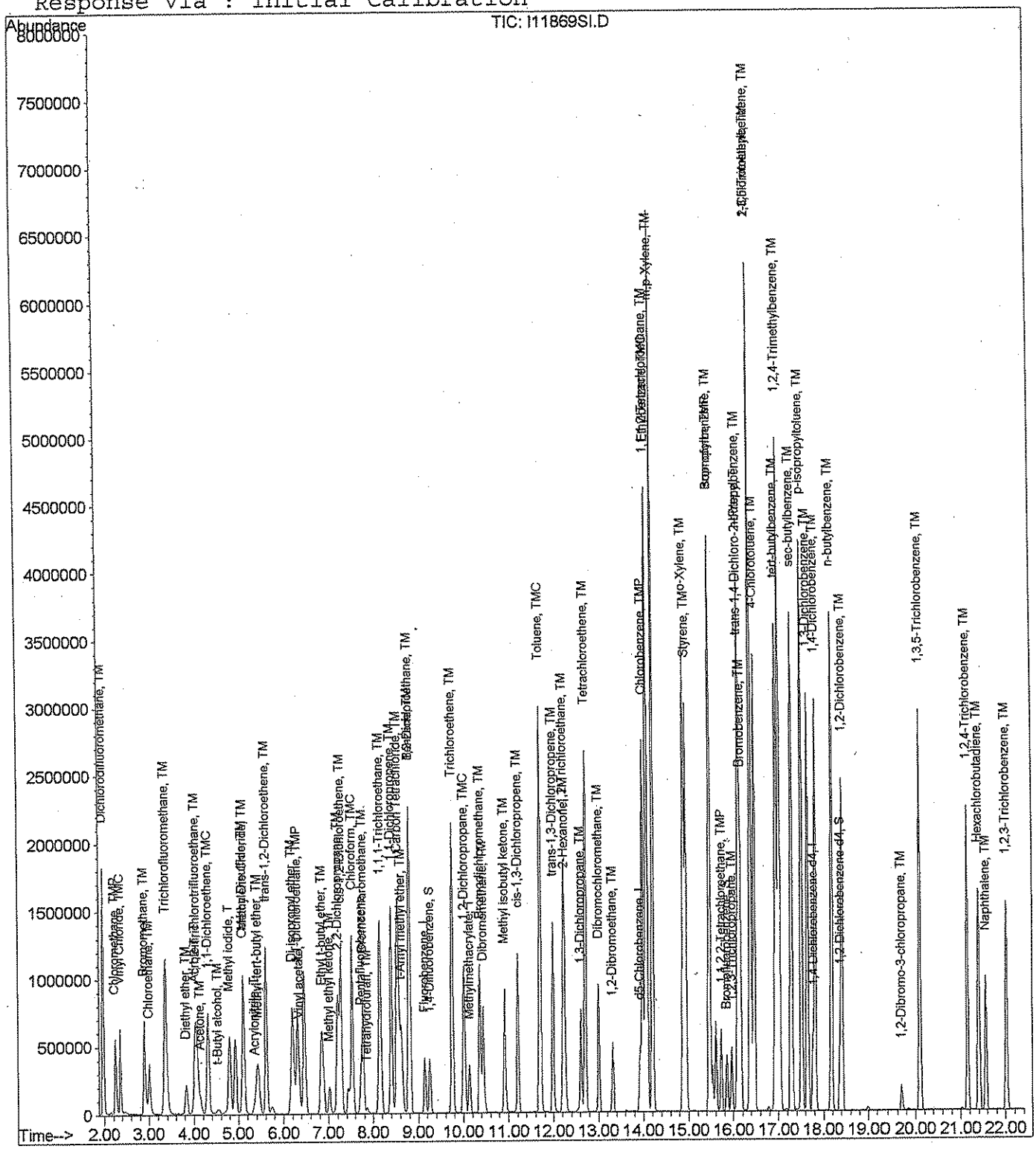
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\070803-I\I11869SI.D
Acq On : 8 Jul 2003 6:52 pm
Sample : 32PPB STD
Misc : 25000
MS Integration Params: rteint.p
Quant Time: Jul 9 8:26 2003

Vial: 9
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Quant Results File: V507083I.

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 08:19:09 2003
Response via : Initial Calibration



## 524 RECOVERY

VMT 7/8/03

| | |
|---|---|
| Data File Name | I11837Q.D |
| Sample Name | L507023I |
| Date | 2 Jul 2003 9:49 am |

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.04 | 1.2 | 87% | OK |
| Chloromethane | 1.23 | 1.2 | 102% | OK |
| Vinyl Chloride | 1.19 | 1.2 | 99% | OK |
| Bromomethane | 0.95 | 1.2 | 79% | OK |
| Chloroethane | 1.11 | 1.2 | 93% | OK |
| t-Butyl alcohol | 8.18 | 6.0 | 136% | * |
| Trichlorofluoromethane | 1.16 | 1.2 | 97% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.19 | 1.2 | 99% | OK |
| Acetone | 1.83 | 1.2 | 152% | * |
| 1,1-Dichloroethene | 1.19 | 1.2 | 99% | OK |
| Di-isopropyl ether | 1.34 | 1.2 | 112% | OK |
| Methylene Chloride | 1.23 | 1.2 | 103% | OK |
| Methyl-tert-butyl ether | 2.69 | 2.4 | 112% | OK |
| trans-1,2-Dichloroethene | 1.31 | 1.2 | 109% | OK |
| 1,1-Dichloroethane | 1.38 | 1.2 | 115% | OK |
| Methyl ethyl ketone | 1.04 | 1.2 | 86% | OK |
| Ethyl t-butyl ether | 1.39 | 1.2 | 116% | OK |
| 2,2-Dichloropropane | 1.57 | 1.2 | 131% | * |
| cis-1,2-Dichloroethene | 1.35 | 1.2 | 112% | OK |
| t-Amyl methyl ether | 1.34 | 1.2 | 112% | OK |
| Chloroform | 1.41 | 1.2 | 117% | OK |
| Bromochloromethane | 1.30 | 1.2 | 108% | OK |
| Tetrahydrofuran | 1.55 | 1.2 | 129% | OK |
| 1,1,1-Trichloroethane | 1.34 | 1.2 | 111% | OK |
| 1,1-Dichloropropene | 1.42 | 1.2 | 119% | OK |
| Carbon Tetrachloride | 1.44 | 1.2 | 120% | OK |
| 1,2-Dichloroethane | 1.44 | 1.2 | 120% | OK |
| Benzene | 1.38 | 1.2 | 115% | OK |
| Trichloroethene | 1.52 | 1.2 | 126% | OK |
| 1,2-Dichloropropane | 1.40 | 1.2 | 117% | OK |
| Bromodichloromethane | 1.39 | 1.2 | 116% | OK |
| Dibromomethane | 1.43 | 1.2 | 119% | OK |
| 2-Hexanone | 1.07 | 1.2 | 89% | OK |
| Methyl isobutyl ketone | 1.24 | 1.2 | 104% | OK |
| cis-1,3-Dichloropropene | 1.31 | 1.2 | 109% | OK |
| Toluene | 1.38 | 1.2 | 115% | OK |
| trans-1,3-Dichloropropene | 1.33 | 1.2 | 111% | OK |
| 1,1,2-Trichloroethane | 1.43 | 1.2 | 119% | OK |
| 1,3-Dichloropropane | 1.37 | 1.2 | 114% | OK |
| Tetrachloroethene | 1.55 | 1.2 | 129% | OK |
| Dibromochloromethane | 1.37 | 1.2 | 114% | OK |
| 1,2-Dibromoethane | 1.41 | 1.2 | 118% | OK |
| Chlorobenzene | 1.33 | 1.2 | 111% | OK |
| 1,1,1,2-Tetrachloroethane | 1.43 | 1.2 | 119% | OK |
| Ethylbenzene | 1.40 | 1.2 | 116% | OK |
| m,p-Xylene | 2.67 | 2.4 | 111% | OK |
| o-Xylene | 1.28 | 1.2 | 107% | OK |
| Styrene | 1.16 | 1.2 | 96% | OK |

7.7.03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.29 | 1.2 | 107% | OK |
| Isopropylbenzene | 1.28 | 1.2 | 107% | OK |
| 1,1,2,2-Tetrachloroethane | 1.26 | 1.2 | 105% | OK |
| 1,2,3-Trichloropropane | 1.29 | 1.2 | 108% | OK |
| n-Propylbenzene | 1.36 | 1.2 | 114% | OK |
| Bromobenzene | 1.32 | 1.2 | 110% | OK |
| 1,3,5-Trimethylbenzene | 1.32 | 1.2 | 110% | OK |
| 2-Chlorotoluene | 1.41 | 1.2 | 118% | OK |
| 4-Chlorotoluene | 1.34 | 1.2 | 112% | OK |
| tert-butylbenzene | 1.30 | 1.2 | 108% | OK |
| 1,2,4-Trimethylbenzene | 1.37 | 1.2 | 114% | OK |
| sec-butylbenzene | 1.31 | 1.2 | 109% | OK |
| p-isopropyltoluene | 1.29 | 1.2 | 107% | OK |
| 1,3-Dichlorobenzene | 1.31 | 1.2 | 109% | OK |
| 1,4-Dichlorobenzene | 1.28 | 1.2 | 107% | OK |
| n-butylbenzene | 1.30 | 1.2 | 108% | OK |
| 1,2-Dichlorobenzene | 1.27 | 1.2 | 105% | OK |
| 1,2-Dibromo-3-chloropropane | 1.42 | 1.2 | 118% | OK |
| 1,2,4-Trichlorobenzene | 1.00 | 1.2 | 83% | OK |
| Hexachlorobutadiene | 1.59 | 1.2 | 132% | * |
| Naphthalene | 0.94 | 1.2 | 78% | OK |
| 1,2,3-Trichlorobenzene | 0.90 | 1.2 | 75% | OK |

7.7.07

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11837Q.D  Vial: 1
Acq On : 2 Jul 2003 9:49 am  Operator: JMR
Sample : L507023I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

MT 7/3/03

Min. RRF : 0.000  Min. Rel. Area : 50%  Max. R.T. Dev 0.50min
Max. RRF Dev : 30%  Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 84 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 1.009 | 0.873 | 13.5 | 71 | -0.02 |
| 3 | TMP | Chloromethane | 0.619 | 0.633 | -2.3 | 75 | -0.01 |
| 4 | TMC | Vinyl Chloride | 0.447 | 0.442 | 1.1 | 70 | -0.01 |
| 5 | TM | Bromomethane | 0.323 | 0.256 | 20.7 | 58 | 0.00 |
| 6 | TM | Chloroethane | 0.298 | 0.276 | 7.4 | 70 | 0.00 |
| 7 | TM | t-Butyl alcohol | 0.007 | 0.009 | -28.6 | 101 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.820 | 0.793 | 3.3 | 84 | -0.02 |
| 9 | TM | Diethyl ether | 0.128 | 0.124 | 3.1 | 77 | -0.01 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.435 | 0.432 | 0.7 | 89 | -0.02 |
| 11 | T | Acrolein | 0.026 | 0.008 | ~~69.2#~~ | ~~28#~~ | ~~-0.01~~ NT |
| 12 | TM | Acetone | 0.045 | 0.014 recalc RRF | 68.9# | 26# | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.348 | 0.345 | 0.9 | 84 | -0.01 |
| 14 | T | Methyl iodide | 0.501 | 0.383 | 23.6 | 81 | -0.02 |
| 15 | TM | Di-isopropyl ether | 1.695 | 1.890 | -11.5 | 89 | -0.02 |
| 16 | TM | Methylene Chloride | 0.865 | 0.983 | -13.6 | 89 | 0.00 |
| 17 | TM | Carbon Disulfide | 0.996 | 1.335 recalc RRF | -34.0# | 111 | 0.00 |
| 18 | T | Acrylonitrile | 0.075 | 0.076 | -1.3 | 101 | 0.01 |
| 19 | TM | Methyl-tert-butyl ether | 0.545 | 1.223 recalc RRF | -124.4# | 182 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.520 | 0.567 | -9.0 | 86 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 1.035 | 1.188 | -14.8 | 90 | 0.00 |
| 22 | T | Vinyl acetate | 0.036 | 0.076 | ~~-111.1#~~ | ~~184~~ | ~~0.01~~ NT |
| 23 | TM | Methyl ethyl ketone | 0.016 | 0.003 recalc RRF | 81.3# | 13# | 0.00 |
| 24 | TM | Ethyl t-butyl ether | 0.829 | 0.963 | -16.2 | 94 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.679 | 0.889 | -30.9# | 109 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.521 | 0.585 | -12.3 | 87 | 0.00 |
| 27 | TM | t-Amyl methyl ether | 0.553 | 0.619 | -11.9 | 89 | 0.00 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.24~~ NT |
| 29 | TMC | Chloroform | 1.078 | 1.263 | -17.2 | 91 | 0.00 |
| 30 | TM | Bromochloromethane | 0.187 | 0.202 | -8.0 | 85 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.022 | -29.4 | 103 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.961 | 1.071 | -11.4 | 95 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ NT |
| 34 | TM | 1,1-Dichloropropene | 0.845 | 1.003 | -18.7 | 93 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.847 | 1.017 | -20.1 | 97 | 0.00 |
| 36 | S | 1,4-Difluorobenzene | 1.539 | 1.523 | 1.0 | 83 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.615 | 0.736 | -19.7 | 91 | 0.00 |
| 38 | TM | Benzene | 2.040 | 2.342 | -14.8 | 88 | 0.00 |
| 9 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 82 | 0.00 |
| 0 | TM | Trichloroethene | 0.308 | 0.389 | -26.3 | 97 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11837Q.D  Vial: 1
Acq On : 2 Jul 2003 9:49 am  Operator: JMR
Sample : L507023I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.256 | 0.300 | -17.2 | 89 | 0.00 |
| 42 | T | Methylmethacrylate | 0.077 | 0.079 | -2.6 | 81 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 45 | TM | Bromodichloromethane | 0.346 | 0.401 | -15.9 | 94 | 0.00 |
| 46 | TM | Dibromomethane | 0.116 | 0.139 | -19.8 | 95 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ |
| 51 | TM | 2-Hexanone | 0.032 | 0.006 see RPT% | 81.3# | 14# | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.037 | 0.008 see RPT% | 78.4# | 17# | 0.01 |
| 53 | TM | cis-1,3-Dichloropropene | 0.328 | 0.359 | -9.5 | 87 | 0.00 |
| 54 | S | Bromofluorobenzene | 0.305 | 0.335 | -9.8 | 93 | 0.00 |
| 5 | TMC | Toluene | 0.626 | 0.720 | -15.0 | 88 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.227 | 0.251 | -10.6 | 88 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.115 | 0.137 | -19.1 | 85 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.241 | 0.276 | -14.5 | 91 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.291 | 0.375 | -28.9 | 100 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.180 | 0.206 | -14.4 | 85 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.119 | 0.140 | -17.6 | 92 | 0.00 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.972 | 1.076 | -10.7 | 90 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.352 | 0.420 | -19.3 | 98 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.935 | 2.253 | -16.4 | 92 | 0.00 |
| 67 | TM | m,p-Xylene | 0.654 | 0.728 | -11.3 | 87 | 0.00 |
| 68 | TM | o-Xylene | 0.624 | 0.668 | -7.1 | 86 | 0.00 |
| 69 | TM | Styrene | 0.969 | 0.933 | 3.7 | 81 | 0.00 |
| 70 | TMP | Bromoform | 0.135 | 0.145 | -7.4 | 94 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.779 | 1.902 | -6.9 | 85 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.208 | 0.218 | -4.8 | 87 | 0.00 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.368 | 0.366 | 0.5 | 89 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.155 | 0.167 | -7.7 | 85 | 0.00 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.081 | 0.080 | 1.2 | 86 | 0.00 |
| 76 | TM | n-Propylbenzene | 2.220 | 2.522 | -13.6 | 92 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.390 | -9.9 | 92 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.458 | 1.605 | -10.1 | 89 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.472 | 1.730 | -17.5 | 93 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.303 | 1.456 | -11.7 | 93 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11837Q.D  Vial: 1
Acq On : 2 Jul 2003 9:49 am  Operator: JMR
Sample : L507023I  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.224 | 1.323 | -8.1 | 90 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.451 | 1.653 | -13.9 | 92 | 0.00 | |
| 83 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.760 | 1.923 | -9.3 | 90 | 0.00 | |
| 85 | TM | p-isopropyltoluene | 1.420 | 1.525 | -7.4 | 89 | 0.00 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.702 | 0.764 | -8.8 | 90 | 0.00 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 90 ✓ | 0.00 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.439 | 1.539 | -6.9 | 86 | 0.00 | |
| 89 | TM | n-butylbenzene | 3.001 | 3.247 | -8.2 | 91 | 0.00 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.221 | 1.287 | -5.4 | 90 | 0.00 | |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.061 | 0.072 | -18.0 | 99 | 0.00 | |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 4 | TM | 1,2,4-Trichlorobenzene | 0.656 | 0.546 | 16.8 | 78 | 0.00 | |
| 95 | TM | Hexachlorobutadiene | 0.415 | 0.549 | -32.3# | 114 | 0.00 | |
| 96 | TM | Naphthalene | 0.609 | 0.462 | 24.1 | 72 | 0.00 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.493 | 0.371 | 24.7 | 75 | 0.00 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.098 | 1.005 | 8.5 | 79 | 0.00 | |

## 524 RECOVERY

Data File Name: I11838Q.D
Sample Name: L507023I2
Date: 2 Jul 2003 10:36 am

MT 7/3/03

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.05 | 1.2 | 87% | OK |
| Chloromethane | 1.23 | 1.2 | 102% | OK |
| Vinyl Chloride | 1.14 | 1.2 | 95% | OK |
| Bromomethane | 0.99 | 1.2 | 82% | OK |
| Chloroethane | 1.09 | 1.2 | 91% | OK |
| t-Butyl alcohol | 6.60 | 6.0 | 110% | OK |
| Trichlorofluoromethane | 1.16 | 1.2 | 96% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.25 | 1.2 | 105% | OK |
| Acetone | 1.73 | 1.2 | 144% | * |
| 1,1-Dichloroethene | 1.22 | 1.2 | 102% | OK |
| Di-isopropyl ether | 1.38 | 1.2 | 115% | OK |
| Methylene Chloride | 1.25 | 1.2 | 104% | OK |
| Methyl-tert-butyl ether | 2.69 | 2.4 | 112% | OK |
| trans-1,2-Dichloroethene | 1.28 | 1.2 | 106% | OK |
| 1,1-Dichloroethane | 1.36 | 1.2 | 113% | OK |
| Methyl ethyl ketone | 1.35 | 1.2 | 113% | OK |
| Ethyl t-butyl ether | 1.40 | 1.2 | 116% | OK |
| 2,2-Dichloropropane | 1.56 | 1.2 | 130% | OK |
| cis-1,2-Dichloroethene | 1.37 | 1.2 | 114% | OK |
| t-Amyl methyl ether | 1.30 | 1.2 | 109% | OK |
| Chloroform | 1.43 | 1.2 | 119% | OK |
| Bromochloromethane | 1.26 | 1.2 | 105% | OK |
| Tetrahydrofuran | 1.69 | 1.2 | 141% | * |
| 1,1,1-Trichloroethane | 1.36 | 1.2 | 113% | OK |
| 1,1-Dichloropropene | 1.40 | 1.2 | 116% | OK |
| Carbon Tetrachloride | 1.38 | 1.2 | 115% | OK |
| 1,2-Dichloroethane | 1.42 | 1.2 | 119% | OK |
| Benzene | 1.37 | 1.2 | 114% | OK |
| Trichloroethene | 1.55 | 1.2 | 129% | OK |
| 1,2-Dichloropropane | 1.37 | 1.2 | 114% | OK |
| Bromodichloromethane | 1.37 | 1.2 | 115% | OK |
| Dibromomethane | 1.47 | 1.2 | 123% | OK |
| 2-Hexanone | 1.22 | 1.2 | 102% | OK |
| Methyl isobutyl ketone | 1.23 | 1.2 | 102% | OK |
| cis-1,3-Dichloropropene | 1.27 | 1.2 | 106% | OK |
| Toluene | 1.38 | 1.2 | 115% | OK |
| trans-1,3-Dichloropropene | 1.23 | 1.2 | 103% | OK |
| 1,1,2-Trichloroethane | 1.39 | 1.2 | 116% | OK |
| 1,3-Dichloropropane | 1.39 | 1.2 | 115% | OK |
| Tetrachloroethene | 1.66 | 1.2 | 139% | * |
| Dibromochloromethane | 1.19 | 1.2 | 99% | OK |
| 1,2-Dibromoethane | 1.40 | 1.2 | 117% | OK |
| Chlorobenzene | 1.35 | 1.2 | 112% | OK |
| 1,1,1,2-Tetrachloroethane | 1.39 | 1.2 | 116% | OK |
| Ethylbenzene | 1.40 | 1.2 | 117% | OK |
| m,p-Xylene | 2.76 | 2.4 | 115% | OK |
| o-Xylene | 1.29 | 1.2 | 108% | OK |
| Styrene | 1.25 | 1.2 | 104% | OK |

7.7.03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.09 | 1.2 | 91% | OK |
| Isopropylbenzene | 1.30 | 1.2 | 108% | OK |
| 1,1,2,2-Tetrachloroethane | 1.28 | 1.2 | 107% | OK |
| 1,2,3-Trichloropropane | 1.34 | 1.2 | 111% | OK |
| n-Propylbenzene | 1.37 | 1.2 | 114% | OK |
| Bromobenzene | 1.31 | 1.2 | 109% | OK |
| 1,3,5-Trimethylbenzene | 1.37 | 1.2 | 115% | OK |
| 2-Chlorotoluene | 1.41 | 1.2 | 118% | OK |
| 4-Chlorotoluene | 1.40 | 1.2 | 117% | OK |
| tert-butylbenzene | 1.34 | 1.2 | 112% | OK |
| 1,2,4-Trimethylbenzene | 1.37 | 1.2 | 114% | OK |
| sec-butylbenzene | 1.41 | 1.2 | 118% | OK |
| p-isopropyltoluene | 1.28 | 1.2 | 107% | OK |
| 1,3-Dichlorobenzene | 1.32 | 1.2 | 110% | OK |
| 1,4-Dichlorobenzene | 1.27 | 1.2 | 106% | OK |
| n-butylbenzene | 1.27 | 1.2 | 106% | OK |
| 1,2-Dichlorobenzene | 1.24 | 1.2 | 104% | OK |
| 1,2-Dibromo-3-chloropropane | 1.22 | 1.2 | 102% | OK |
| 1,2,4-Trichlorobenzene | 1.06 | 1.2 | 88% | OK |
| Hexachlorobutadiene | 1.57 | 1.2 | 131% | OK* |
| Naphthalene | 0.95 | 1.2 | 79% | OK |
| 1,2,3-Trichlorobenzene | 0.96 | 1.2 | 80% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11838Q.D
Acq On : 2 Jul 2003 10:36 am
Sample : L507023I2
Misc : 25000
MS Integration Params: rteint.p

Vial: 2
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

MB8203
Reprinted

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 83 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 1.009 | 0.881 | 12.7 | 70 | -0.01 |
| 3 | TMP | Chloromethane | 0.619 | 0.632 | -2.1 | 74 | -0.01 |
| 4 | TMC | Vinyl Chloride | 0.447 | 0.425 | 4.9 | 66 | -0.01 |
| 5 | TM | Bromomethane | 0.323 | 0.266 | 17.6 | 59 | 0.00 |
| 6 | TM | Chloroethane | 0.298 | 0.272 | 8.7 | 68 | 0.00 |
| 7 | TM | t-Butyl alcohol | 0.007 | 0.007 | 0.0 | 81 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.820 | 0.790 | 3.7 | 82 | 0.00 |
| 9 | TM | Diethyl ether | 0.128 | 0.123 | 3.9 | 75 | -0.02 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.435 | 0.455 | -4.6 | 92 | -0.01 |
| 11 | T | Acrolein | 0.026 | 0.009 | ~~65.4#~~ | ~~31#~~ | ~~-0.02~~ NT |
| 12 | TM | Acetone | 0.045 | 0.013 sec %RPT | 71.1# | 24# | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.348 | 0.355 | -2.0 | 85 | -0.02 |
| 14 | T | Methyl iodide | 0.501 | 0.426 | 15.0 | 89 | -0.01 |
| 15 | TM | Di-isopropyl ether | 1.695 | 1.955 | -15.3 | 90 | 0.00 |
| 16 | TM | Methylene Chloride | 0.865 | 0.992 | -14.7 | 89 | 0.00 |
| 17 | TM | Carbon Disulfide | 0.996 | 0.854 | 14.3 | 70 | 0.00 |
| 18 | T | Acrylonitrile | 0.075 | 0.072 | 4.0 | 93 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether | 0.545 | 1.222 sec %RPT | -124.2# | 179 | -0.01 |
| 20 | TM | trans-1,2-Dichloroethene | 0.520 | 0.554 | -6.5 | 83 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 1.035 | 1.173 | -13.3 | 87 | 0.00 |
| 22 | T | Vinyl acetate | 0.036 | 0.076 | ~~-111.1#~~ | ~~181~~ | ~~0.00~~ NT |
| 23 | TM | Methyl ethyl ketone | 0.016 | 0.004 sec %RPT | 75.0# | 17# | 0.02 |
| 24 | TM | Ethyl t-butyl ether | 0.829 | 0.964 | -16.3 | 92 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.679 | 0.886 | -30.5# | 107 | -0.01 |
| 26 | TM | cis-1,2-Dichloroethene | 0.521 | 0.596 | -14.4 | 87 | 0.00 |
| 27 | TM | t-Amyl methyl ether | 0.553 | 0.601 | -8.7 | 85 | 0.00 |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.24~~ NT |
| 29 | TMC | Chloroform | 1.078 | 1.284 | -19.1 | 91 | 0.00 |
| 30 | TM | Bromochloromethane | 0.187 | 0.196 | -4.8 | 81 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.017 | 0.024 | -41.2# | 111 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.961 | 1.088 | -13.2 | 95 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 34 | TM | 1,1-Dichloropropene | 0.845 | 0.983 | -16.3 | 89 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.847 | 0.970 | -14.5 | 91 | -0.01 |
| 36 | S | 1,4-Difluorobenzene | 1.539 | 1.572 | -2.1 | 85 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.615 | 0.728 | -18.4 | 89 | 0.00 |
| 38 | TM | Benzene | 2.040 | 2.331 | -14.3 | 86 | 0.00 |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 83 | 0.00 |
| 40 | TM | Trichloroethene | 0.308 | 0.398 | -29.2 | 99 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11838Q.D  Vial: 2
Acq On : 2 Jul 2003 10:36 am  Operator: JMR
Sample : L507023I2  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.256 | 0.293 | -14.5 | 87 | 0.00 | |
| 42 | T | Methylmethacrylate | 0.077 | 0.083 | -7.8 | 85 | 0.00 | |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | NT |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | NT |
| 45 | TM | Bromodichloromethane | 0.346 | 0.396 | -14.5 | 93 | 0.00 | |
| 46 | TM | Dibromomethane | 0.116 | 0.143 | -23.3 | 98 | 0.00 | |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 50 | T | No Compound | 0.000 | 0.000 | 0.0 | 0# | 0.50 | |
| 51 | TM | 2-Hexanone | 0.032 | 0.006 | 81.3# | 16# | 0.02 | |
| 52 | TM | Methyl isobutyl ketone | 0.037 | 0.008 | 78.4# | 17# | 0.00 | |
| 53 | TM | cis-1,3-Dichloropropene | 0.328 | 0.347 | -5.8 | 85 | 0.00 | |
| 54 | S | Bromofluorobenzene | 0.305 | 0.332 | -8.9 | 92 | 0.00 | |
| 55 | TMC | Toluene | 0.626 | 0.720 | -15.0 | 88 | 0.00 | |
| 56 | TM | trans-1,3-Dichloropropene | 0.227 | 0.233 | -2.6 | 82 | 0.00 | |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.115 | 0.134 | -16.5 | 84 | 0.00 | |
| 59 | TM | 1,3-Dichloropropane | 0.241 | 0.278 | -15.4 | 92 | 0.00 | |
| 60 | TM | Tetrachloroethene | 0.291 | 0.403 | -38.5# | 108 | 0.00 | |
| 61 | TM | Dibromochloromethane | 0.180 | 0.179 | 0.6 | 74 | 0.00 | |
| 62 | TM | 1,2-Dibromoethane | 0.119 | 0.139 | -16.8 | 92 | 0.00 | |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 86 | 0.00 | |
| 64 | TMP | Chlorobenzene | 0.972 | 1.091 | -12.2 | 89 | 0.00 | |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.352 | 0.409 | -16.2 | 93 | 0.00 | |
| 66 | TMC | Ethylbenzene | 1.935 | 2.261 | -16.8 | 90 | 0.00 | |
| 67 | TM | m,p-Xylene | 0.654 | 0.751 | -14.8 | 88 | 0.00 | |
| 68 | TM | o-Xylene | 0.624 | 0.673 | -7.9 | 85 | 0.00 | |
| 69 | TM | Styrene | 0.969 | 1.009 | -4.1 | 86 | 0.00 | |
| 70 | TMP | Bromoform | 0.135 | 0.123 | 8.9 | 77 | 0.00 | |
| 71 | TM | Isopropylbenzene | 1.779 | 1.929 | -8.4 | 84 | 0.00 | |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.208 | 0.223 | -7.2 | 87 | 0.00 | |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.368 | 0.370 | -0.5 | 87 | 0.00 | |
| 74 | TM | 1,2,3-Trichloropropane | 0.155 | 0.173 | -11.6 | 85 | -0.01 | |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.081 | 0.075 | 7.4 | 78 | 0.00 | |
| 76 | TM | n-Propylbenzene | 2.220 | 2.528 | -13.9 | 90 | 0.00 | |
| 77 | TM | Bromobenzene | 0.355 | 0.387 | -9.0 | 89 | 0.00 | |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.458 | 1.671 | -14.6 | 90 | 0.00 | |
| 79 | TM | 2-Chlorotoluene | 1.472 | 1.730 | -17.5 | 91 | 0.00 | |
| 80 | TM | 4-Chlorotoluene | 1.303 | 1.520 | -16.7 | 94 | 0.00 | |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070203-I\I11838Q.D
Acq On : 2 Jul 2003 10:36 am
Sample : L507023I2
Misc : 25000
MS Integration Params: rteint.p

Vial: 2
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V506183I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jun 18 15:04:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.224 | 1.365 | -11.5 | 90 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.451 | 1.658 | -14.3 | 90 | 0.00 | |
| 83 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.760 | 2.070 | -17.6 | 94 | 0.00 | |
| 85 | TM | p-isopropyltoluene | 1.420 | 1.516 | -6.8 | 86 | 0.00 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.702 | 0.771 | -9.8 | 88 | 0.00 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 92 | 0.00 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.439 | 1.527 | -6.1 | 88 | 0.00 | |
| 89 | TM | n-butylbenzene | 3.001 | 3.170 | -5.6 | 91 | 0.00 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.221 | 1.266 | -3.7 | 91 | 0.00 | |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.061 | 0.062 | -1.6 | 87 | 0.00 | |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.656 | 0.577 | 12.0 | 85 | 0.00 | |
| 95 | TM | Hexachlorobutadiene | 0.415 | 0.543 | -30.8# | 116 | 0.00 | |
| 96 | TM | Naphthalene | 0.609 | 0.469 | 23.0 | 75 | 0.00 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.493 | 0.394 | 20.1 | 82 | 0.00 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.098 | 1.040 | 5.3 | 84 | 0.00 | |

## 524 RECOVERY

Data File Name: I11872Q.D
Sample Name: L507093I
Date: 9 Jul 2003 9:32 am

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.31 | 1.2 | 109% | OK |
| Chloromethane | 1.63 | 1.2 | 136% | * |
| Vinyl Chloride | 1.53 | 1.2 | 128% | OK |
| Bromomethane | 1.62 | 1.2 | 135% | * |
| Chloroethane | 1.51 | 1.2 | 125% | OK |
| t-Butyl alcohol | 4.88 | 6.0 | 81% | OK |
| Trichlorofluoromethane | 1.33 | 1.2 | 111% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.31 | 1.2 | 109% | OK |
| Acetone | 2.08 | 1.2 | 173% | * |
| 1,1-Dichloroethene | 1.36 | 1.2 | 113% | OK |
| Di-isopropyl ether | 1.38 | 1.2 | 115% | OK |
| Methylene Chloride | 1.21 | 1.2 | 101% | OK |
| Methyl-tert-butyl ether | 2.56 | 2.4 | 107% | OK |
| trans-1,2-Dichloroethene | 1.32 | 1.2 | 110% | OK |
| 1,1-Dichloroethane | 1.37 | 1.2 | 115% | OK |
| Methyl ethyl ketone | 1.13 | 1.2 | 94% | OK |
| Ethyl t-butyl ether | 1.35 | 1.2 | 112% | OK |
| 2,2-Dichloropropane | 1.35 | 1.2 | 113% | OK |
| cis-1,2-Dichloroethene | 1.40 | 1.2 | 117% | OK |
| t-Amyl methyl ether | 1.27 | 1.2 | 106% | OK |
| Chloroform | 1.40 | 1.2 | 116% | OK |
| Bromochloromethane | 1.33 | 1.2 | 111% | OK |
| Tetrahydrofuran | 1.24 | 1.2 | 103% | OK |
| 1,1,1-Trichloroethane | 1.34 | 1.2 | 111% | OK |
| 1,1-Dichloropropene | 1.37 | 1.2 | 114% | OK |
| Carbon Tetrachloride | 1.33 | 1.2 | 111% | OK |
| 1,2-Dichloroethane | 1.32 | 1.2 | 110% | OK |
| Benzene | 1.39 | 1.2 | 115% | OK |
| Trichloroethene | 1.44 | 1.2 | 120% | OK |
| 1,2-Dichloropropane | 1.38 | 1.2 | 115% | OK |
| Bromodichloromethane | 1.38 | 1.2 | 115% | OK |
| Dibromomethane | 1.25 | 1.2 | 104% | OK |
| 2-Hexanone | 1.01 | 1.2 | 84% | OK |
| Methyl isobutyl ketone | 1.29 | 1.2 | 108% | OK |
| cis-1,3-Dichloropropene | 1.33 | 1.2 | 111% | OK |
| Toluene | 1.29 | 1.2 | 107% | OK |
| trans-1,3-Dichloropropene | 1.18 | 1.2 | 99% | OK |
| 1,1,2-Trichloroethane | 1.25 | 1.2 | 104% | OK |
| 1,3-Dichloropropane | 1.28 | 1.2 | 106% | OK |
| Tetrachloroethene | 1.36 | 1.2 | 113% | OK |
| Dibromochloromethane | 1.20 | 1.2 | 100% | OK |
| 1,2-Dibromoethane | 1.24 | 1.2 | 103% | OK |
| Chlorobenzene | 1.36 | 1.2 | 113% | OK |
| 1,1,1,2-Tetrachloroethane | 1.41 | 1.2 | 118% | OK |
| Ethylbenzene | 1.35 | 1.2 | 112% | OK |
| m,p-Xylene | 2.57 | 2.4 | 107% | OK |
| o-Xylene | 1.31 | 1.2 | 109% | OK |
| Styrene | 1.06 | 1.2 | 88% | OK |

7.10.03

VMT 7/10/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.16 | 1.2 | 97% | OK |
| Isopropylbenzene | 1.28 | 1.2 | 107% | OK |
| 1,1,2,2-Tetrachloroethane | 1.28 | 1.2 | 107% | OK |
| 1,2,3-Trichloropropane | 1.31 | 1.2 | 109% | OK |
| n-Propylbenzene | 1.32 | 1.2 | 110% | OK |
| Bromobenzene | 1.29 | 1.2 | 108% | OK |
| 1,3,5-Trimethylbenzene | 1.16 | 1.2 | 97% | OK |
| 2-Chlorotoluene | 1.31 | 1.2 | 109% | OK |
| 4-Chlorotoluene | 1.31 | 1.2 | 109% | OK |
| tert-butylbenzene | 1.28 | 1.2 | 106% | OK |
| 1,2,4-Trimethylbenzene | 1.20 | 1.2 | 100% | OK |
| sec-butylbenzene | 1.28 | 1.2 | 107% | OK |
| p-isopropyltoluene | 1.24 | 1.2 | 103% | OK |
| 1,3-Dichlorobenzene | 1.27 | 1.2 | 106% | OK |
| 1,4-Dichlorobenzene | 1.35 | 1.2 | 113% | OK |
| n-butylbenzene | 1.29 | 1.2 | 108% | OK |
| 1,2-Dichlorobenzene | 1.31 | 1.2 | 109% | OK |
| 1,2-Dibromo-3-chloropropane | 0.91 | 1.2 | 76% | OK |
| 1,2,4-Trichlorobenzene | 1.05 | 1.2 | 87% | OK |
| Hexachlorobutadiene | 1.41 | 1.2 | 118% | OK |
| Naphthalene | 0.91 | 1.2 | 76% | OK |
| 1,2,3-Trichlorobenzene | 1.06 | 1.2 | 88% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11872Q.D
Acq On : 9 Jul 2003 9:32 am
Sample : L507093I
Misc : 25000
MS Integration Params: rteint.p

Vial: 3
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

mvs 8.2.03 Reprinted

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 99 | -0.02 | |
| 2 | TM | Dichlorodifluoromethane | 0.735 | 0.803 | -9.3 | 103 | 0.00 | |
| 3 | TMP | Chloromethane | 0.271 | 0.367 | -35.4# | 125 | 0.00 | |
| 4 | TMC | Vinyl Chloride | 0.236 | 0.301 | -27.5# | 117 | 0.00 | |
| 5 | TM | Bromomethane | 0.223 | 0.301 | -35.0# | 125 | -0.01 | |
| 6 | TM | Chloroethane | 0.149 | 0.187 | -25.5 | 119 | 0.00 | |
| 7 | TM | t-Butyl alcohol | 0.004 | 0.003 | 25.0 | 61 | 0.00 | |
| 8 | TM | Trichlorofluoromethane | 0.656 | 0.730 | -11.3 | 106 | -0.01 | |
| 9 | TM | Diethyl ether | 0.079 | 0.089 | -12.7 | 102 | -0.01 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.335 | 0.364 | -8.7 | 102 | 0.00 | |
| 11 | T | Acrolein | 0.006 | 0.004 | ~~-33.3#~~ | ~~54~~ | ~~-0.01~~ | NT |
| 12 | TM | Acetone | 0.021 | 0.007 Dec'd w/ LOT | 66.7# | 33# | 0.00 | |
| 13 | TMC | 1,1-Dichloroethene | 0.261 | 0.295 | -13.0 | 106 | 0.00 | |
| 14 | T | Methyl iodide | 0.361 | 0.235 | ~~-34.9#~~ | ~~73~~ | ~~-0.01~~ | NT |
| 15 | TM | Di-isopropyl ether | 0.537 | 0.619 | -15.3 | 110 | -0.01 | |
| 16 | TM | Methylene Chloride | 0.540 | 0.669 | -23.9 | 107 | -0.02 | |
| 17 | TM | Carbon Disulfide | 0.434 | 0.568 | -30.9# | 131 | -0.01 | |
| 18 | T | Acrylonitrile | 0.021 | 0.022 | -4.8 | 106 | -0.02 | |
| 19 | TM | Methyl-tert-butyl ether | 0.335 | 0.714 Dec'd w/ LOT | -113.1# | 205# | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.386 | 0.426 | -10.4 | 102 | -0.01 | |
| 21 | TMP | 1,1-Dichloroethane | 0.495 | 0.567 | -14.5 | 108 | -0.02 | |
| 22 | T | Vinyl acetate | 0.022 | 0.042 | ~~-90.9#~~ | ~~168~~ | ~~0.00~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.009 | 0.002 Dec'd w/ LOT | 77.8# | 17# | 0.00 | |
| 24 | TM | Ethyl t-butyl ether | 0.397 | 0.445 | -12.1 | 105 | -0.01 | |
| 25 | TM | 2,2-Dichloropropane | 0.486 | 0.548 | -12.8 | 104 | -0.01 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.390 | 0.456 | -16.9 | 110 | -0.01 | |
| 27 | TM | t-Amyl methyl ether | 0.312 | 0.330 | -5.8 | 99 | 0.00 | |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.24~~ | NT |
| 29 | TMC | Chloroform | 0.797 | 0.928 | -16.4 | 109 | -0.01 | |
| 30 | TM | Bromochloromethane | 0.179 | 0.198 | -10.6 | 101 | -0.01 | |
| 31 | TM | Tetrahydrofuran | 0.009 | 0.009 | 0.0 | 84 | -0.01 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.802 | 0.893 | -11.3 | 105 | -0.01 | |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 34 | TM | 1,1-Dichloropropene | 0.526 | 0.600 | -14.1 | 104 | 0.00 | |
| 35 | TM | Carbon Tetrachloride | 0.832 | 0.922 | -10.8 | 104 | -0.01 | |
| 36 | S | 1,4-Difluorobenzene | 1.322 | 1.326 | -0.3 | 100 | -0.01 | |
| 37 | TM | 1,2-Dichloroethane | 0.383 | 0.422 | -10.2 | 96 | -0.01 | |
| 38 | TM | Benzene | 1.185 | 1.368 | -15.4 | 106 | -0.01 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 102 | -0.01 | |
| 40 | TM | Trichloroethene | 0.333 | 0.400 | -20.1 | 113 | -0.01 | |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11872Q.D
Acq On : 9 Jul 2003 9:32 am
Sample : L507093I
Misc : 25000
MS Integration Params: rteint.p

Vial: 3
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.143 | 0.165 | -15.4 | 109 | -0.01 | |
| 42 | T | Methylmethacrylate | 0.055 | 0.051 | 7.3 | 91 | -0.02 | |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 45 | TM | Bromodichloromethane | 0.331 | 0.380 | -14.8 | 109 | -0.01 | |
| 46 | TM | Dibromomethane | 0.123 | 0.128 | -4.1 | 101 | -0.01 | |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 | |
| 50 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | |
| 51 | TM | 2-Hexanone | 0.018 | 0.003 see below | 83.3# | 19# | 0.00 | |
| 52 | TM | Methyl isobutyl ketone | 0.021 | 0.004 see below | 81.0# | 21# | -0.01 | |
| 53 | TM | cis-1,3-Dichloropropene | 0.260 | 0.289 | -11.2 | 111 | 0.00 | |
| 54 | S | Bromofluorobenzene | 0.341 | 0.328 | 3.8 | 98 | -0.01 | |
| 55 | TMC | Toluene | 0.631 | 0.677 | -7.3 | 99 | -0.01 | |
| 56 | TM | trans-1,3-Dichloropropene | 0.200 | 0.197 | 1.5 | 100 | -0.01 | |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.100 | 0.104 | -4.0 | 96 | -0.01 | |
| 59 | TM | 1,3-Dichloropropane | 0.199 | 0.212 | -6.5 | 102 | -0.01 | |
| 60 | TM | Tetrachloroethene | 0.418 | 0.473 | -13.2 | 101 | -0.02 | |
| 61 | TM | Dibromochloromethane | 0.243 | 0.243 | 0.0 | 97 | -0.02 | |
| 62 | TM | 1,2-Dibromoethane | 0.146 | 0.151 | -3.4 | 98 | 0.00 | |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 98 | -0.01 | |
| 64 | TMP | Chlorobenzene | 1.013 | 1.147 | -13.2 | 102 | -0.01 | |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.399 | 0.470 | -17.8 | 108 | -0.01 | |
| 66 | TMC | Ethylbenzene | 1.721 | 1.934 | -12.4 | 102 | -0.01 | |
| 67 | TM | m,p-Xylene | 0.646 | 0.692 | -7.1 | 96 | -0.01 | |
| 68 | TM | o-Xylene | 0.606 | 0.663 | -9.4 | 98 | -0.01 | |
| 69 | TM | Styrene | 0.907 | 0.801 | 11.7 | 81 | -0.01 | |
| 70 | TMP | Bromoform | 0.149 | 0.145 | 2.7 | 89 | 0.00 | |
| 71 | TM | Isopropylbenzene | 1.771 | 1.892 | -6.8 | 97 | -0.01 | |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.152 | 0.162 | -6.6 | 95 | 0.00 | |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.426 | 0.409 | 4.0 | 94 | -0.01 | |
| 74 | TM | 1,2,3-Trichloropropane | 0.109 | 0.119 | -9.2 | 97 | -0.01 | |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.050 | 0.045 | 10.0 | 79 | -0.01 | |
| 76 | TM | n-Propylbenzene | 1.968 | 2.166 | -10.1 | 98 | -0.01 | |
| 77 | TM | Bromobenzene | 0.430 | 0.463 | -7.7 | 96 | 0.00 | |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.540 | 1.490 | 3.2 | 85 | -0.01 | |
| 79 | TM | 2-Chlorotoluene | 1.372 | 1.502 | -9.5 | 99 | -0.01 | |
| 80 | TM | 4-Chlorotoluene | 1.202 | 1.312 | -9.2 | 100 | -0.01 | |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11872Q.D
Acq On : 9 Jul 2003 9:32 am
Sample : L507093I
Misc : 25000
MS Integration Params: rteint.p

Vial: 3
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.371 | 1.457 | -6.3 | 95 | 0.00 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.515 | 1.511 | 0.3 | 91 | -0.01 | |
| 83 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.732 | 1.847 | -6.6 | 95 | -0.01 | |
| 85 | TM | p-isopropyltoluene | 1.573 | 1.622 | -3.1 | 94 | -0.01 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.857 | 0.907 | -5.8 | 97 | -0.01 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 93 | -0.01 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.516 | 1.708 | -12.7 | 97 | -0.01 | |
| 89 | TM | n-butylbenzene | 2.322 | 2.497 | -7.5 | 95 | -0.02 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.271 | 1.387 | -9.1 | 95 | -0.01 | |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.047 | 0.036 | 23.4 | 64 | -0.01 | |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~0.06~~ | NT |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.648 | 0.566 | 12.7 | 85 | -0.01 | |
| 95 | TM | Hexachlorobutadiene | 0.317 | 0.373 | -17.7 | 96 | -0.01 | |
| 96 | TM | Naphthalene | 0.652 | 0.482 | 26.1 | 75 | -0.01 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.460 | 0.416 | 9.6 | 88 | -0.01 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.031 | 1.094 | -6.1 | 94 | -0.01 | |

## 524 RECOVERY

Data File Name: I11873Q.D
Sample Name: L50709312,,4.8PPB
Date: 9 Jul 2003 10:25 am

7-10-03

VMT 7/10/03

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 4.94 | 4.8 | 103% | OK |
| Chloromethane | 5.42 | 4.8 | 113% | OK |
| Vinyl Chloride | 4.79 | 4.8 | 100% | OK |
| Bromomethane | 5.21 | 4.8 | 109% | OK |
| Chloroethane | 5.31 | 4.8 | 111% | OK |
| t-Butyl alcohol | 20.43 | 24.0 | 85% | OK |
| Trichlorofluoromethane | 4.88 | 4.8 | 102% | OK |
| 1,1,2-Trichlorotrifluoroethane | 4.98 | 4.8 | 104% | OK |
| Acetone | 5.99 | 4.8 | 125% | OK |
| 1,1-Dichloroethene | 4.89 | 4.8 | 102% | OK |
| Di-isopropyl ether | 5.00 | 4.8 | 104% | OK |
| Methylene Chloride | 5.68 | 4.8 | 118% | OK |
| Carbon Disulfide | 5.24 | 4.80 | 109% | OK |
| Methyl-tert-butyl ether | 9.20 | 9.6 | 96% | OK |
| trans-1,2-Dichloroethene | 4.87 | 4.8 | 102% | OK |
| 1,1-Dichloroethane | 5.00 | 4.8 | 104% | OK |
| Methyl ethyl ketone | 4.32 | 4.8 | 90% | OK |
| Ethyl t-butyl ether | 4.75 | 4.8 | 99% | OK |
| 2,2-Dichloropropane | 5.64 | 4.8 | 118% | OK |
| cis-1,2-Dichloroethene | 5.11 | 4.8 | 106% | OK |
| t-Amyl methyl ether | 4.77 | 4.8 | 99% | OK |
| Chloroform | 4.85 | 4.8 | 101% | OK |
| Bromochloromethane | 4.91 | 4.8 | 102% | OK |
| Tetrahydrofuran | 5.06 | 4.8 | 105% | OK |
| 1,1,1-Trichloroethane | 5.05 | 4.8 | 105% | OK |
| 1,1-Dichloropropene | 5.05 | 4.8 | 105% | OK |
| Carbon Tetrachloride | 4.96 | 4.8 | 103% | OK |
| 1,2-Dichloroethane | 4.95 | 4.8 | 103% | OK |
| Benzene | 4.90 | 4.8 | 102% | OK |
| Trichloroethene | 5.18 | 4.8 | 108% | OK |
| 1,2-Dichloropropane | 5.17 | 4.8 | 108% | OK |
| Bromodichloromethane | 4.86 | 4.8 | 101% | OK |
| Dibromomethane | 4.53 | 4.8 | 94% | OK |
| 2-Hexanone | 4.48 | 4.8 | 93% | OK |
| Methyl isobutyl ketone | 4.68 | 4.8 | 97% | OK |
| cis-1,3-Dichloropropene | 5.32 | 4.8 | 111% | OK |
| Toluene | 4.71 | 4.8 | 98% | OK |
| trans-1,3-Dichloropropene | 4.93 | 4.8 | 103% | OK |
| 1,1,2-Trichloroethane | 4.95 | 4.8 | 103% | OK |
| 1,3-Dichloropropane | 4.86 | 4.8 | 101% | OK |
| Tetrachloroethene | 5.10 | 4.8 | 106% | OK |
| Dibromochloromethane | 4.52 | 4.8 | 94% | OK |
| 1,2-Dibromoethane | 4.74 | 4.8 | 99% | OK |
| Chlorobenzene | 4.86 | 4.8 | 101% | OK |
| 1,1,1,2-Tetrachloroethane | 5.21 | 4.8 | 109% | OK |
| Ethylbenzene | 4.86 | 4.8 | 101% | OK |
| m,p-Xylene | 9.71 | 9.6 | 101% | OK |
| o-Xylene | 4.97 | 4.8 | 103% | OK |

| | | | | |
|---|---|---|---|---|
| Styrene | 4.96 | 4.8 | 103% | OK |
| Bromoform | 4.74 | 4.8 | 99% | OK |
| Isopropylbenzene | 4.69 | 4.8 | 98% | OK |
| 1,1,2,2-Tetrachloroethane | 4.76 | 4.8 | 99% | OK |
| 1,2,3-Trichloropropane | 4.89 | 4.8 | 102% | OK |
| n-Propylbenzene | 4.95 | 4.8 | 103% | OK |
| Bromobenzene | 4.81 | 4.8 | 100% | OK |
| 1,3,5-Trimethylbenzene | 4.83 | 4.8 | 101% | OK |
| 2-Chlorotoluene | 4.86 | 4.8 | 101% | OK |
| 4-Chlorotoluene | 4.85 | 4.8 | 101% | OK |
| tert-butylbenzene | 4.75 | 4.8 | 99% | OK |
| 1,2,4-Trimethylbenzene | 5.01 | 4.8 | 104% | OK |
| sec-butylbenzene | 5.03 | 4.8 | 105% | OK |
| p-isopropyltoluene | 4.86 | 4.8 | 101% | OK |
| 1,3-Dichlorobenzene | 4.73 | 4.8 | 99% | OK |
| 1,4-Dichlorobenzene | 4.91 | 4.8 | 102% | OK |
| n-butylbenzene | 5.08 | 4.8 | 106% | OK |
| 1,2-Dichlorobenzene | 4.76 | 4.8 | 99% | OK |
| 1,2-Dibromo-3-chloropropane | 4.54 | 4.8 | 95% | OK |
| 1,2,4-Trichlorobenzene | 4.85 | 4.8 | 101% | OK |
| Hexachlorobutadiene | 5.15 | 4.8 | 107% | OK |
| Naphthalene | 3.95 | 4.8 | 82% | OK |
| 1,2,3-Trichlorobenzene | 4.16 | 4.8 | 87% | OK |

## 524 RECOVERY

Data File Name: I11874Q.D
Sample Name: L507093I3..1.2PPB
Date: 9 Jul 2003 11:00 am

| Name | Amount | True Value | Recovery | +/- 30% |
|---|---|---|---|---|
| Dichlorodifluoromethane | 1.19 | 1.2 | 99% | OK |
| Chloromethane | 1.40 | 1.2 | 117% | OK |
| Vinyl Chloride | 1.24 | 1.2 | 103% | OK |
| Bromomethane | 1.48 | 1.2 | 124% | OK |
| Chloroethane | 1.21 | 1.2 | 101% | OK |
| t-Butyl alcohol | 6.23 | 6.0 | 104% | OK |
| Trichlorofluoromethane | 1.19 | 1.2 | 99% | OK |
| 1,1,2-Trichlorotrifluoroethane | 1.27 | 1.2 | 105% | OK |
| Acetone | 2.25 | 1.2 | 187% | (*) |
| 1,1-Dichloroethene | 1.30 | 1.2 | 108% | OK |
| Di-isopropyl ether | 1.31 | 1.2 | 109% | OK |
| Methylene Chloride | 1.14 | 1.2 | 95% | OK |
| Methyl-tert-butyl ether | 2.47 | 2.4 | 103% | OK |
| trans-1,2-Dichloroethene | 1.34 | 1.2 | 112% | OK |
| 1,1-Dichloroethane | 1.31 | 1.2 | 109% | OK |
| Methyl ethyl ketone | 1.34 | 1.2 | 111% | OK |
| Ethyl t-butyl ether | 1.27 | 1.2 | 106% | OK |
| 2,2-Dichloropropane | 1.36 | 1.2 | 113% | OK |
| cis-1,2-Dichloroethene | 1.30 | 1.2 | 108% | OK |
| t-Amyl methyl ether | 1.23 | 1.2 | 102% | OK |
| Chloroform | 1.34 | 1.2 | 111% | OK |
| Bromochloromethane | 1.29 | 1.2 | 108% | OK |
| Tetrahydrofuran | 1.65 | 1.2 | 137% | (*) |
| 1,1,1-Trichloroethane | 1.33 | 1.2 | 111% | OK |
| 1,1-Dichloropropene | 1.33 | 1.2 | 111% | OK |
| Carbon Tetrachloride | 1.31 | 1.2 | 109% | OK |
| 1,2-Dichloroethane | 1.33 | 1.2 | 111% | OK |
| Benzene | 1.35 | 1.2 | 113% | OK |
| Trichloroethene | 1.32 | 1.2 | 110% | OK |
| 1,2-Dichloropropane | 1.31 | 1.2 | 109% | OK |
| Bromodichloromethane | 1.30 | 1.2 | 108% | OK |
| Dibromomethane | 1.15 | 1.2 | 96% | OK |
| 2-Hexanone | 1.07 | 1.2 | 90% | OK |
| Methyl isobutyl ketone | 1.18 | 1.2 | 98% | OK |
| cis-1,3-Dichloropropene | 1.29 | 1.2 | 107% | OK |
| Toluene | 1.23 | 1.2 | 103% | OK |
| trans-1,3-Dichloropropene | 1.18 | 1.2 | 98% | OK |
| 1,1,2-Trichloroethane | 1.26 | 1.2 | 105% | OK |
| 1,3-Dichloropropane | 1.21 | 1.2 | 101% | OK |
| Tetrachloroethene | 1.35 | 1.2 | 112% | OK |
| Dibromochloromethane | 1.15 | 1.2 | 96% | OK |
| 1,2-Dibromoethane | 1.13 | 1.2 | 94% | OK |
| Chlorobenzene | 1.33 | 1.2 | 111% | OK |
| 1,1,1,2-Tetrachloroethane | 1.37 | 1.2 | 114% | OK |
| Ethylbenzene | 1.32 | 1.2 | 110% | OK |
| m,p-Xylene | 2.69 | 2.4 | 112% | OK |
| o-Xylene | 1.35 | 1.2 | 112% | OK |
| Styrene | 1.30 | 1.2 | 108% | OK |

7.10.03

VMT 7/10/03

| | | | | |
|---|---|---|---|---|
| Bromoform | 1.22 | 1.2 | 102% | OK |
| Isopropylbenzene | 1.25 | 1.2 | 105% | OK |
| 1,1,2,2-Tetrachloroethane | 1.27 | 1.2 | 106% | OK |
| 1,2,3-Trichloropropane | 1.26 | 1.2 | 105% | OK |
| -Propylbenzene | 1.31 | 1.2 | 110% | OK |
| Bromobenzene | 1.26 | 1.2 | 105% | OK |
| 1,3,5-Trimethylbenzene | 1.31 | 1.2 | 109% | OK |
| 2-Chlorotoluene | 1.32 | 1.2 | 110% | OK |
| 4-Chlorotoluene | 1.31 | 1.2 | 109% | OK |
| tert-butylbenzene | 1.31 | 1.2 | 110% | OK |
| 1,2,4-Trimethylbenzene | 1.34 | 1.2 | 112% | OK |
| sec-butylbenzene | 1.31 | 1.2 | 109% | OK |
| p-isopropyltoluene | 1.27 | 1.2 | 106% | OK |
| 1,3-Dichlorobenzene | 1.28 | 1.2 | 107% | OK |
| 1,4-Dichlorobenzene | 1.30 | 1.2 | 108% | OK |
| n-butylbenzene | 1.33 | 1.2 | 111% | OK |
| 1,2-Dichlorobenzene | 1.33 | 1.2 | 111% | OK |
| 1,2-Dibromo-3-chloropropane | 1.18 | 1.2 | 98% | OK |
| 1,2,4-Trichlorobenzene | 1.21 | 1.2 | 100% | OK |
| Hexachlorobutadiene | 1.53 | 1.2 | 127% | OK |
| Naphthalene | 1.05 | 1.2 | 87% | OK |
| 1,2,3-Trichlorobenzene | 1.13 | 1.2 | 94% | OK |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11874Q.D
Acq On : 9 Jul 2003 11:00 am
Sample : L507093I3..1.2PPB
Misc : 25000
MS Integration Params: rteint.p

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

Reprinted 8-2003

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 93 | -0.02 | |
| 2 | TM | Dichlorodifluoromethane | 0.735 | 0.727 | 1.1 | 88 | 0.00 | |
| 3 | TMP | Chloromethane | 0.271 | 0.316 | -16.6 | 101 | -0.01 | |
| 4 | TMC | Vinyl Chloride | 0.236 | 0.244 | -3.4 | 89 | -0.01 | |
| 5 | TM | Bromomethane | 0.223 | 0.276 | -23.8 | 108 | -0.01 | |
| 6 | TM | Chloroethane | 0.149 | 0.150 | -0.7 | 90 | -0.01 | |
| 7 | TM | t-Butyl alcohol | 0.004 | 0.004 | 0.0 | 73 | -0.02 | |
| 8 | TM | Trichlorofluoromethane | 0.656 | 0.650 | 0.9 | 89 | -0.02 | |
| 9 | TM | Diethyl ether | 0.079 | 0.074 | 6.3 | 80 | -0.01 | |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.335 | 0.353 | -5.4 | 92 | -0.02 | |
| 11 | T | Acrolein | 0.006 | 0.004 | ~~33.3#~~ | ~~51~~ | ~~0.00~~ | NT |
| 12 | TM | Acetone | 0.021 | 0.008 see worst | 61.9# | 33# | -0.01 | |
| 13 | TMC | 1,1-Dichloroethene | 0.261 | 0.282 | -8.0 | 95 | 0.00 | |
| 14 | T | Methyl iodide | 0.361 | 0.269 | 25.5 | 78 | -0.01 | |
| 15 | TM | Di-isopropyl ether | 0.537 | 0.586 | -9.1 | 98 | 0.00 | |
| 16 | TM | Methylene Chloride | 0.540 | 0.654 | -21.1 | 98 | -0.02 | |
| 17 | TM | Carbon Disulfide | 0.434 | 0.480 | -10.6 | 104 | -0.01 | |
| 18 | T | Acrylonitrile | 0.021 | 0.025 | -19.0 | 113 | -0.02 | |
| 19 | TM | Methyl-tert-butyl ether | 0.335 | 0.690 see worst | -106.0# | 186 | 0.00 | |
| 20 | TM | trans-1,2-Dichloroethene | 0.386 | 0.432 | -11.9 | 97 | -0.01 | |
| 21 | TMP | 1,1-Dichloroethane | 0.495 | 0.541 | -9.3 | 96 | -0.02 | |
| 22 | T | Vinyl acetate | 0.022 | 0.040 | ~~-81.8#~~ | ~~152~~ | ~~-0.01~~ | NT |
| 23 | TM | Methyl ethyl ketone | 0.009 | 0.002 see worst | 77.8# | 19# | 0.02 | |
| 24 | TM | Ethyl t-butyl ether | 0.397 | 0.421 | -6.0 | 93 | 0.00 | |
| 25 | TM | 2,2-Dichloropropane | 0.486 | 0.551 | -13.4 | 99 | -0.01 | |
| 26 | TM | cis-1,2-Dichloroethene | 0.390 | 0.422 | -8.2 | 96 | -0.01 | |
| 27 | TM | t-Amyl methyl ether | 0.312 | 0.319 | -2.2 | 90 | 0.00 | |
| 28 | T | NO COUMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.24~~ | NT |
| 29 | TMC | Chloroform | 0.797 | 0.888 | -11.4 | 98 | -0.01 | |
| 30 | TM | Bromochloromethane | 0.179 | 0.193 | -7.8 | 92 | -0.01 | |
| 31 | TM | Tetrahydrofuran | 0.009 | 0.012 | -33.3# | 106 | 0.00 | |
| 32 | TM | 1,1,1-Trichloroethane | 0.802 | 0.890 | -11.0 | 98 | -0.01 | |
| 33 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 34 | TM | 1,1-Dichloropropene | 0.526 | 0.585 | -11.2 | 96 | -0.01 | |
| 35 | TM | Carbon Tetrachloride | 0.832 | 0.909 | -9.3 | 97 | -0.02 | |
| 36 | S | 1,4-Difluorobenzene | 1.322 | 1.350 | -2.1 | 96 | -0.01 | |
| 37 | TM | 1,2-Dichloroethane | 0.383 | 0.424 | -10.7 | 91 | -0.01 | |
| 38 | TM | Benzene | 1.185 | 1.337 | -12.8 | 98 | -0.02 | |
| 39 | I | Fluorobenzene | 1.000 | 1.000 | 0.0 | 100 | -0.01 | |
| 40 | TM | Trichloroethene | 0.333 | 0.365 | -9.6 | 101 | -0.01 | |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11874Q.D  Vial: 5
Acq On : 9 Jul 2003 11:00 am  Operator: JMR
Sample : L507093I3..1.2PPB  Inst : Instrumen
Misc : 25000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.143 | 0.157 | -9.8 | 101 | -0.01 |
| 42 | T | Methylmethacrylate | 0.055 | 0.050 | 9.1 | 87 | -0.02 |
| 43 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 44 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 45 | TM | Bromodichloromethane | 0.331 | 0.359 | -8.5 | 101 | -0.01 |
| 46 | TM | Dibromomethane | 0.123 | 0.117 | 4.9 | 90 | -0.01 |
| 47 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ |
| 48 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 49 | T | NO COMPOUND | 0.000 | 0.000 | 0.0 | 0# | -0.06 |
| 50 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ |
| 51 | TM | 2-Hexanone | 0.018 | 0.003 | 83.3# | 19# | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.021 | 0.004 | 81.0# | 18# | -0.01 |
| 53 | TM | cis-1,3-Dichloropropene | 0.260 | 0.280 | -7.7 | 105 | -0.01 |
| 54 | S | Bromofluorobenzene | 0.341 | 0.320 | 6.2 | 94 | -0.02 |
| 55 | TMC | Toluene | 0.631 | 0.648 | -2.7 | 93 | -0.01 |
| 56 | TM | trans-1,3-Dichloropropene | 0.200 | 0.196 | 2.0 | 97 | -0.01 |
| 57 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ NT |
| 58 | TM | 1,1,2-Trichloroethane | 0.100 | 0.104 | -4.0 | 95 | -0.01 |
| 59 | TM | 1,3-Dichloropropane | 0.199 | 0.201 | -1.0 | 95 | -0.02 |
| 60 | TM | Tetrachloroethene | 0.418 | 0.469 | -12.2 | 98 | -0.01 |
| 61 | TM | Dibromochloromethane | 0.243 | 0.234 | 3.7 | 92 | -0.02 |
| 62 | TM | 1,2-Dibromoethane | 0.146 | 0.137 | 6.2 | 87 | -0.01 |
| 63 | I | d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 92 | -0.02 |
| 64 | TMP | Chlorobenzene | 1.013 | 1.122 | -10.8 | 94 | -0.01 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.399 | 0.454 | -13.8 | 98 | -0.01 |
| 66 | TMC | Ethylbenzene | 1.721 | 1.896 | -10.2 | 94 | -0.01 |
| 67 | TM | m,p-Xylene | 0.646 | 0.724 | -12.1 | 95 | -0.01 |
| 68 | TM | o-Xylene | 0.606 | 0.679 | -12.0 | 95 | -0.01 |
| 69 | TM | Styrene | 0.907 | 0.982 | -8.3 | 93 | -0.01 |
| 70 | TMP | Bromoform | 0.149 | 0.152 | -2.0 | 87 | -0.01 |
| 71 | TM | Isopropylbenzene | 1.771 | 1.850 | -4.5 | 89 | -0.01 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.152 | 0.161 | -5.9 | 89 | -0.01 |
| 73 | S | 1,2-Dichlorobenzene-d4 | 0.426 | 0.428 | -0.5 | 92 | -0.01 |
| 74 | TM | 1,2,3-Trichloropropane | 0.109 | 0.115 | -5.5 | 88 | -0.01 |
| 75 | T | trans-1,4-Dichloro-2-butene | 0.050 | 0.050 | 0.0 | 83 | -0.01 |
| 76 | TM | n-Propylbenzene | 1.968 | 2.156 | -9.6 | 92 | -0.01 |
| 77 | TM | Bromobenzene | 0.430 | 0.452 | -5.1 | 88 | -0.01 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.540 | 1.681 | -9.2 | 90 | -0.01 |
| 79 | TM | 2-Chlorotoluene | 1.372 | 1.509 | -10.0 | 93 | -0.01 |
| 80 | TM | 4-Chlorotoluene | 1.202 | 1.313 | -9.2 | 94 | -0.01 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\070803-I\I11874Q.D
Acq On : 9 Jul 2003 11:00 am
Sample : L507093I3..1.2PPB
Misc : 25000
MS Integration Params: rteint.p

Vial: 5
Operator: JMR
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V507083I.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Jul 09 09:57:59 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | |
|---|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 1.371 | 1.503 | -9.6 | 92 | -0.01 | |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.515 | 1.692 | -11.7 | 96 | -0.02 | |
| 83 | T | No Compound | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.50~~ | NT |
| 84 | TM | sec-butylbenzene | 1.732 | 1.894 | -9.4 | 92 | -0.02 | |
| 85 | TM | p-isopropyltoluene | 1.573 | 1.667 | -6.0 | 91 | -0.01 | |
| 86 | TM | 1,3-Dichlorobenzene | 0.857 | 0.917 | -7.0 | 93 | -0.01 | |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 88 | -0.02 | |
| 88 | TM | 1,4-Dichlorobenzene | 1.516 | 1.644 | -8.4 | 88 | -0.02 | |
| 89 | TM | n-butylbenzene | 2.322 | 2.570 | -10.7 | 92 | -0.02 | |
| 90 | TM | 1,2-Dichlorobenzene | 1.271 | 1.405 | -10.5 | 91 | -0.01 | |
| 91 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.047 | 0.046 | 2.1 | 78 | -0.01 | |
| 93 | T | NO COMPOUND | 0.000 | 0.000 | ~~0.0~~ | ~~0#~~ | ~~-0.06~~ | NT |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.648 | 0.650 | -0.3 | 93 | -0.01 | |
| 95 | TM | Hexachlorobutadiene | 0.317 | 0.403 | -27.1 | 98 | -0.01 | |
| 96 | TM | Naphthalene | 0.652 | 0.580 | 11.0 | 85 | -0.02 | |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.460 | 0.451 | 2.0 | 90 | -0.02 | |
| 98 | TM | 1,3,5-Trichlorobenzene | 1.031 | 1.077 | -4.5 | 88 | -0.01 | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 | Quote #: | SDG#: 49975

BFB File ID: I11756T | Site ID: Bucks Harbor | Location: Maine

Instrument ID: I | BFB Injection Date: 6/18/03

GC Column: RTX-502.2 | ID: 0.25(mm) | BFB Injection Time: 0952

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 603203 | | 7.71 | | 1172581 | | 9.12 | | 743404 | | 13.90 | | 337661 | | 17.75 | |
| | UPPER LIMIT | 784164 | | 8.17 | | 1524355 | | 9.67 | | 966425 | | 14.73 | | 438959 | | 18.82 | |
| | LOWER LIMIT | 422242 | | 7.25 | | 820807 | | 8.57 | | 520383 | | 13.07 | | 236363 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 0.1PPB STD | 576551 | | 7.72 | | 1101944 | | 9.12 | | 652480 | | 13.91 | | 297945 | | 17.75 | |
| 02 | 0.5PPB STD | 575502 | | 7.72 | | 1098669 | | 9.12 | | 722418 | | 13.90 | | 332913 | | 17.75 | |
| 03 | 1.2PPB STD | 603203 | | 7.71 | | 1172581 | | 9.12 | | 743404 | | 13.90 | | 337661 | | 17.75 | |
| 04 | 4.8PPB STD | 621115 | | 7.71 | | 1202054 | | 9.12 | | 736657 | | 13.90 | | 343739 | | 17.74 | |
| 05 | 8PPB STD | 607336 | | 7.72 | | 1157947 | | 9.13 | | 719531 | | 13.91 | | 348332 | | 17.75 | |
| 06 | 16PPB STD | 603287 | | 7.72 | | 1172654 | | 9.13 | | 772336 | | 13.91 | | 374322 | | 17.75 | |
| 07 | 32PPB STD | 664359 | | 7.71 | | 1243355 | | 9.12 | | 797012 | | 13.90 | | 378332 | | 17.75 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11836T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/2/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0901

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 509687 | 7.71 | 965843 | 9.12 | 653788 | 13.91 | 302608 | 17.75 |
| | UPPER LIMIT | 662593 | 8.17 | 1255596 | 9.67 | 849924 | 14.74 | 393390 | 18.82 |
| | LOWER LIMIT | 356781 | 7.25 | 676090 | 8.57 | 457652 | 13.08 | 211826 | 16.69 |
| | SAMPLE NO. | | | | | | | | |
| 01 | L507023I | 509687 | 7.71 | 965843 | 9.12 | 653788 | 13.91 | 302608 | 17.75 |
| 02 | L507023I2 | 501808 | 7.72 | 968753 | 9.12 | 635824 | 13.91 | 310453 | 17.75 |
| 03 | B507023I | 486468 | 7.71 | 919602 | 9.12 | 627098 | 13.90 | 291099 | 17.75 |
| 04 | B507023I2 | 475334 | 7.71 | 906821 | 9.12 | 588260 | 13.90 | 272347 | 17.75 |
| 05 | ZZZZZ | 488020 | 7.72 | 897748 | 9.12 | 597930 | 13.91 | 277443 | 17.75 |
| 06 | ZZZZZ | 487812 | 7.71 | 913049 | 9.12 | 607135 | 13.90 | 278534 | 17.75 |
| 07 | ZZZZZ | 466374 | 7.72 | 891872 | 9.12 | 585206 | 13.91 | 266005 | 17.75 |
| 08 | ZZZZZ | 477511 | 7.72 | 899123 | 9.13 | 594815 | 13.91 | 291412 | 17.75 |
| 09 | ZZZZZ | 507877 | 7.71 | 968821 | 9.12 | 643263 | 13.91 | 317299 | 17.75 |
| 10 | ZZZZZ | 490857 | 7.72 | 893432 | 9.12 | 605658 | 13.91 | 276459 | 17.75 |
| 11 | ZZZZZ | 484929 | 7.72 | 906941 | 9.13 | 605856 | 13.91 | 278168 | 17.75 |
| 12 | ZZZZZ | 490902 | 7.71 | 933492 | 9.12 | 621376 | 13.91 | 292174 | 17.75 |
| 13 | 49975-2,MS | 489207 | 7.72 | 920912 | 9.13 | 626301 | 13.91 | 314396 | 17.75 |
| 14 | 49975-2,MSD | 494925 | 7.72 | 923285 | 9.13 | 629948 | 13.91 | 304046 | 17.75 |
| 15 | ZZZZZ | 528740 | 7.72 | 960543 | 9.13 | 641313 | 13.91 | 285827 | 17.75 |
| 16 | ZZZZZ | 481526 | 7.72 | 904154 | 9.12 | 641016 | 13.91 | 293407 | 17.76 |
| 17 | ZZZZZ | 485950 | 7.72 | 901661 | 9.12 | 607663 | 13.91 | 278937 | 17.76 |
| 18 | ZZZZZ | 476294 | 7.72 | 927083 | 9.13 | 616445 | 13.91 | 281024 | 17.76 |
| 19 | ZZZZZ | 459389 | 7.72 | 854720 | 9.13 | 581861 | 13.91 | 268125 | 17.75 |
| 20 | ZZZZZ | 474612 | 7.72 | 865176 | 9.12 | 587735 | 13.92 | 267854 | 17.76 |
| 21 | ZZZZZ | 475407 | 7.72 | 880308 | 9.13 | 578366 | 13.92 | 271823 | 17.75 |
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| 24 | | | | | | | | | |

IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11861T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/8/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1410

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 380936 | | 7.72 | | 534160 | | 9.13 | | 410392 | | 13.92 | | 221583 | | 17.76 | |
| | UPPER LIMIT | 495217 | | 8.18 | | 694408 | | 9.68 | | 533510 | | 14.76 | | 288058 | | 18.83 | |
| | LOWER LIMIT | 266655 | | 7.26 | | 373912 | | 8.58 | | 287274 | | 13.08 | | 155108 | | 16.69 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 0.1PPB STD | 371633 | | 7.73 | | 536092 | | 9.14 | | 411389 | | 13.92 | | 209563 | | 17.76 | |
| 02 | 0.5PPB STD | 389286 | | 7.72 | | 554207 | | 9.13 | | 421678 | | 13.91 | | 222465 | | 17.76 | |
| 03 | 1.2PPB STD | 380936 | | 7.72 | | 534160 | | 9.13 | | 410392 | | 13.92 | | 221583 | | 17.76 | |
| 04 | 4.8PPB STD | 389022 | | 7.72 | | 567452 | | 9.13 | | 423331 | | 13.92 | | 227795 | | 17.77 | |
| 05 | 8PPB STD | 390526 | | 7.72 | | 566503 | | 9.13 | | 432334 | | 13.92 | | 235314 | | 17.76 | |
| 06 | 16PPB STD | 404996 | | 7.73 | | 591513 | | 9.13 | | 442317 | | 13.92 | | 242452 | | 17.77 | |
| 07 | 32PPB STD | 408658 | | 7.73 | | 589053 | | 9.13 | | 441296 | | 13.93 | | 244767 | | 17.77 | |
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IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 49975

BFB File ID: I11871T Site ID: Bucks Harbor Location: Maine

Instrument ID: I BFB Injection Date: 7/9/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0857

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 376574 | 7.72 | 545312 | 9.13 | 400669 | 13.92 | 206066 | 17.76 |
| | UPPER LIMIT | 489546 | 8.18 | 708906 | 9.68 | 520870 | 14.76 | 267886 | 18.83 |
| | LOWER LIMIT | 263602 | 7.26 | 381718 | 8.58 | 280468 | 13.08 | 144246 | 16.69 |
| | SAMPLE NO. | | | | | | | | |
| 01 | L507093I | 376574 | 7.72 | 545312 | 9.13 | 400669 | 13.92 | 206066 | 17.76 |
| 02 | L507093I2,,4.8PPB | 368835 | 7.73 | 543042 | 9.13 | 397271 | 13.92 | 206439 | 17.76 |
| 03 | L507093I3,,1.2PPB | 353632 | 7.72 | 533424 | 9.13 | 376176 | 13.91 | 194405 | 17.76 |
| 04 | B507093I | 342585 | 7.72 | 500618 | 9.13 | 367132 | 13.91 | 180650 | 17.76 |
| 05 | 49975-1 | 361463 | 7.72 | 522823 | 9.13 | 387757 | 13.91 | 185258 | 17.75 |
| 06 | 49975-2 | 351114 | 7.72 | 518722 | 9.13 | 390701 | 13.91 | 188631 | 17.75 |
| 07 | ZZZZZ | 336748 | 7.72 | 486272 | 9.13 | 365212 | 13.91 | 174228 | 17.76 |
| 08 | ZZZZZ | 335227 | 7.73 | 496525 | 9.14 | 371984 | 13.92 | 187113 | 17.75 |
| 09 | ZZZZZ | 348609 | 7.72 | 512058 | 9.12 | 379097 | 13.91 | 190415 | 17.76 |
| 10 | ZZZZZ | 358591 | 7.72 | 523819 | 9.13 | 381955 | 13.92 | 187888 | 17.76 |
| 11 | ZZZZZ | 351626 | 7.72 | 516453 | 9.13 | 382075 | 13.92 | 197026 | 17.75 |
| 12 | ZZZZZ | 367056 | 7.72 | 536479 | 9.13 | 399934 | 13.91 | 196928 | 17.75 |
| 13 | ZZZZZ | 370464 | 7.72 | 536464 | 9.13 | 402251 | 13.91 | 196251 | 17.76 |
| 14 | ZZZZZ | 378538 | 7.72 | 546045 | 9.12 | 404570 | 13.91 | 217367 | 17.76 |
| 15 | ZZZZZ | 368958 | 7.72 | 550234 | 9.13 | 408901 | 13.91 | 216419 | 17.76 |
| 16 | | | | | | | | | |
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| 24 | | | | | | | | | |

IS1 = Pentafluorobenzene
IS2 = Fluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +30% of internal standard area
AREA LOWER LIMIT = -30% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or hand-delivered
2) Temp blank °C 4.1
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: 7-2-03

Project#: 10976.217.002 Project: Bucks
Company: Weston Solutions
Contact: Kathleen Sawkey
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603 656-5574 PO# Quote #
Sampler (Signature):

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-070103-01 | 7/1/03 | 1230 | VOC 524.2 | | | | | X | | | W | 2 | V | | 49975-1 |
| WY03-0703-01-A | ↓ | 1235 | ↓ | | | | | X | | | DW | 4 | V | | 2 |
| | | | | | | | | | | | | | | | |
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FAX RESULTS? YES NO
Fax # 603 656-5401

Turnaround Request
Standard [X] Due Date
Priority [ ] Due Date

Comments / Instructions:
VOC, 524.2
(A) Part of Residential Program for Bucks

Client Code: WESTONM

Page 1 of 1

| Received By: | Time: 1335 | Date: 7.2.03 |
|---|---|---|
| Received By: | Time: | Date: |
| Received By: | Time: | Date: |
| Relinquished By Sampler: | | |
| Relinquished By: | | |
| Relinquished By: | | 7-2-03 |

129/129

Analytics\AEL Documents\AEL COC

analytics environmental laboratory LLC

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800-929-9906
www.analyticslab.com

August 29, 2003

Mr. Jim Ricker
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 50269**

Dear Mr. Ricker:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 8260B. Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Aqueous Volatile Organics:**
Two compounds t-Butyl alcohol and Tetrahydrofuran had high recoveries in the Laboratory Control Spike /Duplicate (LCS/LCSD) analyzed 08/19/03 (L808193B/L808193B2). Methyl ethyl ketone had an RPD of 18% that is above the limit of 15%. (See Form III). ). t-Butyl alcohol had high recovery in the matrix spike duplicate 50269-2 (MW14-038-PP). Methyl ethyl ketone was detected in several samples associated with this QC however no data was qualified for the marginal RPD failure.

Multiple analytes had recoveries above the acceptance criteria in the LCS/LCSD analyzed on 08/19/03 (L808193B3/L808193B4). See Form III These analytes were not detected in the samples associated with this QC and results were reported without qualification.

t-Butyl alcohol and 1,2-Dibromo-3-chloropropane had high recoveries in the Laboratory Control Spike (LCS) analyzed 08/20/03 (L808203B). These analytes were not detected in the samples associated with this QC and results were reported without qualification.

The Continuing Calibration Standards (CC) (File # B17294SC, B17318SC and B17340SC)) had high %D (24%, 36% and28%) for t-Butyl Alcohol with a limit of 20%. T-Butyl alcohol was not detected in any samples and results were reported without qualification.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 50269**

**Revision: Rev. 0**

**Re: Bucks Harbor Packer Tests** **10971-217-002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 15 August 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 50269-1 | 08/12/03 | TB-081203-01 | EPA 8260 Volatile Organics | |
| 50269-2 | 08/12/03 | MW14-038-PP | EPA 8260 Volatile Organics | |
| 50269-3 | 08/13/03 | MW14-050-PP | EPA 8260 Volatile Organics | |
| 50269-4 | 08/13/03 | MW14-063-PP | EPA 8260 Volatile Organics | |
| 50269-5 | 08/13/03 | MW14-073-PP | EPA 8260 Volatile Organics | |
| 50269-6 | 08/13/03 | MW11-097-PP | EPA 8260 Volatile Organics | |
| 50269-7 | 08/14/03 | MW11-147-PP | EPA 8260 Volatile Organics | |
| 50269-8 | 08/14/03 | MW11-157-PP | EPA 8260 Volatile Organics | |
| 50269-9 | 08/14/03 | MW11-183-PP | EPA 8260 Volatile Organics | |
| 50269-10 | 08/14/03 | MW12-040-PP | EPA 8260 Volatile Organics | |
| 50269-11 | 08/14/03 | MW12-083-PP | EPA 8260 Volatile Organics | |
| 50269-12 | 08/15/03 | MW12-161-PP | EPA 8260 Volatile Organics | |
| 50269-13 | 08/15/03 | MW12-207-PP | EPA 8260 Volatile Organics | |
| | 08/15/03 | MW12-207-PP | Electronic Data Deliverable | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 08/22/03

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analytics environmental laboratory LLC

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800-929-9906

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B808193B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 99 % | d4-1,2-Dichloroethane | 97 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

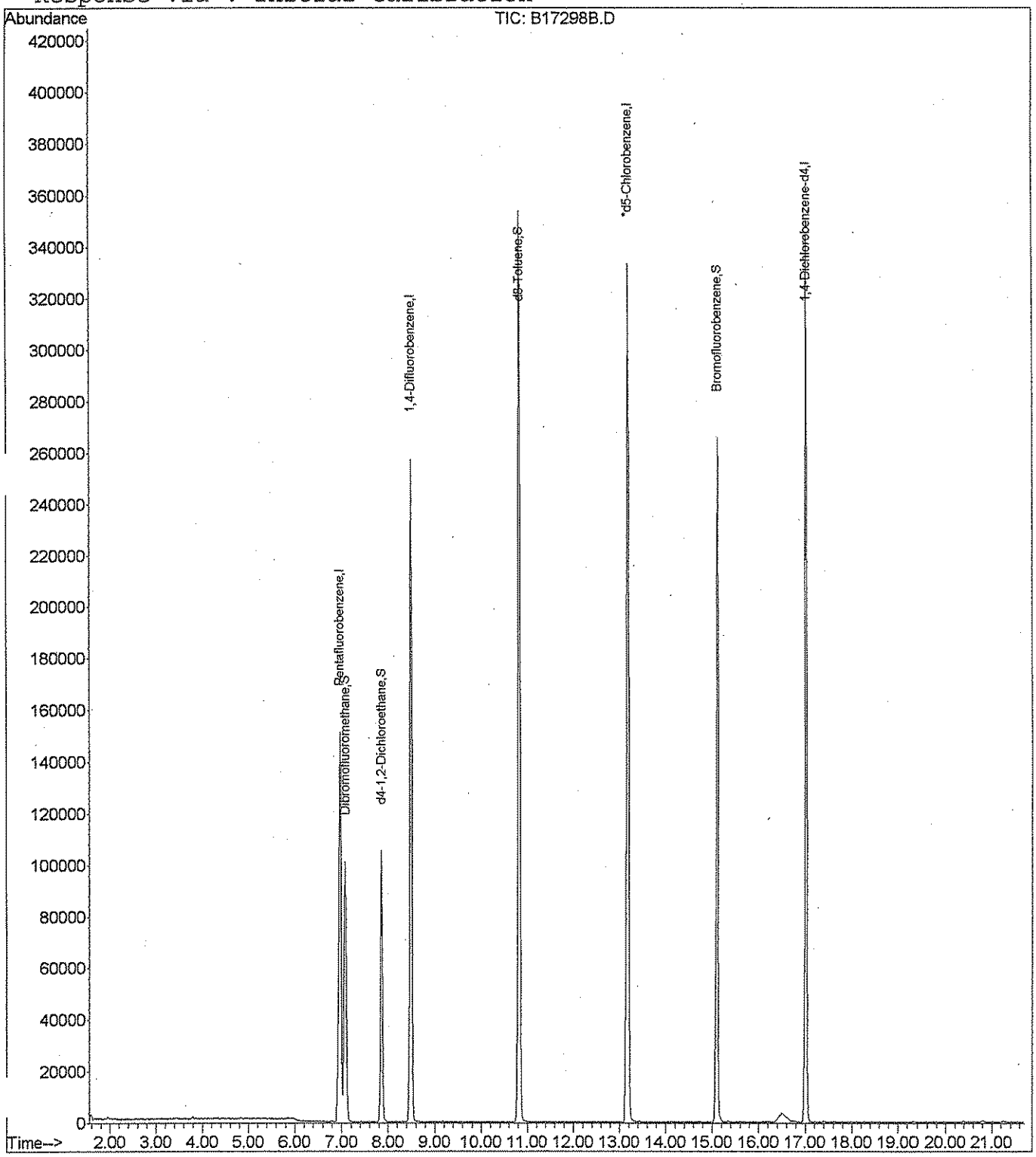
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17298B.D Vial: 7
Acq On : 19 Aug 2003 11:24 am Operator:
Sample : B808193B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 11:32 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B808193B2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

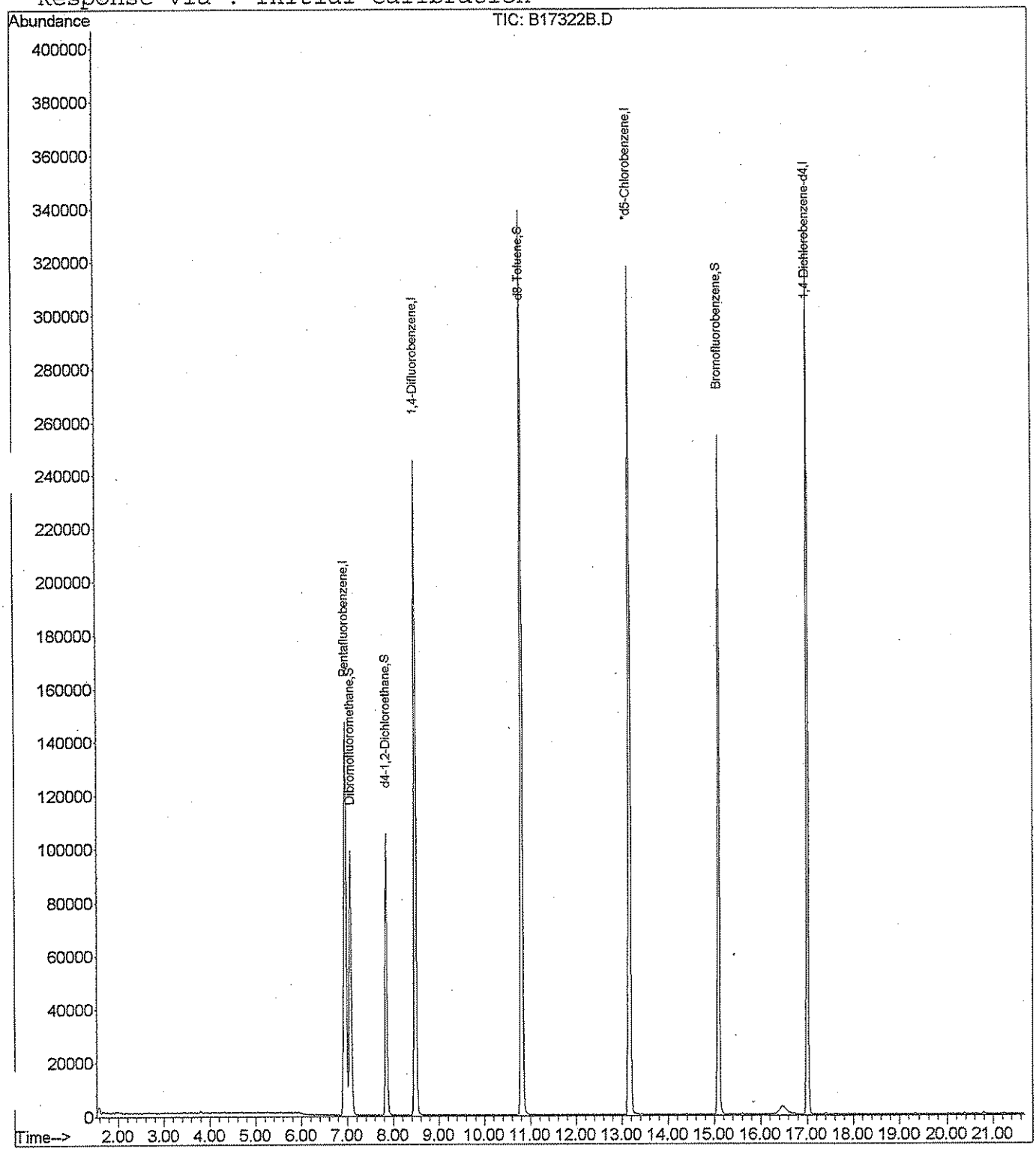
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17322B.D Vial: 31
Acq On : 19 Aug 2003 11:34 pm Operator:
Sample : B808193B2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 23:46 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B808203B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

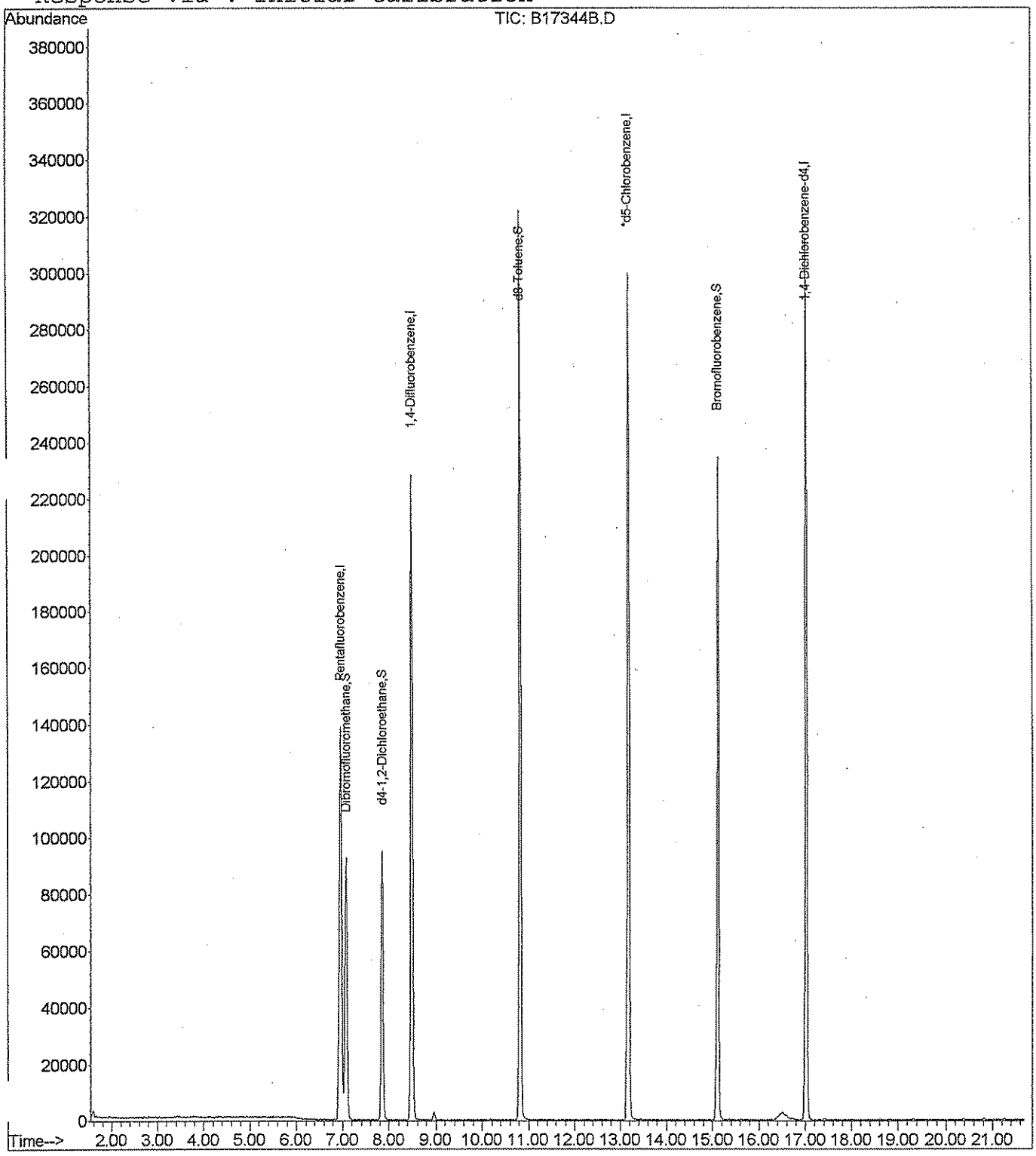
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17344B.D Vial: 6
Acq On : 20 Aug 2003 11:36 am Operator:
Sample : B808203B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 11:52 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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800-929-9906

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** TB-081203-01

**SAMPLE DATA**

**Lab Sample ID:** 50269-1
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/12/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 102 | % | Bromofluorobenzene | 98 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

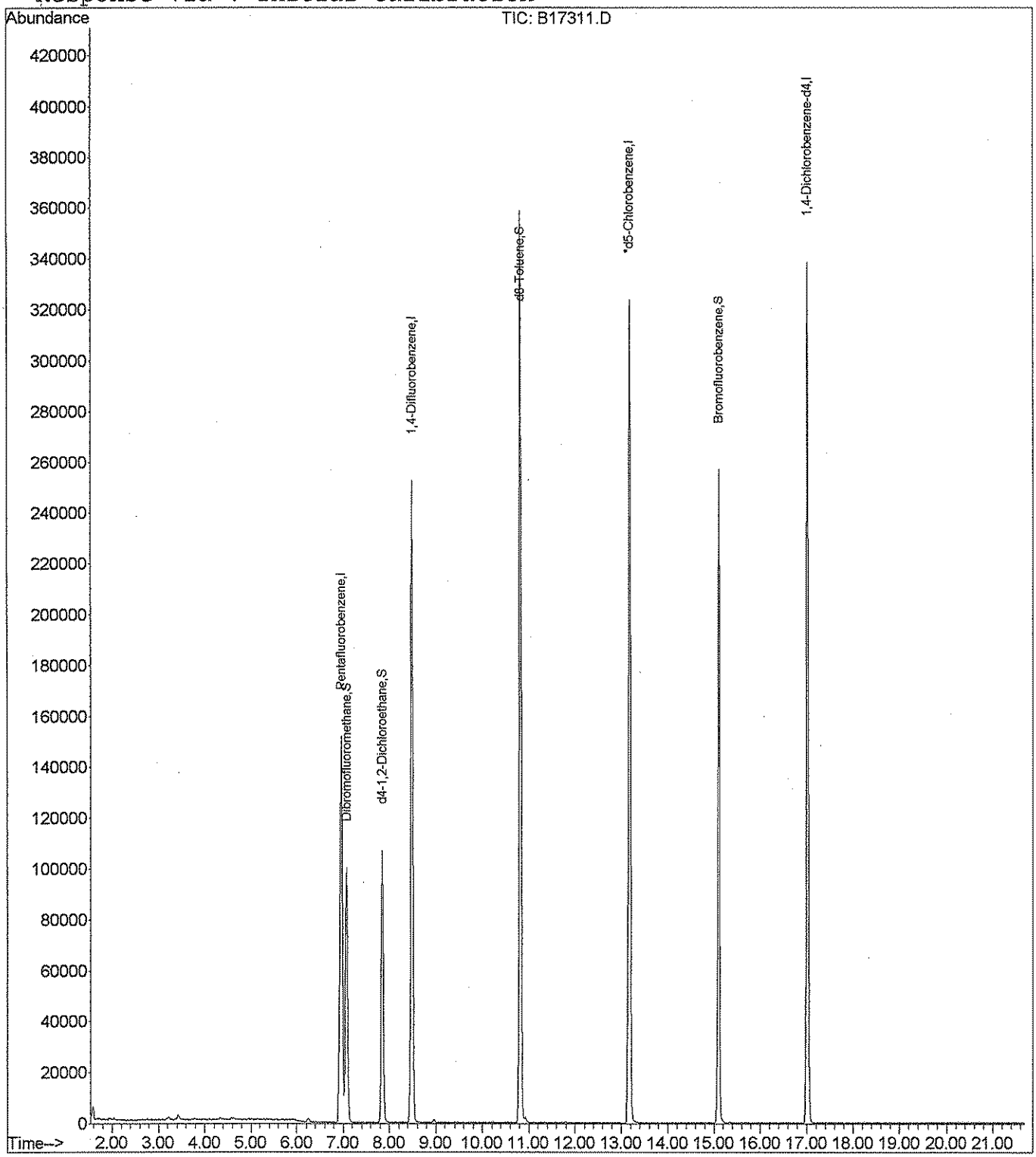
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17311.D Vial: 20
Acq On : 19 Aug 2003 5:57 pm Operator:
Sample : 50269-1 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 18:11 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW14-038-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/12/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **1 J** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **15** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **8 J** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 % | d4-1,2-Dichloroethane | 101 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

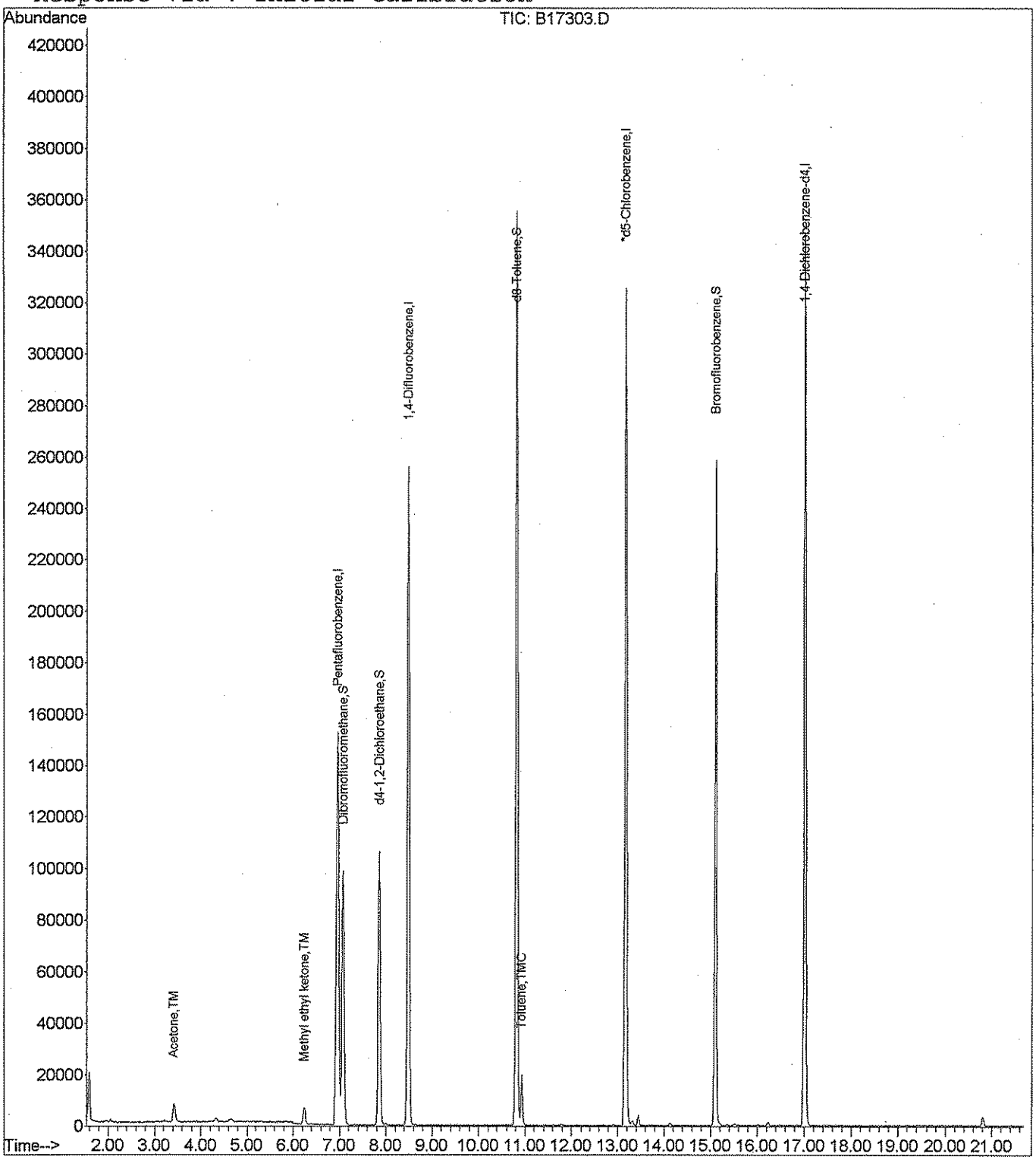
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17303.D Vial: 12
Acq On : 19 Aug 2003 1:48 pm Operator:
Sample : 50269-2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 14:06 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW14-050-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/13/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **1 J** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **22** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **15** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 101 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

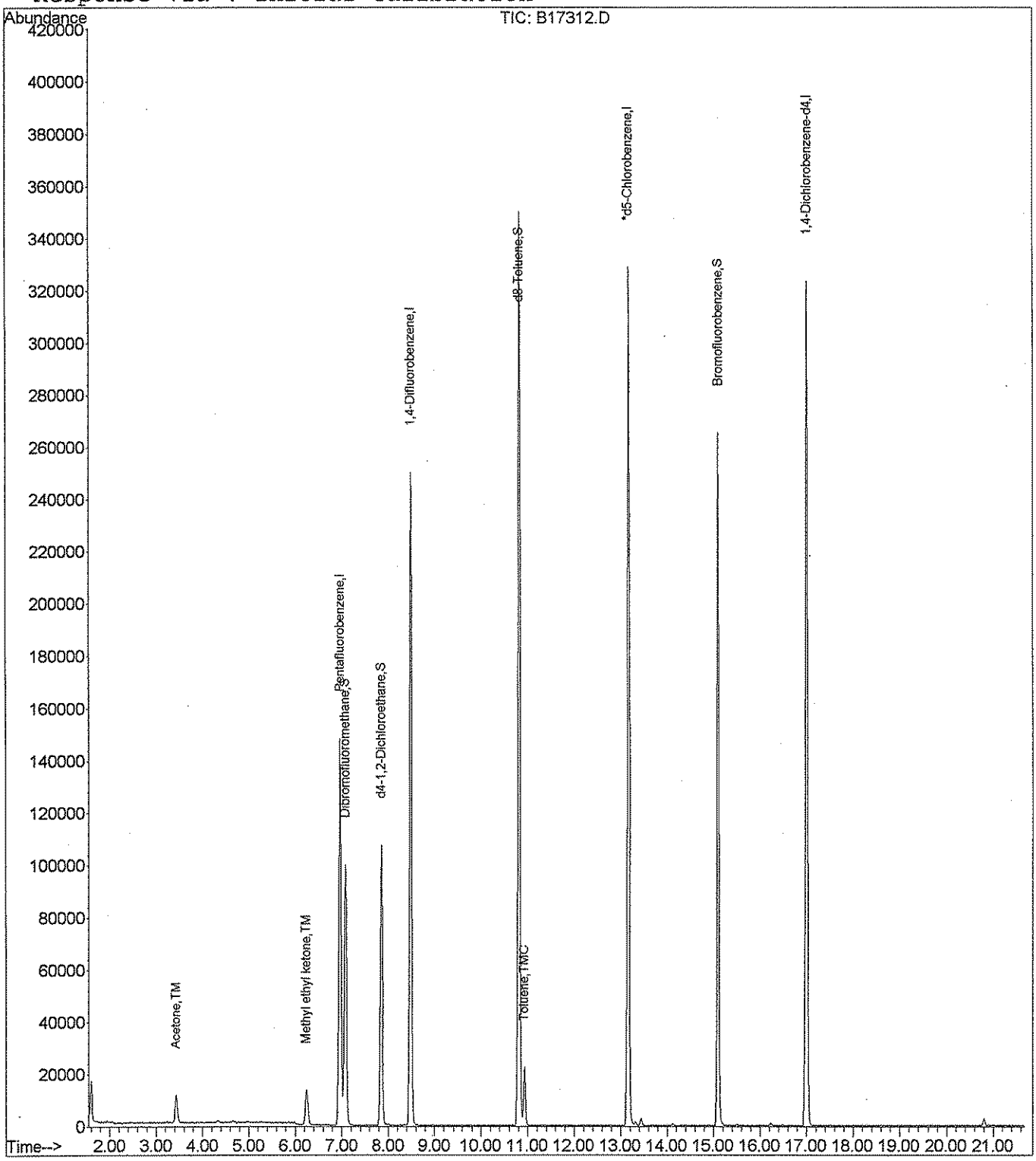
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17312.D Vial: 21
Acq On : 19 Aug 2003 6:26 pm Operator:
Sample : 50269-3 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 18:41 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW14-063-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/13/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **13** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **8 J** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 | % | d4-1,2-Dichloroethane | 104 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

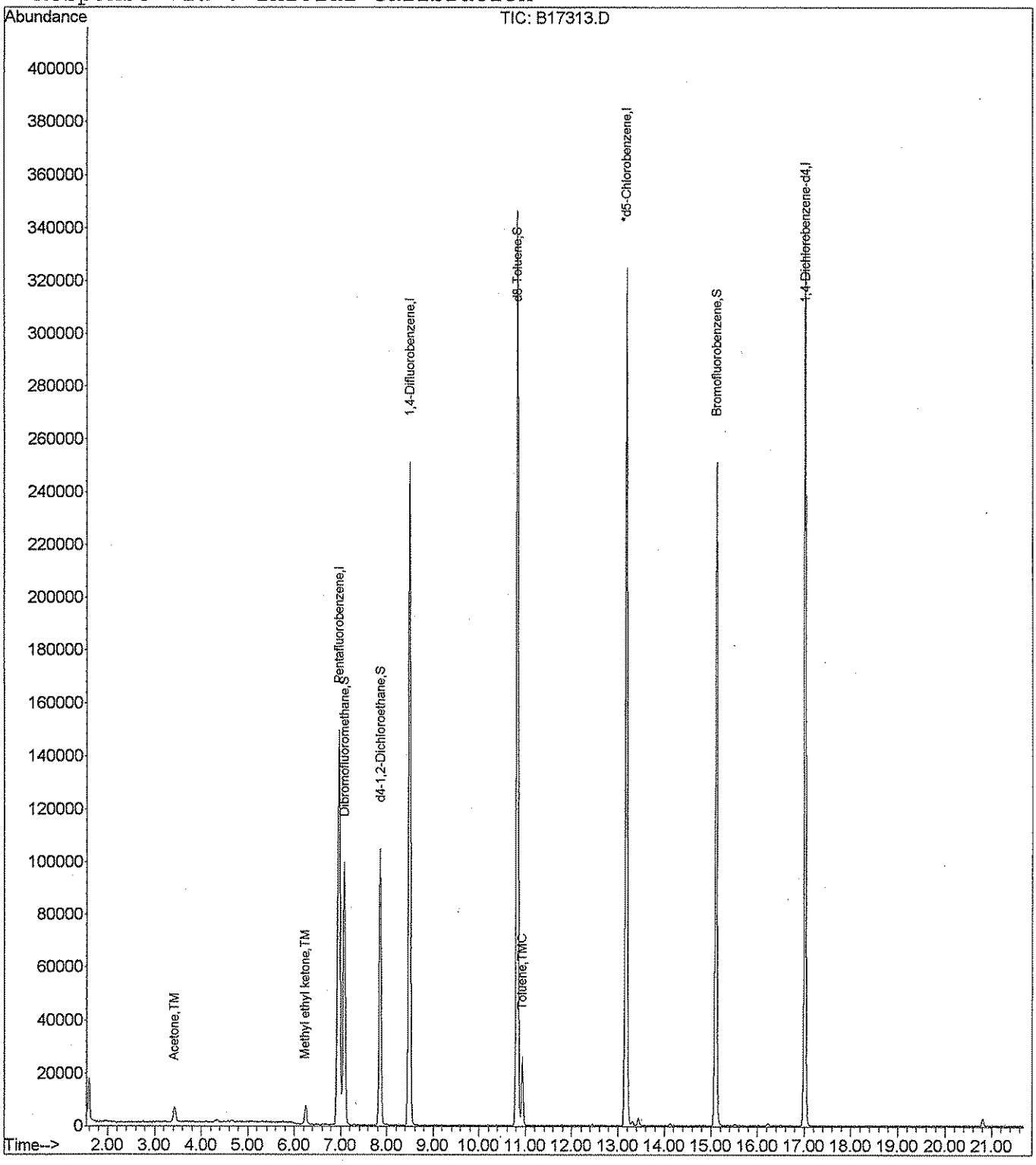
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\081903-B\B17313.D Vial: 22
Acq On : 19 Aug 2003 6:56 pm Operator:
Sample : 50269-4 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 19:12 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW14-073-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/13/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **1 J** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **15** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **9 J** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 96 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

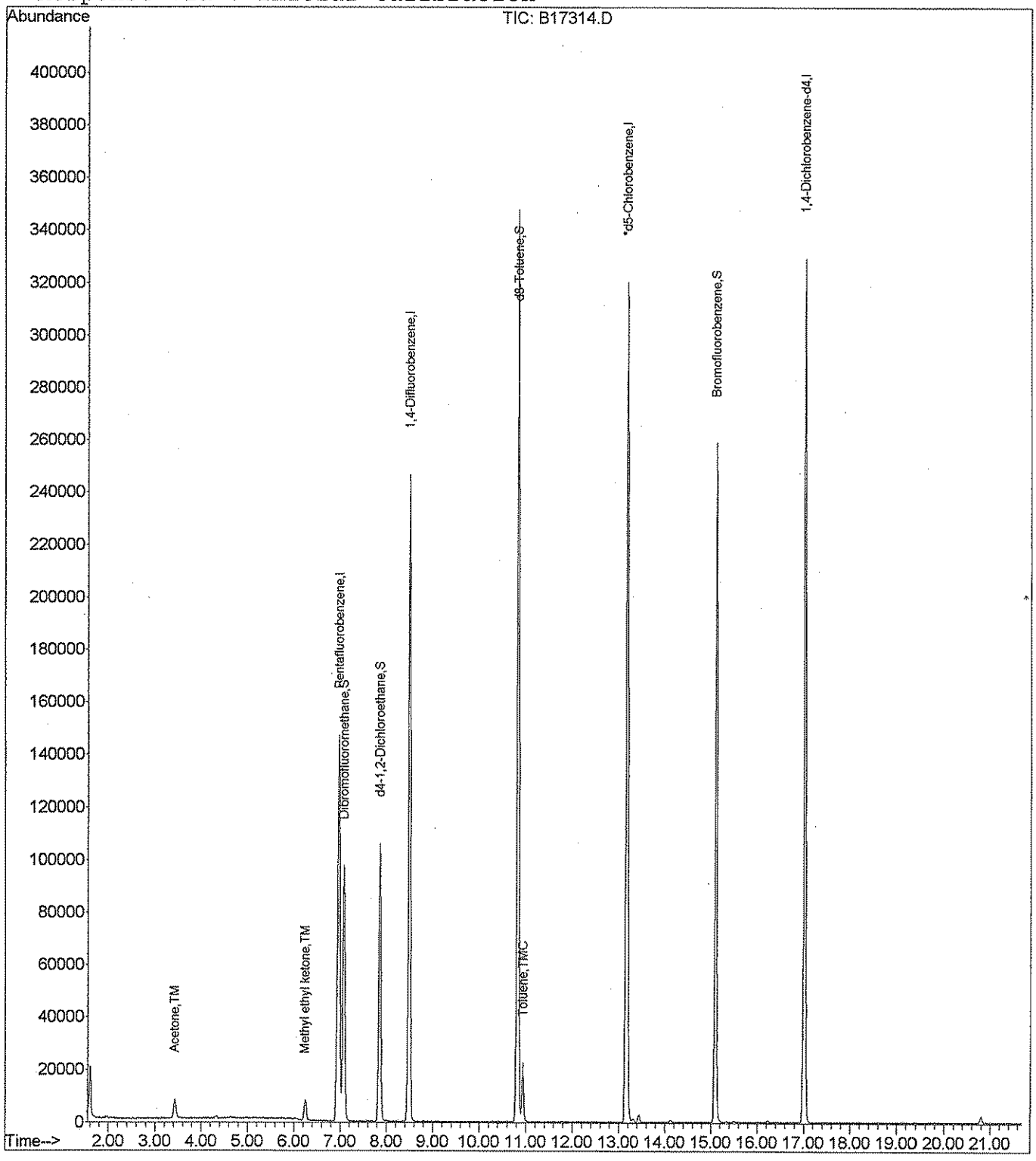
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17314.D Vial: 23
Acq On : 19 Aug 2003 7:25 pm Operator:
Sample : 50269-5 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 19:42 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**SAMPLE DATA**

**Lab Sample ID:** 50269-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/13/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002
**Field Sample ID:** MW11-097-PP

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **4** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **15** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 101 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

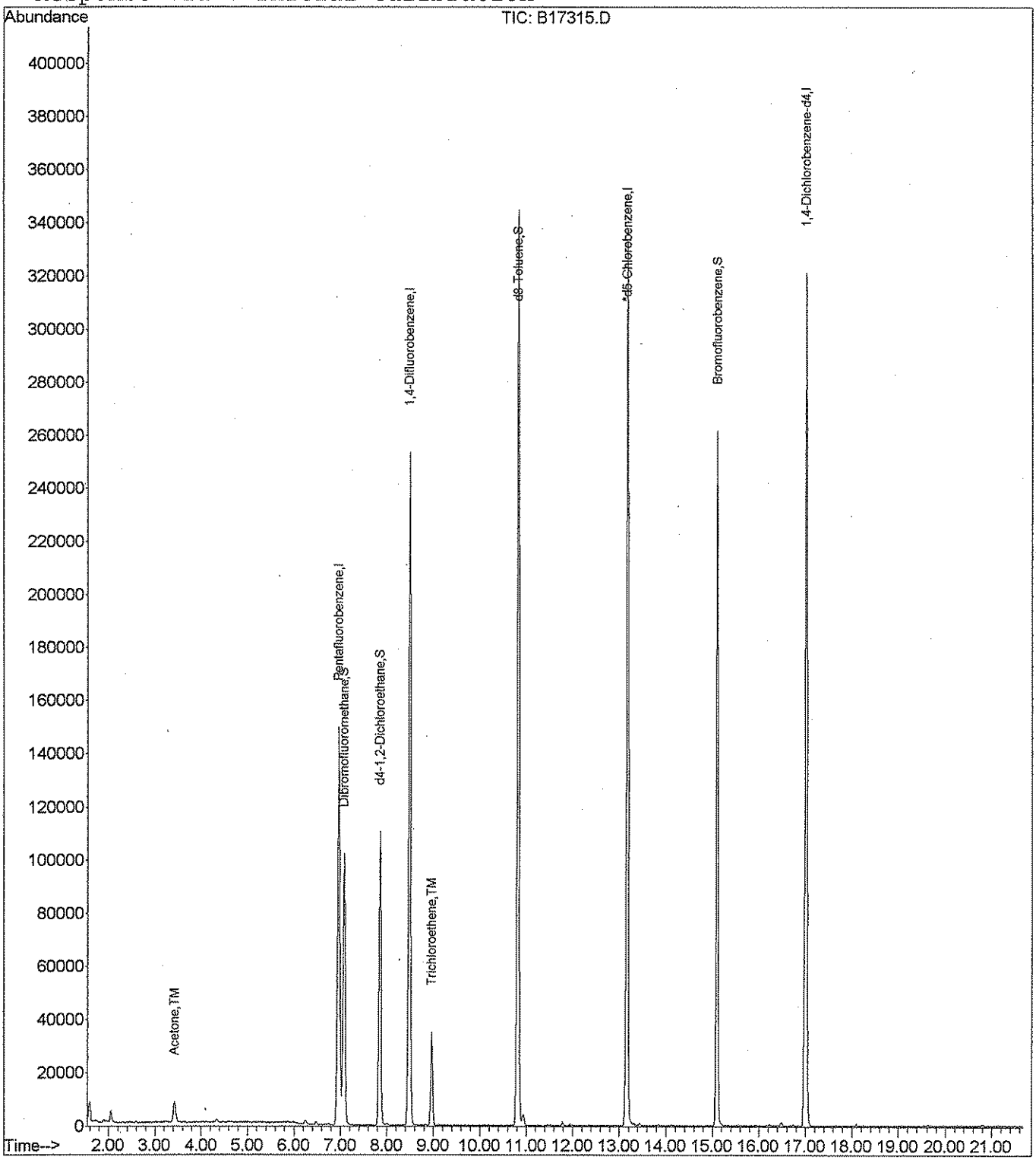
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\081903-B\B17315.D Vial: 24
Acq On : 19 Aug 2003 7:54 pm Operator:
Sample : 50269-6 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 20:12 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW11-147-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **5** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **12** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

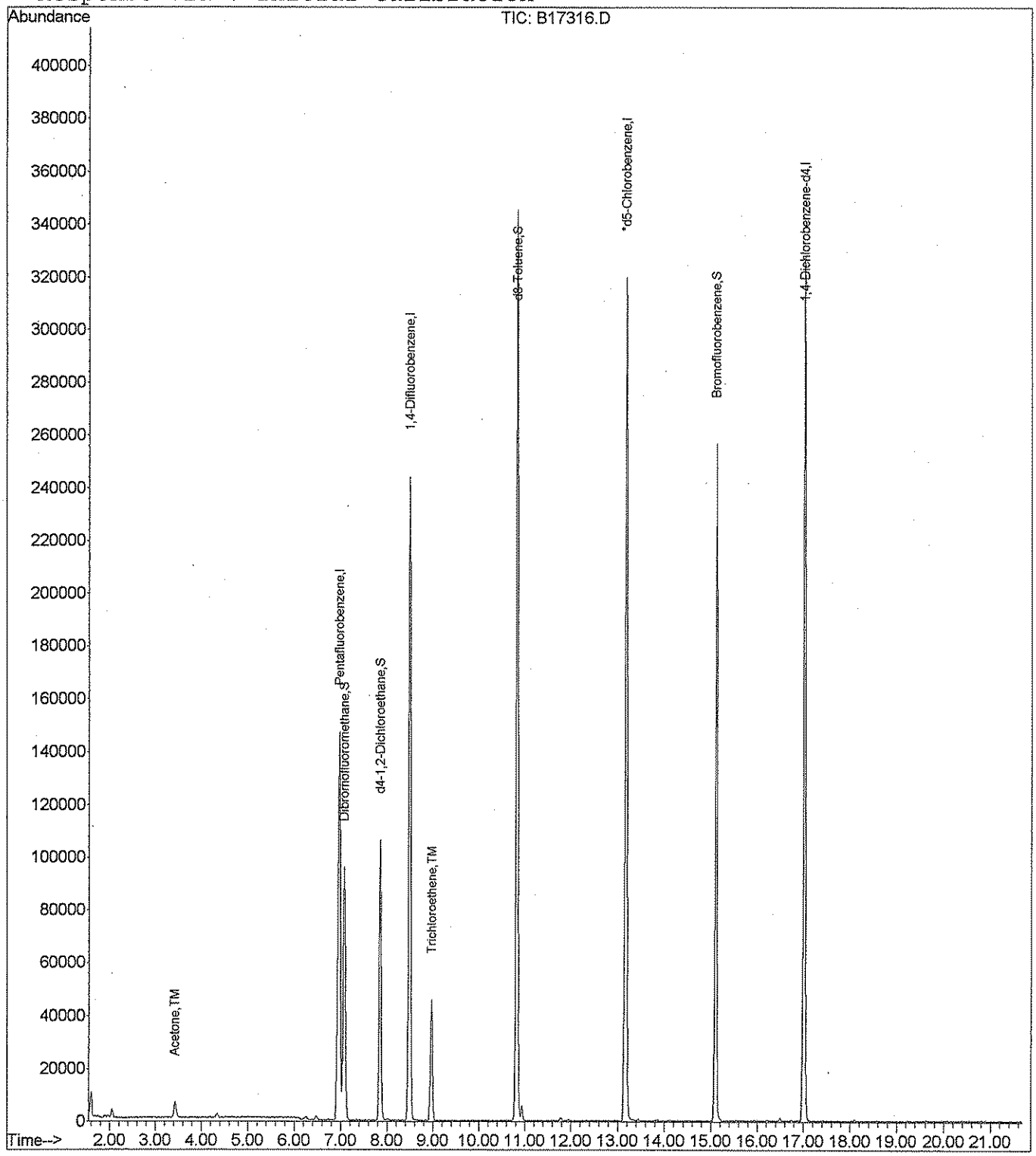
**COMMENTS:**

8260 full

Authorized signature Melissa A Hall

Data File : C:\HPCHEM\1\DATA\081903-B\B17316.D Vial: 25
Acq On : 19 Aug 2003 8:23 pm Operator:
Sample : 50269-7 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 20:43 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW11-157-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-8
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | 3 |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 % | d4-1,2-Dichloroethane | 101 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

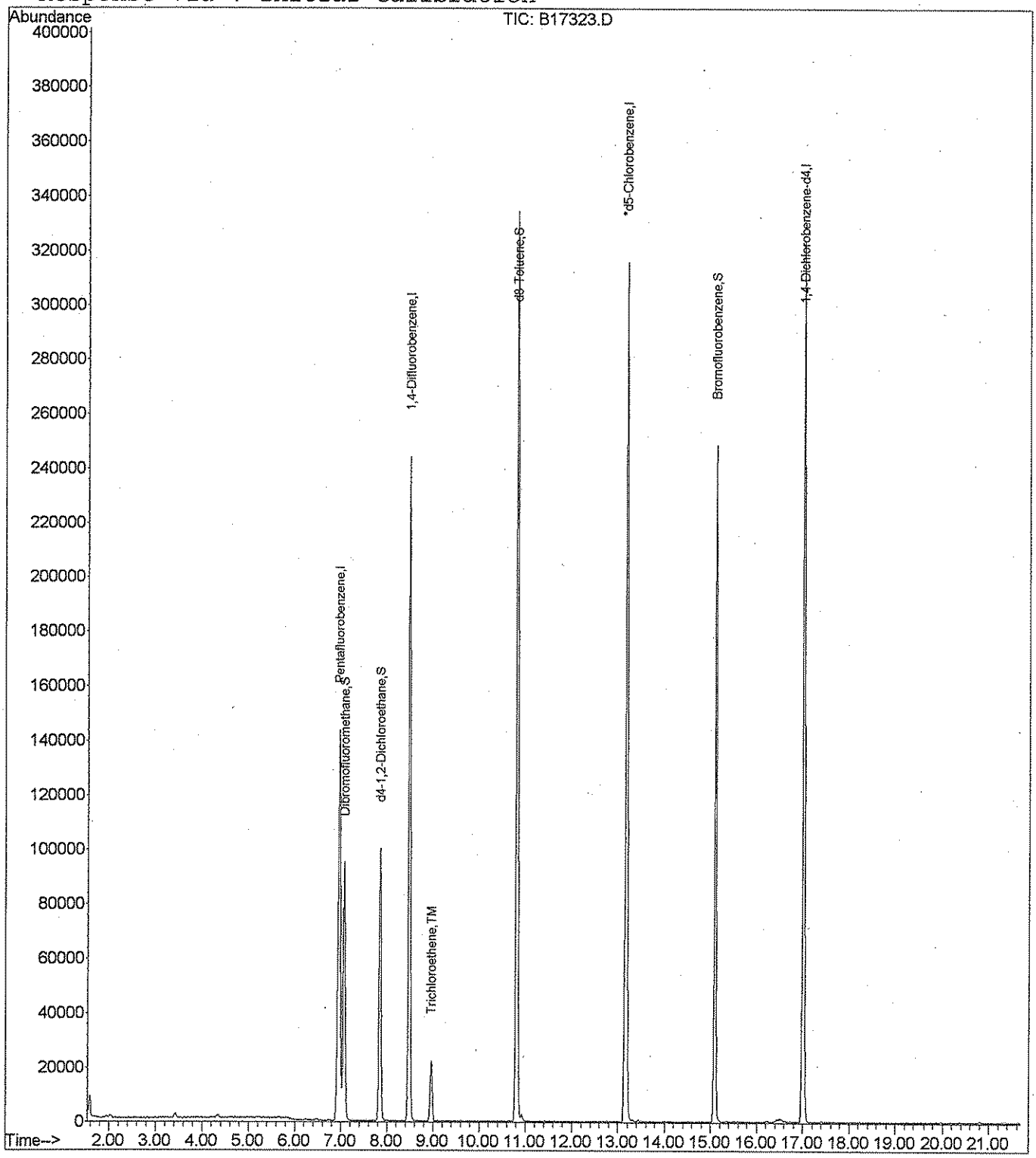
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17323.D Vial: 32
Acq On : 19 Aug 2003 12:03 am Operator:
Sample : 50269-8 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 0:16 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW11-183-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | 2 |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

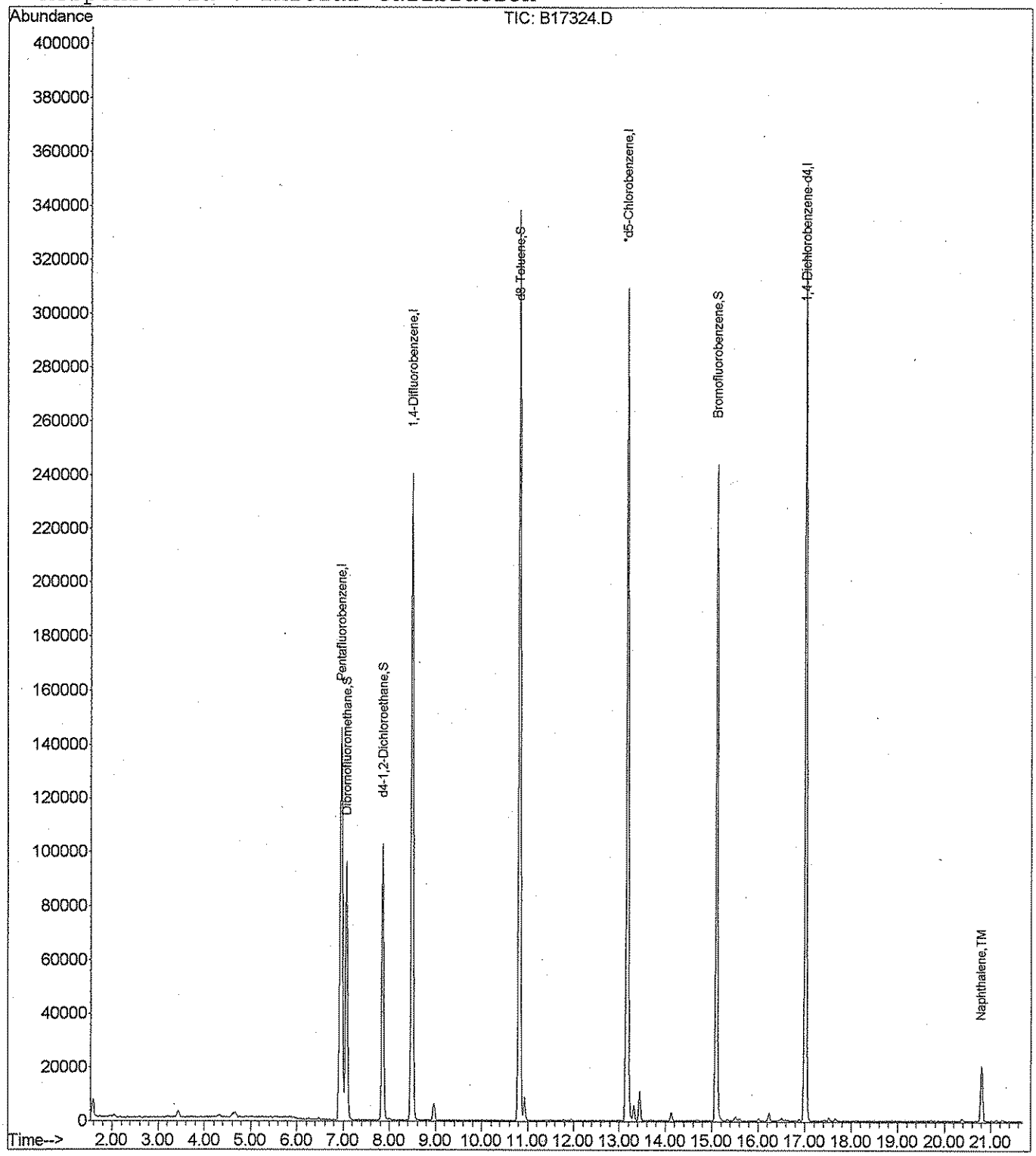
8260 full

Authorized signature Melissa A Tull

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17324.D Vial: 33
Acq On : 20 Aug 2003 12:32 am Operator:
Sample : 50269-9 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 0:47 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-040-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-10
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **167 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **10** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 101 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

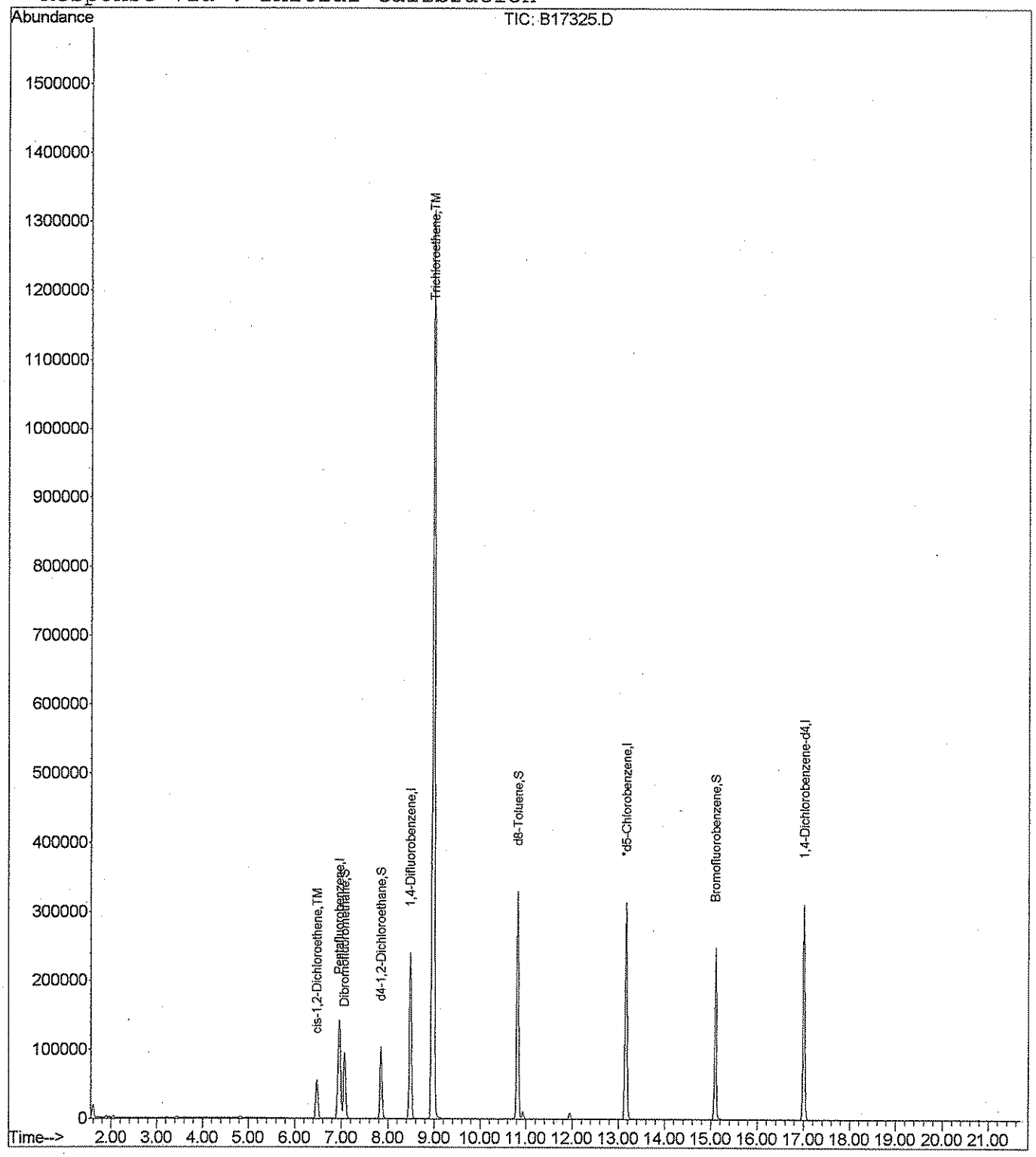
**COMMENTS:**

8260 full

Authorized signature Melissa A Kelli

Data File : C:\HPCHEM\1\DATA\081903-B\B17325.D Vial: 34
Acq On : 20 Aug 2003 1:01 am Operator:
Sample : 50269-10 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 1:17 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-040-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-10 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 5.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 10 | U | 1,3-Dichloropropane | 10 | U |
| Bromobenzene | 10 | U | cis-1,3-Dichloropropene | 10 | U |
| Bromochloromethane | 10 | U | trans-1,3-Dichloropropene | 10 | U |
| Bromodichloromethane | 10 | U | 2,2-Dichloropropane | 10 | U |
| Bromoform | 10 | U | 1,1-Dichloropropene | 10 | U |
| Bromomethane | 10 | U | Ethylbenzene | 10 | U |
| n-butylbenzene | 10 | U | Hexachlorobutadiene | 10 | U |
| sec-butylbenzene | 10 | U | Isopropylbenzene | 10 | U |
| tert-butylbenzene | 10 | U | p-isopropyltoluene | 10 | U |
| Carbon Tetrachloride | 10 | U | Methylene Chloride | 25 | U |
| Chlorobenzene | 10 | U | Methyl-tert-butyl ether (MTBE) | 10 | U |
| Chloroethane | 10 | U | Naphthalene | 10 | U |
| Chloroform | 10 | U | n-Propylbenzene | 10 | U |
| Chloromethane | 10 | U | Styrene | 10 | U |
| 2-Chlorotoluene | 10 | U | 1,1,1,2-Tetrachloroethane | 10 | U |
| 4-Chlorotoluene | 10 | U | 1,1,2,2-Tetrachloroethane | 10 | U |
| Dibromochloromethane | 10 | U | Tetrachloroethene | 10 | U |
| 1,2-Dibromo-3-chloropropane | 10 | U | Toluene | 10 | U |
| 1,2-Dibromoethane | 10 | U | 1,2,3-Trichlorobenzene | 10 | U |
| Dibromomethane | 10 | U | 1,2,4-Trichlorobenzene | 10 | U |
| 1,2-Dichlorobenzene | 10 | U | 1,1,1-Trichloroethane | 10 | U |
| 1,3-Dichlorobenzene | 10 | U | 1,1,2-Trichloroethane | 10 | U |
| 1,4-Dichlorobenzene | 10 | U | Trichloroethene | 10 | **161** |
| Dichlorodifluoromethane | 10 | U | Trichlorofluoromethane | 10 | U |
| 1,1-Dichloroethane | 10 | U | 1,2,3-Trichloropropane | 10 | U |
| 1,2-Dichloroethane | 10 | U | 1,2,4-Trimethylbenzene | 10 | U |
| 1,1-Dichloroethene | 10 | U | 1,3,5-Trimethylbenzene | 10 | U |
| cis-1,2-Dichloroethene | 10 | **9 J** | Vinyl Chloride | 10 | U |
| trans-1,2-Dichloroethene | 10 | U | o-Xylene | 10 | U |
| 1,2-Dichloropropane | 10 | U | m,p-Xylene | 10 | U |
| Acetone | 50 | U | Diethyl ether | 10 | U |
| Carbon Disulfide | 10 | U | 2-Hexanone | 50 | U |
| Tetrahydrofuran | 25 | U | Methyl isobutyl ketone | 50 | U |
| Methyl ethyl ketone | 50 | U | Di-isopropyl ether (DIPE) | 10 | U |
| t-Butyl alcohol (TBA) | 100 | U | Ethyl t-butyl ether (ETBE) | 10 | U |
| t-Amyl methyl ether (TAME) | 10 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 % | d4-1,2-Dichloroethane | 99 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

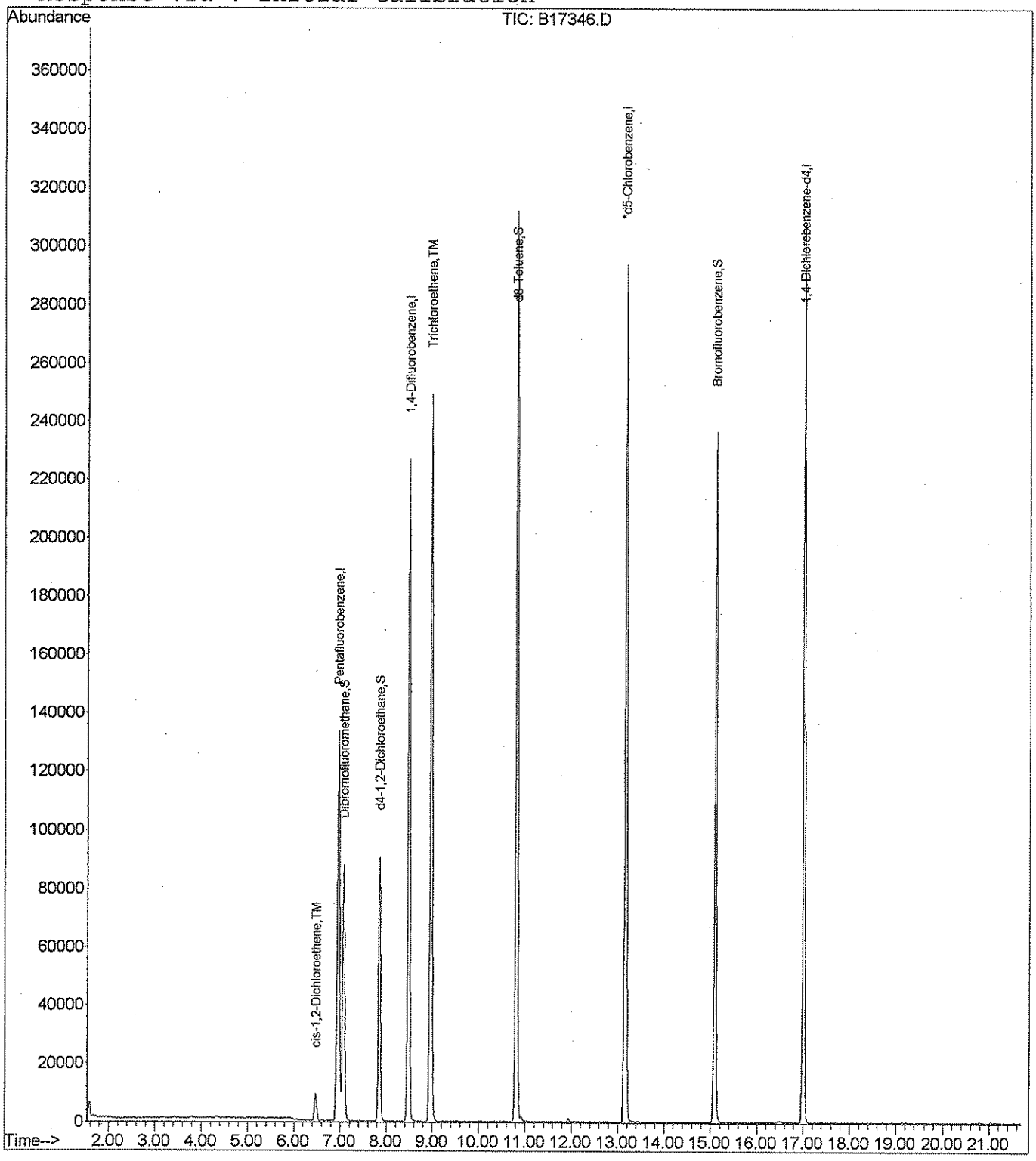
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17346.D Vial: 8
Acq On : 20 Aug 2003 12:49 pm Operator:
Sample : 50269-10,DL Inst : Instrumen
Misc : 1000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 13:13 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-083-PP

**Lab Sample ID:** 50269-11
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **2** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **284 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **15** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 102 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

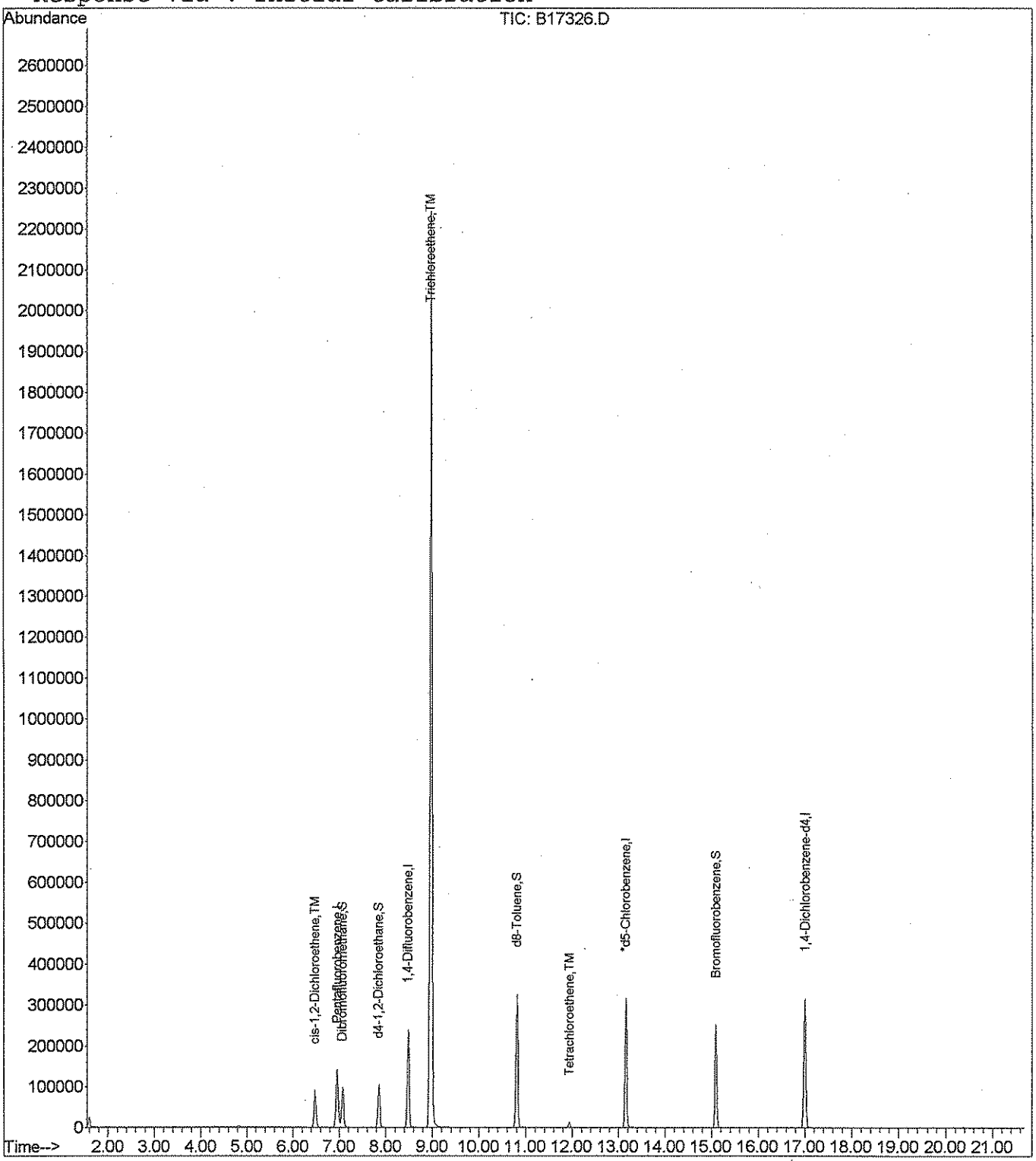
8260 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17326.D Vial: 35
Acq On : 20 Aug 2003 1:31 am Operator:
Sample : 50269-11 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 1:48 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-083-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-11 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/14/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **297** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | **15 J** | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 % | d4-1,2-Dichloroethane | 101 % | d8-Toluene | 100 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

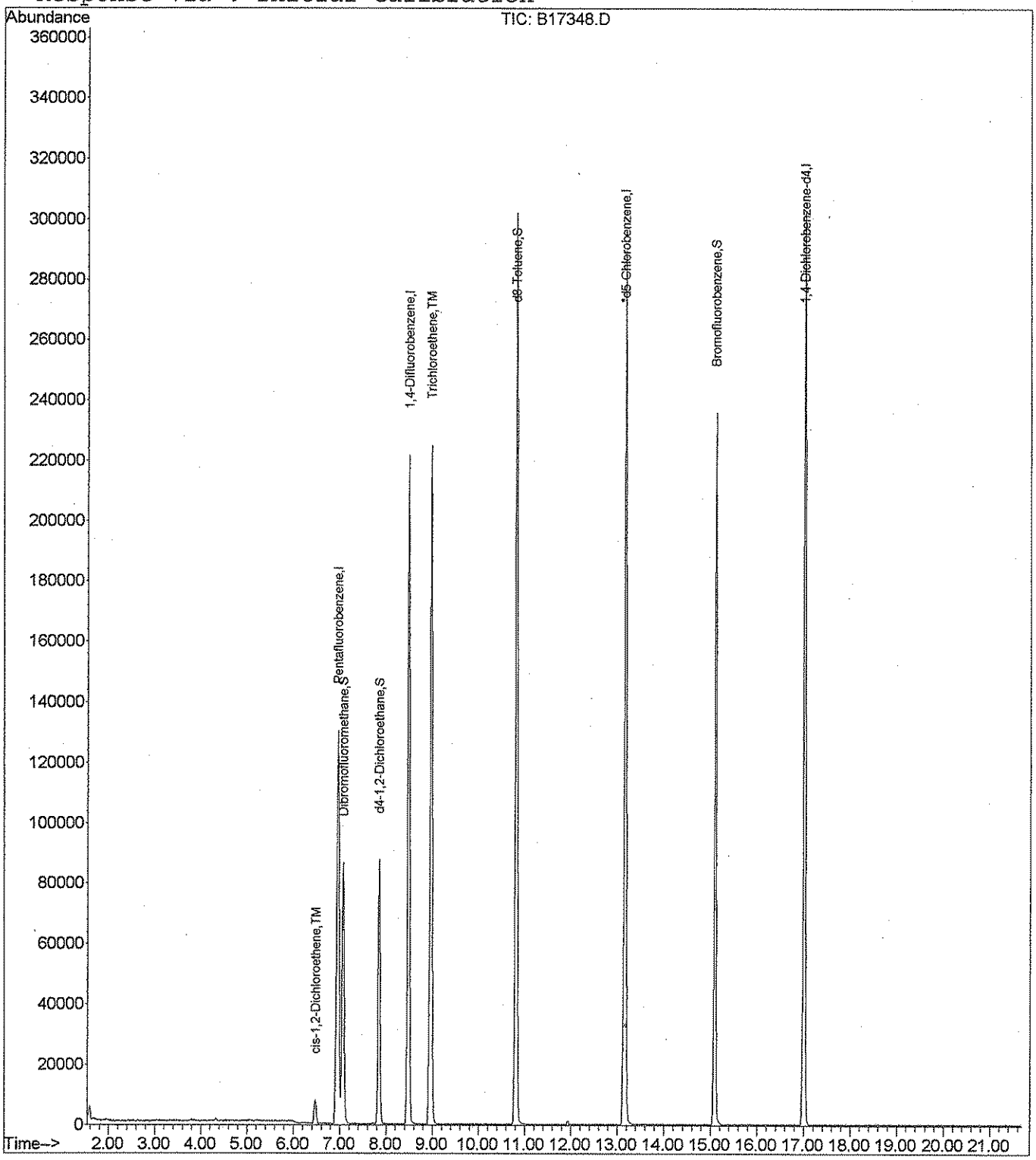
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\082003-B\B17348.D Vial: 10
Acq On : 20 Aug 2003 2:00 pm Operator:
Sample : 50269-11,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 14:09 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-161-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-12
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **1 J** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **274 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **15** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 104 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

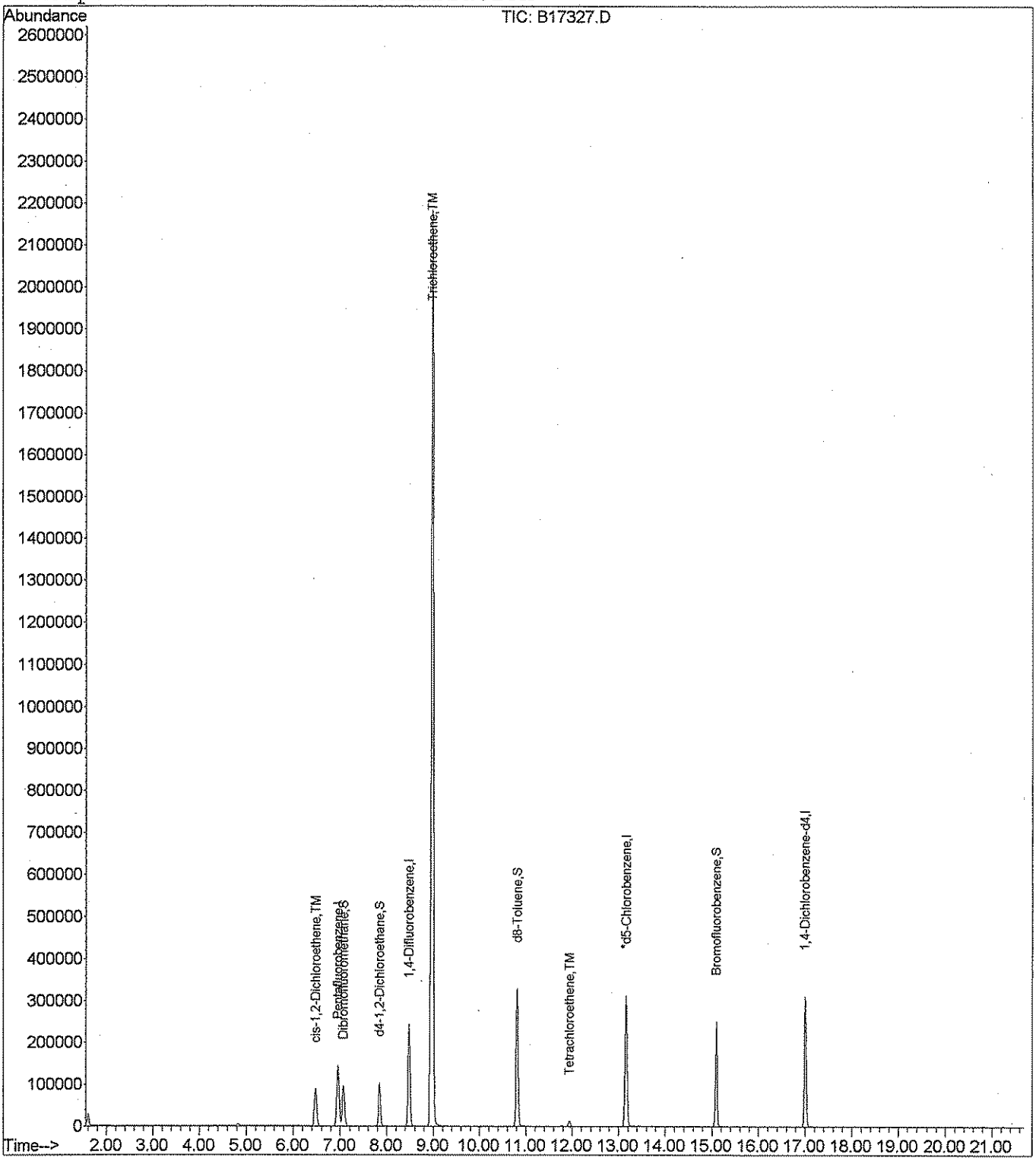
8260 full

Authorized signature Melissa A Kalli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17327.D Vial: 36
Acq On : 20 Aug 2003 2:00 am Operator:
Sample : 50269-12 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 2:19 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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1 Wall Street
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August 22, 2003

**SAMPLE DATA**

**Lab Sample ID:** 50269-12 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002
**Field Sample ID:** MW12-161-PP

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **279** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | **14 J** | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 99 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

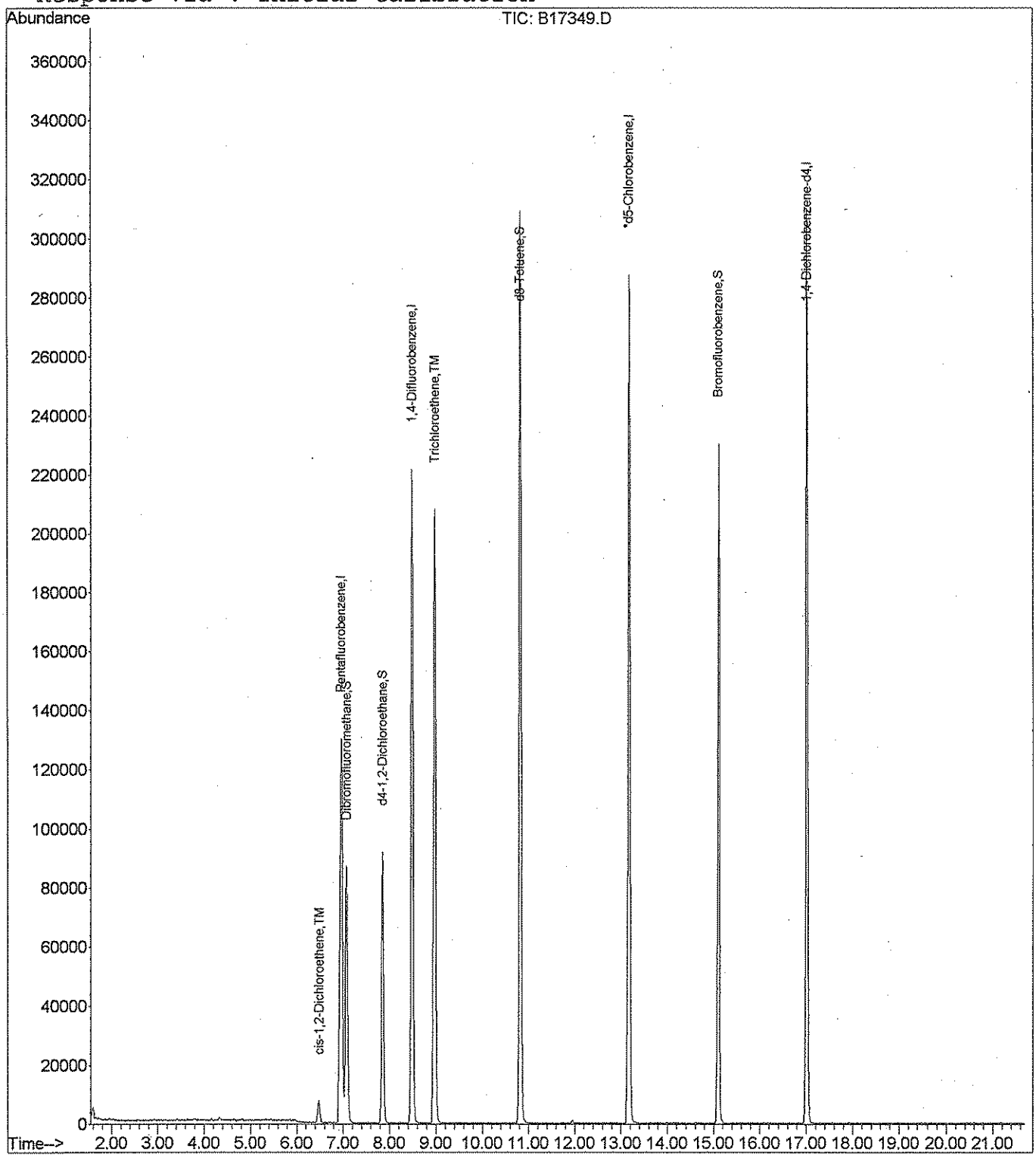
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17349.D Vial: 11
Acq On : 20 Aug 2003 2:29 pm Operator:
Sample : 50269-12,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 14:42 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-207-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-13
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **2** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **285 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **15** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 101 % | Bromofluorobenzene | 94 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

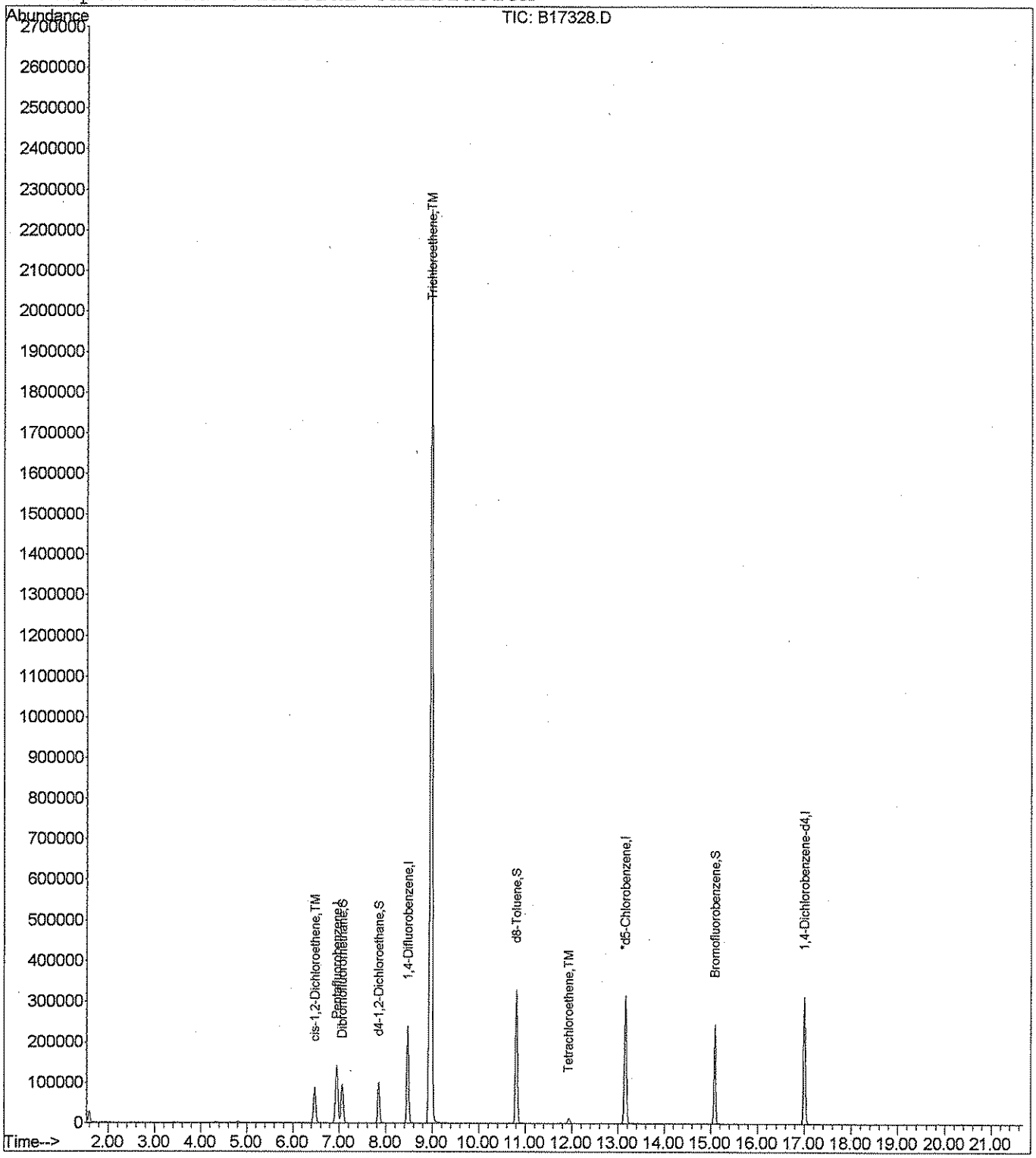
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17328.D Vial: 37
Acq On : 20 Aug 2003 2:29 am Operator:
Sample : 50269-13 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 2:49 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW12-207-PP

**SAMPLE DATA**

**Lab Sample ID:** 50269-13 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/15/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **276** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | **14 J** | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 % | d4-1,2-Dichloroethane | 100 % | d8-Toluene | 101 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

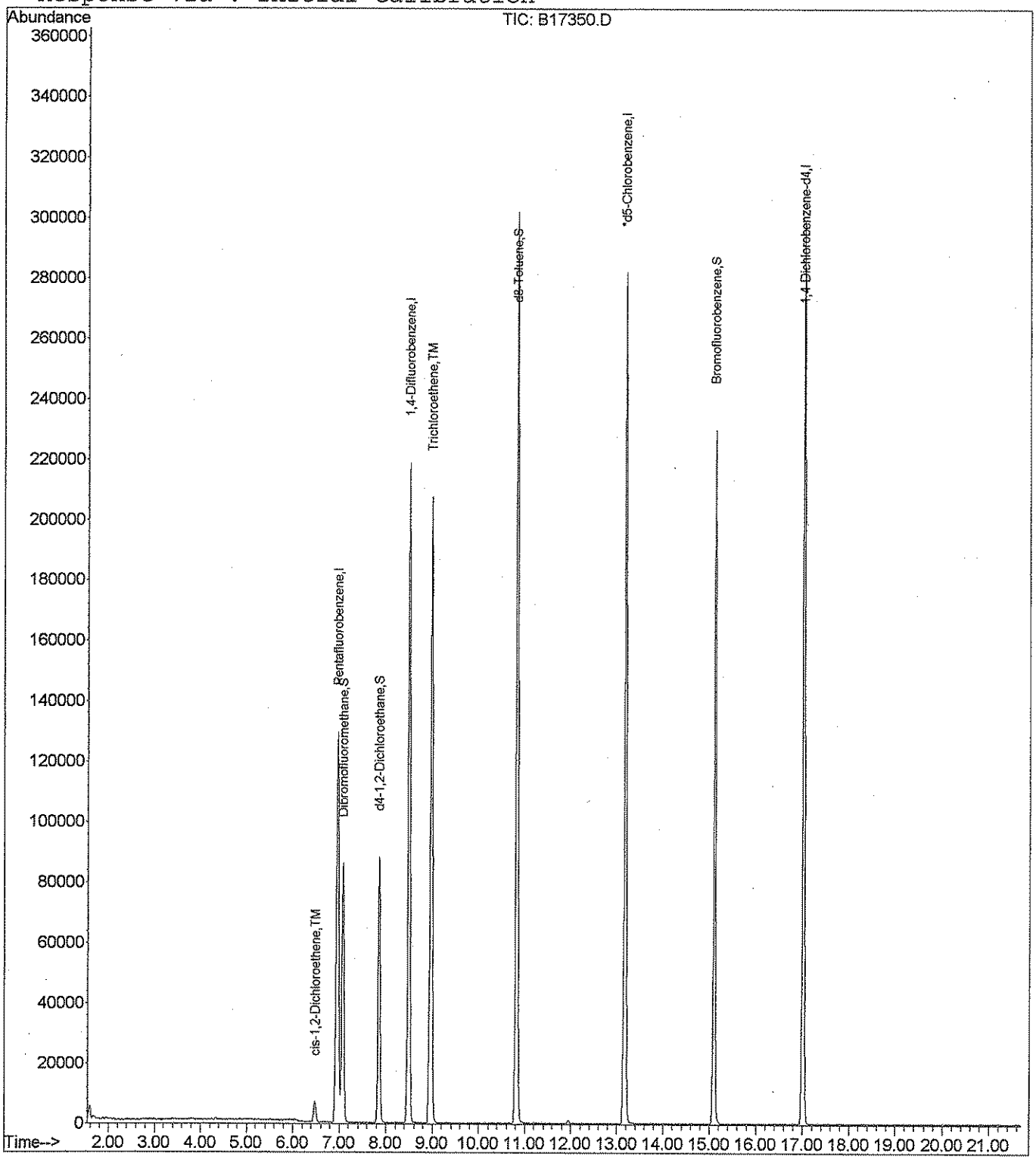
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\082003-B\B17350.D Vial: 12
Acq On : 20 Aug 2003 2:55 pm Operator:
Sample : 50269-13,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 15:16 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 1 PPB | 93% | 98% | 98% | 100% | 0 |
| 02 | 2 PPB | 92% | 95% | 100% | 99% | 0 |
| 03 | 5 PPB | 97% | 101% | 99% | 99% | 0 |
| 04 | 20 PPB | 99% | 104% | 100% | 101% | 0 |
| 05 | 50 PPB | 96% | 100% | 102% | 103% | 0 |
| 06 | 100 PPB | 97% | 102% | 102% | 99% | 0 |
| 07 | ZZZZZZ | 100% | 99% | 99% | 101% | 0 |
| 08 | ZZZZZZ | 102% | 101% | 101% | 100% | 0 |
| 09 | ZZZZZZ | 98% | 95% | 98% | 100% | 0 |
| 10 | ZZZZZZ | 99% | 95% | 98% | 100% | 0 |
| 11 | ZZZZZZ | 99% | 96% | 99% | 101% | 0 |
| 12 | ZZZZZZ | 98% | 96% | 99% | 98% | 0 |
| 13 | ZZZZZZ | 100% | 101% | 101% | 98% | 0 |
| 14 | ZZZZZZ | 101% | 101% | 100% | 96% | 0 |
| 15 | ZZZZZZ | 103% | 104% | 100% | 97% | 0 |
| 16 | ZZZZZZ | 102% | 104% | 100% | 97% | 0 |
| 17 | ZZZZZZ | 102% | 103% | 102% | 97% | 0 |
| 18 | ZZZZZZ | 100% | 102% | 101% | 97% | 0 |
| 19 | ZZZZZZ | 99% | 105% | 103% | 101% | 0 |
| 20 | ZZZZZZ | 100% | 102% | 103% | 99% | 0 |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20PPB STD | 102% | 100% | 102% | 102% | 0 |
| 02 | L808193B | 102% | 102% | 102% | 100% | 0 |
| 03 | L808193B2 | 102% | 100% | 102% | 101% | 0 |
| 04 | ZZZZZ | 101% | 100% | 101% | 98% | 0 |
| 05 | B808193B | 99% | 97% | 100% | 97% | 0 |
| 06 | ZZZZZ | 99% | 97% | 100% | 99% | 0 |
| 07 | ZZZZZ | 103% | 102% | 100% | 98% | 0 |
| 08 | ZZZZZ | 101% | 102% | 101% | 99% | 0 |
| 09 | ZZZZZ | 102% | 102% | 99% | 97% | 0 |
| 10 | 50269-2 | 100% | 101% | 101% | 97% | 0 |
| 11 | 50269-2,MS | 103% | 103% | 101% | 101% | 0 |
| 12 | 50269-2,MSD | 103% | 103% | 102% | 102% | 0 |
| 13 | 50262-2 | 100% | 103% | 103% | 98% | 0 |
| 14 | ZZZZZ | 100% | 101% | 101% | 99% | 0 |
| 15 | ZZZZZ | 100% | 100% | 101% | 99% | 0 |
| 16 | ZZZZZ | 100% | 101% | 101% | 98% | 0 |
| 17 | ZZZZZ | 101% | 101% | 100% | 97% | 0 |
| 18 | 50269-1 | 100% | 102% | 102% | 98% | 0 |
| 19 | 50269-3 | 102% | 103% | 101% | 98% | 0 |
| 20 | 50269-4 | 101% | 104% | 101% | 97% | 0 |
| 21 | 50269-5 | 101% | 103% | 101% | 96% | 0 |
| 22 | 50269-6 | 101% | 103% | 101% | 96% | 0 |
| 23 | 50269-7 | 100% | 102% | 101% | 98% | 0 |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

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# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20 PPB STD | 103% | 104% | 102% | 99% | 0 |
| 02 | L808193B3 | 102% | 101% | 104% | 100% | 0 |
| 03 | L808193B4 | 106% | 105% | 102% | 101% | 0 |
| 04 | B808193B2 | 102% | 103% | 100% | 98% | 0 |
| 05 | 50269-8 | 100% | 101% | 101% | 97% | 0 |
| 06 | 50269-9 | 101% | 102% | 101% | 97% | 0 |
| 07 | 50269-10 | 102% | 103% | 101% | 96% | 0 |
| 08 | 50269-11 | 102% | 102% | 102% | 97% | 0 |
| 09 | 50269-12 | 102% | 104% | 101% | 97% | 0 |
| 10 | 50269-13 | 102% | 103% | 101% | 94% | 0 |
| 11 | ZZZZZ | 100% | 102% | 101% | 97% | 0 |
| 12 | ZZZZZ | 102% | 104% | 101% | 96% | 0 |
| 13 | ZZZZZ | 102% | 104% | 100% | 96% | 0 |
| 14 | ZZZZZ | 103% | 103% | 100% | 97% | 0 |
| 15 | ZZZZZ | 101% | 101% | 100% | 97% | 0 |
| 16 | ZZZZZ | 103% | 103% | 100% | 96% | 0 |
| 17 | ZZZZZ | 102% | 104% | 100% | 97% | 0 |
| 18 | ZZZZZ | 103% | 105% | 101% | 96% | 0 |
| 19 | ZZZZZ | 103% | 103% | 99% | 96% | 0 |
| 20 | ZZZZZ | 103% | 103% | 100% | 97% | 0 |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20PPB STD | 106% | 105% | 103% | 102% | 0 |
| 02 | L808203B | 102% | 101% | 102% | 101% | 0 |
| 03 | L808203B2 | 103% | 100% | 101% | 100% | 0 |
| 04 | ZZZZZ | 102% | 100% | 100% | 99% | 0 |
| 05 | B808203B | 103% | 103% | 100% | 97% | 0 |
| 06 | ZZZZZ | 103% | 102% | 99% | 99% | 0 |
| 07 | 50269-10,DL | 101% | 99% | 101% | 97% | 0 |
| 08 | ZZZZZ | 104% | 101% | 99% | 99% | 0 |
| 09 | 50269-11,DL | 101% | 101% | 100% | 99% | 0 |
| 10 | 50269-12,DL | 103% | 103% | 99% | 98% | 0 |
| 11 | 50269-13,DL | 103% | 100% | 101% | 97% | 0 |
| 12 | ZZZZZ | 103% | 103% | 99% | 95% | 0 |
| 13 | ZZZZZ | 103% | 103% | 100% | 97% | 0 |
| 14 | ZZZZZ | 102% | 99% | 100% | 100% | 0 |
| 15 | ZZZZZ | 104% | 101% | 99% | 97% | 0 |
| 16 | ZZZZZ | 103% | 102% | 100% | 98% | 0 |
| 17 | ZZZZZ | 104% | 104% | 99% | 98% | 0 |
| 18 | ZZZZZ | 103% | 101% | 98% | 100% | 0 |
| 19 | ZZZZZ | 104% | 103% | 99% | 98% | 0 |
| 20 | ZZZZZ | 102% | 100% | 99% | 98% | 0 |
| 21 | ZZZZZ | 102% | 104% | 100% | 98% | 0 |
| 22 | ZZZZZ | 102% | 104% | 100% | 99% | 0 |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

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**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B/L808193B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.0 | 100 | | 19.3 | 96 | | 4 | | 15 | 80-120 |
| Chloromethane | 20 | U | 20.9 | 105 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 19.5 | 98 | | 18.9 | 95 | | 3 | | 15 | 80-120 |
| Bromomethane | 20 | U | 20.3 | 101 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| Chloroethane | 20 | U | 20.3 | 102 | | 19.3 | 96 | | 5 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 128.8 | 129 | * | 122.0 | 122 | * | 5 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 20.1 | 100 | | 19.4 | 97 | | 3 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Acetone | 100 | U | 102.1 | 102 | | 98.7 | 99 | | 3 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.2 | 101 | | 19.5 | 98 | | 3 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.6 | 108 | | 20.6 | 103 | | 5 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.7 | 104 | | 19.9 | 99 | | 4 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.8 | 104 | | 19.9 | 100 | | 4 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.2 | 111 | | 42.7 | 107 | | 4 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 20.6 | 103 | | 19.6 | 98 | | 5 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.9 | 104 | | 19.9 | 99 | | 5 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 106.9 | 107 | | 113.6 | 114 | | 6 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 18.4 | 92 | | 22.0 | 110 | | 18 | * | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 22.6 | 113 | | 21.8 | 109 | | 3 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 21.1 | 105 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 22.4 | 112 | | 21.9 | 110 | | 2 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.6 | 103 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.4 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 24.3 | 122 | * | 23.7 | 118 | | 3 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 21.0 | 105 | | 20.4 | 102 | | 3 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.3 | 107 | | 20.8 | 104 | | 3 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 21.2 | 106 | | 20.8 | 104 | | 2 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Benzene | 20 | U | 20.5 | 102 | | 20.0 | 100 | | 2 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 22.1 | 110 | | 21.9 | 109 | | 1 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.7 | 108 | | 21.7 | 109 | | 0 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 21.7 | 108 | | 21.7 | 109 | | 0 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.5 | 108 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 112.6 | 113 | | 110.8 | 111 | | 2 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 115.1 | 115 | | 113.5 | 113 | | 1 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 118 | | 23.6 | 118 | | 0 | | 15 | 80-120 |
| Toluene | 20 | U | 20.5 | 102 | | 20.1 | 101 | | 2 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 23.1 | 116 | | 23.1 | 115 | | 0 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.1 | 110 | | 22.3 | 111 | | 1 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.5 | 107 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.1 | 101 | | 19.8 | 99 | | 2 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 20.3 | 102 | | 20.5 | 102 | | 1 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B/L808193B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.6 | 108 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 20.1 | 100 | | 19.8 | 99 | | 1 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.0 | 110 | | 22.2 | 111 | | 1 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.6 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 41.4 | 103 | | 40.8 | 102 | | 1 | | 15 | 80-120 |
| o-Xylene | 20 | U | 21.0 | 105 | | 20.9 | 105 | | 0 | | 15 | 80-120 |
| Styrene | 20 | U | 21.4 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.1 | 105 | | 21.0 | 105 | | 0 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 20.0 | 100 | | 19.9 | 100 | | 1 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.5 | 108 | | 21.6 | 108 | | 0 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 20.7 | 103 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 20.1 | 100 | | 20.1 | 100 | | 0 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.9 | 104 | | 20.5 | 103 | | 2 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 20.4 | 102 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.6 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.8 | 104 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.8 | 104 | | 20.9 | 104 | | 0 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.4 | 102 | | 20.6 | 103 | | 1 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.4 | 97 | | 19.3 | 97 | | 0 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 19.8 | 99 | | 19.8 | 99 | | 0 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 20.0 | 100 | | 19.7 | 99 | | 1 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 21.2 | 106 | | 20.6 | 103 | | 3 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.6 | 103 | | 20.3 | 102 | | 1 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 23.7 | 118 | | 23.6 | 118 | | 0 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 21.2 | 106 | | 21.2 | 106 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 21.6 | 108 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| Naphthalene | 20 | U | 21.7 | 109 | | 21.3 | 107 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 20.2 | 101 | | 19.8 | 91 | | 2 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 71 outside limits

Spike Recovery:3 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 50269-2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.5 | 102 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| Chloromethane | 20 | U | 21.3 | 107 | | 21.9 | 110 | | 3 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 20.6 | 103 | | 20.6 | 103 | | 0 | | 15 | 70-130 |
| Bromomethane | 20 | U | 19.8 | 99 | | 21.9 | 109 | | 10 | | 15 | 70-130 |
| Chloroethane | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 2 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 100 | U | 129.3 | 129 | | 139.5 | 140 | * | 8 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 21.2 | 106 | | 21.2 | 106 | | 0 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 21.2 | 106 | | 21.3 | 107 | | 1 | | 15 | 70-130 |
| Acetone | 100 | **15** | 117.3 | 102 | | 122.4 | 107 | | 4 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 21.4 | 107 | | 21.5 | 107 | | 0 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.9 | 109 | | 21.7 | 108 | | 1 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 20.5 | 103 | | 20.4 | 102 | | 0 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 22.0 | 110 | | 21.9 | 110 | | 0 | | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.4 | 111 | | 45.1 | 113 | | 2 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 20 | U | 21.4 | 107 | | 21.5 | 108 | | 1 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 21.6 | 108 | | 21.7 | 109 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 100 | **8** | 123.6 | 116 | | 130.6 | 123 | | 6 | | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 22.3 | 112 | | 22.7 | 114 | | 2 | | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 21.9 | 109 | | 22.1 | 111 | | 1 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 20 | U | 21.9 | 109 | | 22.2 | 111 | | 2 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 20 | U | 22.4 | 112 | | 22.8 | 114 | | 2 | | 15 | 70-130 |
| Chloroform | 20 | U | 21.3 | 107 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 20.9 | 105 | | 21.1 | 106 | | 1 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 24.4 | 122 | | 25.5 | 128 | | 5 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 22.2 | 111 | | 22.3 | 112 | | 1 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 22.7 | 114 | | 22.9 | 114 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 22.3 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 21.6 | 108 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Benzene | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| Trichloroethene | 20 | U | 22.8 | 114 | | 23.3 | 117 | | 2 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 22.3 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 22.1 | 110 | | 22.4 | 112 | | 1 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 21.8 | 109 | | 21.8 | 109 | | 0 | | 15 | 70-130 |
| 2-Hexanone | 100 | U | 111.6 | 112 | | 115.8 | 116 | | 4 | | 15 | 70-130 |
| Methyl isobutyl ketone | 100 | U | 114.5 | 115 | | 117.7 | 118 | | 3 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 118 | | 24.1 | 121 | | 2 | | 15 | 70-130 |
| Toluene | 20 | **1** | 22.1 | 104 | | 22.6 | 107 | | 2 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 20 | U | 23.1 | 116 | | 23.5 | 118 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 22.5 | 113 | | 22.6 | 113 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 21.7 | 109 | | 22.2 | 111 | | 2 | | 15 | 70-130 |
| Tetrachloroethene | 20 | U | 20.5 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 20.5 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 50269-2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.7 | 109 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 20.6 | 103 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.4 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| m,p-Xylene | 40 | U | 42.7 | 107 | | 43.3 | 108 | | 1 | | 15 | 70-130 |
| o-Xylene | 20 | U | 21.6 | 108 | | 21.9 | 109 | | 1 | | 15 | 70-130 |
| Styrene | 20 | U | 22.0 | 110 | | 22.2 | 111 | | 1 | | 15 | 70-130 |
| Bromoform | 20 | U | 21.3 | 107 | | 21.7 | 108 | | 2 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 20.8 | 104 | | 20.9 | 105 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.5 | 108 | | 22.0 | 110 | | 2 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 21.7 | 109 | | 2 | | 15 | 70-130 |
| n-Propylbenzene | 20 | U | 21.5 | 107 | | 21.7 | 108 | | 1 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 20.5 | 103 | | 20.7 | 104 | | 1 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 21.2 | 106 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 21.1 | 106 | | 21.8 | 109 | | 3 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 20.9 | 104 | | 20.7 | 103 | | 1 | | 15 | 70-130 |
| tert-butylbenzene | 20 | U | 21.0 | 105 | | 21.5 | 108 | | 2 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 21.6 | 108 | | 21.9 | 109 | | 1 | | 15 | 70-130 |
| sec-butylbenzene | 20 | U | 21.2 | 106 | | 21.4 | 107 | | 1 | | 15 | 70-130 |
| p-isopropyltoluene | 20 | U | 20.0 | 100 | | 20.2 | 101 | | 1 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 20.2 | 101 | | 20.6 | 103 | | 2 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 20.3 | 102 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| n-butylbenzene | 20 | U | 21.5 | 107 | | 21.5 | 107 | | 0 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 20.8 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 23.6 | 118 | | 24.5 | 123 | | 4 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.7 | 103 | | 21.3 | 107 | | 3 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 21.8 | 109 | | 22.3 | 112 | | 2 | | 15 | 70-130 |
| Naphthalene | 20 | U | 21.1 | 106 | | 22.3 | 112 | | 6 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.5 | 102 | | 21.3 | 107 | | 4 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 20.1 | 101 | | 20.3 | 101 | | 1 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery: 1 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B3/L808193B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 19.2 | 96 | | 19.7 | 98 | | 2 | | 15 | 80-120 |
| Chloromethane | 20 | U | 20.3 | 101 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 19.8 | 99 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| Bromomethane | 20 | U | 21.2 | 106 | | 22.6 | 113 | | 6 | | 15 | 80-120 |
| Chloroethane | 20 | U | 20.2 | 101 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 138.0 | 138 | * | 147.6 | 148 | * | 7 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 19.9 | 100 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 21.5 | 108 | | 22.2 | 111 | | 3 | | 15 | 80-120 |
| Acetone | 100 | U | 107.8 | 108 | | 115.5 | 115 | | 7 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.1 | 101 | | 20.7 | 103 | | 3 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.4 | 107 | | 21.8 | 109 | | 2 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.8 | 104 | | 21.5 | 108 | | 3 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.7 | 103 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.3 | 111 | | 46.0 | 115 | | 4 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 20.5 | 102 | | 21.0 | 105 | | 3 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.9 | 105 | | 21.3 | 107 | | 2 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 115.0 | 115 | | 124.7 | 125 | * | 8 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 18.2 | 91 | | 19.6 | 98 | | 8 | | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 18.1 | 91 | | 18.5 | 93 | | 2 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 20.7 | 104 | | 21.6 | 108 | | 4 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 21.6 | 108 | | 22.7 | 114 | | 5 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.3 | 101 | | 20.9 | 105 | | 3 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.2 | 101 | | 21.3 | 106 | | 5 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 25.0 | 125 | * | 26.1 | 130 | * | 4 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 20.5 | 102 | | 21.2 | 106 | | 4 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.0 | 105 | | 21.6 | 108 | | 3 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 20.9 | 104 | | 21.5 | 108 | | 3 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 21.0 | 105 | | 21.7 | 109 | | 3 | | 15 | 80-120 |
| Benzene | 20 | U | 20.1 | 101 | | 20.7 | 104 | | 3 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 22.1 | 110 | | 21.9 | 110 | | 1 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.7 | 109 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 22.0 | 110 | | 21.9 | 109 | | 0 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.7 | 109 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 117.4 | 117 | | 119.7 | 120 | | 2 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 119.4 | 119 | | 120.7 | 121 | * | 1 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.3 | 116 | | 22.9 | 114 | | 2 | | 15 | 80-120 |
| Toluene | 20 | U | 20.6 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 22.9 | 114 | | 22.4 | 112 | | 2 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.7 | 113 | | 22.6 | 113 | | 0 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.8 | 109 | | 21.9 | 109 | | 0 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.3 | 101 | | 19.6 | 98 | | 4 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 20.8 | 104 | | 20.5 | 103 | | 1 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B3/L808193B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.8 | 109 | | 22.1 | 111 | | 1 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 19.9 | 99 | | 19.9 | 99 | | 0 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.7 | 109 | | 21.6 | 108 | | 1 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.2 | 101 | | 20.2 | 101 | | 0 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 40.2 | 100 | | 40.5 | 101 | | 1 | | 15 | 80-120 |
| o-Xylene | 20 | U | 20.6 | 103 | | 20.9 | 104 | | 2 | | 15 | 80-120 |
| Styrene | 20 | U | 21.1 | 106 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 1 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 19.8 | 99 | | 19.8 | 99 | | 0 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.8 | 109 | | 22.1 | 110 | | 1 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.6 | 108 | | 21.8 | 109 | | 1 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 20.3 | 102 | | 20.2 | 101 | | 0 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 19.9 | 100 | | 19.9 | 99 | | 0 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.4 | 102 | | 20.3 | 102 | | 0 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 19.9 | 99 | | 20.3 | 101 | | 2 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.5 | 102 | | 20.2 | 101 | | 1 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.4 | 102 | | 20.8 | 104 | | 2 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.4 | 102 | | 20.7 | 103 | | 1 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.0 | 100 | | 20.1 | 101 | | 0 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.0 | 95 | | 19.0 | 95 | | 0 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 19.6 | 98 | | 19.6 | 98 | | 0 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 19.6 | 98 | | 19.4 | 97 | | 1 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 20.2 | 101 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.4 | 102 | | 20.2 | 101 | | 1 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 24.0 | 120 | | 24.5 | 122 | | 2 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.5 | 103 | | 20.6 | 103 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 20.7 | 103 | | 20.5 | 102 | | 1 | | 15 | 80-120 |
| Naphthalene | 20 | U | 21.5 | 107 | | 22.0 | 110 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.6 | 103 | | 20.7 | 104 | | 0 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 19.4 | 97 | | 19.3 | 91 | | 1 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery:6 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B/L808203B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.1 | 100 | | 19.4 | 97 | | 3 | | 15 | 80-120 |
| Chloromethane | 20 | U | 21.4 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 20.7 | 103 | | 19.1 | 95 | | 8 | | 15 | 80-120 |
| Bromomethane | 20 | U | 21.5 | 108 | | 19.7 | 99 | | 9 | | 15 | 80-120 |
| Chloroethane | 20 | U | 21.0 | 105 | | 20.3 | 102 | | 3 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 118.4 | 118 | | 128.8 | 129 | * | 8 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 20.7 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 20.8 | 104 | | 20.7 | 103 | | 0 | | 15 | 80-120 |
| Acetone | 100 | U | 100.6 | 101 | | 102.3 | 102 | | 2 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.3 | 101 | | 19.8 | 99 | | 2 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 1 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.9 | 105 | | 21.4 | 107 | | 2 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.5 | 102 | | 20.0 | 100 | | 3 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 42.2 | 105 | | 42.8 | 107 | | 1 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 19.6 | 98 | | 20.1 | 100 | | 2 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.7 | 104 | | 20.8 | 104 | | 0 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 108.4 | 108 | | 115.2 | 115 | | 6 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 21.7 | 108 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 21.8 | 109 | | 21.1 | 105 | | 3 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 21.0 | 105 | | 20.7 | 104 | | 1 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 21.4 | 107 | | 21.8 | 109 | | 2 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.4 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.5 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 23.0 | 115 | | 23.7 | 119 | | 3 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 20.7 | 103 | | 20.6 | 103 | | 1 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.3 | 106 | | 21.1 | 105 | | 1 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 21.6 | 108 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 20.9 | 104 | | 21.0 | 105 | | 1 | | 15 | 80-120 |
| Benzene | 20 | U | 20.4 | 102 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 23.0 | 115 | | 22.5 | 113 | | 2 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.4 | 107 | | 20.9 | 105 | | 2 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 21.6 | 108 | | 21.3 | 106 | | 2 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.5 | 107 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 108.2 | 108 | | 113.2 | 113 | | 5 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 110.0 | 110 | | 113.4 | 113 | | 3 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 119 | | 23.1 | 116 | | 2 | | 15 | 80-120 |
| Toluene | 20 | U | 20.6 | 103 | | 20.1 | 101 | | 2 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 23.4 | 117 | | 23.1 | 116 | | 1 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.3 | 111 | | 22.2 | 111 | | 1 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.6 | 108 | | 21.7 | 109 | | 1 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.3 | 102 | | 20.0 | 100 | | 2 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 21.0 | 105 | | 20.4 | 102 | | 3 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50269

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B/L808203B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.8 | 109 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 20.5 | 103 | | 20.0 | 100 | | 3 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.6 | 113 | | 22.0 | 110 | | 3 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.8 | 104 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 41.4 | 103 | | 40.7 | 102 | | 2 | | 15 | 80-120 |
| o-Xylene | 20 | U | 21.1 | 106 | | 20.9 | 105 | | 1 | | 15 | 80-120 |
| Styrene | 20 | U | 21.6 | 108 | | 21.2 | 106 | | 2 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.7 | 108 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 20.4 | 102 | | 19.9 | 99 | | 3 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.8 | 109 | | 22.2 | 111 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 22.0 | 110 | | 3 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 21.0 | 105 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 20.7 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 21.0 | 105 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 21.0 | 105 | | 20.7 | 104 | | 1 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.7 | 104 | | 20.1 | 101 | | 3 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.5 | 103 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 21.2 | 106 | | 20.9 | 105 | | 1 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.8 | 104 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.7 | 98 | | 19.5 | 98 | | 1 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 20.4 | 102 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 20.0 | 100 | | 19.7 | 98 | | 2 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 20.7 | 103 | | 20.4 | 102 | | 1 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.5 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 22.8 | 114 | | 24.4 | 122 | * | 7 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.6 | 103 | | 20.7 | 104 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 21.6 | 108 | | 20.8 | 104 | | 4 | | 15 | 80-120 |
| Naphthalene | 20 | U | 20.9 | 104 | | 21.8 | 109 | | 4 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.5 | 103 | | 20.6 | 103 | | 0 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 19.8 | 99 | | 19.6 | 91 | | 1 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery:2 out of 142 outside limits

Comments: _____

_____

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9.1.03

**Voltage** 1918

**Threshold** 160

081803-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | IW-B-081803-1-MT | | | | | | |
| 1 | V8081B8B | BFB 50ng 2ul V4575 | 5mL | ✓ | | B17270 | WT | NA 532 |
| 2 | | 1ppb .25ml V4586 V4588 | | ✓ | | 71 | | |
| 3 | | 2 ppb 150ml | | ✓ | | 72 | | |
| 4 | | 5 ppb 1.25ml | | ✓ | | 73 | | |
| 5 | | 20 ppb 5ml | | ✓ | | 74 | | |
| 6 | | 50 ppb 12.5ml | | ✓ | | 75 | | |
| 7 | | 100 ppb 25ml | | ✓ | | 76 | | |
| 8 | | Blank | | ✓ | | 77 | | |
| 9 | | LB081838 5ml V4587 V4591 | | ✓ | | 78 | | |
| 10 | | LB081838Z | | ✓ | | 79 | | |
| 11 | | Bromoform | | ✓ | | 80 | | |
| 12 | | B[illegible]1838 | | ✓ | | 81 | | |
| 13 | | ~~50257-1~~ 50261-3 | | ✓ | | 82 | | <2 |
| 14 | | 50259-1 | | ✓ | | 83 | | <2 |
| 15 | | 50260-13 | | ✓ | | 84 | | <2 |
| 16 | | 50261-1 | | ✓ | | 85 | | <2 |
| 17 | | -2 | | ✓ | | 86 | | <2 |
| 18 | | 50257-1 | 500ml | ✓ | | 87 | | <2 |
| 19 | | 50262-1 | 5mL | ✓ | | 88 | | <2 |
| 20 | | -2 | 250ml | | DW 5mL | 89 | | <2 |
| 21 | | -3 | 5mL | ✓ | | 90 | | <2 |
| 22 | | -4 | | ✓ | | 91 | | <2 |

8.19.03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4597 Exp: 9-1-03

**Voltage** 1918

**Threshold** 100

Sun 081903-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-081903-1-JL | | | | | | | |
| 1 | V8081803B | Blank | 5mL | | | B17292 | | |
| 2 | | BFB 50ng 2mL V4575 | | | ✓ | 93 | T | 838 |
| 3 | | 20 PPB Stnd V4586 V4588 | | | ✓ TBA ↑ 24%. | 94 | SC | |
| 4 | | L808193B V4587 V4590 | | | ✓ Ethyl Red ↑ 18%. | 95 | Q | |
| 5 | | L808193B2 ↓ | | | ✓ TBA 129/122%. | 96 | Q | |
| 6 | | Bromofluorobenzene | | | ✓ | 97 | | |
| 7 | | L808193B | | | ✓ | 98 | B | |
| 8 | | 50262-5 | | | ✓ TB | 99 | | <2 |
| 9 | | 50240-8 | | | ✓ | B17300 | | <2 |
| 10 | | 50243-6 | | | ✓ | 1 | | <2 |
| 11 | | ↓ -8 | | | ✓ | 2 | | <2 |
| 12 | | 50269-2 | | | ✓ | 3 | | <2 |
| 13 | | -2 MS | | | ✓ TBA MSD @140% | 4 | SP | <2 |
| 14 | | ↓ -2 MSD | | | ✓ | 5 | SP | <2 |
| 15 | | 50262-2 | | | ✓ | 6 | | <2 |
| 16 | | 50254-20 | | | ✓ | 7 | | <2 |
| 17 | | -21 | 250mL | | ✓ | 8 | | <2 |
| 18 | | -22 | 5mL | | ✓ | 9 | | <2 |
| 19 | | ↓ -30 | | | NM 1mL | 10 | | <2 |
| 20 | | 50269-1 | | | ✓ | 11 | | <2 |
| 21 | | -3 | | | ✓ | 12 | | <2 |
| 22 | | -4 | | | ✓ | 13 | | <2 |
| 23 | | -5 | | | ✓ | 14 | | <2 |
| 24 | | -6 | | | ✓ | 15 | | <2 |
| 25 | | ↓ -7 | | | ✓ | 16 | | <2 |
| 26 | | BFB 50ng 2mL V4575 | 5mL | | ✓ | 17 | T | 857 |
| 27 | | 20 PPB Stnd V4586 V4588 | | | ✓ TBA ↑ 36%. | 18 | SC | |
| 28 | | L808193B3 V4587 V4590 | | | ✓ TBA, THF, MIBK | 19 | Q | |
| 29 | | L808193B4 ↓ | | | ✓ 1208370 ↑ | 20 | Q | |
| 30 | | ~~L808193B2~~ Blank | | | eo check | 21 | B | |

Sun 8-19-03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9-1-03

**Voltage** 1918

**Threshold** 100

081903-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V808183B | B808193B2 | 5mL | | ✓ | B17322B | [illegible] | |
| 32 | | 50269-8 | | | ✓ | 23 | | <2 |
| 33 | | -9 | | | ✓ | 24 | | <2 |
| 34 | | -10 | | | ✓ RR 1mL | 25 | | <2 |
| 35 | | -11 | | | ✓ RR 500mL | 26 | | <2 |
| 36 | | -12 | | | ✓ RR 500mL | 27 | | <2 |
| 37 | | -13 | | | ✓ RR 500mL | 28 | | <2 |
| 38 | | 50273-1 | | | ✓ RR 500mL | 29 | | <2 |
| 39 | | -2 | | | ✓ RR 500mL | 30 | | <2 |
| 40 | | -3 | | | ✓ RR 500mL | 31 | | <2 |
| 41 | | -4 | | | ✓ RR 500mL | 32 | | <2 |
| 42 | | -5 | | | ✓ RR 500mL | 33 | | <2 |
| 43 | | -6 | | | ✓ | 34 | | <2 |
| 44 | | -7 | | | ✓ RR 50mL | 35 | | <2 |
| 45 | | -8 | | | ✓ RR 50mL | 36 | | <2 |
| 46 | | -9 | | | ✓ RR 50mL | 37 | | <2 |
| 47 | | -10 | | | ✓ RR 50mL | 38 | | <2 |

8.20.03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9-1-03

**Voltage** 1918

**Threshold** 100

Sec 082003-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH | |
|---|---|---|---|---|---|---|---|---|---|
| | W-B-082003-1-JR | | | | | | | | |
| 1 | V808183B | Sec 8-20-03 ~~Blank~~ BFB 50 | 5mL | ✓ | 2mL V4575 | B17339T | Sec | | 910 |
| 2 | | Sec 8-20-03 ~~BFB~~ 20PPB 5mL V4586 V4588 | | ✓ | TBA↑ | 40SC | | | |
| 3 | | L808203B V4587 V4590 | | ✓ | | 41 | Q | | |
| 4 | | L808203B2 | | ✓ | TBA↑ 1230BCP↑ | 42 | Q | | |
| 5 | | Bromoform | | ✓ | | 43 | | | |
| 6 | | B808203B | | ✓ | | 44 | B | | |
| 7 | | 50229-5 | 1mL | ✓ | | 45 | | <2 | |
| 8 | | 50269-10, DL | 1mL | ✓ | | 46 | | <2 | |
| 9 | | 50254-30 | 1mL | ✓ | | 47 | | <2 | |
| 10 | | 50269-11, DL | 500mL | ✓ | | 48 | | <2 | |
| 11 | | -12, DL | | ✓ | | 49 | | <2 | |
| 12 | | -13, DL | | ✓ | | 50 | | <2 | |
| 13 | | 50273-1, DL | | ✓ | | 51 | | <2 | |
| 14 | | -2, DL | | ✓ | | 52 | | <2 | |
| 15 | | -3, DL | | ✓ | | 53 | | <2 | |
| 16 | | -4, DL | | ✓ | | 54 | | <2 | |
| 17 | | -5, DL | | ✓ | | 55 | | <2 | |
| 18 | | 50254-27 | | ✓ | | 56 | | <2 | |
| 19 | | -28 | | ✓ | | 57 | | <2 | |
| 20 | | -29 | | ✓ | | 58 | | <2 | |
| 21 | | -31 | | | RR 100mL | 59 | | <2 | |
| 22 | | 50274-4 | | | RR 250mL | 60 | | <2 | |
| 23 | | -6 | | | *OUT 12hr. RR 500mL | 61 | | <2 | |
| 24 | | BFB 50ng 2mL V4575 | 5mL | ✓ | | 62 | T | | 945 |
| 25 | | 20PPB 5mL V4586 V4588 | | ✓ | TBA↑ | 63 | SC | | |
| 26 | | L808203B3 V4587 V4590 | | ✓ | TBA↑. THF↑ | 64 | Q | | |
| 27 | | L808203B4 | | ✓ | | 65 | Q | | |
| 28 | | B808203B2 | | ✓ | | 66 | B | | |
| 29 | | 50273-7, DL | 50mL | ✓ | | 67 | | <2 | |
| 30 | | -8, DL | | ✓ | | 68 | | <2 | |

(CONT.)

Revision: 04/30/02

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.3 |
| 75 | 30.0 - 60.0% of mass 95 | 43.4 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 72.9 |
| 175 | 5.0 - 9.0% of mass 174 | 5.4 ( 7.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 72.8 ( 99.8 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.5 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 1 PPB | 1 PPB | B17271SI.D | 08/18/03 | 18:02 |
| 02 | 2 PPB | 2 PPB | B17272SI.D | 08/18/03 | 18:31 |
| 03 | 5 PPB | 5 PPB | B17273SI.D | 08/18/03 | 19:00 |
| 04 | 20 PPB | 20 PPB | B17274SI.D | 08/18/03 | 19:29 |
| 05 | 50 PPB | 50 PPB | B17275SI.D | 08/18/03 | 19:59 |
| 06 | 100 PPB | 100 PPB | B17276SI.D | 08/18/03 | 20:28 |
| 07 | ZZZZZ | ZZZZZ | B17278Q.D | 08/18/03 | 21:41 |
| 08 | ZZZZZ | ZZZZZ | B17279Q.D | 08/18/03 | 22:10 |
| 09 | ZZZZZ | ZZZZZ | B17280.D | 08/18/03 | 22:40 |
| 10 | ZZZZZ | ZZZZZ | B17281B.D | 08/18/03 | 23:09 |
| 11 | ZZZZZ | ZZZZZ | B17282.D | 08/18/03 | 23:38 |
| 12 | ZZZZZ | ZZZZZ | B17283.D | 08/18/03 | 0:07 |
| 13 | ZZZZZ | ZZZZZ | B17284.D | 08/19/03 | 0:37 |
| 14 | ZZZZZ | ZZZZZ | B17285.D | 08/19/03 | 1:06 |
| 15 | ZZZZZ | ZZZZZ | B17286.D | 08/19/03 | 1:35 |
| 16 | ZZZZZ | ZZZZZ | B17287.D | 08/19/03 | 2:04 |
| 17 | ZZZZZ | ZZZZZ | B17288.D | 08/19/03 | 2:34 |
| 18 | ZZZZZ | ZZZZZ | B17289.D | 08/19/03 | 3:03 |
| 19 | ZZZZZ | ZZZZZ | B17290.D | 08/19/03 | 3:47 |
| 20 | ZZZZZ | ZZZZZ | B17291.D | 08/19/03 | 4:16 |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.9 |
| 75 | 30.0 - 60.0% of mass 95 | 42.0 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.1 ( 0.2 )1 |
| 174 | Greater than 50% of mass 95 | 72.2 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 6.7 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 70.2 ( 97.3 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.2 ( 5.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B17294SC.D | 08/19/03 | 9:17 |
| 02 | L808193B | L808193B | B17295Q.D | 08/19/03 | 9:46 |
| 03 | L808193B2 | L808193B2 | B17296Q.D | 08/19/03 | 10:22 |
| 04 | ZZZZZ | ZZZZZ | B17297.D | 08/19/03 | 10:54 |
| 05 | B808193B | B808193B | B17298B.D | 08/19/03 | 11:24 |
| 06 | ZZZZZ | ZZZZZ | B17299.D | 08/19/03 | 11:56 |
| 07 | ZZZZZ | ZZZZZ | B17300.D | 08/19/03 | 12:20 |
| 08 | ZZZZZ | ZZZZZ | B17301.D | 08/19/03 | 12:50 |
| 09 | ZZZZZ | ZZZZZ | B17302.D | 08/19/03 | 13:19 |
| 10 | 50269-2 | 50269-2 | B17303.D | 08/19/03 | 13:48 |
| 11 | 50269-2,MS | 50269-2,MS | B17304SP.D | 08/19/03 | 14:17 |
| 12 | 50269-2,MSD | 50269-2,MSD | B17305SP.D | 08/19/03 | 14:47 |
| 13 | 50262-2 | 50262-2 | B17306.D | 08/19/03 | 15:16 |
| 14 | ZZZZZ | ZZZZZ | B17307.D | 08/19/03 | 16:00 |
| 15 | ZZZZZ | ZZZZZ | B17308.D | 08/19/03 | 16:29 |
| 16 | ZZZZZ | ZZZZZ | B17309.D | 08/19/03 | 16:58 |
| 17 | ZZZZZ | ZZZZZ | B17310.D | 08/19/03 | 17:28 |
| 18 | 50269-1 | 50269-1 | B17311.D | 08/19/03 | 17:57 |
| 19 | 50269-3 | 50269-3 | B17312.D | 08/19/03 | 18:26 |
| 20 | 50269-4 | 50269-4 | B17313.D | 08/19/03 | 18:56 |
| 21 | 50269-5 | 50269-5 | B17314.D | 08/19/03 | 19:25 |
| 22 | 50269-6 | 50269-6 | B17315.D | 08/19/03 | 19:54 |
| 23 | 50269-7 | 50269-7 | B17316.D | 08/19/03 | 20:23 |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.9 |
| 75 | 30.0 - 60.0% of mass 95 | 43.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 76.7 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 6.6 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 73.3 ( 95.6 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.4 ( 6.0 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20 PPB STD | 20 PPB STD | B17318SC.D | 08/19/03 | 21:36 |
| 02 | L808193B3 | L808193B3 | B17319Q.D | 08/19/03 | 22:06 |
| 03 | L808193B4 | L808193B4 | B17320Q.D | 08/19/03 | 22:35 |
| 04 | B808193B2 | B808193B2 | B17322B.D | 08/19/03 | 23:34 |
| 05 | 50269-8 | 50269-8 | B17323.D | 08/19/03 | 0:03 |
| 06 | 50269-9 | 50269-9 | B17324.D | 08/20/03 | 0:32 |
| 07 | 50269-10 | 50269-10 | B17325.D | 08/20/03 | 1:01 |
| 08 | 50269-11 | 50269-11 | B17326.D | 08/20/03 | 1:31 |
| 09 | 50269-12 | 50269-12 | B17327.D | 08/20/03 | 2:00 |
| 10 | 50269-13 | 50269-13 | B17328.D | 08/20/03 | 2:29 |
| 11 | ZZZZZ | ZZZZZ | B17329.D | 08/20/03 | 2:58 |
| 12 | ZZZZZ | ZZZZZ | B17330.D | 08/20/03 | 3:42 |
| 13 | ZZZZZ | ZZZZZ | B17331.D | 08/20/03 | 4:12 |
| 14 | ZZZZZ | ZZZZZ | B17332.D | 08/20/03 | 4:41 |
| 15 | ZZZZZ | ZZZZZ | B17333.D | 08/20/03 | 5:10 |
| 16 | ZZZZZ | ZZZZZ | B17334.D | 08/20/03 | 5:39 |
| 17 | ZZZZZ | ZZZZZ | B17335.D | 08/20/03 | 6:09 |
| 18 | ZZZZZ | ZZZZZ | B17336.D | 08/20/03 | 6:38 |
| 19 | ZZZZZ | ZZZZZ | B17337.D | 08/20/03 | 7:07 |
| 20 | ZZZZZ | ZZZZZ | B17338.D | 08/20/03 | 7:42 |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.0 |
| 75 | 30.0 - 60.0% of mass 95 | 42.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 76.9 |
| 175 | 5.0 - 9.0% of mass 174 | 5.3 ( 6.9 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 74.1 ( 96.5 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B17340SC.D | 08/20/03 | 9:41 |
| 02 | L808203B | L808203B | B17341Q.D | 08/20/03 | 10:08 |
| 03 | L808203B2 | L808203B2 | B17342Q.D | 08/20/03 | 10:38 |
| 04 | ZZZZZ | ZZZZZ | B17343.D | 08/20/03 | 11:07 |
| 05 | B808203B | B808203B | B17344B.D | 08/20/03 | 11:36 |
| 06 | ZZZZZ | ZZZZZ | B17345.D | 08/20/03 | 12:05 |
| 07 | 50269-10.DL | 50269-10.DL | B17346.D | 08/20/03 | 12:49 |
| 08 | ZZZZZ | ZZZZZ | B17347.D | 08/20/03 | 13:16 |
| 09 | 50269-11.DL | 50269-11.DL | B17348.D | 08/20/03 | 14:00 |
| 10 | 50269-12.DL | 50269-12.DL | B17349.D | 08/20/03 | 14:29 |
| 11 | 50269-13.DL | 50269-13.DL | B17350.D | 08/20/03 | 14:55 |
| 12 | ZZZZZ | ZZZZZ | B17351.D | 08/20/03 | 15:39 |
| 13 | ZZZZZ | ZZZZZ | B17352.D | 08/20/03 | 16:08 |
| 14 | ZZZZZ | ZZZZZ | B17353.D | 08/20/03 | 16:38 |
| 15 | ZZZZZ | ZZZZZ | B17354.D | 08/20/03 | 17:22 |
| 16 | ZZZZZ | ZZZZZ | B17355.D | 08/20/03 | 17:51 |
| 17 | ZZZZZ | ZZZZZ | B17356.D | 08/20/03 | 18:20 |
| 18 | ZZZZZ | ZZZZZ | B17357.D | 08/20/03 | 18:49 |
| 19 | ZZZZZ | ZZZZZ | B17358.D | 08/20/03 | 19:33 |
| 20 | ZZZZZ | ZZZZZ | B17359.D | 08/20/03 | 20:03 |
| 21 | ZZZZZ | ZZZZZ | B17360.D | 08/20/03 | 20:32 |
| 22 | ZZZZZ | ZZZZZ | B17361.D | 08/20/03 | 21:16 |
| 23 | | | | | |

| | |
|---|---|
| Acq. Method File | V808183B |
| Level 1 File Name | B17271SI.D |
| Level 2 File Name | B17272SI.D |
| Level 3 File Name | B17273SI.D |
| Level 4 File Name | B17274SI.D |
| Level 5 File Name | B17275SI.D |
| Level 6 File Name | B17276SI.D |

L=Linear
Q=Quadratic

| Name | Response Factor Rel. STDEV |
|---|---|
| Dichlorodifluoromethane | 3.51% |
| Chloromethane | 8.34% |
| Vinyl Chloride | 15.89% |
| Bromomethane | 11.86% |
| Chloroethane | 6.33% |
| t-Butyl alcohol (TBA) | 14.67% |
| Trichlorofluoromethane | 4.07% |
| Diethyl ether | 4.41% |
| 1,1,2-Trichlorotrifluoroethane | 3.85% |
| Acrolein | 8.89% |
| Acetone | 8.68% |
| 1,1-Dichloroethene | 2.75% |
| Methyl iodide | 7.61% |
| Di-isopropyl ether (DIPE) | 6.21% |
| Methylene Chloride | 99.99% L |
| Carbon Disulfide | 4.29% |
| Acrylonitrile | 7.95% |
| Methyl-tert-butyl ether (MTBE) | 2.43% |
| trans-1,2-Dichloroethene | 5.07% |
| 1,1-Dichloroethane | 6.75% |
| Vinyl acetate | 18.22% |
| Methyl ethyl ketone | 9.54% |
| Ethyl t-butyl ether (ETBE) | 3.34% |
| 2,2-Dichloropropane | 7.93% |
| cis-1,2-Dichloroethene | 3.20% |
| t-Amyl methyl ether (TAME) | 4.60% |
| Chloroform | 4.06% |
| Bromochloromethane | 1.39% |
| Tetrahydrofuran | 99.99% Q |
| 1,1,1-Trichloroethane | 4.15% |
| 1,1-Dichloropropene | 2.30% |
| Carbon Tetrachloride | 4.99% |
| 1,2-Dichloroethane | 3.01% |
| Benzene | 4.66% |
| Trichloroethene | 5.75% |
| 1,2-Dichloropropane | 2.72% |
| Methylmethacrylate | 10.12% |
| Bromodichloromethane | 4.99% |
| Dibromomethane | 5.82% |
| 2-Chloroethylvinyl ether | 9.46% |
| 2-Hexanone | 6.80% |
| Methyl isobutyl ketone | 7.59% |
| cis-1,3-Dichloropropene | 7.28% |
| Toluene | 3.97% |
| trans-1,3-Dichloropropene | 9.21% |
| 1,1,2-Trichloroethane | 2.75% |
| 1,3-Dichloropropane | 1.88% |
| Tetrachloroethene | 5.42% |
| Dibromochloromethane | 5.46% |
| 1,2-Dibromoethane | 4.30% |
| Chlorobenzene | 5.03% |
| 1,1,1,2-Tetrachloroethane | 4.15% |
| Ethylbenzene | 4.14% |
| m,p-Xylene | 3.44% |
| o-Xylene | 3.37% |
| Styrene | 2.84% |
| Bromoform | 7.23% |
| Isopropylbenzene | 3.50% |
| 1,1,2,2-Tetrachloroethane | 2.38% |
| 1,2,3-Trichloropropane | 8.33% |
| trans-1,4-Dichloro-2-butene | 4.75% |
| n-Propylbenzene | 3.45% |
| Bromobenzene | 3.55% |
| 1,3,5-Trimethylbenzene | 2.16% |
| 2-Chlorotoluene | 3.90% |
| 4-Chlorotoluene | 3.37% |
| tert-butylbenzene | 4.03% |
| 1,2,4-Trimethylbenzene | 3.96% |
| sec-butylbenzene | 6.23% |
| p-isopropyltoluene | 5.73% |
| 1,3-Dichlorobenzene | 4.89% |
| 1,4-Dichlorobenzene | 4.69% |
| n-butylbenzene | 3.65% |
| 1,2-Dichlorobenzene | 3.50% |
| 1,2-Dibromo-3-chloropropane | 13.75% |
| 1,2,4-Trichlorobenzene | 3.86% |
| Hexachlorobutadiene | 11.31% |
| Naphthalene | 4.31% |
| 1,2,3-Trichlorobenzene | 3.87% |
| 1,3,5-Trichlorobenzene | 3.01% |
| AVG | 8.01% |

9.19.03

VMT 8/19/03

Response Factor Report  Instrumen

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 0.741 | 0.716 | 0.731 | 0.686 | 0.705 | 0.677 | 0.709 | 3.51 |
| 3) | TMP | Chloromethane | 0.642 | 0.624 | 0.593 | 0.542 | 0.546 | 0.524 | 0.578 | 8.34 |
| 4) | TMC | Vinyl Chloride | 0.449 | 0.409 | 0.399 | 0.328 | 0.325 | 0.301 | 0.369 | 15.89 |
| 5) | TM | Bromomethane | 0.326 | 0.251 | 0.248 | 0.238 | 0.266 | 0.266 | 0.266 | 11.86 |
| 6) | TM | Chloroethane | 0.282 | 0.249 | 0.253 | 0.249 | 0.251 | 0.233 | 0.253 | 6.33 |
| 7) | TM | t-Butyl alcohol (TB | 0.022 | 0.023 | 0.023 | 0.025 | 0.030 | 0.030 | 0.025# | 14.67 |
| 8) | TM | Trichlorofluorometh | 0.621 | 0.557 | 0.598 | 0.582 | 0.574 | 0.564 | 0.582 | 4.07 |
| 9) | TM | Diethyl ether | 0.198 | 0.177 | 0.178 | 0.190 | 0.186 | 0.191 | 0.187 | 4.41 |
| 10) | TM | 1,1,2-Trichlorotrif | 0.351 | 0.334 | 0.368 | 0.372 | 0.350 | 0.354 | 0.355 | 3.85 |
| 11) | TM | Acrolein | 0.027 | 0.024 | 0.026 | 0.027 | 0.029 | 0.031 | 0.027# | 8.89 |
| 12) | TM | Acetone | 0.139 | 0.117 | 0.112 | 0.111 | 0.117 | 0.120 | 0.119 | 8.68 |
| 13) | TMC | 1,1-Dichloroethene | 0.357 | 0.331 | 0.338 | 0.340 | 0.334 | 0.336 | 0.339 | 2.75 |
| 14) | TM | Methyl iodide | 0.462 | 0.413 | 0.466 | 0.498 | 0.511 | 0.500 | 0.475 | 7.61 |
| 15) | TM | Di-isopropyl ether | 1.571 | 1.426 | 1.392 | 1.377 | 1.354 | 1.323 | 1.407 | 6.21 |
| 16) | TM | Methylene Chloride | 0.716 | 0.616 | 0.455 | 0.393 | 0.371 | 0.361 | 0.485 | 30.32 |
| 17) | TM | Carbon Disulfide | 1.063 | 0.965 | 1.026 | 1.072 | 1.078 | 1.080 | 1.047 | 4.29 |
| 18) | TM | Acrylonitrile | 0.118 | 0.103 | 0.118 | 0.121 | 0.126 | 0.131 | 0.120 | 7.95 |
| 19) | TM | Methyl-tert-butyl e | 0.988 | 0.921 | 0.940 | 0.954 | 0.933 | 0.952 | 0.948 | 2.43 |
| 20) | TM | trans-1,2-Dichloroe | 0.399 | 0.343 | 0.372 | 0.378 | 0.361 | 0.365 | 0.370 | 5.07 |
| 21) | TMP | 1,1-Dichloroethane | 0.724 | 0.646 | 0.645 | 0.640 | 0.612 | 0.600 | 0.644 | 6.75 |
| 22) | TM | Vinyl acetate | 0.035 | 0.048 | 0.057 | 0.058 | 0.059 | 0.060 | 0.053# | 18.22 |
| 23) | TM | Methyl ethyl ketone | 0.043 | 0.041 | 0.041 | 0.046 | 0.050 | 0.051 | 0.045# | 9.54 |
| 24) | TM | Ethyl t-butyl ether | 1.364 | 1.389 | 1.379 | 1.444 | 1.479 | 1.457 | 1.419 | 3.34 |
| 25) | TM | 2,2-Dichloropropane | 0.665 | 0.571 | 0.585 | 0.622 | 0.541 | 0.550 | 0.589 | 7.93 |
| 26) | TM | cis-1,2-Dichloroeth | 0.536 | 0.489 | 0.502 | 0.516 | 0.519 | 0.523 | 0.514 | 3.20 |
| 27) | TM | t-Amyl methyl ether | 1.226 | 1.171 | 1.202 | 1.261 | 1.313 | 1.307 | 1.247 | 4.60 |
| 28) | S | Dibromofluoromethan | 0.558 | 0.551 | 0.578 | 0.591 | 0.574 | 0.582 | 0.572 | 2.66 |
| 29) | TMC | Chloroform | 0.935 | 0.838 | 0.848 | 0.854 | 0.853 | 0.859 | 0.865 | 4.06 |
| 30) | TM | Bromochloromethane | 0.255 | 0.244 | 0.250 | 0.248 | 0.247 | 0.248 | 0.249 | 1.39 |
| 31) | TM | Tetrahydrofuran | 0.023 | 0.029 | 0.037 | 0.043 | 0.046 | 0.047 | 0.037# | 26.64 |
| 32) | TM | 1,1,1-Trichloroetha | 0.697 | 0.619 | 0.655 | 0.675 | 0.676 | 0.684 | 0.668 | 4.15 |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 34) | TM | 1,1-Dichloropropene | 0.657 | 0.619 | 0.647 | 0.654 | 0.660 | 0.653 | 0.648 | 2.30 |
| 35) | TM | Carbon Tetrachlorid | 0.494 | 0.450 | 0.489 | 0.508 | 0.510 | 0.520 | 0.495 | 4.99 |
| 36) | S | d4-1,2-Dichloroetha | 0.607 | 0.588 | 0.623 | 0.646 | 0.617 | 0.632 | 0.619 | 3.24 |
| 37) | TM | 1,2-Dichloroethane | 0.719 | 0.662 | 0.664 | 0.686 | 0.679 | 0.680 | 0.681 | 3.01 |
| 38) | TM | Benzene | 2.106 | 1.963 | 1.934 | 1.912 | 1.897 | 1.839 | 1.942 | 4.66 |
| 39) | I | 1,4-Difluorobenzene | ISTD | | | | | | | |
| 40) | TM | Trichloroethene | 0.322 | 0.274 | 0.286 | 0.282 | 0.292 | 0.289 | 0.291 | 5.75 |
| 41) | TMC | 1,2-Dichloropropane | 0.267 | 0.262 | 0.249 | 0.251 | 0.260 | 0.256 | 0.258 | 2.72 |
| 42) | TM | Methylmethacrylate | 0.160 | 0.161 | 0.164 | 0.179 | 0.197 | 0.199 | 0.177 | 10.12 |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 45) | TM | Bromodichloromethan | 0.349 | 0.335 | 0.332 | 0.352 | 0.371 | 0.373 | 0.352 | 4.99 |
| 46) | TM | Dibromomethane | 0.193 | 0.185 | 0.199 | 0.202 | 0.214 | 0.215 | 0.201 | 5.82 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 50) | T | 2-Chloroethylvinyl | | | | 0.002 | 0.002 | 0.002 | 0.002# | 9.46 |
| 51) | TM | 2-Hexanone | 0.088 | 0.100 | 0.094 | 0.099 | 0.107 | 0.103 | 0.098# | 6.80 |
| 52) | TM | Methyl isobutyl ket | 0.091 | 0.088 | 0.089 | 0.095 | 0.105 | 0.102 | 0.095# | 7.59 |
| 53) | TM | cis-1,3-Dichloropro | 0.384 | 0.393 | 0.406 | 0.432 | 0.455 | 0.454 | 0.421 | 7.28 |
| 54) | S | d8-Toluene | 1.104 | 1.125 | 1.121 | 1.127 | 1.149 | 1.157 | 1.131 | 1.71 |
| 55) | TMC | Toluene | 0.739 | 0.685 | 0.665 | 0.667 | 0.706 | 0.695 | 0.693 | 3.97 |
| 56) | TM | trans-1,3-Dichlorop | 0.333 | 0.342 | 0.360 | 0.386 | 0.415 | 0.409 | 0.374 | 9.21 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 58) | TM | 1,1,2-Trichloroetha | 0.236 | 0.234 | 0.221 | 0.225 | 0.235 | 0.226 | 0.229 | 2.75 |
| 59) | TM | 1,3-Dichloropropane | 0.480 | 0.468 | 0.467 | 0.466 | 0.488 | 0.471 | 0.473 | 1.88 |
| 60) | TM | Tetrachloroethene | 0.310 | 0.278 | 0.272 | 0.269 | 0.276 | 0.273 | 0.280 | 5.42 |
| 61) | TM | Dibromochloromethan | 0.264 | 0.248 | 0.252 | 0.265 | 0.284 | 0.280 | 0.265 | 5.46 |
| 62) | TM | 1,2-Dibromoethane | 0.304 | 0.277 | 0.287 | 0.291 | 0.310 | 0.305 | 0.296 | 4.30 |
| 63) | I | *d5-Chlorobenzene | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | | |
| 64) | TMP | Chlorobenzene | 0.966 | 0.890 | 0.861 | 0.848 | 0.875 | 0.849 | 0.881 | 5.03 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.283 | 0.254 | 0.256 | 0.267 | 0.275 | 0.267 | 0.267 | 4.15 |
| 66) | TMC | Ethylbenzene | 1.630 | 1.506 | 1.465 | 1.477 | 1.511 | 1.464 | 1.509 | 4.14 |
| 67) | TM | m,p-Xylene | 0.584 | 0.552 | 0.537 | 0.536 | 0.557 | 0.534 | 0.550 | 3.44 |
| 68) | TM | o-Xylene | 0.546 | 0.505 | 0.510 | 0.522 | 0.545 | 0.535 | 0.527 | 3.37 |
| 69) | TM | Styrene | 0.944 | 0.914 | 0.922 | 0.939 | 0.987 | 0.963 | 0.945 | 2.84 |
| 70) | TMP | Bromoform | 0.199 | 0.196 | 0.199 | 0.212 | 0.232 | 0.225 | 0.210 | 7.23 |
| 71) | TM | Isopropylbenzene | 1.359 | 1.252 | 1.268 | 1.303 | 1.363 | 1.321 | 1.311 | 3.50 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.424 | 0.417 | 0.404 | 0.400 | 0.423 | 0.411 | 0.413 | 2.38 |
| 73) | S | Bromofluorobenzene | 0.530 | 0.526 | 0.528 | 0.535 | 0.546 | 0.527 | 0.532 | 1.43 |
| 74) | TM | 1,2,3-Trichloroprop | 0.368 | 0.314 | 0.308 | 0.298 | 0.313 | 0.298 | 0.317 | 8.33 |
| 75) | TM | trans-1,4-Dichloro- | 0.114 | 0.121 | 0.120 | 0.127 | 0.130 | 0.126 | 0.123 | 4.75 |
| 76) | TM | n-Propylbenzene | 1.786 | 1.633 | 1.651 | 1.653 | 1.728 | 1.680 | 1.689 | 3.45 |
| 77) | TM | Bromobenzene | 0.376 | 0.362 | 0.347 | 0.346 | 0.355 | 0.342 | 0.355 | 3.55 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.041 | 1.006 | 1.003 | 1.012 | 1.057 | 1.039 | 1.026 | 2.16 |
| 79) | TM | 2-Chlorotoluene | 1.249 | 1.155 | 1.136 | 1.121 | 1.159 | 1.148 | 1.161 | 3.90 |
| 80) | TM | 4-Chlorotoluene | 1.127 | 1.074 | 1.034 | 1.046 | 1.084 | 1.036 | 1.067 | 3.37 |
| 81) | TM | tert-butylbenzene | 0.828 | 0.766 | 0.805 | 0.831 | 0.864 | 0.834 | 0.821 | 4.03 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.187 | 1.092 | 1.063 | 1.079 | 1.123 | 1.100 | 1.107 | 3.96 |
| 83) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 84) | TM | sec-butylbenzene | | 1.406 | 1.223 | 1.205 | 1.275 | 1.255 | 1.273 | 6.23 |
| 85) | TM | p-isopropyltoluene | 1.114 | 0.992 | 0.954 | 0.963 | 1.008 | 0.997 | 1.005 | 5.73 |

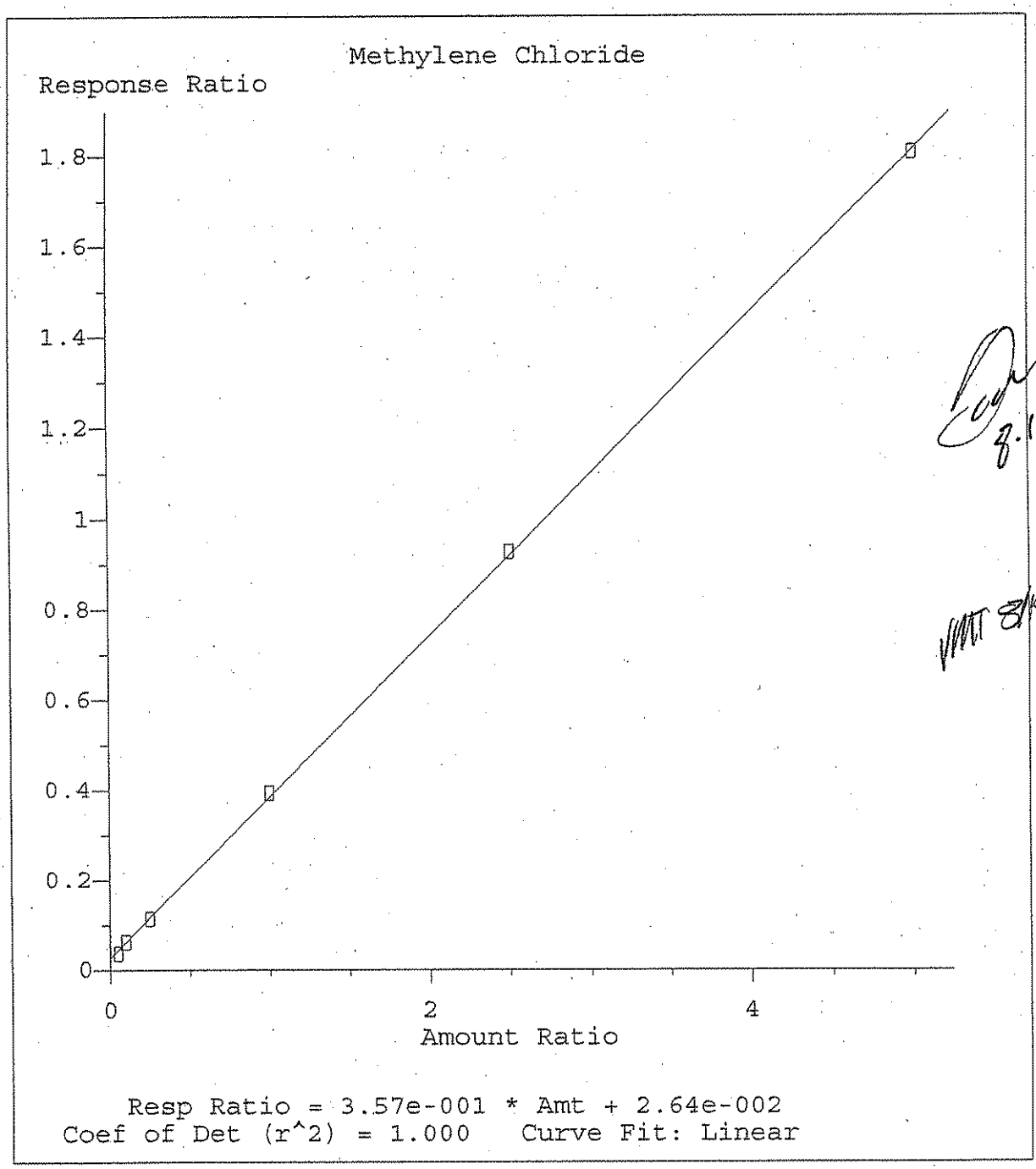
(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.681 | 0.626 | 0.603 | 0.598 | 0.624 | 0.607 | 0.623 | 4.89 |
| 87) | I | 1,4-Dichlorobenzene-d | ISTD | | | | | | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.398 | 1.339 | 1.272 | 1.253 | 1.266 | 1.241 | 1.295 | 4.69 |
| 89) | TM | n-butylbenzene | 2.003 | 1.820 | 1.829 | 1.887 | 1.934 | 1.927 | 1.900 | 3.65 |
| 90) | TM | 1,2-Dichlorobenzene | 1.254 | 1.156 | 1.144 | 1.151 | 1.180 | 1.157 | 1.174 | 3.50 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.091 | 0.116 | 0.118 | 0.125 | 0.134 | 0.137 | 0.120 | 13.75 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.731 | 0.677 | 0.673 | 0.693 | 0.724 | 0.732 | 0.705 | 3.86 |
| 95) | TM | Hexachlorobutadiene | 0.259 | 0.205 | 0.201 | 0.195 | 0.203 | 0.205 | 0.211 | 11.31 |
| 96) | TM | Naphthalene | 1.936 | 1.846 | 1.830 | 1.898 | 2.013 | 2.029 | 1.925 | 4.31 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.697 | 0.642 | 0.632 | 0.631 | 0.653 | 0.668 | 0.654 | 3.87 |
| 98) | TM | 1,3,5-Trichlorobenz | 0.761 | 0.736 | 0.707 | 0.731 | 0.759 | 0.764 | 0.743 | 3.01 |

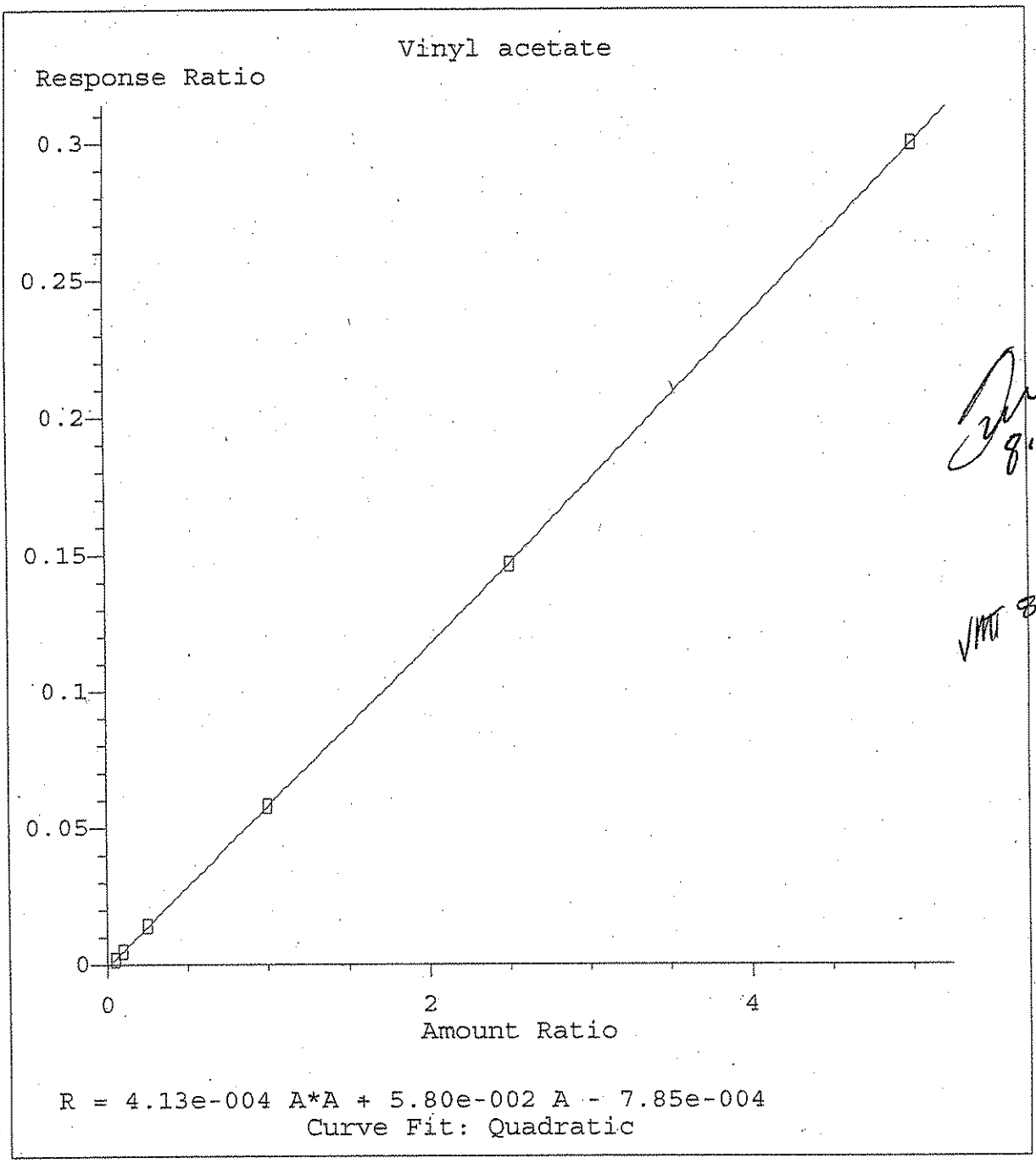
(#) = Out of Range




8.19.03

8/19/03

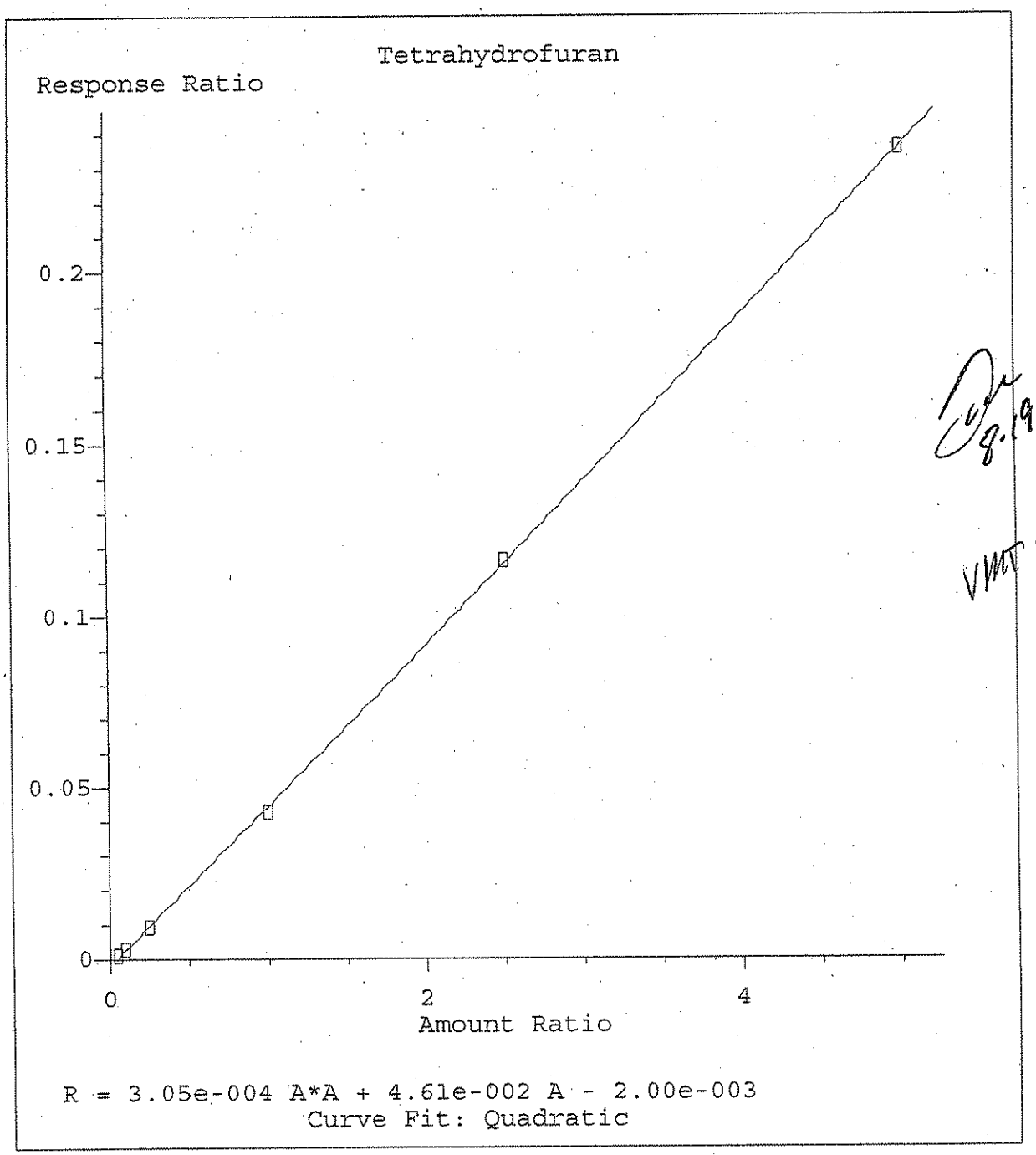
Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003




8.19.03

VMT 8/19/03

Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003




8.19.03

VMT 8/19/03

Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8-19-03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 194884 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 352942 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 310446 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 157731 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 108750 | 18.67 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 93.35% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 118270 | 19.61 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.05% | | | |
| 54) d8-Toluene | 10.81 | 98 | 389823 | 19.53 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 97.65% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 164599 | 19.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.70% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 7221 | 1.04 | ug/L | 96 |
| 3) Chloromethane | 1.83 | 50 | 6254 | 1.11 | ug/L | 95 |
| 4) Vinyl Chloride | 1.94 | 62 | 4372 | 1.22 | ug/L | 95 |
| 5) Bromomethane | 2.40 | 94 | 3180 | 1.23 | ug/L | 95 |
| 6) Chloroethane | 2.49 | 64 | 2749 | 1.12 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.79 | 59 | 1052 | 4.26 | ug/L # | 72 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 6047 | 1.07 | ug/L | 96 |
| 9) Diethyl ether | 3.18 | 74 | 1933 | 1.06 | ug/L # | 73 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 3416 | 0.99 | ug/L | 89 |
| 11) Acrolein | 3.33 | 56 | 1294 | 4.87 | ug/L | 83 |
| 12) Acetone | 3.42 | 43 | 6789 | 5.84 | ug/L # | 86 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 3483 | 1.05 | ug/L | 94 |
| 14) Methyl iodide | 4.03 | 142 | 4506 | 0.97 | ug/L # | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 15309 | 1.12 | ug/L | 96 |
| 16) Methylene Chloride | 4.33 | 84 | 6978 | 0.52 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 10357 | 1.01 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 1147 | 0.98 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 9627 | 1.04 | ug/L | 91 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 3889 | 1.08 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 7056 | 1.12 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 344 | 0.67 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 6.25 | 72 | 2118 | 4.78 | ug/L | 85 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 13288 | 0.96 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 6479 | 1.13 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 5222 | 1.04 | ug/L # | 85 |
| 27) t-Amyl methyl ether (TAME) | 7.85 | 73 | 11946 | 0.98 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 29) Chloroform | 6.73 | 83 | 9109 | 1.08 | ug/L | | 99 |
| 30) Bromochloromethane | 6.96 | 128 | 2480 | 1.02 | ug/L | | 95 |
| 31) Tetrahydrofuran | 7.08 | 71 | 221 | 1.36 | ug/L | # | 19 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 6792 | 1.04 | ug/L | | 94 |
| 34) 1,1-Dichloropropene | 7.59 | 75 | 6399 | 1.01 | ug/L | | 96 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 4810 | 1.00 | ug/L | | 97 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 7002 | 1.05 | ug/L | | 96 |
| 38) Benzene | 8.00 | 78 | 20521 | 1.08 | ug/L | | 100 |
| 40) Trichloroethene | 8.96 | 95 | 5691 | 1.11 | ug/L | | 86 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 4718 | 1.04 | ug/L | | 87 |
| 42) Methylmethacrylate | 9.38 | 69 | 2821 | 0.91 | ug/L | | 97 |
| 45) Bromodichloromethane | 9.59 | 83 | 6163 | 0.99 | ug/L | | 95 |
| 46) Dibromomethane | 9.65 | 93 | 3410 | 0.96 | ug/L | | 88 |
| 51) 2-Hexanone | 11.51 | 58 | 7762 | 4.47 | ug/L | | 74 |
| 52) Methyl isobutyl ketone | 10.17 | 58 | 8056 | 4.80 | ug/L | # | 66 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 6785 | 0.91 | ug/L | | 89 |
| 55) Toluene | 10.94 | 92 | 13034 | 1.07 | ug/L | | 91 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 5885 | 0.89 | ug/L | | 95 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 4157 | 1.03 | ug/L | | 83 |
| 59) 1,3-Dichloropropane | 11.84 | 76 | 8474 | 1.01 | ug/L | | 96 |
| 60) Tetrachloroethene | 11.94 | 166 | 5469 | 1.11 | ug/L | | 93 |
| 61) Dibromochloromethane | 12.24 | 129 | 4667 | 1.00 | ug/L | | 97 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 5372 | 1.03 | ug/L | | 94 |
| 64) Chlorobenzene | 13.22 | 112 | 14993 | 1.10 | ug/L | | 88 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 4399 | 1.06 | ug/L | | 90 |
| 66) Ethylbenzene | 13.31 | 91 | 25295 | 1.08 | ug/L | | 99 |
| 67) m,p-Xylene | 13.44 | 106 | 18118 | 2.12 | ug/L | | 98 |
| 68) o-Xylene | 14.13 | 106 | 8482 | 1.04 | ug/L | | 95 |
| 69) Styrene | 14.18 | 104 | 14647 | 1.00 | ug/L | | 98 |
| 70) Bromoform | 14.69 | 173 | 3084 | 0.94 | ug/L | | 95 |
| 71) Isopropylbenzene | 14.70 | 105 | 21099 | 1.04 | ug/L | | 94 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 6584 | 1.03 | ug/L | | 93 |
| 74) 1,2,3-Trichloropropane | 15.19 | 75 | 5719 | 1.16 | ug/L | | 97 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 1776 | 0.93 | ug/L | | 95 |
| 76) n-Propylbenzene | 15.34 | 91 | 27727 | 1.06 | ug/L | | 95 |
| 77) Bromobenzene | 15.39 | 156 | 5829 | 1.06 | ug/L | | 95 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 16162 | 1.01 | ug/L | | 89 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 19394 | 1.08 | ug/L | | 95 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 17501 | 1.06 | ug/L | | 93 |
| 81) tert-butylbenzene | 16.17 | 119 | 12858 | 1.01 | ug/L | | 92 |
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 18421 | 1.07 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

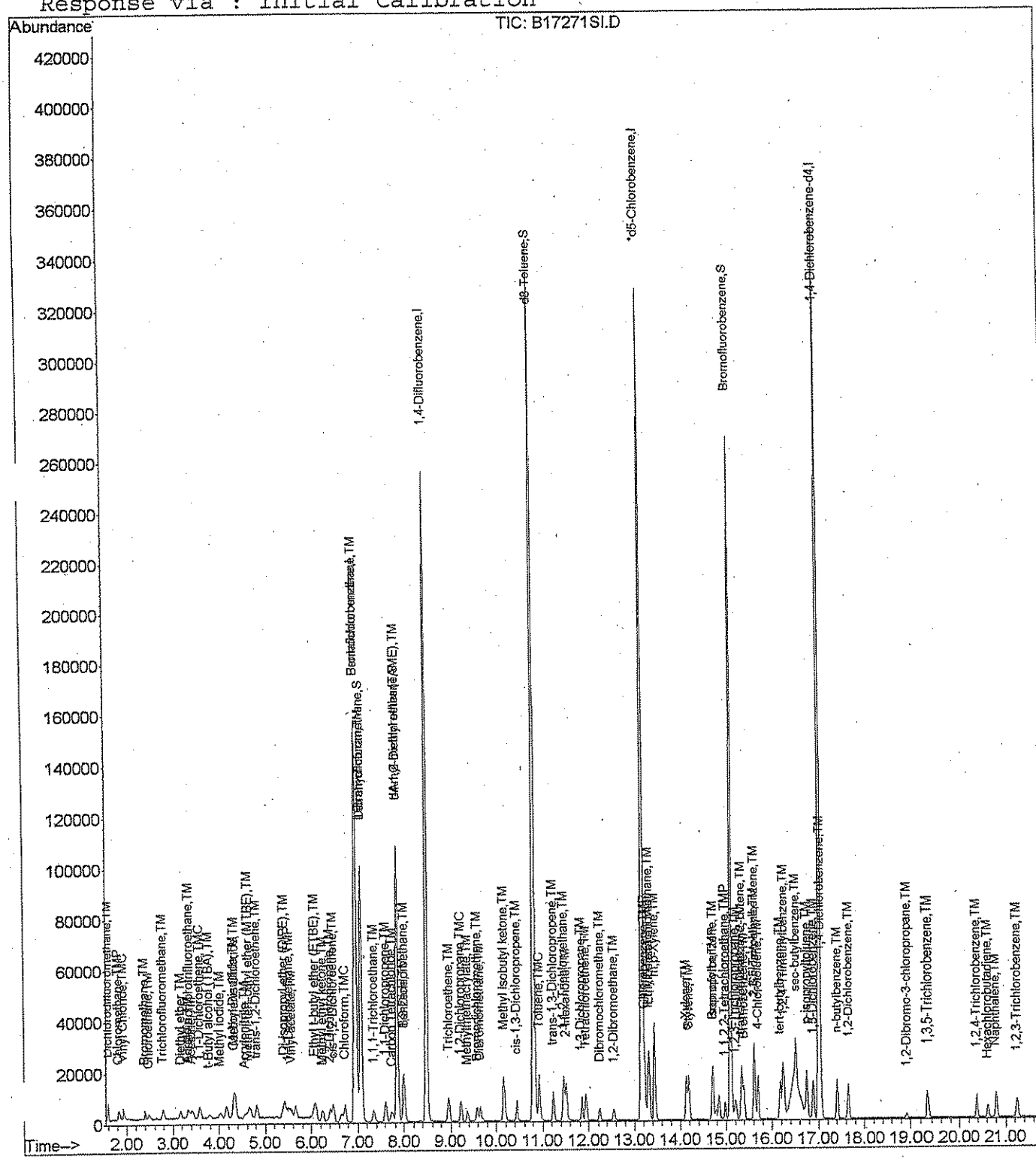
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 28053 | 1.42 | ug/L | | 97 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 17297 | 1.11 | ug/L | | 98 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 10570 | 1.09 | ug/L | | 97 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 11025 | 1.08 | ug/L | | 91 |
| 89) | n-butylbenzene | 17.40 | 91 | 15794 | 1.05 | ug/L | | 94 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 9888 | 1.07 | ug/L | | 95 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 719 | 0.76 | ug/L | # | 77 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 5766 | 1.04 | ug/L | | 95 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 2045 | 1.23 | ug/L | | 91 |
| 96) | Naphthalene | 20.79 | 128 | 15272 | 1.01 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 5495 | 1.07 | ug/L | | 86 |
| 98) | 1,3,5-Trichlorobenzene | 19.32 | 180 | 5998 | 1.02 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration
B17271SI.D V808183B.M Tue Aug 19 07:30:24 2003 Page 3

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D  Vial: 2
Acq On : 18 Aug 2003 6:02 pm  Operator:
Sample : 1 PPB  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003  Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.96 | 168 | 187228 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 339004 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.17 | 117 | 311635 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 158277 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.06 | 111 | 103076 | 18.42 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 92.10% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 110119 | 19.01 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 95.05% | | | |
| 54) d8-Toluene | 10.81 | 98 | 381463 | 19.90 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.50% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 163876 | 19.77 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.85% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 13407 | 2.02 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 11677 | 2.16 | ug/L | 99 |
| 4) Vinyl Chloride | 1.94 | 62 | 7666 | 2.22 | ug/L | 93 |
| 5) Bromomethane | 2.39 | 94 | 4704 | 1.89 | ug/L | 91 |
| 6) Chloroethane | 2.48 | 64 | 4655 | 1.97 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 2164 | 9.13 | ug/L # | 72 |
| 8) Trichlorofluoromethane | 2.79 | 101 | 10423 | 1.91 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 3318 | 1.90 | ug/L # | 85 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 6252 | 1.88 | ug/L # | 90 |
| 11) Acrolein | 3.33 | 56 | 2215 | 8.68 | ug/L | 89 |
| 12) Acetone | 3.43 | 43 | 10937 | 9.79 | ug/L # | 86 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 6196 | 1.95 | ug/L | 97 |
| 14) Methyl iodide | 4.04 | 142 | 7730 | 1.74 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 26699 | 2.03 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 11525 | 1.97 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 18074 | 1.84 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 1930 | 1.72 | ug/L | 88 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 17249 | 1.94 | ug/L # | 87 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 6420 | 1.86 | ug/L | 91 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 12086 | 2.00 | ug/L | 96 |
| 22) Vinyl acetate | 5.57 | 86 | 891 | 1.81 | ug/L # | 50 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 3819 | 8.97 | ug/L | 91 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 26012 | 1.96 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 10694 | 1.94 | ug/L | 90 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 9159 | 1.90 | ug/L # | 84 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 21922 | 1.88 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
B17272SI.D V808183B.M Tue Aug 19 07:30:29 2003 Page 1

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 15697 | 1.94 | ug/L | | 99 |
| 30) | Bromochloromethane | 6.96 | 128 | 4570 | 1.96 | ug/L | # | 86 |
| 31) | Tetrahydrofuran | 7.08 | 71 | 537 | 2.11 | ug/L | # | 71 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 11583 | 1.85 | ug/L | | 96 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 11595 | 1.91 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 8431 | 1.82 | ug/L | | 96 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 12391 | 1.94 | ug/L | | 97 |
| 38) | Benzene | 8.00 | 78 | 36756 | 2.02 | ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 9276 | 1.88 | ug/L | | 85 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 8897 | 2.04 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.38 | 69 | 5450 | 1.82 | ug/L | | 98 |
| 45) | Bromodichloromethane | 9.59 | 83 | 11341 | 1.90 | ug/L | | 95 |
| 46) | Dibromomethane | 9.66 | 93 | 6275 | 1.84 | ug/L | | 93 |
| 51) | 2-Hexanone | 11.51 | 58 | 16942 | 10.15 | ug/L | | 84 |
| 52) | Methyl isobutyl ketone | 10.17 | 58 | 14953 | 9.28 | ug/L | # | 64 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 13317 | 1.87 | ug/L | | 99 |
| 55) | Toluene | 10.93 | 92 | 23230 | 1.98 | ug/L | | 92 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 11577 | 1.83 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 7939 | 2.04 | ug/L | | 97 |
| 59) | 1,3-Dichloropropane | 11.84 | 76 | 15873 | 1.98 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.94 | 166 | 9418 | 1.99 | ug/L | | 98 |
| 61) | Dibromochloromethane | 12.24 | 129 | 8401 | 1.87 | ug/L | | 90 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 9404 | 1.88 | ug/L | | 94 |
| 64) | Chlorobenzene | 13.21 | 112 | 27731 | 2.02 | ug/L | | 96 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 7923 | 1.90 | ug/L | | 95 |
| 66) | Ethylbenzene | 13.31 | 91 | 46945 | 2.00 | ug/L | | 97 |
| 67) | m,p-Xylene | 13.44 | 106 | 34416 | 4.02 | ug/L | | 99 |
| 68) | o-Xylene | 14.13 | 106 | 15729 | 1.91 | ug/L | | 90 |
| 69) | Styrene | 14.18 | 104 | 28499 | 1.94 | ug/L | | 95 |
| 70) | Bromoform | 14.69 | 173 | 6097 | 1.86 | ug/L | | 99 |
| 71) | Isopropylbenzene | 14.70 | 105 | 39017 | 1.91 | ug/L | | 97 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 13008 | 2.02 | ug/L | | 93 |
| 74) | 1,2,3-Trichloropropane | 15.21 | 75 | 9770 | 1.98 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 3776 | 1.97 | ug/L | | 96 |
| 76) | n-Propylbenzene | 15.34 | 91 | 50892 | 1.93 | ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 11288 | 2.04 | ug/L | | 99 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 31356 | 1.96 | ug/L | | 100 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 36000 | 1.99 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 33473 | 2.01 | ug/L | | 96 |
| 81) | tert-butylbenzene | 16.17 | 119 | 23866 | 1.86 | ug/L | | 92 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 34028 | 1.97 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

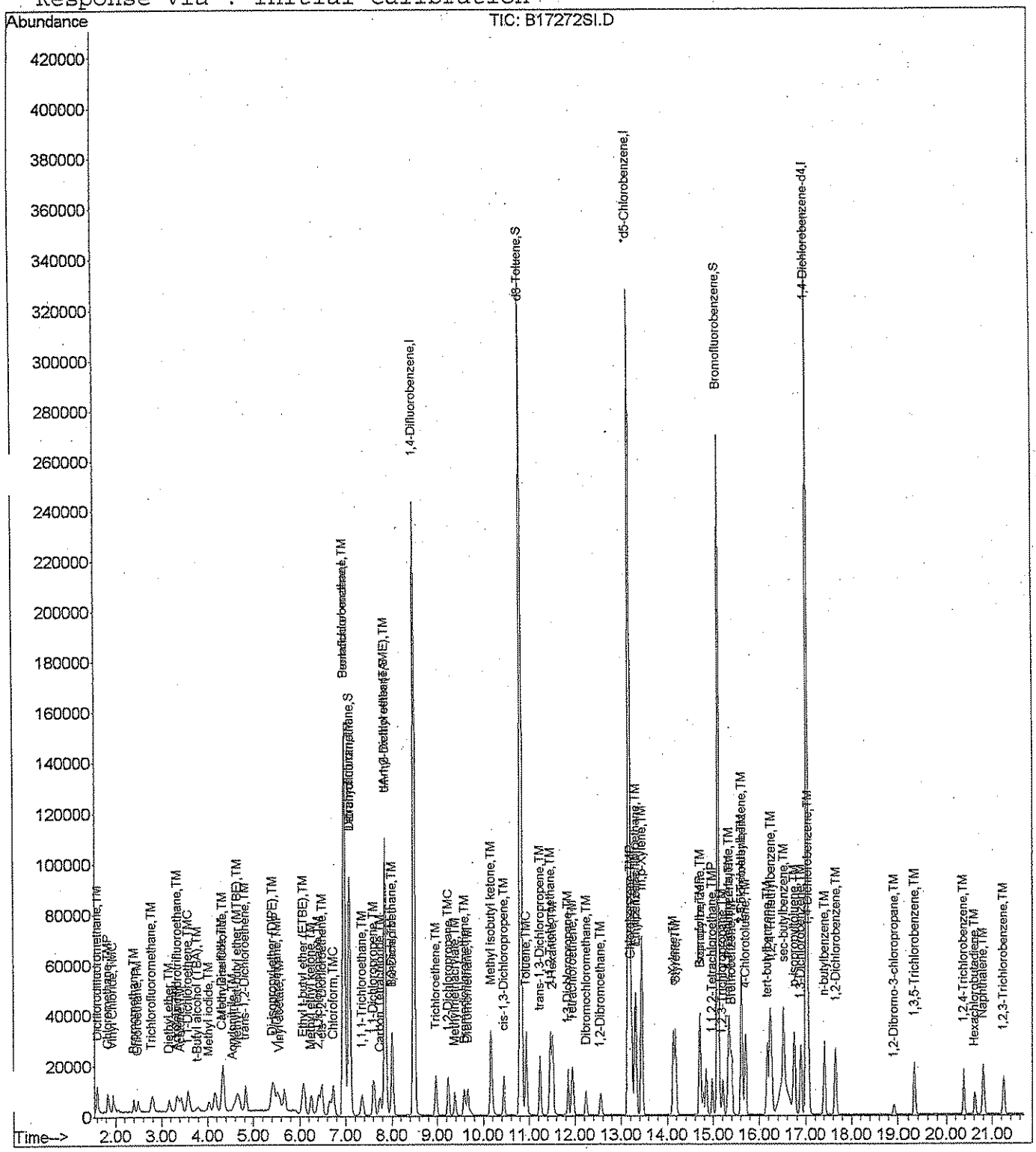
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 43822 | 2.21 | ug/L | | 97 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 30926 | 1.98 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 19504 | 2.01 | ug/L | | 94 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 21190 | 2.07 | ug/L | | 96 |
| 89) | n-butylbenzene | 17.40 | 91 | 28809 | 1.92 | ug/L | | 92 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 18289 | 1.97 | ug/L | | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 1839 | 1.93 | ug/L | # | 77 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 10723 | 1.92 | ug/L | | 98 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 3242 | 1.94 | ug/L | | 87 |
| 96) | Naphthalene | 20.80 | 128 | 29214 | 1.92 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 10168 | 1.97 | ug/L | | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 11655 | 1.98 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 193601 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 352182 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 315401 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 158971 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 111909 | 19.34 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.70% | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 120659 | 20.14 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.70% | | | |
| 54) d8-Toluene | 10.81 | 98 | 394837 | 19.83 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.15% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 166407 | 19.84 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.20% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 35366 | 5.15 | ug/L | 94 |
| 3) Chloromethane | 1.83 | 50 | 28696 | 5.13 | ug/L | 97 |
| 4) Vinyl Chloride | 1.94 | 62 | 19330 | 5.42 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 12013 | 4.67 | ug/L | 95 |
| 6) Chloroethane | 2.48 | 64 | 12256 | 5.01 | ug/L | 96 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 5466 | 22.29 | ug/L # | 82 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 28959 | 5.14 | ug/L | 93 |
| 9) Diethyl ether | 3.17 | 74 | 8601 | 4.76 | ug/L | 91 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 17790 | 5.18 | ug/L | 89 |
| 12) Acetone | 3.42 | 43 | 27178 | 23.52 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 16361 | 4.98 | ug/L | 93 |
| 14) Methyl iodide | 4.03 | 142 | 22567 | 4.91 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 67385 | 4.95 | ug/L | 98 |
| 16) Methylene Chloride | 4.34 | 84 | 21998 | 4.88 | ug/L | 91 |
| 17) Carbon Disulfide | 4.30 | 76 | 49656 | 4.90 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 5719 | 4.94 | ug/L | 95 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 45513 | 4.96 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 17988 | 5.03 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 31233 | 5.01 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 9996 | 22.71 | ug/L | 95 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 66724 | 4.86 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 28335 | 4.97 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 24292 | 4.88 | ug/L # | 85 |
| 27) t-Amyl methyl ether (TAME) | 7.85 | 73 | 58167 | 4.82 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 41049 | 4.90 | ug/L | 95 |
| 30) Bromochloromethane | 6.97 | 128 | 12078 | 5.02 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 31) | Tetrahydrofuran | 7.08 | 71 | 1796 | 4.89 | ug/L | | 97 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 31688 | 4.90 | ug/L | | 97 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 31326 | 4.99 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 23683 | 4.94 | ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 32124 | 4.87 | ug/L | | 99 |
| 38) | Benzene | 8.00 | 78 | 93623 | 4.98 | ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 25179 | 4.92 | ug/L | | 83 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 21947 | 4.84 | ug/L | | 100 |
| 42) | Methylmethacrylate | 9.38 | 69 | 14462 | 4.65 | ug/L | | 93 |
| 45) | Bromodichloromethane | 9.59 | 83 | 29232 | 4.72 | ug/L | | 99 |
| 46) | Dibromomethane | 9.65 | 93 | 17493 | 4.93 | ug/L | | 99 |
| 51) | 2-Hexanone | 11.51 | 58 | 41283 | 23.82 | ug/L | | 85 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 38994 | 23.30 | ug/L | # | 84 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 35772 | 4.83 | ug/L | | 97 |
| 55) | Toluene | 10.93 | 92 | 58553 | 4.80 | ug/L | | 93 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 31663 | 4.81 | ug/L | | 98 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 19416 | 4.81 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 41100 | 4.93 | ug/L | | 98 |
| 60) | Tetrachloroethene | 11.94 | 166 | 23923 | 4.86 | ug/L | | 94 |
| 61) | Dibromochloromethane | 12.25 | 129 | 22144 | 4.74 | ug/L | | 94 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 25226 | 4.85 | ug/L | | 99 |
| 64) | Chlorobenzene | 13.22 | 112 | 67854 | 4.88 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 20190 | 4.79 | ug/L | | 95 |
| 66) | Ethylbenzene | 13.31 | 91 | 115528 | 4.86 | ug/L | | 100 |
| 67) | m,p-Xylene | 13.44 | 106 | 84670 | 9.76 | ug/L | | 97 |
| 68) | o-Xylene | 14.12 | 106 | 40241 | 4.84 | ug/L | | 97 |
| 69) | Styrene | 14.18 | 104 | 72675 | 4.88 | ug/L | | 96 |
| 70) | Bromoform | 14.69 | 173 | 15710 | 4.73 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 99999 | 4.84 | ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 31866 | 4.89 | ug/L | | 97 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 24296 | 4.87 | ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 9434 | 4.86 | ug/L | | 95 |
| 76) | n-Propylbenzene | 15.34 | 91 | 130194 | 4.89 | ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 27344 | 4.89 | ug/L | | 93 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 79076 | 4.89 | ug/L | | 95 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 89535 | 4.89 | ug/L | | 95 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 81555 | 4.85 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.17 | 119 | 63499 | 4.90 | ug/L | | 89 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 83809 | 4.80 | ug/L | | 98 |
| 84) | sec-butylbenzene | 16.52 | 105 | 96423 | 4.80 | ug/L | | 96 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 75184 | 4.74 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

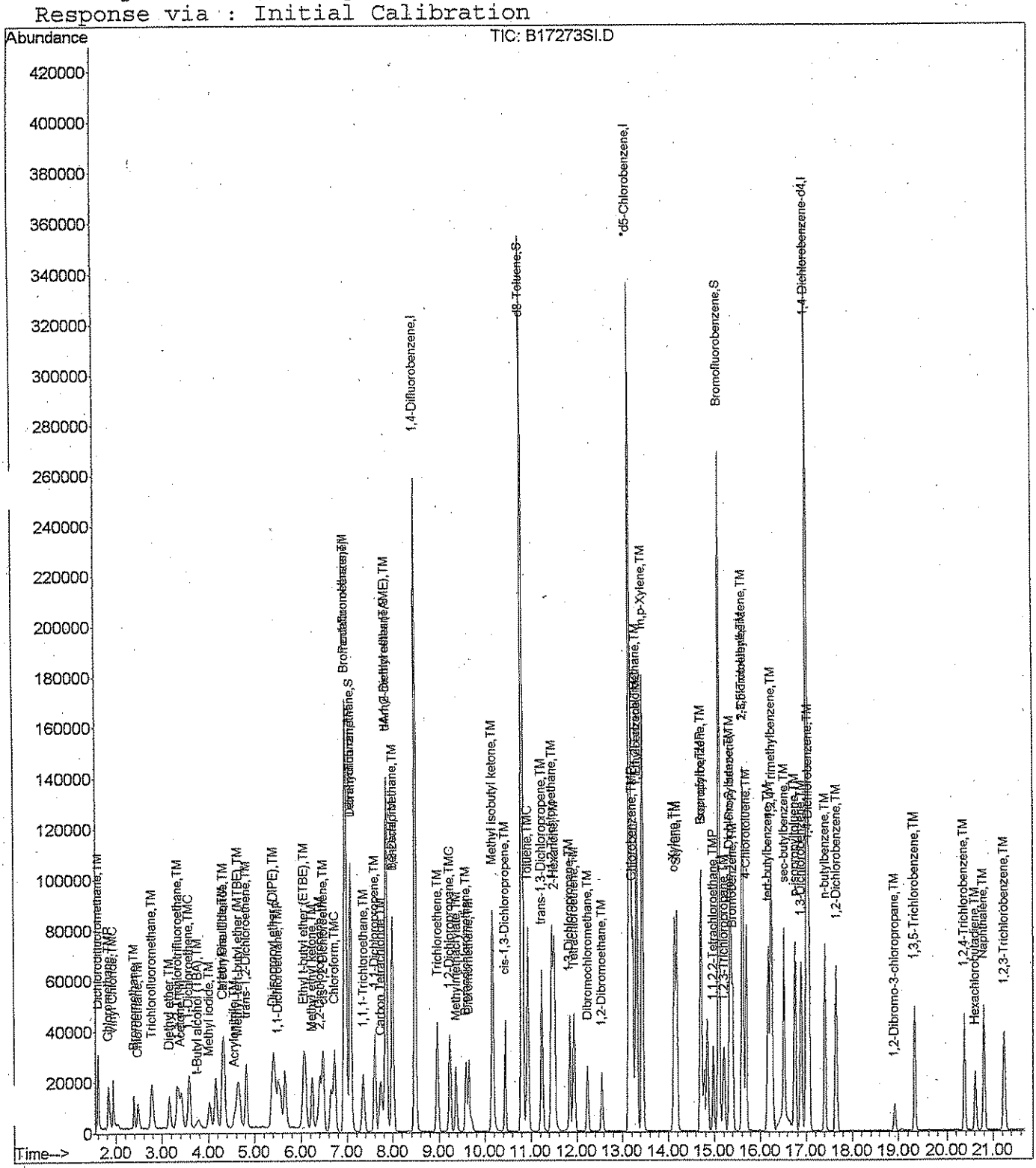
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 47533 | 4.84 | ug/L | | 96 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 50560 | 4.91 | ug/L | | 96 |
| 89) n-butylbenzene | 17.40 | 91 | 72685 | 4.81 | ug/L | | 92 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 45477 | 4.87 | ug/L | | 96 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 4685 | 4.90 | ug/L | # | 75 |
| 94) 1,2,4-Trichlorobenzene | 20.37 | 180 | 26744 | 4.77 | ug/L | | 97 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 7969 | 4.75 | ug/L | | 98 |
| 96) Naphthalene | 20.79 | 128 | 72749 | 4.75 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 25114 | 4.83 | ug/L | | 100 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 28101 | 4.76 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03 VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 197698 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 361866 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 323047 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 161610 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 116847 | 19.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.90% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 127661 | 20.87 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.35% | | | |
| 54) d8-Toluene | 10.81 | 98 | 407981 | 19.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.70% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 172800 | 20.11 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.55% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 135716 | 19.36 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 107111 | 18.73 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 64938 | 17.82 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 46999 | 17.88 | ug/L | 99 |
| 6) Chloroethane | 2.48 | 64 | 49268 | 19.71 | ug/L | 100 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 24557 | 98.07 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 115087 | 19.99 | ug/L | 96 |
| 9) Diethyl ether | 3.17 | 74 | 37653 | 20.39 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 73513 | 20.97 | ug/L | 90 |
| 11) Acrolein | 3.33 | 56 | 27156 | 100.73 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 109412 | 92.74 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 67165 | 20.02 | ug/L | 97 |
| 14) Methyl iodide | 4.03 | 142 | 98360 | 20.95 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 272178 | 19.57 | ug/L | 98 |
| 16) Methylene Chloride | 4.34 | 84 | 77644 | 20.51 | ug/L | 94 |
| 17) Carbon Disulfide | 4.30 | 76 | 211925 | 20.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 24016 | 20.32 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 188573 | 20.12 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 74734 | 20.46 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 126583 | 19.87 | ug/L | 97 |
| 22) Vinyl acetate | 5.56 | 86 | 11455 | 21.98 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 45743 | 101.78 | ug/L | 97 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 285419 | 20.36 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 122896 | 21.10 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 102039 | 20.08 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 249329 | 20.23 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 168910 | 19.76 | ug/L | | 100 |
| 30) | Bromochloromethane | 6.97 | 128 | 48947 | 19.92 | ug/L | | 96 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 8431 | 19.26 | ug/L | | 83 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 133505 | 20.23 | ug/L | | 95 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 129346 | 20.18 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 100427 | 20.52 | ug/L | | 95 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 135599 | 20.13 | ug/L | | 99 |
| 38) | Benzene | 8.00 | 78 | 377913 | 19.69 | ug/L | | 99 |
| 40) | Trichloroethene | 8.96 | 95 | 102108 | 19.40 | ug/L | | 87 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 90692 | 19.46 | ug/L | | 99 |
| 42) | Methylmethacrylate | 9.38 | 69 | 64790 | 20.27 | ug/L | | 95 |
| 45) | Bromodichloromethane | 9.59 | 83 | 127258 | 19.98 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 73271 | 20.10 | ug/L | | 98 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 586 | 18.07 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 179141 | 100.58 | ug/L | | 91 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 171127 | 99.52 | ug/L | # | 84 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 156293 | 20.53 | ug/L | | 99 |
| 55) | Toluene | 10.93 | 92 | 241249 | 19.25 | ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 139856 | 20.66 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 81434 | 19.63 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 168451 | 19.67 | ug/L | | 100 |
| 60) | Tetrachloroethene | 11.94 | 166 | 97448 | 19.26 | ug/L | | 96 |
| 61) | Dibromochloromethane | 12.24 | 129 | 95771 | 19.95 | ug/L | | 98 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 105198 | 19.67 | ug/L | | 97 |
| 64) | Chlorobenzene | 13.22 | 112 | 274039 | 19.25 | ug/L | | 100 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 86194 | 19.98 | ug/L | | 97 |
| 66) | Ethylbenzene | 13.31 | 91 | 477120 | 19.58 | ug/L | | 98 |
| 67) | m,p-Xylene | 13.44 | 106 | 346378 | 38.99 | ug/L | | 97 |
| 68) | o-Xylene | 14.13 | 106 | 168534 | 19.79 | ug/L | | 95 |
| 69) | Styrene | 14.18 | 104 | 303460 | 19.88 | ug/L | | 99 |
| 70) | Bromoform | 14.69 | 173 | 68605 | 20.18 | ug/L | | 97 |
| 71) | Isopropylbenzene | 14.70 | 105 | 421053 | 19.88 | ug/L | | 96 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 129332 | 19.37 | ug/L | | 97 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 96334 | 18.84 | ug/L | | 97 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 41181 | 20.70 | ug/L | | 91 |
| 76) | n-Propylbenzene | 15.34 | 91 | 533959 | 19.58 | ug/L | | 96 |
| 77) | Bromobenzene | 15.39 | 156 | 111865 | 19.53 | ug/L | | 96 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 327040 | 19.73 | ug/L | | 95 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 362137 | 19.31 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 337818 | 19.60 | ug/L | | 95 |
| 81) | tert-butylbenzene | 16.17 | 119 | 268300 | 20.22 | ug/L | | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

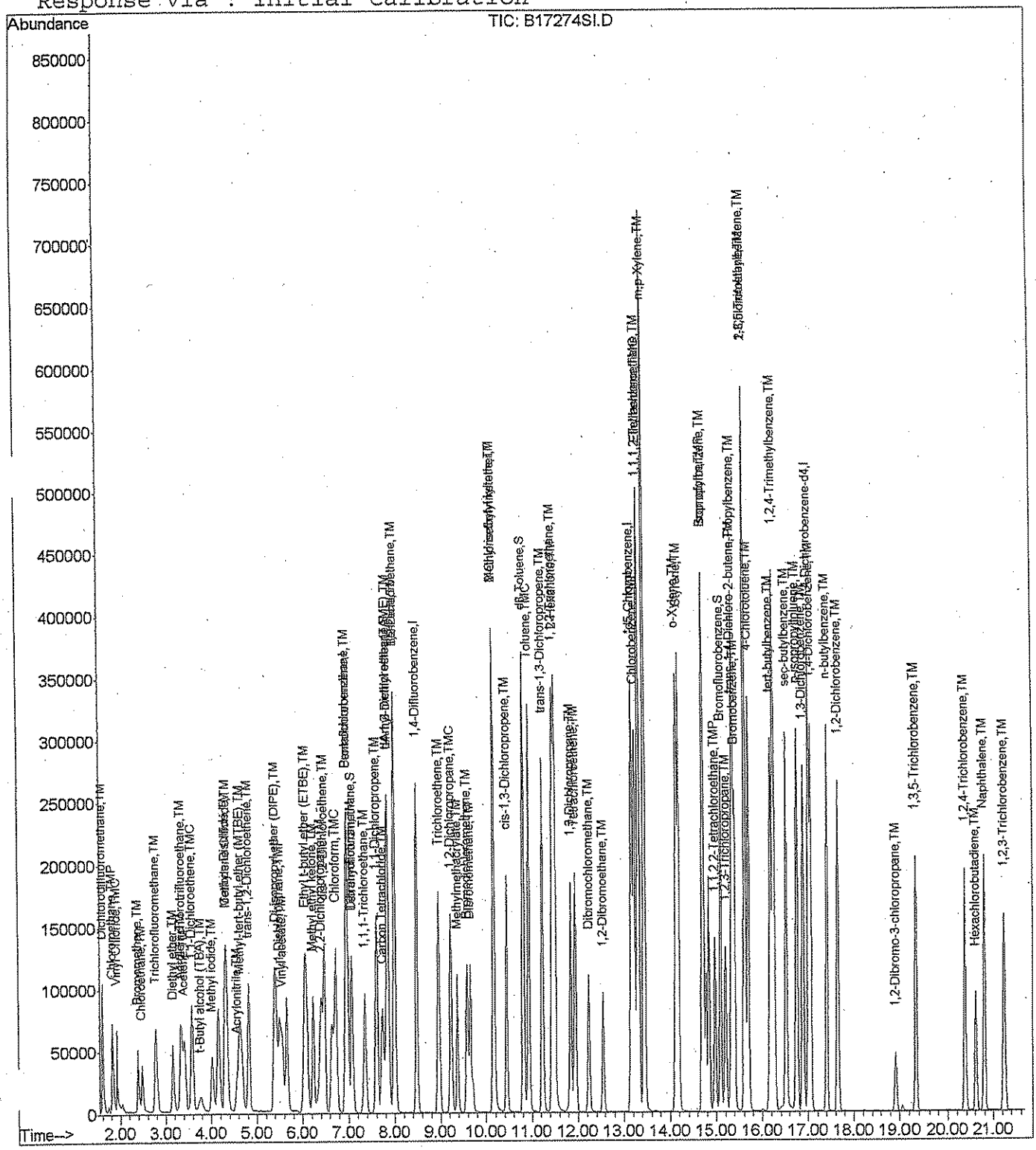
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 348607 | 19.49 | ug/L | | 95 |
| 84) sec-butylbenzene | 16.52 | 105 | 389387 | 18.94 | ug/L | | 96 |
| 85) p-isopropyltoluene | 16.74 | 119 | 311188 | 19.17 | ug/L | | 96 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 193206 | 19.19 | ug/L | | 97 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 202557 | 19.36 | ug/L | | 95 |
| 89) n-butylbenzene | 17.40 | 91 | 304975 | 19.86 | ug/L | | 93 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 186081 | 19.62 | ug/L | | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 20253 | 20.84 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 111991 | 19.66 | ug/L | | 97 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 31486 | 18.46 | ug/L | | 97 |
| 96) Naphthalene | 20.79 | 128 | 306798 | 19.72 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 101899 | 19.29 | ug/L | | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 118098 | 19.67 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VM 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 199392 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 356595 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 320837 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 165503 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 114508 | 19.21 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.05% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 122969 | 19.93 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.65% | | | |
| 54) d8-Toluene | 10.81 | 98 | 409710 | 20.32 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.60% | | | |
| 73) Bromofluorobenzene | 15.10 | 95 | 175149 | 20.53 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.65% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 351236 | 49.67 | ug/L | 98 |
| 3) Chloromethane | 1.83 | 50 | 272307 | 47.22 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 161820 | 44.04 | ug/L | 100 |
| 5) Bromomethane | 2.38 | 94 | 132739 | 50.06 | ug/L | 98 |
| 6) Chloroethane | 2.47 | 64 | 124973 | 49.58 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.78 | 59 | 73887 | 292.57 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 285985 | 49.25 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 92777 | 49.82 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.33 | 101 | 174476 | 49.35 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 71614 | 263.37 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 291722 | 245.17 | ug/L | 96 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 166672 | 49.25 | ug/L | 94 |
| 14) Methyl iodide | 4.02 | 142 | 254760 | 53.79 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.40 | 45 | 675047 | 48.11 | ug/L | 98 |
| 16) Methylene Chloride | 4.33 | 84 | 184811 | 50.42 | ug/L | 97 |
| 17) Carbon Disulfide | 4.29 | 76 | 537476 | 51.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 62991 | 52.83 | ug/L | 97 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 465076 | 49.21 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 180058 | 48.87 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 304827 | 47.45 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 29215 | 55.58 | ug/L | 93 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 125397 | 276.63 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 737342 | 52.14 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 269838 | 45.94 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 258742 | 50.47 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 654489 | 52.66 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 425342 | 49.34 | ug/L | | 98 |
| 30) | Bromochloromethane | 6.97 | 128 | 123210 | 49.72 | ug/L | | 94 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 23167 | 50.46 | ug/L | | 87 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 337207 | 50.65 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 329182 | 50.92 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 254056 | 51.46 | ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 338485 | 49.82 | ug/L | | 100 |
| 38) | Benzene | 8.00 | 78 | 945597 | 48.85 | ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 259872 | 50.12 | ug/L | | 86 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 231779 | 50.47 | ug/L | | 99 |
| 42) | Methylmethacrylate | 9.38 | 69 | 175467 | 55.72 | ug/L | | 94 |
| 45) | Bromodichloromethane | 9.58 | 83 | 330983 | 52.73 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 190793 | 53.13 | ug/L | | 99 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 1604 | 50.19 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.51 | 58 | 474884 | 270.56 | ug/L | | 89 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 470128 | 277.46 | ug/L | # | 84 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 405755 | 54.09 | ug/L | | 98 |
| 55) | Toluene | 10.94 | 92 | 629307 | 50.95 | ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 369834 | 55.45 | ug/L | | 96 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 209217 | 51.17 | ug/L | | 94 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 435050 | 51.55 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.94 | 166 | 246263 | 49.39 | ug/L | | 97 |
| 61) | Dibromochloromethane | 12.24 | 129 | 253122 | 53.50 | ug/L | | 99 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 276256 | 52.41 | ug/L | | 96 |
| 64) | Chlorobenzene | 13.22 | 112 | 701699 | 49.62 | ug/L | | 100 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 220513 | 51.46 | ug/L | | 95 |
| 66) | Ethylbenzene | 13.31 | 91 | 1212205 | 50.08 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 892764 | 101.20 | ug/L | | 97 |
| 68) | o-Xylene | 14.12 | 106 | 437461 | 51.72 | ug/L | | 93 |
| 69) | Styrene | 14.18 | 104 | 791784 | 52.24 | ug/L | | 100 |
| 70) | Bromoform | 14.69 | 173 | 186119 | 55.13 | ug/L | | 99 |
| 71) | Isopropylbenzene | 14.70 | 105 | 1093461 | 51.98 | ug/L | | 96 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 339300 | 51.17 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.19 | 75 | 251446 | 49.52 | ug/L | | 100 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 104513 | 52.89 | ug/L | | 89 |
| 76) | n-Propylbenzene | 15.34 | 91 | 1386155 | 51.17 | ug/L | | 97 |
| 77) | Bromobenzene | 15.39 | 156 | 284888 | 50.08 | ug/L | | 93 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 847658 | 51.48 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 929287 | 49.88 | ug/L | | 95 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 869406 | 50.80 | ug/L | | 95 |
| 81) | tert-butylbenzene | 16.17 | 119 | 693163 | 52.61 | ug/L | | 91 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

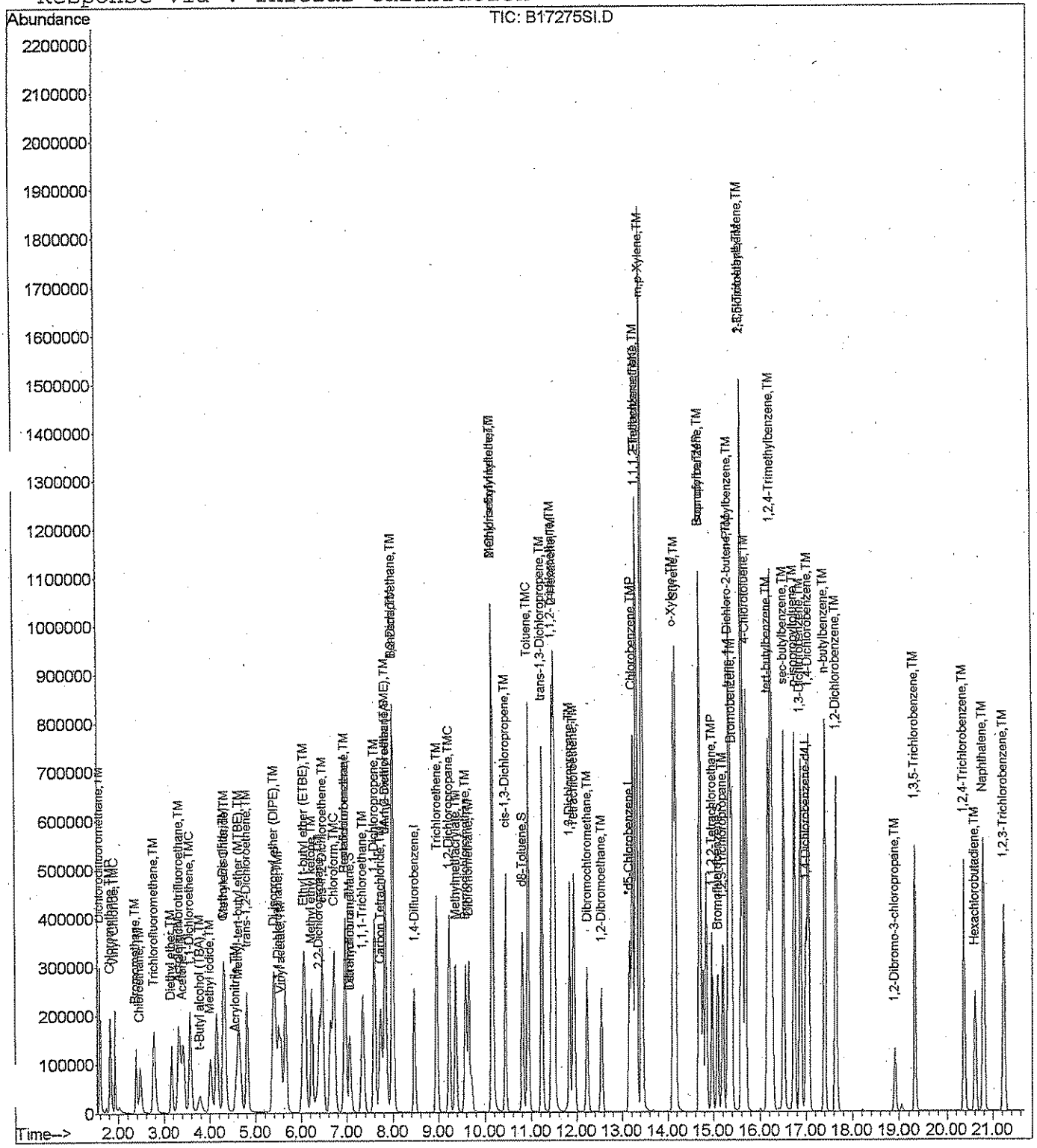
| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 901107 | 50.73 | ug/L | 97 |
| 84) | sec-butylbenzene | 16.51 | 105 | 1022434 | 50.08 | ug/L | 95 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 808770 | 50.17 | ug/L | 97 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 500545 | 50.07 | ug/L | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 523889 | 48.89 | ug/L | 96 |
| 89) | n-butylbenzene | 17.40 | 91 | 800202 | 50.89 | ug/L | 94 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 488321 | 50.28 | ug/L | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 55518 | 55.77 | ug/L | 83 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 299528 | 51.34 | ug/L | 98 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 83908 | 48.03 | ug/L | 98 |
| 96) | Naphthalene | 20.79 | 128 | 832726 | 52.26 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 270190 | 49.94 | ug/L | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 313950 | 51.06 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
MMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 200689 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 357021 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 322036 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 165458 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 116788 | 19.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 97.35% | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 126917 | 20.44 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.20% | | | |
| 54) d8-Toluene | 10.81 | 98 | 413251 | 20.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.35% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 169703 | 19.81 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.05% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 679189 | 95.43 | ug/L | 99 |
| 3) Chloromethane | 1.82 | 50 | 525717 | 90.58 | ug/L | 100 |
| 4) Vinyl Chloride | 1.92 | 62 | 301976 | 81.65 | ug/L | 100 |
| 5) Bromomethane | 2.36 | 94 | 266809 | 99.98 | ug/L | 97 |
| 6) Chloroethane | 2.45 | 64 | 233960 | 92.22 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.83 | 59 | 151547 | 596.20 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.76 | 101 | 565450 | 96.74 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 191510 | 102.18 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.33 | 101 | 355032 | 99.77 | ug/L | 90 |
| 11) Acrolein | 3.32 | 56 | 154807 | 565.65 | ug/L | 98 |
| 12) Acetone | 3.43 | 43 | 601552 | 502.29 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 337390 | 99.05 | ug/L | 94 |
| 14) Methyl iodide | 4.01 | 142 | 501692 | 105.25 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 1327934 | 94.04 | ug/L | 99 |
| 16) Methylene Chloride | 4.33 | 84 | 362658 | 99.70 | ug/L | 97 |
| 17) Carbon Disulfide | 4.29 | 76 | 1084153 | 103.15 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 131178 | 109.32 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 955100 | 100.40 | ug/L # | 84 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 365868 | 98.65 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 601603 | 93.04 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 60121 | 113.64 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 254117 | 556.97 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.06 | 59 | 1461605 | 102.68 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 552237 | 93.42 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 524825 | 101.72 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 1311658 | 104.85 | ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.72 | 83 | 861770 | 99.33 | ug/L | | 97 |
| 30) | Bromochloromethane | 6.97 | 128 | 249235 | 99.93 | ug/L | | 97 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 47319 | 99.92 | ug/L | | 87 |
| 32) | 1,1,1-Trichloroethane | 7.34 | 97 | 686730 | 102.49 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 655235 | 100.70 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 522147 | 105.08 | ug/L | | 95 |
| 37) | 1,2-Dichloroethane | 7.98 | 62 | 682004 | 99.74 | ug/L | | 100 |
| 38) | Benzene | 7.99 | 78 | 1845180 | 94.70 | ug/L | | 99 |
| 40) | Trichloroethene | 8.96 | 95 | 516326 | 99.45 | ug/L | | 87 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 456564 | 99.30 | ug/L | | 99 |
| 42) | Methylmethacrylate | 9.37 | 69 | 355175 | 112.65 | ug/L | | 94 |
| 45) | Bromodichloromethane | 9.58 | 83 | 666728 | 106.10 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 383861 | 106.76 | ug/L | | 98 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 3496 | 109.27 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 922901 | 525.19 | ug/L | | 90 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 910808 | 536.90 | ug/L | # | 83 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 809656 | 107.81 | ug/L | | 100 |
| 55) | Toluene | 10.93 | 92 | 1241053 | 100.35 | ug/L | | 98 |
| 56) | trans-1,3-Dichloropropene | 11.23 | 75 | 729489 | 109.24 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 403242 | 98.51 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 841458 | 99.58 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.95 | 166 | 486939 | 97.55 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.24 | 129 | 499204 | 105.39 | ug/L | | 98 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 544349 | 103.14 | ug/L | | 95 |
| 64) | Chlorobenzene | 13.22 | 112 | 1367661 | 96.36 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 430572 | 100.10 | ug/L | | 97 |
| 66) | Ethylbenzene | 13.32 | 91 | 2357418 | 97.03 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 1720762 | 194.32 | ug/L | | 98 |
| 68) | o-Xylene | 14.12 | 106 | 861115 | 101.43 | ug/L | | 95 |
| 69) | Styrene | 14.18 | 104 | 1550478 | 101.91 | ug/L | | 99 |
| 70) | Bromoform | 14.70 | 173 | 361818 | 106.78 | ug/L | | 96 |
| 71) | Isopropylbenzene | 14.70 | 105 | 2127340 | 100.76 | ug/L | | 96 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 662106 | 99.47 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 479126 | 94.00 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 203119 | 102.40 | ug/L | | 87 |
| 76) | n-Propylbenzene | 15.35 | 91 | 2705056 | 99.49 | ug/L | | 98 |
| 77) | Bromobenzene | 15.40 | 156 | 550181 | 96.36 | ug/L | | 97 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 1672441 | 101.20 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 1848491 | 98.86 | ug/L | | 92 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 1668122 | 97.10 | ug/L | | 96 |
| 81) | tert-butylbenzene | 16.18 | 119 | 1343091 | 101.55 | ug/L | | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

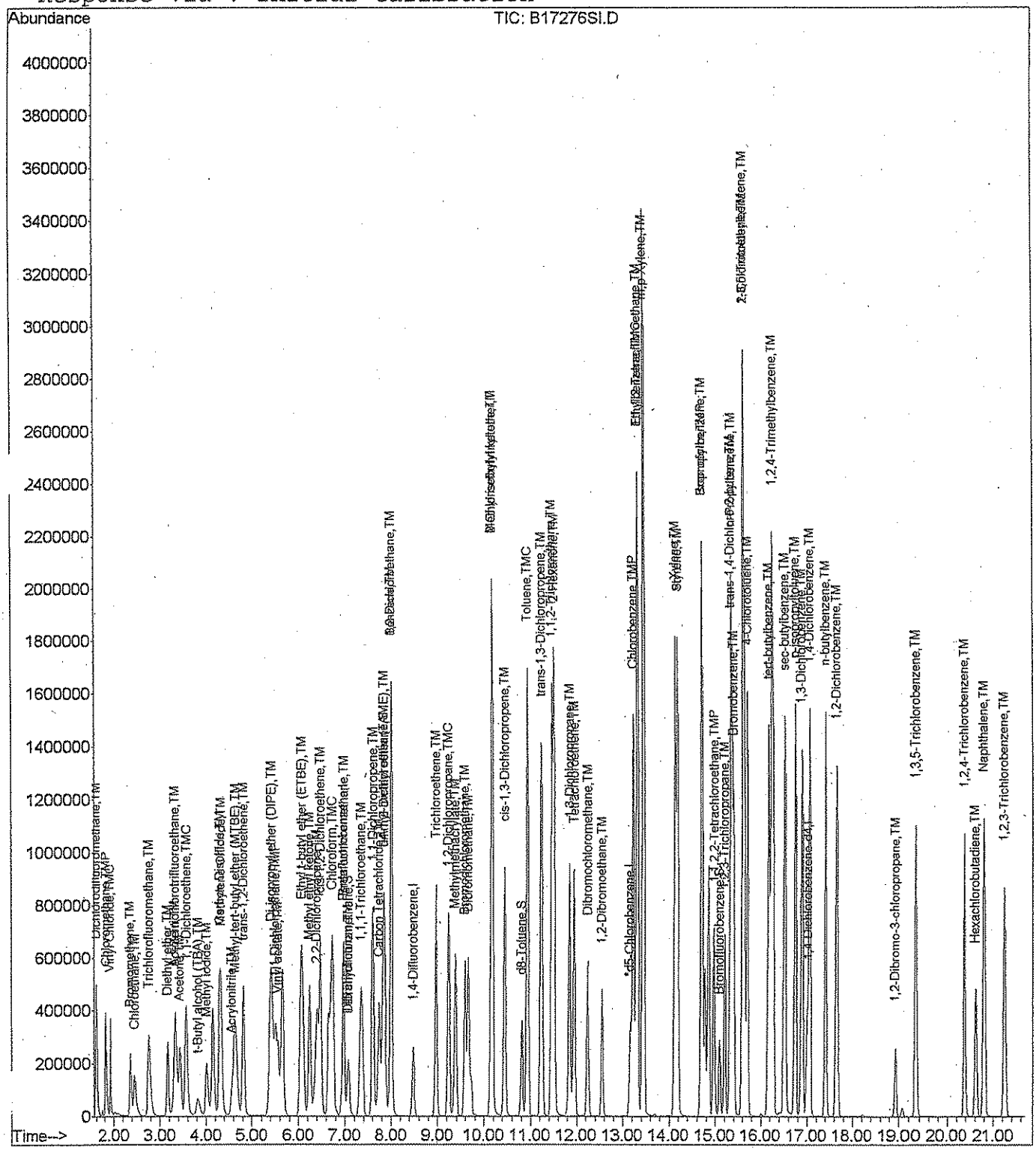
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 1770566 | 99.31 | ug/L | 96 |
| 84) sec-butylbenzene | 16.51 | 105 | 2020424 | 98.59 | ug/L | 94 |
| 85) p-isopropyltoluene | 16.74 | 119 | 1605587 | 99.24 | ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 16.87 | 146 | 977654 | 97.43 | ug/L | 96 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 1026936 | 95.86 | ug/L | 97 |
| 89) n-butylbenzene | 17.41 | 91 | 1594553 | 101.44 | ug/L | 95 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 957443 | 98.60 | ug/L | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 113357 | 113.91 | ug/L | 87 |
| 94) 1,2,4-Trichlorobenzene | 20.37 | 180 | 605486 | 103.81 | ug/L | 98 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 169204 | 96.87 | ug/L | 96 |
| 96) Naphthalene | 20.80 | 128 | 1678263 | 105.36 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.24 | 180 | 552520 | 102.16 | ug/L | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 632334 | 102.88 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D  Vial: 3
Acq On : 19 Aug 2003 9:17 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

9.14.03
VMT 8/19/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.729 | -2.8 | 109 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.564 | 2.4 | 107 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.347 | 6.0 | 108 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.233 | 12.4 | 101 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.263 | -4.0 | 108 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.031# | -24.0# | 130 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.580 | 0.3 | 102 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.204 | -9.1 | 110 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.386 | -8.7 | 106 | 0.00 |
| 11 | TM | Acrolein | 0.027 | 0.032# | -18.5 | 118 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.127 | -6.7 | 117 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.349 | 2.9 | 106 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.529 | -11.4 | 109 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.478 | -5.0 | 110 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.407 linear | 16.1 | 106 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.128 | -7.7 | 108 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.133 | -10.8 | 112 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.027 | -8.3 | 111 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.394 | -6.5 | 107 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.667 | -3.6 | 107 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.064# NT | -20.8# | 113 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.054# ok | -20.0# | 120 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.534 | -8.1 | 109 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.654 | -11.0 | 108 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.542 | -5.4 | 108 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.377 | -10.4 | 112 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.582 | -1.7 | 101 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.889 | 2.8 | 107 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.257 | -3.2 | 106 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.050# linear | -35.1# | 121 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.700 | -4.8 | 106 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.696 | -7.4 | 109 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.530 | -7.1 | 107 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.620 | -0.2 | 99 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.704 | -3.4 | 105 | 0.00 |
| 38 | TM | Benzene | 1.942 | 2.006 | -3.3 | 108 | 0.00 |
| 3 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 4 | TM | Trichloroethene | 0.291 | 0.302 | -3.8 | 108 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D  Vial: 3
Acq On : 19 Aug 2003 9:17 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.274 | -6.2 | 110 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.212 | -19.8 | 119 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.371 | -5.4 | 106 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.219 | -9.0 | 109 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 121 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.115 | -17.3 | 116 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.112 | -17.9 | 119 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.477 | -13.3 | 111 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.148 | -1.5 | 102 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.724 | -4.5 | 109 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.429 | -14.7 | 112 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.247 | -7.9 | 110 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.504 | -6.6 | 109 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.289 | -3.2 | 108 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.280 | -5.7 | 106 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.318 | -7.4 | 110 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 99 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.913 | -3.6 | 106 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.287 | -7.5 | 106 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.590 | -5.4 | 106 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.580 | -5.5 | 107 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.564 | -7.0 | 107 | 0.00 |
| 69 | TM | Styrene | 0.945 | 1.024 | -8.4 | 108 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.235 | -11.9 | 109 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.409 | -7.5 | 107 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.454 | -9.9 | 112 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.543 | -2.1 | 100 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.339 | -6.9 | 112 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.141 | -14.6 | 109 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.801 | -6.6 | 108 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.364 | -2.5 | 104 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.089 | -6.1 | 106 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.226 | -5.6 | 108 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.107 | -3.7 | 105 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D  Vial: 3
Acq On : 19 Aug 2003 9:17 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.856 | -4.3 | 102 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.156 | -4.4 | 106 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.289 | -1.3 | 106 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 1.027 | -2.2 | 105 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.638 | -2.4 | 105 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.335 | -3.1 | 105 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 2.045 | -7.6 | 107 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.249 | -6.4 | 107 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.142 | -18.3 | 112 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.752 | -6.7 | 107 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.219 | -3.8 | 111 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 2.091 | -8.6 | 109 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.678 | -3.7 | 106 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.790 | -6.3 | 106 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 9:36 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8-14-07
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 202958 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 363522 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 319153 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 159181 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 118059 | 20.33 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.65% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 125895 | 20.05 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.25% | | | |
| 54) d8-Toluene | 10.81 | 98 | 417423 | 20.31 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.55% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 173332 | 20.42 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.10% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 147916 | 20.55 | ug/L | 98 |
| 3) Chloromethane | 1.83 | 50 | 114442 | 19.50 | ug/L | 98 |
| 4) Vinyl Chloride | 1.93 | 62 | 70380 | 18.82 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 47294 | 17.52 | ug/L | 98 |
| 6) Chloroethane | 2.48 | 64 | 53445 | 20.83 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 31856 | 123.92 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 117798 | 19.93 | ug/L | 97 |
| 9) Diethyl ether | 3.16 | 74 | 41406 | 21.84 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 78285 | 21.75 | ug/L | 90 |
| 11) Acrolein | 3.32 | 56 | 31979 | 115.54 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 128476 | 106.08 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 70929 | 20.59 | ug/L | 90 |
| 14) Methyl iodide | 4.03 | 142 | 107373 | 22.27 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 299875 | 21.00 | ug/L | 99 |
| 16) Methylene Chloride 107% | 4.33 | 84 | 82561 | 21.30 | ug/L | 97 |
| 17) Carbon Disulfide | 4.30 | 76 | 229035 | 21.55 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 27007 | 22.25 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 208433 | 21.67 | ug/L # | 85 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 80008 | 21.33 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 135276 | 20.69 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 12986 | 24.27 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 54896 | 118.98 | ug/L | 98 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 311425 | 21.63 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 132793 | 22.21 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 109909 | 21.06 | ug/L | 94 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 279561 | 22.10 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 9:36 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 29) Chloroform | 6.73 | 83 | 180487 | 20.57 | ug/L | | 94 |
| 30) Bromochloromethane | 6.97 | 128 | 52107 | 20.66 | ug/L | | 95 |
| 31) Tetrahydrofuran 117% | 7.07 | 71 | 10225 | 22.57 | ug/L | | 88 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 141980 | 20.95 | ug/L | | 96 |
| 34) 1,1-Dichloropropene | 7.61 | 75 | 141197 | 21.46 | ug/L | | 97 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 107483 | 21.39 | ug/L | | 95 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 142820 | 20.65 | ug/L | | 100 |
| 38) Benzene | 8.00 | 78 | 407167 | 20.66 | ug/L | | 98 |
| 40) Trichloroethene | 8.97 | 95 | 109874 | 20.78 | ug/L | | 88 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 99566 | 21.27 | ug/L | | 99 |
| 42) Methylmethacrylate | 9.38 | 69 | 77206 | 24.05 | ug/L | | 95 |
| 45) Bromodichloromethane | 9.59 | 83 | 135042 | 21.10 | ug/L | | 96 |
| 46) Dibromomethane | 9.66 | 93 | 79522 | 21.72 | ug/L | | 99 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 711 | 21.82 | ug/L | # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 208486 | 116.52 | ug/L | | 90 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 203709 | 117.93 | ug/L | # | 85 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 173338 | 22.67 | ug/L | | 100 |
| 55) Toluene | 10.93 | 92 | 263024 | 20.89 | ug/L | | 99 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 155967 | 22.94 | ug/L | | 98 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 89734 | 21.53 | ug/L | | 94 |
| 59) 1,3-Dichloropropane | 11.84 | 76 | 183162 | 21.29 | ug/L | | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 105055 | 20.67 | ug/L | | 96 |
| 61) Dibromochloromethane | 12.24 | 129 | 101947 | 21.14 | ug/L | | 99 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 115451 | 21.48 | ug/L | | 99 |
| 64) Chlorobenzene | 13.22 | 112 | 291365 | 20.71 | ug/L | | 99 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 91569 | 21.48 | ug/L | | 97 |
| 66) Ethylbenzene | 13.31 | 91 | 507319 | 21.07 | ug/L | | 98 |
| 67) m,p-Xylene | 13.44 | 106 | 369980 | 42.16 | ug/L | | 98 |
| 68) o-Xylene | 14.12 | 106 | 179871 | 21.38 | ug/L | | 96 |
| 69) Styrene | 14.18 | 104 | 326768 | 21.67 | ug/L | | 100 |
| 70) Bromoform | 14.69 | 173 | 75089 | 22.36 | ug/L | | 99 |
| 71) Isopropylbenzene | 14.70 | 105 | 449565 | 21.49 | ug/L | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 145021 | 21.98 | ug/L | | 97 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 108289 | 21.44 | ug/L | | 100 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 44879 | 22.83 | ug/L | | 91 |
| 76) n-Propylbenzene | 15.34 | 91 | 574862 | 21.33 | ug/L | | 96 |
| 77) Bromobenzene | 15.39 | 156 | 116299 | 20.55 | ug/L | | 92 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 347609 | 21.22 | ug/L | | 95 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 391167 | 21.11 | ug/L | | 95 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 353380 | 20.76 | ug/L | | 94 |
| 81) tert-butylbenzene | 16.17 | 119 | 273209 | 20.84 | ug/L | | 89 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 9:36 2003 Quant Results File: V808183B.RES

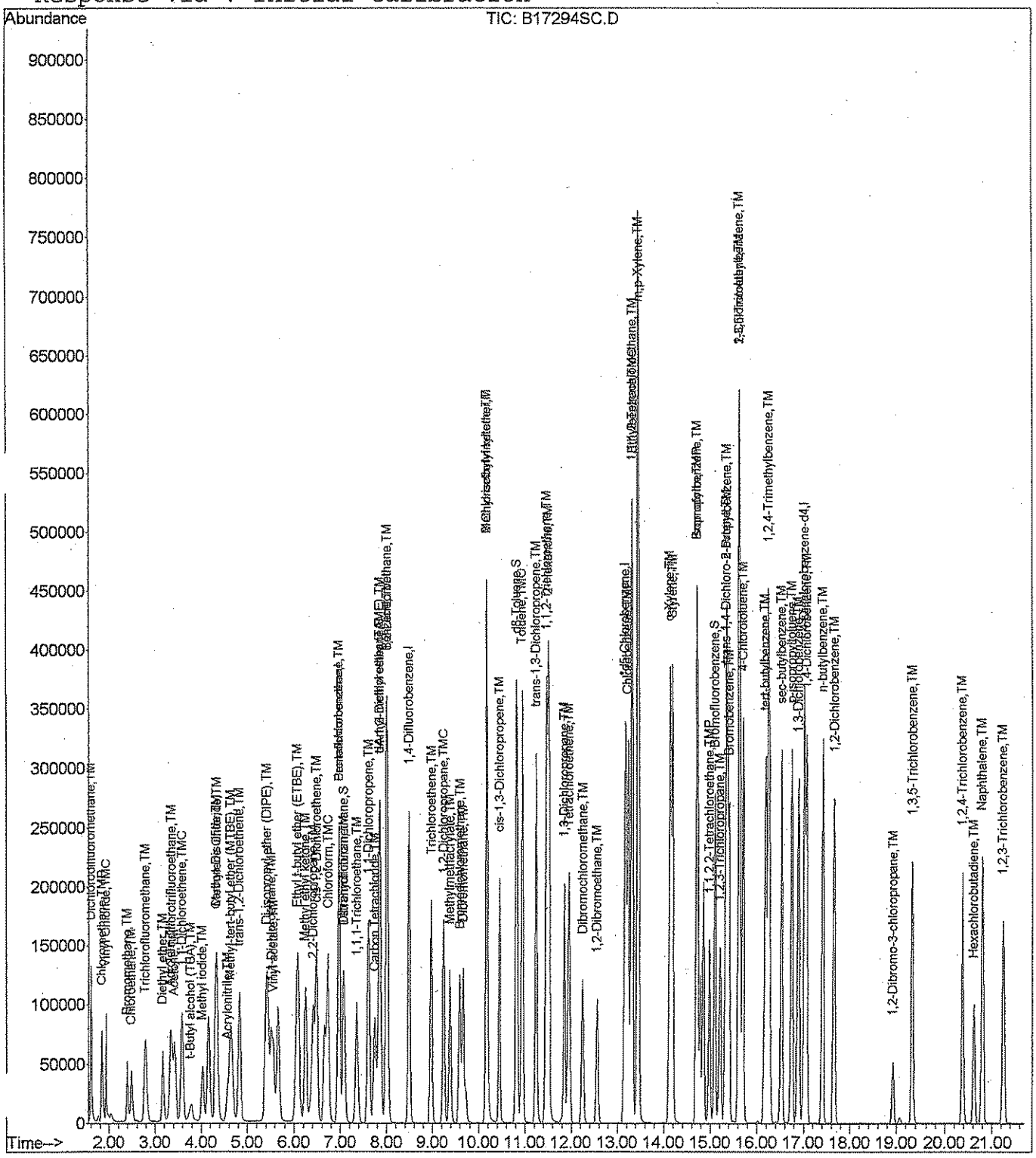
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 368927 | 20.88 | ug/L | | 96 |
| 84) | sec-butylbenzene | 16.52 | 105 | 411341 | 20.25 | ug/L | | 96 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 327749 | 20.44 | ug/L | | 96 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 203770 | 20.49 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 212583 | 20.63 | ug/L | | 97 |
| 89) | n-butylbenzene | 17.40 | 91 | 325477 | 21.52 | ug/L | | 94 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 198790 | 21.28 | ug/L | | 98 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 22604 | 23.61 | ug/L | # | 84 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 119757 | 21.34 | ug/L | | 99 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 34820 | 20.72 | ug/L | | 98 |
| 96) | Naphthalene | 20.79 | 128 | 332901 | 21.72 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 107930 | 20.74 | ug/L | | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 125740 | 21.26 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 9:36 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D  Vial: 27
Acq On : 19 Aug 2003 9:36 pm  Operator:
Sample : 20 PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

8.20.07

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.679 | 4.2 | 94 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.523 | 9.5 | 92 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.344 | 6.8 | 100 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.236 | 11.3 | 95 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.253 | 0.0 | 97 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.034# | -36.0# | 130 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.577 | 0.9 | 95 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.204 | -9.1 | 102 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.381 | -7.3 | 98 | 0.00 |
| 11 | TM | Acrolein | 0.027 | 0.031# | -14.8 | 107 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.133 | -11.8 | 115 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.350 | 3.2 | 98 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.524 | -10.3 | 100 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.437 | -2.1 | 100 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.406 linear | ~~16.3~~ | 99 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.128 | -7.7 | 100 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.142 | -18.3 | 111 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.031 | -8.8 | 103 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.391 | -5.7 | 99 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.666 | -3.4 | 99 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.057# | -7.5 | 94 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.049# | -8.9 | 101 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.234 | 13.0 | 82 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.540 | 8.3 | 83 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.525 | -2.1 | 97 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.322 | -6.0 | 100 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.592 | -3.5 | 95 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.873 | 0.9 | 97 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.252 | -1.2 | 97 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.050# linear | ~~35.1#~~ | 112 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.676 | -1.2 | 95 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.666 | -2.8 | 97 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.510 | -3.0 | 96 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.642 | -3.7 | 95 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.695 | -2.1 | 97 | 0.00 |
| 38 | TM | Benzene | 1.942 | 1.945 | -0.2 | 97 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 94 | 0.00 |
| 40 | TM | Trichloroethene | 0.291 | 0.292 | -0.3 | 97 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D  Vial: 27
Acq On : 19 Aug 2003 9:36 pm  Operator:
Sample : 20 PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.263 | -1.9 | 99 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.206 | -16.4 | 108 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.359 | -2.0 | 96 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.216 | -7.5 | 100 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 135 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.116 | -18.4 | 110 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.114 | -20.0# | 113 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.443 | -5.2 | 96 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.153 | -1.9 | 96 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.702 | -1.3 | 99 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.398 | -6.4 | 97 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.241 | -5.2 | 100 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.491 | -3.8 | 99 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.280 | 0.0 | 98 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.267 | -0.8 | 95 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.303 | -2.4 | 98 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 93 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.864 | 1.9 | 95 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.270 | -1.1 | 94 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.512 | -0.2 | 96 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.549 | 0.2 | 96 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.530 | -0.6 | 95 | 0.00 |
| 69 | TM | Styrene | 0.945 | 0.966 | -2.2 | 96 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.222 | -5.7 | 98 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.334 | -1.8 | 96 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.443 | -7.3 | 103 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.529 | 0.6 | 92 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.326 | -2.8 | 102 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.132 | -7.3 | 97 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.704 | -0.9 | 96 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.347 | 2.3 | 94 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.027 | -0.1 | 95 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.158 | 0.3 | 96 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.059 | 0.7 | 95 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.835 | -1.7 | 94 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.083 | 2.2 | 94 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.220 | 4.2 | 95 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 0.959 | 4.6 | 93 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.603 | 3.2 | 94 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 93 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.255 | 3.1 | 93 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 1.919 | -1.0 | 94 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.161 | 1.1 | 93 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.141 | -17.5 | 104 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.691 | 2.0 | 92 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.193 | 8.5 | 92 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 1.997 | -3.7 | 97 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.640 | 2.1 | 94 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.729 | 1.9 | 92 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.20.03
V808183

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 188501 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 339495 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 301716 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 149594 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 111546 | 20.68 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.40% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 121033 | 20.75 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.75% | | | |
| 54) d8-Toluene | 10.81 | 98 | 391459 | 20.39 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.95% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 159615 | 19.89 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.45% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 128083 | 19.16 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 98569 | 18.08 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 64826 | 18.66 | ug/L | 100 |
| 5) Bromomethane | 2.39 | 94 | 44571 | 17.78 | ug/L | 97 |
| 6) Chloroethane | 2.48 | 64 | 47722 | 20.03 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 31979 | 133.94 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 108764 | 19.81 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 38386 | 21.80 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 71862 | 21.50 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 29115 | 113.26 | ug/L | 98 |
| 12) Acetone | 3.42 | 43 | 125460 | 111.53 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 66064 | 20.65 | ug/L | 95 |
| 14) Methyl iodide | 4.03 | 142 | 98764 | 22.06 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 270927 | 20.43 | ug/L | 98 |
| 16) Methylene Chloride 106% | 4.33 | 84 | 76492 | 21.24 | ug/L | 97 |
| 17) Carbon Disulfide | 4.30 | 76 | 212651 | 21.54 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 26674 | 23.67 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 194321 | 21.75 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 73695 | 21.16 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 125516 | 20.67 | ug/L | 98 |
| 22) Vinyl acetate | 5.56 | 86 | 10823 | 21.78 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 46300 | 108.04 | ug/L | 97 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 232658 | 17.40 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 101793 | 18.33 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 98886 | 20.40 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 249167 | 21.21 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 164511 | 20.19 | ug/L | | 96 |
| 30) | Bromochloromethane | 6.97 | 128 | 47469 | 20.26 | ug/L | | 96 |
| 31) | Tetrahydrofuran 1179. | 7.06 | 71 | 9484 | 22.54 | ug/L | | 86 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 127465 | 20.25 | ug/L | | 97 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 125570 | 20.55 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 96124 | 20.59 | ug/L | | 98 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 131080 | 20.41 | ug/L | | 98 |
| 38) | Benzene | 8.00 | 78 | 366569 | 20.03 | ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 99219 | 20.10 | ug/L | | 85 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 89394 | 20.45 | ug/L | | 99 |
| 42) | Methylmethacrylate | 9.38 | 69 | 70058 | 23.37 | ug/L | | 96 |
| 45) | Bromodichloromethane | 9.59 | 83 | 122024 | 20.42 | ug/L | | 99 |
| 46) | Dibromomethane | 9.65 | 93 | 73312 | 21.44 | ug/L | | 99 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 794 | 26.10 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 196420 | 117.55 | ug/L | | 89 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 192729 | 119.47 | ug/L | # | 86 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 150534 | 21.08 | ug/L | | 98 |
| 55) | Toluene | 10.93 | 92 | 238415 | 20.27 | ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 135135 | 21.28 | ug/L | | 97 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 81716 | 20.99 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 166783 | 20.76 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.94 | 166 | 95071 | 20.03 | ug/L | | 97 |
| 61) | Dibromochloromethane | 12.24 | 129 | 90610 | 20.12 | ug/L | | 98 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 102912 | 20.51 | ug/L | | 97 |
| 64) | Chlorobenzene | 13.22 | 112 | 260600 | 19.60 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 81396 | 20.20 | ug/L | | 96 |
| 66) | Ethylbenzene | 13.31 | 91 | 456152 | 20.04 | ug/L | | 98 |
| 67) | m,p-Xylene | 13.44 | 106 | 331406 | 39.95 | ug/L | | 96 |
| 68) | o-Xylene | 14.12 | 106 | 159997 | 20.12 | ug/L | | 92 |
| 69) | Styrene | 14.18 | 104 | 291424 | 20.44 | ug/L | | 100 |
| 70) | Bromoform | 14.69 | 173 | 66912 | 21.08 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 402555 | 20.35 | ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 133592 | 21.42 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.19 | 75 | 98327 | 20.59 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 39925 | 21.48 | ug/L | | 91 |
| 76) | n-Propylbenzene | 15.34 | 91 | 514194 | 20.19 | ug/L | | 96 |
| 77) | Bromobenzene | 15.39 | 156 | 104802 | 19.59 | ug/L | | 91 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 309886 | 20.01 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 349328 | 19.94 | ug/L | | 93 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 319503 | 19.85 | ug/L | | 94 |
| 81) | tert-butylbenzene | 16.17 | 119 | 252004 | 20.34 | ug/L | | 90 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
IS Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

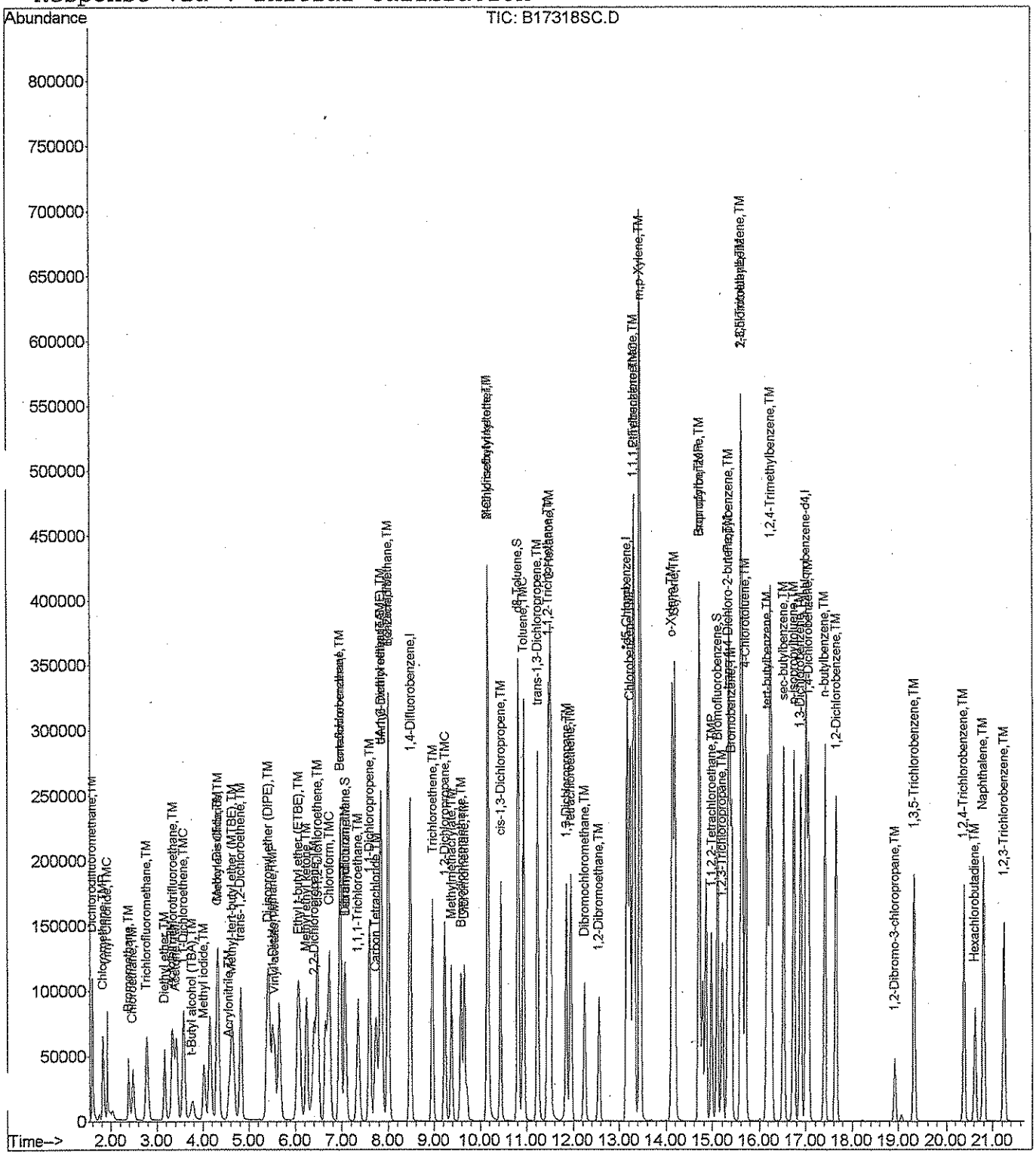
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 326651 | 19.55 | ug/L | | 96 |
| 84) sec-butylbenzene | 16.52 | 105 | 368156 | 19.17 | ug/L | | 94 |
| 85) p-isopropyltoluene | 16.74 | 119 | 289237 | 19.08 | ug/L | | 96 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 181959 | 19.36 | ug/L | | 95 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 187781 | 19.39 | ug/L | | 96 |
| 89) n-butylbenzene | 17.40 | 91 | 287086 | 20.20 | ug/L | | 93 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 173730 | 19.79 | ug/L | | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 21062 | 23.41 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 103401 | 19.61 | ug/L | | 99 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 28863 | 18.28 | ug/L | | 100 |
| 96) Naphthalene | 20.79 | 128 | 298772 | 20.75 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 95758 | 19.58 | ug/L | | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.32 | 180 | 109127 | 19.64 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D  Vial: 2
Acq On : 20 Aug 2003 9:41 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.712 | -0.4 | 91 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.541 | 6.4 | 88 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.358 | 3.0 | 96 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.254 | 4.5 | 94 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.256 | -1.2 | 90 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.032# | -28.0# | 112 | 0.01 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.603 | -3.6 | 91 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.205 | -9.6 | 95 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.397 | -11.8 | 94 | -0.02 |
| 11 | T | Acrolein | 0.027 | 0.031# | -14.8 | 99 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.129 | -8.4 | 103 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.353 | -4.1 | 92 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.525 | -10.5 | 93 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.468 | -4.3 | 94 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.431 linear | ~~11~~.1 | 97 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.159 | -10.7 | 95 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.140 | -16.7 | 102 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.033 | -9.0 | 95 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.396 | -7.0 | 92 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.688 | -6.8 | 95 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.063# | -18.9 | 95 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.052# | -15.6 | 100 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.248 | 12.1 | 76 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.658 | -11.7 | 93 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.532 | -3.5 | 91 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.317 | -5.6 | 92 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.604 | -5.6 | 90 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.912 | -5.4 | 94 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.260 | -4.4 | 93 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.048# linear | ~~29.7#~~ | 98 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.707 | -5.8 | 92 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.675 | -4.2 | 91 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.539 | -8.9 | 94 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.650 | -5.0 | 89 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.717 | -5.3 | 92 | 0.00 |
| 38 | TM | Benzene | 1.942 | 1.982 | -2.1 | 91 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 86 | 0.00 |
| 40 | TM | Trichloroethene | 0.291 | 0.318 | -9.3 | 97 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D  Vial: 2
Acq On : 20 Aug 2003 9:41 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.264 | 2.3 | 91 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.199 | -12.4 | 96 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.373 | -6.0 | 92 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.220 | -9.5 | 94 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 131 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.112 | -14.3 | 98 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.110 | -15.8 | 100 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.464 | -10.2 | 93 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.169 | -3.4 | 90 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.721 | 4.0 | 93 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.422 | -12.8 | 94 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.249 | -8.7 | 96 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.500 | -5.7 | 93 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.297 | -6.1 | 95 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.281 | -6.0 | 92 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.312 | -5.4 | 93 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.896 | -1.7 | 92 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.281 | -5.2 | 92 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.549 | 2.7 | 92 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.570 | -3.6 | 93 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.547 | -3.8 | 92 | 0.00 |
| 69 | TM | Styrene | 0.945 | 1.000 | -5.8 | 93 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.230 | -9.5 | 95 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.376 | -5.0 | 92 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.446 | -8.0 | 97 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.544 | -2.3 | 89 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.329 | -3.8 | 97 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.140 | -13.8 | 96 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.758 | -4.1 | 93 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.361 | -1.7 | 91 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.067 | -4.0 | 92 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.214 | -4.6 | 95 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.069 | -0.2 | 89 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D  Vial: 2
Acq On : 20 Aug 2003 9:41 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.847 | -3.2 | 89 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.133 | -2.3 | 92 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.263 | 0.8 | 92 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 1.007 | -0.2 | 91 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.632 | -1.4 | 93 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.320 | -1.9 | 93 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 1.996 | -5.1 | 93 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.213 | -3.3 | 93 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.140 | -16.7 | 98 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.717 | -1.7 | 91 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.211 | 0.0 | 95 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 2.022 | -5.0 | 94 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.663 | -1.4 | 93 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.762 | -2.6 | 92 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.96 | 168 | 174125 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 312914 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 282690 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 142302 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 105253 | 21.12 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.60% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 113107 | 20.99 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.95% | | | |
| 54) d8-Toluene | 10.81 | 98 | 365725 | 20.67 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.35% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 153921 | 20.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.35% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 124027 | 20.08 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 94221 | 18.71 | ug/L | 98 |
| 4) Vinyl Chloride | 1.93 | 62 | 62302 | 19.41 | ug/L | 100 |
| 5) Bromomethane | 2.39 | 94 | 44163 | 19.07 | ug/L | 97 |
| 6) Chloroethane | 2.48 | 64 | 44555 | 20.24 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 27560 | 124.97 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 105007 | 20.71 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 35725 | 21.97 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 69179 | 22.41 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 26801 | 112.87 | ug/L | 98 |
| 12) Acetone | 3.43 | 43 | 112392 | 108.16 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 61518 | 20.82 | ug/L | 98 |
| 14) Methyl iodide | 4.03 | 142 | 91447 | 22.11 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 255647 | 20.87 | ug/L | 99 |
| 16) Methylene Chloride 117% | 4.34 | 84 | 75066 | 22.66 | ug/L | 95 |
| 17) Carbon Disulfide | 4.31 | 76 | 201845 | 22.13 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 24404 | 23.44 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 179813 | 21.79 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 69031 | 21.45 | ug/L | 91 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 119870 | 21.37 | ug/L | 98 |
| 22) Vinyl acetate | 5.56 | 86 | 10912 | 23.77 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 45642 | 115.30 | ug/L | 93 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 217311 | 17.60 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 114644 | 22.35 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 92578 | 20.68 | ug/L | 94 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 229245 | 21.12 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
B17340SC.D V808183B.M Wed Aug 20 09:54:58 2003 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 158885 | 21.11 | ug/L | | 97 |
| 30) | Bromochloromethane | 6.97 | 128 | 45331 | 20.95 | ug/L | | 96 |
| 31) | Tetrahydrofuran 107% | 7.08 | 71 | 8304 | 21.42 | ug/L | | 89 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 123132 | 21.18 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 117507 | 20.81 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 93929 | 21.79 | ug/L | | 93 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 124799 | 21.04 | ug/L | | 100 |
| 38) | Benzene | 8.00 | 78 | 345037 | 20.41 | ug/L | | 99 |
| 40) | Trichloroethene | 8.96 | 95 | 99376 | 21.84 | ug/L | | 86 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 82506 | 20.47 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.37 | 69 | 62386 | 22.58 | ug/L | | 93 |
| 45) | Bromodichloromethane | 9.59 | 83 | 116569 | 21.16 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 68782 | 21.83 | ug/L | | 95 |
| 50) | 2-Chloroethylvinyl ether | 10.15 | 63 | 765 | 27.28 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 175498 | 113.95 | ug/L | | 90 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 171973 | 115.66 | ug/L | # | 83 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 145049 | 22.04 | ug/L | | 99 |
| 55) | Toluene | 10.93 | 92 | 225543 | 20.81 | ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.23 | 75 | 132039 | 22.56 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 77871 | 21.70 | ug/L | | 96 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 156515 | 21.13 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.95 | 166 | 92918 | 21.24 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.24 | 129 | 87924 | 21.18 | ug/L | | 95 |
| 62) | 1,2-Dibromoethane | 12.56 | 107 | 97565 | 21.09 | ug/L | | 95 |
| 64) | Chlorobenzene | 13.22 | 112 | 253315 | 20.33 | ug/L | | 99 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 79331 | 21.01 | ug/L | | 96 |
| 66) | Ethylbenzene | 13.32 | 91 | 437928 | 20.53 | ug/L | | 98 |
| 67) | m,p-Xylene | 13.43 | 106 | 322240 | 41.46 | ug/L | | 96 |
| 68) | o-Xylene | 14.12 | 106 | 154590 | 20.74 | ug/L | | 96 |
| 69) | Styrene | 14.18 | 104 | 282795 | 21.17 | ug/L | | 98 |
| 70) | Bromoform | 14.70 | 173 | 65119 | 21.89 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 389022 | 20.99 | ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 126096 | 21.58 | ug/L | | 97 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 92985 | 20.78 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 39634 | 22.76 | ug/L | | 90 |
| 76) | n-Propylbenzene | 15.35 | 91 | 496948 | 20.82 | ug/L | | 98 |
| 77) | Bromobenzene | 15.40 | 156 | 102079 | 20.37 | ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 301591 | 20.79 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 343211 | 20.91 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.69 | 91 | 302279 | 20.04 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.17 | 119 | 239352 | 20.62 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

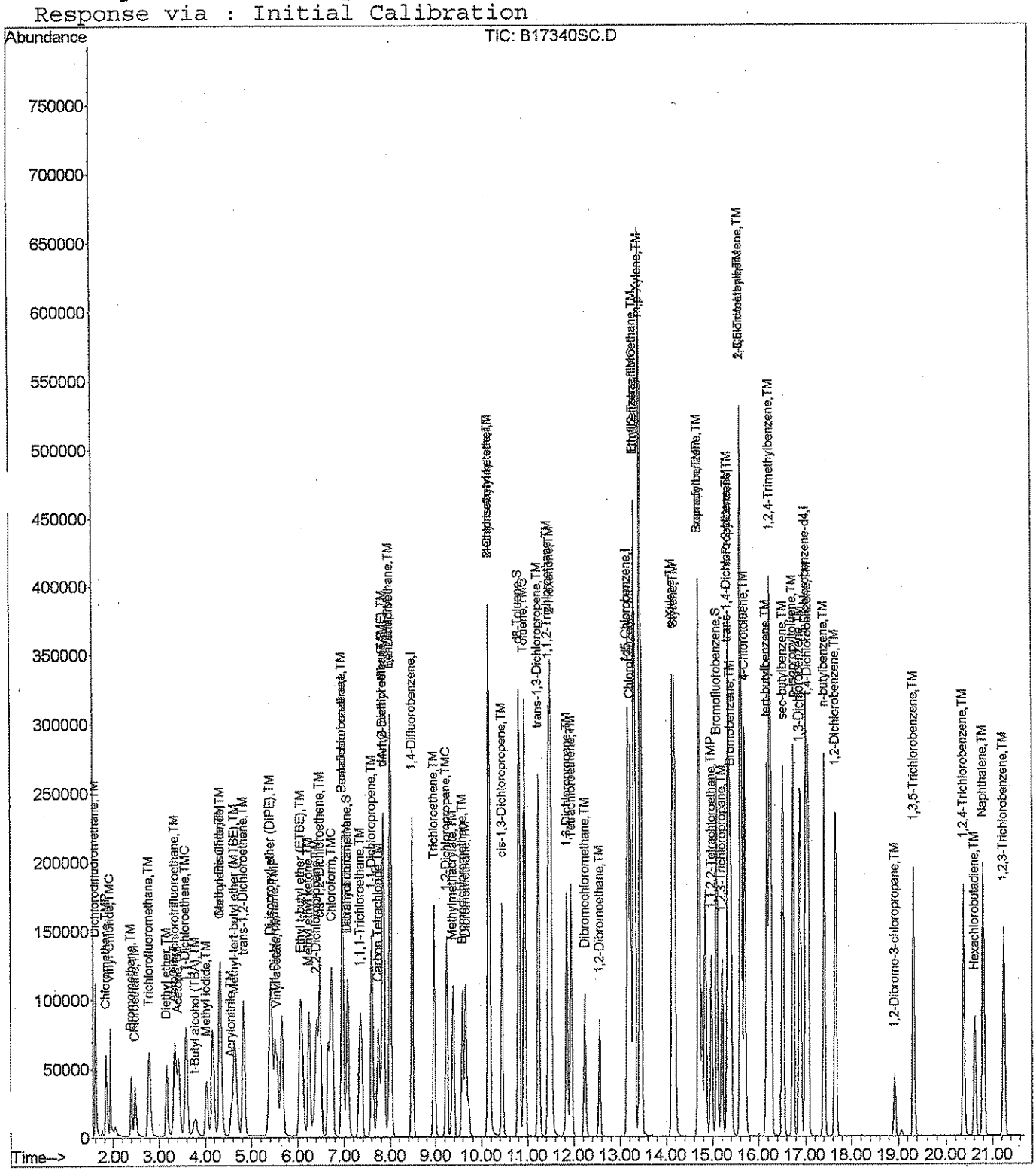
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 320321 | 20.47 | ug/L | | 96 |
| 84) | sec-butylbenzene | 16.52 | 105 | 356958 | 19.84 | ug/L | | 96 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 284628 | 20.04 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 178734 | 20.29 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 187861 | 20.39 | ug/L | | 98 |
| 89) | n-butylbenzene | 17.41 | 91 | 284067 | 21.01 | ug/L | | 95 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 172616 | 20.67 | ug/L | | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 19905 | 23.26 | ug/L | # | 83 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 102061 | 20.34 | ug/L | | 97 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 30044 | 20.00 | ug/L | | 95 |
| 96) | Naphthalene | 20.80 | 128 | 287747 | 21.00 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 94351 | 20.28 | ug/L | | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 108416 | 20.51 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration
B17340SC.D V808183B.M Wed Aug 20 09:54:58 2003 Page 3

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 197698 | 6.95 | 361866 | 8.48 | 323047 | 13.16 | 161610 | 17.00 |
| | UPPER LIMIT | 395396 | 7.37 | 723732 | 8.99 | 646094 | 13.95 | 323220 | 18.02 |
| | LOWER LIMIT | 98849 | 6.53 | 180933 | 7.97 | 161524 | 12.37 | 80805 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 1 PPB | 194884 | 6.95 | 352942 | 8.48 | 310446 | 13.16 | 157731 | 17.00 |
| 02 | 2 PPB | 187228 | 6.96 | 339004 | 8.48 | 311635 | 13.17 | 158277 | 17.00 |
| 03 | 5 PPB | 193601 | 6.95 | 352182 | 8.48 | 315401 | 13.16 | 158971 | 17.00 |
| 04 | 20 PPB | 197698 | 6.95 | 361866 | 8.48 | 323047 | 13.16 | 161610 | 17.00 |
| 05 | 50 PPB | 199392 | 6.95 | 356595 | 8.48 | 320837 | 13.16 | 165503 | 17.00 |
| 06 | 100 PPB | 200689 | 6.95 | 357021 | 8.48 | 322036 | 13.16 | 165458 | 17.00 |
| 07 | ZZZZZ | 197897 | 6.95 | 360991 | 8.48 | 325667 | 13.16 | 162066 | 17.00 |
| 08 | ZZZZZ | 199226 | 6.95 | 365678 | 8.48 | 323499 | 13.16 | 163685 | 17.00 |
| 09 | ZZZZZ | 205618 | 6.95 | 370683 | 8.48 | 329320 | 13.16 | 165492 | 17.00 |
| 10 | ZZZZZ | 195650 | 6.95 | 362747 | 8.48 | 324301 | 13.16 | 163278 | 17.00 |
| 11 | ZZZZZ | 191995 | 6.95 | 356658 | 8.48 | 317499 | 13.16 | 162537 | 17.00 |
| 12 | ZZZZZ | 187502 | 6.96 | 348470 | 8.48 | 314789 | 13.16 | 158678 | 17.00 |
| 13 | ZZZZZ | 194803 | 6.95 | 354673 | 8.48 | 316582 | 13.16 | 159429 | 17.00 |
| 14 | ZZZZZ | 202441 | 6.95 | 359801 | 8.48 | 322091 | 13.16 | 157769 | 17.00 |
| 15 | ZZZZZ | 203687 | 6.95 | 361234 | 8.48 | 320827 | 13.16 | 156863 | 17.00 |
| 16 | ZZZZZ | 201401 | 6.96 | 359940 | 8.48 | 320620 | 13.16 | 154821 | 17.00 |
| 17 | ZZZZZ | 198213 | 6.95 | 354824 | 8.48 | 316800 | 13.16 | 156467 | 17.00 |
| 18 | ZZZZZ | 204212 | 6.95 | 359094 | 8.48 | 322486 | 13.16 | 157190 | 17.00 |
| 19 | ZZZZZ | 201415 | 6.96 | 354445 | 8.48 | 319055 | 13.16 | 155339 | 17.00 |
| 20 | ZZZZZ | 203936 | 6.96 | 361852 | 8.48 | 326249 | 13.16 | 159856 | 17.00 |
| 21 | ZZZZZ | 209500 | 6.95 | 366130 | 8.48 | 330762 | 13.16 | 160018 | 17.00 |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 202958 | 6.95 | 363522 | 8.48 | 319153 | 13.16 | 159181 | 17.00 |
| | UPPER LIMIT | 405916 | 7.37 | 727044 | 8.99 | 638306 | 13.95 | 318362 | 18.02 |
| | LOWER LIMIT | 101479 | 6.53 | 181761 | 7.97 | 159577 | 12.37 | 79591 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 20PPB STD | 202958 | 6.95 | 363522 | 8.48 | 319153 | 13.16 | 159181 | 17.00 |
| 02 | L808193B | 200665 | 6.95 | 361525 | 8.48 | 320402 | 13.16 | 159243 | 17.00 |
| 03 | L808193B2 | 202086 | 6.95 | 359194 | 8.48 | 318072 | 13.16 | 160185 | 17.00 |
| 04 | ZZZZZ | 200264 | 6.95 | 358659 | 8.48 | 318502 | 13.16 | 157063 | 17.00 |
| 05 | B808193B | 195185 | 6.96 | 351323 | 8.47 | 313817 | 13.16 | 154350 | 17.00 |
| 06 | ZZZZZ | 189184 | 6.95 | 344210 | 8.48 | 308630 | 13.16 | 152881 | 17.00 |
| 07 | ZZZZZ | 195765 | 6.95 | 357194 | 8.48 | 315993 | 13.16 | 153809 | 17.00 |
| 08 | ZZZZZ | 194224 | 6.96 | 351678 | 8.48 | 311670 | 13.16 | 152393 | 17.00 |
| 09 | ZZZZZ | 193222 | 6.95 | 352292 | 8.48 | 311567 | 13.16 | 150623 | 17.00 |
| 10 | 50269-2 | 192985 | 6.95 | 347362 | 8.48 | 307394 | 13.16 | 150240 | 17.00 |
| 11 | 50269-2,MS | 190568 | 6.95 | 344499 | 8.48 | 307028 | 13.16 | 153508 | 17.00 |
| 12 | 50269-2,MSD | 190025 | 6.95 | 343393 | 8.48 | 307317 | 13.16 | 154822 | 17.00 |
| 13 | 50262-2 | 196106 | 6.95 | 351596 | 8.48 | 318425 | 13.16 | 154406 | 17.00 |
| 14 | ZZZZZ | 200137 | 6.95 | 358634 | 8.48 | 321809 | 13.16 | 155068 | 17.00 |
| 15 | ZZZZZ | 197545 | 6.95 | 353403 | 8.48 | 313075 | 13.16 | 153693 | 17.00 |
| 16 | ZZZZZ | 193644 | 6.95 | 349229 | 8.48 | 310432 | 13.16 | 150864 | 17.00 |
| 17 | ZZZZZ | 192154 | 6.96 | 343776 | 8.47 | 306550 | 13.16 | 149831 | 17.00 |
| 18 | 50269-1 | 192749 | 6.95 | 344157 | 8.48 | 306840 | 13.16 | 148088 | 17.00 |
| 19 | 50269-3 | 188968 | 6.96 | 340945 | 8.48 | 304353 | 13.16 | 147846 | 17.00 |
| 20 | 50269-4 | 186913 | 6.95 | 339528 | 8.48 | 302806 | 13.16 | 147822 | 17.00 |
| 21 | 50269-5 | 188068 | 6.96 | 337771 | 8.48 | 303435 | 13.17 | 146215 | 17.00 |
| 22 | 50269-6 | 190780 | 6.95 | 342062 | 8.48 | 305740 | 13.16 | 147525 | 17.00 |
| 23 | 50269-7 | 187267 | 6.96 | 333756 | 8.47 | 300339 | 13.16 | 145080 | 17.00 |
| 24 | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 188501 | 6.95 | 339495 | 8.48 | 301716 | 13.16 | 149594 | 17.00 |
| | UPPER LIMIT | 377002 | 7.37 | 678990 | 8.99 | 603432 | 13.95 | 299188 | 18.02 |
| | LOWER LIMIT | 94251 | 6.53 | 169748 | 7.97 | 150858 | 12.37 | 74797 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 20 PPB STD | 188501 | 6.95 | 339495 | 8.48 | 301716 | 13.16 | 149594 | 17.00 |
| 02 | L808193B3 | 189504 | 6.95 | 333165 | 8.48 | 302351 | 13.16 | 150801 | 17.00 |
| 03 | L808193B4 | 183434 | 6.95 | 335585 | 8.48 | 300928 | 13.16 | 151148 | 17.00 |
| 04 | B808193B2 | 187824 | 6.95 | 337820 | 8.48 | 298482 | 13.16 | 147095 | 17.00 |
| 05 | 50269-8 | 185701 | 6.95 | 334770 | 8.48 | 297687 | 13.16 | 145259 | 17.00 |
| 06 | 50269-9 | 182544 | 6.95 | 327806 | 8.48 | 294607 | 13.16 | 145698 | 17.00 |
| 07 | 50269-10 | 182730 | 6.95 | 326884 | 8.48 | 292724 | 13.16 | 143526 | 17.00 |
| 08 | 50269-11 | 182269 | 6.96 | 326387 | 8.48 | 293011 | 13.16 | 142036 | 17.00 |
| 09 | 50269-12 | 182445 | 6.96 | 325095 | 8.48 | 292940 | 13.16 | 141328 | 17.00 |
| 10 | 50269-13 | 181422 | 6.95 | 325220 | 8.48 | 288306 | 13.16 | 142056 | 16.99 |
| 11 | ZZZZZ | 177543 | 6.95 | 320784 | 8.48 | 291233 | 13.16 | 139502 | 17.00 |
| 12 | ZZZZZ | 176838 | 6.96 | 322210 | 8.48 | 287454 | 13.16 | 140547 | 17.00 |
| 13 | ZZZZZ | 178680 | 6.95 | 319159 | 8.48 | 285338 | 13.16 | 138827 | 17.00 |
| 14 | ZZZZZ | 177917 | 6.95 | 318729 | 8.48 | 286274 | 13.16 | 139863 | 17.00 |
| 15 | ZZZZZ | 174339 | 6.95 | 316923 | 8.48 | 282869 | 13.16 | 139360 | 17.00 |
| 16 | ZZZZZ | 173026 | 6.95 | 314377 | 8.48 | 279861 | 13.16 | 136843 | 17.00 |
| 17 | ZZZZZ | 172856 | 6.96 | 316137 | 8.48 | 282270 | 13.16 | 137151 | 17.00 |
| 18 | ZZZZZ | 174649 | 6.96 | 314299 | 8.49 | 278691 | 13.16 | 137959 | 17.00 |
| 19 | ZZZZZ | 173004 | 6.95 | 309419 | 8.48 | 277830 | 13.16 | 137309 | 17.00 |
| 20 | ZZZZZ | 170064 | 6.95 | 309918 | 8.48 | 276591 | 13.16 | 135518 | 17.00 |
| 21 | | 169316 | 6.96 | 306595 | 8.48 | 274077 | 13.17 | 135068 | 17.00 |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50269

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 174125 | | 6.96 | | 312914 | | 8.48 | | 282690 | | 13.16 | | 142302 | | 17.00 | |
| | UPPER LIMIT | 348250 | | 7.38 | | 625828 | | 8.99 | | 565380 | | 13.95 | | 284604 | | 18.02 | |
| | LOWER LIMIT | 87063 | | 6.54 | | 156457 | | 7.97 | | 141345 | | 12.37 | | 71151 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 174125 | | 6.96 | | 312914 | | 8.48 | | 282690 | | 13.16 | | 142302 | | 17.00 | |
| 02 | L808203B | 175842 | | 6.95 | | 315853 | | 8.48 | | 282788 | | 13.16 | | 145080 | | 17.00 | |
| 03 | L808203B2 | 174557 | | 6.95 | | 318567 | | 8.47 | | 284716 | | 13.16 | | 145875 | | 17.00 | |
| 04 | ZZZZZ | 172363 | | 6.95 | | 316590 | | 8.48 | | 281915 | | 13.16 | | 141140 | | 17.00 | |
| 05 | B808203B | 171337 | | 6.95 | | 313651 | | 8.48 | | 282160 | | 13.16 | | 139694 | | 17.00 | |
| 06 | ZZZZZ | 168149 | | 6.95 | | 310354 | | 8.48 | | 275986 | | 13.16 | | 137600 | | 17.00 | |
| 07 | 50269-10,DL | 169138 | | 6.95 | | 306382 | | 8.48 | | 275577 | | 13.16 | | 135409 | | 17.00 | |
| 08 | ZZZZZ | 162501 | | 6.95 | | 300529 | | 8.48 | | 269565 | | 13.16 | | 134035 | | 17.00 | |
| 09 | 50269-11,DL | 163021 | | 6.95 | | 300195 | | 8.48 | | 267834 | | 13.16 | | 134671 | | 17.00 | |
| 10 | 50269-12,DL | 163872 | | 6.96 | | 302089 | | 8.47 | | 270922 | | 13.16 | | 134906 | | 17.00 | |
| 11 | 50269-13,DL | 163083 | | 6.95 | | 297174 | | 8.48 | | 267773 | | 13.16 | | 133154 | | 17.00 | |
| 12 | ZZZZZ | 161379 | | 6.95 | | 298155 | | 8.48 | | 268785 | | 13.16 | | 134176 | | 17.00 | |
| 13 | ZZZZZ | 159084 | | 6.95 | | 294487 | | 8.48 | | 264762 | | 13.16 | | 133261 | | 17.00 | |
| 14 | ZZZZZ | 152950 | | 6.95 | | 281263 | | 8.48 | | 256110 | | 13.16 | | 132982 | | 17.00 | |
| 15 | ZZZZZ | 153690 | | 6.95 | | 286726 | | 8.48 | | 261088 | | 13.16 | | 131689 | | 17.00 | |
| 16 | ZZZZZ | 155820 | | 6.95 | | 288480 | | 8.48 | | 260354 | | 13.16 | | 131502 | | 17.00 | |
| 17 | ZZZZZ | 160610 | | 6.95 | | 292772 | | 8.48 | | 261386 | | 13.16 | | 131431 | | 17.00 | |
| 18 | ZZZZZ | 152888 | | 6.95 | | 286669 | | 8.48 | | 257552 | | 13.16 | | 129932 | | 17.00 | |
| 19 | ZZZZZ | 160172 | | 6.95 | | 293311 | | 8.48 | | 263224 | | 13.16 | | 130452 | | 17.00 | |
| 20 | ZZZZZ | 148730 | | 6.95 | | 280495 | | 8.48 | | 255829 | | 13.16 | | 130575 | | 17.00 | |
| 21 | ZZZZZ | 164754 | | 6.96 | | 306731 | | 8.47 | | 274599 | | 13.16 | | 135683 | | 17.00 | |
| 22 | ZZZZZ | 167315 | | 6.95 | | 307208 | | 8.48 | | 276043 | | 13.16 | | 136847 | | 17.00 | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C NO temp blank Samples on ice measured temp 4°C
3) Received in good condition (Y) or N
4) pH checked by: N/A
5) Labels checked by: JB 8/18/03

Project#: 10971.217.002 Project: Buckis Harbor Packer TO15

Company: **Weston Solutions**

Contact: Jim Packer

Address: **1 Wall Street**

**Manchester, NH 03101-1501**

Phone: (603)656-5487 PO# Quote #

Sampler (Signature): Kathleen Sackup

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4±2 C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TB-081203-01 | 8/12/03 | 0760 | VOC 8260B | | X | | | X | | | W | 2 | V | | 50269-1 |
| MW14-038-PP | 8/12/03 | 1830 | | | X | | | X | | | GW | 3 | V | | -2 |
| MW14-050-PP | 8/13/03 | 0845 | | | X | | | X | | | | 3 | V | | -3 |
| MW14-063-PP | 8/13/03 | 0945 | | | X | | | X | | | | 3 | V | | -4 |
| MW14-073-PP | 8/13/03 | 1020 | | | X | | | X | | | | 3 | V | | -5 |
| MW11-097-PP | 8/13/03 | 1800 | | | X | | | X | | | | 3 | V | | -6 |
| MW11-147-PP | 8/14/03 | 0815 | | | X | | | X | | | | 3 | V | | -7 |
| MW11-157-PP | 8/14/03 | 0925 | | | X | | | X | | | | 3 | V | | -8 |
| MW11-193-PP | 8/14/03 | 1015 | | | X | | | X | | | | 3 | V | | -9 |
| MW12-040-PP | 8/14/03 | 1045 | | | X | | | X | | | | 3 | V | | -10 |
| MW12-083-PP | 8/14/03 | 1725 | | | X | | | X | | | | 3 | V | | -11 |
| MW12-161-PP | 8/15/03 | 0800 | | | X | | | X | | | | 3 | V | | -12 |

Received By: Unselbirkhi Time: 2020
Date: 8/15/03
Relinquished By Sampler:

FAX RESULTS? (YES) NO
Fax # 603 656 5401

Turnaround Request
Standard ☐ Due Date
Priority ☐ Due Date

Comments / Instructions: Packer Samples Buckis Harbor
via VOC 8260B
Results due by Aug. 22nd (data results w/ QC report to follow later)

Client Code: WESTONM

Page 1 of 2

Analytics\AEL Documents\AEL COC

120/122

# Chain Of Custody Form

**analytics** environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

**Samples were:**
1) Shipped or hand-delivered
2) Temp blank °C No temp blank Staples on ice measured temp of staples 4°C
3) Received in good condition Y or N
4) pH checked by: N/A
5) Labels checked by: JB 8/18/03

Project#: 10971.217.002 Project: Bucks Harbor
Company: **Weston Solutions**
Contact: Jim Ricker
Address: **1 Wall Street**
**Manchester, NH 03101-1501**
Phone: 603 656-5487 PO# Quote #
Sampler (Signature): CT Scup

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4°C | $HNO_3$ | $H_2SO_4$ | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW12-207-PP | 8/15/03 | 0845 | VOC 8260 | | X | | | X | | | GW | 3 | ✓ | | 50269-13 |

Comments / Instructions:
see page 1 for TAT + details

FAX RESULTS? YES NO
Fax #

Turnaround Request
Standard ☐ Due Date
Priority ☐ Due Date

Client Code: WESTONM

Page 2 of 2

Received By: [signature] Time: 2020 Date: 8/15/03
Received By: Time: Date:
Received By: Time: Date:
Relinquished By Sampler: CT Scup
Relinquished By:
Relinquished By:

Analytics\AEL Documents\AEL COC

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 50269 — COOLER NUMBER: N/A

CLIENT: Weston — NUMBER OF COOLERS: 1

PROJECT: 10971217002 — DATE RECEIVED: 8/15/03

**A: PRELIMINARY EXAMINATION:** — DATE COOLER OPENED: 8/15/03

1. Cooler received by(initials) ALR — Date Received: 8/15/03
2. Did cooler come with a shipping slip? — Y (N)

If YES, enter carrier name and airbill number here: _____

3. Were custody seals on the outside of cooler? — Y (N)
How many & where: _____ Seal Date: _____ Seal Name: _____

4. Did the custody seals arrive unbroken and intact upon arrival? — Y N/A

5. COC#: _____

6. Were Custody papers filled out properly (ink,signed, etc)? — (Y) N

7. Were custody papers sealed in a plastic bag? — Y (N)

8. Did you sign the COC in the appropriate place? — (Y) N

9. Was the project identifiable from the COC papers? — (Y) N

10. Was enough ice used to chill the cooler? (Y) N — Temp. of cooler: No temp blank. Samples were on ice with a measured temp of 4°C

**B. Log-In:** Date samples were logged in: _____ By: _____

11. Type of packing in cooler(bubble wrap, popcorn) — Y None

12. Were all bottles sealed in separate plastic bags? — (Y) N

13. Did all bottles arrive unbroken and were labels in good condition? — (Y) N

14. Were all bottle labels complete(ID,Date,time,etc.) — (Y) N

15. Did all bottle labels agree with custody papers? — (Y) N

16. Were the correct containers used for the tests indicated: — (Y) N

17. Were samples received at the correct pH? — Y N/A

18. Was sufficient amount of sample sent for the tests indicated? — (Y) N

19. Were bubbles absent in VOA samples? — Y (N)

If NO, List sample #'s: _____

20. Laboratory labeling verified by (initials): JB — Date: 8/18/03

analytics environmental laboratory LLC

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800-929-9906
www.analyticslab.com

August 29, 2003

Mr. Jim Ricker
Weston Solutions
One Wall Street
Manchester, NH 03101-1501

**RE: Analytical Results Case Narrative**
**Bucks Harbor, ME Project**
**Analytics # 50273**

Dear Mr. Ricker:

Enclosed please find the analytical results for samples collected from the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed for the target volatile organic compounds by EPA Method 8260B. Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level III package has been assembled in the following order:

Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
VOA Form 1 Sample Data Results
Chromatograms
VOA Form 2 Surrogate Recoveries
VOA Form 3 MS/MSD and LCS Recoveries
VOA Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
VOA Form 5 BFB Tune Summaries
VOA Form 6 Initial Calibration Data (equiv..) Response Factor Report
VOA Form 7 Continuing Calibration Check (equiv.)
VOA Form 8 Int. Standard and RT Summary
Chain of Custody (COC) Forms
Sample Receipt Checklist

## QC NON CONFORMANCE SUMMARY

**Sample Receipt:**
No QC deviations.

**Aqueous Volatile Organics:**
Two compounds t-Butyl alcohol and Tetrahydrofuran had high recoveries in the Laboratory Control Spike /Duplicate (LCS/LCSD) analyzed 08/19/03 (L808193B/L808193B2). Methyl ethyl ketone had an RPD of 18% that is above the limit of 15%. (See Form III). ). t-Butyl alcohol had high recovery in the matrix spike duplicate 50269-2 (MW14-038-PP). Methyl ethyl ketone was detected in several samples associated with this QC however no data was qualified for the marginal RPD failure.

Multiple analytes had recoveries above the acceptance criteria in the LCS/LCSD analyzed on 08/19/03 (L808193B3/L808193B4). See Form III These analytes were not detected in the samples associated with this QC and results were reported without qualification.

t-Butyl alcohol and 1,2-Dibromo-3-chloropropane had high recoveries in the Laboratory Control Spike (LCS) analyzed 08/20/03 (L808203B). These analytes were not detected in the samples associated with this QC and results were reported without qualification.

Two compounds t-Butyl alcohol and Tetrahydrofuran had high recoveries in the Laboratory Control Spike (LCS) analyzed 08/20/03 (L808203B30. These analytes were not detected in the samples associated with this QC and results were reported without qualification

The Continuing Calibration Standards (CC) (File # B17294SC, B17318SC, B17340Scand B17363SC) had high %D (24%, 36%,28%and 28%) for t-Butyl Alcohol with a limit of 20%. T-Butyl alcohol was not detected in any samples and results were reported without qualification.

If you have any questions on this data submittal, please do not hesitate to contact me.

Sincerely,
ANALYTICS Environmental Laboratory, LLC

Stephen L. Knollmeyer
Laboratory Director

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
www.analyticslab.com

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

**Report Number: 50273**

**Revision: Rev. 0**

**Re: Bucks Harbor Packer Tests** **10971-217-002**

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 August 2003 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

| Lab Number | Sample Date | Station Location | Analysis | Comments |
|---|---|---|---|---|
| 50273-1 | 08/15/03 | MW7-015-PP | EPA 8260 Volatile Organics | |
| 50273-2 | 08/15/03 | MW7-044-PP | EPA 8260 Volatile Organics | |
| 50273-3 | 08/15/03 | MW7-075-PP | EPA 8260 Volatile Organics | |
| 50273-4 | 08/15/03 | MW7-115-PP | EPA 8260 Volatile Organics | |
| 50273-5 | 08/15/03 | MW7-115-PP-E | EPA 8260 Volatile Organics | |
| 50273-6 | 08/15/03 | TB-081503-01 | EPA 8260 Volatile Organics | |
| 50273-7 | 08/16/03 | MW10-130-PP | EPA 8260 Volatile Organics | |
| 50273-8 | 08/16/03 | MW10-150-PP | EPA 8260 Volatile Organics | |
| 50273-9 | 08/16/03 | MW10-150-PP-E | EPA 8260 Volatile Organics | |
| 50273-10 | 08/16/03 | MW10-164-PP | Electronic Data Deliverable | |
| | 08/16/03 | MW10-164-PP | EPA 8260 Volatile Organics | |

**Sample Receipt Exceptions:** None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina, Virginia, Pennsylvania and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature _____
Stephen L. Knollmeyer Lab. Director

Date 08/22/03

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analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**Lab Sample ID:** B808193B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 99 % | d4-1,2-Dichloroethane | 97 % | d8-Toluene | 100 % | Bromofluorobenzene | 97 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

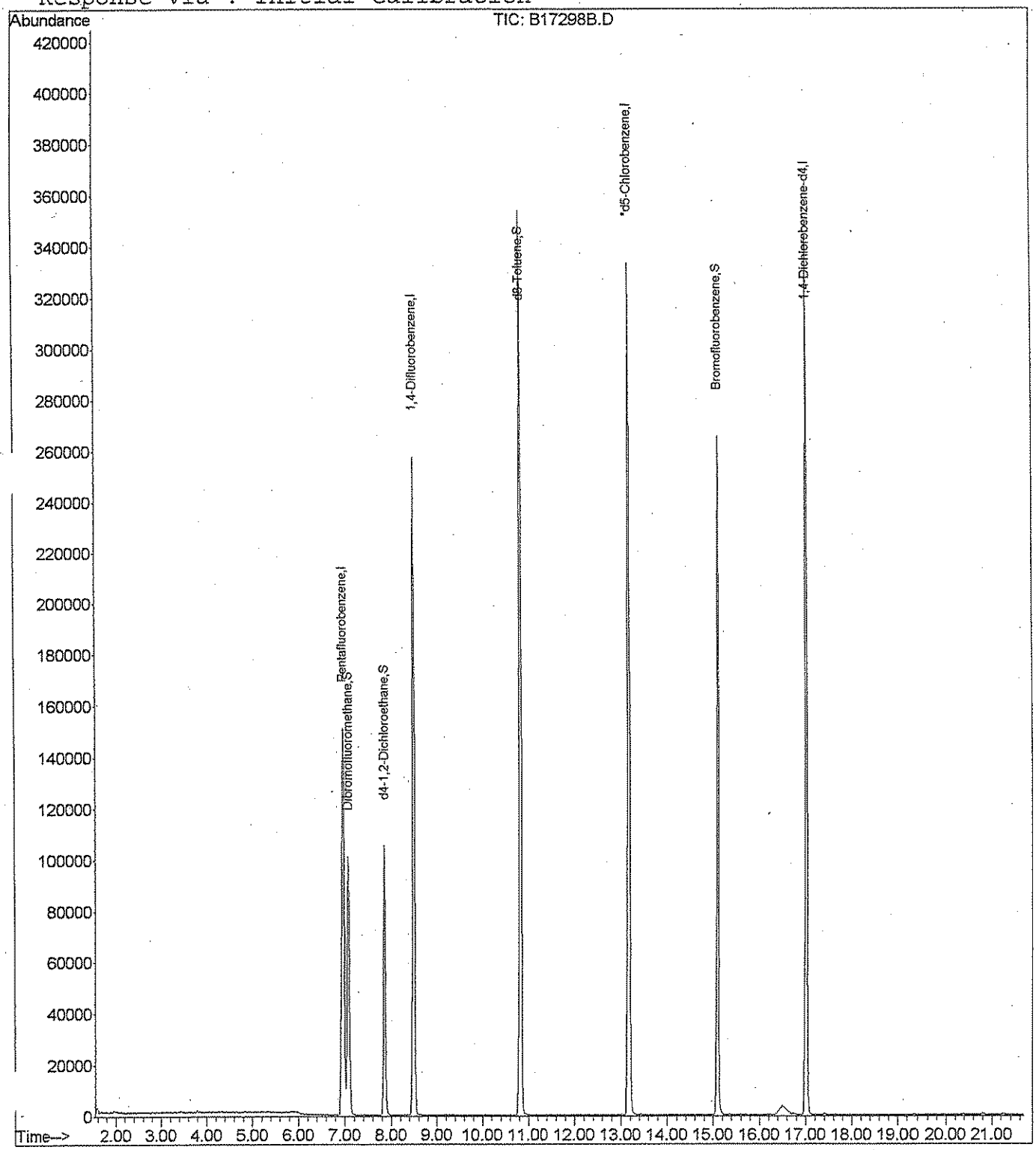
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17298B.D Vial: 7
Acq On : 19 Aug 2003 11:24 am Operator:
Sample : B808193B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 11:32 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

195 Commerce Way
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603-436-5111 Fax 603-430-2151
800-929-9906

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**Lab Sample ID:** B808193B2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/19/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 98 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

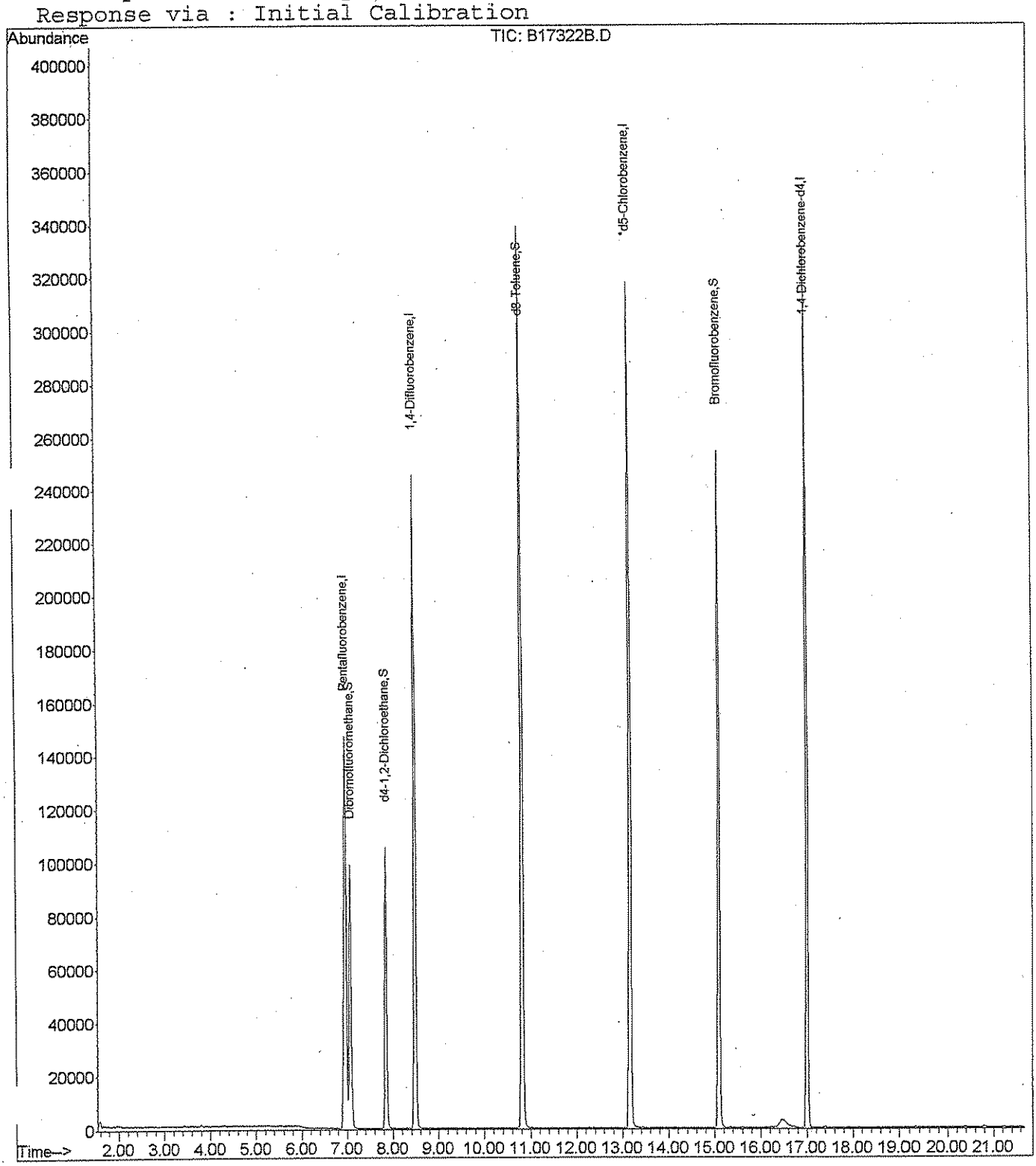
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17322B.D Vial: 31
Acq On : 19 Aug 2003 11:34 pm Operator:
Sample : B808193B2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 23:46 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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800-929-9906

Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B808203B
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

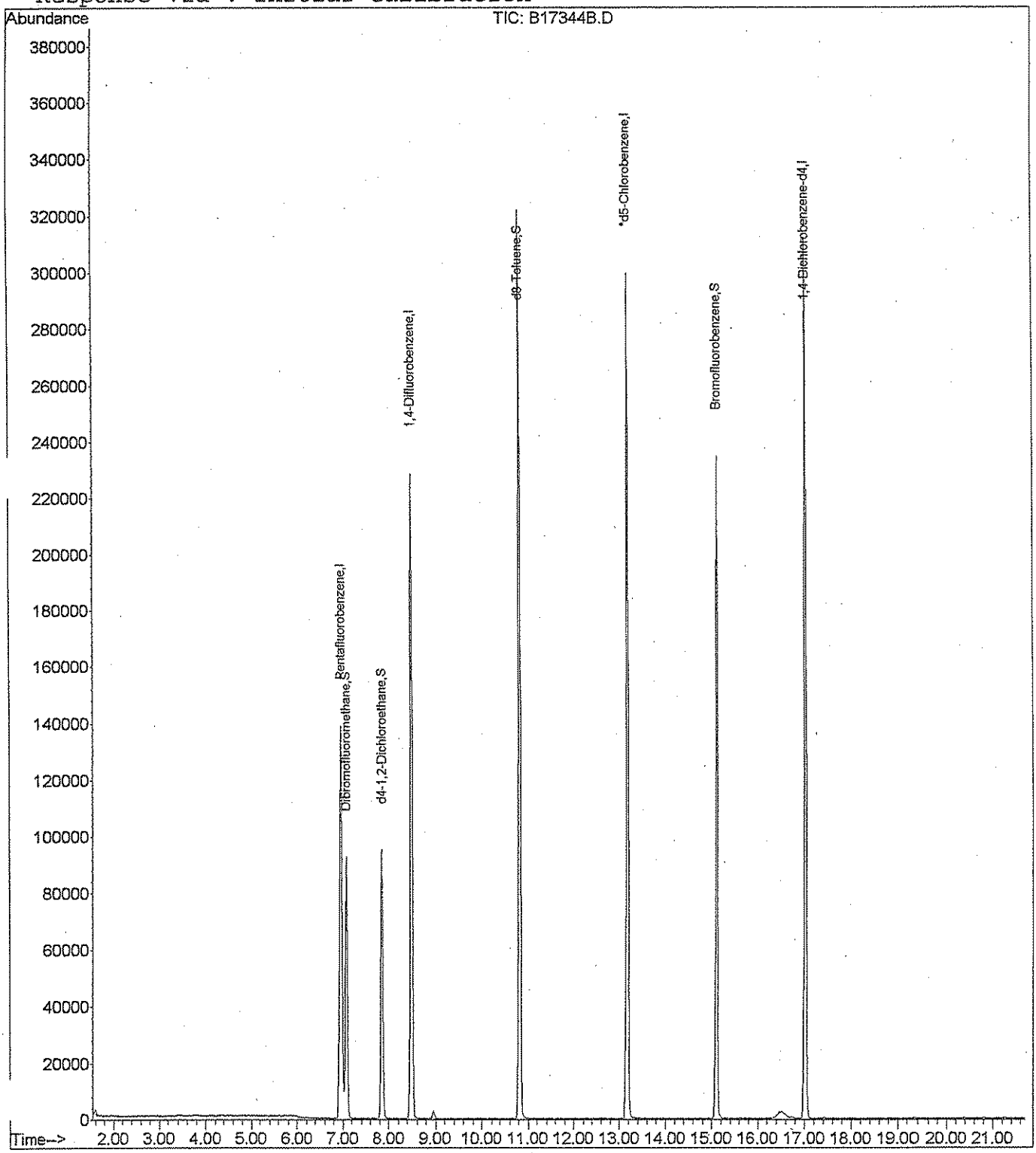
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17344B.D Vial: 6
Acq On : 20 Aug 2003 11:36 am Operator:
Sample : B808203B Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 11:52 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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1 Wall Street
Manchester NH 03101-1501

August 29, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** LABQC

**SAMPLE DATA**

**Lab Sample ID:** B808203B2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** N/A
**Lab Receipt Date:** N/A
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 101 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 98 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

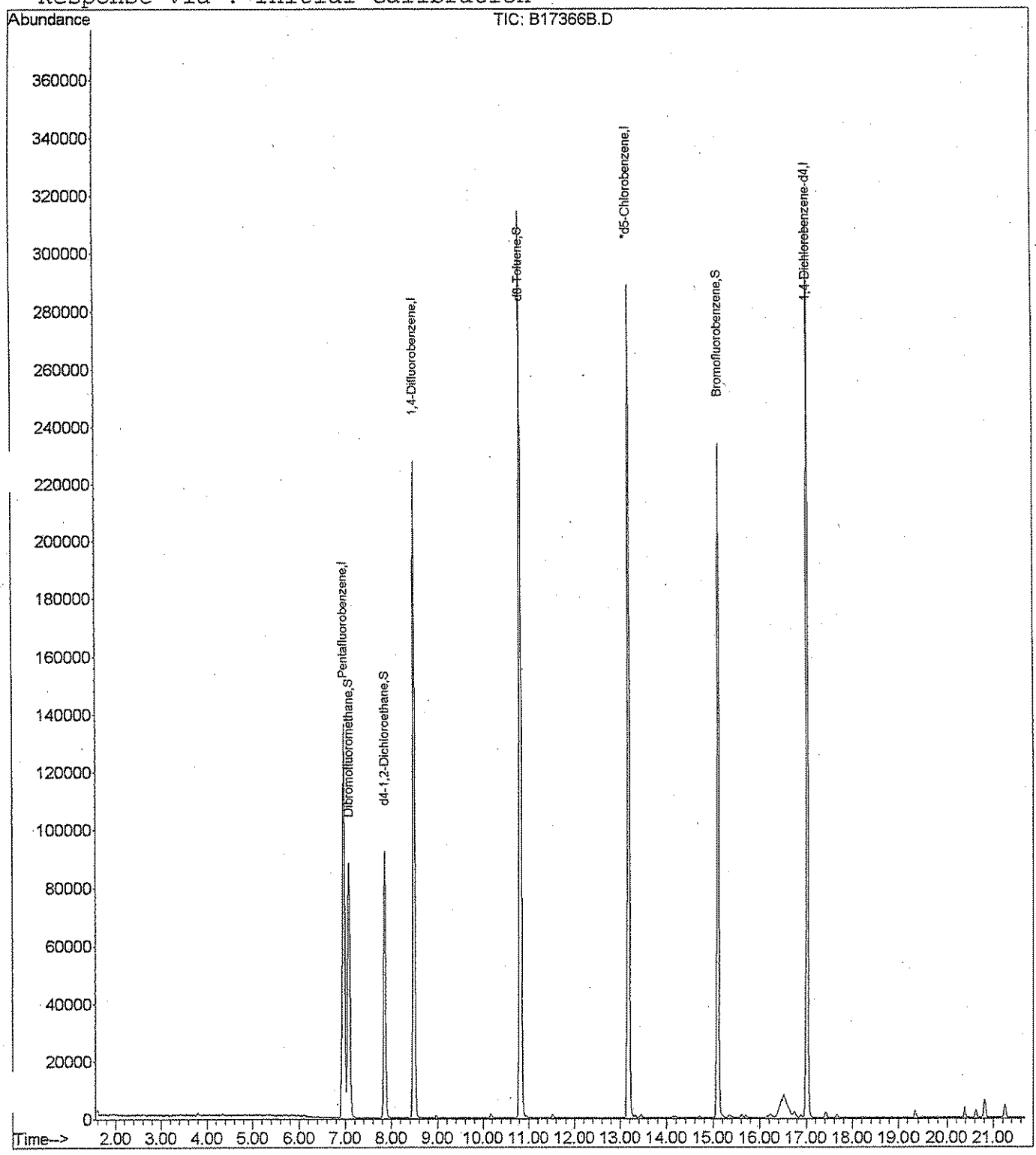
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17366B.D Vial: 28
Acq On : 20 Aug 2003 11:42 pm Operator:
Sample : B808203B2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 23:55 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-015-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-1
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **444 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | 3 | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

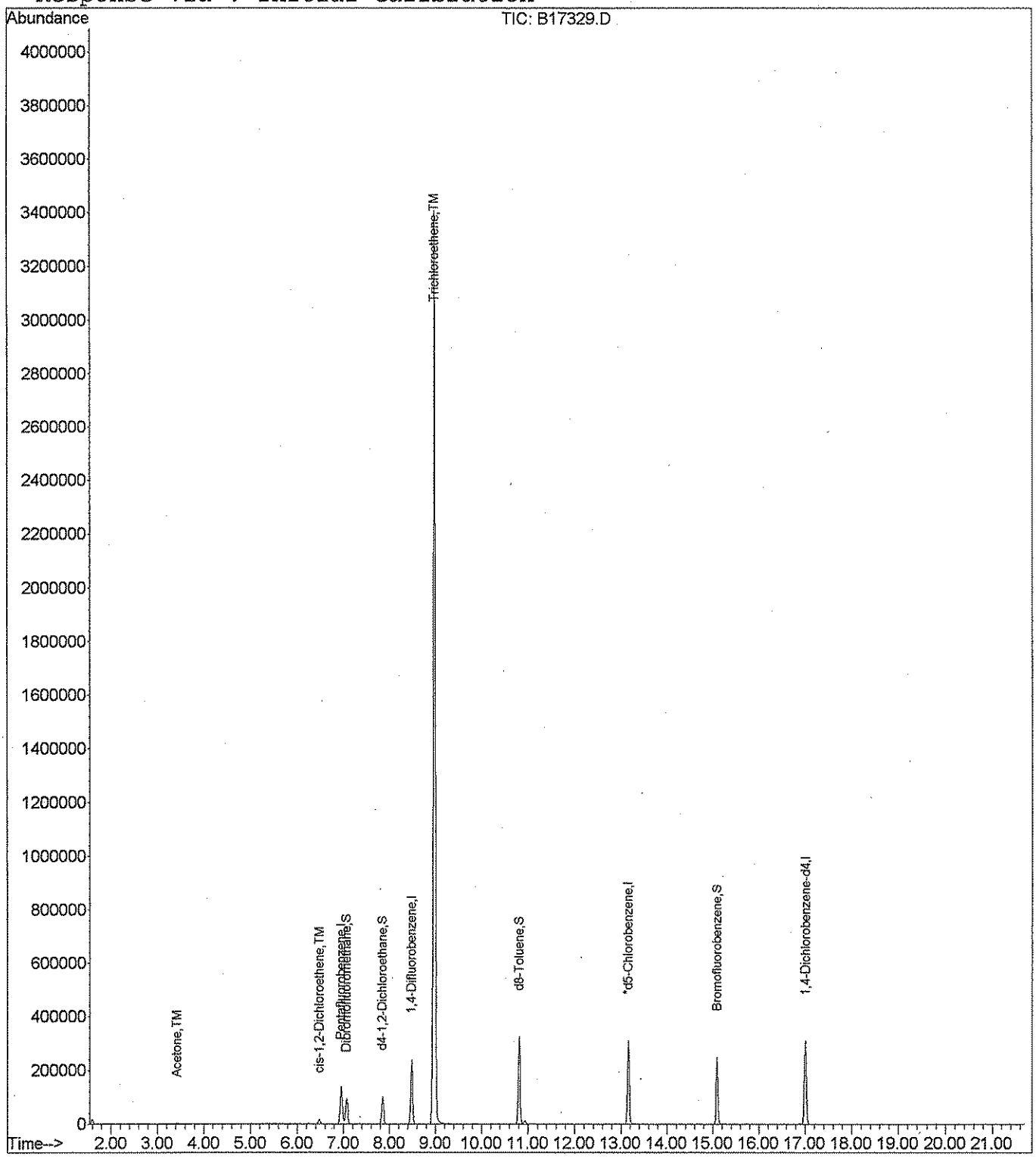
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17329.D Vial: 38
Acq On : 20 Aug 2003 2:58 am Operator:
Sample : 50273-1 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 3:20 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Manchester NH 03101-1501

August 22, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-015-PP

**Lab Sample ID:** 50273-1 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | 472 |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 99 % | Bromofluorobenzene | 95 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

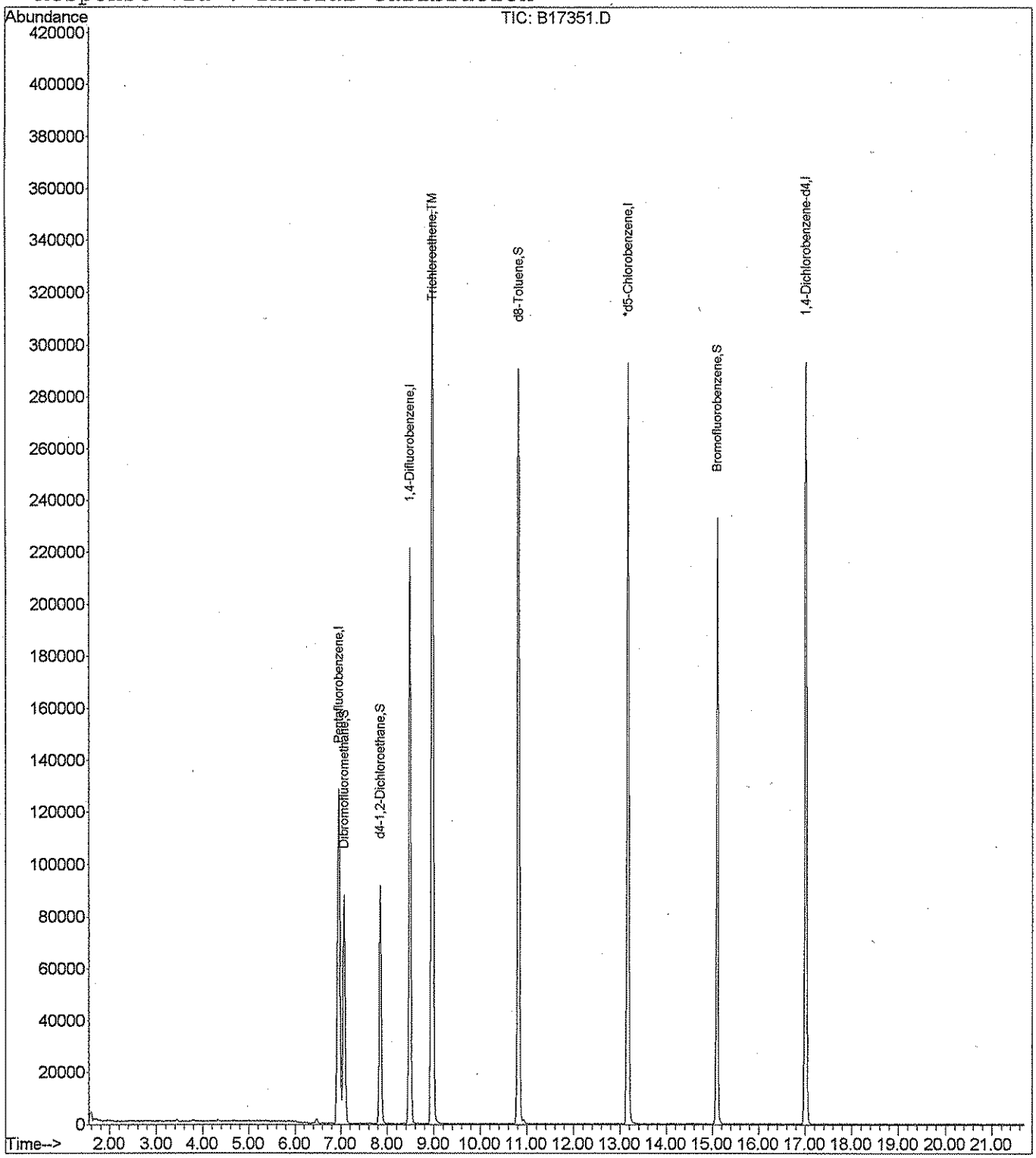
8260 full

Authorized signature Melissa A Hall

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17351.D Vial: 13
Acq On : 20 Aug 2003 3:39 pm Operator:
Sample : 50273-1,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 15:49 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Manchester NH 03101-1501

August 22, 2003

**SAMPLE DATA**

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-044-PP

**Lab Sample ID:** 50273-2
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **371 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **34** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **18** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 104 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 96 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

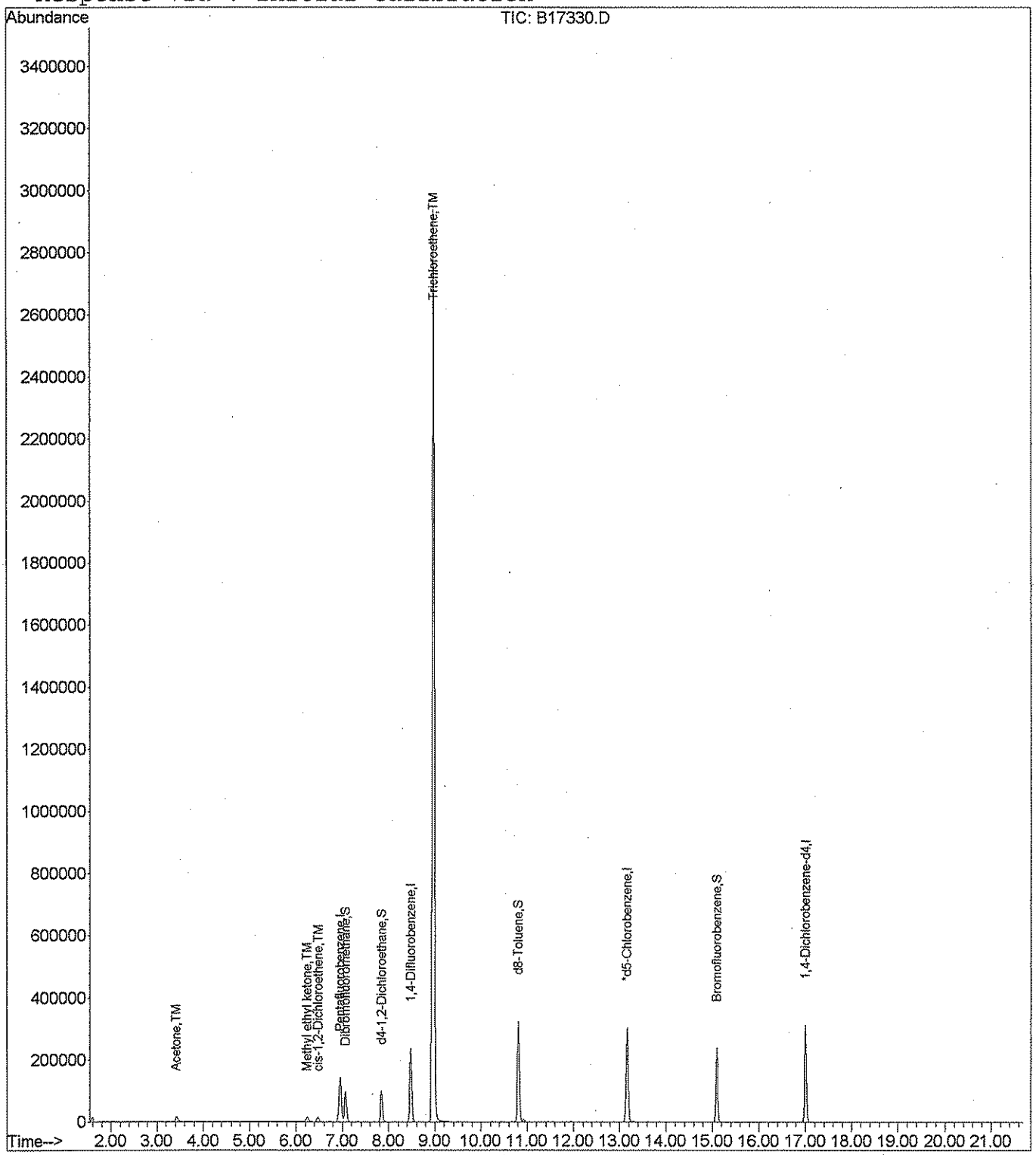
**COMMENTS:**

8260 full

Authorized signature Melissa A Tuttle

Data File : C:\HPCHEM\1\DATA\081903-B\B17330.D Vial: 39
Acq On : 20 Aug 2003 3:42 am Operator:
Sample : 50273-2 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 3:51 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-044-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-2 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | 392 |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

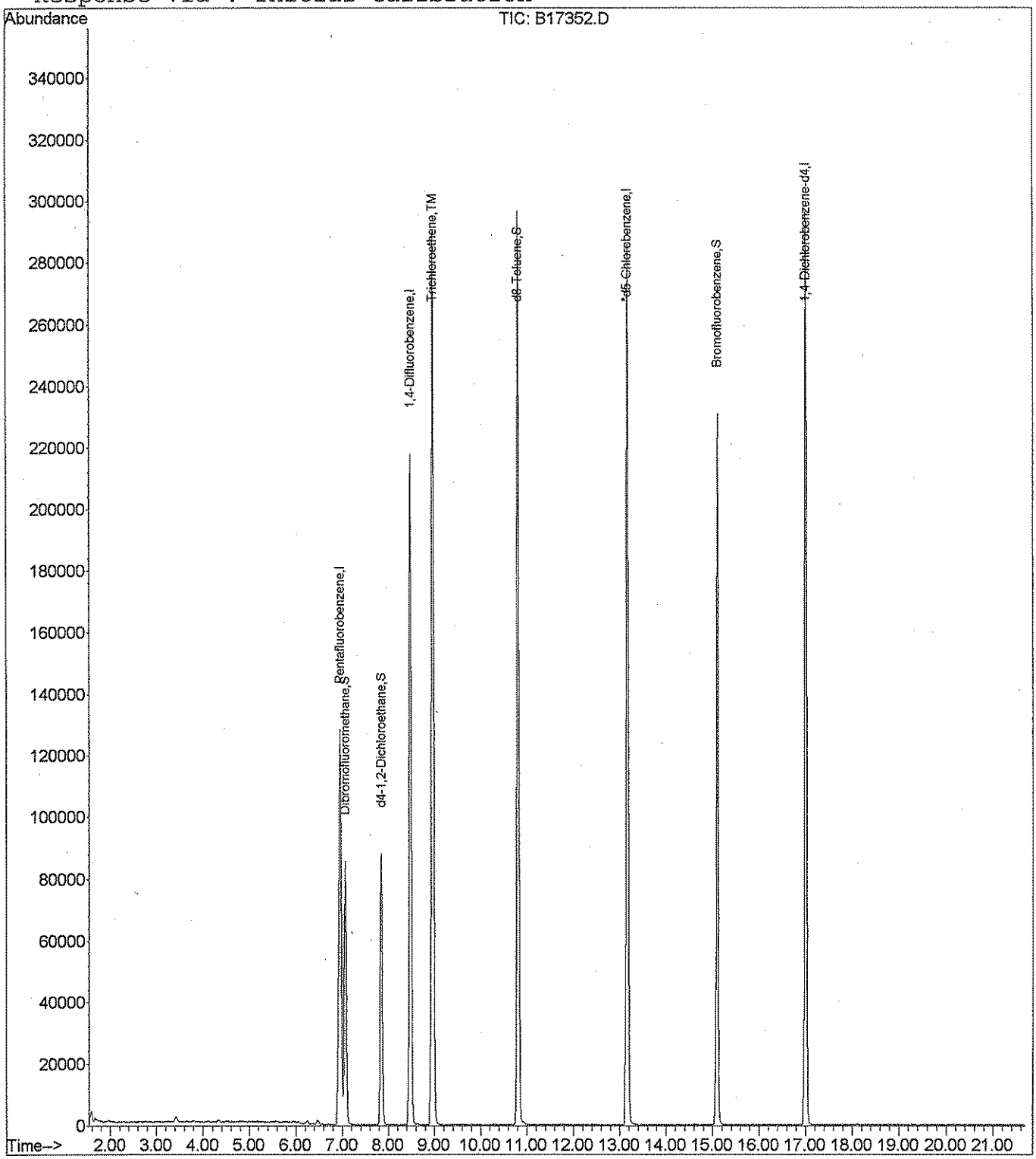
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17352.D Vial: 14
Acq On : 20 Aug 2003 4:08 pm Operator:
Sample : 50273-2,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 16:23 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-075-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-3
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **373 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **14** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **8 J** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 104 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 96 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

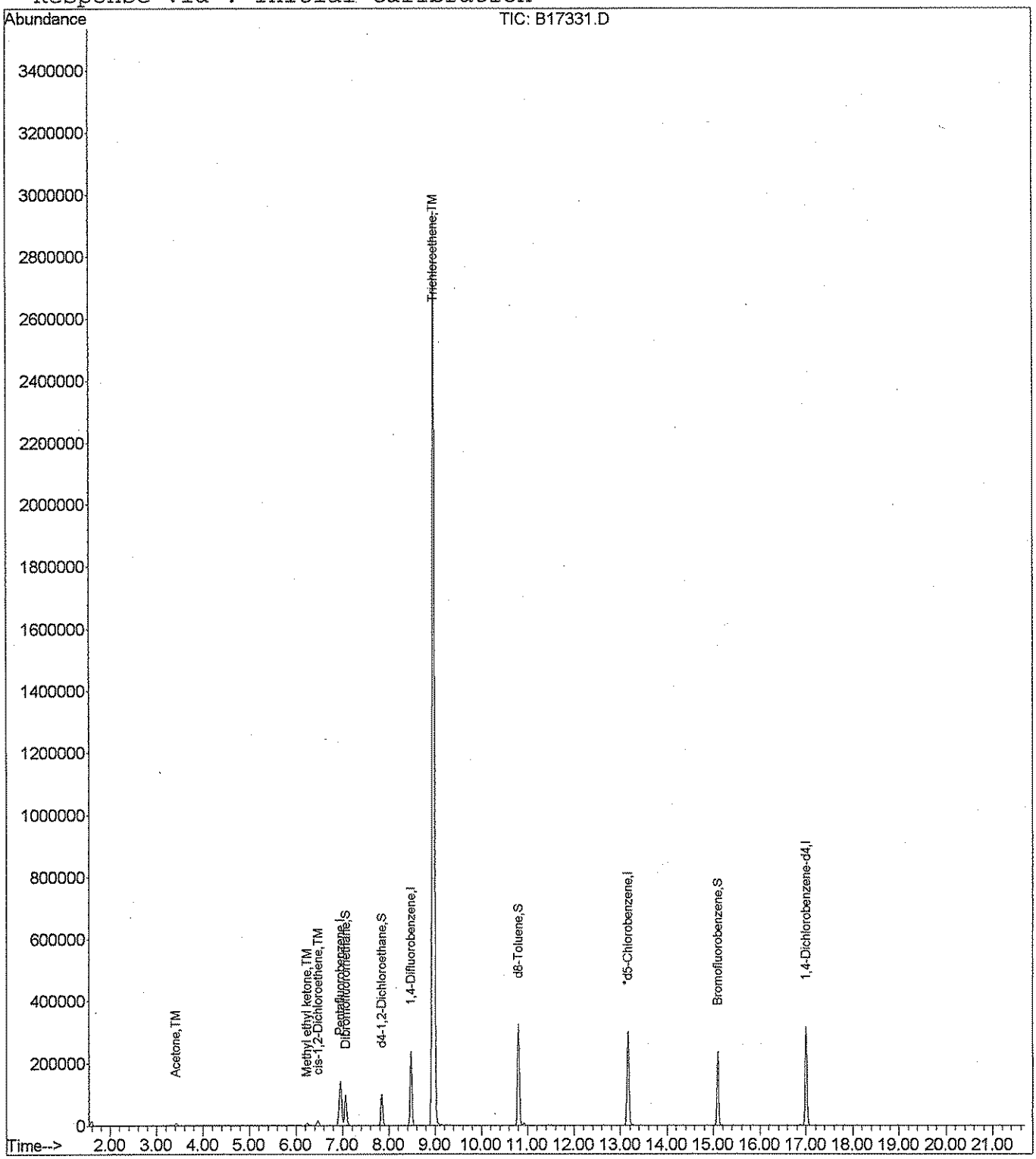
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\081903-B\B17331.D Vial: 40
Acq On : 20 Aug 2003 4:12 am Operator:
Sample : 50273-3 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 4:21 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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August 22, 2003

**SAMPLE DATA**

**Lab Sample ID:** 50273-3 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002
**Field Sample ID:** MW7-075-PP

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **376** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 % | d4-1,2-Dichloroethane | 99 % | d8-Toluene | 100 % | Bromofluorobenzene | 100 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

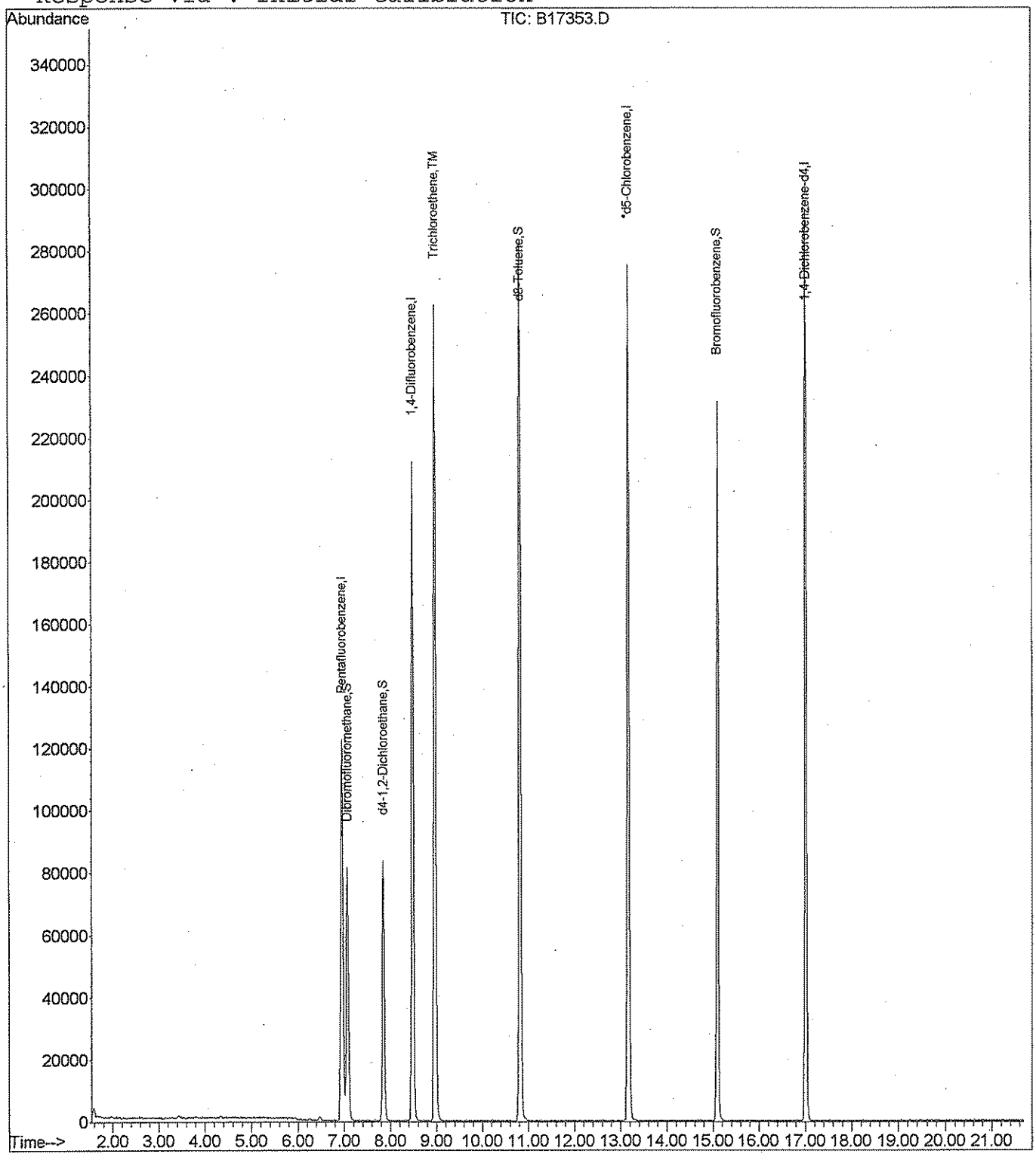
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\082003-B\B17353.D Vial: 15
Acq On : 20 Aug 2003 4:38 pm Operator:
Sample : 50273-3,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 16:56 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-115-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-4
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **460 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **3** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

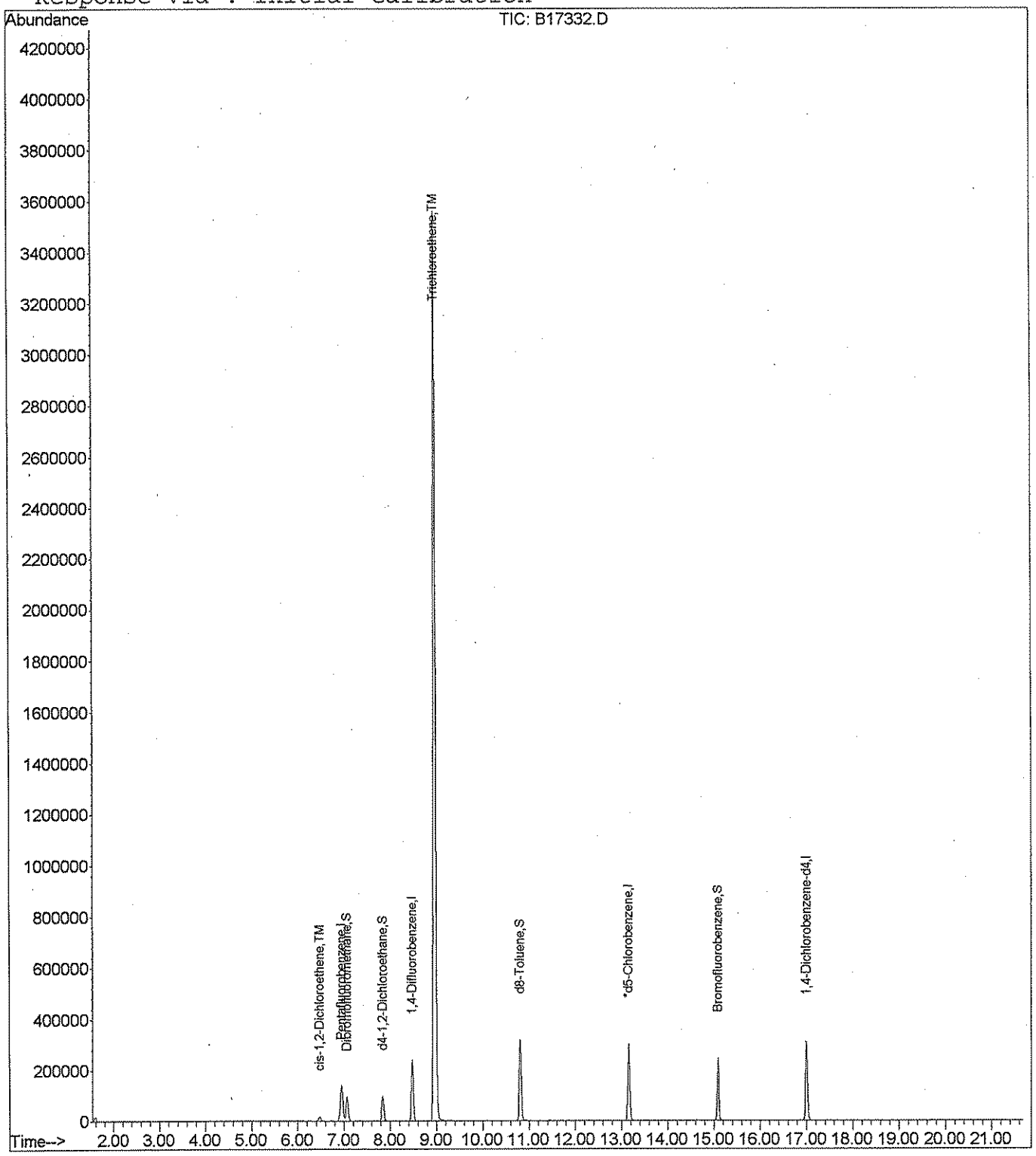
8260 full

Authorized signature Melissa A Kalli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17332.D Vial: 41
Acq On : 20 Aug 2003 4:41 am Operator:
Sample : 50273-4 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 4:51 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-115-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-4 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **501** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 104 | % | d4-1,2-Dichloroethane | 101 | % | d8-Toluene | 99 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

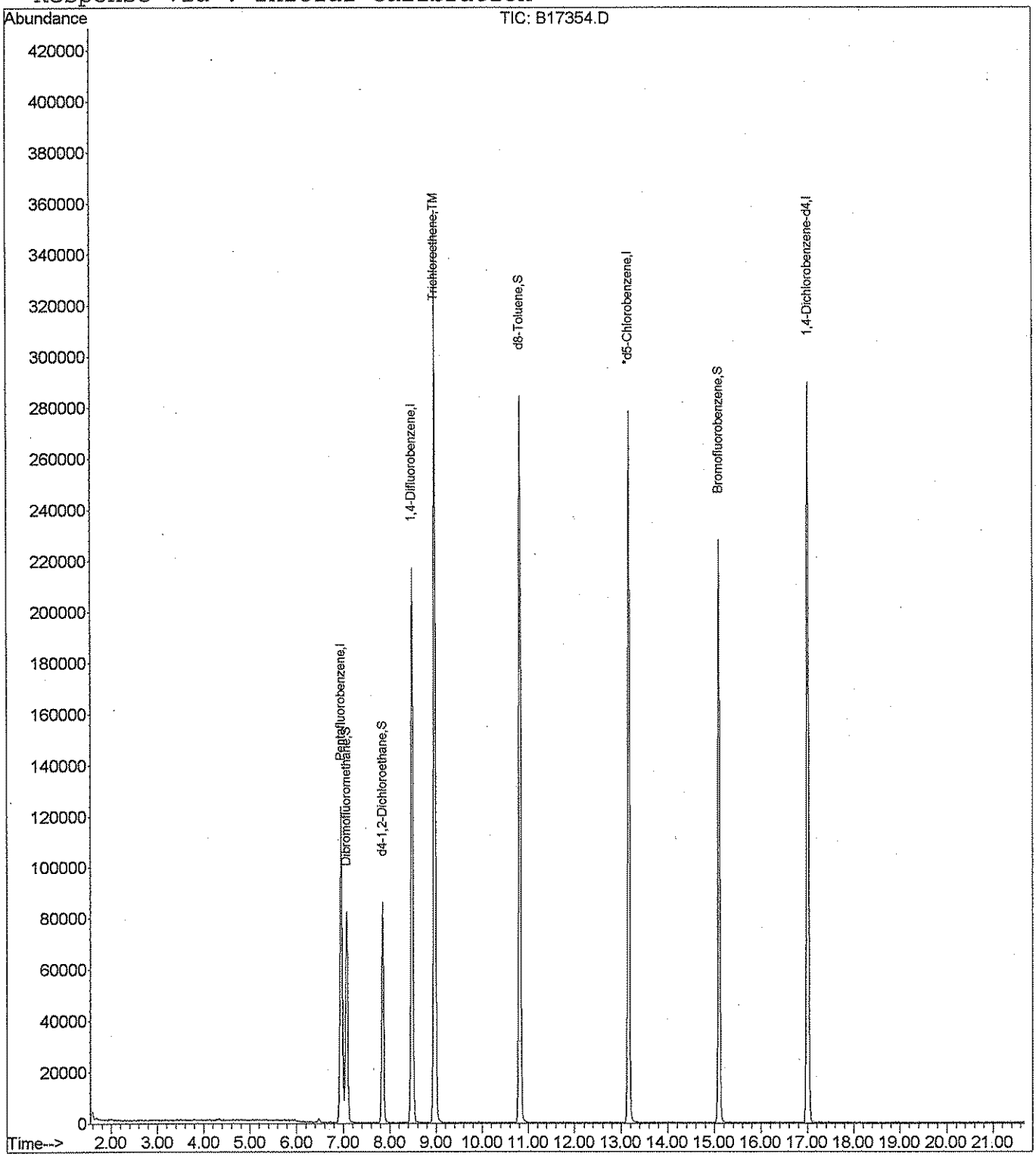
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17354.D Vial: 16
Acq On : 20 Aug 2003 5:22 pm Operator:
Sample : 50273-4,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 17:30 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-115-PP-E

**SAMPLE DATA**

**Lab Sample ID:** 50273-5
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **415 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | 3 | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 | % | d4-1,2-Dichloroethane | 101 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

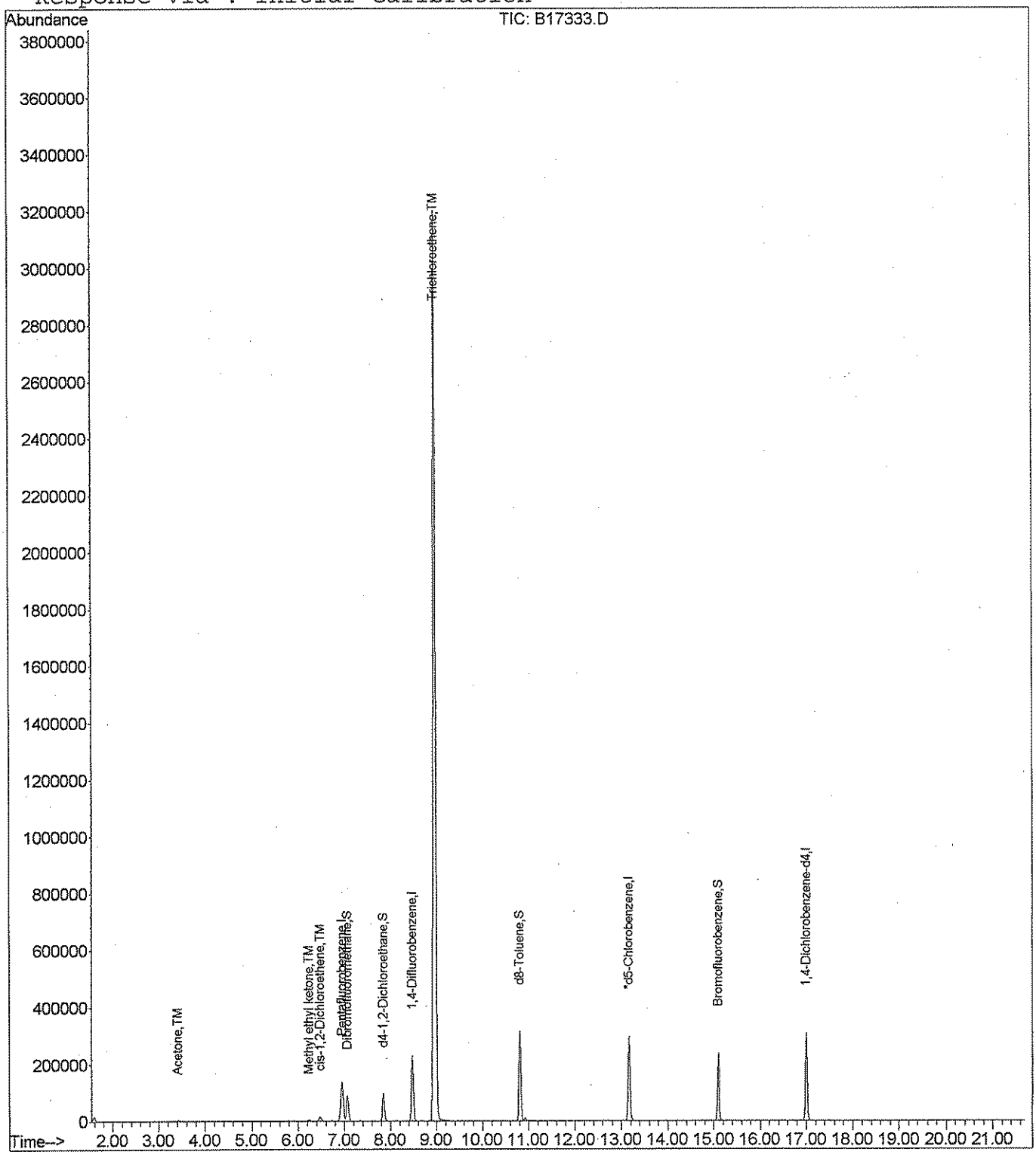
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17333.D Vial: 42
Acq On : 20 Aug 2003 5:10 am Operator:
Sample : 50273-5 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 5:22 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW7-115-PP-E

**SAMPLE DATA**

**Lab Sample ID:** 50273-5 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 10
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 20 | U | 1,3-Dichloropropane | 20 | U |
| Bromobenzene | 20 | U | cis-1,3-Dichloropropene | 20 | U |
| Bromochloromethane | 20 | U | trans-1,3-Dichloropropene | 20 | U |
| Bromodichloromethane | 20 | U | 2,2-Dichloropropane | 20 | U |
| Bromoform | 20 | U | 1,1-Dichloropropene | 20 | U |
| Bromomethane | 20 | U | Ethylbenzene | 20 | U |
| n-butylbenzene | 20 | U | Hexachlorobutadiene | 20 | U |
| sec-butylbenzene | 20 | U | Isopropylbenzene | 20 | U |
| tert-butylbenzene | 20 | U | p-isopropyltoluene | 20 | U |
| Carbon Tetrachloride | 20 | U | Methylene Chloride | 50 | U |
| Chlorobenzene | 20 | U | Methyl-tert-butyl ether (MTBE) | 20 | U |
| Chloroethane | 20 | U | Naphthalene | 20 | U |
| Chloroform | 20 | U | n-Propylbenzene | 20 | U |
| Chloromethane | 20 | U | Styrene | 20 | U |
| 2-Chlorotoluene | 20 | U | 1,1,1,2-Tetrachloroethane | 20 | U |
| 4-Chlorotoluene | 20 | U | 1,1,2,2-Tetrachloroethane | 20 | U |
| Dibromochloromethane | 20 | U | Tetrachloroethene | 20 | U |
| 1,2-Dibromo-3-chloropropane | 20 | U | Toluene | 20 | U |
| 1,2-Dibromoethane | 20 | U | 1,2,3-Trichlorobenzene | 20 | U |
| Dibromomethane | 20 | U | 1,2,4-Trichlorobenzene | 20 | U |
| 1,2-Dichlorobenzene | 20 | U | 1,1,1-Trichloroethane | 20 | U |
| 1,3-Dichlorobenzene | 20 | U | 1,1,2-Trichloroethane | 20 | U |
| 1,4-Dichlorobenzene | 20 | U | Trichloroethene | 20 | **418** |
| Dichlorodifluoromethane | 20 | U | Trichlorofluoromethane | 20 | U |
| 1,1-Dichloroethane | 20 | U | 1,2,3-Trichloropropane | 20 | U |
| 1,2-Dichloroethane | 20 | U | 1,2,4-Trimethylbenzene | 20 | U |
| 1,1-Dichloroethene | 20 | U | 1,3,5-Trimethylbenzene | 20 | U |
| cis-1,2-Dichloroethene | 20 | U | Vinyl Chloride | 20 | U |
| trans-1,2-Dichloroethene | 20 | U | o-Xylene | 20 | U |
| 1,2-Dichloropropane | 20 | U | m,p-Xylene | 20 | U |
| Acetone | 100 | U | Diethyl ether | 20 | U |
| Carbon Disulfide | 20 | U | 2-Hexanone | 100 | U |
| Tetrahydrofuran | 50 | U | Methyl isobutyl ketone | 100 | U |
| Methyl ethyl ketone | 100 | U | Di-isopropyl ether (DIPE) | 20 | U |
| t-Butyl alcohol (TBA) | 200 | U | Ethyl t-butyl ether (ETBE) | 20 | U |
| t-Amyl methyl ether (TAME) | 20 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 102 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 98 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

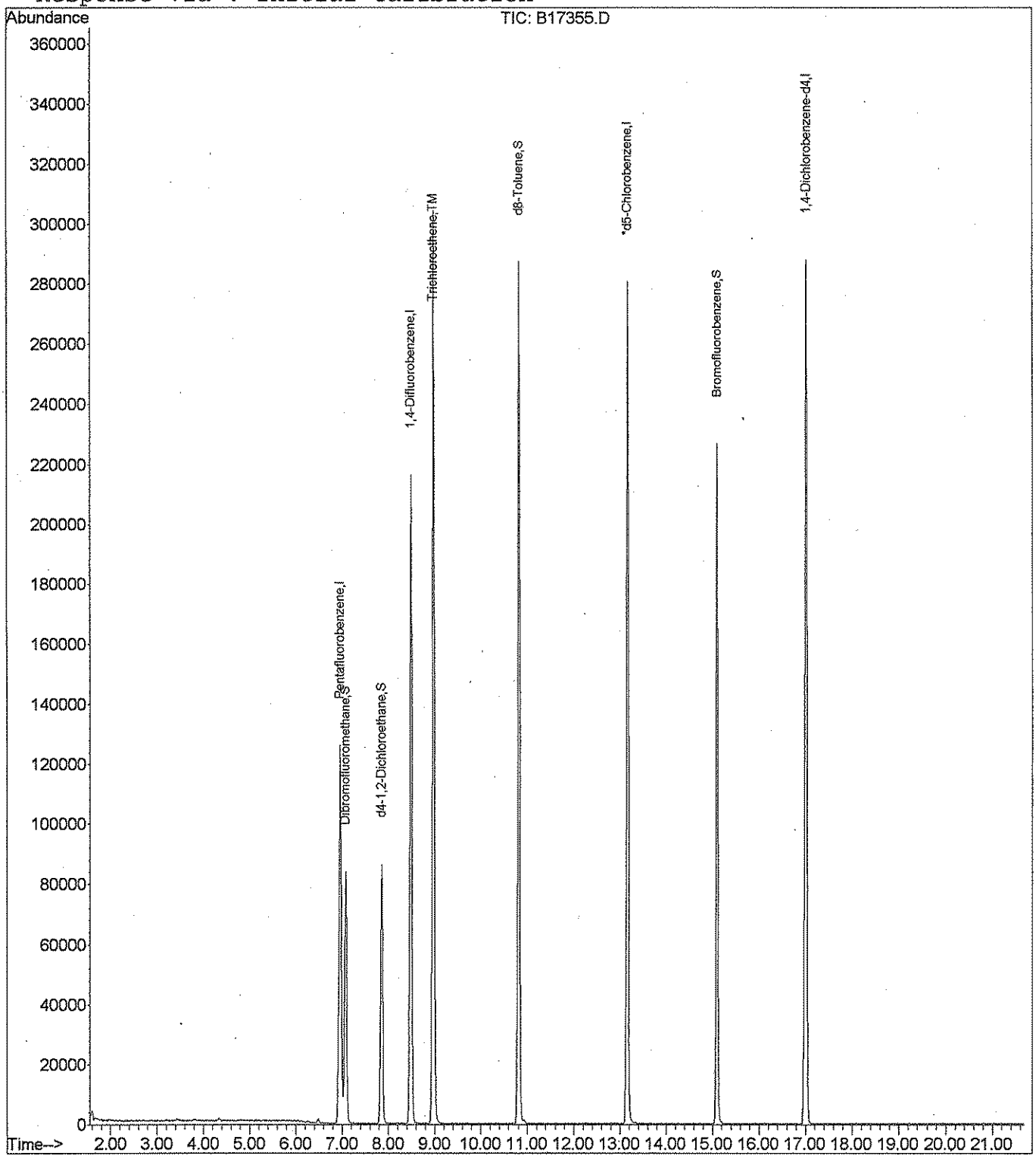
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17355.D Vial: 17
Acq On : 20 Aug 2003 5:51 pm Operator:
Sample : 50273-5,DL Inst : Instrumen
Misc : 500 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 18:03 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** TB-081503-01

**SAMPLE DATA**

**Lab Sample ID:** 50273-6
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/15/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | U |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | U |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | U |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | U | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | U | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 % | d4-1,2-Dichloroethane | 103 % | d8-Toluene | 100 % | Bromofluorobenzene | 96 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

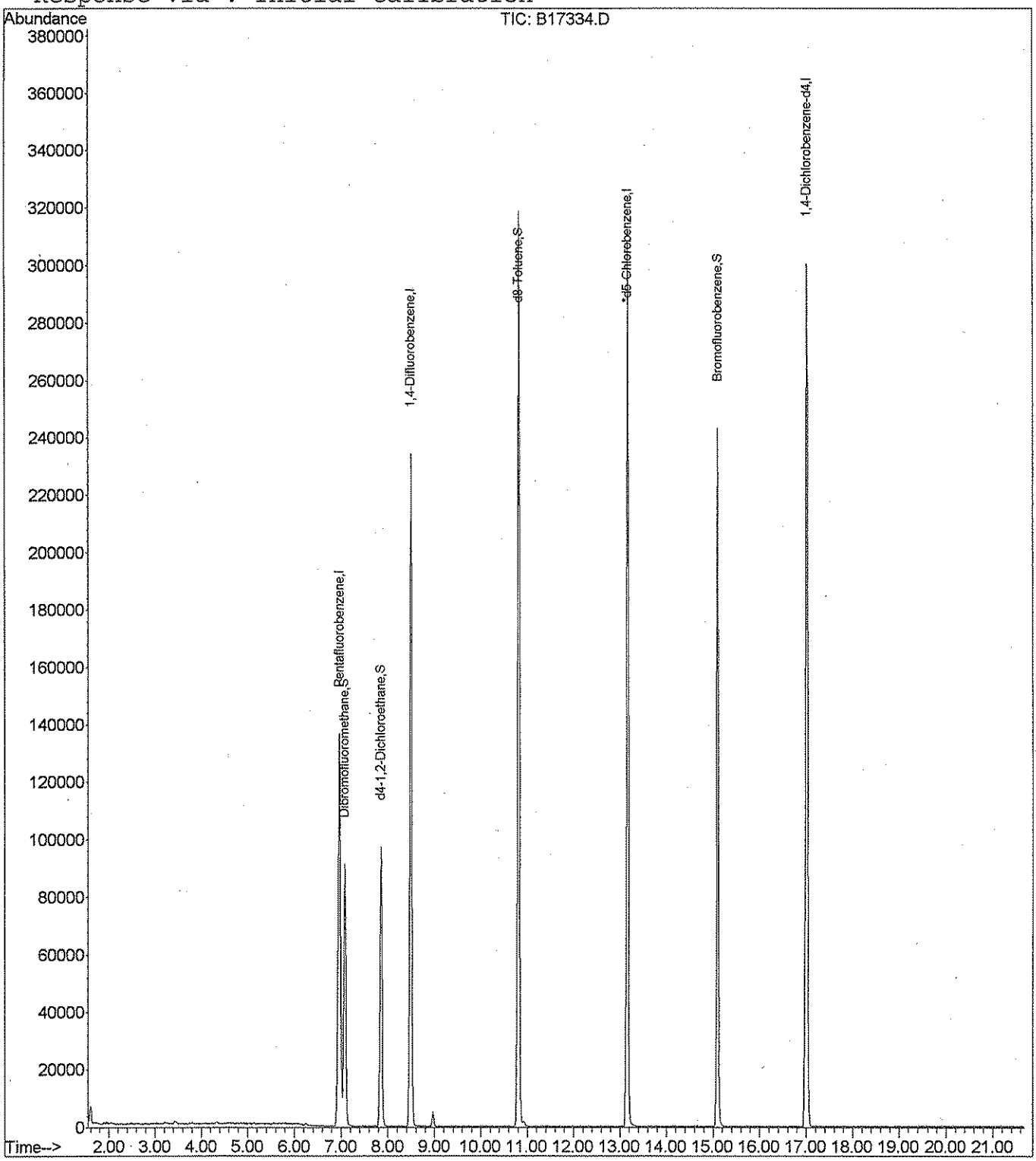
**COMMENTS:**

8260 full

Authorized signature Melissa A Hall

Data File : C:\HPCHEM\1\DATA\081903-B\B17334.D Vial: 43
Acq On : 20 Aug 2003 5:39 am Operator:
Sample : 50273-6 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 5:52 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-130-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-7
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | **1 J** |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **17** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **2060 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **61** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **2** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **59** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **29** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 104 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

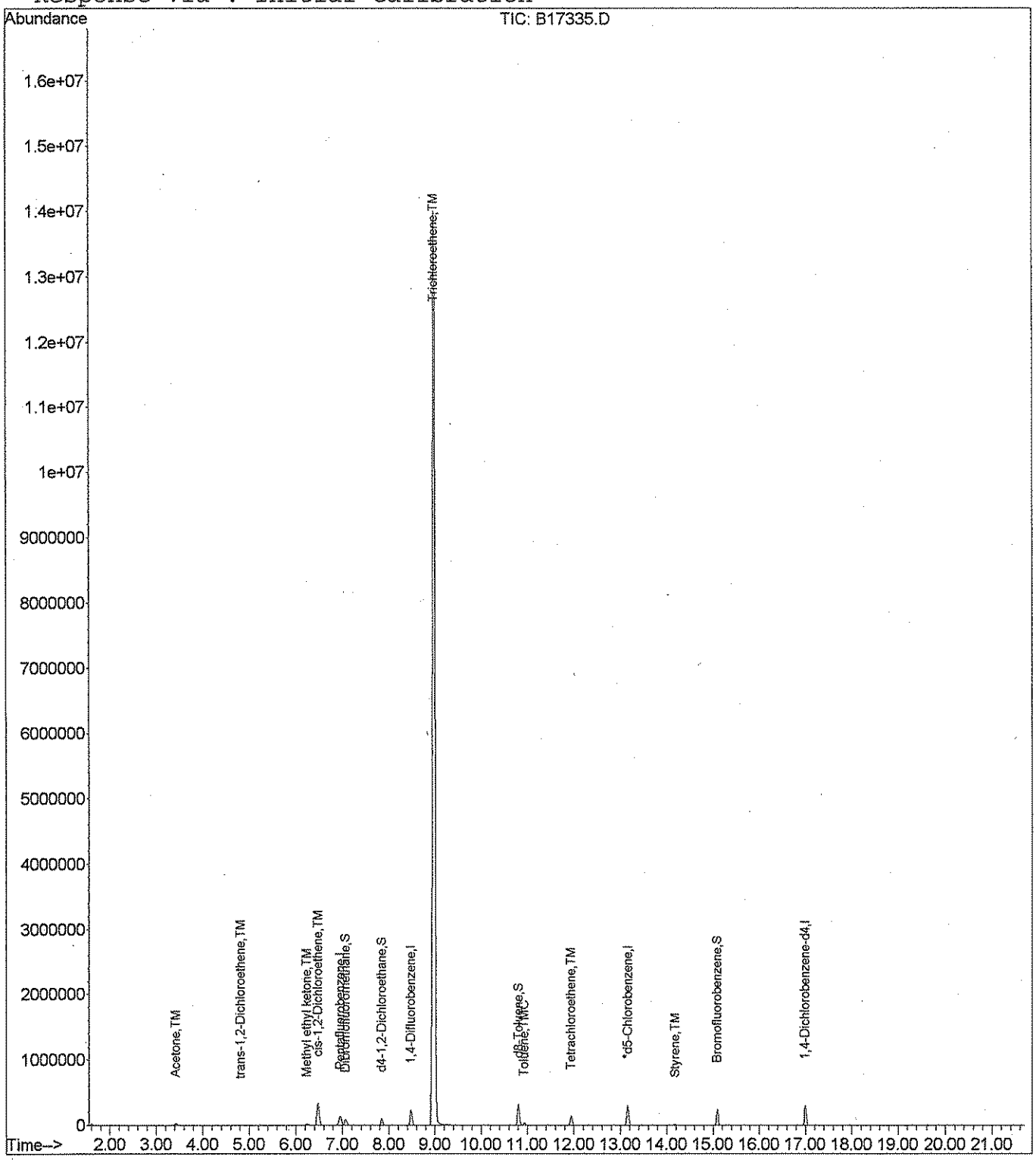
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\081903-B\B17335.D Vial: 44
Acq On : 20 Aug 2003 6:09 am Operator:
Sample : 50273-7 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 6:23 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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August 22, 2003

**SAMPLE DATA**

**Lab Sample ID:** 50273-7 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 100
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/21/03

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-130-PP

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 200 | U | 1,3-Dichloropropane | 200 | U |
| Bromobenzene | 200 | U | cis-1,3-Dichloropropene | 200 | U |
| Bromochloromethane | 200 | U | trans-1,3-Dichloropropene | 200 | U |
| Bromodichloromethane | 200 | U | 2,2-Dichloropropane | 200 | U |
| Bromoform | 200 | U | 1,1-Dichloropropene | 200 | U |
| Bromomethane | 200 | U | Ethylbenzene | 200 | U |
| n-butylbenzene | 200 | U | Hexachlorobutadiene | 200 | U |
| sec-butylbenzene | 200 | U | Isopropylbenzene | 200 | U |
| tert-butylbenzene | 200 | U | p-isopropyltoluene | 200 | U |
| Carbon Tetrachloride | 200 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 200 | U | Methyl-tert-butyl ether (MTBE) | 200 | U |
| Chloroethane | 200 | U | Naphthalene | 200 | U |
| Chloroform | 200 | U | n-Propylbenzene | 200 | U |
| Chloromethane | 200 | U | Styrene | 200 | U |
| 2-Chlorotoluene | 200 | U | 1,1,1,2-Tetrachloroethane | 200 | U |
| 4-Chlorotoluene | 200 | U | 1,1,2,2-Tetrachloroethane | 200 | U |
| Dibromochloromethane | 200 | U | Tetrachloroethene | 200 | U |
| 1,2-Dibromo-3-chloropropane | 200 | U | Toluene | 200 | U |
| 1,2-Dibromoethane | 200 | U | 1,2,3-Trichlorobenzene | 200 | U |
| Dibromomethane | 200 | U | 1,2,4-Trichlorobenzene | 200 | U |
| 1,2-Dichlorobenzene | 200 | U | 1,1,1-Trichloroethane | 200 | U |
| 1,3-Dichlorobenzene | 200 | U | 1,1,2-Trichloroethane | 200 | U |
| 1,4-Dichlorobenzene | 200 | U | Trichloroethene | 200 | **3460** |
| Dichlorodifluoromethane | 200 | U | Trichlorofluoromethane | 200 | U |
| 1,1-Dichloroethane | 200 | U | 1,2,3-Trichloropropane | 200 | U |
| 1,2-Dichloroethane | 200 | U | 1,2,4-Trimethylbenzene | 200 | U |
| 1,1-Dichloroethene | 200 | U | 1,3,5-Trimethylbenzene | 200 | U |
| cis-1,2-Dichloroethene | 200 | U | Vinyl Chloride | 200 | U |
| trans-1,2-Dichloroethene | 200 | U | o-Xylene | 200 | U |
| 1,2-Dichloropropane | 200 | U | m,p-Xylene | 200 | U |
| Acetone | 1000 | U | Diethyl ether | 200 | U |
| Carbon Disulfide | 200 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 200 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 200 | U |
| t-Amyl methyl ether (TAME) | 200 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 101 % | d4-1,2-Dichloroethane | 97 % | d8-Toluene | 99 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

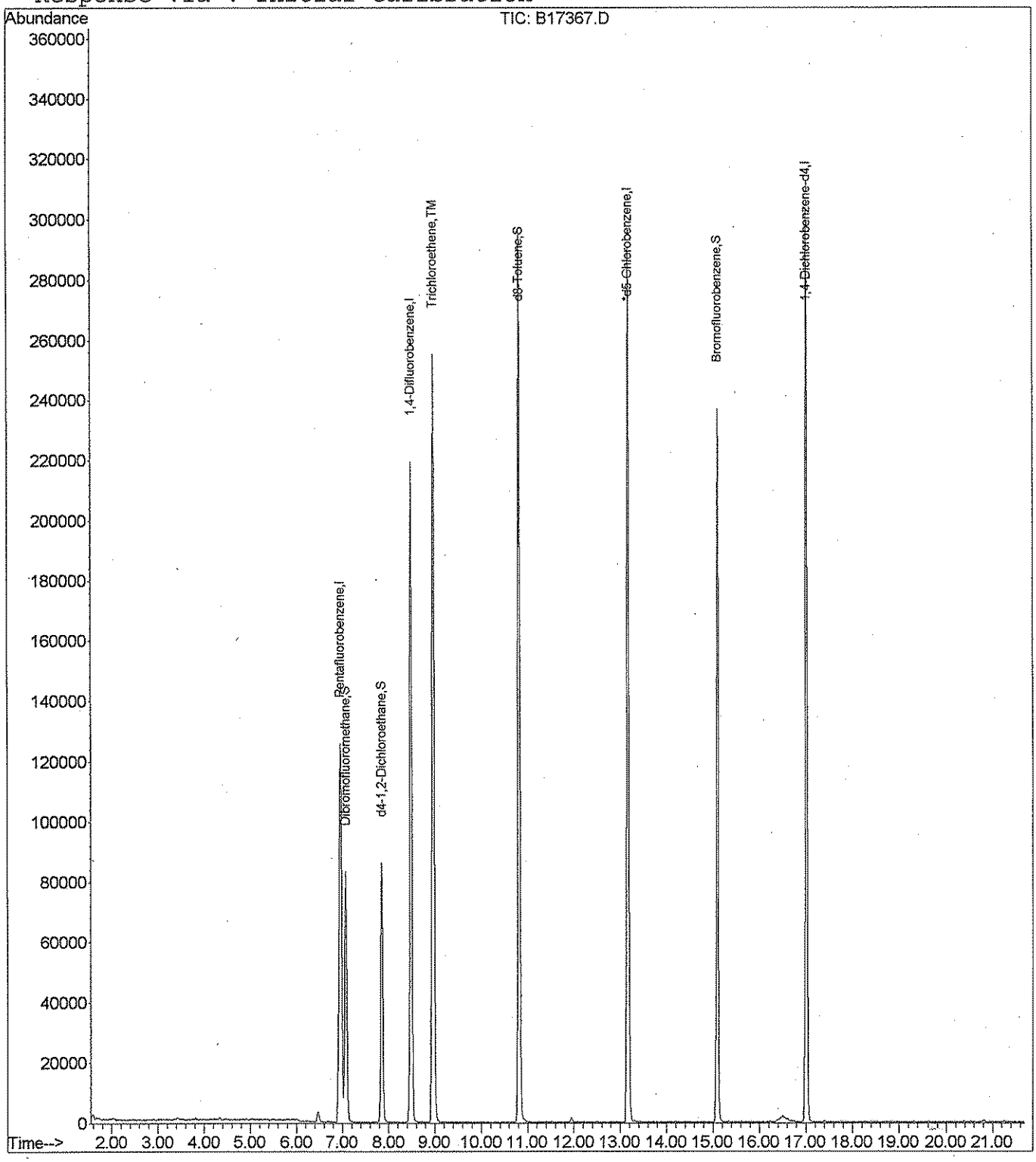
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17367.D Vial: 29
Acq On : 21 Aug 2003 12:11 am Operator:
Sample : 50273-7,DL Inst : Instrumen
Misc : 50 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 21 0:29 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-150-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-8
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **17** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **2090 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **60** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **3** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | **18** | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | **9 J** | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 105 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 96 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

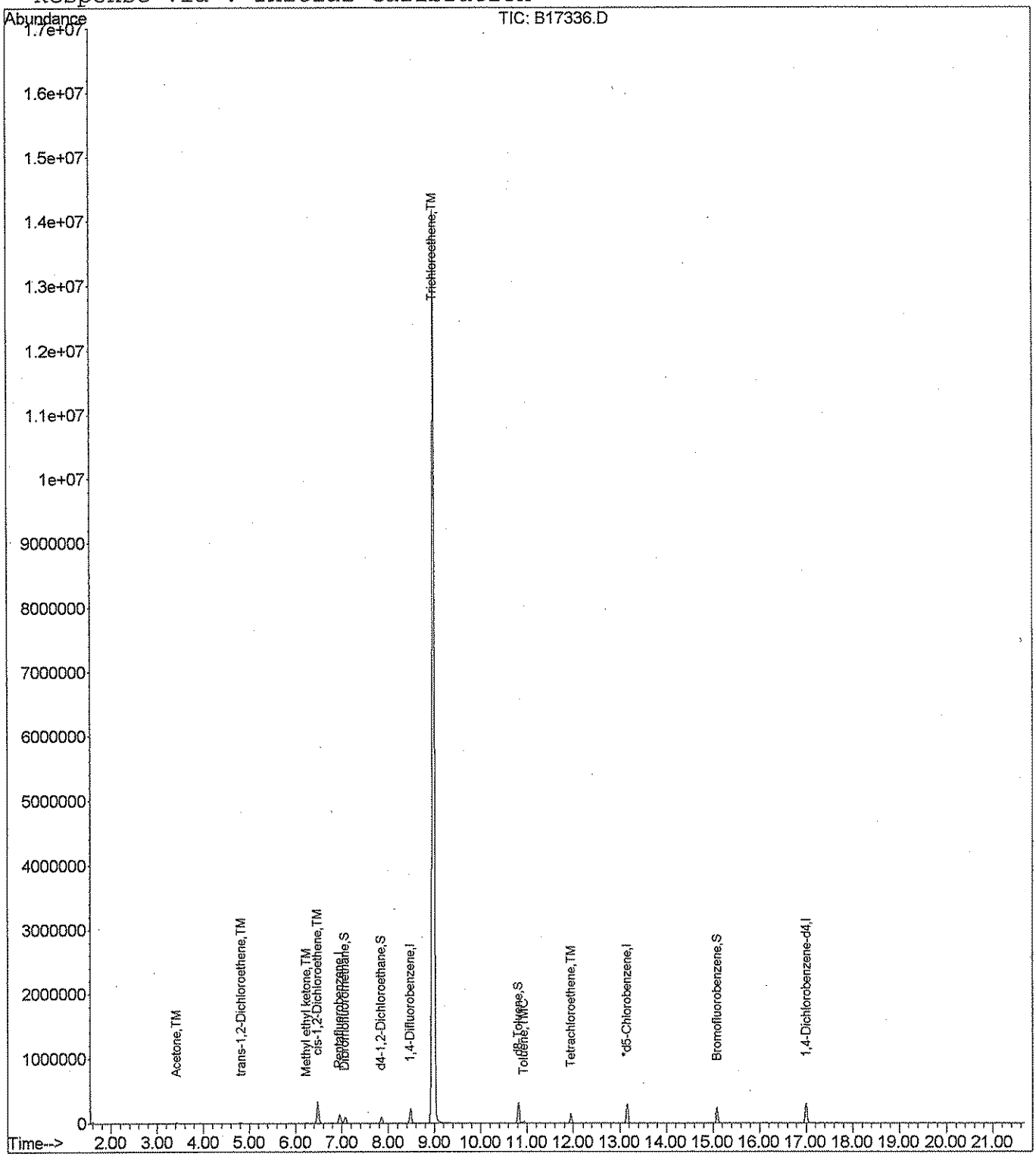
8260 full

Authorized signature Melissa A Kelli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17336.D Vial: 45
Acq On : 20 Aug 2003 6:38 am Operator:
Sample : 50273-8 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 6:54 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-150-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-8 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 100
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/21/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 200 | U | 1,3-Dichloropropane | 200 | U |
| Bromobenzene | 200 | U | cis-1,3-Dichloropropene | 200 | U |
| Bromochloromethane | 200 | U | trans-1,3-Dichloropropene | 200 | U |
| Bromodichloromethane | 200 | U | 2,2-Dichloropropane | 200 | U |
| Bromoform | 200 | U | 1,1-Dichloropropene | 200 | U |
| Bromomethane | 200 | U | Ethylbenzene | 200 | U |
| n-butylbenzene | 200 | U | Hexachlorobutadiene | 200 | U |
| sec-butylbenzene | 200 | U | Isopropylbenzene | 200 | U |
| tert-butylbenzene | 200 | U | p-isopropyltoluene | 200 | U |
| Carbon Tetrachloride | 200 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 200 | U | Methyl-tert-butyl ether (MTBE) | 200 | U |
| Chloroethane | 200 | U | Naphthalene | 200 | U |
| Chloroform | 200 | U | n-Propylbenzene | 200 | U |
| Chloromethane | 200 | U | Styrene | 200 | U |
| 2-Chlorotoluene | 200 | U | 1,1,1,2-Tetrachloroethane | 200 | U |
| 4-Chlorotoluene | 200 | U | 1,1,2,2-Tetrachloroethane | 200 | U |
| Dibromochloromethane | 200 | U | Tetrachloroethene | 200 | U |
| 1,2-Dibromo-3-chloropropane | 200 | U | Toluene | 200 | U |
| 1,2-Dibromoethane | 200 | U | 1,2,3-Trichlorobenzene | 200 | U |
| Dibromomethane | 200 | U | 1,2,4-Trichlorobenzene | 200 | U |
| 1,2-Dichlorobenzene | 200 | U | 1,1,1-Trichloroethane | 200 | U |
| 1,3-Dichlorobenzene | 200 | U | 1,1,2-Trichloroethane | 200 | U |
| 1,4-Dichlorobenzene | 200 | U | Trichloroethene | 200 | **3450** |
| Dichlorodifluoromethane | 200 | U | Trichlorofluoromethane | 200 | U |
| 1,1-Dichloroethane | 200 | U | 1,2,3-Trichloropropane | 200 | U |
| 1,2-Dichloroethane | 200 | U | 1,2,4-Trimethylbenzene | 200 | U |
| 1,1-Dichloroethene | 200 | U | 1,3,5-Trimethylbenzene | 200 | U |
| cis-1,2-Dichloroethene | 200 | U | Vinyl Chloride | 200 | U |
| trans-1,2-Dichloroethene | 200 | U | o-Xylene | 200 | U |
| 1,2-Dichloropropane | 200 | U | m,p-Xylene | 200 | U |
| Acetone | 1000 | U | Diethyl ether | 200 | U |
| Carbon Disulfide | 200 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 200 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 200 | U |
| t-Amyl methyl ether (TAME) | 200 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 100 | % | d4-1,2-Dichloroethane | 94 | % | d8-Toluene | 101 | % | Bromofluorobenzene | 100 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

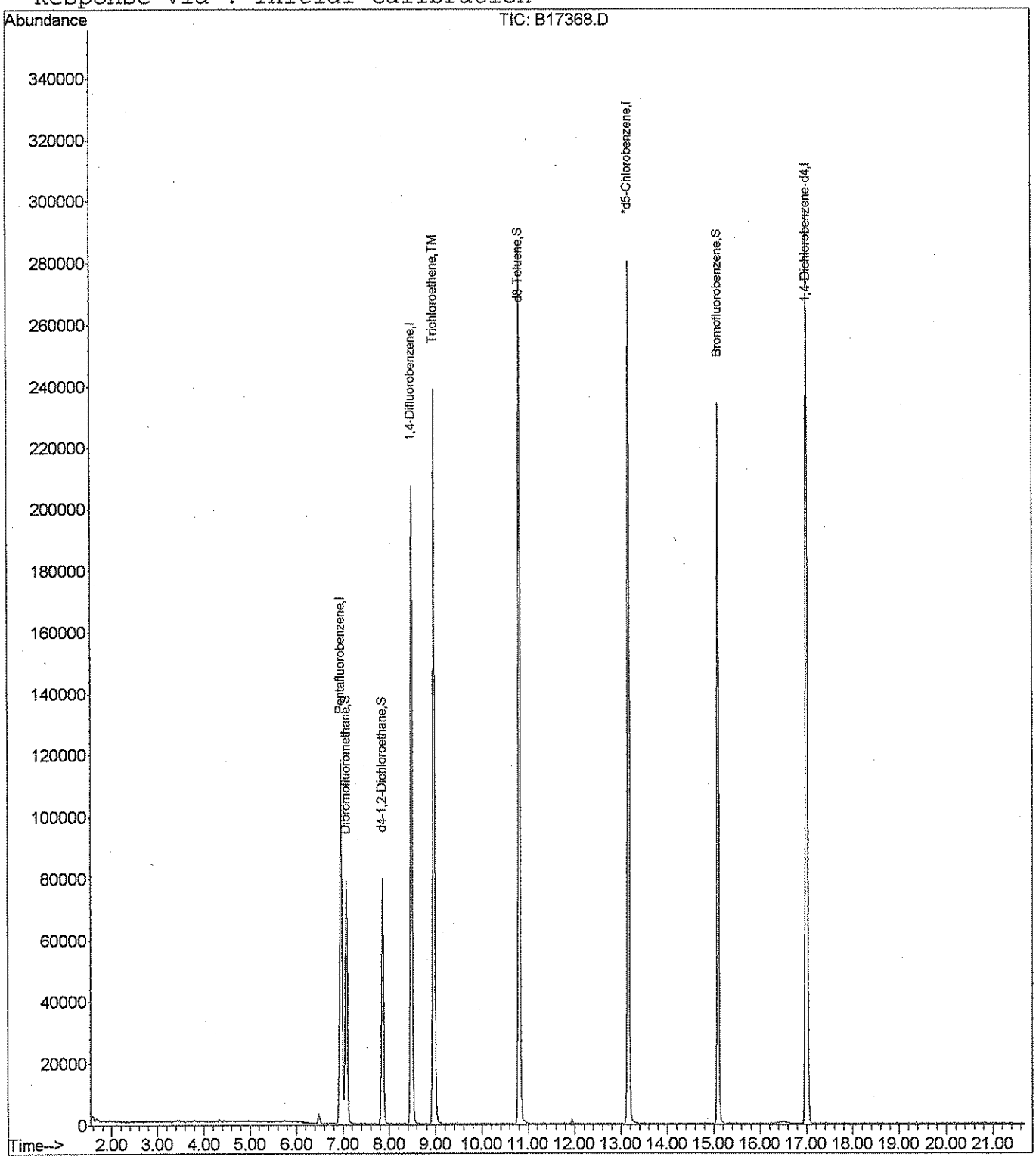
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17368.D Vial: 30
Acq On : 21 Aug 2003 12:41 am Operator:
Sample : 50273-8,DL Inst : Instrumen
Misc : 50 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 21 1:02 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-150-PP-E

**SAMPLE DATA**

**Lab Sample ID:** 50273-9
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **14** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **2** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1960 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **58** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **2** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 99 | % | Bromofluorobenzene | 96 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

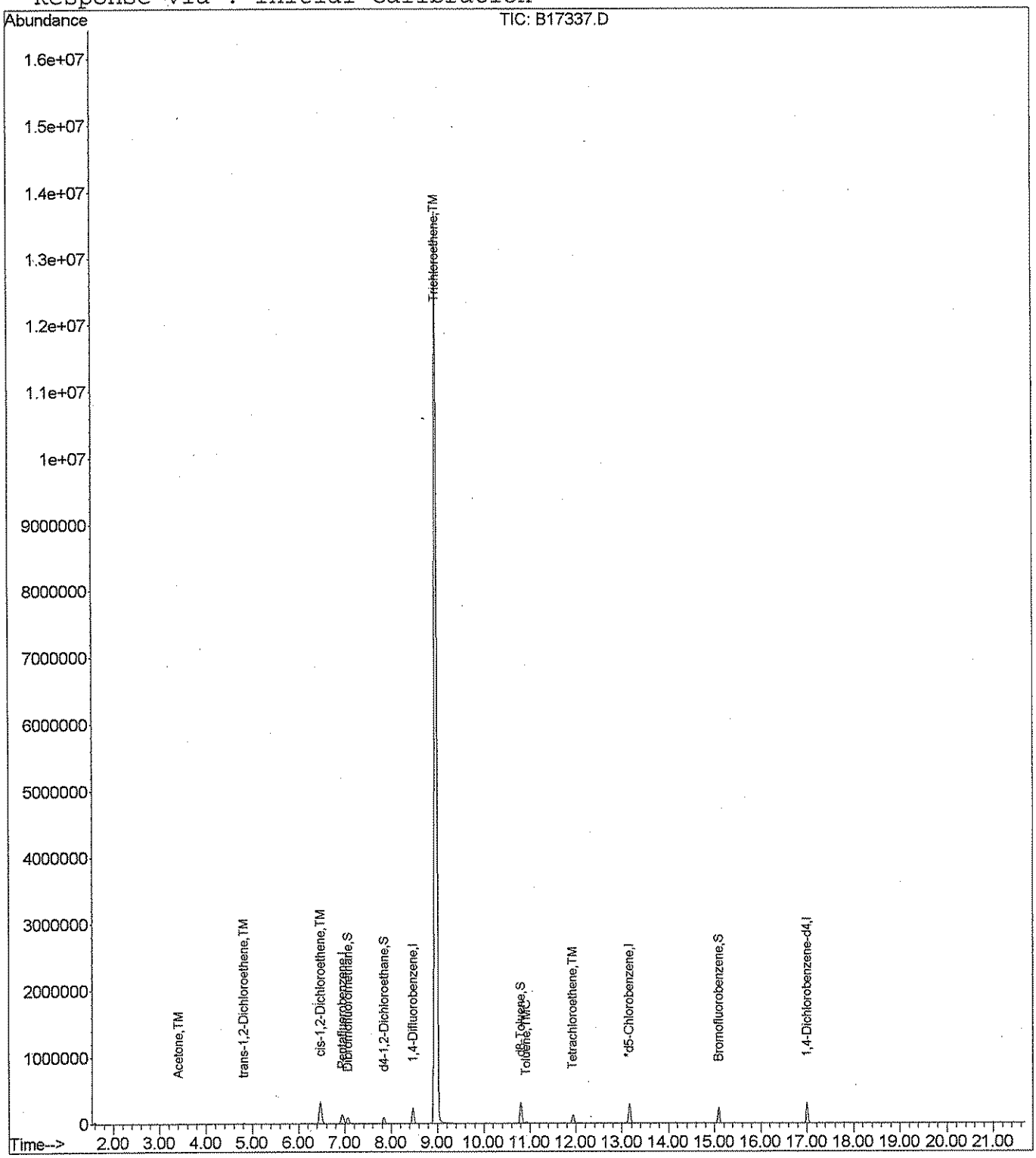
8260 full

Authorized signature Melissa A Kalli

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17337.D Vial: 46
Acq On : 20 Aug 2003 7:07 am Operator:
Sample : 50273-9 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 7:24 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-150-PP-E

**SAMPLE DATA**

**Lab Sample ID:** 50273-9 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 100
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/21/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 200 | U | 1,3-Dichloropropane | 200 | U |
| Bromobenzene | 200 | U | cis-1,3-Dichloropropene | 200 | U |
| Bromochloromethane | 200 | U | trans-1,3-Dichloropropene | 200 | U |
| Bromodichloromethane | 200 | U | 2,2-Dichloropropane | 200 | U |
| Bromoform | 200 | U | 1,1-Dichloropropene | 200 | U |
| Bromomethane | 200 | U | Ethylbenzene | 200 | U |
| n-butylbenzene | 200 | U | Hexachlorobutadiene | 200 | U |
| sec-butylbenzene | 200 | U | Isopropylbenzene | 200 | U |
| tert-butylbenzene | 200 | U | p-isopropyltoluene | 200 | U |
| Carbon Tetrachloride | 200 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 200 | U | Methyl-tert-butyl ether (MTBE) | 200 | U |
| Chloroethane | 200 | U | Naphthalene | 200 | U |
| Chloroform | 200 | U | n-Propylbenzene | 200 | U |
| Chloromethane | 200 | U | Styrene | 200 | U |
| 2-Chlorotoluene | 200 | U | 1,1,1,2-Tetrachloroethane | 200 | U |
| 4-Chlorotoluene | 200 | U | 1,1,2,2-Tetrachloroethane | 200 | U |
| Dibromochloromethane | 200 | U | Tetrachloroethene | 200 | U |
| 1,2-Dibromo-3-chloropropane | 200 | U | Toluene | 200 | U |
| 1,2-Dibromoethane | 200 | U | 1,2,3-Trichlorobenzene | 200 | U |
| Dibromomethane | 200 | U | 1,2,4-Trichlorobenzene | 200 | U |
| 1,2-Dichlorobenzene | 200 | U | 1,1,1-Trichloroethane | 200 | U |
| 1,3-Dichlorobenzene | 200 | U | 1,1,2-Trichloroethane | 200 | U |
| 1,4-Dichlorobenzene | 200 | U | Trichloroethene | 200 | **3460** |
| Dichlorodifluoromethane | 200 | U | Trichlorofluoromethane | 200 | U |
| 1,1-Dichloroethane | 200 | U | 1,2,3-Trichloropropane | 200 | U |
| 1,2-Dichloroethane | 200 | U | 1,2,4-Trimethylbenzene | 200 | U |
| 1,1-Dichloroethene | 200 | U | 1,3,5-Trimethylbenzene | 200 | U |
| cis-1,2-Dichloroethene | 200 | U | Vinyl Chloride | 200 | U |
| trans-1,2-Dichloroethene | 200 | U | o-Xylene | 200 | U |
| 1,2-Dichloropropane | 200 | U | m,p-Xylene | 200 | U |
| Acetone | 1000 | U | Diethyl ether | 200 | U |
| Carbon Disulfide | 200 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 200 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 200 | U |
| t-Amyl methyl ether (TAME) | 200 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 102 | % | d4-1,2-Dichloroethane | 99 | % | d8-Toluene | 99 | % | Bromofluorobenzene | 98 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

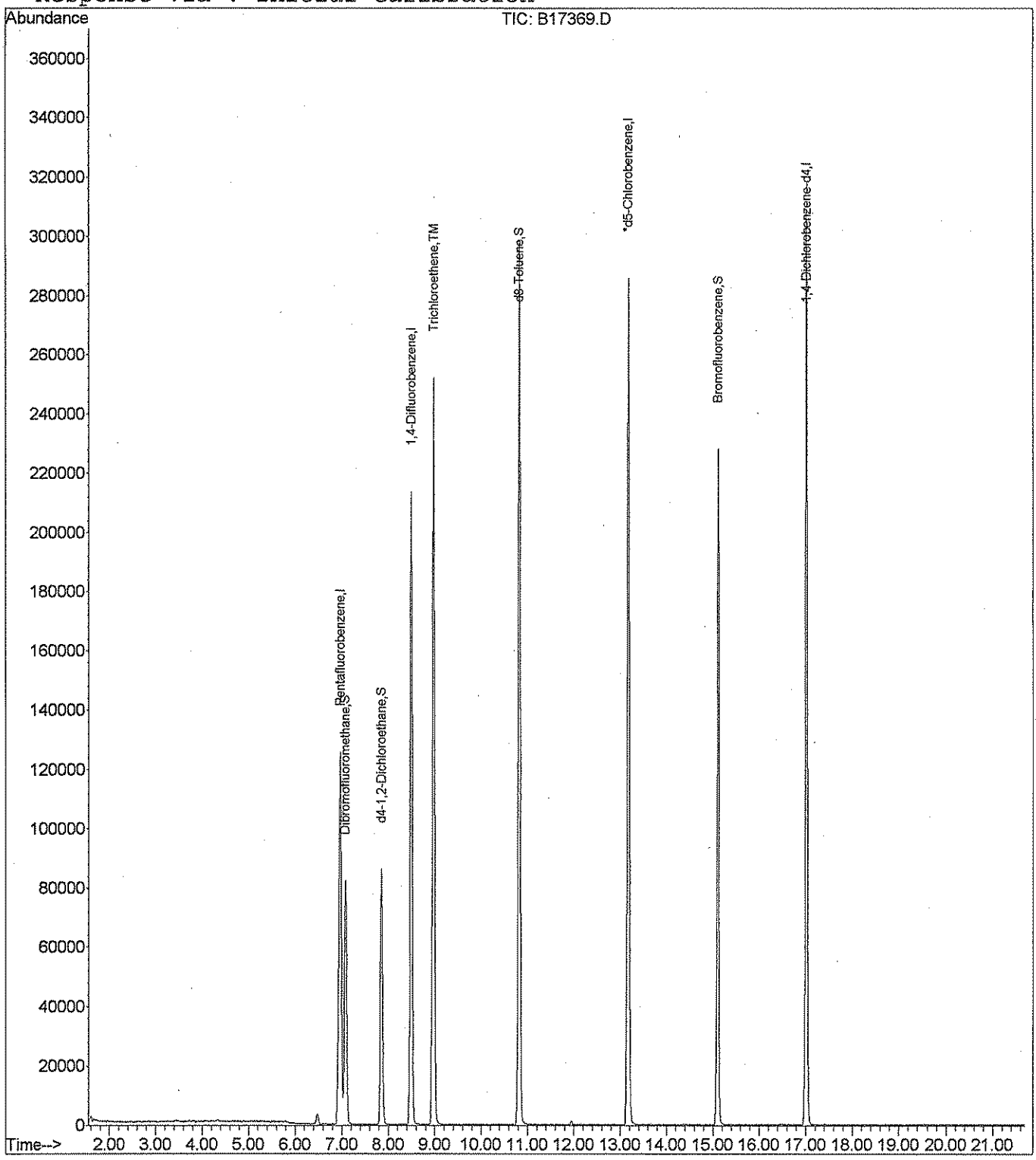
**COMMENTS:**

8260 full

Authorized signature

Data File : C:\HPCHEM\1\DATA\082003-B\B17369.D Vial: 31
Acq On : 21 Aug 2003 1:24 am Operator:
Sample : 50273-9,DL Inst : Instrumen
Misc : 50 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 21 1:35 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-164-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-10
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 1.0
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/20/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 2 | U | 1,3-Dichloropropane | 2 | U |
| Bromobenzene | 2 | U | cis-1,3-Dichloropropene | 2 | U |
| Bromochloromethane | 2 | U | trans-1,3-Dichloropropene | 2 | U |
| Bromodichloromethane | 2 | U | 2,2-Dichloropropane | 2 | U |
| Bromoform | 2 | U | 1,1-Dichloropropene | 2 | U |
| Bromomethane | 2 | U | Ethylbenzene | 2 | U |
| n-butylbenzene | 2 | U | Hexachlorobutadiene | 2 | U |
| sec-butylbenzene | 2 | U | Isopropylbenzene | 2 | U |
| tert-butylbenzene | 2 | U | p-isopropyltoluene | 2 | U |
| Carbon Tetrachloride | 2 | U | Methylene Chloride | 5 | U |
| Chlorobenzene | 2 | U | Methyl-tert-butyl ether (MTBE) | 2 | U |
| Chloroethane | 2 | U | Naphthalene | 2 | U |
| Chloroform | 2 | U | n-Propylbenzene | 2 | U |
| Chloromethane | 2 | U | Styrene | 2 | U |
| 2-Chlorotoluene | 2 | U | 1,1,1,2-Tetrachloroethane | 2 | U |
| 4-Chlorotoluene | 2 | U | 1,1,2,2-Tetrachloroethane | 2 | U |
| Dibromochloromethane | 2 | U | Tetrachloroethene | 2 | **15** |
| 1,2-Dibromo-3-chloropropane | 2 | U | Toluene | 2 | **1 J** |
| 1,2-Dibromoethane | 2 | U | 1,2,3-Trichlorobenzene | 2 | U |
| Dibromomethane | 2 | U | 1,2,4-Trichlorobenzene | 2 | U |
| 1,2-Dichlorobenzene | 2 | U | 1,1,1-Trichloroethane | 2 | U |
| 1,3-Dichlorobenzene | 2 | U | 1,1,2-Trichloroethane | 2 | U |
| 1,4-Dichlorobenzene | 2 | U | Trichloroethene | 2 | **1980 E** |
| Dichlorodifluoromethane | 2 | U | Trichlorofluoromethane | 2 | U |
| 1,1-Dichloroethane | 2 | U | 1,2,3-Trichloropropane | 2 | U |
| 1,2-Dichloroethane | 2 | U | 1,2,4-Trimethylbenzene | 2 | U |
| 1,1-Dichloroethene | 2 | U | 1,3,5-Trimethylbenzene | 2 | U |
| cis-1,2-Dichloroethene | 2 | **56** | Vinyl Chloride | 2 | U |
| trans-1,2-Dichloroethene | 2 | **2** | o-Xylene | 2 | U |
| 1,2-Dichloropropane | 2 | U | m,p-Xylene | 2 | U |
| Acetone | 10 | U | Diethyl ether | 2 | U |
| Carbon Disulfide | 2 | U | 2-Hexanone | 10 | U |
| Tetrahydrofuran | 5 | U | Methyl isobutyl ketone | 10 | U |
| Methyl ethyl ketone | 10 | U | Di-isopropyl ether (DIPE) | 2 | U |
| t-Butyl alcohol (TBA) | 20 | U | Ethyl t-butyl ether (ETBE) | 2 | U |
| t-Amyl methyl ether (TAME) | 2 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 103 | % | d4-1,2-Dichloroethane | 103 | % | d8-Toluene | 100 | % | Bromofluorobenzene | 97 | % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

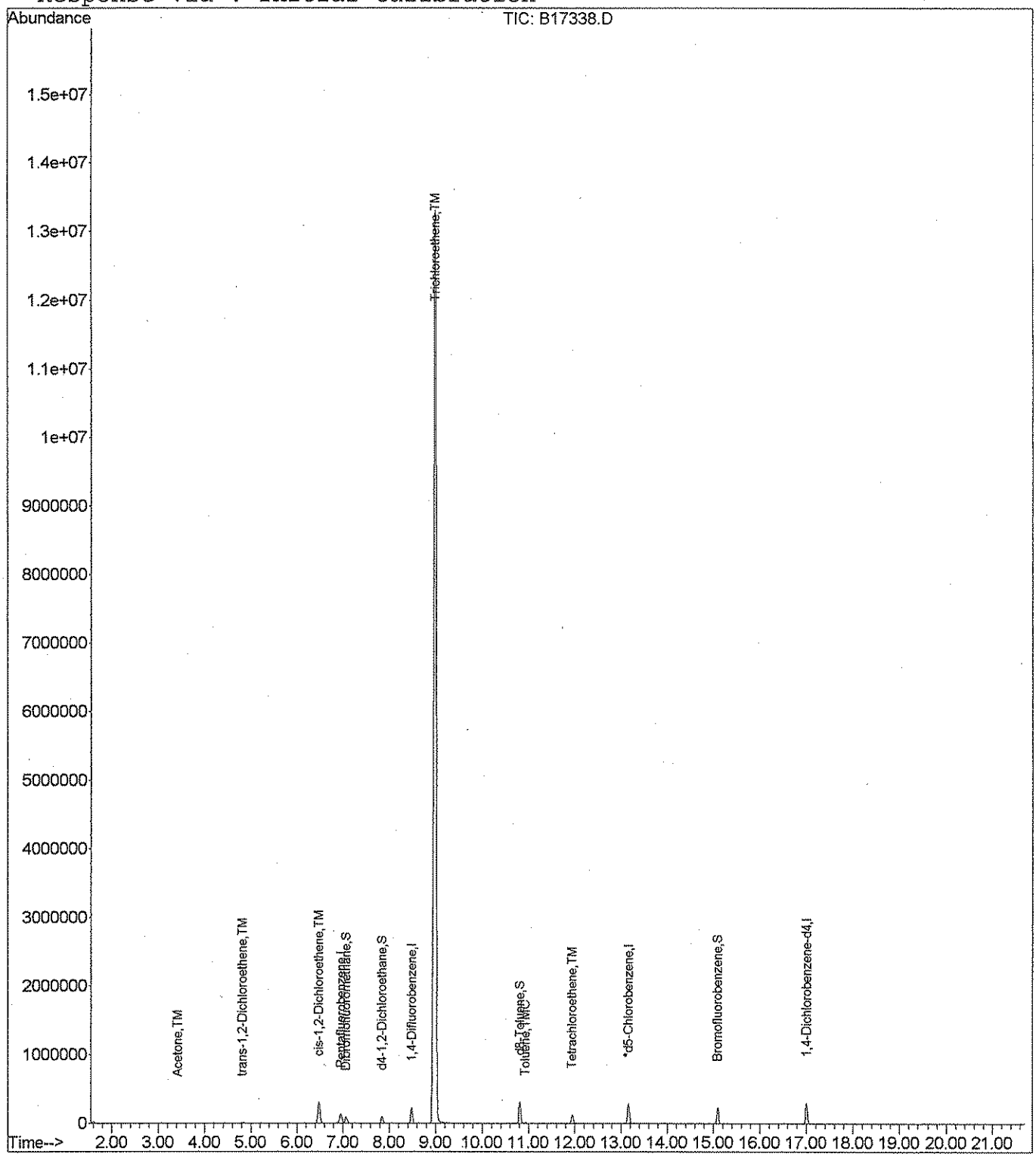
8260 full

Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17338.D Vial: 47
Acq On : 20 Aug 2003 7:42 am Operator:
Sample : 50273-10 Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 7:55 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

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Mr. Jim Ricker
Weston Solutions
1 Wall Street
Manchester NH 03101-1501

August 22, 2003

**CLIENT SAMPLE ID**

**Project Name:** Bucks Harbor Packer Tests

**Project Number:** 10971-217-002

**Field Sample ID:** MW10-164-PP

**SAMPLE DATA**

**Lab Sample ID:** 50273-10 DL
**Matrix:** Aqueous
**Percent Solid:** N/A
**Dilution Factor:** 100
**Collection Date:** 08/16/03
**Lab Receipt Date:** 08/18/03
**Analysis Date:** 08/21/03

## ANALYTICAL RESULTS VOLATILE ORGANICS

| COMPOUND | Quantitation Limit µg/L | Result µg/L | COMPOUND | Quantitation Limit µg/L | Result µg/L |
|---|---|---|---|---|---|
| Benzene | 200 | U | 1,3-Dichloropropane | 200 | U |
| Bromobenzene | 200 | U | cis-1,3-Dichloropropene | 200 | U |
| Bromochloromethane | 200 | U | trans-1,3-Dichloropropene | 200 | U |
| Bromodichloromethane | 200 | U | 2,2-Dichloropropane | 200 | U |
| Bromoform | 200 | U | 1,1-Dichloropropene | 200 | U |
| Bromomethane | 200 | U | Ethylbenzene | 200 | U |
| n-butylbenzene | 200 | U | Hexachlorobutadiene | 200 | U |
| sec-butylbenzene | 200 | U | Isopropylbenzene | 200 | U |
| tert-butylbenzene | 200 | U | p-isopropyltoluene | 200 | U |
| Carbon Tetrachloride | 200 | U | Methylene Chloride | 500 | U |
| Chlorobenzene | 200 | U | Methyl-tert-butyl ether (MTBE) | 200 | U |
| Chloroethane | 200 | U | Naphthalene | 200 | U |
| Chloroform | 200 | U | n-Propylbenzene | 200 | U |
| Chloromethane | 200 | U | Styrene | 200 | U |
| 2-Chlorotoluene | 200 | U | 1,1,1,2-Tetrachloroethane | 200 | U |
| 4-Chlorotoluene | 200 | U | 1,1,2,2-Tetrachloroethane | 200 | U |
| Dibromochloromethane | 200 | U | Tetrachloroethene | 200 | U |
| 1,2-Dibromo-3-chloropropane | 200 | U | Toluene | 200 | U |
| 1,2-Dibromoethane | 200 | U | 1,2,3-Trichlorobenzene | 200 | U |
| Dibromomethane | 200 | U | 1,2,4-Trichlorobenzene | 200 | U |
| 1,2-Dichlorobenzene | 200 | U | 1,1,1-Trichloroethane | 200 | U |
| 1,3-Dichlorobenzene | 200 | U | 1,1,2-Trichloroethane | 200 | U |
| 1,4-Dichlorobenzene | 200 | U | Trichloroethene | 200 | **3400** |
| Dichlorodifluoromethane | 200 | U | Trichlorofluoromethane | 200 | U |
| 1,1-Dichloroethane | 200 | U | 1,2,3-Trichloropropane | 200 | U |
| 1,2-Dichloroethane | 200 | U | 1,2,4-Trimethylbenzene | 200 | U |
| 1,1-Dichloroethene | 200 | U | 1,3,5-Trimethylbenzene | 200 | U |
| cis-1,2-Dichloroethene | 200 | U | Vinyl Chloride | 200 | U |
| trans-1,2-Dichloroethene | 200 | U | o-Xylene | 200 | U |
| 1,2-Dichloropropane | 200 | U | m,p-Xylene | 200 | U |
| Acetone | 1000 | U | Diethyl ether | 200 | U |
| Carbon Disulfide | 200 | U | 2-Hexanone | 1000 | U |
| Tetrahydrofuran | 500 | U | Methyl isobutyl ketone | 1000 | U |
| Methyl ethyl ketone | 1000 | U | Di-isopropyl ether (DIPE) | 200 | U |
| t-Butyl alcohol (TBA) | 2000 | U | Ethyl t-butyl ether (ETBE) | 200 | U |
| t-Amyl methyl ether (TAME) | 200 | U | | | |

**Surrogate Standard Recovery**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibromofluoromethane | 97 % | d4-1,2-Dichloroethane | 93 % | d8-Toluene | 104 % | Bromofluorobenzene | 99 % |

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

**METHODOLOGY:** Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

**COMMENTS:**

8260 full

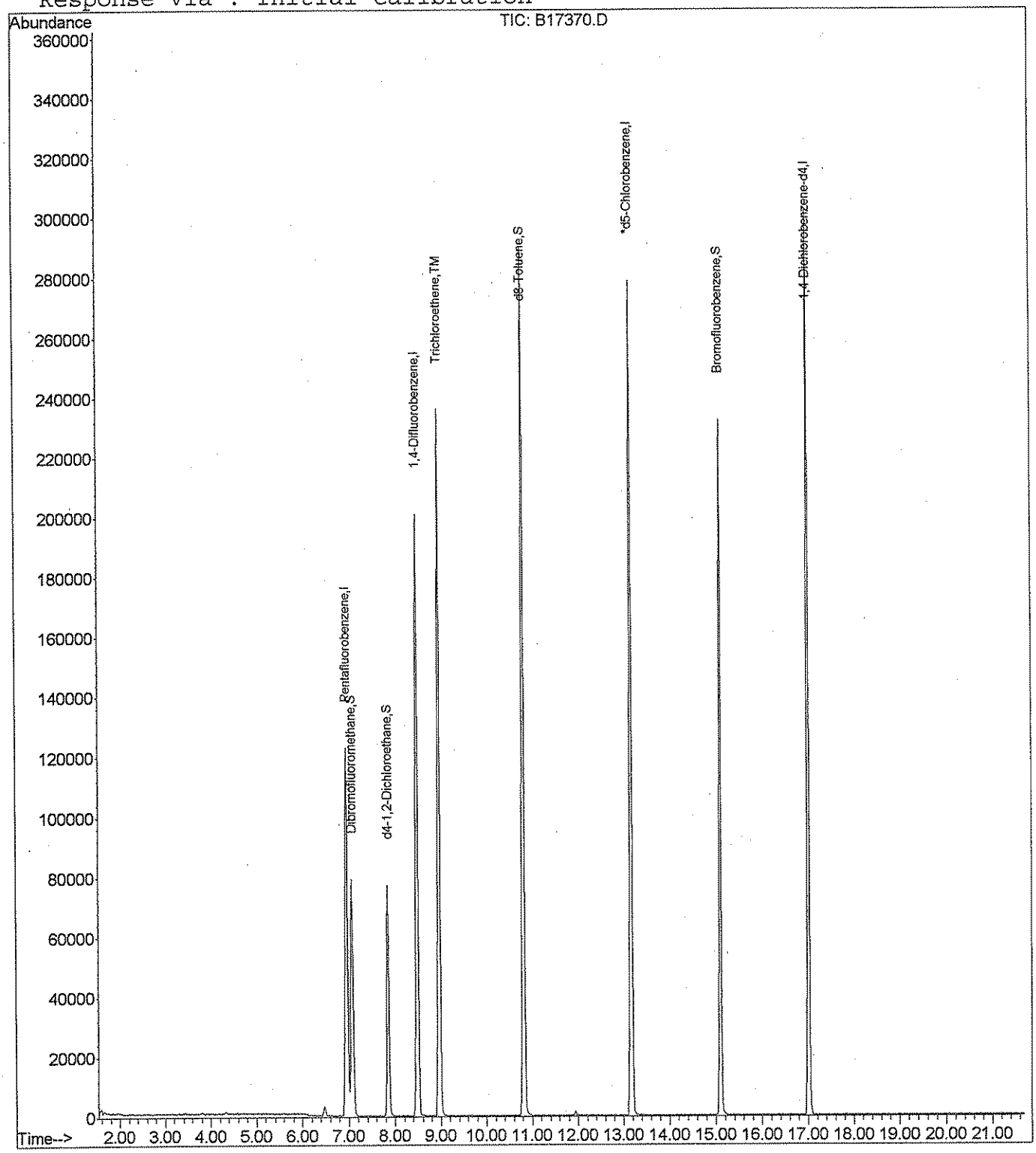
Authorized signature

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17370.D
Acq On : 21 Aug 2003 1:54 am
Sample : 50273-10,DL
Misc : 50
MS Integration Params: rteint.p
Quant Time: Aug 21 2:08 2003

Vial: 32
Operator:
Inst : Instrumen
Multiplr: 1.00
Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



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# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 1 PPB | 93% | 98% | 98% | 100% | 0 |
| 02 | 2 PPB | 92% | 95% | 100% | 99% | 0 |
| 03 | 5 PPB | 97% | 101% | 99% | 99% | 0 |
| 04 | 20 PPB | 99% | 104% | 100% | 101% | 0 |
| 05 | 50 PPB | 96% | 100% | 102% | 103% | 0 |
| 06 | 100 PPB | 97% | 102% | 102% | 99% | 0 |
| 07 | ZZZZZ | 100% | 99% | 99% | 101% | 0 |
| 08 | ZZZZZ | 102% | 101% | 101% | 100% | 0 |
| 09 | ZZZZZ | 98% | 95% | 98% | 100% | 0 |
| 10 | ZZZZZ | 99% | 95% | 98% | 100% | 0 |
| 11 | ZZZZZ | 99% | 96% | 99% | 101% | 0 |
| 12 | ZZZZZ | 98% | 96% | 99% | 98% | 0 |
| 13 | ZZZZZ | 100% | 101% | 101% | 98% | 0 |
| 14 | ZZZZZ | 101% | 101% | 100% | 96% | 0 |
| 15 | ZZZZZ | 103% | 104% | 100% | 97% | 0 |
| 16 | ZZZZZ | 102% | 104% | 100% | 97% | 0 |
| 17 | ZZZZZ | 102% | 103% | 102% | 97% | 0 |
| 18 | ZZZZZ | 100% | 102% | 101% | 97% | 0 |
| 19 | ZZZZZ | 99% | 105% | 103% | 101% | 0 |
| 20 | ZZZZZ | 100% | 102% | 103% | 99% | 0 |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20PPB STD | 102% | 100% | 102% | 102% | 0 |
| 02 | L808193B | 102% | 102% | 102% | 100% | 0 |
| 03 | L808193B2 | 102% | 100% | 102% | 101% | 0 |
| 04 | ZZZZZ | 101% | 100% | 101% | 98% | 0 |
| 05 | B808193B | 99% | 97% | 100% | 97% | 0 |
| 06 | ZZZZZ | 99% | 97% | 100% | 99% | 0 |
| 07 | ZZZZZ | 103% | 102% | 100% | 98% | 0 |
| 08 | ZZZZZ | 101% | 102% | 101% | 99% | 0 |
| 09 | ZZZZZ | 102% | 102% | 99% | 97% | 0 |
| 10 | ZZZZZ | 100% | 101% | 101% | 97% | 0 |
| 11 | 50269-2,MS | 103% | 103% | 101% | 101% | 0 |
| 12 | 50269-2,MSD | 103% | 103% | 102% | 102% | 0 |
| 13 | ZZZZZ | 100% | 103% | 103% | 98% | 0 |
| 14 | ZZZZZ | 100% | 101% | 101% | 99% | 0 |
| 15 | ZZZZZ | 100% | 100% | 101% | 99% | 0 |
| 16 | ZZZZZ | 100% | 101% | 101% | 98% | 0 |
| 17 | ZZZZZ | 101% | 101% | 100% | 97% | 0 |
| 18 | ZZZZZ | 100% | 102% | 102% | 98% | 0 |
| 19 | ZZZZZ | 102% | 103% | 101% | 98% | 0 |
| 20 | ZZZZZ | 101% | 104% | 101% | 97% | 0 |
| 21 | ZZZZZ | 101% | 103% | 101% | 96% | 0 |
| 22 | ZZZZZ | 101% | 103% | 101% | 96% | 0 |
| 23 | ZZZZZ | 100% | 102% | 101% | 98% | 0 |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

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# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20 PPB STD | 103% | 104% | 102% | 99% | 0 |
| 02 | L808193B3 | 102% | 101% | 104% | 100% | 0 |
| 03 | L808193B4 | 106% | 105% | 102% | 101% | 0 |
| 04 | B808193B2 | 102% | 103% | 100% | 98% | 0 |
| 05 | ZZZZZ | 100% | 101% | 101% | 97% | 0 |
| 06 | ZZZZZ | 101% | 102% | 101% | 97% | 0 |
| 07 | ZZZZZ | 102% | 103% | 101% | 96% | 0 |
| 08 | ZZZZZ | 102% | 102% | 102% | 97% | 0 |
| 09 | ZZZZZ | 102% | 104% | 101% | 97% | 0 |
| 10 | ZZZZZ | 102% | 103% | 101% | 94% | 0 |
| 11 | 50273-1 | 100% | 102% | 101% | 97% | 0 |
| 12 | 50273-2 | 102% | 104% | 101% | 96% | 0 |
| 13 | 50273-3 | 102% | 104% | 100% | 96% | 0 |
| 14 | 50273-4 | 103% | 103% | 100% | 97% | 0 |
| 15 | 50273-5 | 101% | 101% | 100% | 97% | 0 |
| 16 | 50273-6 | 103% | 103% | 100% | 96% | 0 |
| 17 | 50273-7 | 102% | 104% | 100% | 97% | 0 |
| 18 | 50273-8 | 103% | 105% | 101% | 96% | 0 |
| 19 | 50273-9 | 103% | 103% | 99% | 96% | 0 |
| 20 | 50273-10 | 103% | 103% | 100% | 97% | 0 |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

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# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20PPB STD | 106% | 105% | 103% | 102% | 0 |
| 02 | L808203B | 102% | 101% | 102% | 101% | 0 |
| 03 | L808203B2 | 103% | 100% | 101% | 100% | 0 |
| 04 | ZZZZZ | 102% | 100% | 100% | 99% | 0 |
| 05 | B808203B | 103% | 103% | 100% | 97% | 0 |
| 06 | ZZZZZ | 103% | 102% | 99% | 99% | 0 |
| 07 | ZZZZZ | 101% | 99% | 101% | 97% | 0 |
| 08 | ZZZZZ | 104% | 101% | 99% | 99% | 0 |
| 09 | ZZZZZ | 101% | 101% | 100% | 99% | 0 |
| 10 | ZZZZZ | 103% | 103% | 99% | 98% | 0 |
| 11 | ZZZZZ | 103% | 100% | 101% | 97% | 0 |
| 12 | 50273-1,DL | 103% | 103% | 99% | 95% | 0 |
| 13 | 50273-2,DL | 103% | 103% | 100% | 97% | 0 |
| 14 | 50273-3,DL | 102% | 99% | 100% | 100% | 0 |
| 15 | 50273-4,DL | 104% | 101% | 99% | 97% | 0 |
| 16 | 50273-5,DL | 103% | 102% | 100% | 98% | 0 |
| 17 | ZZZZZ | 104% | 104% | 99% | 98% | 0 |
| 18 | ZZZZZ | 103% | 101% | 98% | 100% | 0 |
| 19 | ZZZZZ | 104% | 103% | 99% | 98% | 0 |
| 20 | ZZZZZ | 102% | 100% | 99% | 98% | 0 |
| 21 | ZZZZZ | 102% | 104% | 100% | 98% | 0 |
| 22 | ZZZZZ | 102% | 104% | 100% | 99% | 0 |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

# VOLATILE ORGANIC AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17362T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2145

Heated Purge: (Y/N) N

| | SAMPLE ID | SMC1 # | SMC 2 # | SMC 3 # | SMC 4 # | OUT |
|---|---|---|---|---|---|---|
| 01 | 20PPB_STD | 104% | 103% | 99% | 103% | 0 |
| 02 | L808203B3 | 106% | 106% | 101% | 102% | 0 |
| 03 | L808203B4 | 105% | 104% | 102% | 100% | 0 |
| 04 | B808203B2 | 103% | 101% | 100% | 98% | 0 |
| 05 | 50273-7,DL | 101% | 97% | 99% | 99% | 0 |
| 06 | 50273-8,DL | 100% | 94% | 101% | 100% | 0 |
| 07 | 50273-9,DL | 102% | 99% | 99% | 98% | 0 |
| 08 | 50273-10,DL | 97% | 93% | 104% | 99% | 0 |
| 09 | ZZZZZ | 99% | 93% | 99% | 101% | 0 |
| 10 | ZZZZZ | 97% | 93% | 100% | 101% | 0 |
| 11 | ZZZZZ | 101% | 95% | 101% | 100% | 0 |
| 12 | ZZZZZ | 104% | 103% | 100% | 97% | 0 |
| 13 | ZZZZZ | 103% | 105% | 101% | 95% | 0 |
| 14 | ZZZZZ | 103% | 106% | 101% | 96% | 0 |
| 15 | ZZZZZ | 100% | 103% | 101% | 99% | 0 |
| 16 | ZZZZZ | 101% | 102% | 102% | 97% | 0 |
| 17 | ZZZZZ | 103% | 105% | 103% | 97% | 0 |
| 18 | ZZZZZ | 104% | 102% | 101% | 100% | 0 |
| 19 | ZZZZZ | 103% | 102% | 102% | 102% | 0 |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |

| | QC LIMITS |
|---|---|
| SMC1 = Dibromofluoromethane | 70-130% |
| SMC2 = 1,2-Dichloroethane-d4 | 70-130% |
| SMC3 = Toluene-d8 | 70-130% |
| SMC4 = Bromofluorobenzene | 70-130% |

\# Column to be used to flag recovery values

* Values outside of protocol required QC limits

D System Monitoring Compound diluted out

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B/L808193B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.0 | 100 | | 19.3 | 96 | | 4 | | 15 | 80-120 |
| Chloromethane | 20 | U | 20.9 | 105 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 19.5 | 98 | | 18.9 | 95 | | 3 | | 15 | 80-120 |
| Bromomethane | 20 | U | 20.3 | 101 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| Chloroethane | 20 | U | 20.3 | 102 | | 19.3 | 96 | | 5 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 128.8 | 129 | * | 122.0 | 122 | * | 5 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 20.1 | 100 | | 19.4 | 97 | | 3 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Acetone | 100 | U | 102.1 | 102 | | 98.7 | 99 | | 3 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.2 | 101 | | 19.5 | 98 | | 3 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.6 | 108 | | 20.6 | 103 | | 5 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.7 | 104 | | 19.9 | 99 | | 4 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.8 | 104 | | 19.9 | 100 | | 4 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.2 | 111 | | 42.7 | 107 | | 4 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 20.6 | 103 | | 19.6 | 98 | | 5 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.9 | 104 | | 19.9 | 99 | | 5 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 106.9 | 107 | | 113.6 | 114 | | 6 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 18.4 | 92 | | 22.0 | 110 | | 18 | * | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 22.6 | 113 | | 21.8 | 109 | | 3 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 21.1 | 105 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 22.4 | 112 | | 21.9 | 110 | | 2 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.6 | 103 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.4 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 24.3 | 122 | * | 23.7 | 118 | | 3 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 21.0 | 105 | | 20.4 | 102 | | 3 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.3 | 107 | | 20.8 | 104 | | 3 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 21.2 | 106 | | 20.8 | 104 | | 2 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Benzene | 20 | U | 20.5 | 102 | | 20.0 | 100 | | 2 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 22.1 | 110 | | 21.9 | 109 | | 1 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.7 | 108 | | 21.7 | 109 | | 0 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 21.7 | 108 | | 21.7 | 109 | | 0 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.5 | 108 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 112.6 | 113 | | 110.8 | 111 | | 2 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 115.1 | 115 | | 113.5 | 113 | | 1 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 118 | | 23.6 | 118 | | 0 | | 15 | 80-120 |
| Toluene | 20 | U | 20.5 | 102 | | 20.1 | 101 | | 2 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 23.1 | 116 | | 23.1 | 115 | | 0 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.1 | 110 | | 22.3 | 111 | | 1 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.5 | 107 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.1 | 101 | | 19.8 | 99 | | 2 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 20.3 | 102 | | 20.5 | 102 | | 1 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B/L808193B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.6 | 108 | | 21.5 | 108 | | 0 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 20.1 | 100 | | 19.8 | 99 | | 1 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.0 | 110 | | 22.2 | 111 | | 1 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.6 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 41.4 | 103 | | 40.8 | 102 | | 1 | | 15 | 80-120 |
| o-Xylene | 20 | U | 21.0 | 105 | | 20.9 | 105 | | 0 | | 15 | 80-120 |
| Styrene | 20 | U | 21.4 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.1 | 105 | | 21.0 | 105 | | 0 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 20.0 | 100 | | 19.9 | 100 | | 1 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.5 | 108 | | 21.6 | 108 | | 0 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 20.7 | 103 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 20.1 | 100 | | 20.1 | 100 | | 0 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.9 | 104 | | 20.5 | 103 | | 2 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 20.4 | 102 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.6 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.8 | 104 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.8 | 104 | | 20.9 | 104 | | 0 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.4 | 102 | | 20.6 | 103 | | 1 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.4 | 97 | | 19.3 | 97 | | 0 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 19.8 | 99 | | 19.8 | 99 | | 0 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 20.0 | 100 | | 19.7 | 99 | | 1 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 21.2 | 106 | | 20.6 | 103 | | 3 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.6 | 103 | | 20.3 | 102 | | 1 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 23.7 | 118 | | 23.6 | 118 | | 0 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 21.2 | 106 | | 21.2 | 106 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 21.6 | 108 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| Naphthalene | 20 | U | 21.7 | 109 | | 21.3 | 107 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 21.0 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 20.2 | 101 | | 19.8 | 91 | | 2 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 1 out of 71 outside limits
Spike Recovery:3 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 50269-2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.5 | 102 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| Chloromethane | 20 | U | 21.3 | 107 | | 21.9 | 110 | | 3 | | 15 | 70-130 |
| Vinyl Chloride | 20 | U | 20.6 | 103 | | 20.6 | 103 | | 0 | | 15 | 70-130 |
| Bromomethane | 20 | U | 19.8 | 99 | | 21.9 | 109 | | 10 | | 15 | 70-130 |
| Chloroethane | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 2 | | 15 | 70-130 |
| t-Butyl alcohol (TBA) | 100 | U | 129.3 | 129 | | 139.5 | 140 | * | 8 | | 15 | 70-130 |
| Trichlorofluoromethane | 20 | U | 21.2 | 106 | | 21.2 | 106 | | 0 | | 15 | 70-130 |
| Diethyl ether | 20 | U | 21.2 | 106 | | 21.3 | 107 | | 1 | | 15 | 70-130 |
| Acetone | 100 | 15 | 117.3 | 102 | | 122.4 | 107 | | 4 | | 15 | 70-130 |
| 1,1-Dichloroethene | 20 | U | 21.4 | 107 | | 21.5 | 107 | | 0 | | 15 | 70-130 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.9 | 109 | | 21.7 | 108 | | 1 | | 15 | 70-130 |
| Methylene Chloride | 20 | U | 20.5 | 103 | | 20.4 | 102 | | 0 | | 15 | 70-130 |
| Carbon Disulfide | 20 | U | 22.0 | 110 | | 21.9 | 110 | | 0 | | 15 | 70-130 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.4 | 111 | | 45.1 | 113 | | 2 | | 15 | 70-130 |
| trans-1,2-Dichloroethene | 20 | U | 21.4 | 107 | | 21.5 | 108 | | 1 | | 15 | 70-130 |
| 1,1-Dichloroethane | 20 | U | 21.6 | 108 | | 21.7 | 109 | | 1 | | 15 | 70-130 |
| Methyl ethyl ketone | 100 | 8 | 123.6 | 116 | | 130.6 | 123 | | 6 | | 15 | 70-130 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 22.3 | 112 | | 22.7 | 114 | | 2 | | 15 | 70-130 |
| 2,2-Dichloropropane | 20 | U | 21.9 | 109 | | 22.1 | 111 | | 1 | | 15 | 70-130 |
| cis-1,2-Dichloroethene | 20 | U | 21.9 | 109 | | 22.2 | 111 | | 2 | | 15 | 70-130 |
| t-Amyl methyl ether (TAME) | 20 | U | 22.4 | 112 | | 22.8 | 114 | | 2 | | 15 | 70-130 |
| Chloroform | 20 | U | 21.3 | 107 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| Bromochloromethane | 20 | U | 20.9 | 105 | | 21.1 | 106 | | 1 | | 15 | 70-130 |
| Tetrahydrofuran | 20 | U | 24.4 | 122 | | 25.5 | 128 | | 5 | | 15 | 70-130 |
| 1,1,1-Trichloroethane | 20 | U | 22.2 | 111 | | 22.3 | 112 | | 1 | | 15 | 70-130 |
| 1,1-Dichloropropene | 20 | U | 22.7 | 114 | | 22.9 | 114 | | 1 | | 15 | 70-130 |
| Carbon Tetrachloride | 20 | U | 22.3 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| 1,2-Dichloroethane | 20 | U | 21.6 | 108 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Benzene | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| Trichloroethene | 20 | U | 22.8 | 114 | | 23.3 | 117 | | 2 | | 15 | 70-130 |
| 1,2-Dichloropropane | 20 | U | 22.3 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| Bromodichloromethane | 20 | U | 22.1 | 110 | | 22.4 | 112 | | 1 | | 15 | 70-130 |
| Dibromomethane | 20 | U | 21.8 | 109 | | 21.8 | 109 | | 0 | | 15 | 70-130 |
| 2-Hexanone | 100 | U | 111.6 | 112 | | 115.8 | 116 | | 4 | | 15 | 70-130 |
| Methyl isobutyl ketone | 100 | U | 114.5 | 115 | | 117.7 | 118 | | 3 | | 15 | 70-130 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 118 | | 24.1 | 121 | | 2 | | 15 | 70-130 |
| Toluene | 20 | 1 | 22.1 | 104 | | 22.6 | 107 | | 2 | | 15 | 70-130 |
| trans-1,3-Dichloropropene | 20 | U | 23.1 | 116 | | 23.5 | 118 | | 2 | | 15 | 70-130 |
| 1,1,2-Trichloroethane | 20 | U | 22.5 | 113 | | 22.6 | 113 | | 0 | | 15 | 70-130 |
| 1,3-Dichloropropane | 20 | U | 21.7 | 109 | | 22.2 | 111 | | 2 | | 15 | 70-130 |
| Tetrachloroethene | 20 | U | 20.5 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |
| Dibromochloromethane | 20 | U | 20.5 | 103 | | 21.0 | 105 | | 2 | | 15 | 70-130 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**MATRIX SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Matrix Spike/Duplicate Sample ID: 50269-2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | MS CONC. ug/L | MS REC % | # | MSD CONC. ug/L | MSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.7 | 109 | | 21.9 | 110 | | 1 | | 15 | 70-130 |
| Chlorobenzene | 20 | U | 20.6 | 103 | | 20.8 | 104 | | 1 | | 15 | 70-130 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.4 | 112 | | 22.6 | 113 | | 1 | | 15 | 70-130 |
| Ethylbenzene | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 70-130 |
| m,p-Xylene | 40 | U | 42.7 | 107 | | 43.3 | 108 | | 1 | | 15 | 70-130 |
| o-Xylene | 20 | U | 21.6 | 108 | | 21.9 | 109 | | 1 | | 15 | 70-130 |
| Styrene | 20 | U | 22.0 | 110 | | 22.2 | 111 | | 1 | | 15 | 70-130 |
| Bromoform | 20 | U | 21.3 | 107 | | 21.7 | 108 | | 2 | | 15 | 70-130 |
| Isopropylbenzene | 20 | U | 20.8 | 104 | | 20.9 | 105 | | 1 | | 15 | 70-130 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.5 | 108 | | 22.0 | 110 | | 2 | | 15 | 70-130 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 21.7 | 109 | | 2 | | 15 | 70-130 |
| n-Propylbenzene | 20 | U | 21.5 | 107 | | 21.7 | 108 | | 1 | | 15 | 70-130 |
| Bromobenzene | 20 | U | 20.5 | 103 | | 20.7 | 104 | | 1 | | 15 | 70-130 |
| 1,3,5-Trimethylbenzene | 20 | U | 21.2 | 106 | | 21.6 | 108 | | 2 | | 15 | 70-130 |
| 2-Chlorotoluene | 20 | U | 21.1 | 106 | | 21.8 | 109 | | 3 | | 15 | 70-130 |
| 4-Chlorotoluene | 20 | U | 20.9 | 104 | | 20.7 | 103 | | 1 | | 15 | 70-130 |
| tert-butylbenzene | 20 | U | 21.0 | 105 | | 21.5 | 108 | | 2 | | 15 | 70-130 |
| 1,2,4-Trimethylbenzene | 20 | U | 21.6 | 108 | | 21.9 | 109 | | 1 | | 15 | 70-130 |
| sec-butylbenzene | 20 | U | 21.2 | 106 | | 21.4 | 107 | | 1 | | 15 | 70-130 |
| p-isopropyltoluene | 20 | U | 20.0 | 100 | | 20.2 | 101 | | 1 | | 15 | 70-130 |
| 1,3-Dichlorobenzene | 20 | U | 20.2 | 101 | | 20.6 | 103 | | 2 | | 15 | 70-130 |
| 1,4-Dichlorobenzene | 20 | U | 20.3 | 102 | | 20.2 | 101 | | 0 | | 15 | 70-130 |
| n-butylbenzene | 20 | U | 21.5 | 107 | | 21.5 | 107 | | 0 | | 15 | 70-130 |
| 1,2-Dichlorobenzene | 20 | U | 20.8 | 104 | | 21.0 | 105 | | 1 | | 15 | 70-130 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 23.6 | 118 | | 24.5 | 123 | | 4 | | 15 | 70-130 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.7 | 103 | | 21.3 | 107 | | 3 | | 15 | 70-130 |
| Hexachlorobutadiene | 20 | U | 21.8 | 109 | | 22.3 | 112 | | 2 | | 15 | 70-130 |
| Naphthalene | 20 | U | 21.1 | 106 | | 22.3 | 112 | | 6 | | 15 | 70-130 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.5 | 102 | | 21.3 | 107 | | 4 | | 15 | 70-130 |
| 1,3,5-Trichlorobenzene | 20 | U | 20.1 | 101 | | 20.3 | 101 | | 1 | | 15 | 70-130 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery: 1 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B3/L808193B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 19.2 | 96 | | 19.7 | 98 | | 2 | | 15 | 80-120 |
| Chloromethane | 20 | U | 20.3 | 101 | | 20.7 | 103 | | 2 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 19.8 | 99 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| Bromomethane | 20 | U | 21.2 | 106 | | 22.6 | 113 | | 6 | | 15 | 80-120 |
| Chloroethane | 20 | U | 20.2 | 101 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 138.0 | 138 | * | 147.6 | 148 | * | 7 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 19.9 | 100 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 21.5 | 108 | | 22.2 | 111 | | 3 | | 15 | 80-120 |
| Acetone | 100 | U | 107.8 | 108 | | 115.5 | 115 | | 7 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.1 | 101 | | 20.7 | 103 | | 3 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.4 | 107 | | 21.8 | 109 | | 2 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.8 | 104 | | 21.5 | 108 | | 3 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.7 | 103 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.3 | 111 | | 46.0 | 115 | | 4 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 20.5 | 102 | | 21.0 | 105 | | 3 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.9 | 105 | | 21.3 | 107 | | 2 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 115.0 | 115 | | 124.7 | 125 | * | 8 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 18.2 | 91 | | 19.6 | 98 | | 8 | | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 18.1 | 91 | | 18.5 | 93 | | 2 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 20.7 | 104 | | 21.6 | 108 | | 4 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 21.6 | 108 | | 22.7 | 114 | | 5 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.3 | 101 | | 20.9 | 105 | | 3 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.2 | 101 | | 21.3 | 106 | | 5 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 25.0 | 125 | * | 26.1 | 130 | * | 4 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 20.5 | 102 | | 21.2 | 106 | | 4 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.0 | 105 | | 21.6 | 108 | | 3 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 20.9 | 104 | | 21.5 | 108 | | 3 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 21.0 | 105 | | 21.7 | 109 | | 3 | | 15 | 80-120 |
| Benzene | 20 | U | 20.1 | 101 | | 20.7 | 104 | | 3 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 22.1 | 110 | | 21.9 | 110 | | 1 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.7 | 109 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 22.0 | 110 | | 21.9 | 109 | | 0 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.7 | 109 | | 21.7 | 108 | | 0 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 117.4 | 117 | | 119.7 | 120 | | 2 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 119.4 | 119 | | 120.7 | 121 | * | 1 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.3 | 116 | | 22.9 | 114 | | 2 | | 15 | 80-120 |
| Toluene | 20 | U | 20.6 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 22.9 | 114 | | 22.4 | 112 | | 2 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.7 | 113 | | 22.6 | 113 | | 0 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.8 | 109 | | 21.9 | 109 | | 0 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.3 | 101 | | 19.6 | 98 | | 4 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 20.8 | 104 | | 20.5 | 103 | | 1 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808193B3/L808193B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.8 | 109 | | 22.1 | 111 | | 1 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 19.9 | 99 | | 19.9 | 99 | | 0 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.7 | 109 | | 21.6 | 108 | | 1 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.2 | 101 | | 20.2 | 101 | | 0 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 40.2 | 100 | | 40.5 | 101 | | 1 | | 15 | 80-120 |
| o-Xylene | 20 | U | 20.6 | 103 | | 20.9 | 104 | | 2 | | 15 | 80-120 |
| Styrene | 20 | U | 21.1 | 106 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 1 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 19.8 | 99 | | 19.8 | 99 | | 0 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.8 | 109 | | 22.1 | 110 | | 1 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.6 | 108 | | 21.8 | 109 | | 1 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 20.3 | 102 | | 20.2 | 101 | | 0 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 19.9 | 100 | | 19.9 | 99 | | 0 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.4 | 102 | | 20.3 | 102 | | 0 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 19.9 | 99 | | 20.3 | 101 | | 2 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.5 | 102 | | 20.2 | 101 | | 1 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.4 | 102 | | 20.8 | 104 | | 2 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.4 | 102 | | 20.7 | 103 | | 1 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.0 | 100 | | 20.1 | 101 | | 0 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.0 | 95 | | 19.0 | 95 | | 0 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 19.6 | 98 | | 19.6 | 98 | | 0 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 19.6 | 98 | | 19.4 | 97 | | 1 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 20.2 | 101 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.4 | 102 | | 20.2 | 101 | | 1 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 24.0 | 120 | | 24.5 | 122 | | 2 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.5 | 103 | | 20.6 | 103 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 20.7 | 103 | | 20.5 | 102 | | 1 | | 15 | 80-120 |
| Naphthalene | 20 | U | 21.5 | 107 | | 22.0 | 110 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.6 | 103 | | 20.7 | 104 | | 0 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 19.4 | 97 | | 19.3 | 91 | | 1 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 0 out of 71 outside limits
Spike Recovery:6 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B/L808203B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 20.1 | 100 | | 19.4 | 97 | | 3 | | 15 | 80-120 |
| Chloromethane | 20 | U | 21.4 | 107 | | 21.2 | 106 | | 1 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 20.7 | 103 | | 19.1 | 95 | | 8 | | 15 | 80-120 |
| Bromomethane | 20 | U | 21.5 | 108 | | 19.7 | 99 | | 9 | | 15 | 80-120 |
| Chloroethane | 20 | U | 21.0 | 105 | | 20.3 | 102 | | 3 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 118.4 | 118 | | 128.8 | 129 | * | 8 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 20.7 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 20.8 | 104 | | 20.7 | 103 | | 0 | | 15 | 80-120 |
| Acetone | 100 | U | 100.6 | 101 | | 102.3 | 102 | | 2 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.3 | 101 | | 19.8 | 99 | | 2 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 21.1 | 105 | | 21.4 | 107 | | 1 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 20.9 | 105 | | 21.4 | 107 | | 2 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 20.5 | 102 | | 20.0 | 100 | | 3 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 42.2 | 105 | | 42.8 | 107 | | 1 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 19.6 | 98 | | 20.1 | 100 | | 2 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 20.7 | 104 | | 20.8 | 104 | | 0 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 108.4 | 108 | | 115.2 | 115 | | 6 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 21.7 | 108 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 21.8 | 109 | | 21.1 | 105 | | 3 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 21.0 | 105 | | 20.7 | 104 | | 1 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 21.4 | 107 | | 21.8 | 109 | | 2 | | 15 | 80-120 |
| Chloroform | 20 | U | 20.4 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.5 | 102 | | 20.4 | 102 | | 0 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 23.0 | 115 | | 23.7 | 119 | | 3 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 20.7 | 103 | | 20.6 | 103 | | 1 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.3 | 106 | | 21.1 | 105 | | 1 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 21.6 | 108 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 20.9 | 104 | | 21.0 | 105 | | 1 | | 15 | 80-120 |
| Benzene | 20 | U | 20.4 | 102 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 23.0 | 115 | | 22.5 | 113 | | 2 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.4 | 107 | | 20.9 | 105 | | 2 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 21.6 | 108 | | 21.3 | 106 | | 2 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.5 | 107 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 108.2 | 108 | | 113.2 | 113 | | 5 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 110.0 | 110 | | 113.4 | 113 | | 3 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 23.7 | 119 | | 23.1 | 116 | | 2 | | 15 | 80-120 |
| Toluene | 20 | U | 20.6 | 103 | | 20.1 | 101 | | 2 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 23.4 | 117 | | 23.1 | 116 | | 1 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.3 | 111 | | 22.2 | 111 | | 1 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.6 | 108 | | 21.7 | 109 | | 1 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 20.3 | 102 | | 20.0 | 100 | | 2 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 21.0 | 105 | | 20.4 | 102 | | 3 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B/L808203B2

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.8 | 109 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 20.5 | 103 | | 20.0 | 100 | | 3 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 22.6 | 113 | | 22.0 | 110 | | 3 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.8 | 104 | | 20.2 | 101 | | 3 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 41.4 | 103 | | 40.7 | 102 | | 2 | | 15 | 80-120 |
| o-Xylene | 20 | U | 21.1 | 106 | | 20.9 | 105 | | 1 | | 15 | 80-120 |
| Styrene | 20 | U | 21.6 | 108 | | 21.2 | 106 | | 2 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.7 | 108 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 20.4 | 102 | | 19.9 | 99 | | 3 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.8 | 109 | | 22.2 | 111 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.3 | 107 | | 22.0 | 110 | | 3 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 21.0 | 105 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 20.7 | 103 | | 20.1 | 100 | | 3 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 21.0 | 105 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 21.0 | 105 | | 20.7 | 104 | | 1 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 20.7 | 104 | | 20.1 | 101 | | 3 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.5 | 103 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 21.2 | 106 | | 20.9 | 105 | | 1 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 20.8 | 104 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 19.7 | 98 | | 19.5 | 98 | | 1 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 20.4 | 102 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 20.0 | 100 | | 19.7 | 98 | | 2 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 20.7 | 103 | | 20.4 | 102 | | 1 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 20.5 | 103 | | 20.2 | 101 | | 2 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 22.8 | 114 | | 24.4 | 122 | * | 7 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 20.6 | 103 | | 20.7 | 104 | | 0 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 21.6 | 108 | | 20.8 | 104 | | 4 | | 15 | 80-120 |
| Naphthalene | 20 | U | 20.9 | 104 | | 21.8 | 109 | | 4 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.5 | 103 | | 20.6 | 103 | | 0 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 19.8 | 99 | | 19.6 | 91 | | 1 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits
RPD: 0 out of 71 outside limits
Spike Recovery:2 out of 142 outside limits

Comments: _____

_____

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B3/L808203B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 20 | U | 19.4 | 97 | | 18.6 | 93 | | 4 | | 15 | 80-120 |
| Chloromethane | 20 | U | 21.9 | 109 | | 21.0 | 105 | | 4 | | 15 | 80-120 |
| Vinyl Chloride | 20 | U | 20.7 | 104 | | 19.9 | 100 | | 4 | | 15 | 80-120 |
| Bromomethane | 20 | U | 21.7 | 109 | | 20.8 | 104 | | 4 | | 15 | 80-120 |
| Chloroethane | 20 | U | 21.3 | 107 | | 20.6 | 103 | | 4 | | 15 | 80-120 |
| t-Butyl alcohol (TBA) | 100 | U | 128.1 | 128 | * | 117.8 | 118 | | 8 | | 15 | 80-120 |
| Trichlorofluoromethane | 20 | U | 20.9 | 105 | | 20.3 | 102 | | 3 | | 15 | 80-120 |
| Diethyl ether | 20 | U | 21.8 | 109 | | 22.0 | 110 | | 1 | | 15 | 80-120 |
| Acetone | 100 | U | 105.5 | 106 | | 106.2 | 106 | | 1 | | 15 | 80-120 |
| 1,1-Dichloroethene | 20 | U | 20.8 | 104 | | 20.5 | 102 | | 2 | | 15 | 80-120 |
| Di-isopropyl ether (DIPE) | 20 | U | 22.1 | 110 | | 21.6 | 108 | | 2 | | 15 | 80-120 |
| Methylene Chloride | 20 | U | 21.4 | 107 | | 21.0 | 105 | | 2 | | 15 | 80-120 |
| Carbon Disulfide | 20 | U | 21.0 | 105 | | 20.6 | 103 | | 2 | | 15 | 80-120 |
| Methyl-tert-butyl ether (MTBE) | 40 | U | 44.9 | 112 | | 44.8 | 112 | | 0 | | 15 | 80-120 |
| trans-1,2-Dichloroethene | 20 | U | 20.9 | 104 | | 20.7 | 103 | | 1 | | 15 | 80-120 |
| 1,1-Dichloroethane | 20 | U | 21.5 | 108 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| Methyl ethyl ketone | 100 | U | 114.8 | 115 | | 114.0 | 114 | | 1 | | 15 | 80-120 |
| Ethyl t-butyl ether (ETBE) | 20 | U | 22.2 | 111 | | 21.4 | 107 | | 3 | | 15 | 80-120 |
| 2,2-Dichloropropane | 20 | U | 17.0 | 85 | | 16.3 | 82 | | 4 | | 15 | 80-120 |
| cis-1,2-Dichloroethene | 20 | U | 21.5 | 107 | | 21.0 | 105 | | 2 | | 15 | 80-120 |
| t-Amyl methyl ether (TAME) | 20 | U | 22.1 | 110 | | 21.6 | 108 | | 2 | | 15 | 80-120 |
| Chloroform | 20 | U | 21.1 | 105 | | 20.8 | 104 | | 1 | | 15 | 80-120 |
| Bromochloromethane | 20 | U | 20.9 | 105 | | 20.2 | 101 | | 4 | | 15 | 80-120 |
| Tetrahydrofuran | 20 | U | 25.3 | 126 | * | 23.8 | 119 | | 6 | | 15 | 80-120 |
| 1,1,1-Trichloroethane | 20 | U | 21.4 | 107 | | 21.0 | 105 | | 2 | | 15 | 80-120 |
| 1,1-Dichloropropene | 20 | U | 21.5 | 108 | | 21.3 | 107 | | 1 | | 15 | 80-120 |
| Carbon Tetrachloride | 20 | U | 21.7 | 109 | | 21.6 | 108 | | 1 | | 15 | 80-120 |
| 1,2-Dichloroethane | 20 | U | 21.5 | 108 | | 21.3 | 107 | | 1 | | 15 | 80-120 |
| Benzene | 20 | U | 20.9 | 105 | | 20.3 | 102 | | 3 | | 15 | 80-120 |
| Trichloroethene | 20 | U | 21.8 | 109 | | 21.7 | 108 | | 1 | | 15 | 80-120 |
| 1,2-Dichloropropane | 20 | U | 21.6 | 108 | | 21.5 | 107 | | 0 | | 15 | 80-120 |
| Bromodichloromethane | 20 | U | 21.5 | 107 | | 21.7 | 108 | | 1 | | 15 | 80-120 |
| Dibromomethane | 20 | U | 21.3 | 106 | | 21.2 | 106 | | 0 | | 15 | 80-120 |
| 2-Hexanone | 100 | U | 110.9 | 111 | | 110.0 | 110 | | 1 | | 15 | 80-120 |
| Methyl isobutyl ketone | 100 | U | 110.7 | 111 | | 111.8 | 112 | | 1 | | 15 | 80-120 |
| cis-1,3-Dichloropropene | 20 | U | 22.3 | 112 | | 22.5 | 113 | | 1 | | 15 | 80-120 |
| Toluene | 20 | U | 19.8 | 99 | | 19.8 | 99 | | 0 | | 15 | 80-120 |
| trans-1,3-Dichloropropene | 20 | U | 22.0 | 110 | | 21.9 | 110 | | 0 | | 15 | 80-120 |
| 1,1,2-Trichloroethane | 20 | U | 22.3 | 111 | | 22.1 | 111 | | 1 | | 15 | 80-120 |
| 1,3-Dichloropropane | 20 | U | 21.5 | 108 | | 21.4 | 107 | | 1 | | 15 | 80-120 |
| Tetrachloroethene | 20 | U | 19.0 | 95 | | 19.2 | 96 | | 1 | | 15 | 80-120 |
| Dibromochloromethane | 20 | U | 20.5 | 102 | | 20.5 | 102 | | 0 | | 15 | 80-120 |

analytics environmental laboratory LLC

**VOLATILE ORGANIC**

**LABORATORY CONTROL SPIKE/DUPLICATE**

**PERCENT RECOVERY**

Project #: 10971.217.002 Quote #: SDG#: 50273

Site ID: Bucks Harbor Location: Maine

Instrument ID: B

GC Column: RTX-502.2 ID: 0.25 (mm)

Heated Purge: (Y/N) N

Laboratory Control Spike/Duplicate Sample ID: L808203B3/L808203B4

| COMPOUND | SPIKE ADDED ug/L | SAMPLE AMT ug/L | LCS CONC. ug/L | LCS REC % | # | LCSD CONC. ug/L | LCSD REC % | # | RPD | # | QC LIMITS RPD | QC LIMITS % REC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | 20 | U | 21.6 | 108 | | 21.5 | 107 | | 0 | | 15 | 80-120 |
| Chlorobenzene | 20 | U | 19.6 | 98 | | 19.6 | 98 | | 0 | | 15 | 80-120 |
| 1,1,1,2-Tetrachloroethane | 20 | U | 21.8 | 109 | | 21.7 | 109 | | 0 | | 15 | 80-120 |
| Ethylbenzene | 20 | U | 20.3 | 102 | | 19.9 | 100 | | 2 | | 15 | 80-120 |
| m,p-Xylene | 40 | U | 40.4 | 101 | | 39.7 | 99 | | 2 | | 15 | 80-120 |
| o-Xylene | 20 | U | 20.7 | 104 | | 20.5 | 103 | | 1 | | 15 | 80-120 |
| Styrene | 20 | U | 21.1 | 106 | | 20.9 | 104 | | 1 | | 15 | 80-120 |
| Bromoform | 20 | U | 21.6 | 108 | | 21.1 | 106 | | 2 | | 15 | 80-120 |
| Isopropylbenzene | 20 | U | 19.9 | 100 | | 19.4 | 97 | | 2 | | 15 | 80-120 |
| 1,1,2,2-Tetrachloroethane | 20 | U | 21.9 | 109 | | 21.6 | 108 | | 1 | | 15 | 80-120 |
| 1,2,3-Trichloropropane | 20 | U | 21.4 | 107 | | 21.6 | 108 | | 1 | | 15 | 80-120 |
| n-Propylbenzene | 20 | U | 20.2 | 101 | | 20.0 | 100 | | 1 | | 15 | 80-120 |
| Bromobenzene | 20 | U | 20.2 | 101 | | 19.7 | 98 | | 3 | | 15 | 80-120 |
| 1,3,5-Trimethylbenzene | 20 | U | 20.3 | 101 | | 20.1 | 101 | | 1 | | 15 | 80-120 |
| 2-Chlorotoluene | 20 | U | 20.8 | 104 | | 20.0 | 100 | | 4 | | 15 | 80-120 |
| 4-Chlorotoluene | 20 | U | 19.5 | 98 | | 19.5 | 97 | | 0 | | 15 | 80-120 |
| tert-butylbenzene | 20 | U | 20.2 | 101 | | 19.9 | 99 | | 2 | | 15 | 80-120 |
| 1,2,4-Trimethylbenzene | 20 | U | 20.6 | 103 | | 20.5 | 102 | | 0 | | 15 | 80-120 |
| sec-butylbenzene | 20 | U | 19.7 | 98 | | 19.9 | 99 | | 1 | | 15 | 80-120 |
| p-isopropyltoluene | 20 | U | 18.7 | 94 | | 18.8 | 94 | | 0 | | 15 | 80-120 |
| 1,3-Dichlorobenzene | 20 | U | 19.5 | 98 | | 19.4 | 97 | | 1 | | 15 | 80-120 |
| 1,4-Dichlorobenzene | 20 | U | 19.1 | 95 | | 19.5 | 97 | | 2 | | 15 | 80-120 |
| n-butylbenzene | 20 | U | 19.4 | 97 | | 19.7 | 99 | | 1 | | 15 | 80-120 |
| 1,2-Dichlorobenzene | 20 | U | 19.9 | 99 | | 20.1 | 100 | | 1 | | 15 | 80-120 |
| 1,2-Dibromo-3-chloropropane | 20 | U | 23.9 | 119 | | 24.1 | 120 | | 1 | | 15 | 80-120 |
| 1,2,4-Trichlorobenzene | 20 | U | 19.9 | 99 | | 20.5 | 103 | | 3 | | 15 | 80-120 |
| Hexachlorobutadiene | 20 | U | 20.1 | 101 | | 20.3 | 101 | | 1 | | 15 | 80-120 |
| Naphthalene | 20 | U | 20.8 | 104 | | 21.2 | 106 | | 2 | | 15 | 80-120 |
| 1,2,3-Trichlorobenzene | 20 | U | 20.2 | 101 | | 20.3 | 102 | | 0 | | 15 | 80-120 |
| 1,3,5-Trichlorobenzene | 20 | U | 18.8 | 94 | | 19.2 | 91 | | 2 | | 15 | 80-120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 71 outside limits

Spike Recovery:2 out of 142 outside limits

Comments: _____

_____

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9.1.03

**Voltage** 1918

**Threshold** 160

081803-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | | w-B-081803-1-MT | | | | | | |
| 1 | V8081838 | BFB 50ng 2ml V4575 | 5mL | ✓ | | B17270 | WT | NA 532 |
| 2 | | 1ppb .25ml V4586 V4588 | | ✓ | | 71 | | |
| 3 | | 2 ppb 150ml | | ✓ | | 72 | | |
| 4 | | 5 ppb 1.25ml | | ✓ | | 73 | | |
| 5 | | 20 ppb 5ml | | ✓ | | 74 | | |
| 6 | | 50 ppb 12.5ml | | ✓ | | 75 | | |
| 7 | | 100 ppb 25ml | | ✓ | | 76 | | |
| 8 | | Blank | | ✓ | | 77 | | |
| 9 | | L8081838 5ml V4587 V4594 | | ✓ | | 78 | | |
| 10 | | L8081838Z 〃 〃 | | ✓ | | 79 | | |
| 11 | | Bromoform | | ✓ | | 80 | | |
| 12 | | B8081838 | | ✓ | | 81 | | |
| 13 | | ~~50257-1~~ 50261-3 | | ✓ | | 82 | | <2 |
| 14 | | 50259-1 | | ✓ | | 83 | | <2 |
| 15 | | 50260-B | | ✓ | | 84 | | <2 |
| 16 | | 50261-1 | | ✓ | | 85 | | <2 |
| 17 | | 〃 -2 | 〃 | ✓ | | 86 | | <2 |
| 18 | | 50257-1 | 500ml | ✓ | | 87 | | <2 |
| 19 | | 50262-1 | 5mL | ✓ | | 88 | | <2 |
| 20 | | -2 | 250ml | | DM 5mL | 89 | | <2 |
| 21 | | -3 | 5mL | ✓ | | 90 | | <2 |
| 22 | | -4 | 〃 | ✓ | | 91 | 〃 | <2 |

8.19.03

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:
SS+IS V4597 Exp: 9.1.03
**Voltage** 1918
**Threshold** 100

Sun 081903-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| | W-B-081903-1-JL | | | | | | | |
| 1 | V8081803B | Blank | 5mL | | | B17292 | | |
| 2 | | BFB 50ng 2mL V4575 | | ✓ | | 93 | T | 838 |
| 3 | | 20ppb 5mL V4586 V4588 | | ✓ | TBA @ 24%. | 94 | SC | |
| 4 | | L808193B V4587 V4590 | | ✓ | EtBE, DIPE @ 18%. | 95 | Q | |
| 5 | | L808193B2 ↓ | | ✓ | TBA 129/122%. | 96 | Q | |
| 6 | | Bromofluorm | | ✓ | | 97 | | |
| 7 | | B808193B | | ✓ | | 98 | B | |
| 8 | | 50262-5 | | ✓ | TB | 99 | | <2 |
| 9 | | 50240-8 | | ✓ | | B17300 | | <2 |
| 10 | | 50243-6 | | ✓ | | 1 | | <2 |
| 11 | | ↓ -8 | | ✓ | | 2 | | <2 |
| 12 | | 50269-2 | | ✓ | | 3 | | <2 |
| 13 | | -2 MS | | ✓ | TBA MSD @140%. | 4 | SP | <2 |
| 14 | | ↓ -2 MSD | | ✓ | | 5 | SP | <2 |
| 15 | | 50262-2 | | ✓ | | 6 | | <2 |
| 16 | | 50254-20 | | ✓ | | 7 | | <2 |
| 17 | | -21 | 250mL | ✓ | | 8 | | <2 |
| 18 | | -22 | 5mL | ✓ | | 9 | | <2 |
| 19 | | ↓ -30 | | | MM 1mL | 10 | | <2 |
| 20 | | 50269-1 | | ✓ | | 11 | | <2 |
| 21 | | -3 | | ✓ | | 12 | | <2 |
| 22 | | -4 | | ✓ | | 13 | | <2 |
| 23 | | -5 | | ✓ | | 14 | | <2 |
| 24 | | -6 | | ✓ | | 15 | | <2 |
| 25 | | ↓ -7 | | ✓ | | 16 | | <2 |
| 26 | | BFB 50ng 2mL V4575 | 5mL | ✓ | | 17 | T | 857 |
| 27 | | 20ppb 5mL V4586 V4588 | | ✓ | TBA @ 36%. | 18 | SC | |
| 28 | | L808193B3 V4587 V4590 | | ✓ | TBA, THF, MIBK | 19 | Q | |
| 29 | | L808193B4 ↓ | | ✓ | 120 B7 CP @ | 20 | Q | |
| 30 | | ~~B808193B2~~ Blank | | | co check | 21 | B | |

Sun 8.19.03

Revision: 04/30/02



LU25J

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9-1-03

**Voltage** 1918

**Threshold** 100

Sw 081903-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V8081B/b | B808193B2 | 5mL | ✓ | | B173228 | Jw | |
| 32 | | 50269-8 | | ✓ | | 23 | | <2 |
| 33 | | -9 | | ✓ | | 24 | | <2 |
| 34 | | -10 | | ✓ | nn/1mL | 25 | | <2 |
| 35 | | -11 | | ✓ | nn 500mL | 26 | | <2 |
| 36 | | -12 | | ✓ | nn 500mL | 27 | | <2 |
| 37 | | -13 | | ✓ | nn 500mL | 28 | | <2 |
| 38 | | 50273-1 | | ✓ | nn 500mL | 29 | | <2 |
| 39 | | -2 | | ✓ | nn 500mL | 30 | | <2 |
| 40 | | -3 | | ✓ | nn 500mL | 31 | | <2 |
| 41 | | -4 | | ✓ | nn 500mL | 32 | | <2 |
| 42 | | -5 | | ✓ | nn 500mL | 33 | | <2 |
| 43 | | -6 | | ✓ | | 34 | | <2 |
| 44 | | -7 | | ✓ | nn 50mL | 35 | | <2 |
| 45 | | -8 | | ✓ | nn 50mL | 36 | | <2 |
| 46 | | -9 | | ✓ | nn 50mL | 37 | | <2 |
| 47 | ↓ | -10 | ↓ | ✓ | nn 50mL | 38 | ↓ | <2 |

9.30.03

Jw

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9.1.03

**Voltage** 1918

**Threshold** 100

082003-B

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH | |
|---|---|---|---|---|---|---|---|---|---|
| | W-B-082003-1-JL2 | | | | | | | | |
| 1 | V8081B | ~~Sur 9.20.03~~ ~~Bromo~~ BFB 50ng | 5mL | | 2mL V4575 | B173351 | | | 910 |
| 2 | | ~~Surr 9.20.03~~ BFB 20PPB 5mL V4586 V4588 | | | THF | 405C | | | |
| 3 | | L808203B V4587 V4590 | | | | 41 | Q | | |
| 4 | | L808203B2 | | | THF 1,2-DCP | 42 | Q | | |
| 5 | | Bromoform | | | | 43 | | | |
| 6 | | B808203B | | | | 44 | B | | |
| 7 | | 50229-5 | 1mL | | | 45 | | | L2 |
| 8 | | 50269-10, DL | 1mL | | | 46 | | | L2 |
| 9 | | 50254-30 | 1mL | | | 47 | | | L2 |
| 10 | | 50269-11, DL | 500mL | | | 48 | | | L2 |
| 11 | | -12, DL | | | | 49 | | | L2 |
| 12 | | -13, DL | | | | 50 | | | L2 |
| 13 | | 50273-1, DL | | | | 51 | | | L2 |
| 14 | | -2, DL | | | | 52 | | | L2 |
| 15 | | -3, DL | | | | 53 | | | L2 |
| 16 | | -4, DL | | | | 54 | | | L2 |
| 17 | | -5, DL | | | | 55 | | | L2 |
| 18 | | 50254-27 | | | | 56 | | | L2 |
| 19 | | -28 | | | | 57 | | | L2 |
| 20 | | -29 | | | | 58 | | | L2 |
| 21 | | -31 | | | MW 100mL | 59 | | | L2 |
| 22 | | 50274-4 | | | MW 250mL | 60 | | | L2 |
| 23 | | -6 | | | * ONT 12hr. MW 500mL | 61 | | | L2 |
| 24 | | BFB 50ng 2mL V4575 | 5mL | | | 62 | T | | 945 |
| 25 | | 20PPB 5mL V4586 V4588 | | | THF | 63 | SC | | |
| 26 | | L808203B3 V4587 V4590 | | | THF, THF | 64 | Q | | |
| 27 | | L808203B4 | | | | 65 | Q | | |
| 28 | | B808203B2 | | | | 66 | B | | |
| 29 | | 50273-7, DL | 50mL | | | 67 | | | L2 |
| 30 | | -8, DL | | | | 68 | | | L2 |

(cont.)

Revision: 04/30/02

**GC/MS Volatiles Instrument: B**

IS only Exp:

SS+IS V4593 Exp: 9-1-03

**Voltage** 1918

**Threshold** 100

[signature] 082003-B (CONT.)

| Tube | Method | Sample | Vol | DF | Comments | File # | LB | pH |
|---|---|---|---|---|---|---|---|---|
| 31 | V808183.B | 50273-9, DL | 50mL | ✓ | | B17369 | [signature] | <2 |
| 32 | | -10, DL | | ✓ | | 70 | | <2 |
| 33 | | 50254-24 | | ✓ | | 71 | | <2 |
| 34 | | -25 | | ✓ | | 72 | | <2 |
| 35 | | -26 | | ✓ | | 73 | | <2 |
| 36 | | 50254-32 | 5mL | ✓ | | 74 | | <2 |
| 37 | | 50274-1 | | ✓ | | 75 | | <2 |
| 38 | | -2 | | ✓ | | 76 | | <2 |
| 39 | | -3 | | ✓ | | 77 | | <2 |
| 40 | | -5 | | ✓ | | 78 | | <2 |
| 41 | | -7 | | ✓ | | 79 | | <2 |
| 42 | | -1, MS | | | TBA↑ | 80 | SP | <2 |
| 43 | | -1, MSD | | | RPD↑ TBA, 2-HEX, MIBAL | 81 | SP | <2 |

[signature] 8-21-03

Revision: 04/30/02

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 19.3 |
| 75 | 30.0 - 60.0% of mass 95 | 43.4 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 72.9 |
| 175 | 5.0 - 9.0% of mass 174 | 5.4 ( 7.5 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 72.8 ( 99.8 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.5 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 1 PPB | 1 PPB | B17271SI.D | 08/18/03 | 18:02 |
| 02 | 2 PPB | 2 PPB | B17272SI.D | 08/18/03 | 18:31 |
| 03 | 5 PPB | 5 PPB | B17273SI.D | 08/18/03 | 19:00 |
| 04 | 20 PPB | 20 PPB | B17274SI.D | 08/18/03 | 19:29 |
| 05 | 50 PPB | 50 PPB | B17275SI.D | 08/18/03 | 19:59 |
| 06 | 100 PPB | 100 PPB | B17276SI.D | 08/18/03 | 20:28 |
| 07 | ZZZZZ | ZZZZZ | B17278Q.D | 08/18/03 | 21:41 |
| 08 | ZZZZZ | ZZZZZ | B17279Q.D | 08/18/03 | 22:10 |
| 09 | ZZZZZ | ZZZZZ | B17280.D | 08/18/03 | 22:40 |
| 10 | ZZZZZ | ZZZZZ | B17281B.D | 08/18/03 | 23:09 |
| 11 | ZZZZZ | ZZZZZ | B17282.D | 08/18/03 | 23:38 |
| 12 | ZZZZZ | ZZZZZ | B17283.D | 08/18/03 | 0:07 |
| 13 | ZZZZZ | ZZZZZ | B17284.D | 08/19/03 | 0:37 |
| 14 | ZZZZZ | ZZZZZ | B17285.D | 08/19/03 | 1:06 |
| 15 | ZZZZZ | ZZZZZ | B17286.D | 08/19/03 | 1:35 |
| 16 | ZZZZZ | ZZZZZ | B17287.D | 08/19/03 | 2:04 |
| 17 | ZZZZZ | ZZZZZ | B17288.D | 08/19/03 | 2:34 |
| 18 | ZZZZZ | ZZZZZ | B17289.D | 08/19/03 | 3:03 |
| 19 | ZZZZZ | ZZZZZ | B17290.D | 08/19/03 | 3:47 |
| 20 | ZZZZZ | ZZZZZ | B17291.D | 08/19/03 | 4:16 |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.9 |
| 75 | 30.0 - 60.0% of mass 95 | 42.0 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.8 |
| 173 | Less than 2.0% of mass 174 | 0.1 ( 0.2 )1 |
| 174 | Greater than 50% of mass 95 | 72.2 |
| 175 | 5.0 - 9.0% of mass 174 | 4.8 ( 6.7 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 70.2 ( 97.3 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.2 ( 5.9 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B17294SC.D | 08/19/03 | 9:17 |
| 02 | L808193B | L808193B | B17295Q.D | 08/19/03 | 9:46 |
| 03 | L808193B2 | L808193B2 | B17296Q.D | 08/19/03 | 10:22 |
| 04 | ZZZZZ | ZZZZZ | B17297.D | 08/19/03 | 10:54 |
| 05 | B808193B | B808193B | B17298B.D | 08/19/03 | 11:24 |
| 06 | ZZZZZ | ZZZZZ | B17299.D | 08/19/03 | 11:56 |
| 07 | ZZZZZ | ZZZZZ | B17300.D | 08/19/03 | 12:20 |
| 08 | ZZZZZ | ZZZZZ | B17301.D | 08/19/03 | 12:50 |
| 09 | ZZZZZ | ZZZZZ | B17302.D | 08/19/03 | 13:19 |
| 10 | ZZZZZ | ZZZZZ | B17303.D | 08/19/03 | 13:48 |
| 11 | 50269-2,MS | 50269-2,MS | B17304SP.D | 08/19/03 | 14:17 |
| 12 | 50269-2,MSD | 50269-2,MSD | B17305SP.D | 08/19/03 | 14:47 |
| 13 | ZZZZZ | ZZZZZ | B17306.D | 08/19/03 | 15:16 |
| 14 | ZZZZZ | ZZZZZ | B17307.D | 08/19/03 | 16:00 |
| 15 | ZZZZZ | ZZZZZ | B17308.D | 08/19/03 | 16:29 |
| 16 | ZZZZZ | ZZZZZ | B17309.D | 08/19/03 | 16:58 |
| 17 | ZZZZZ | ZZZZZ | B17310.D | 08/19/03 | 17:28 |
| 18 | ZZZZZ | ZZZZZ | B17311.D | 08/19/03 | 17:57 |
| 19 | ZZZZZ | ZZZZZ | B17312.D | 08/19/03 | 18:26 |
| 20 | ZZZZZ | ZZZZZ | B17313.D | 08/19/03 | 18:56 |
| 21 | ZZZZZ | ZZZZZ | B17314.D | 08/19/03 | 19:25 |
| 22 | ZZZZZ | ZZZZZ | B17315.D | 08/19/03 | 19:54 |
| 23 | ZZZZZ | ZZZZZ | B17316.D | 08/19/03 | 20:23 |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.9 |
| 75 | 30.0 - 60.0% of mass 95 | 43.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 76.7 |
| 175 | 5.0 - 9.0% of mass 174 | 5.1 ( 6.6 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 73.3 ( 95.6 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.4 ( 6.0 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20 PPB STD | 20 PPB STD | B17318SC.D | 08/19/03 | 21:36 |
| 02 | L808193B3 | L808193B3 | B17319Q.D | 08/19/03 | 22:06 |
| 03 | L808193B4 | L808193B4 | B17320Q.D | 08/19/03 | 22:35 |
| 04 | B808193B2 | B808193B2 | B17322B.D | 08/19/03 | 23:34 |
| 05 | ZZZZZ | ZZZZZ | B17323.D | 08/19/03 | 0:03 |
| 06 | ZZZZZ | ZZZZZ | B17324.D | 08/20/03 | 0:32 |
| 07 | ZZZZZ | ZZZZZ | B17325.D | 08/20/03 | 1:01 |
| 08 | ZZZZZ | ZZZZZ | B17326.D | 08/20/03 | 1:31 |
| 09 | ZZZZZ | ZZZZZ | B17327.D | 08/20/03 | 2:00 |
| 10 | ZZZZZ | ZZZZZ | B17328.D | 08/20/03 | 2:29 |
| 11 | 50273-1 | 50273-1 | B17329.D | 08/20/03 | 2:58 |
| 12 | 50273-2 | 50273-2 | B17330.D | 08/20/03 | 3:42 |
| 13 | 50273-3 | 50273-3 | B17331.D | 08/20/03 | 4:12 |
| 14 | 50273-4 | 50273-4 | B17332.D | 08/20/03 | 4:41 |
| 15 | 50273-5 | 50273-5 | B17333.D | 08/20/03 | 5:10 |
| 16 | 50273-6 | 50273-6 | B17334.D | 08/20/03 | 5:39 |
| 17 | 50273-7 | 50273-7 | B17335.D | 08/20/03 | 6:09 |
| 18 | 50273-8 | 50273-8 | B17336.D | 08/20/03 | 6:38 |
| 19 | 50273-9 | 50273-9 | B17337.D | 08/20/03 | 7:07 |
| 20 | 50273-10 | 50273-10 | B17338.D | 08/20/03 | 7:42 |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.0 |
| 75 | 30.0 - 60.0% of mass 95 | 42.7 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.5 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 76.9 |
| 175 | 5.0 - 9.0% of mass 174 | 5.3 ( 6.9 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 74.1 ( 96.5 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.4 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B17340SC.D | 08/20/03 | 9:41 |
| 02 | L808203B | L808203B | B17341Q.D | 08/20/03 | 10:08 |
| 03 | L808203B2 | L808203B2 | B17342Q.D | 08/20/03 | 10:38 |
| 04 | ZZZZZ | ZZZZZ | B17343.D | 08/20/03 | 11:07 |
| 05 | B808203B | B808203B | B17344B.D | 08/20/03 | 11:36 |
| 06 | ZZZZZ | ZZZZZ | B17345.D | 08/20/03 | 12:05 |
| 07 | ZZZZZ | ZZZZZ | B17346.D | 08/20/03 | 12:49 |
| 08 | ZZZZZ | ZZZZZ | B17347.D | 08/20/03 | 13:16 |
| 09 | ZZZZZ | ZZZZZ | B17348.D | 08/20/03 | 14:00 |
| 10 | ZZZZZ | ZZZZZ | B17349.D | 08/20/03 | 14:29 |
| 11 | ZZZZZ | ZZZZZ | B17350.D | 08/20/03 | 14:55 |
| 12 | 50273-1,DL | 50273-1,DL | B17351.D | 08/20/03 | 15:39 |
| 13 | 50273-2,DL | 50273-2,DL | B17352.D | 08/20/03 | 16:08 |
| 14 | 50273-3,DL | 50273-3,DL | B17353.D | 08/20/03 | 16:38 |
| 15 | 50273-4,DL | 50273-4,DL | B17354.D | 08/20/03 | 17:22 |
| 16 | 50273-5,DL | 50273-5,DL | B17355.D | 08/20/03 | 17:51 |
| 17 | ZZZZZ | ZZZZZ | B17356.D | 08/20/03 | 18:20 |
| 18 | ZZZZZ | ZZZZZ | B17357.D | 08/20/03 | 18:49 |
| 19 | ZZZZZ | ZZZZZ | B17358.D | 08/20/03 | 19:33 |
| 20 | ZZZZZ | ZZZZZ | B17359.D | 08/20/03 | 20:03 |
| 21 | ZZZZZ | ZZZZZ | B17360.D | 08/20/03 | 20:32 |
| 22 | ZZZZZ | ZZZZZ | B17361.D | 08/20/03 | 21:16 |
| 23 | | | | | |

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# VOLATILE ORGANIC
# INSTRUMENT PERFORMANCE CHECK
# BROMOFLUOROBENZENE (BFB)

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17362T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2145

Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 18.8 |
| 75 | 30.0 - 60.0% of mass 95 | 42.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 6.0 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | Greater than 50% of mass 95 | 74.0 |
| 175 | 5.0 - 9.0% of mass 174 | 5.7 ( 7.6 )1 |
| 176 | >95.0 - <101.0% of mass 174 | 73.7 ( 99.7 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 ( 6.3 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | 20PPB STD | 20PPB STD | B17363SC.D | 08/20/03 | 22:14 |
| 02 | L808203B3 | L808203B3 | B17364Q.D | 08/20/03 | 22:43 |
| 03 | L808203B4 | L808203B4 | B17365Q.D | 08/20/03 | 23:13 |
| 04 | B808203B2 | B808203B2 | B17366B.D | 08/20/03 | 23:42 |
| 05 | 50273-7,DL | 50273-7,DL | B17367.D | 08/21/03 | 0:11 |
| 06 | 50273-8,DL | 50273-8,DL | B17368.D | 08/21/03 | 0:41 |
| 07 | 50273-9,DL | 50273-9,DL | B17369.D | 08/21/03 | 1:24 |
| 08 | 50273-10,DL | 50273-10,DL | B17370.D | 08/21/03 | 1:54 |
| 09 | ZZZZZ | ZZZZZ | B17371.D | 08/21/03 | 2:23 |
| 10 | ZZZZZ | ZZZZZ | B17372.D | 08/21/03 | 3:07 |
| 11 | ZZZZZ | ZZZZZ | B17373.D | 08/21/03 | 3:36 |
| 12 | ZZZZZ | ZZZZZ | B17374.D | 08/21/03 | 4:05 |
| 13 | ZZZZZ | ZZZZZ | B17375.D | 08/21/03 | 4:35 |
| 14 | ZZZZZ | ZZZZZ | B17376.D | 08/21/03 | 5:04 |
| 15 | ZZZZZ | ZZZZZ | B17377.D | 08/21/03 | 5:33 |
| 16 | ZZZZZ | ZZZZZ | B17378.D | 08/21/03 | 6:02 |
| 17 | ZZZZZ | ZZZZZ | B17379.D | 08/21/03 | 6:32 |
| 18 | ZZZZZ | ZZZZZ | B17380SP.D | 08/21/03 | 8:11 |
| 19 | ZZZZZ | ZZZZZ | B17381SP.D | 08/21/03 | 8:40 |
| 20 | | | | | |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |

| | |
|---|---|
| Acq. Method File | V808183B |
| Level 1 File Name | B17271SI.D |
| Level 2 File Name | B17272SI.D |
| Level 3 File Name | B17273SI.D |
| Level 4 File Name | B17274SI.D |
| Level 5 File Name | B17275SI.D |
| Level 6 File Name | B17276SI.D |

L=Linear
Q=Quadratic

| Name | Response Factor Rel. STDEV |
|---|---|
| Dichlorodifluoromethane | 3.51% |
| Chloromethane | 8.34% |
| Vinyl Chloride | 15.89% |
| Bromomethane | 11.86% |
| Chloroethane | 6.33% |
| t-Butyl alcohol (TBA) | 14.67% |
| Trichlorofluoromethane | 4.07% |
| Diethyl ether | 4.41% |
| 1,1,2-Trichlorotrifluoroethane | 3.85% |
| Acrolein | 8.89% |
| Acetone | 8.68% |
| 1,1-Dichloroethene | 2.75% |
| Methyl iodide | 7.61% |
| Di-isopropyl ether (DIPE) | 6.21% |
| Methylene Chloride | 99.99% L |
| Carbon Disulfide | 4.29% |
| Acrylonitrile | 7.95% |
| Methyl-tert-butyl ether (MTBE) | 2.43% |
| trans-1,2-Dichloroethene | 5.07% |
| 1,1-Dichloroethane | 6.75% |
| Vinyl acetate | 18.22% |
| Methyl ethyl ketone | 9.54% |
| Ethyl t-butyl ether (ETBE) | 3.34% |
| 2,2-Dichloropropane | 7.93% |
| cis-1,2-Dichloroethene | 3.20% |
| t-Amyl methyl ether (TAME) | 4.60% |
| Chloroform | 4.06% |
| Bromochloromethane | 1.39% |
| Tetrahydrofuran | 99.99% Q |
| 1,1,1-Trichloroethane | 4.15% |
| 1,1-Dichloropropene | 2.30% |
| Carbon Tetrachloride | 4.99% |
| 1,2-Dichloroethane | 3.01% |
| Benzene | 4.66% |
| Trichloroethene | 5.75% |
| 1,2-Dichloropropane | 2.72% |
| Methylmethacrylate | 10.12% |
| Bromodichloromethane | 4.99% |
| Dibromomethane | 5.82% |
| 2-Chloroethylvinyl ether | 9.46% |
| 2-Hexanone | 6.80% |
| Methyl isobutyl ketone | 7.59% |
| cis-1,3-Dichloropropene | 7.28% |
| Toluene | 3.97% |
| trans-1,3-Dichloropropene | 9.21% |
| 1,1,2-Trichloroethane | 2.75% |
| 1,3-Dichloropropane | 1.88% |
| Tetrachloroethene | 5.42% |
| Dibromochloromethane | 5.46% |
| 1,2-Dibromoethane | 4.30% |
| Chlorobenzene | 5.03% |
| 1,1,1,2-Tetrachloroethane | 4.15% |
| Ethylbenzene | 4.14% |
| m,p-Xylene | 3.44% |
| o-Xylene | 3.37% |
| Styrene | 2.84% |
| Bromoform | 7.23% |
| Isopropylbenzene | 3.50% |
| 1,1,2,2-Tetrachloroethane | 2.38% |
| 1,2,3-Trichloropropane | 8.33% |
| trans-1,4-Dichloro-2-butene | 4.75% |
| n-Propylbenzene | 3.45% |
| Bromobenzene | 3.55% |
| 1,3,5-Trimethylbenzene | 2.16% |
| 2-Chlorotoluene | 3.90% |
| 4-Chlorotoluene | 3.37% |
| tert-butylbenzene | 4.03% |
| 1,2,4-Trimethylbenzene | 3.96% |
| sec-butylbenzene | 6.23% |
| p-isopropyltoluene | 5.73% |
| 1,3-Dichlorobenzene | 4.89% |
| 1,4-Dichlorobenzene | 4.69% |
| n-butylbenzene | 3.65% |
| 1,2-Dichlorobenzene | 3.50% |
| 1,2-Dibromo-3-chloropropane | 13.75% |
| 1,2,4-Trichlorobenzene | 3.86% |
| Hexachlorobutadiene | 11.31% |
| Naphthalene | 4.31% |
| 1,2,3-Trichlorobenzene | 3.87% |
| 1,3,5-Trichlorobenzene | 3.01% |
| AVG | 8.01% |

8.19.03

VMT 8/19/03

Response Factor Report Instrumen

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

8.19.03

VMT 8/19/03

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | Pentafluorobenzene | ISTD | | | | | | | | |
| 2) | TM | Dichlorodifluoromet | 0.741 | 0.716 | 0.731 | 0.686 | 0.705 | 0.677 | 0.709 | 3.51 | |
| 3) | TMP | Chloromethane | 0.642 | 0.624 | 0.593 | 0.542 | 0.546 | 0.524 | 0.578 | 8.34 | |
| 4) | TMC | Vinyl Chloride | 0.449 | 0.409 | 0.399 | 0.328 | 0.325 | 0.301 | 0.369 | 15.89 | |
| 5) | TM | Bromomethane | 0.326 | 0.251 | 0.248 | 0.238 | 0.266 | 0.266 | 0.266 | 11.86 | |
| 6) | TM | Chloroethane | 0.282 | 0.249 | 0.253 | 0.249 | 0.251 | 0.233 | 0.253 | 6.33 | |
| 7) | TM | t-Butyl alcohol (TB | 0.022 | 0.023 | 0.023 | 0.025 | 0.030 | 0.030 | 0.025# | 14.67 | |
| 8) | TM | Trichlorofluorometh | 0.621 | 0.557 | 0.598 | 0.582 | 0.574 | 0.564 | 0.582 | 4.07 | |
| 9) | TM | Diethyl ether | 0.198 | 0.177 | 0.178 | 0.190 | 0.186 | 0.191 | 0.187 | 4.41 | |
| 10) | TM | 1,1,2-Trichlorotrif | 0.351 | 0.334 | 0.368 | 0.372 | 0.350 | 0.354 | 0.355 | 3.85 | |
| 11) | TM | Acrolein | 0.027 | 0.024 | 0.026 | 0.027 | 0.029 | 0.031 | 0.027# | 8.89 | |
| 12) | TM | Acetone | 0.139 | 0.117 | 0.112 | 0.111 | 0.117 | 0.120 | 0.119 | 8.68 | |
| 13) | TMC | 1,1-Dichloroethene | 0.357 | 0.331 | 0.338 | 0.340 | 0.334 | 0.336 | 0.339 | 2.75 | |
| 14) | TM | Methyl iodide | 0.462 | 0.413 | 0.466 | 0.498 | 0.511 | 0.500 | 0.475 | 7.61 | |
| 15) | TM | Di-isopropyl ether | 1.571 | 1.426 | 1.392 | 1.377 | 1.354 | 1.323 | 1.407 | 6.21 | |
| 16) | TM | Methylene Chloride | 0.716 | 0.616 | 0.455 | 0.393 | 0.371 | 0.361 | 0.485 | 30.32 | Line |
| 17) | TM | Carbon Disulfide | 1.063 | 0.965 | 1.026 | 1.072 | 1.078 | 1.080 | 1.047 | 4.29 | |
| 18) | TM | Acrylonitrile | 0.118 | 0.103 | 0.118 | 0.121 | 0.126 | 0.131 | 0.120 | 7.95 | |
| 19) | TM | Methyl-tert-butyl e | 0.988 | 0.921 | 0.940 | 0.954 | 0.933 | 0.952 | 0.948 | 2.43 | |
| 20) | TM | trans-1,2-Dichloroe | 0.399 | 0.343 | 0.372 | 0.378 | 0.361 | 0.365 | 0.370 | 5.07 | |
| 21) | TMP | 1,1-Dichloroethane | 0.724 | 0.646 | 0.645 | 0.640 | 0.612 | 0.600 | 0.644 | 6.75 | |
| 22) | TM | Vinyl acetate | 0.035 | 0.048 | 0.057 | 0.058 | 0.059 | 0.060 | 0.053# | 18.22 | Qua |
| 23) | TM | Methyl ethyl ketone | 0.043 | 0.041 | 0.041 | 0.046 | 0.050 | 0.051 | 0.045# | 9.54 | |
| 24) | TM | Ethyl t-butyl ether | 1.364 | 1.389 | 1.379 | 1.444 | 1.479 | 1.457 | 1.419 | 3.34 | |
| 25) | TM | 2,2-Dichloropropane | 0.665 | 0.571 | 0.585 | 0.622 | 0.541 | 0.550 | 0.589 | 7.93 | |
| 26) | TM | cis-1,2-Dichloroeth | 0.536 | 0.489 | 0.502 | 0.516 | 0.519 | 0.523 | 0.514 | 3.20 | |
| 27) | TM | t-Amyl methyl ether | 1.226 | 1.171 | 1.202 | 1.261 | 1.313 | 1.307 | 1.247 | 4.60 | |
| 28) | S | Dibromofluoromethan | 0.558 | 0.551 | 0.578 | 0.591 | 0.574 | 0.582 | 0.572 | 2.66 | |
| 29) | TMC | Chloroform | 0.935 | 0.838 | 0.848 | 0.854 | 0.853 | 0.859 | 0.865 | 4.06 | |
| 30) | TM | Bromochloromethane | 0.255 | 0.244 | 0.250 | 0.248 | 0.247 | 0.248 | 0.249 | 1.39 | |
| 31) | TM | Tetrahydrofuran | 0.023 | 0.029 | 0.037 | 0.043 | 0.046 | 0.047 | 0.037# | 26.64 | Qua |
| 32) | TM | 1,1,1-Trichloroetha | 0.697 | 0.619 | 0.655 | 0.675 | 0.676 | 0.684 | 0.668 | 4.15 | |
| 33) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 | |
| 34) | TM | 1,1-Dichloropropene | 0.657 | 0.619 | 0.647 | 0.654 | 0.660 | 0.653 | 0.648 | 2.30 | |
| 35) | TM | Carbon Tetrachlorid | 0.494 | 0.450 | 0.489 | 0.508 | 0.510 | 0.520 | 0.495 | 4.99 | |
| 36) | S | d4-1,2-Dichloroetha | 0.607 | 0.588 | 0.623 | 0.646 | 0.617 | 0.632 | 0.619 | 3.24 | |
| 37) | TM | 1,2-Dichloroethane | 0.719 | 0.662 | 0.664 | 0.686 | 0.679 | 0.680 | 0.681 | 3.01 | |
| 38) | TM | Benzene | 2.106 | 1.963 | 1.934 | 1.912 | 1.897 | 1.839 | 1.942 | 4.66 | |
| 39) | I | 1,4-Difluorobenzene | ISTD | | | | | | | | |
| 40) | TM | Trichloroethene | 0.322 | 0.274 | 0.286 | 0.282 | 0.292 | 0.289 | 0.291 | 5.75 | |
| 41) | TMC | 1,2-Dichloropropane | 0.267 | 0.262 | 0.249 | 0.251 | 0.260 | 0.256 | 0.258 | 2.72 | |
| 42) | TM | Methylmethacrylate | 0.160 | 0.161 | 0.164 | 0.179 | 0.197 | 0.199 | 0.177 | 10.12 | |

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS |
|---|---|---|---|---|---|---|---|---|---|---|
| 43) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 44) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 45) | TM | Bromodichloromethan | 0.349 | 0.335 | 0.332 | 0.352 | 0.371 | 0.373 | 0.352 | 4.99 |
| 46) | TM | Dibromomethane | 0.193 | 0.185 | 0.199 | 0.202 | 0.214 | 0.215 | 0.201 | 5.82 |
| 47) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 48) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 49) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 50) | T | 2-Chloroethylvinyl | | | | 0.002 | 0.002 | 0.002 | 0.002# | 9.46 |
| 51) | TM | 2-Hexanone | 0.088 | 0.100 | 0.094 | 0.099 | 0.107 | 0.103 | 0.098# | 6.80 |
| 52) | TM | Methyl isobutyl ket | 0.091 | 0.088 | 0.089 | 0.095 | 0.105 | 0.102 | 0.095# | 7.59 |
| 53) | TM | cis-1,3-Dichloropro | 0.384 | 0.393 | 0.406 | 0.432 | 0.455 | 0.454 | 0.421 | 7.28 |
| 54) | S | d8-Toluene | 1.104 | 1.125 | 1.121 | 1.127 | 1.149 | 1.157 | 1.131 | 1.71 |
| 55) | TMC | Toluene | 0.739 | 0.685 | 0.665 | 0.667 | 0.706 | 0.695 | 0.693 | 3.97 |
| 56) | TM | trans-1,3-Dichlorop | 0.333 | 0.342 | 0.360 | 0.386 | 0.415 | 0.409 | 0.374 | 9.21 |
| 57) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 58) | TM | 1,1,2-Trichloroetha | 0.236 | 0.234 | 0.221 | 0.225 | 0.235 | 0.226 | 0.229 | 2.75 |
| 59) | TM | 1,3-Dichloropropane | 0.480 | 0.468 | 0.467 | 0.466 | 0.488 | 0.471 | 0.473 | 1.88 |
| 60) | TM | Tetrachloroethene | 0.310 | 0.278 | 0.272 | 0.269 | 0.276 | 0.273 | 0.280 | 5.42 |
| 61) | TM | Dibromochloromethan | 0.264 | 0.248 | 0.252 | 0.265 | 0.284 | 0.280 | 0.265 | 5.46 |
| 62) | TM | 1,2-Dibromoethane | 0.304 | 0.277 | 0.287 | 0.291 | 0.310 | 0.305 | 0.296 | 4.30 |
| 63) | I | *d5-Chlorobenzene | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | | |
| 64) | TMP | Chlorobenzene | 0.966 | 0.890 | 0.861 | 0.848 | 0.875 | 0.849 | 0.881 | 5.03 |
| 65) | TM | 1,1,1,2-Tetrachloro | 0.283 | 0.254 | 0.256 | 0.267 | 0.275 | 0.267 | 0.267 | 4.15 |
| 66) | TMC | Ethylbenzene | 1.630 | 1.506 | 1.465 | 1.477 | 1.511 | 1.464 | 1.509 | 4.14 |
| 67) | TM | m,p-Xylene | 0.584 | 0.552 | 0.537 | 0.536 | 0.557 | 0.534 | 0.550 | 3.44 |
| 68) | TM | o-Xylene | 0.546 | 0.505 | 0.510 | 0.522 | 0.545 | 0.535 | 0.527 | 3.37 |
| 69) | TM | Styrene | 0.944 | 0.914 | 0.922 | 0.939 | 0.987 | 0.963 | 0.945 | 2.84 |
| 70) | TMP | Bromoform | 0.199 | 0.196 | 0.199 | 0.212 | 0.232 | 0.225 | 0.210 | 7.23 |
| 71) | TM | Isopropylbenzene | 1.359 | 1.252 | 1.268 | 1.303 | 1.363 | 1.321 | 1.311 | 3.50 |
| 72) | TMP | 1,1,2,2-Tetrachloro | 0.424 | 0.417 | 0.404 | 0.400 | 0.423 | 0.411 | 0.413 | 2.38 |
| 73) | S | Bromofluorobenzene | 0.530 | 0.526 | 0.528 | 0.535 | 0.546 | 0.527 | 0.532 | 1.43 |
| 74) | TM | 1,2,3-Trichloroprop | 0.368 | 0.314 | 0.308 | 0.298 | 0.313 | 0.298 | 0.317 | 8.33 |
| 75) | TM | trans-1,4-Dichloro- | 0.114 | 0.121 | 0.120 | 0.127 | 0.130 | 0.126 | 0.123 | 4.75 |
| 76) | TM | n-Propylbenzene | 1.786 | 1.633 | 1.651 | 1.653 | 1.728 | 1.680 | 1.689 | 3.45 |
| 77) | TM | Bromobenzene | 0.376 | 0.362 | 0.347 | 0.346 | 0.355 | 0.342 | 0.355 | 3.55 |
| 78) | TM | 1,3,5-Trimethylbenz | 1.041 | 1.006 | 1.003 | 1.012 | 1.057 | 1.039 | 1.026 | 2.16 |
| 79) | TM | 2-Chlorotoluene | 1.249 | 1.155 | 1.136 | 1.121 | 1.159 | 1.148 | 1.161 | 3.90 |
| 80) | TM | 4-Chlorotoluene | 1.127 | 1.074 | 1.034 | 1.046 | 1.084 | 1.036 | 1.067 | 3.37 |
| 81) | TM | tert-butylbenzene | 0.828 | 0.766 | 0.805 | 0.831 | 0.864 | 0.834 | 0.821 | 4.03 |
| 82) | TM | 1,2,4-Trimethylbenz | 1.187 | 1.092 | 1.063 | 1.079 | 1.123 | 1.100 | 1.107 | 3.96 |
| 83) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 84) | TM | sec-butylbenzene | | 1.406 | 1.223 | 1.205 | 1.275 | 1.255 | 1.273 | 6.23 |
| 85) | TM | p-isopropyltoluene | 1.114 | 0.992 | 0.954 | 0.963 | 1.008 | 0.997 | 1.005 | 5.73 |

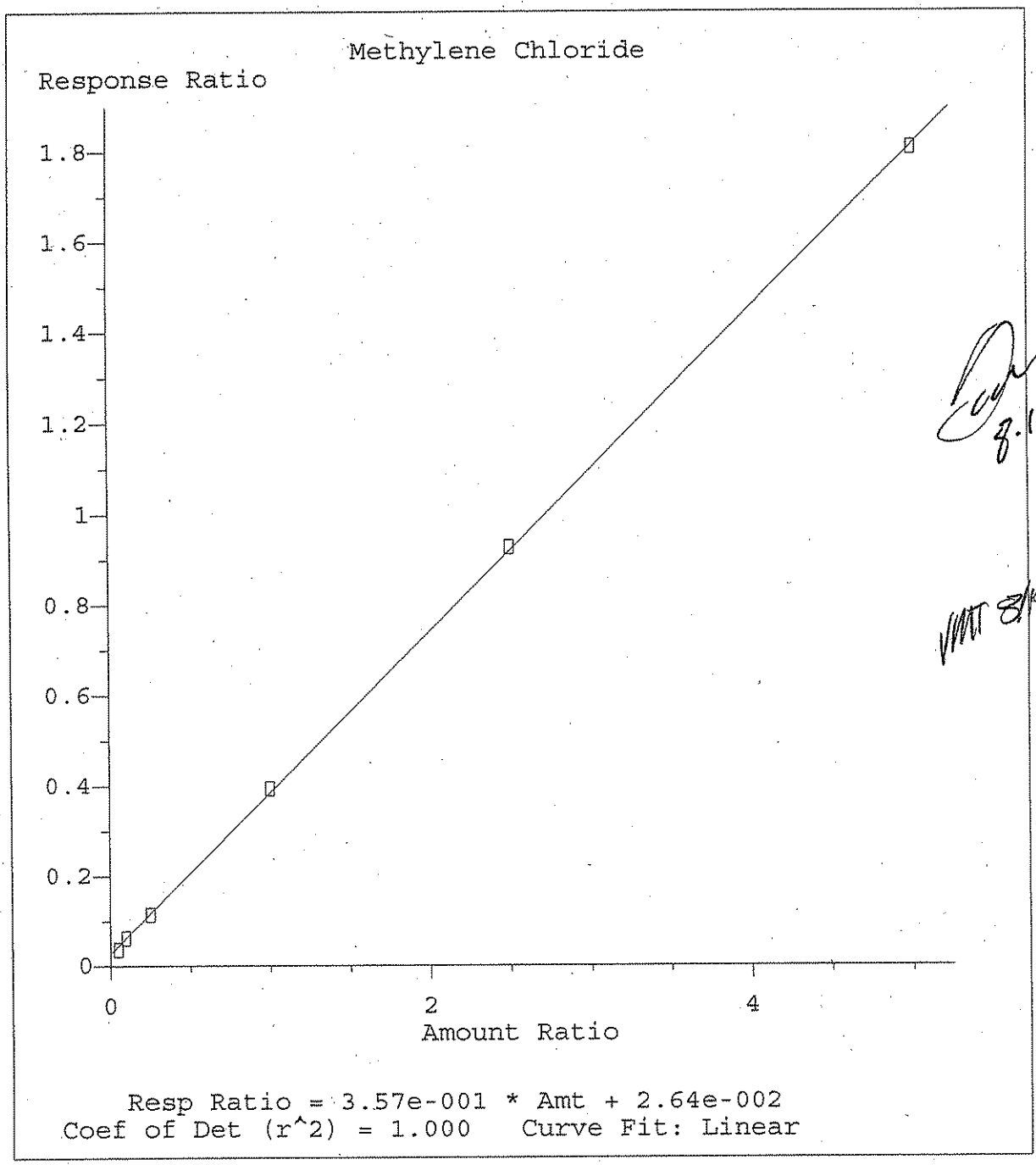
(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration

Calibration Files
1 =B17271SI.D 2 =B17272SI.D 5 =B17273SI.D
20 =B17274SI.D 50 =B17275SI.D 100 =B17276SI.D

| | | Compound | 1 | 2 | 5 | 20 | 50 | 100 | Avg | %RS |
|---|---|---|---|---|---|---|---|---|---|---|
| 86) | TM | 1,3-Dichlorobenzene | 0.681 | 0.626 | 0.603 | 0.598 | 0.624 | 0.607 | 0.623 | 4.89 |
| 87) | I | 1,4-Dichlorobenzene-d | ISTD | | | | | | | |
| 88) | TM | 1,4-Dichlorobenzene | 1.398 | 1.339 | 1.272 | 1.253 | 1.266 | 1.241 | 1.295 | 4.69 |
| 89) | TM | n-butylbenzene | 2.003 | 1.820 | 1.829 | 1.887 | 1.934 | 1.927 | 1.900 | 3.65 |
| 90) | TM | 1,2-Dichlorobenzene | 1.254 | 1.156 | 1.144 | 1.151 | 1.180 | 1.157 | 1.174 | 3.50 |
| 91) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 92) | TM | 1,2-Dibromo-3-chlor | 0.091 | 0.116 | 0.118 | 0.125 | 0.134 | 0.137 | 0.120 | 13.75 |
| 93) | T | NO COMPOUND | | | | | | | 0.000# | -1.00 |
| 94) | TM | 1,2,4-Trichlorobenz | 0.731 | 0.677 | 0.673 | 0.693 | 0.724 | 0.732 | 0.705 | 3.86 |
| 95) | TM | Hexachlorobutadiene | 0.259 | 0.205 | 0.201 | 0.195 | 0.203 | 0.205 | 0.211 | 11.31 |
| 96) | TM | Naphthalene | 1.936 | 1.846 | 1.830 | 1.898 | 2.013 | 2.029 | 1.925 | 4.31 |
| 97) | TM | 1,2,3-Trichlorobenz | 0.697 | 0.642 | 0.632 | 0.631 | 0.653 | 0.668 | 0.654 | 3.87 |
| 98) | TM | 1,3,5-Trichlorobenz | 0.761 | 0.736 | 0.707 | 0.731 | 0.759 | 0.764 | 0.743 | 3.01 |

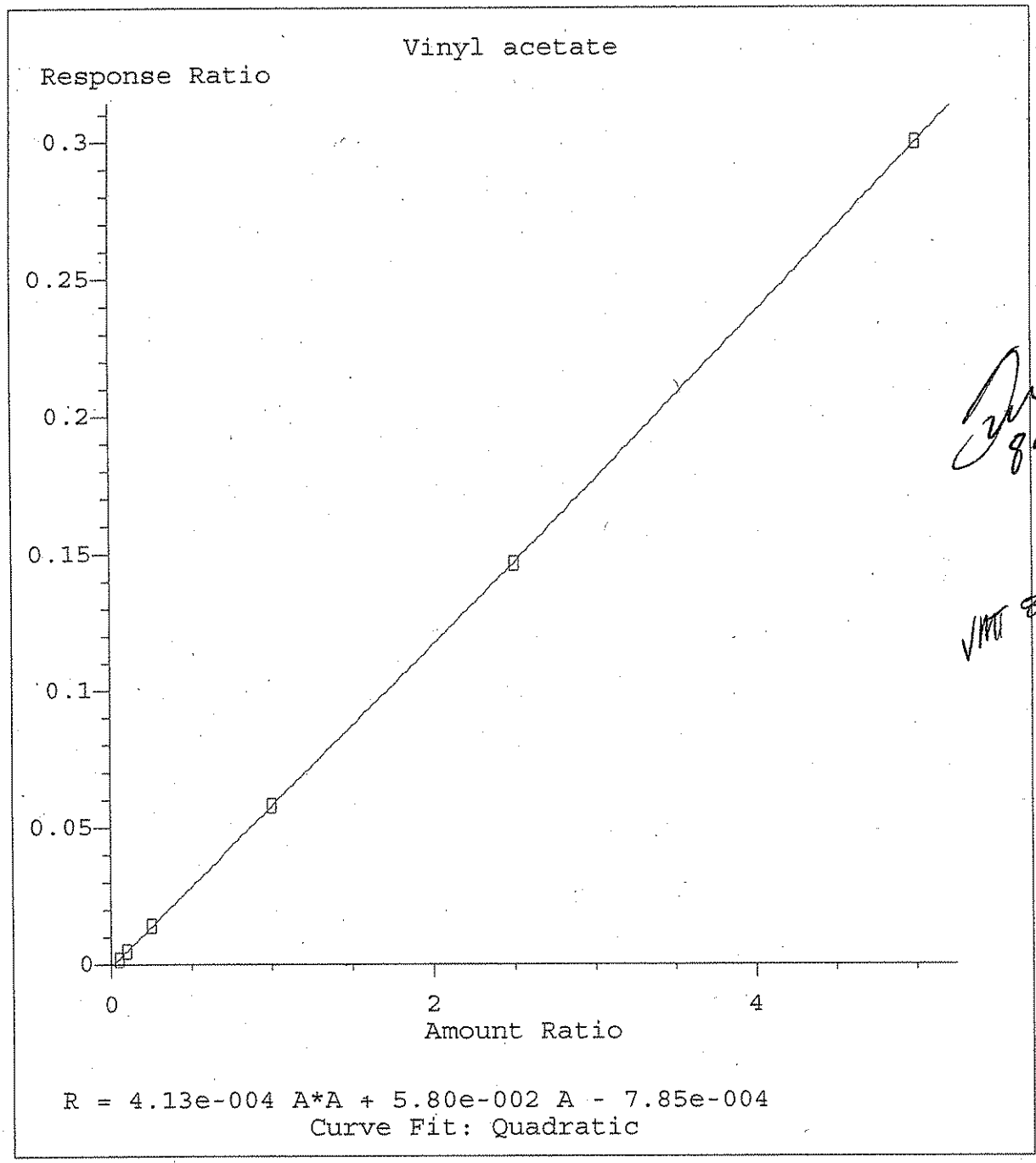
(#) = Out of Range




8.19.03

8/19/03

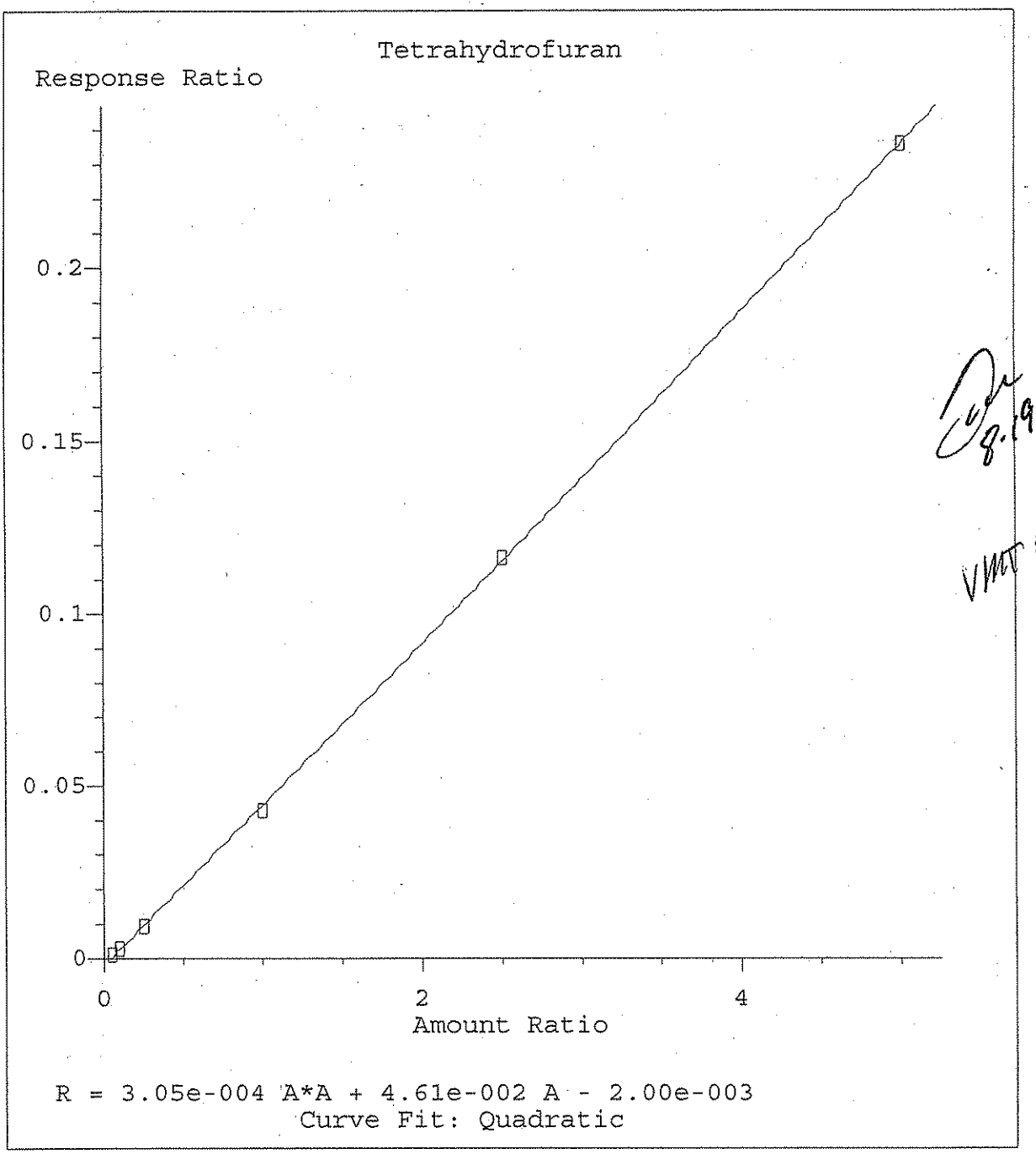
Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003




8.19.03

VMT 8/19/03

Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003




8.19.03

VMT 8/19/03

Method Name: C:\HPCHEM\1\METHODS\V808183B.M
Calibration Table Last Updated: Tue Aug 19 07:02:41 2003

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8-19-03
JMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 194884 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 352942 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 310446 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 157731 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 108750 | 18.67 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 93.35% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 118270 | 19.61 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.05% | | | |
| 54) d8-Toluene | 10.81 | 98 | 389823 | 19.53 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 97.65% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 164599 | 19.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.70% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 7221 | 1.04 | ug/L | 96 |
| 3) Chloromethane | 1.83 | 50 | 6254 | 1.11 | ug/L | 95 |
| 4) Vinyl Chloride | 1.94 | 62 | 4372 | 1.22 | ug/L | 95 |
| 5) Bromomethane | 2.40 | 94 | 3180 | 1.23 | ug/L | 95 |
| 6) Chloroethane | 2.49 | 64 | 2749 | 1.12 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.79 | 59 | 1052 | 4.26 | ug/L # | 72 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 6047 | 1.07 | ug/L | 96 |
| 9) Diethyl ether | 3.18 | 74 | 1933 | 1.06 | ug/L # | 73 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 3416 | 0.99 | ug/L | 89 |
| 11) Acrolein | 3.33 | 56 | 1294 | 4.87 | ug/L | 83 |
| 12) Acetone | 3.42 | 43 | 6789 | 5.84 | ug/L # | 86 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 3483 | 1.05 | ug/L | 94 |
| 14) Methyl iodide | 4.03 | 142 | 4506 | 0.97 | ug/L # | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 15309 | 1.12 | ug/L | 96 |
| 16) Methylene Chloride | 4.33 | 84 | 6978 | 0.52 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 10357 | 1.01 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 1147 | 0.98 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 9627 | 1.04 | ug/L | 91 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 3889 | 1.08 | ug/L | 94 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 7056 | 1.12 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 344 | 0.67 | ug/L # | 1 |
| 23) Methyl ethyl ketone | 6.25 | 72 | 2118 | 4.78 | ug/L | 85 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 13288 | 0.96 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 6479 | 1.13 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 5222 | 1.04 | ug/L # | 85 |
| 27) t-Amyl methyl ether (TAME) | 7.85 | 73 | 11946 | 0.98 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 9109 | 1.08 | ug/L | | 99 |
| 30) | Bromochloromethane | 6.96 | 128 | 2480 | 1.02 | ug/L | | 95 |
| 31) | Tetrahydrofuran | 7.08 | 71 | 221 | 1.36 | ug/L | # | 19 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 6792 | 1.04 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.59 | 75 | 6399 | 1.01 | ug/L | | 96 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 4810 | 1.00 | ug/L | | 97 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 7002 | 1.05 | ug/L | | 96 |
| 38) | Benzene | 8.00 | 78 | 20521 | 1.08 | ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 5691 | 1.11 | ug/L | | 86 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 4718 | 1.04 | ug/L | | 87 |
| 42) | Methylmethacrylate | 9.38 | 69 | 2821 | 0.91 | ug/L | | 97 |
| 45) | Bromodichloromethane | 9.59 | 83 | 6163 | 0.99 | ug/L | | 95 |
| 46) | Dibromomethane | 9.65 | 93 | 3410 | 0.96 | ug/L | | 88 |
| 51) | 2-Hexanone | 11.51 | 58 | 7762 | 4.47 | ug/L | | 74 |
| 52) | Methyl isobutyl ketone | 10.17 | 58 | 8056 | 4.80 | ug/L | # | 66 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 6785 | 0.91 | ug/L | | 89 |
| 55) | Toluene | 10.94 | 92 | 13034 | 1.07 | ug/L | | 91 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 5885 | 0.89 | ug/L | | 95 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 4157 | 1.03 | ug/L | | 83 |
| 59) | 1,3-Dichloropropane | 11.84 | 76 | 8474 | 1.01 | ug/L | | 96 |
| 60) | Tetrachloroethene | 11.94 | 166 | 5469 | 1.11 | ug/L | | 93 |
| 61) | Dibromochloromethane | 12.24 | 129 | 4667 | 1.00 | ug/L | | 97 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 5372 | 1.03 | ug/L | | 94 |
| 64) | Chlorobenzene | 13.22 | 112 | 14993 | 1.10 | ug/L | | 88 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 4399 | 1.06 | ug/L | | 90 |
| 66) | Ethylbenzene | 13.31 | 91 | 25295 | 1.08 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 18118 | 2.12 | ug/L | | 98 |
| 68) | o-Xylene | 14.13 | 106 | 8482 | 1.04 | ug/L | | 95 |
| 69) | Styrene | 14.18 | 104 | 14647 | 1.00 | ug/L | | 98 |
| 70) | Bromoform | 14.69 | 173 | 3084 | 0.94 | ug/L | | 95 |
| 71) | Isopropylbenzene | 14.70 | 105 | 21099 | 1.04 | ug/L | | 94 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 6584 | 1.03 | ug/L | | 93 |
| 74) | 1,2,3-Trichloropropane | 15.19 | 75 | 5719 | 1.16 | ug/L | | 97 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 1776 | 0.93 | ug/L | | 95 |
| 76) | n-Propylbenzene | 15.34 | 91 | 27727 | 1.06 | ug/L | | 95 |
| 77) | Bromobenzene | 15.39 | 156 | 5829 | 1.06 | ug/L | | 95 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 16162 | 1.01 | ug/L | | 89 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 19394 | 1.08 | ug/L | | 95 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 17501 | 1.06 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.17 | 119 | 12858 | 1.01 | ug/L | | 92 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 18421 | 1.07 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:25:02 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

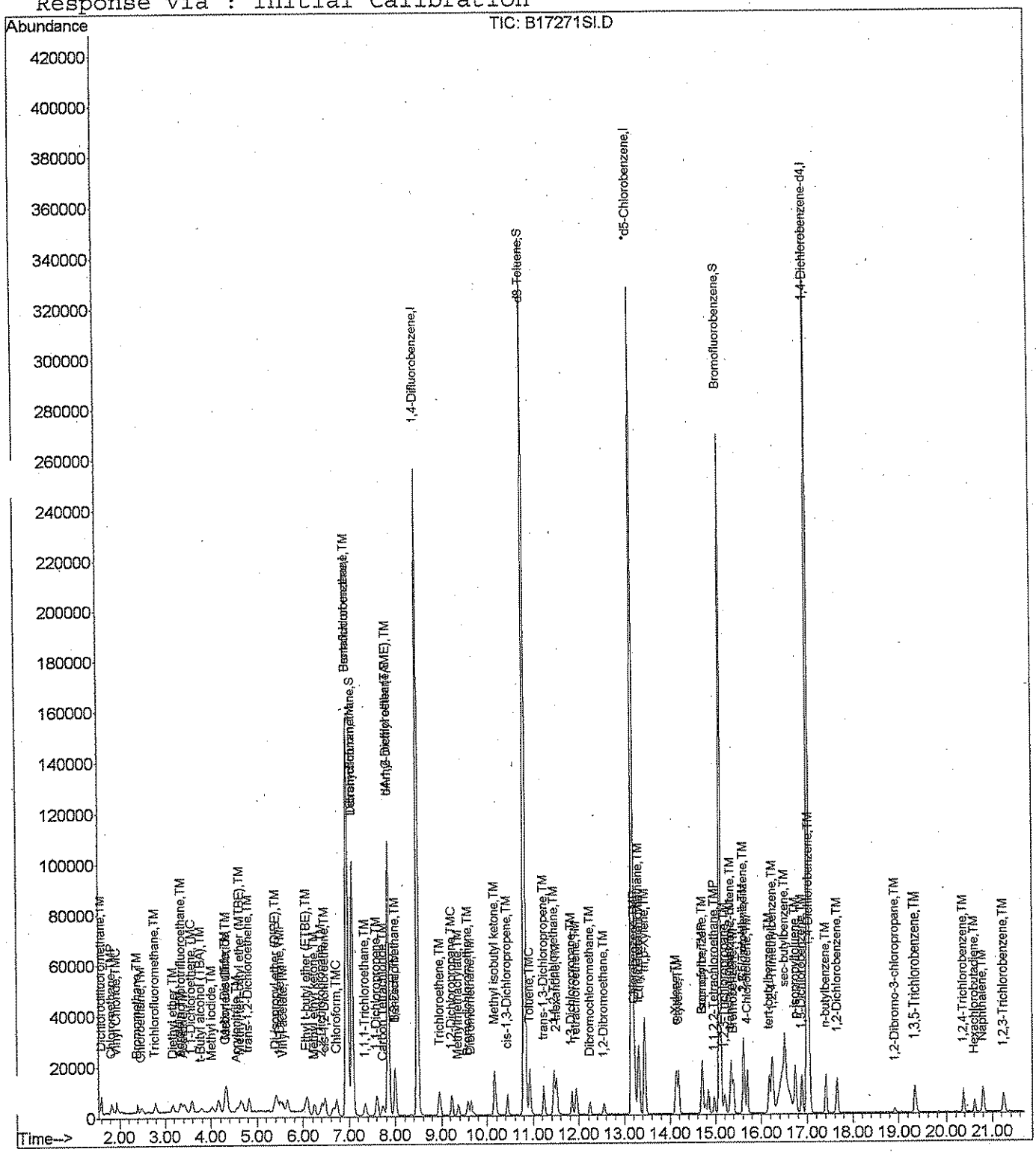
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 28053 | 1.42 | ug/L | | 97 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 17297 | 1.11 | ug/L | | 98 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 10570 | 1.09 | ug/L | | 97 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 11025 | 1.08 | ug/L | | 91 |
| 89) | n-butylbenzene | 17.40 | 91 | 15794 | 1.05 | ug/L | | 94 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 9888 | 1.07 | ug/L | | 95 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 719 | 0.76 | ug/L | # | 77 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 5766 | 1.04 | ug/L | | 95 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 2045 | 1.23 | ug/L | | 91 |
| 96) | Naphthalene | 20.79 | 128 | 15272 | 1.01 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 5495 | 1.07 | ug/L | | 86 |
| 98) | 1,3,5-Trichlorobenzene | 19.32 | 180 | 5998 | 1.02 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17271SI.D Vial: 2
Acq On : 18 Aug 2003 6:02 pm Operator:
Sample : 1 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:26 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.96 | 168 | 187228 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 339004 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.17 | 117 | 311635 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 158277 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.06 | 111 | 103076 | 18.42 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 92.10% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 110119 | 19.01 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 95.05% | | | |
| 54) d8-Toluene | 10.81 | 98 | 381463 | 19.90 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.50% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 163876 | 19.77 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.85% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 13407 | 2.02 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 11677 | 2.16 | ug/L | 99 |
| 4) Vinyl Chloride | 1.94 | 62 | 7666 | 2.22 | ug/L | 93 |
| 5) Bromomethane | 2.39 | 94 | 4704 | 1.89 | ug/L | 91 |
| 6) Chloroethane | 2.48 | 64 | 4655 | 1.97 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 2164 | 9.13 | ug/L # | 72 |
| 8) Trichlorofluoromethane | 2.79 | 101 | 10423 | 1.91 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 3318 | 1.90 | ug/L # | 85 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 6252 | 1.88 | ug/L # | 90 |
| 11) Acrolein | 3.33 | 56 | 2215 | 8.68 | ug/L | 89 |
| 12) Acetone | 3.43 | 43 | 10937 | 9.79 | ug/L # | 86 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 6196 | 1.95 | ug/L | 97 |
| 14) Methyl iodide | 4.04 | 142 | 7730 | 1.74 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 26699 | 2.03 | ug/L | 100 |
| 16) Methylene Chloride | 4.33 | 84 | 11525 | 1.97 | ug/L | 98 |
| 17) Carbon Disulfide | 4.30 | 76 | 18074 | 1.84 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 1930 | 1.72 | ug/L | 88 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 17249 | 1.94 | ug/L # | 87 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 6420 | 1.86 | ug/L | 91 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 12086 | 2.00 | ug/L | 96 |
| 22) Vinyl acetate | 5.57 | 86 | 891 | 1.81 | ug/L # | 50 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 3819 | 8.97 | ug/L | 91 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 26012 | 1.96 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 10694 | 1.94 | ug/L | 90 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 9159 | 1.90 | ug/L # | 84 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 21922 | 1.88 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 15697 | 1.94 | ug/L | | 99 |
| 30) | Bromochloromethane | 6.96 | 128 | 4570 | 1.96 | ug/L | # | 86 |
| 31) | Tetrahydrofuran | 7.08 | 71 | 537 | 2.11 | ug/L | # | 71 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 11583 | 1.85 | ug/L | | 96 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 11595 | 1.91 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 8431 | 1.82 | ug/L | | 96 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 12391 | 1.94 | ug/L | | 97 |
| 38) | Benzene | 8.00 | 78 | 36756 | 2.02 | ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 9276 | 1.88 | ug/L | | 85 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 8897 | 2.04 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.38 | 69 | 5450 | 1.82 | ug/L | | 98 |
| 45) | Bromodichloromethane | 9.59 | 83 | 11341 | 1.90 | ug/L | | 95 |
| 46) | Dibromomethane | 9.66 | 93 | 6275 | 1.84 | ug/L | | 93 |
| 51) | 2-Hexanone | 11.51 | 58 | 16942 | 10.15 | ug/L | | 84 |
| 52) | Methyl isobutyl ketone | 10.17 | 58 | 14953 | 9.28 | ug/L | # | 64 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 13317 | 1.87 | ug/L | | 99 |
| 55) | Toluene | 10.93 | 92 | 23230 | 1.98 | ug/L | | 92 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 11577 | 1.83 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 7939 | 2.04 | ug/L | | 97 |
| 59) | 1,3-Dichloropropane | 11.84 | 76 | 15873 | 1.98 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.94 | 166 | 9418 | 1.99 | ug/L | | 98 |
| 61) | Dibromochloromethane | 12.24 | 129 | 8401 | 1.87 | ug/L | | 90 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 9404 | 1.88 | ug/L | | 94 |
| 64) | Chlorobenzene | 13.21 | 112 | 27731 | 2.02 | ug/L | | 96 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 7923 | 1.90 | ug/L | | 95 |
| 66) | Ethylbenzene | 13.31 | 91 | 46945 | 2.00 | ug/L | | 97 |
| 67) | m,p-Xylene | 13.44 | 106 | 34416 | 4.02 | ug/L | | 99 |
| 68) | o-Xylene | 14.13 | 106 | 15729 | 1.91 | ug/L | | 90 |
| 69) | Styrene | 14.18 | 104 | 28499 | 1.94 | ug/L | | 95 |
| 70) | Bromoform | 14.69 | 173 | 6097 | 1.86 | ug/L | | 99 |
| 71) | Isopropylbenzene | 14.70 | 105 | 39017 | 1.91 | ug/L | | 97 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 13008 | 2.02 | ug/L | | 93 |
| 74) | 1,2,3-Trichloropropane | 15.21 | 75 | 9770 | 1.98 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 3776 | 1.97 | ug/L | | 96 |
| 76) | n-Propylbenzene | 15.34 | 91 | 50892 | 1.93 | ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 11288 | 2.04 | ug/L | | 99 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 31356 | 1.96 | ug/L | | 100 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 36000 | 1.99 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 33473 | 2.01 | ug/L | | 96 |
| 81) | tert-butylbenzene | 16.17 | 119 | 23866 | 1.86 | ug/L | | 92 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 34028 | 1.97 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

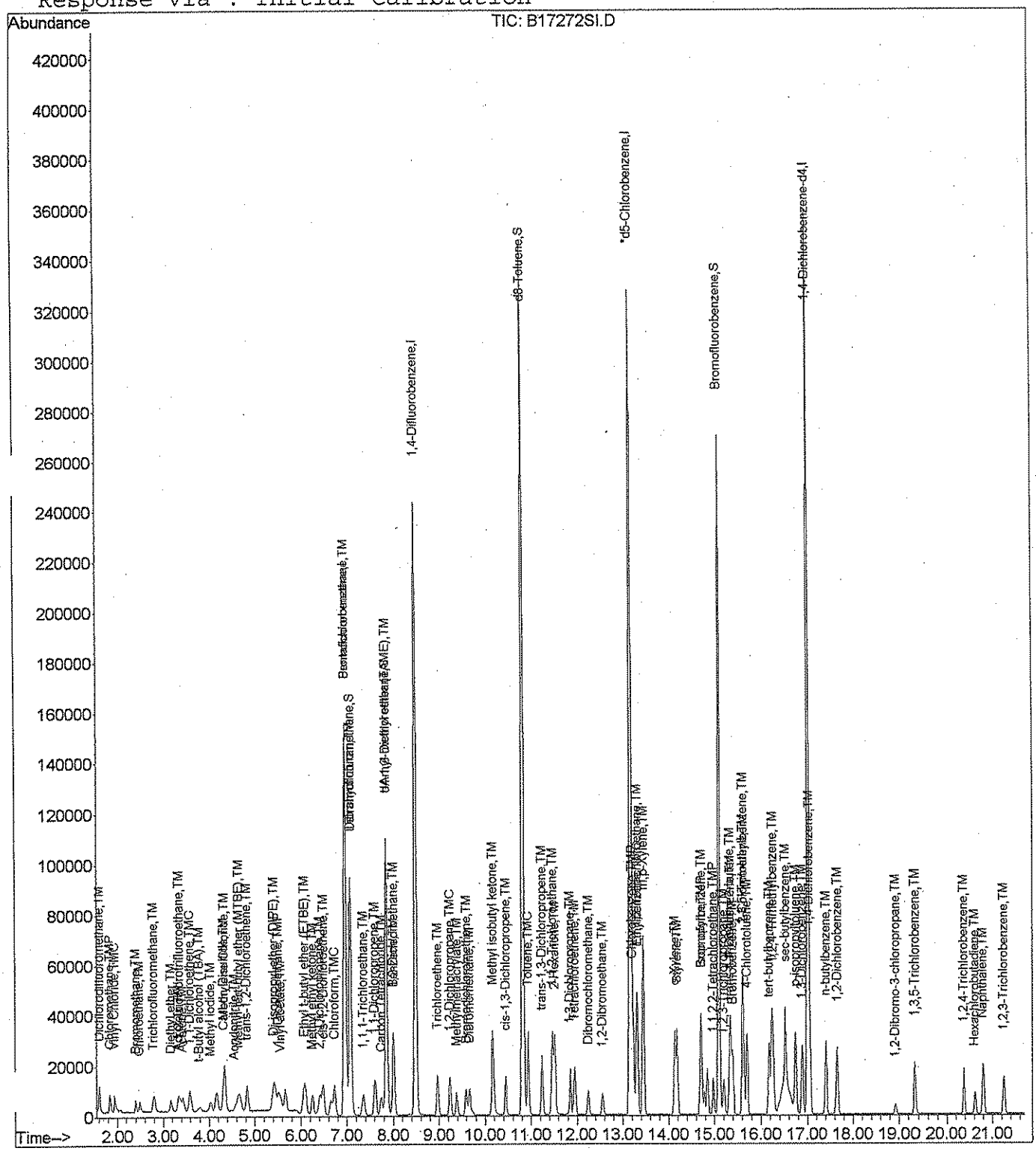
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 84) | sec-butylbenzene | 16.52 | 105 | 43822 | 2.21 | ug/L | | 97 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 30926 | 1.98 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 19504 | 2.01 | ug/L | | 94 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 21190 | 2.07 | ug/L | | 96 |
| 89) | n-butylbenzene | 17.40 | 91 | 28809 | 1.92 | ug/L | | 92 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 18289 | 1.97 | ug/L | | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 1839 | 1.93 | ug/L | # | 77 |
| 94) | 1,2,4-Trichlorobenzene | 20.38 | 180 | 10723 | 1.92 | ug/L | | 98 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 3242 | 1.94 | ug/L | | 87 |
| 96) | Naphthalene | 20.80 | 128 | 29214 | 1.92 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 10168 | 1.97 | ug/L | | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 11655 | 1.98 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17272SI.D Vial: 3
Acq On : 18 Aug 2003 6:31 pm Operator:
Sample : 2 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 193601 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 352182 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 315401 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 158971 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 111909 | 19.34 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.70% | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 120659 | 20.14 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.70% | | | |
| 54) d8-Toluene | 10.81 | 98 | 394837 | 19.83 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.15% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 166407 | 19.84 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.20% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 35366 | 5.15 | ug/L | 94 |
| 3) Chloromethane | 1.83 | 50 | 28696 | 5.13 | ug/L | 97 |
| 4) Vinyl Chloride | 1.94 | 62 | 19330 | 5.42 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 12013 | 4.67 | ug/L | 95 |
| 6) Chloroethane | 2.48 | 64 | 12256 | 5.01 | ug/L | 96 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 5466 | 22.29 | ug/L # | 82 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 28959 | 5.14 | ug/L | 93 |
| 9) Diethyl ether | 3.17 | 74 | 8601 | 4.76 | ug/L | 91 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 17790 | 5.18 | ug/L | 89 |
| 12) Acetone | 3.42 | 43 | 27178 | 23.52 | ug/L | 92 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 16361 | 4.98 | ug/L | 93 |
| 14) Methyl iodide | 4.03 | 142 | 22567 | 4.91 | ug/L | 99 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 67385 | 4.95 | ug/L | 98 |
| 16) Methylene Chloride | 4.34 | 84 | 21998 | 4.88 | ug/L | 91 |
| 17) Carbon Disulfide | 4.30 | 76 | 49656 | 4.90 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 5719 | 4.94 | ug/L | 95 |
| 19) Methyl-tert-butyl ether (M | 4.65 | 73 | 45513 | 4.96 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 17988 | 5.03 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 31233 | 5.01 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 9996 | 22.71 | ug/L | 95 |
| 24) Ethyl t-butyl ether (ETBE) | 6.08 | 59 | 66724 | 4.86 | ug/L | 98 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 28335 | 4.97 | ug/L | 97 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 24292 | 4.88 | ug/L # | 85 |
| 27) t-Amyl methyl ether (TAME) | 7.85 | 73 | 58167 | 4.82 | ug/L | 98 |
| 29) Chloroform | 6.73 | 83 | 41049 | 4.90 | ug/L | 95 |
| 30) Bromochloromethane | 6.97 | 128 | 12078 | 5.02 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 31) | Tetrahydrofuran | 7.08 | 71 | 1796 | 4.89 | ug/L | | 97 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 31688 | 4.90 | ug/L | | 97 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 31326 | 4.99 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 23683 | 4.94 | ug/L | | 94 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 32124 | 4.87 | ug/L | | 99 |
| 38) | Benzene | 8.00 | 78 | 93623 | 4.98 | ug/L | | 98 |
| 40) | Trichloroethene | 8.96 | 95 | 25179 | 4.92 | ug/L | | 83 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 21947 | 4.84 | ug/L | | 100 |
| 42) | Methylmethacrylate | 9.38 | 69 | 14462 | 4.65 | ug/L | | 93 |
| 45) | Bromodichloromethane | 9.59 | 83 | 29232 | 4.72 | ug/L | | 99 |
| 46) | Dibromomethane | 9.65 | 93 | 17493 | 4.93 | ug/L | | 99 |
| 51) | 2-Hexanone | 11.51 | 58 | 41283 | 23.82 | ug/L | | 85 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 38994 | 23.30 | ug/L | # | 84 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 35772 | 4.83 | ug/L | | 97 |
| 55) | Toluene | 10.93 | 92 | 58553 | 4.80 | ug/L | | 93 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 31663 | 4.81 | ug/L | | 98 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 19416 | 4.81 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 41100 | 4.93 | ug/L | | 98 |
| 60) | Tetrachloroethene | 11.94 | 166 | 23923 | 4.86 | ug/L | | 94 |
| 61) | Dibromochloromethane | 12.25 | 129 | 22144 | 4.74 | ug/L | | 94 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 25226 | 4.85 | ug/L | | 99 |
| 64) | Chlorobenzene | 13.22 | 112 | 67854 | 4.88 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 20190 | 4.79 | ug/L | | 95 |
| 66) | Ethylbenzene | 13.31 | 91 | 115528 | 4.86 | ug/L | | 100 |
| 67) | m,p-Xylene | 13.44 | 106 | 84670 | 9.76 | ug/L | | 97 |
| 68) | o-Xylene | 14.12 | 106 | 40241 | 4.84 | ug/L | | 97 |
| 69) | Styrene | 14.18 | 104 | 72675 | 4.88 | ug/L | | 96 |
| 70) | Bromoform | 14.69 | 173 | 15710 | 4.73 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 99999 | 4.84 | ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 31866 | 4.89 | ug/L | | 97 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 24296 | 4.87 | ug/L | | 99 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 9434 | 4.86 | ug/L | | 95 |
| 76) | n-Propylbenzene | 15.34 | 91 | 130194 | 4.89 | ug/L | | 98 |
| 77) | Bromobenzene | 15.39 | 156 | 27344 | 4.89 | ug/L | | 93 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 79076 | 4.89 | ug/L | | 95 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 89535 | 4.89 | ug/L | | 95 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 81555 | 4.85 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.17 | 119 | 63499 | 4.90 | ug/L | | 89 |
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 83809 | 4.80 | ug/L | | 98 |
| 84) | sec-butylbenzene | 16.52 | 105 | 96423 | 4.80 | ug/L | | 96 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 75184 | 4.74 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

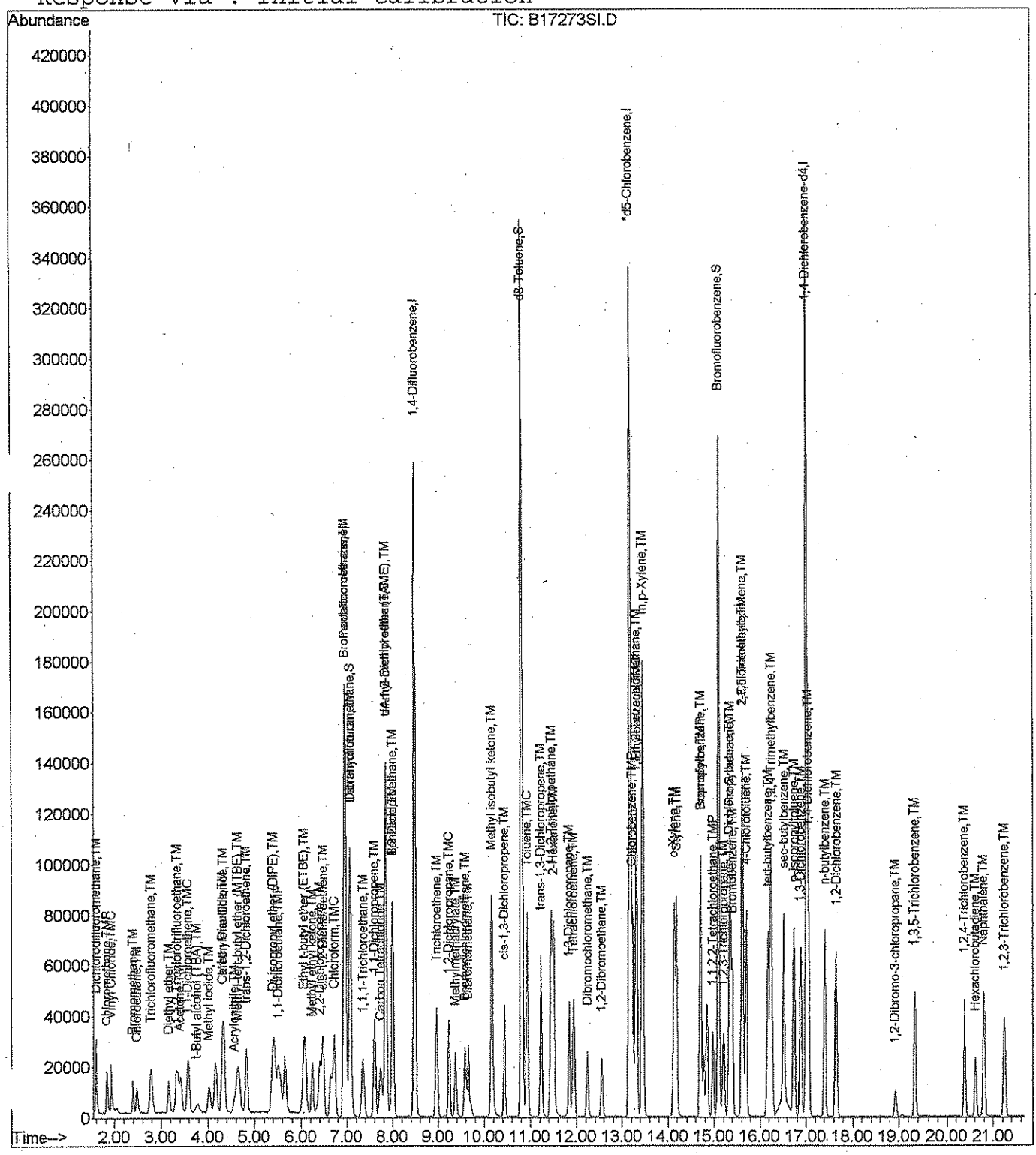
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 47533 | 4.84 | ug/L | | 96 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 50560 | 4.91 | ug/L | | 96 |
| 89) | n-butylbenzene | 17.40 | 91 | 72685 | 4.81 | ug/L | | 92 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 45477 | 4.87 | ug/L | | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 4685 | 4.90 | ug/L | # | 75 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 26744 | 4.77 | ug/L | | 97 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 7969 | 4.75 | ug/L | | 98 |
| 96) | Naphthalene | 20.79 | 128 | 72749 | 4.75 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.25 | 180 | 25114 | 4.83 | ug/L | | 100 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 28101 | 4.76 | ug/L | | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17273SI.D Vial: 4
Acq On : 18 Aug 2003 7:00 pm Operator:
Sample : 5 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03 VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 197698 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 361866 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 323047 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 161610 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 116847 | 19.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 98.90% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 127661 | 20.87 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.35% | | | |
| 54) d8-Toluene | 10.81 | 98 | 407981 | 19.94 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.70% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 172800 | 20.11 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.55% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 135716 | 19.36 | ug/L | 100 |
| 3) Chloromethane | 1.83 | 50 | 107111 | 18.73 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 64938 | 17.82 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 46999 | 17.88 | ug/L | 99 |
| 6) Chloroethane | 2.48 | 64 | 49268 | 19.71 | ug/L | 100 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 24557 | 98.07 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 115087 | 19.99 | ug/L | 96 |
| 9) Diethyl ether | 3.17 | 74 | 37653 | 20.39 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.35 | 101 | 73513 | 20.97 | ug/L | 90 |
| 11) Acrolein | 3.33 | 56 | 27156 | 100.73 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 109412 | 92.74 | ug/L | 95 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 67165 | 20.02 | ug/L | 97 |
| 14) Methyl iodide | 4.03 | 142 | 98360 | 20.95 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 272178 | 19.57 | ug/L | 98 |
| 16) Methylene Chloride | 4.34 | 84 | 77644 | 20.51 | ug/L | 94 |
| 17) Carbon Disulfide | 4.30 | 76 | 211925 | 20.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 24016 | 20.32 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 188573 | 20.12 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 74734 | 20.46 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 126583 | 19.87 | ug/L | 97 |
| 22) Vinyl acetate | 5.56 | 86 | 11455 | 21.98 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 45743 | 101.78 | ug/L | 97 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 285419 | 20.36 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 122896 | 21.10 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 102039 | 20.08 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 249329 | 20.23 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc Unit | Qvalue |
|---|---|---|---|---|---|
| 29) Chloroform | 6.73 | 83 | 168910 | 19.76 ug/L | 100 |
| 30) Bromochloromethane | 6.97 | 128 | 48947 | 19.92 ug/L | 96 |
| 31) Tetrahydrofuran | 7.07 | 71 | 8431 | 19.26 ug/L | 83 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 133505 | 20.23 ug/L | 95 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 129346 | 20.18 ug/L | 98 |
| 35) Carbon Tetrachloride | 7.74 | 119 | 100427 | 20.52 ug/L | 95 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 135599 | 20.13 ug/L | 99 |
| 38) Benzene | 8.00 | 78 | 377913 | 19.69 ug/L | 99 |
| 40) Trichloroethene | 8.96 | 95 | 102108 | 19.40 ug/L | 87 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 90692 | 19.46 ug/L | 99 |
| 42) Methylmethacrylate | 9.38 | 69 | 64790 | 20.27 ug/L | 95 |
| 45) Bromodichloromethane | 9.59 | 83 | 127258 | 19.98 ug/L | 97 |
| 46) Dibromomethane | 9.65 | 93 | 73271 | 20.10 ug/L | 98 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 586 | 18.07 ug/L # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 179141 | 100.58 ug/L | 91 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 171127 | 99.52 ug/L # | 84 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 156293 | 20.53 ug/L | 99 |
| 55) Toluene | 10.93 | 92 | 241249 | 19.25 ug/L | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 139856 | 20.66 ug/L | 99 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 81434 | 19.63 ug/L | 95 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 168451 | 19.67 ug/L | 100 |
| 60) Tetrachloroethene | 11.94 | 166 | 97448 | 19.26 ug/L | 96 |
| 61) Dibromochloromethane | 12.24 | 129 | 95771 | 19.95 ug/L | 98 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 105198 | 19.67 ug/L | 97 |
| 64) Chlorobenzene | 13.22 | 112 | 274039 | 19.25 ug/L | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 86194 | 19.98 ug/L | 97 |
| 66) Ethylbenzene | 13.31 | 91 | 477120 | 19.58 ug/L | 98 |
| 67) m,p-Xylene | 13.44 | 106 | 346378 | 38.99 ug/L | 97 |
| 68) o-Xylene | 14.13 | 106 | 168534 | 19.79 ug/L | 95 |
| 69) Styrene | 14.18 | 104 | 303460 | 19.88 ug/L | 99 |
| 70) Bromoform | 14.69 | 173 | 68605 | 20.18 ug/L | 97 |
| 71) Isopropylbenzene | 14.70 | 105 | 421053 | 19.88 ug/L | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 129332 | 19.37 ug/L | 97 |
| 74) 1,2,3-Trichloropropane | 15.20 | 75 | 96334 | 18.84 ug/L | 97 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 41181 | 20.70 ug/L | 91 |
| 76) n-Propylbenzene | 15.34 | 91 | 533959 | 19.58 ug/L | 96 |
| 77) Bromobenzene | 15.39 | 156 | 111865 | 19.53 ug/L | 96 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 327040 | 19.73 ug/L | 95 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 362137 | 19.31 ug/L | 94 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 337818 | 19.60 ug/L | 95 |
| 81) tert-butylbenzene | 16.17 | 119 | 268300 | 20.22 ug/L | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

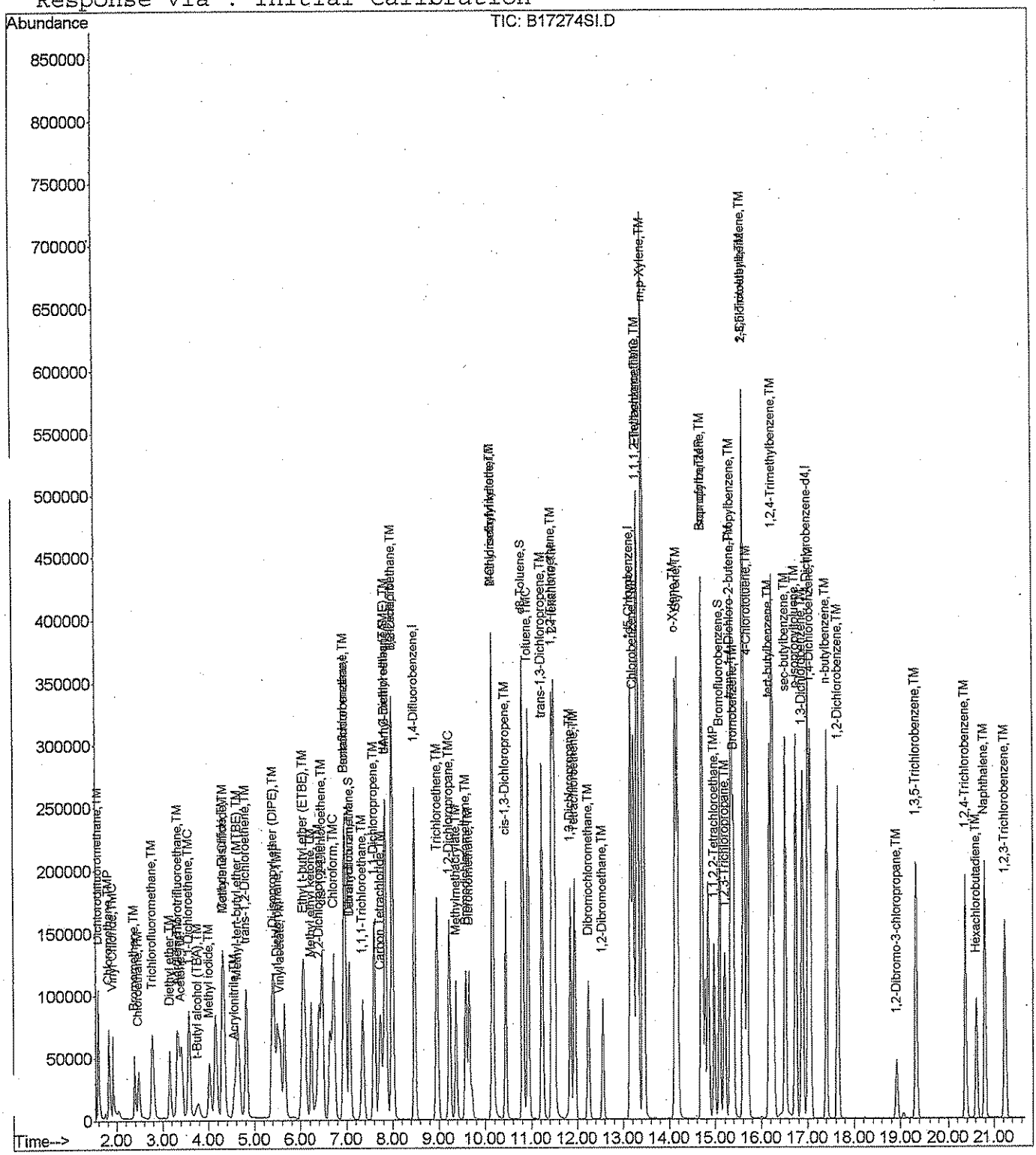
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 348607 | 19.49 | ug/L | | 95 |
| 84) sec-butylbenzene | 16.52 | 105 | 389387 | 18.94 | ug/L | | 96 |
| 85) p-isopropyltoluene | 16.74 | 119 | 311188 | 19.17 | ug/L | | 96 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 193206 | 19.19 | ug/L | | 97 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 202557 | 19.36 | ug/L | | 95 |
| 89) n-butylbenzene | 17.40 | 91 | 304975 | 19.86 | ug/L | | 93 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 186081 | 19.62 | ug/L | | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 20253 | 20.84 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 111991 | 19.66 | ug/L | | 97 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 31486 | 18.46 | ug/L | | 97 |
| 96) Naphthalene | 20.79 | 128 | 306798 | 19.72 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 101899 | 19.29 | ug/L | | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 118098 | 19.67 | ug/L | | 98 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081803-B\B17274SI.D Vial: 5
Acq On : 18 Aug 2003 7:29 pm Operator:
Sample : 20 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
VMT 8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 199392 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 356595 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 320837 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 165503 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 114508 | 19.21 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 96.05% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 122969 | 19.93 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.65% | | | |
| 54) d8-Toluene | 10.81 | 98 | 409710 | 20.32 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.60% | | | |
| 73) Bromofluorobenzene | 15.10 | 95 | 175149 | 20.53 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.65% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 351236 | 49.67 | ug/L | 98 |
| 3) Chloromethane | 1.83 | 50 | 272307 | 47.22 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 161820 | 44.04 | ug/L | 100 |
| 5) Bromomethane | 2.38 | 94 | 132739 | 50.06 | ug/L | 98 |
| 6) Chloroethane | 2.47 | 64 | 124973 | 49.58 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.78 | 59 | 73887 | 292.57 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.77 | 101 | 285985 | 49.25 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 92777 | 49.82 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.33 | 101 | 174476 | 49.35 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 71614 | 263.37 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 291722 | 245.17 | ug/L | 96 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 166672 | 49.25 | ug/L | 94 |
| 14) Methyl iodide | 4.02 | 142 | 254760 | 53.79 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.40 | 45 | 675047 | 48.11 | ug/L | 98 |
| 16) Methylene Chloride | 4.33 | 84 | 184811 | 50.42 | ug/L | 97 |
| 17) Carbon Disulfide | 4.29 | 76 | 537476 | 51.47 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 62991 | 52.83 | ug/L | 97 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 465076 | 49.21 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 180058 | 48.87 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 304827 | 47.45 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 29215 | 55.58 | ug/L | 93 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 125397 | 276.63 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 737342 | 52.14 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 269838 | 45.94 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 258742 | 50.47 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 654489 | 52.66 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 29) Chloroform | 6.73 | 83 | 425342 | 49.34 | ug/L | | 98 |
| 30) Bromochloromethane | 6.97 | 128 | 123210 | 49.72 | ug/L | | 94 |
| 31) Tetrahydrofuran | 7.07 | 71 | 23167 | 50.46 | ug/L | | 87 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 337207 | 50.65 | ug/L | | 94 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 329182 | 50.92 | ug/L | | 98 |
| 35) Carbon Tetrachloride | 7.73 | 119 | 254056 | 51.46 | ug/L | | 94 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 338485 | 49.82 | ug/L | | 100 |
| 38) Benzene | 8.00 | 78 | 945597 | 48.85 | ug/L | | 100 |
| 40) Trichloroethene | 8.96 | 95 | 259872 | 50.12 | ug/L | | 86 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 231779 | 50.47 | ug/L | | 99 |
| 42) Methylmethacrylate | 9.38 | 69 | 175467 | 55.72 | ug/L | | 94 |
| 45) Bromodichloromethane | 9.58 | 83 | 330983 | 52.73 | ug/L | | 97 |
| 46) Dibromomethane | 9.65 | 93 | 190793 | 53.13 | ug/L | | 99 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 1604 | 50.19 | ug/L | # | 1 |
| 51) 2-Hexanone | 11.51 | 58 | 474884 | 270.56 | ug/L | | 89 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 470128 | 277.46 | ug/L | # | 84 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 405755 | 54.09 | ug/L | | 98 |
| 55) Toluene | 10.94 | 92 | 629307 | 50.95 | ug/L | | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 369834 | 55.45 | ug/L | | 96 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 209217 | 51.17 | ug/L | | 94 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 435050 | 51.55 | ug/L | | 99 |
| 60) Tetrachloroethene | 11.94 | 166 | 246263 | 49.39 | ug/L | | 97 |
| 61) Dibromochloromethane | 12.24 | 129 | 253122 | 53.50 | ug/L | | 99 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 276256 | 52.41 | ug/L | | 96 |
| 64) Chlorobenzene | 13.22 | 112 | 701699 | 49.62 | ug/L | | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 220513 | 51.46 | ug/L | | 95 |
| 66) Ethylbenzene | 13.31 | 91 | 1212205 | 50.08 | ug/L | | 99 |
| 67) m,p-Xylene | 13.44 | 106 | 892764 | 101.20 | ug/L | | 97 |
| 68) o-Xylene | 14.12 | 106 | 437461 | 51.72 | ug/L | | 93 |
| 69) Styrene | 14.18 | 104 | 791784 | 52.24 | ug/L | | 100 |
| 70) Bromoform | 14.69 | 173 | 186119 | 55.13 | ug/L | | 99 |
| 71) Isopropylbenzene | 14.70 | 105 | 1093461 | 51.98 | ug/L | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 339300 | 51.17 | ug/L | | 96 |
| 74) 1,2,3-Trichloropropane | 15.19 | 75 | 251446 | 49.52 | ug/L | | 100 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 104513 | 52.89 | ug/L | | 89 |
| 76) n-Propylbenzene | 15.34 | 91 | 1386155 | 51.17 | ug/L | | 97 |
| 77) Bromobenzene | 15.39 | 156 | 284888 | 50.08 | ug/L | | 93 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 847658 | 51.48 | ug/L | | 96 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 929287 | 49.88 | ug/L | | 95 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 869406 | 50.80 | ug/L | | 95 |
| 81) tert-butylbenzene | 16.17 | 119 | 693163 | 52.61 | ug/L | | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

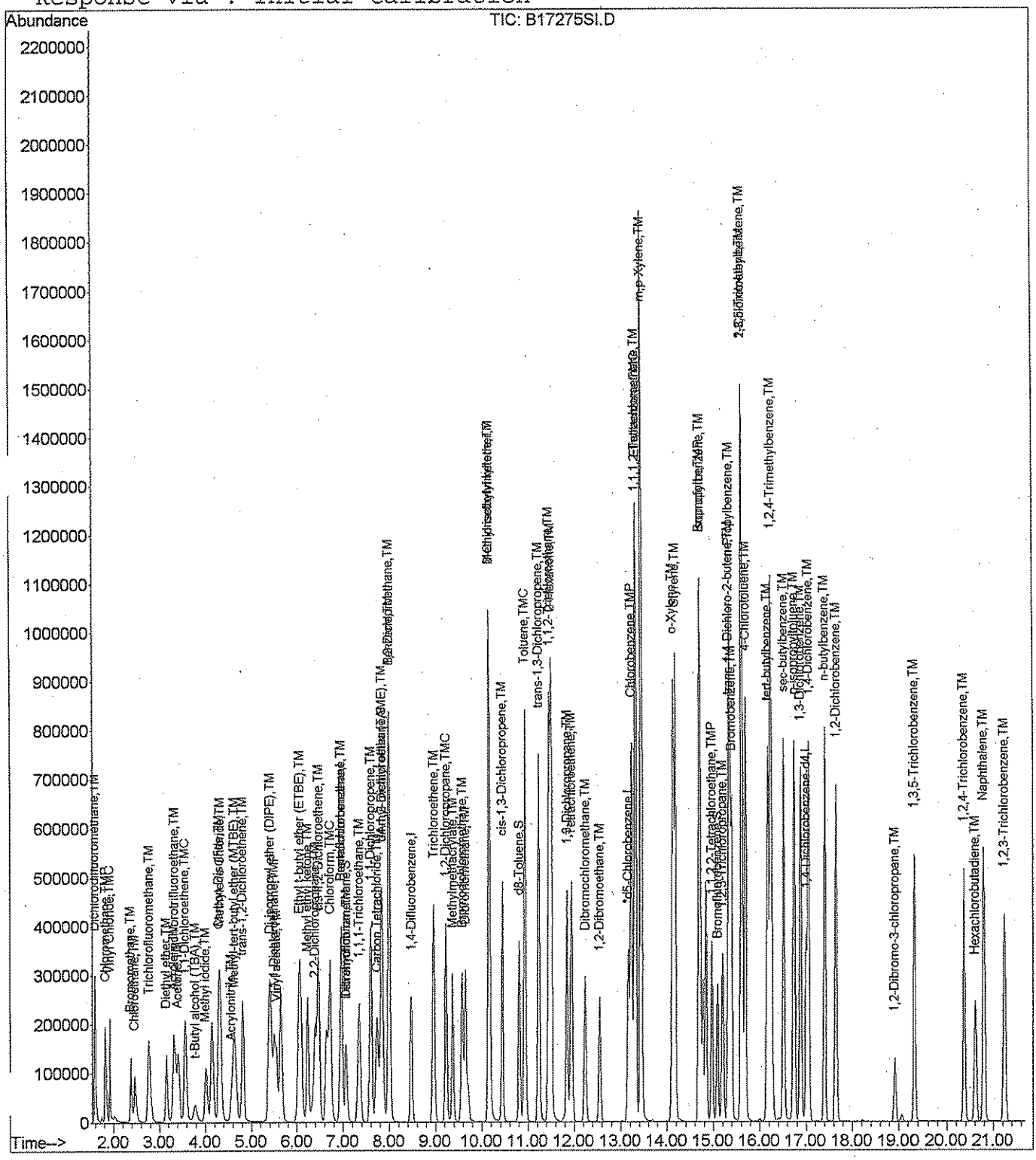
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 901107 | 50.73 | ug/L | 97 |
| 84) sec-butylbenzene | 16.51 | 105 | 1022434 | 50.08 | ug/L | 95 |
| 85) p-isopropyltoluene | 16.74 | 119 | 808770 | 50.17 | ug/L | 97 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 500545 | 50.07 | ug/L | 98 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 523889 | 48.89 | ug/L | 96 |
| 89) n-butylbenzene | 17.40 | 91 | 800202 | 50.89 | ug/L | 94 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 488321 | 50.28 | ug/L | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 55518 | 55.77 | ug/L | 83 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 299528 | 51.34 | ug/L | 98 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 83908 | 48.03 | ug/L | 98 |
| 96) Naphthalene | 20.79 | 128 | 832726 | 52.26 | ug/L | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 270190 | 49.94 | ug/L | 98 |
| 98) 1,3,5-Trichlorobenzene | 19.33 | 180 | 313950 | 51.06 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17275SI.D Vial: 6
Acq On : 18 Aug 2003 7:59 pm Operator:
Sample : 50 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.19.03
8/19/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 200689 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 357021 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 322036 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 165458 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 116788 | 19.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 97.35% | | | |
| 36) d4-1,2-Dichloroethane | 7.85 | 65 | 126917 | 20.44 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.20% | | | |
| 54) d8-Toluene | 10.81 | 98 | 413251 | 20.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.35% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 169703 | 19.81 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.05% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 679189 | 95.43 | ug/L | 99 |
| 3) Chloromethane | 1.82 | 50 | 525717 | 90.58 | ug/L | 100 |
| 4) Vinyl Chloride | 1.92 | 62 | 301976 | 81.65 | ug/L | 100 |
| 5) Bromomethane | 2.36 | 94 | 266809 | 99.98 | ug/L | 97 |
| 6) Chloroethane | 2.45 | 64 | 233960 | 92.22 | ug/L | 98 |
| 7) t-Butyl alcohol (TBA) | 3.83 | 59 | 151547 | 596.20 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.76 | 101 | 565450 | 96.74 | ug/L | 99 |
| 9) Diethyl ether | 3.16 | 74 | 191510 | 102.18 | ug/L | 97 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.33 | 101 | 355032 | 99.77 | ug/L | 90 |
| 11) Acrolein | 3.32 | 56 | 154807 | 565.65 | ug/L | 98 |
| 12) Acetone | 3.43 | 43 | 601552 | 502.29 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.57 | 96 | 337390 | 99.05 | ug/L | 94 |
| 14) Methyl iodide | 4.01 | 142 | 501692 | 105.25 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 1327934 | 94.04 | ug/L | 99 |
| 16) Methylene Chloride | 4.33 | 84 | 362658 | 99.70 | ug/L | 97 |
| 17) Carbon Disulfide | 4.29 | 76 | 1084153 | 103.15 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 131178 | 109.32 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 955100 | 100.40 | ug/L # | 84 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 365868 | 98.65 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 601603 | 93.04 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 60121 | 113.64 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 254117 | 556.97 | ug/L | 99 |
| 24) Ethyl t-butyl ether (ETBE) | 6.06 | 59 | 1461605 | 102.68 | ug/L | 96 |
| 25) 2,2-Dichloropropane | 6.40 | 77 | 552237 | 93.42 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 524825 | 101.72 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 1311658 | 104.85 | ug/L | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.72 | 83 | 861770 | 99.33 | ug/L | | 97 |
| 30) | Bromochloromethane | 6.97 | 128 | 249235 | 99.93 | ug/L | | 97 |
| 31) | Tetrahydrofuran | 7.07 | 71 | 47319 | 99.92 | ug/L | | 87 |
| 32) | 1,1,1-Trichloroethane | 7.34 | 97 | 686730 | 102.49 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 655235 | 100.70 | ug/L | | 98 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 522147 | 105.08 | ug/L | | 95 |
| 37) | 1,2-Dichloroethane | 7.98 | 62 | 682004 | 99.74 | ug/L | | 100 |
| 38) | Benzene | 7.99 | 78 | 1845180 | 94.70 | ug/L | | 99 |
| 40) | Trichloroethene | 8.96 | 95 | 516326 | 99.45 | ug/L | | 87 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 456564 | 99.30 | ug/L | | 99 |
| 42) | Methylmethacrylate | 9.37 | 69 | 355175 | 112.65 | ug/L | | 94 |
| 45) | Bromodichloromethane | 9.58 | 83 | 666728 | 106.10 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 383861 | 106.76 | ug/L | | 98 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 3496 | 109.27 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 922901 | 525.19 | ug/L | | 90 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 910808 | 536.90 | ug/L | # | 83 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 809656 | 107.81 | ug/L | | 100 |
| 55) | Toluene | 10.93 | 92 | 1241053 | 100.35 | ug/L | | 98 |
| 56) | trans-1,3-Dichloropropene | 11.23 | 75 | 729489 | 109.24 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 403242 | 98.51 | ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 841458 | 99.58 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.95 | 166 | 486939 | 97.55 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.24 | 129 | 499204 | 105.39 | ug/L | | 98 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 544349 | 103.14 | ug/L | | 95 |
| 64) | Chlorobenzene | 13.22 | 112 | 1367661 | 96.36 | ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 430572 | 100.10 | ug/L | | 97 |
| 66) | Ethylbenzene | 13.32 | 91 | 2357418 | 97.03 | ug/L | | 99 |
| 67) | m,p-Xylene | 13.44 | 106 | 1720762 | 194.32 | ug/L | | 98 |
| 68) | o-Xylene | 14.12 | 106 | 861115 | 101.43 | ug/L | | 95 |
| 69) | Styrene | 14.18 | 104 | 1550478 | 101.91 | ug/L | | 99 |
| 70) | Bromoform | 14.70 | 173 | 361818 | 106.78 | ug/L | | 96 |
| 71) | Isopropylbenzene | 14.70 | 105 | 2127340 | 100.76 | ug/L | | 96 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 662106 | 99.47 | ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 479126 | 94.00 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 203119 | 102.40 | ug/L | | 87 |
| 76) | n-Propylbenzene | 15.35 | 91 | 2705056 | 99.49 | ug/L | | 98 |
| 77) | Bromobenzene | 15.40 | 156 | 550181 | 96.36 | ug/L | | 97 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 1672441 | 101.20 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 1848491 | 98.86 | ug/L | | 92 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 1668122 | 97.10 | ug/L | | 96 |
| 81) | tert-butylbenzene | 16.18 | 119 | 1343091 | 101.55 | ug/L | | 93 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.RES

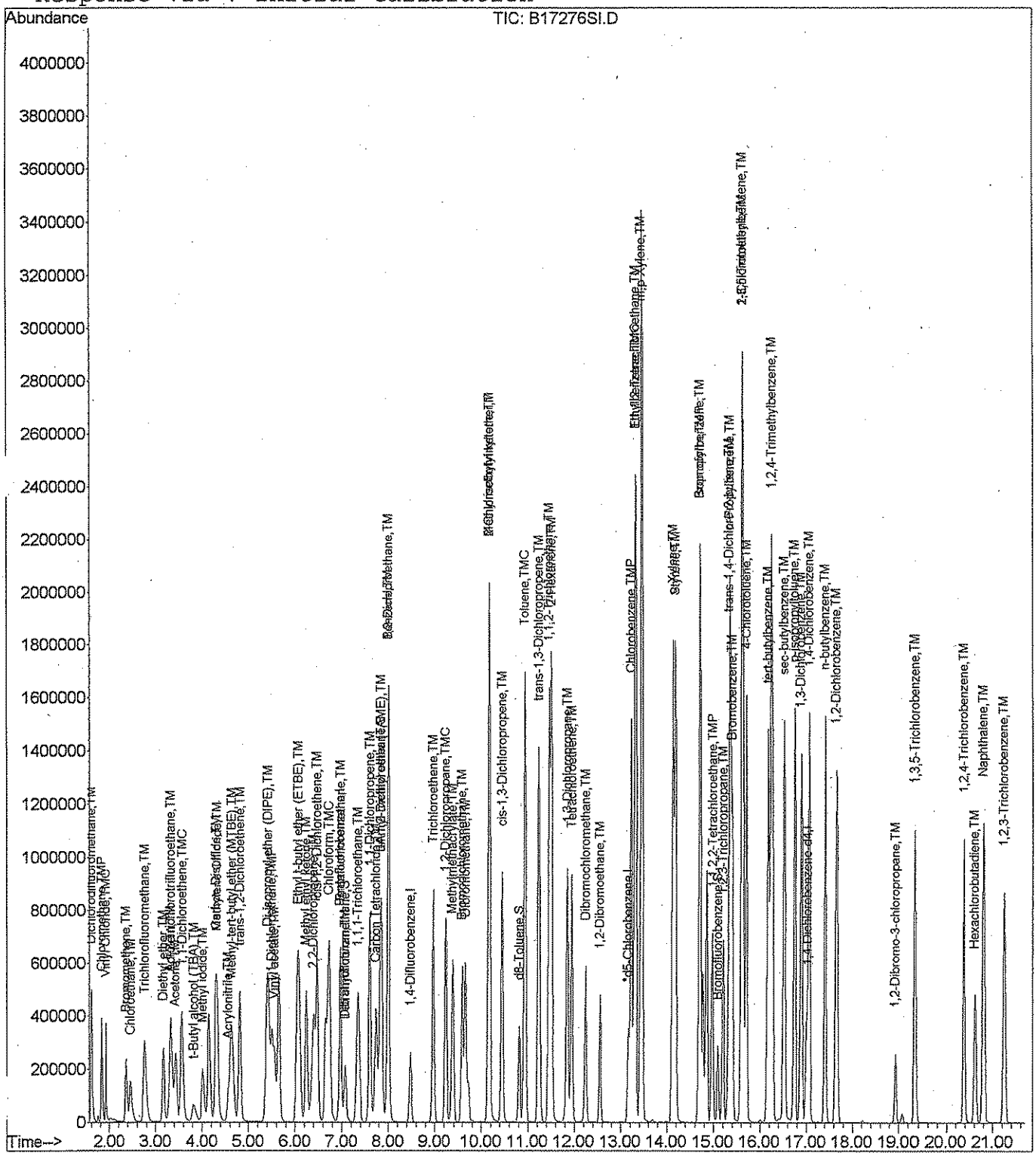
Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:26:36 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 1770566 | 99.31 | ug/L | 96 |
| 84) | sec-butylbenzene | 16.51 | 105 | 2020424 | 98.59 | ug/L | 94 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 1605587 | 99.24 | ug/L | 97 |
| 86) | 1,3-Dichlorobenzene | 16.87 | 146 | 977654 | 97.43 | ug/L | 96 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 1026936 | 95.86 | ug/L | 97 |
| 89) | n-butylbenzene | 17.41 | 91 | 1594553 | 101.44 | ug/L | 95 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 957443 | 98.60 | ug/L | 97 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.93 | 75 | 113357 | 113.91 | ug/L | 87 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 605486 | 103.81 | ug/L | 98 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 169204 | 96.87 | ug/L | 96 |
| 96) | Naphthalene | 20.80 | 128 | 1678263 | 105.36 | ug/L | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 552520 | 102.16 | ug/L | 99 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 632334 | 102.88 | ug/L | 100 |

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\081803-B\B17276SI.D Vial: 7
Acq On : 18 Aug 2003 8:28 pm Operator:
Sample : 100 PPB Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 19 7:27 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D  Vial: 3
Acq On : 19 Aug 2003 9:17 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

8.19.03
VMT 8/19/03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 103 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.729 | -2.8 | 109 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.564 | 2.4 | 107 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.347 | 6.0 | 108 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.233 | 12.4 | 101 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.263 | -4.0 | 108 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.031# | -24.0# | 130 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.580 | 0.3 | 102 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.204 | -9.1 | 110 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.386 | -8.7 | 106 | 0.00 |
| 11 | TM | Acrolein | 0.027 | 0.032# | -18.5 | 118 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.127 | -6.7 | 117 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.349 | -2.9 | 106 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.529 | -11.4 | 109 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.478 | -5.0 | 110 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.407 linear | 16.1 | 106 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.128 | -7.7 | 108 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.133 | -10.8 | 112 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.027 | -8.3 | 111 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.394 | -6.5 | 107 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.667 | -3.6 | 107 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.064# NT | -20.8# | 113 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.054# ok | -20.0# | 120 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.534 | -8.1 | 109 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.654 | -11.0 | 108 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.542 | -5.4 | 108 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.377 | -10.4 | 112 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.582 | -1.7 | 101 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.889 | -2.8 | 107 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.257 | -3.2 | 106 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.050# linear | -35.1# | 121 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.700 | -4.8 | 106 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.696 | -7.4 | 109 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.530 | -7.1 | 107 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.620 | -0.2 | 99 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.704 | -3.4 | 105 | 0.00 |
| 38 | TM | Benzene | 1.942 | 2.006 | -3.3 | 108 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 100 | 0.00 |
| 40 | TM | Trichloroethene | 0.291 | 0.302 | -3.8 | 108 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D  Vial: 3
Acq On : 19 Aug 2003 9:17 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.274 | 6.2 | 110 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.212 | -19.8 | 119 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.371 | -5.4 | 106 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.219 | -9.0 | 109 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 121 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.115 | -17.3 | 116 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.112 | -17.9 | 119 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.477 | -13.3 | 111 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.148 | -1.5 | 102 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.724 | 4.5 | 109 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.429 | -14.7 | 112 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.247 | -7.9 | 110 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.504 | -6.6 | 109 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.289 | -3.2 | 108 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.280 | -5.7 | 106 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.318 | -7.4 | 110 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 99 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.913 | -3.6 | 106 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.287 | -7.5 | 106 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.590 | 5.4 | 106 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.580 | -5.5 | 107 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.564 | -7.0 | 107 | 0.00 |
| 69 | TM | Styrene | 0.945 | 1.024 | -8.4 | 108 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.235 | -11.9 | 109 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.409 | -7.5 | 107 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.454 | -9.9 | 112 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.543 | -2.1 | 100 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.339 | -6.9 | 112 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.141 | -14.6 | 109 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.801 | -6.6 | 108 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.364 | -2.5 | 104 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.089 | -6.1 | 106 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.226 | -5.6 | 108 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.107 | -3.7 | 105 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.856 | -4.3 | 102 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.156 | -4.4 | 106 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.289 | -1.3 | 106 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 1.027 | -2.2 | 105 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.638 | -2.4 | 105 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 98 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.335 | -3.1 | 105 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 2.045 | -7.6 | 107 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.249 | -6.4 | 107 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.142 | -18.3 | 112 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.752 | -6.7 | 107 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.219 | -3.8 | 111 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 2.091 | -8.6 | 109 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.678 | -3.7 | 106 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.790 | -6.3 | 106 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17294SC.D Vial: 3
Acq On : 19 Aug 2003 9:17 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 19 9:36 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8-14-03
VMT 8/14/03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 202958 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 363522 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 319153 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 159181 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 118059 | 20.33 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.65% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 125895 | 20.05 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 100.25% | | | |
| 54) d8-Toluene | 10.81 | 98 | 417423 | 20.31 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.55% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 173332 | 20.42 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.10% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.59 | 85 | 147916 | 20.55 | ug/L | 98 |
| 3) Chloromethane | 1.83 | 50 | 114442 | 19.50 | ug/L | 98 |
| 4) Vinyl Chloride | 1.93 | 62 | 70380 | 18.82 | ug/L | 99 |
| 5) Bromomethane | 2.39 | 94 | 47294 | 17.52 | ug/L | 98 |
| 6) Chloroethane | 2.48 | 64 | 53445 | 20.83 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 31856 | 123.92 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 117798 | 19.93 | ug/L | 97 |
| 9) Diethyl ether | 3.16 | 74 | 41406 | 21.84 | ug/L | 96 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 78285 | 21.75 | ug/L | 90 |
| 11) Acrolein | 3.32 | 56 | 31979 | 115.54 | ug/L | 100 |
| 12) Acetone | 3.42 | 43 | 128476 | 106.08 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 70929 | 20.59 | ug/L | 90 |
| 14) Methyl iodide | 4.03 | 142 | 107373 | 22.27 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 299875 | 21.00 | ug/L | 99 |
| 16) Methylene Chloride 107% | 4.33 | 84 | 82561 | 21.30 | ug/L | 97 |
| 17) Carbon Disulfide | 4.30 | 76 | 229035 | 21.55 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 27007 | 22.25 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 208433 | 21.67 | ug/L # | 85 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 80008 | 21.33 | ug/L | 92 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 135276 | 20.69 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 12986 | 24.27 | ug/L | 97 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 54896 | 118.98 | ug/L | 98 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 311425 | 21.63 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 132793 | 22.21 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 109909 | 21.06 | ug/L | 94 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 279561 | 22.10 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D  Vial: 27
Acq On : 19 Aug 2003 9:36 pm  Operator:
Sample : 20 PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

8.20.03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 95 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.679 | 4.2 | 94 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.523 | 9.5 | 92 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.344 | 6.8 | 100 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.236 | 11.3 | 95 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.253 | 0.0 | 97 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.034# | -36.0# | 130 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.577 | 0.9 | 95 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.204 | -9.1 | 102 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.381 | -7.3 | 98 | 0.00 |
| 11 | TM | Acrolein | 0.027 | 0.031# | -14.8 | 107 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.133 | -11.8 | 115 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.350 | 3.2 | 98 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.524 | -10.3 | 100 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.437 | -2.1 | 100 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.406 linear | ~~16.3~~ | 99 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.128 | -7.7 | 100 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.142 | -18.3 | 111 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.031 | -8.8 | 103 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.391 | -5.7 | 99 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.666 | -3.4 | 99 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.057# | -7.5 | 94 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.049# | -8.9 | 101 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.234 | 13.0 | 82 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.540 | 8.3 | 83 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.525 | -2.1 | 97 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.322 | -6.0 | 100 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.592 | -3.5 | 95 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.873 | 0.9 | 97 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.252 | -1.2 | 97 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.050# linear | ~~35.1#~~ | 112 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.676 | -1.2 | 95 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.666 | -2.8 | 97 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.510 | -3.0 | 96 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.642 | -3.7 | 95 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.695 | -2.1 | 97 | 0.00 |
| 38 | TM | Benzene | 1.942 | 1.945 | -0.2 | 97 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 94 | 0.00 |
| 40 | TM | Trichloroethene | 0.291 | 0.292 | -0.3 | 97 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D  Vial: 27
Acq On : 19 Aug 2003 9:36 pm  Operator:
Sample : 20 PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.263 | -1.9 | 99 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.206 | -16.4 | 108 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.359 | -2.0 | 96 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.216 | -7.5 | 100 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 135 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.116 | -18.4 | 110 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.114 | -20.0# | 113 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.443 | -5.2 | 96 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.153 | -1.9 | 96 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.702 | -1.3 | 99 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.398 | -6.4 | 97 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.241 | -5.2 | 100 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.491 | -3.8 | 99 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.280 | 0.0 | 98 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.267 | -0.8 | 95 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.303 | -2.4 | 98 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 93 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.864 | 1.9 | 95 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.270 | -1.1 | 94 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.512 | -0.2 | 96 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.549 | 0.2 | 96 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.530 | -0.6 | 95 | 0.00 |
| 69 | TM | Styrene | 0.945 | 0.966 | -2.2 | 96 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.222 | -5.7 | 98 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.334 | -1.8 | 96 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.443 | -7.3 | 103 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.529 | 0.6 | 92 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.326 | -2.8 | 102 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.132 | -7.3 | 97 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.704 | -0.9 | 96 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.347 | 2.3 | 94 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.027 | -0.1 | 95 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.158 | 0.3 | 96 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.059 | 0.7 | 95 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D  Vial: 27
Acq On : 19 Aug 2003 9:36 pm  Operator:
Sample : 20 PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.835 | -1.7 | 94 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.083 | 2.2 | 94 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.220 | 4.2 | 95 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 0.959 | 4.6 | 93 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.603 | 3.2 | 94 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 93 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.255 | 3.1 | 93 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 1.919 | -1.0 | 94 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.161 | 1.1 | 93 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.141 | -17.5 | 104 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.691 | 2.0 | 92 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.193 | 8.5 | 92 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 1.997 | -3.7 | 97 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.640 | 2.1 | 94 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.729 | 1.9 | 92 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.20.03

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 188501 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 339495 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 301716 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 149594 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 111546 | 20.68 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.40% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 121033 | 20.75 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.75% | | | |
| 54) d8-Toluene | 10.81 | 98 | 391459 | 20.39 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 101.95% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 159615 | 19.89 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.45% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 128083 | 19.16 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 98569 | 18.08 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 64826 | 18.66 | ug/L | 100 |
| 5) Bromomethane | 2.39 | 94 | 44571 | 17.78 | ug/L | 97 |
| 6) Chloroethane | 2.48 | 64 | 47722 | 20.03 | ug/L | 99 |
| 7) t-Butyl alcohol (TBA) | 3.76 | 59 | 31979 | 133.94 | ug/L | 97 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 108764 | 19.81 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 38386 | 21.80 | ug/L | 94 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 71862 | 21.50 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 29115 | 113.26 | ug/L | 98 |
| 12) Acetone | 3.42 | 43 | 125460 | 111.53 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 66064 | 20.65 | ug/L | 95 |
| 14) Methyl iodide | 4.03 | 142 | 98764 | 22.06 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.42 | 45 | 270927 | 20.43 | ug/L | 98 |
| 16) Methylene Chloride 106% | 4.33 | 84 | 76492 | 21.24 | ug/L | 97 |
| 17) Carbon Disulfide | 4.30 | 76 | 212651 | 21.54 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 26674 | 23.67 | ug/L | 99 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 194321 | 21.75 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 73695 | 21.16 | ug/L | 93 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 125516 | 20.67 | ug/L | 98 |
| 22) Vinyl acetate | 5.56 | 86 | 10823 | 21.78 | ug/L | 94 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 46300 | 108.04 | ug/L | 97 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 232658 | 17.40 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 101793 | 18.33 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 98886 | 20.40 | ug/L | 92 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 249167 | 21.21 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration
B17318SC.D V808183B.M Wed Aug 20 07:13:16 2003 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

VOA 8260

| | Compound | R.T. | QIon | Response | Conc Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 164511 | 20.19 ug/L | | 96 |
| 30) | Bromochloromethane | 6.97 | 128 | 47469 | 20.26 ug/L | | 96 |
| 31) | Tetrahydrofuran 1174. | 7.06 | 71 | 9484 | 22.54 ug/L | | 86 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 127465 | 20.25 ug/L | | 97 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 125570 | 20.55 ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.73 | 119 | 96124 | 20.59 ug/L | | 98 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 131080 | 20.41 ug/L | | 98 |
| 38) | Benzene | 8.00 | 78 | 366569 | 20.03 ug/L | | 100 |
| 40) | Trichloroethene | 8.96 | 95 | 99219 | 20.10 ug/L | | 85 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 89394 | 20.45 ug/L | | 99 |
| 42) | Methylmethacrylate | 9.38 | 69 | 70058 | 23.37 ug/L | | 96 |
| 45) | Bromodichloromethane | 9.59 | 83 | 122024 | 20.42 ug/L | | 99 |
| 46) | Dibromomethane | 9.65 | 93 | 73312 | 21.44 ug/L | | 99 |
| 50) | 2-Chloroethylvinyl ether | 10.16 | 63 | 794 | 26.10 ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 196420 | 117.55 ug/L | | 89 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 192729 | 119.47 ug/L | # | 86 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 150534 | 21.08 ug/L | | 98 |
| 55) | Toluene | 10.93 | 92 | 238415 | 20.27 ug/L | | 97 |
| 56) | trans-1,3-Dichloropropene | 11.22 | 75 | 135135 | 21.28 ug/L | | 97 |
| 58) | 1,1,2-Trichloroethane | 11.46 | 83 | 81716 | 20.99 ug/L | | 95 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 166783 | 20.76 ug/L | | 99 |
| 60) | Tetrachloroethene | 11.94 | 166 | 95071 | 20.03 ug/L | | 97 |
| 61) | Dibromochloromethane | 12.24 | 129 | 90610 | 20.12 ug/L | | 98 |
| 62) | 1,2-Dibromoethane | 12.55 | 107 | 102912 | 20.51 ug/L | | 97 |
| 64) | Chlorobenzene | 13.22 | 112 | 260600 | 19.60 ug/L | | 98 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 81396 | 20.20 ug/L | | 96 |
| 66) | Ethylbenzene | 13.31 | 91 | 456152 | 20.04 ug/L | | 98 |
| 67) | m,p-Xylene | 13.44 | 106 | 331406 | 39.95 ug/L | | 96 |
| 68) | o-Xylene | 14.12 | 106 | 159997 | 20.12 ug/L | | 92 |
| 69) | Styrene | 14.18 | 104 | 291424 | 20.44 ug/L | | 100 |
| 70) | Bromoform | 14.69 | 173 | 66912 | 21.08 ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 402555 | 20.35 ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 133592 | 21.42 ug/L | | 96 |
| 74) | 1,2,3-Trichloropropane | 15.19 | 75 | 98327 | 20.59 ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.31 | 53 | 39925 | 21.48 ug/L | | 91 |
| 76) | n-Propylbenzene | 15.34 | 91 | 514194 | 20.19 ug/L | | 96 |
| 77) | Bromobenzene | 15.39 | 156 | 104802 | 19.59 ug/L | | 91 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 309886 | 20.01 ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.62 | 91 | 349328 | 19.94 ug/L | | 93 |
| 80) | 4-Chlorotoluene | 15.70 | 91 | 319503 | 19.85 ug/L | | 94 |
| 81) | tert-butylbenzene | 16.17 | 119 | 252004 | 20.34 ug/L | | 90 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
RTE Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

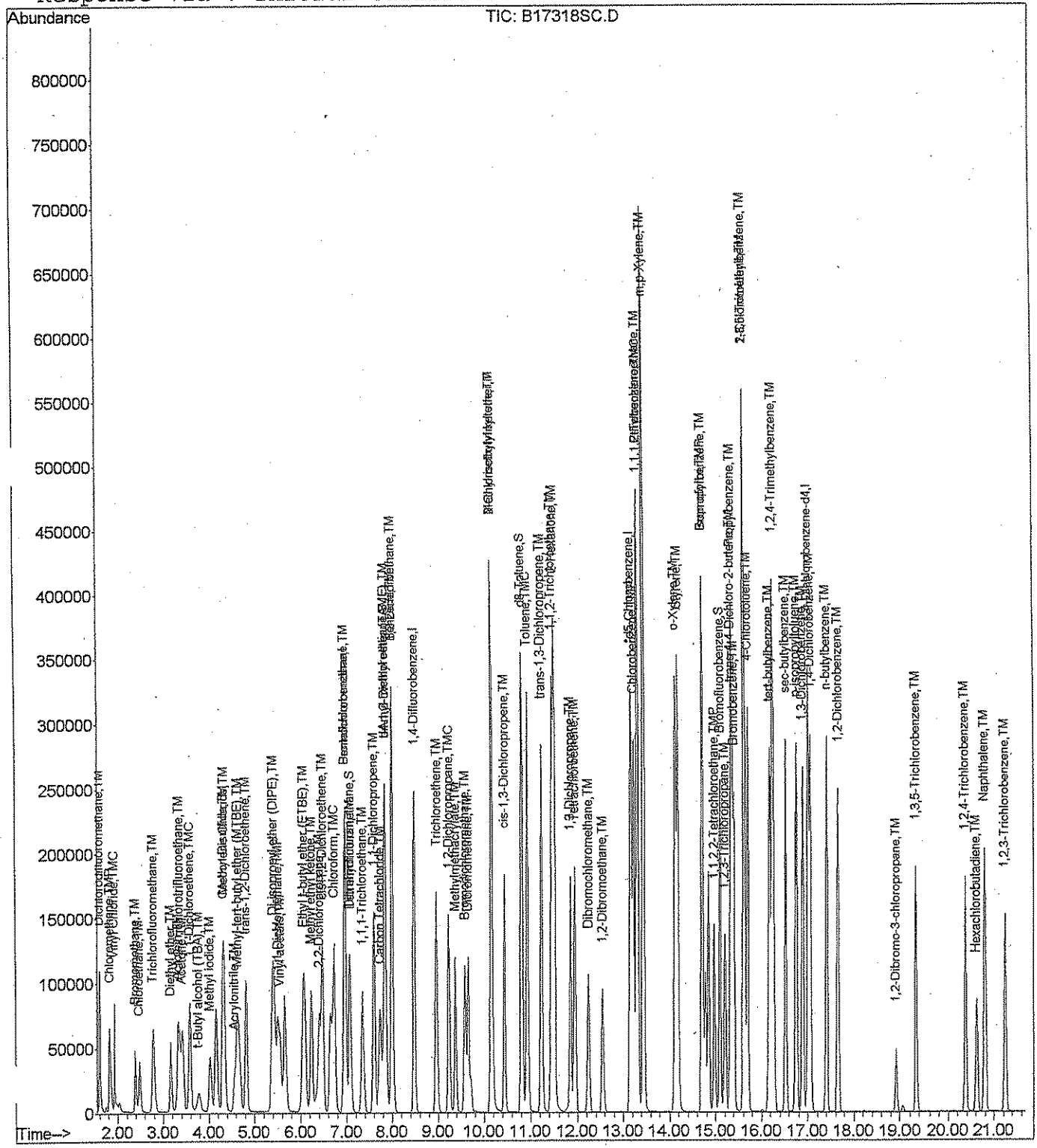
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 326651 | 19.55 | ug/L | | 96 |
| 84) sec-butylbenzene | 16.52 | 105 | 368156 | 19.17 | ug/L | | 94 |
| 85) p-isopropyltoluene | 16.74 | 119 | 289237 | 19.08 | ug/L | | 96 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 181959 | 19.36 | ug/L | | 95 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 187781 | 19.39 | ug/L | | 96 |
| 89) n-butylbenzene | 17.40 | 91 | 287086 | 20.20 | ug/L | | 93 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 173730 | 19.79 | ug/L | | 97 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 21062 | 23.41 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 103401 | 19.61 | ug/L | | 99 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 28863 | 18.28 | ug/L | | 100 |
| 96) Naphthalene | 20.79 | 128 | 298772 | 20.75 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 95758 | 19.58 | ug/L | | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.32 | 180 | 109127 | 19.64 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081903-B\B17318SC.D Vial: 27
Acq On : 19 Aug 2003 9:36 pm Operator:
Sample : 20 PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 7:12 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Tue Aug 19 07:29:19 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D  Vial: 2
Acq On : 20 Aug 2003 9:41 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.712 | -0.4 | 91 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.541 | 6.4 | 88 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.358 | 3.0 | 96 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.254 | 4.5 | 94 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.256 | -1.2 | 90 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.032# | -28.0# | 112 | 0.01 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.603 | -3.6 | 91 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.205 | -9.6 | 95 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.397 | -11.8 | 94 | -0.02 |
| 11 | T | Acrolein | 0.027 | 0.031# | -14.8 | 99 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.129 | -8.4 | 103 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.353 | 4.1 | 92 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.525 | -10.5 | 93 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.468 | -4.3 | 94 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.431 Linear | ~~-11.1~~ | 97 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.159 | -10.7 | 95 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.140 | -16.7 | 102 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.033 | -9.0 | 95 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.396 | -7.0 | 92 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.688 | -6.8 | 95 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.063# | -18.9 | 95 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.052# | -15.6 | 100 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.248 | 12.1 | 76 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.658 | -11.7 | 93 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.532 | -3.5 | 91 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.317 | -5.6 | 92 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.604 | -5.6 | 90 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.912 | 5.4 | 94 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.260 | -4.4 | 93 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.048# Linear | ~~-29.7#~~ | 98 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.707 | -5.8 | 92 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.675 | -4.2 | 91 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.539 | -8.9 | 94 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.650 | -5.0 | 89 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.717 | -5.3 | 92 | 0.00 |
| 38 | TM | Benzene | 1.942 | 1.982 | -2.1 | 91 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 86 | 0.00 |
| 40 | TM | Trichloroethene | 0.291 | 0.318 | -9.3 | 97 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D  Vial: 2
Acq On : 20 Aug 2003 9:41 am  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.264 | 2.3 | 91 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.199 | -12.4 | 96 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.373 | -6.0 | 92 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.220 | -9.5 | 94 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.002# | 0.0 | 131 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.112 | -14.3 | 98 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.110 | -15.8 | 100 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.464 | -10.2 | 93 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.169 | -3.4 | 90 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.721 | 4.0 | 93 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.422 | -12.8 | 94 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.249 | -8.7 | 96 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.500 | -5.7 | 93 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.297 | -6.1 | 95 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.281 | -6.0 | 92 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.312 | -5.4 | 93 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.896 | -1.7 | 92 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.281 | -5.2 | 92 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.549 | 2.7 | 92 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.570 | -3.6 | 93 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.547 | -3.8 | 92 | 0.00 |
| 69 | TM | Styrene | 0.945 | 1.000 | -5.8 | 93 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.230 | -9.5 | 95 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.376 | -5.0 | 92 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.446 | -8.0 | 97 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.544 | -2.3 | 89 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.329 | -3.8 | 97 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.140 | -13.8 | 96 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.758 | -4.1 | 93 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.361 | -1.7 | 91 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.067 | -4.0 | 92 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.214 | -4.6 | 95 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.069 | -0.2 | 89 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.847 | -3.2 | 89 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.133 | -2.3 | 92 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.263 | 0.8 | 92 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 1.007 | -0.2 | 91 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.632 | -1.4 | 93 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 88 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.320 | -1.9 | 93 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 1.996 | -5.1 | 93 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.213 | -3.3 | 93 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.140 | -16.7 | 98 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.717 | -1.7 | 91 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.211 | 0.0 | 95 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 2.022 | -5.0 | 94 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.663 | -1.4 | 93 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.762 | -2.6 | 92 | 0.00 |

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.96 | 168 | 174125 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 312914 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 282690 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 142302 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 105253 | 21.12 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 105.60% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 113107 | 20.99 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 104.95% | | | |
| 54) d8-Toluene | 10.81 | 98 | 365725 | 20.67 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.35% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 153921 | 20.47 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.35% | | | |
| **arget Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 124027 | 20.08 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 94221 | 18.71 | ug/L | 98 |
| 4) Vinyl Chloride | 1.93 | 62 | 62302 | 19.41 | ug/L | 100 |
| 5) Bromomethane | 2.39 | 94 | 44163 | 19.07 | ug/L | 97 |
| 6) Chloroethane | 2.48 | 64 | 44555 | 20.24 | ug/L | 97 |
| 7) t-Butyl alcohol (TBA) | 3.77 | 59 | 27560 | 124.97 | ug/L | 98 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 105007 | 20.71 | ug/L | 98 |
| 9) Diethyl ether | 3.16 | 74 | 35725 | 21.97 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.34 | 101 | 69179 | 22.41 | ug/L | 89 |
| 11) Acrolein | 3.32 | 56 | 26801 | 112.87 | ug/L | 98 |
| 12) Acetone | 3.43 | 43 | 112392 | 108.16 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 61518 | 20.82 | ug/L | 98 |
| 14) Methyl iodide | 4.03 | 142 | 91447 | 22.11 | ug/L | 96 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 255647 | 20.87 | ug/L | 99 |
| 16) Methylene Chloride 117% | 4.34 | 84 | 75066 | 22.66 | ug/L | 95 |
| 17) Carbon Disulfide | 4.31 | 76 | 201845 | 22.13 | ug/L | 100 |
| 18) Acrylonitrile | 4.55 | 53 | 24404 | 23.44 | ug/L | 98 |
| 19) Methyl-tert-butyl ether (M | 4.63 | 73 | 179813 | 21.79 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.82 | 96 | 69031 | 21.45 | ug/L | 91 |
| 21) 1,1-Dichloroethane | 5.51 | 63 | 119870 | 21.37 | ug/L | 98 |
| 22) Vinyl acetate | 5.56 | 86 | 10912 | 23.77 | ug/L | 95 |
| 23) Methyl ethyl ketone | 6.24 | 72 | 45642 | 115.30 | ug/L | 93 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 217311 | 17.60 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 114644 | 22.35 | ug/L | 99 |
| 26) cis-1,2-Dichloroethene | 6.47 | 96 | 92578 | 20.68 | ug/L | 94 |
| 27) t-Amyl methyl ether (TAME) | 7.83 | 73 | 229245 | 21.12 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration
B17340SC.D V808183B.M Wed Aug 20 09:54:58 2003 Page 1

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 29) | Chloroform | 6.73 | 83 | 158885 | 21.11 | ug/L | | 97 |
| 30) | Bromochloromethane | 6.97 | 128 | 45331 | 20.95 | ug/L | | 96 |
| 31) | Tetrahydrofuran 107% | 7.08 | 71 | 8304 | 21.42 | ug/L | | 89 |
| 32) | 1,1,1-Trichloroethane | 7.35 | 97 | 123132 | 21.18 | ug/L | | 94 |
| 34) | 1,1-Dichloropropene | 7.60 | 75 | 117507 | 20.81 | ug/L | | 97 |
| 35) | Carbon Tetrachloride | 7.74 | 119 | 93929 | 21.79 | ug/L | | 93 |
| 37) | 1,2-Dichloroethane | 7.99 | 62 | 124799 | 21.04 | ug/L | | 100 |
| 38) | Benzene | 8.00 | 78 | 345037 | 20.41 | ug/L | | 99 |
| 40) | Trichloroethene | 8.96 | 95 | 99376 | 21.84 | ug/L | | 86 |
| 41) | 1,2-Dichloropropane | 9.23 | 63 | 82506 | 20.47 | ug/L | | 98 |
| 42) | Methylmethacrylate | 9.37 | 69 | 62386 | 22.58 | ug/L | | 93 |
| 45) | Bromodichloromethane | 9.59 | 83 | 116569 | 21.16 | ug/L | | 97 |
| 46) | Dibromomethane | 9.65 | 93 | 68782 | 21.83 | ug/L | | 95 |
| 50) | 2-Chloroethylvinyl ether | 10.15 | 63 | 765 | 27.28 | ug/L | # | 1 |
| 51) | 2-Hexanone | 11.50 | 58 | 175498 | 113.95 | ug/L | | 90 |
| 52) | Methyl isobutyl ketone | 10.16 | 58 | 171973 | 115.66 | ug/L | # | 83 |
| 53) | cis-1,3-Dichloropropene | 10.44 | 75 | 145049 | 22.04 | ug/L | | 99 |
| 55) | Toluene | 10.93 | 92 | 225543 | 20.81 | ug/L | | 99 |
| 56) | trans-1,3-Dichloropropene | 11.23 | 75 | 132039 | 22.56 | ug/L | | 99 |
| 58) | 1,1,2-Trichloroethane | 11.45 | 83 | 77871 | 21.70 | ug/L | | 96 |
| 59) | 1,3-Dichloropropane | 11.85 | 76 | 156515 | 21.13 | ug/L | | 99 |
| 60) | Tetrachloroethene | 11.95 | 166 | 92918 | 21.24 | ug/L | | 95 |
| 61) | Dibromochloromethane | 12.24 | 129 | 87924 | 21.18 | ug/L | | 95 |
| 62) | 1,2-Dibromoethane | 12.56 | 107 | 97565 | 21.09 | ug/L | | 95 |
| 64) | Chlorobenzene | 13.22 | 112 | 253315 | 20.33 | ug/L | | 99 |
| 65) | 1,1,1,2-Tetrachloroethane | 13.30 | 131 | 79331 | 21.01 | ug/L | | 96 |
| 66) | Ethylbenzene | 13.32 | 91 | 437928 | 20.53 | ug/L | | 98 |
| 67) | m,p-Xylene | 13.43 | 106 | 322240 | 41.46 | ug/L | | 96 |
| 68) | o-Xylene | 14.12 | 106 | 154590 | 20.74 | ug/L | | 96 |
| 69) | Styrene | 14.18 | 104 | 282795 | 21.17 | ug/L | | 98 |
| 70) | Bromoform | 14.70 | 173 | 65119 | 21.89 | ug/L | | 98 |
| 71) | Isopropylbenzene | 14.70 | 105 | 389022 | 20.99 | ug/L | | 95 |
| 72) | 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 126096 | 21.58 | ug/L | | 97 |
| 74) | 1,2,3-Trichloropropane | 15.20 | 75 | 92985 | 20.78 | ug/L | | 98 |
| 75) | trans-1,4-Dichloro-2-buten | 15.32 | 53 | 39634 | 22.76 | ug/L | | 90 |
| 76) | n-Propylbenzene | 15.35 | 91 | 496948 | 20.82 | ug/L | | 98 |
| 77) | Bromobenzene | 15.40 | 156 | 102079 | 20.37 | ug/L | | 94 |
| 78) | 1,3,5-Trimethylbenzene | 15.60 | 105 | 301591 | 20.79 | ug/L | | 96 |
| 79) | 2-Chlorotoluene | 15.61 | 91 | 343211 | 20.91 | ug/L | | 94 |
| 80) | 4-Chlorotoluene | 15.69 | 91 | 302279 | 20.04 | ug/L | | 93 |
| 81) | tert-butylbenzene | 16.17 | 119 | 239352 | 20.62 | ug/L | | 95 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

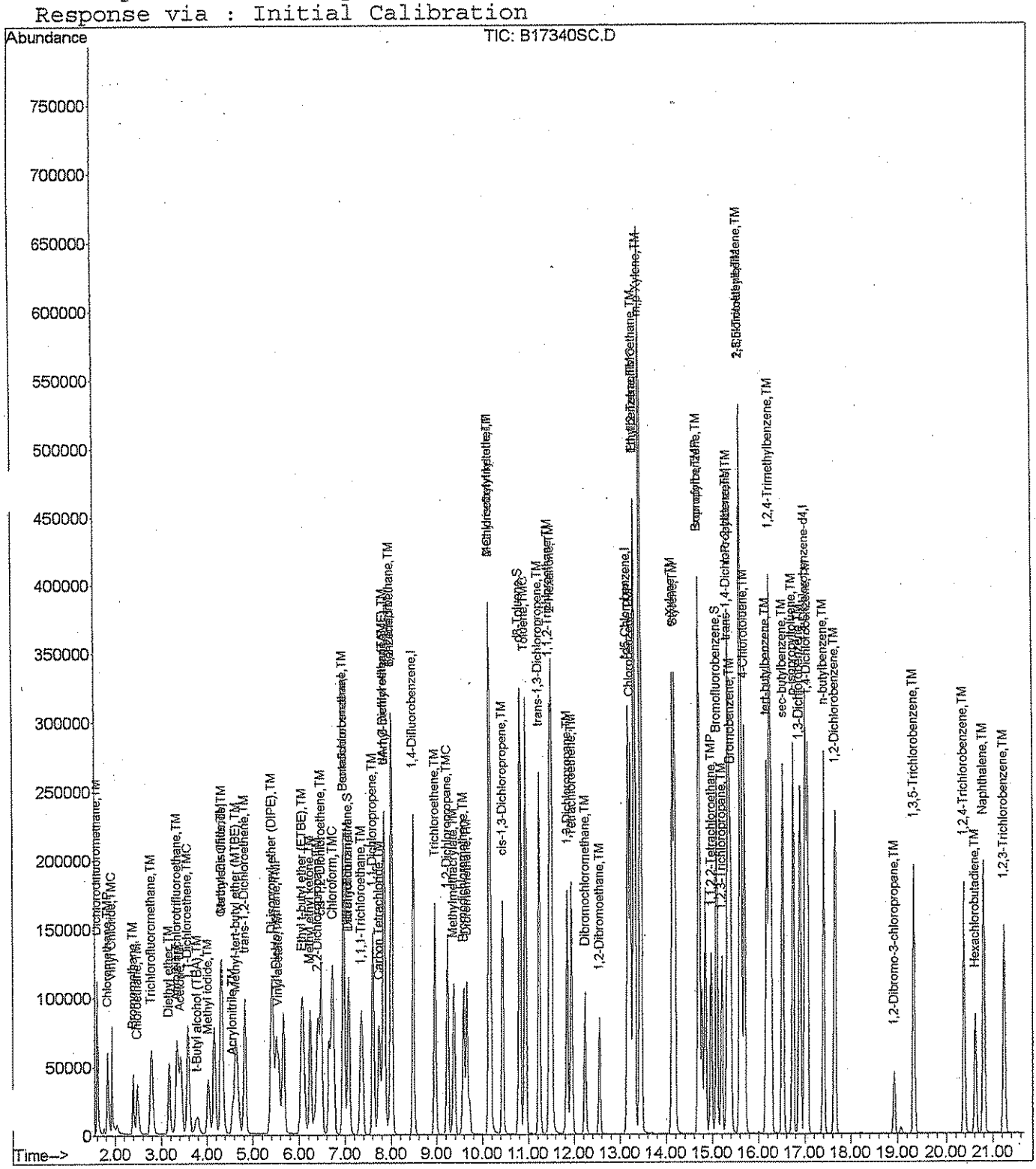
| | Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|---|
| 82) | 1,2,4-Trimethylbenzene | 16.23 | 105 | 320321 | 20.47 | ug/L | | 96 |
| 84) | sec-butylbenzene | 16.52 | 105 | 356958 | 19.84 | ug/L | | 96 |
| 85) | p-isopropyltoluene | 16.74 | 119 | 284628 | 20.04 | ug/L | | 97 |
| 86) | 1,3-Dichlorobenzene | 16.88 | 146 | 178734 | 20.29 | ug/L | | 98 |
| 88) | 1,4-Dichlorobenzene | 17.05 | 146 | 187861 | 20.39 | ug/L | | 98 |
| 89) | n-butylbenzene | 17.41 | 91 | 284067 | 21.01 | ug/L | | 95 |
| 90) | 1,2-Dichlorobenzene | 17.65 | 146 | 172616 | 20.67 | ug/L | | 96 |
| 92) | 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 19905 | 23.26 | ug/L | # | 83 |
| 94) | 1,2,4-Trichlorobenzene | 20.37 | 180 | 102061 | 20.34 | ug/L | | 97 |
| 95) | Hexachlorobutadiene | 20.62 | 225 | 30044 | 20.00 | ug/L | | 95 |
| 96) | Naphthalene | 20.80 | 128 | 287747 | 21.00 | ug/L | | 100 |
| 97) | 1,2,3-Trichlorobenzene | 21.24 | 180 | 94351 | 20.28 | ug/L | | 98 |
| 98) | 1,3,5-Trichlorobenzene | 19.33 | 180 | 108416 | 20.51 | ug/L | | 99 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17340SC.D Vial: 2
Acq On : 20 Aug 2003 9:41 am Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 20 9:54 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration



# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D  Vial: 25
Acq On : 20 Aug 2003 10:14 pm  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

8.21.03

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | Pentafluorobenzene | 1.000 | 1.000 | 0.0 | 81 | 0.00 |
| 2 | TM | Dichlorodifluoromethane | 0.709 | 0.697 | 1.7 | 82 | 0.00 |
| 3 | TMP | Chloromethane | 0.578 | 0.596 | -3.1 | 89 | 0.00 |
| 4 | TMC | Vinyl Chloride | 0.369 | 0.365 | 1.1 | 90 | 0.00 |
| 5 | TM | Bromomethane | 0.266 | 0.253 | 4.9 | 86 | 0.00 |
| 6 | TM | Chloroethane | 0.253 | 0.275 | -8.7 | 89 | 0.00 |
| 7 | TM | t-Butyl alcohol (TBA) | 0.025 | 0.032# | -28.0# | 105 | 0.00 |
| 8 | TM | Trichlorofluoromethane | 0.582 | 0.610 | -4.8 | 84 | 0.00 |
| 9 | TM | Diethyl ether | 0.187 | 0.197 | -5.3 | 83 | 0.00 |
| 10 | TM | 1,1,2-Trichlorotrifluoroeth | 0.355 | 0.373 | -5.1 | 81 | 0.00 |
| 11 | T | Acrolein | 0.027 | 0.028# | -3.7 | 83 | 0.00 |
| 12 | TM | Acetone | 0.119 | 0.129 | -8.4 | 94 | 0.00 |
| 13 | TMC | 1,1-Dichloroethene | 0.339 | 0.372 | 9.7 | 88 | 0.00 |
| 14 | TM | Methyl iodide | 0.475 | 0.519 | -9.3 | 84 | 0.00 |
| 15 | TM | Di-isopropyl ether (DIPE) | 1.407 | 1.535 | -9.1 | 90 | 0.00 |
| 16 | TM | Methylene Chloride | 0.485 | 0.423 Linear | ~~12.8~~ | 87 | 0.00 |
| 17 | TM | Carbon Disulfide | 1.047 | 1.155 | -10.3 | 87 | 0.00 |
| 18 | TM | Acrylonitrile | 0.120 | 0.141 | -17.5 | 94 | 0.00 |
| 19 | TM | Methyl-tert-butyl ether (MT | 0.948 | 1.020 | -7.6 | 86 | 0.00 |
| 20 | TM | trans-1,2-Dichloroethene | 0.370 | 0.394 | -6.5 | 84 | 0.00 |
| 21 | TMP | 1,1-Dichloroethane | 0.644 | 0.708 | -9.9 | 89 | 0.00 |
| 22 | TM | Vinyl acetate | 0.053 | 0.055# | -3.8 | 76 | 0.00 |
| 23 | TM | Methyl ethyl ketone | 0.045 | 0.053# | -17.8 | 93 | 0.00 |
| 24 | TM | Ethyl t-butyl ether (ETBE) | 1.419 | 1.455 | -2.5 | 81 | 0.00 |
| 25 | TM | 2,2-Dichloropropane | 0.589 | 0.505 | 14.3 | 65 | 0.00 |
| 26 | TM | cis-1,2-Dichloroethene | 0.514 | 0.535 | -4.1 | 84 | 0.00 |
| 27 | TM | t-Amyl methyl ether (TAME) | 1.247 | 1.358 | -8.9 | 87 | 0.00 |
| 28 | S | Dibromofluoromethane | 0.572 | 0.595 | -4.0 | 81 | 0.00 |
| 29 | TMC | Chloroform | 0.865 | 0.899 | 3.9 | 85 | 0.00 |
| 30 | TM | Bromochloromethane | 0.249 | 0.261 | -4.8 | 85 | 0.00 |
| 31 | TM | Tetrahydrofuran | 0.037 | 0.048# Linear | ~~29.7#~~ | 91 | 0.00 |
| 32 | TM | 1,1,1-Trichloroethane | 0.668 | 0.705 | -5.5 | 84 | 0.00 |
| 33 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 34 | TM | 1,1-Dichloropropene | 0.648 | 0.698 | -7.7 | 86 | 0.00 |
| 35 | TM | Carbon Tetrachloride | 0.495 | 0.537 | -8.5 | 85 | 0.00 |
| 36 | S | d4-1,2-Dichloroethane | 0.619 | 0.635 | -2.6 | 79 | 0.00 |
| 37 | TM | 1,2-Dichloroethane | 0.681 | 0.715 | -5.0 | 84 | 0.00 |
| 38 | TM | Benzene | 1.942 | 2.116 | -9.0 | 89 | 0.00 |
| 39 | I | 1,4-Difluorobenzene | 1.000 | 1.000 | 0.0 | 83 | 0.00 |
| 4 | TM | Trichloroethene | 0.291 | 0.298 | -2.4 | 88 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D
Acq On : 20 Aug 2003 10:14 pm
Sample : 20PPB STD
Misc : 5000
MS Integration Params: rteint.p

Vial: 25
Operator:
Inst : Instrumen
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 41 | TMC | 1,2-Dichloropropane | 0.258 | 0.261 | 1.2 | 87 | 0.00 |
| 42 | TM | Methylmethacrylate | 0.177 | 0.200 | -13.0 | 93 | 0.00 |
| 43 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 44 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 45 | TM | Bromodichloromethane | 0.352 | 0.359 | -2.0 | 85 | 0.00 |
| 46 | TM | Dibromomethane | 0.201 | 0.211 | -5.0 | 87 | 0.00 |
| 47 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 48 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 49 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 50 | T | 2-Chloroethylvinyl ether | 0.002 | 0.001# | 50.0# | 67 | 0.00 |
| 51 | TM | 2-Hexanone | 0.098 | 0.114 | -16.3 | 96 | 0.00 |
| 52 | TM | Methyl isobutyl ketone | 0.095 | 0.105 | -10.5 | 93 | 0.00 |
| 53 | TM | cis-1,3-Dichloropropene | 0.421 | 0.446 | -5.9 | 86 | 0.00 |
| 54 | S | d8-Toluene | 1.131 | 1.121 | 0.9 | 83 | 0.00 |
| 55 | TMC | Toluene | 0.693 | 0.699 | -0.9 | 87 | 0.00 |
| 56 | TM | trans-1,3-Dichloropropene | 0.374 | 0.402 | -7.5 | 87 | 0.00 |
| 57 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 58 | TM | 1,1,2-Trichloroethane | 0.229 | 0.245 | -7.0 | 91 | 0.00 |
| 59 | TM | 1,3-Dichloropropane | 0.473 | 0.498 | -5.3 | 89 | 0.00 |
| 60 | TM | Tetrachloroethene | 0.280 | 0.284 | -1.4 | 88 | 0.00 |
| 61 | TM | Dibromochloromethane | 0.265 | 0.279 | -5.3 | 88 | 0.00 |
| 62 | TM | 1,2-Dibromoethane | 0.296 | 0.313 | -5.7 | 90 | 0.00 |
| 63 | I | *d5-Chlorobenzene | 1.000 | 1.000 | 0.0 | 83 | 0.00 |
| 64 | TMP | Chlorobenzene | 0.881 | 0.893 | -1.4 | 88 | 0.00 |
| 65 | TM | 1,1,1,2-Tetrachloroethane | 0.267 | 0.280 | -4.9 | 87 | 0.00 |
| 66 | TMC | Ethylbenzene | 1.509 | 1.578 | -4.6 | 89 | 0.00 |
| 67 | TM | m,p-Xylene | 0.550 | 0.579 | -5.3 | 90 | 0.00 |
| 68 | TM | o-Xylene | 0.527 | 0.562 | -6.6 | 90 | 0.00 |
| 69 | TM | Styrene | 0.945 | 1.014 | -7.3 | 90 | 0.00 |
| 70 | TMP | Bromoform | 0.210 | 0.236 | -12.4 | 93 | 0.00 |
| 71 | TM | Isopropylbenzene | 1.311 | 1.409 | -7.5 | 90 | 0.00 |
| 72 | TMP | 1,1,2,2-Tetrachloroethane | 0.413 | 0.461 | -11.6 | 96 | 0.00 |
| 73 | S | Bromofluorobenzene | 0.532 | 0.549 | -3.2 | 85 | 0.00 |
| 74 | TM | 1,2,3-Trichloropropane | 0.317 | 0.334 | -5.4 | 93 | 0.00 |
| 75 | TM | trans-1,4-Dichloro-2-butene | 0.123 | 0.133 | -8.1 | 87 | 0.00 |
| 76 | TM | n-Propylbenzene | 1.689 | 1.767 | -4.6 | 89 | 0.00 |
| 77 | TM | Bromobenzene | 0.355 | 0.370 | -4.2 | 89 | 0.00 |
| 78 | TM | 1,3,5-Trimethylbenzene | 1.026 | 1.075 | -4.8 | 88 | 0.00 |
| 79 | TM | 2-Chlorotoluene | 1.161 | 1.208 | -4.0 | 90 | 0.00 |
| 80 | TM | 4-Chlorotoluene | 1.067 | 1.106 | -3.7 | 88 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D  Vial: 25
Acq On : 20 Aug 2003 10:14 pm  Operator:
Sample : 20PPB STD  Inst : Instrumen
Misc : 5000  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Multiple Level Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 81 | TM | tert-butylbenzene | 0.821 | 0.881 | -7.3 | 88 | 0.00 |
| 82 | TM | 1,2,4-Trimethylbenzene | 1.107 | 1.151 | -4.0 | 89 | 0.00 |
| 83 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 84 | TM | sec-butylbenzene | 1.273 | 1.278 | -0.4 | 88 | 0.00 |
| 85 | TM | p-isopropyltoluene | 1.005 | 0.996 | 0.9 | 86 | 0.00 |
| 86 | TM | 1,3-Dichlorobenzene | 0.623 | 0.631 | -1.3 | 88 | 0.00 |
| 87 | I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 85 | 0.00 |
| 88 | TM | 1,4-Dichlorobenzene | 1.295 | 1.274 | 1.6 | 87 | 0.00 |
| 89 | TM | n-butylbenzene | 1.900 | 1.914 | -0.7 | 87 | 0.00 |
| 90 | TM | 1,2-Dichlorobenzene | 1.174 | 1.201 | -2.3 | 89 | 0.00 |
| 91 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 92 | TM | 1,2-Dibromo-3-chloropropane | 0.120 | 0.143 | -19.2 | 97 | 0.00 |
| 93 | T | NO COMPOUND | 0.000 | 0.000# | 0.0 | 0# | -0.24 |
| 94 | TM | 1,2,4-Trichlorobenzene | 0.705 | 0.714 | -1.3 | 88 | 0.00 |
| 95 | TM | Hexachlorobutadiene | 0.211 | 0.197 | 6.6 | 86 | 0.00 |
| 96 | TM | Naphthalene | 1.925 | 2.046 | -6.3 | 92 | 0.00 |
| 97 | TM | 1,2,3-Trichlorobenzene | 0.654 | 0.658 | -0.6 | 89 | 0.00 |
| 98 | TM | 1,3,5-Trichlorobenzene | 0.743 | 0.736 | 0.9 | 86 | 0.00 |

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D Vial: 25
Acq On : 20 Aug 2003 10:14 pm Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 21 7:41 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

8.21.03 MB8183

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Pentafluorobenzene | 6.95 | 168 | 159242 | 20.00 | ug/L | 0.00 |
| 39) 1,4-Difluorobenzene | 8.48 | 114 | 301519 | 20.00 | ug/L | 0.00 |
| 63) *d5-Chlorobenzene | 13.16 | 117 | 268700 | 20.00 | ug/L | 0.00 |
| 87) 1,4-Dichlorobenzene-d4 | 17.00 | 152 | 137842 | 20.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 28) Dibromofluoromethane | 7.07 | 111 | 94700 | 20.78 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.90% | | | |
| 36) d4-1,2-Dichloroethane | 7.84 | 65 | 101128 | 20.52 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 102.60% | | | |
| 54) d8-Toluene | 10.81 | 98 | 338078 | 19.83 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 99.15% | | | |
| 73) Bromofluorobenzene | 15.09 | 95 | 147619 | 20.66 | ug/L | 0.00 |
| Spiked Amount 20.000 | Range 70 - 130 | | Recovery = 103.30% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) Dichlorodifluoromethane | 1.60 | 85 | 111053 | 19.66 | ug/L | 99 |
| 3) Chloromethane | 1.83 | 50 | 94979 | 20.62 | ug/L | 99 |
| 4) Vinyl Chloride | 1.93 | 62 | 58185 | 19.83 | ug/L | 100 |
| 5) Bromomethane | 2.39 | 94 | 40330 | 19.05 | ug/L | 98 |
| 6) Chloroethane | 2.48 | 64 | 43816 | 21.77 | ug/L | 94 |
| 7) t-Butyl alcohol (TBA) | 3.75 | 59 | 25798 | 127.91 | ug/L | 95 |
| 8) Trichlorofluoromethane | 2.78 | 101 | 97177 | 20.95 | ug/L | 97 |
| 9) Diethyl ether | 3.16 | 74 | 31409 | 21.12 | ug/L | 95 |
| 10) 1,1,2-Trichlorotrifluoroet | 3.36 | 101 | 59475 | 21.06 | ug/L | 90 |
| 11) Acrolein | 3.33 | 56 | 22461 | 103.43 | ug/L | 94 |
| 12) Acetone | 3.42 | 43 | 102912 | 108.30 | ug/L | 97 |
| 13) 1,1-Dichloroethene | 3.58 | 96 | 59296 | 21.94 | ug/L | 91 |
| 14) Methyl iodide | 4.03 | 142 | 82593 | 21.84 | ug/L | 95 |
| 15) Di-isopropyl ether (DIPE) | 5.41 | 45 | 244494 | 21.82 | ug/L | 98 |
| 16) Methylene Chloride 111% | 4.34 | 84 | 67283 | 22.18 | ug/L | 96 |
| 17) Carbon Disulfide | 4.30 | 76 | 183991 | 22.06 | ug/L | 100 |
| 18) Acrylonitrile | 4.56 | 53 | 22515 | 23.65 | ug/L | 96 |
| 19) Methyl-tert-butyl ether (M | 4.64 | 73 | 162405 | 21.52 | ug/L # | 86 |
| 20) trans-1,2-Dichloroethene | 4.81 | 96 | 62769 | 21.33 | ug/L | 89 |
| 21) 1,1-Dichloroethane | 5.50 | 63 | 112687 | 21.96 | ug/L | 99 |
| 22) Vinyl acetate | 5.56 | 86 | 8733 | 20.80 | ug/L | 92 |
| 23) Methyl ethyl ketone | 6.23 | 72 | 42442 | 117.24 | ug/L | 94 |
| 24) Ethyl t-butyl ether (ETBE) | 6.07 | 59 | 231620 | 20.51 | ug/L | 97 |
| 25) 2,2-Dichloropropane | 6.41 | 77 | 80414 | 17.14 | ug/L | 100 |
| 26) cis-1,2-Dichloroethene | 6.48 | 96 | 85237 | 20.82 | ug/L | 93 |
| 27) t-Amyl methyl ether (TAME) | 7.84 | 73 | 216289 | 21.79 | ug/L | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D Vial: 25
Acq On : 20 Aug 2003 10:14 pm Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Aug 21 7:41 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 29) Chloroform | 6.73 | 83 | 143217 | 20.80 | ug/L | | 94 |
| 30) Bromochloromethane | 6.97 | 128 | 41568 | 21.01 | ug/L | | 96 |
| 31) Tetrahydrofuran 1087. | 7.07 | 71 | 7686 | 21.67 | ug/L | | 87 |
| 32) 1,1,1-Trichloroethane | 7.35 | 97 | 112198 | 21.10 | ug/L | | 95 |
| 34) 1,1-Dichloropropene | 7.60 | 75 | 111131 | 21.52 | ug/L | | 98 |
| 35) Carbon Tetrachloride | 7.74 | 119 | 85459 | 21.67 | ug/L | | 94 |
| 37) 1,2-Dichloroethane | 7.99 | 62 | 113827 | 20.98 | ug/L | | 100 |
| 38) Benzene | 8.00 | 78 | 336920 | 21.79 | ug/L | | 99 |
| 40) Trichloroethene | 8.96 | 95 | 89794 | 20.48 | ug/L | | 85 |
| 41) 1,2-Dichloropropane | 9.23 | 63 | 78625 | 20.25 | ug/L | | 100 |
| 42) Methylmethacrylate | 9.38 | 69 | 60276 | 22.64 | ug/L | | 97 |
| 45) Bromodichloromethane | 9.59 | 83 | 108250 | 20.40 | ug/L | | 99 |
| 46) Dibromomethane | 9.65 | 93 | 63502 | 20.91 | ug/L | | 97 |
| 50) 2-Chloroethylvinyl ether | 10.16 | 63 | 392 | 14.51 | ug/L | # | 1 |
| 51) 2-Hexanone | 11.50 | 58 | 171634 | 115.65 | ug/L | | 91 |
| 52) Methyl isobutyl ketone | 10.16 | 58 | 158696 | 110.77 | ug/L | # | 85 |
| 53) cis-1,3-Dichloropropene | 10.44 | 75 | 134548 | 21.21 | ug/L | | 99 |
| 55) Toluene | 10.93 | 92 | 210668 | 20.17 | ug/L | | 97 |
| 56) trans-1,3-Dichloropropene | 11.22 | 75 | 121295 | 21.51 | ug/L | | 98 |
| 58) 1,1,2-Trichloroethane | 11.46 | 83 | 73906 | 21.38 | ug/L | | 92 |
| 59) 1,3-Dichloropropane | 11.85 | 76 | 150189 | 21.05 | ug/L | | 100 |
| 60) Tetrachloroethene | 11.94 | 166 | 85653 | 20.32 | ug/L | | 97 |
| 61) Dibromochloromethane | 12.24 | 129 | 84061 | 21.01 | ug/L | | 96 |
| 62) 1,2-Dibromoethane | 12.55 | 107 | 94279 | 21.15 | ug/L | | 96 |
| 64) Chlorobenzene | 13.22 | 112 | 239998 | 20.27 | ug/L | | 100 |
| 65) 1,1,1,2-Tetrachloroethane | 13.29 | 131 | 75299 | 20.98 | ug/L | | 96 |
| 66) Ethylbenzene | 13.31 | 91 | 424010 | 20.92 | ug/L | | 98 |
| 67) m,p-Xylene | 13.44 | 106 | 311141 | 42.11 | ug/L | | 97 |
| 68) o-Xylene | 14.12 | 106 | 150912 | 21.31 | ug/L | | 96 |
| 69) Styrene | 14.18 | 104 | 272364 | 21.46 | ug/L | | 100 |
| 70) Bromoform | 14.69 | 173 | 63509 | 22.46 | ug/L | | 98 |
| 71) Isopropylbenzene | 14.70 | 105 | 378519 | 21.49 | ug/L | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 14.97 | 83 | 123813 | 22.29 | ug/L | | 97 |
| 74) 1,2,3-Trichloropropane | 15.19 | 75 | 89718 | 21.10 | ug/L | | 100 |
| 75) trans-1,4-Dichloro-2-buten | 15.31 | 53 | 35763 | 21.61 | ug/L | | 91 |
| 76) n-Propylbenzene | 15.34 | 91 | 474879 | 20.93 | ug/L | | 97 |
| 77) Bromobenzene | 15.39 | 156 | 99294 | 20.84 | ug/L | | 92 |
| 78) 1,3,5-Trimethylbenzene | 15.60 | 105 | 288979 | 20.96 | ug/L | | 94 |
| 79) 2-Chlorotoluene | 15.62 | 91 | 324548 | 20.80 | ug/L | | 95 |
| 80) 4-Chlorotoluene | 15.70 | 91 | 297310 | 20.74 | ug/L | | 94 |
| 81) tert-butylbenzene | 16.17 | 119 | 236662 | 21.45 | ug/L | | 91 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D Vial: 25
Acq On : 20 Aug 2003 10:14 pm Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
IS Integration Params: rteint.p
Quant Time: Aug 21 7:41 2003 Quant Results File: V808183B.RES

Quant Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration
DataAcq Meth : V808183B

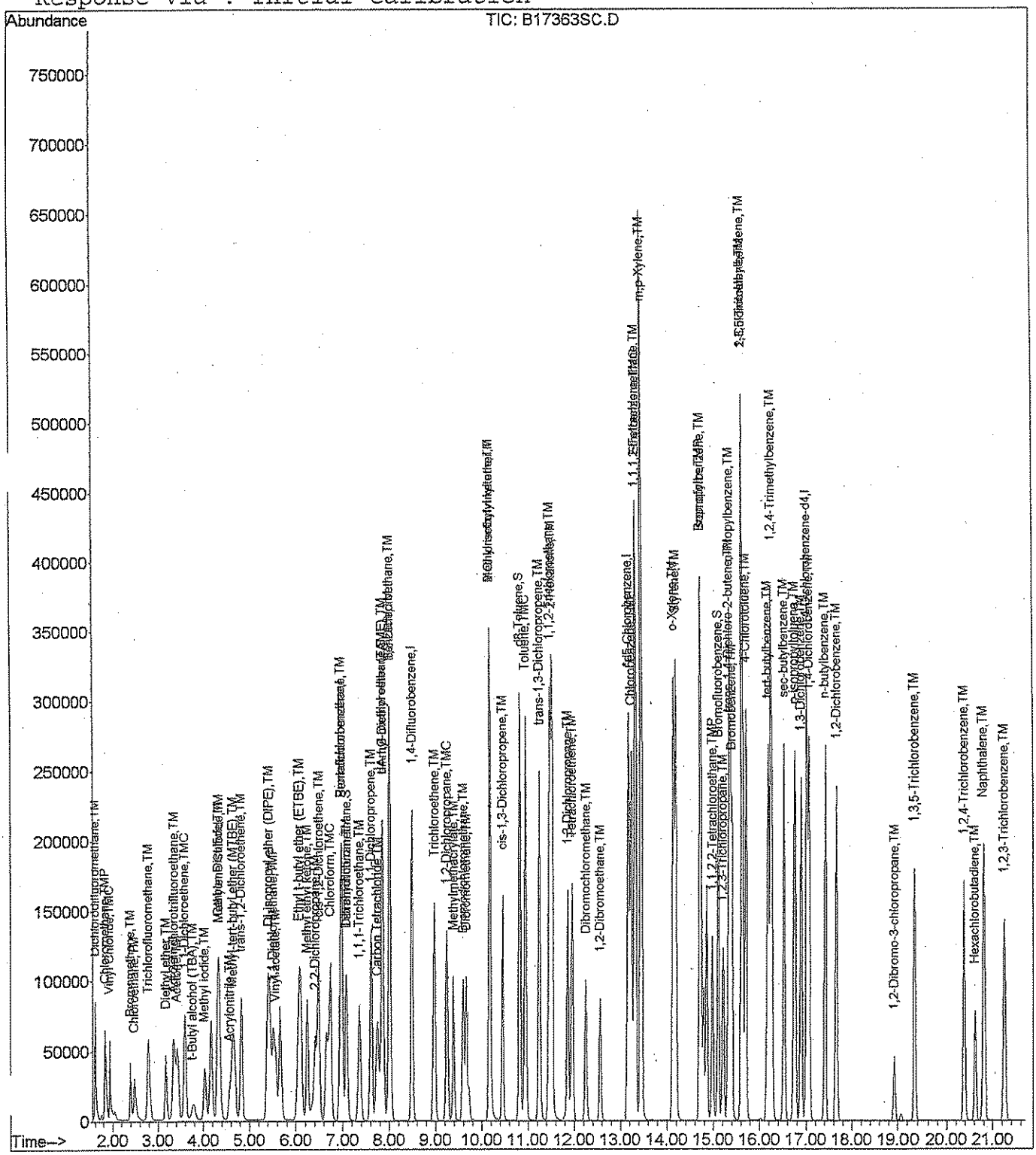
| Compound | R.T. | QIon | Response | Conc | Unit | | Qvalue |
|---|---|---|---|---|---|---|---|
| 82) 1,2,4-Trimethylbenzene | 16.23 | 105 | 309358 | 20.80 | ug/L | | 95 |
| 84) sec-butylbenzene | 16.52 | 105 | 343418 | 20.08 | ug/L | | 95 |
| 85) p-isopropyltoluene | 16.74 | 119 | 267748 | 19.83 | ug/L | | 97 |
| 86) 1,3-Dichlorobenzene | 16.88 | 146 | 169652 | 20.26 | ug/L | | 96 |
| 88) 1,4-Dichlorobenzene | 17.05 | 146 | 175673 | 19.68 | ug/L | | 95 |
| 89) n-butylbenzene | 17.40 | 91 | 263842 | 20.15 | ug/L | | 94 |
| 90) 1,2-Dichlorobenzene | 17.65 | 146 | 165577 | 20.47 | ug/L | | 98 |
| 92) 1,2-Dibromo-3-chloropropan | 18.92 | 75 | 19712 | 23.78 | ug/L | # | 80 |
| 94) 1,2,4-Trichlorobenzene | 20.38 | 180 | 98367 | 20.24 | ug/L | | 97 |
| 95) Hexachlorobutadiene | 20.62 | 225 | 27158 | 18.66 | ug/L | | 97 |
| 96) Naphthalene | 20.79 | 128 | 282043 | 21.25 | ug/L | | 100 |
| 97) 1,2,3-Trichlorobenzene | 21.25 | 180 | 90681 | 20.13 | ug/L | | 99 |
| 98) 1,3,5-Trichlorobenzene | 19.34 | 180 | 101470 | 19.82 | ug/L | | 97 |

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082003-B\B17363SC.D Vial: 25
Acq On : 20 Aug 2003 10:14 pm Operator:
Sample : 20PPB STD Inst : Instrumen
Misc : 5000 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 21 7:41 2003 Quant Results File: V808183B.R

Method : C:\HPCHEM\1\METHODS\V808183B.M (RTE Integrator)
Title : 8260 Purgable Organics
Last Update : Wed Aug 20 08:51:31 2003
Response via : Initial Calibration



analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17270T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/18/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 1732

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 197698 | 6.95 | 361866 | 8.48 | 323047 | 13.16 | 161610 | 17.00 |
| | UPPER LIMIT | 395396 | 7.37 | 723732 | 8.99 | 646094 | 13.95 | 323220 | 18.02 |
| | LOWER LIMIT | 98849 | 6.53 | 180933 | 7.97 | 161524 | 12.37 | 80805 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 1 PPB | 194884 | 6.95 | 352942 | 8.48 | 310446 | 13.16 | 157731 | 17.00 |
| 02 | 2 PPB | 187228 | 6.96 | 339004 | 8.48 | 311635 | 13.17 | 158277 | 17.00 |
| 03 | 5 PPB | 193601 | 6.95 | 352182 | 8.48 | 315401 | 13.16 | 158971 | 17.00 |
| 04 | 20 PPB | 197698 | 6.95 | 361866 | 8.48 | 323047 | 13.16 | 161610 | 17.00 |
| 05 | 50 PPB | 199392 | 6.95 | 356595 | 8.48 | 320837 | 13.16 | 165503 | 17.00 |
| 06 | 100 PPB | 200689 | 6.95 | 357021 | 8.48 | 322036 | 13.16 | 165458 | 17.00 |
| 07 | ZZZZZ | 197897 | 6.95 | 360991 | 8.48 | 325667 | 13.16 | 162066 | 17.00 |
| 08 | ZZZZZ | 199226 | 6.95 | 365678 | 8.48 | 323499 | 13.16 | 163685 | 17.00 |
| 09 | ZZZZZ | 205618 | 6.95 | 370683 | 8.48 | 329320 | 13.16 | 165492 | 17.00 |
| 10 | ZZZZZ | 195650 | 6.95 | 362747 | 8.48 | 324301 | 13.16 | 163278 | 17.00 |
| 11 | ZZZZZ | 191995 | 6.95 | 356658 | 8.48 | 317499 | 13.16 | 162537 | 17.00 |
| 12 | ZZZZZ | 187502 | 6.96 | 348470 | 8.48 | 314789 | 13.16 | 158678 | 17.00 |
| 13 | ZZZZZ | 194803 | 6.95 | 354673 | 8.48 | 316582 | 13.16 | 159429 | 17.00 |
| 14 | ZZZZZ | 202441 | 6.95 | 359801 | 8.48 | 322091 | 13.16 | 157769 | 17.00 |
| 15 | ZZZZZ | 203687 | 6.95 | 361234 | 8.48 | 320827 | 13.16 | 156863 | 17.00 |
| 16 | ZZZZZ | 201401 | 6.96 | 359940 | 8.48 | 320620 | 13.16 | 154821 | 17.00 |
| 17 | ZZZZZ | 198213 | 6.95 | 354824 | 8.48 | 316800 | 13.16 | 156467 | 17.00 |
| 18 | ZZZZZ | 204212 | 6.95 | 359094 | 8.48 | 322486 | 13.16 | 157190 | 17.00 |
| 19 | ZZZZZ | 201415 | 6.96 | 354445 | 8.48 | 319055 | 13.16 | 155339 | 17.00 |
| 20 | ZZZZZ | 203936 | 6.96 | 361852 | 8.48 | 326249 | 13.16 | 159856 | 17.00 |
| 21 | ZZZZZ | 209500 | 6.95 | 366130 | 8.48 | 330762 | 13.16 | 160018 | 17.00 |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17293T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0838

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 202958 | | 6.95 | | 363522 | | 8.48 | | 319153 | | 13.16 | | 159181 | | 17.00 | |
| | UPPER LIMIT | 405916 | | 7.37 | | 727044 | | 8.99 | | 638306 | | 13.95 | | 318362 | | 18.02 | |
| | LOWER LIMIT | 101479 | | 6.53 | | 181761 | | 7.97 | | 159577 | | 12.37 | | 79591 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 202958 | | 6.95 | | 363522 | | 8.48 | | 319153 | | 13.16 | | 159181 | | 17.00 | |
| 02 | L808193B | 200665 | | 6.95 | | 361525 | | 8.48 | | 320402 | | 13.16 | | 159243 | | 17.00 | |
| 03 | L808193B2 | 202086 | | 6.95 | | 359194 | | 8.48 | | 318072 | | 13.16 | | 160185 | | 17.00 | |
| 04 | ZZZZZ | 200264 | | 6.95 | | 358659 | | 8.48 | | 318502 | | 13.16 | | 157063 | | 17.00 | |
| 05 | B808193B | 195185 | | 6.96 | | 351323 | | 8.47 | | 313817 | | 13.16 | | 154350 | | 17.00 | |
| 06 | ZZZZZ | 189184 | | 6.95 | | 344210 | | 8.48 | | 308630 | | 13.16 | | 152881 | | 17.00 | |
| 07 | ZZZZZ | 195765 | | 6.95 | | 357194 | | 8.48 | | 315993 | | 13.16 | | 153809 | | 17.00 | |
| 08 | ZZZZZ | 194224 | | 6.96 | | 351678 | | 8.48 | | 311670 | | 13.16 | | 152393 | | 17.00 | |
| 09 | ZZZZZ | 193222 | | 6.95 | | 352292 | | 8.48 | | 311567 | | 13.16 | | 150623 | | 17.00 | |
| 10 | ZZZZZ | 192985 | | 6.95 | | 347362 | | 8.48 | | 307394 | | 13.16 | | 150240 | | 17.00 | |
| 11 | 50269-2,MS | 190568 | | 6.95 | | 344499 | | 8.48 | | 307028 | | 13.16 | | 153508 | | 17.00 | |
| 12 | 50269-2,MSD | 190025 | | 6.95 | | 343393 | | 8.48 | | 307317 | | 13.16 | | 154822 | | 17.00 | |
| 13 | ZZZZZ | 196106 | | 6.95 | | 351596 | | 8.48 | | 318425 | | 13.16 | | 154406 | | 17.00 | |
| 14 | ZZZZZ | 200137 | | 6.95 | | 358634 | | 8.48 | | 321809 | | 13.16 | | 155068 | | 17.00 | |
| 15 | ZZZZZ | 197545 | | 6.95 | | 353403 | | 8.48 | | 313075 | | 13.16 | | 153693 | | 17.00 | |
| 16 | ZZZZZ | 193644 | | 6.95 | | 349229 | | 8.48 | | 310432 | | 13.16 | | 150864 | | 17.00 | |
| 17 | ZZZZZ | 192154 | | 6.96 | | 343776 | | 8.47 | | 306550 | | 13.16 | | 149831 | | 17.00 | |
| 18 | ZZZZZ | 192749 | | 6.95 | | 344157 | | 8.48 | | 306840 | | 13.16 | | 148088 | | 17.00 | |
| 19 | ZZZZZ | 188968 | | 6.96 | | 340945 | | 8.48 | | 304353 | | 13.16 | | 147846 | | 17.00 | |
| 20 | ZZZZZ | 186913 | | 6.95 | | 339528 | | 8.48 | | 302806 | | 13.16 | | 147822 | | 17.00 | |
| 21 | ZZZZZ | 188068 | | 6.96 | | 337771 | | 8.48 | | 303435 | | 13.17 | | 146215 | | 17.00 | |
| 22 | ZZZZZ | 190780 | | 6.95 | | 342062 | | 8.48 | | 305740 | | 13.16 | | 147525 | | 17.00 | |
| 23 | ZZZZZ | 187267 | | 6.96 | | 333756 | | 8.47 | | 300339 | | 13.16 | | 145080 | | 17.00 | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17317T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/19/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2053

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 188501 | | 6.95 | | 339495 | | 8.48 | | 301716 | | 13.16 | | 149594 | | 17.00 | |
| | UPPER LIMIT | 377002 | | 7.37 | | 678990 | | 8.99 | | 603432 | | 13.95 | | 299188 | | 18.02 | |
| | LOWER LIMIT | 94251 | | 6.53 | | 169748 | | 7.97 | | 150858 | | 12.37 | | 74797 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20 PPB STD | 188501 | | 6.95 | | 339495 | | 8.48 | | 301716 | | 13.16 | | 149594 | | 17.00 | |
| 02 | L808193B3 | 189504 | | 6.95 | | 333165 | | 8.48 | | 302351 | | 13.16 | | 150801 | | 17.00 | |
| 03 | L808193B4 | 183434 | | 6.95 | | 335585 | | 8.48 | | 300928 | | 13.16 | | 151148 | | 17.00 | |
| 04 | B808193B2 | 187824 | | 6.95 | | 337820 | | 8.48 | | 298482 | | 13.16 | | 147095 | | 17.00 | |
| 05 | ZZZZZ | 185701 | | 6.95 | | 334770 | | 8.48 | | 297687 | | 13.16 | | 145259 | | 17.00 | |
| 06 | ZZZZZ | 182544 | | 6.95 | | 327806 | | 8.48 | | 294607 | | 13.16 | | 145698 | | 17.00 | |
| 07 | ZZZZZ | 182730 | | 6.95 | | 326884 | | 8.48 | | 292724 | | 13.16 | | 143526 | | 17.00 | |
| 08 | ZZZZZ | 182269 | | 6.96 | | 326387 | | 8.48 | | 293011 | | 13.16 | | 142036 | | 17.00 | |
| 09 | ZZZZZ | 182445 | | 6.96 | | 325095 | | 8.48 | | 292940 | | 13.16 | | 141328 | | 17.00 | |
| 10 | ZZZZZ | 181422 | | 6.95 | | 325220 | | 8.48 | | 288306 | | 13.16 | | 142056 | | 16.99 | |
| 11 | 50273-1 | 177543 | | 6.95 | | 320784 | | 8.48 | | 291233 | | 13.16 | | 139502 | | 17.00 | |
| 12 | 50273-2 | 178838 | | 6.96 | | 322210 | | 8.48 | | 287454 | | 13.16 | | 140547 | | 17.00 | |
| 13 | 50273-3 | 178680 | | 6.95 | | 319159 | | 8.48 | | 285338 | | 13.16 | | 138827 | | 17.00 | |
| 14 | 50273-4 | 177917 | | 6.95 | | 318729 | | 8.48 | | 286274 | | 13.16 | | 139863 | | 17.00 | |
| 15 | 50273-5 | 174339 | | 6.95 | | 316923 | | 8.48 | | 282869 | | 13.16 | | 139360 | | 17.00 | |
| 16 | 50273-6 | 173026 | | 6.95 | | 314377 | | 8.48 | | 279861 | | 13.16 | | 136843 | | 17.00 | |
| 17 | 50273-7 | 172856 | | 6.96 | | 316137 | | 8.48 | | 282270 | | 13.16 | | 137151 | | 17.00 | |
| 18 | 50273-8 | 174649 | | 6.96 | | 314299 | | 8.49 | | 278691 | | 13.16 | | 137959 | | 17.00 | |
| 19 | 50273-9 | 173004 | | 6.95 | | 309419 | | 8.48 | | 277830 | | 13.16 | | 137309 | | 17.00 | |
| 20 | 50273-10 | 170064 | | 6.95 | | 309918 | | 8.48 | | 276591 | | 13.16 | | 135518 | | 17.00 | |
| 21 | | 169316 | | 6.96 | | 306595 | | 8.48 | | 274077 | | 13.17 | | 135068 | | 17.00 | |
| 22 | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17339T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 0910

Heated Purge: (Y/N) N

| | | IS1 AREA # | RT # | IS2 AREA # | RT # | IS3 AREA # | RT # | IS4 AREA # | RT # |
|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 174125 | 6.96 | 312914 | 8.48 | 282690 | 13.16 | 142302 | 17.00 |
| | UPPER LIMIT | 348250 | 7.38 | 625828 | 8.99 | 565380 | 13.95 | 284604 | 18.02 |
| | LOWER LIMIT | 87063 | 6.54 | 156457 | 7.97 | 141345 | 12.37 | 71151 | 15.98 |
| | SAMPLE NO. | | | | | | | | |
| 01 | 20PPB STD | 174125 | 6.96 | 312914 | 8.48 | 282690 | 13.16 | 142302 | 17.00 |
| 02 | L808203B | 175842 | 6.95 | 315853 | 8.48 | 282788 | 13.16 | 145080 | 17.00 |
| 03 | L808203B2 | 174557 | 6.95 | 318567 | 8.47 | 284716 | 13.16 | 145875 | 17.00 |
| 04 | ZZZZZ | 172363 | 6.95 | 316590 | 8.48 | 281915 | 13.16 | 141140 | 17.00 |
| 05 | B808203B | 171337 | 6.95 | 313651 | 8.48 | 282160 | 13.16 | 139694 | 17.00 |
| 06 | ZZZZZ | 168149 | 6.95 | 310354 | 8.48 | 275986 | 13.16 | 137600 | 17.00 |
| 07 | ZZZZZ | 169138 | 6.95 | 306382 | 8.48 | 275577 | 13.16 | 135409 | 17.00 |
| 08 | ZZZZZ | 162501 | 6.95 | 300529 | 8.48 | 269565 | 13.16 | 134035 | 17.00 |
| 09 | ZZZZZ | 163021 | 6.95 | 300195 | 8.48 | 267834 | 13.16 | 134671 | 17.00 |
| 10 | ZZZZZ | 163872 | 6.96 | 302089 | 8.47 | 270922 | 13.16 | 134906 | 17.00 |
| 11 | ZZZZZ | 163083 | 6.95 | 297174 | 8.48 | 267773 | 13.16 | 133154 | 17.00 |
| 12 | 50273-1,DL | 161379 | 6.95 | 298155 | 8.48 | 268785 | 13.16 | 134176 | 17.00 |
| 13 | 50273-2,DL | 159084 | 6.95 | 294487 | 8.48 | 264762 | 13.16 | 133261 | 17.00 |
| 14 | 50273-3,DL | 152950 | 6.95 | 281263 | 8.48 | 256110 | 13.16 | 132982 | 17.00 |
| 15 | 50273-4,DL | 153690 | 6.95 | 286726 | 8.48 | 261088 | 13.16 | 131689 | 17.00 |
| 16 | 50273-5,DL | 155820 | 6.95 | 288480 | 8.48 | 260354 | 13.16 | 131502 | 17.00 |
| 17 | ZZZZZ | 160610 | 6.95 | 292772 | 8.48 | 261386 | 13.16 | 131431 | 17.00 |
| 18 | ZZZZZ | 152888 | 6.95 | 286669 | 8.48 | 257552 | 13.16 | 129932 | 17.00 |
| 19 | ZZZZZ | 160172 | 6.95 | 293311 | 8.48 | 263224 | 13.16 | 130452 | 17.00 |
| 20 | ZZZZZ | 148730 | 6.95 | 280495 | 8.48 | 255829 | 13.16 | 130575 | 17.00 |
| 21 | ZZZZZ | 164754 | 6.96 | 306731 | 8.47 | 274599 | 13.16 | 135683 | 17.00 |
| 22 | ZZZZZ | 167315 | 6.95 | 307208 | 8.48 | 276043 | 13.16 | 136847 | 17.00 |
| 23 | | | | | | | | | |
| 24 | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

analytics environmental laboratory LLC

# VOLATILE ORGANIC
# INTERNAL STANDARD AREA AND RT SUMMARY

Project #: 10971.217.002 Quote #: SDG#: 50273

BFB File ID: B17362T Site ID: Bucks Harbor Location: Maine

Instrument ID: B BFB Injection Date: 8/20/03

GC Column: RTX-502.2 ID: 0.25(mm) BFB Injection Time: 2145

Heated Purge: (Y/N) N

| | | IS1 AREA | # | RT | # | IS2 AREA | # | RT | # | IS3 AREA | # | RT | # | IS4 AREA | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 HOUR STD | 159242 | | 6.95 | | 301519 | | 8.48 | | 268700 | | 13.16 | | 137842 | | 17.00 | |
| | UPPER LIMIT | 318484 | | 7.37 | | 603038 | | 8.99 | | 537400 | | 13.95 | | 275684 | | 18.02 | |
| | LOWER LIMIT | 79621 | | 6.53 | | 150760 | | 7.97 | | 134350 | | 12.37 | | 68921 | | 15.98 | |
| | SAMPLE NO. | | | | | | | | | | | | | | | | |
| 01 | 20PPB STD | 159242 | | 6.95 | | 301519 | | 8.48 | | 268700 | | 13.16 | | 137842 | | 17.00 | |
| 02 | L808203B3 | 166975 | | 6.95 | | 312369 | | 8.48 | | 278465 | | 13.16 | | 142425 | | 17.00 | |
| 03 | L808203B4 | 173893 | | 6.96 | | 317318 | | 8.47 | | 282912 | | 13.16 | | 141041 | | 17.00 | |
| 04 | B808203B2 | 169228 | | 6.95 | | 310954 | | 8.48 | | 278584 | | 13.16 | | 139425 | | 17.00 | |
| 05 | 50273-7,DL | 159416 | | 6.96 | | 298972 | | 8.48 | | 270513 | | 13.16 | | 136104 | | 17.00 | |
| 06 | 50273-8,DL | 151472 | | 6.95 | | 281980 | | 8.48 | | 262170 | | 13.16 | | 134354 | | 17.00 | |
| 07 | 50273-9,DL | 159164 | | 6.95 | | 294451 | | 8.48 | | 269249 | | 13.17 | | 134996 | | 17.00 | |
| 08 | 50273-10,DL | 153756 | | 6.95 | | 275209 | | 8.48 | | 264353 | | 13.16 | | 132504 | | 17.00 | |
| 09 | ZZZZZ | 148460 | | 6.95 | | 280081 | | 8.48 | | 254859 | | 13.16 | | 132762 | | 17.00 | |
| 10 | ZZZZZ | 145191 | | 6.95 | | 273975 | | 8.48 | | 254626 | | 13.16 | | 132519 | | 17.00 | |
| 11 | ZZZZZ | 151293 | | 6.95 | | 278466 | | 8.48 | | 257990 | | 13.16 | | 130358 | | 17.00 | |
| 12 | ZZZZZ | 159537 | | 6.95 | | 293128 | | 8.48 | | 263097 | | 13.16 | | 131573 | | 17.00 | |
| 13 | ZZZZZ | 163982 | | 6.95 | | 296516 | | 8.48 | | 268088 | | 13.16 | | 130333 | | 17.00 | |
| 14 | ZZZZZ | 161134 | | 6.95 | | 293587 | | 8.48 | | 264497 | | 13.16 | | 129545 | | 17.00 | |
| 15 | ZZZZZ | 164383 | | 6.95 | | 300398 | | 8.48 | | 269433 | | 13.16 | | 133693 | | 17.00 | |
| 16 | ZZZZZ | 165063 | | 6.95 | | 297410 | | 8.48 | | 268209 | | 13.16 | | 132215 | | 17.00 | |
| 17 | ZZZZZ | 162446 | | 6.95 | | 291552 | | 8.48 | | 266591 | | 13.16 | | 132219 | | 17.00 | |
| 18 | ZZZZZ | 168656 | | 6.95 | | 308687 | | 8.48 | | 276910 | | 13.16 | | 140757 | | 17.00 | |
| 19 | ZZZZZ | 169789 | | 6.95 | | 307005 | | 8.48 | | 276659 | | 13.16 | | 140757 | | 17.00 | |
| 20 | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

IS1=Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.06 minutes of internal standard RRT
RT LOWER LIMIT = -0.06 minutes of internal standard RRT

# Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

# Chain Of Custody Form

analytics environmental laboratory LLC
195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

**For Analytics Use Only Rev 10/02**

Samples were:
1) Shipped or ~~hand-delivered~~
2) Temp blank °C 4.6
3) Received in good condition (Y) or N
4) pH checked by: n/a
5) Labels checked by: JB 8/18/03

Project#: 10971.217.002 Project: Bucks Harbor Pacher Tests
Company: Weston Solutions
Contact: Jim Richer
Address: 1 Wall Street
Manchester, NH 03101-1501
Phone: 603-656-5487 PO# Quote #
Sampler (Signature): Andrew Herms

Matrix Key: WW=Wastewater, SW=Surfacewater, GW=Groundwater, DW=Drinkingwater, S=Soil/Sludge, O=Oil, E=Extract, X=Other

Container Key: P=plastic G=glass

Preservation

| Station Identification | Sample Date | Sample Time | Analysis | Unpres | 4° C | HNO3 | H2SO4 | HCL | Methanol | Other | Matrix | Container number/type | | pH | Analytics Sample # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~MW7-015-PP~~ | | | | | | | | | | | | | | | |
| MW7-015-PP | 8/15/03 | 1345 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 50273-1 |
| MW7-044-PP | 8/15/03 | 1415 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 2 |
| MW7-075-PP | 8/15/03 | 1445 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 3 |
| MW7-115-PP | 8/15/03 | 1520 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 4 |
| MW7-115-PP-E | 8/15/03 | 1520 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 5 |
| TB-081503-01 | 8/15/03 | | VOC 8260B | | X | | | X | | | W | 2 | V | | 6 |
| MW10-130-PP | 8/16/03 | 0850 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 7 |
| MW10-150-PP | 8/16/03 | 0925 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 8 |
| MW10-150-PP-E | 8/16/03 | 0925 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 9 |
| MW10-164-PP | 8/16/03 | 0950 | VOC 8260B | | X | | | X | | | GW | 3 | V | | 10 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Received By: Time: 0900
Received By: Time:
Received By: Time:
Date: 8/18/03
Date:
Date:

FAX RESULTS? (YES) NO
Fax # 603-656-5401

Turnaround Request
Standard ☐ Priority ☐
Due Date ~~Due Date~~

Comments / Instructions:
Pacher Samples Bucks Harbor
via VOC 8260B
(*) Results due by Aug. 22nd (data results w/QC report to follow later)

Client Code: WESTONM

Page 1 of 1

Relinquished By Sampler:
Relinquished By:
Relinquished By:

Analytics\AEL Documents\AEL COC

139/140

# ANALYTICS SAMPLE RECEIPT CHECKLIST

analytics environmental laboratory LLC

AEL LAB#: 50273 — COOLER NUMBER: n/a

CLIENT: Weston Solutions — NUMBER OF COOLERS: 1

PROJECT: Bucks Harbor Packer Tests — DATE RECEIVED: 8.18.03

**A: PRELIMINARY EXAMINATION:** — DATE COOLER OPENED: 8.18.03

1. Cooler received by(initials) JB — Date Received: 8.18.03
2. Did cooler come with a shipping slip? — Y (N)

If YES, enter carrier name and airbill number here: n/a

3. Were custody seals on the outside of cooler? — Y N/a
How many & where: _____ Seal Date: _____ Seal Name: _____

4. Did the custody seals arrive unbroken and intact upon arrival? — Y N/a

5. COC#: n/a

| | | |
|---|---|---|
| 6. Were Custody papers filled out properly (ink,signed, etc)? | (Y) | N |
| 7. Were custody papers sealed in a plastic bag? | (Y) | N |
| 8. Did you sign the COC in the appropriate place? | (Y) | N |
| 9. Was the project identifiable from the COC papers? | (Y) | N |

10. Was enough ice used to chill the cooler? (Y) N — Temp. of cooler: 4.5

**B. Log-In:** Date samples were logged in: 8.18.03 — By: amb

| | | |
|---|---|---|
| 11. Type of packing in cooler (bubble wrap, popcorn) | (Y) | N |
| 12. Were all bottles sealed in separate plastic bags? | (Y) | N |
| 13. Did all bottles arrive unbroken and were labels in good condition? | (Y) | N |
| 14. Were all bottle labels complete(ID,Date,time,etc.) | (Y) | N |
| 15. Did all bottle labels agree with custody papers? | (Y) | N |
| 16. Were the correct containers used for the tests indicated: | (Y) | N |
| 17. Were samples received at the correct pH? | Y | N/a |
| 18. Was sufficient amount of sample sent for the tests indicated? | (Y) | N |
| 19. Were bubbles absent in VOA samples? | Y | (N) |

If NO, List sample #'s: TB-081503-01 (50273-6-A and -B)

20. Laboratory labeling verified by (initials): JB — Date: 8/18/03

# APPENDIX E

# RISK ASSESSMENT DOCUMENTATION (TABLES 6-1 THROUGH 6-161)

TABLE 6-1

RAGS Part D TABLE 1

SELECTION OF EXPOSURE PATHWAYS

Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine

| Scenario Timeframe | Medium | Exposure Medium | Exposure Point | Receptor Population | Receptor Age | Exposure Route | On-Site/ Off-Site | Type of Analysis | Rationale for Selection or Exclusion of Exposure Pathway |
|---|---|---|---|---|---|---|---|---|---|
| Current | Groundwater | Groundwater | Contaminants are in groundwater[a] and exposure to groundwater is evaluated. | Inmate | Adult | Ingestion | On-Site | Quantitative | Inmate incidentally ingests groundwater |
| | | | | | | Inhalation | On-Site | Quantitative | Inmate inhales vapor while showering |
| | | | | Resident | Adult | Ingestion | Off-Site | Quantitative | Resident incidentally ingests groundwater |
| | | | | | | Inhalation | Off-Site | Quantitative | Resident inhales vapor while showering |
| | | | | | Child | Ingestion | Off-Site | Quantitative | Resident incidentally ingests groundwater |
| | | | | | | Dermal | Off-Site | Qualitative | Resident contacts VOCS while bathing. |
| Future | Groundwater | Groundwater | Contaminants are in groundwater[b] and exposure to groundwater is evaluated. | Resident | Adult | Ingestion | On-Site | Quantitative | Resident incidentally ingests groundwater |
| | | | | | | Inhalation | On-Site | Quantitative | Resident inhales vapor while showering |
| | | | | | Child | Ingestion | On-Site | Quantitative | Resident incidentally ingests groundwater |
| | | | | | | Dermal | On-Site | Qualitative | Resident contacts VOCS while bathing. |

[a] Inmate was exposed to well WY3. Current resident was exposed to drinking water wells (each well was evaluated separately).

[b] Future residents were exposed to monitoring wells at Howard Mountain and Miller Mountain.

**TABLE 6-29**

**RAGS Part D TABLE 3.1 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW1)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Trichloroethene | µg/L | 0.72 | 0.80 (N) | 0.89 | 0.80 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-30**

**RAGS Part D TABLE 3.2 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW2)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Tetrachloroethene | µg/L | 0.39 | 0.47 (N) | 0.62 | 0.47 | µg/L | 95% UCL-N | W-Test (3) |
| | Trichloroethene | µg/L | 12.5 | 14.3 (N) | 18.0 | 14.3 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-31**

**RAGS Part D TABLE 3.3 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW3)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Trichloroethene | µg/L | 4.05 | 4.99 (N) | 8.20 | 4.99 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-32**

**RAGS Part D TABLE 3.4 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW4)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.25 | 0.26 (T) | 0.29 J | 0.26 | µg/L | 95% UCL-T | W-Test (1) |
| | Tetrachloroethene | µg/L | 0.72 | 0.79 (N) | 1.00 | 0.79 | µg/L | 95% UCL-N | W-Test (3) |
| | Trichloroethene | µg/L | 65.4 | 70.4 (T) | 90.5 | 70.4 | µg/L | 95% UCL-T | W-Test (4) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-33**

**RAGS Part D TABLE 3.5 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW9)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Trichloroethene | µg/L | 0.62 | 0.74 (T) | 0.75 | 0.74 | µg/L | 95% UCL-T | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-34**

**RAGS Part D TABLE 3.6 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW12)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Trichloroethene | µg/L | 2.83 | 4.33 (T) | 9.00 | 4.33 | µg/L | 95% UCL-T | W-Test (4) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-35**

**RAGS Part D TABLE 3.7 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW15)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | MTBE | µg/L | 28.0 | 431 (T) | 95.0 | 95.0 | µg/L | Maximum | W-Test (2) |
| | t-Amyl Methyl Ether | µg/L | 0.48 | 2.17 (T) | 1.40 | 1.40 | µg/L | Maximum | W-Test (2) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-36**

**RAGS Part D TABLE 3.8 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW17)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.28 | 0.35 (T) | 0.39 J | 0.35 | µg/L | 95% UCL-T | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-37**

**RAGS Part D TABLE 3.9 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW20)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.26 | 0.30 (T) | 0.32 J | 0.30 | µg/L | 95% UCL-T | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-38**

**RAGS Part D TABLE 3.10 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW21)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Benzene | µg/L | 0.44 | 1.13 (T) | 0.78 | 0.78 | µg/L | Maximum | W-Test (2) |
| | MTBE | µg/L | 26.0 | 35.0 (N) | 36.0 | 35.0 | µg/L | 95% UCL-N | W-Test (3) |
| | t-Amyl Methyl Ether | µg/L | 0.31 | 0.49 (T) | 0.55 | 0.49 | µg/L | 95% UCL-T | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-39**

**RAGS Part D TABLE 3.11 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW23)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | 1,2-Dichloroethane | µg/L | 0.26 | 0.27 (T) | 0.35 J | 0.27 | µg/L | 95% UCL-T | W-Test (1) |
| | Trichloroethene | µg/L | 1.81 | 3.75 (T) | 2.90 | 2.90 | µg/L | Maximum | W-Test (2) |
| | cis-1,2-Dichloroethene | µg/L | 4.52 | 17.4 (T) | 7.40 | 7.40 | µg/L | Maximum | W-Test (2) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-40**

**RAGS Part D TABLE 3.12 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW25)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.43 | 0.59 (N) | 0.59 | 0.59 | µg/L | Maximum | W-Test (2) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-41**

**RAGS Part D TABLE 3.13 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW28)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.44 | 39.5 (T) | 0.83 | 0.83 | µg/L | Maximum | W-Test (2) |

**TABLE 6-42**

**RAGS Part D TABLE 3.14 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW29)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.26 | 0.30 (T) | 0.30 J | 0.30 | µg/L | Maximum | W-Test (2) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-43**

**RAGS Part D TABLE 3.15 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW30)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.99 | 1.46 (N) | 1.60 | 1.46 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-44**

**RAGS Part D TABLE 3.16 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW31)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Trichloroethene | µg/L | 1.09 | 1.16 (N) | 1.30 | 1.16 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-45**

**RAGS Part D TABLE 3.17 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW33)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.32 | 0.47 (T) | 0.46 J | 0.46 | µg/L | Maximum | W-Test (2) |
| | Trichloroethene | µg/L | 0.58 | 0.63 (N) | 0.64 | 0.63 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: J = Estimated Value
N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-46**

**RAGS Part D TABLE 3.18 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater (Well - DW40)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Chloroform | µg/L | 0.56 | 0.66 (N) | 0.63 | 0.63 | µg/L | Maximum | W-Test (2) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-47**

**RAGS Part D TABLE 3.19 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current/Future
Medium: Groundwater
Exposure Medium: Groundwater (Well - WY3)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration (Qualifier) | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | Dibromochloromethane | µg/L | 0.33 | 0.43 (T) | 0.82 | 0.43 | µg/L | 95% UCL-T | W-Test (1) |
| | Trichloroethene | µg/L | 0.613 | 0.65 (N) | 0.70 | 0.65 | µg/L | 95% UCL-N | W-Test (3) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) Shapiro-Wilk W Test indicates data are neither normally nor lognormally distributed. They were assumed to be lognormally distributed.
(2) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.
(3) Shapiro-Wilk W Test indicates data are normally distributed.
(4) Shapiro-Wilk W Test indicates data are lognormally distributed.

**TABLE 6-48**

**RAGS Part D TABLE 3.20 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater (Howard Mountain)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | 1,3-Dichlorobenzene | µg/L | 0.98 | 1.06 N | 2.00 | 1.06 | µg/L | 95% UCL-N | W-Test (3) |
| | 1,4-Dichlorobenzene | µg/L | 1.02 | 1.14 N | 3.00 | 1.14 | µg/L | 95% UCL-N | W-Test (3) |
| | Tetrachloroethene | µg/L | 1.55 | 3.25 NP | 12.0 | 3.25 | µg/L | 95% UCL-NP | W-Test (1) |
| | Trichloroethene | µg/L | 85.8 | 660 NP | 1,820 | 660 | µg/L | 99% UCL-NP | W-Test (2) |
| | Cis-1,2-Dichloroethene | µg/L | 2.98 | 9.67 NP | 49.0 | 9.67 | µg/L | 95% UCL-NP | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
N/A = Not Applicable
T = Transformed

(1) ProUCL indicates data are nonparametric. The 95% Chebyshev (Mean, Sd) UCL was the ProUCL recommendation.
(2) ProUCL indicates data are nonparametric. The 99% Chebyshev (Mean, Sd) UCL was the ProUCL recommendation.
(3) ProUCL indicates data are normal. The Student's-t UCL was the ProUCL recommendation.

**TABLE 6-49**

**RAGS Part D TABLE 3.21 RME**

**EXPOSURE POINT CONCENTRATION SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater (Miller Mountain)

| Exposure Point | Chemical of Potential Concern | Units | Arithmetic Mean (1) | 95% UCL (1) (Distribution) | Maximum Concentration | Exposure Point Concentration | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Value | Units | Statistic | Rationale |
| Tap Water | 1,2,4-Trichlorobenzene | µg/L | 2.00 | NC | 4.00 | 4.00 | µg/L | Maximum | W-Test (1) |
| | Trichloroethene | µg/L | 21.0 | NC | 61.0 | 61.0 | µg/L | Maximum | W-Test (1) |
| | Cis-1,2-Dichloroethene | µg/L | 8.33 | NC | 23.0 | 23.0 | µg/L | Maximum | W-Test (1) |

Statistics: Maximum Detected Value (Maximum); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Transformed Data (95% UCL-T).
Nondetects were included at half the sample quantitation limit.
The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

Definitions: N = Normal
NC = Not calculated due to insufficient sample size.
N/A = Not Applicable
T = Transformed

(1) 95% UCL exceeds maximum detected concentration. Therefore, maximum concentration used for EPC.

**TABLE 6-50**

**RAGS Part D Table 4.1**

**VALUES USED FOR DAILY INTAKE CALCULATIONS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current\Future
Medium: Groundwater
Exposure Medium: Groundwater

| Exposure Route | Receptor Population | Receptor Age | Exposure Point | Parameter Code | Parameter Definition | Value | Units | Rationale/ Reference | Intake Equation/ Model Name |
|---|---|---|---|---|---|---|---|---|---|
| Ingestion | Resident | Adult | Tap Water | EPC | Exposure point concentration | Chem-Specific | µg/L | [1] | Chronic daily intake (CDI)(mg/kg-day) = |
| | | | | IRGW | Ingestion rate of groundwater | 2 | L/day | EPA, 1997 [2] | |
| | | | | EF | Exposure frequency | 350 | days/year | EPA, 1989 | EPC x IRGW x CF x EF x ED |
| | | | | ED | Exposure duration | 30 | years | EPA, 1991 | x 1/BW x 1/AT |
| | | | | CF | Conversion factor | 1.00E-03 | mg/µg | ----- | |
| | | | | BW | Body weight | 70 | kg | EPA, 1989 | |
| | | | | $AT_c$ | Averaging time - cancer | 25,550 | days | EPA, 1989 | |
| | | | | $AT_n$ | Averaging time - noncancer | 10,950 | days | EPA, 1989 | |

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

[2] p.3-1

EPA 1989a: *Risk Assessment Guidance for Superfund.* Volume 1: *Human Health Evaluation Manual, Part A* . OERR EPA/540/1-89/002.

EPA, 1997: *Exposure Factors Handbook* , Volume 1: *General Factors* . EPA/600/P-95/002Fa.

NA = Not applicable

**TABLE 6-51**

**RAGS Part D Table 4.2**

**VALUES USED FOR DAILY INTAKE CALCULATIONS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current\Future
Medium: Groundwater
Exposure Medium: Groundwater

| Exposure Route | Receptor Population | Receptor Age | Exposure Point | Parameter Code | Parameter Definition | Value | Units | Rationale/ Reference | Intake Equation/ Model Name |
|---|---|---|---|---|---|---|---|---|---|
| Inhalation | Resident | Adult | Air | CA | Chemical concentration in air | Chem-Specific | µg/m$^3$ | [1] | Chronic daily intake (CDI)(mg/kg-day) = |
| | | | | CF | Conversion factor | 1.00E-03 | mg/µg | ----- | |
| | | | | IR | Adult inhalation rate | 0.5 | m$^3$/hour | EPA, 1997 [2] | |
| | | | | ET | Exposure time | 0.25 | hours/day | | [CA x CF x IR x ET x EF x ED] |
| | | | | EF | Exposure frequency | 350 | days/year | EPA, 1991 | x 1/BW x 1/AT |
| | | | | ED | Exposure duration | 30 | years | EPA, 1991 | |
| | | | | BW | Body weight | 70 | kg | EPA, 1989 | |
| | | | | $AT_c$ | Averaging time - cancer | 25,550 | days | EPA, 1989 | |
| | | | | $AT_n$ | Averaging time - noncancer | 10,950 | days | EPA, 1989 | |
| | | | | EPC | Exposure point concentration | Chem-Specific | µg/L | [3] | Concentration in air (CA)(µg/m$^3$) = |
| | | | | FV | Fraction volatilized | 1 | unitless | | |
| | | | | FL | Flow rate | 30 | L/minute | | [EPC x FV x FR x SD x 1/BV] |
| | | | | SD | Shower duration | 15 | minutes | | |
| | | | | BV | Bathroom volume | 12 | m$^3$ | | |

[1] Foster-Chrostowski (1987) Model.

[2] Derived from Table 5-23 (EPA, 1997). Short-term mean exposures based on sedentary activities for adults.

[3] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

NA = Not applicable

**TABLE 6-52**

**RAGS Part D Table 4.3**

**VALUES USED FOR DAILY INTAKE CALCULATIONS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current\Future
Medium: Groundwater
Exposure Medium: Groundwater

| Exposure Route | Receptor Population | Receptor Age | Exposure Point | Parameter Code | Parameter Definition | Value | Units | Rationale/ Reference | Intake Equation/ Model Name |
|---|---|---|---|---|---|---|---|---|---|
| Ingestion | Resident | Child (1-6 yrs) | Tap Water | EPC | Exposure point concentration | Chem-Specific | µg/L | [1] | Chronic daily intake (CDI)(mg/kg-day) = |
| | | | | IRGW | Ingestion rate of groundwater | 1 | L/day | EPA, 1997 [2] | |
| | | | | EF | Exposure frequency | 350 | days/year | EPA, 1989 | EPC x IRGW x CF x EF x ED |
| | | | | ED | Exposure duration | 6 | years | EPA, 1991 | x 1/BW x 1/AT |
| | | | | CF | Conversion factor | 1.00E-03 | mg/µg | ----- | |
| | | | | BW | Body weight | 15 | kg | EPA, 1989 | |
| | | | | $AT_c$ | Averaging time - cancer | 25,550 | days | EPA, 1989 | |
| | | | | $AT_n$ | Averaging time - noncancer | 2,190 | days | EPA, 1989 | |

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

[2] p.3-1

EPA 1989a: *Risk Assessment Guidance for Superfund.* Volume 1: *Human Health Evaluation Manual, Part A* . OERR EPA/540/1-89/002.

EPA, 1997: *Exposure Factors Handbook* , Volume 1: *General Factors* . EPA/600/P-95/002Fa.

NA = Not applicable

**TABLE 6-53**

**RAGS Part D Table 4.4**

**VALUES USED FOR DAILY INTAKE CALCULATIONS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater

| Exposure Route | Receptor Population | Receptor Age | Exposure Point | Parameter Code | Parameter Definition | Value | Units | Rationale/ Reference | Intake Equation/ Model Name |
|---|---|---|---|---|---|---|---|---|---|
| Ingestion | Prison Inmate | Adult | Tap Water | EPC | Exposure point concentration | Chem-Specific | µg/L | [1] | Chronic daily intake (CDI)(mg/kg-day) = |
| | | | | IRGW | Ingestion rate of groundwater | 2 | L/day | EPA, 1997 [2] | |
| | | | | EF | Exposure frequency | 365 | days/year | EPA, 1989 | EPC x IRGW x CF x EF x ED |
| | | | | ED | Exposure duration | 30 | years | EPA, 1991 | x 1/BW x 1/AT |
| | | | | CF | Conversion factor | 1.00E-03 | mg/µg | ----- | |
| | | | | BW | Body weight | 70 | kg | EPA, 1989 | |
| | | | | $AT_c$ | Averaging time - cancer | 25,550 | days | EPA, 1989 | |
| | | | | $AT_n$ | Averaging time - noncancer | 10,950 | days | EPA, 1989 | |

[1] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

[2] p.3-1

EPA 1989a: *Risk Assessment Guidance for Superfund.* Volume 1: *Human Health Evaluation Manual, Part A* . OERR EPA/540/1-89/002.

EPA, 1997: *Exposure Factors Handbook* , Volume 1: *General Factors* . EPA/600/P-95/002Fa.

NA = Not applicable

**TABLE 6-54**

**RAGS Part D Table 4.5**

**VALUES USED FOR DAILY INTAKE CALCULATIONS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Medium: Groundwater
Exposure Medium: Groundwater

| Exposure Route | Receptor Population | Receptor Age | Exposure Point | Parameter Code | Parameter Definition | Value | Units | Rationale/ Reference | Intake Equation/ Model Name |
|---|---|---|---|---|---|---|---|---|---|
| Inhalation | Prison Inmate | Adult | Air | CA | Chemical concentration in air | Chem-Specific | µg/m$^3$ | [1] | Chronic daily intake (CDI)(mg/kg-day) = |
| | | | | CF | Conversion factor | 1.00E-03 | mg/µg | ----- | |
| | | | | IR | Adult inhalation rate | 0.5 | m$^3$/hour | EPA, 1997 [2] | |
| | | | | ET | Exposure time | 0.25 | hours/day | | [CA x CF x IR x ET x EF x ED] |
| | | | | EF | Exposure frequency | 365 | days/year | EPA, 1991 | x 1/BW x 1/AT |
| | | | | ED | Exposure duration | 30 | years | EPA, 1991 | |
| | | | | BW | Body weight | 70 | kg | EPA, 1989 | |
| | | | | $AT_c$ | Averaging time - cancer | 25,550 | days | EPA, 1989 | |
| | | | | $AT_n$ | Averaging time - noncancer | 10,950 | days | EPA, 1989 | |
| | | | | EPC | Exposure point concentration | Chem-Specific | µg/L | [3] | Concentration in air (CA)(µg/m$^3$) = |
| | | | | FV | Fraction volatilized | 1 | unitless | | |
| | | | | FL | Flow rate | 30 | L/minute | | [EPC x FV x FR x SD x 1/BV] |
| | | | | SD | Shower duration | 15 | minutes | | |
| | | | | BV | Bathroom volume | 12 | m$^3$ | | |

[1] Foster-Chrostowski (1987) Model.

[2] Derived from Table 5-23 (EPA, 1997). Short-term mean exposures based on sedentary activities for adults.

[3] The EPC is based on the lower of the 95% UCL and the maximum detected concentration.

NA = Not applicable

**Table 6-55**

**RAGS Part D TABLE 7.1.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Trichloroethene | 0.80 | µg/L | 9.39E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.22E-07 | 2.19E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.004 |
| | | from Well - DW1 | Exp. Route Total | | | | | | | | 1.22E-07 | | | | | 0.004 |
| | | Exposure Point Total | | | | | | | | | 1.22E-07 | | | | | 0.004 |
| | Exposure Medium Total | | | | | | | | | | 1.22E-07 | | | | | 0.004 |
| | Air | Air | Inhalation | Trichloroethene | 30.0 | µg/L | 2.20E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.54E-07 | 5.14E-05 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.0003 |
| | | | Exp. Route Total | | | | | | | | 1.54E-07 | | | | | 0.0003 |
| | | Exposure Point Total | | | | | | | | | 1.54E-07 | | | | | 0.0003 |
| | Exposure Medium Total | | | | | | | | | | 1.54E-07 | | | | | 0.0003 |
| Groundwater Total | | | | | | | | | | | 2.76E-07 | | | | | 0.004 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 2.76E-07 | | | | Total of Receptor Hazards Across All Media | 0.0040 |

**Table 6-56**

**RAGS Part D TABLE 7.2.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW2 | Ingestion | Tetrachloroethene | 0.47 | µg/L | 5.52E-06 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 2.98E-06 | 1.29E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0013 |
| | | | | Trichloroethene | 14.3 | µg/L | 1.68E-04 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 2.18E-06 | 3.92E-04 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.07 |
| | | | Exp. Route Total | | | | | | | | 5.16E-06 | | | | | 0.07 |
| | | Exposure Point Total | | | | | | | | | 5.16E-06 | | | | | 0.07 |
| | Exposure Medium Total | | | | | | | | | | 5.16E-06 | | | | | 0.07 |
| | Air | Air | Inhalation | Tetrachloroethene | 17.6 | µg/L | 1.29E-05 | mg/kg/day | 2.0E-02 | 1/mg/kg/day | 2.59E-07 | 3.02E-05 | mg/kg/day | 1.40E-01 | mg/kg/day | 0.00022 |
| | | | | Trichloroethene | 536 | µg/L | 3.94E-04 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 2.75E-06 | 9.18E-04 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.005 |
| | | | Exp. Route Total | | | | | | | | 3.01E-06 | | | | | 0.006 |
| | | Exposure Point Total | | | | | | | | | 3.01E-06 | | | | | 0.006 |
| | Exposure Medium Total | | | | | | | | | | 3.01E-06 | | | | | 0.006 |
| Groundwater Total | | | | | | | | | | | 8.18E-06 | | | | | 0.07 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 8.18E-06 | | | | Total of Receptor Hazards Across All Media | 0.07 |

**Table 6-57**

**RAGS Part D TABLE 7.3.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Trichloroethene | 4.99 | µg/L | 5.86E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 7.62E-07 | 1.37E-04 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.02 |
| | | from Well - DW3 | Exp. Route Total | | | | | | | | 7.62E-07 | | | | | 0.02 |
| | | Exposure Point Total | | | | | | | | | 7.62E-07 | | | | | 0.02 |
| | Exposure Medium Total | | | | | | | | | | 7.62E-07 | | | | | 0.02 |
| | Air | Air | Inhalation | Trichloroethene | 187 | µg/L | 1.37E-04 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 9.61E-07 | 3.20E-04 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.002 |
| | | | Exp. Route Total | | | | | | | | 9.61E-07 | | | | | 0.002 |
| | | Exposure Point Total | | | | | | | | | 9.61E-07 | | | | | 0.002 |
| | Exposure Medium Total | | | | | | | | | | 9.61E-07 | | | | | 0.002 |
| Groundwater Total | | | | | | | | | | | 1.72E-06 | | | | | 0.02 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media 1.72E-06 | | | | | Total of Receptor Hazards Across All Media 0.02 |

**Table 6-58**

**RAGS Part D TABLE 7.4.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW4 | Ingestion | Chloroform | 0.26 | µg/L | 3.05E-06 | mg/kg/day | NA | NA | --- | 7.12E-06 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.00071 |
| | | | | Tetrachloroethene | 0.79 | µg/L | 9.28E-06 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 5.01E-06 | 2.16E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0022 |
| | | | | Trichloroethene | 70.4 | µg/L | 8.27E-04 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.07E-05 | 1.93E-03 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.32 |
| | | | Exp. Route Total | | | | | | | | 1.58E-05 | | | | | 0.32 |
| | | Exposure Point Total | | | | | | | | | 1.58E-05 | | | | | 0.32 |
| | Exposure Medium Total | | | | | | | | | | 1.58E-05 | | | | | 0.32 |
| | Air | Air | Inhalation | Chloroform | 9.75 | µg/L | 7.16E-06 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 5.80E-07 | 1.67E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0012 |
| | | | | Tetrachloroethene | 29.6 | µg/L | 2.17E-05 | mg/kg/day | 2.0E-02 | 1/mg/kg/day | 4.35E-07 | 5.07E-05 | mg/kg/day | 1.40E-01 | mg/kg/day | 0.00036 |
| | | | | Trichloroethene | 2,640 | µg/L | 1.94E-03 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.36E-05 | 4.52E-03 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.03 |
| | | | Exp. Route Total | | | | | | | | 1.46E-05 | | | | | 0.03 |
| | | Exposure Point Total | | | | | | | | | 1.46E-05 | | | | | 0.03 |
| | Exposure Medium Total | | | | | | | | | | 1.46E-05 | | | | | 0.03 |
| Groundwater Total | | | | | | | | | | | 3.03E-05 | | | | | 0.35 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 3.03E-05 | | Total of Receptor Hazards Across All Media | | 0.35 |

**Table 6-59**

**RAGS Part D TABLE 7.5.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Trichloroethene | 0.74 | µg/L | 8.69E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.13E-07 | 2.03E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.003 |
| | | from Well - DW9 | Exp. Route Total | | | | | | | | 1.13E-07 | | | | | 0.003 |
| | | Exposure Point Total | | | | | | | | | 1.13E-07 | | | | | 0.003 |
| | Exposure Medium Total | | | | | | | | | | 1.13E-07 | | | | | 0.003 |
| | Air | Air | Inhalation | Trichloroethene | 27.8 | µg/L | 2.04E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.43E-07 | 4.75E-05 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.0003 |
| | | | Exp. Route Total | | | | | | | | 1.43E-07 | | | | | 0.0003 |
| | | Exposure Point Total | | | | | | | | | 1.43E-07 | | | | | 0.0003 |
| | Exposure Medium Total | | | | | | | | | | 1.43E-07 | | | | | 0.0003 |
| Groundwater Total | | | | | | | | | | | 2.56E-07 | | | | | 0.004 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media 2.56E-07 | | | | | Total of Receptor Hazards Across All Media 0.004 |

**Table 6-60**

**RAGS Part D TABLE 7.6.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Trichloroethene | 4.33 | µg/L | 5.08E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 6.61E-07 | 1.19E-04 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.02 |
| | | from Well - DW12 | Exp. Route Total | | | | | | | | 2.25E-06 | | | | | 0.02 |
| | | Exposure Point Total | | | | | | | | | 2.25E-06 | | | | | 0.02 |
| | Exposure Medium Total | | | | | | | | | | 2.25E-06 | | | | | 0.02 |
| | Air | Air | Inhalation | Trichloroethene | 162 | µg/L | 1.19E-04 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 8.34E-07 | 2.78E-04 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.002 |
| | | | Exp. Route Total | | | | | | | | 9.72E-07 | | | | | 0.002 |
| | | Exposure Point Total | | | | | | | | | 9.72E-07 | | | | | 0.002 |
| | Exposure Medium Total | | | | | | | | | | 9.72E-07 | | | | | 0.002 |
| Groundwater Total | | | | | | | | | | | 3.22E-06 | | | | | 0.02 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media 3.22E-06 | | | | | Total of Receptor Hazards Across All Media 0.02 |

**Table 6-61**

**RAGS Part D TABLE 7.7.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater | Ingestion | MTBE | 95.0 | µg/L | 1.12E-03 | mg/kg/day | 4.0E-03 | 1/mg/kg/day | 4.46E-06 | 2.60E-03 | mg/kg/day | NA | NA | --- |
| | | from Well - DW15 | | t-Amyl Methyl Ether | 1.40 | µg/L | 1.64E-05 | mg/kg/day | NA | NA | --- | 3.84E-05 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 4.46E-06 | | | | | --- |
| | | Exposure Point Total | | | | | | | | | 4.46E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | 4.46E-06 | | | | | --- |
| | Air | Air | Inhalation | MTBE | 3,563 | µg/L | 2.61E-03 | mg/kg/day | NA | NA | --- | 6.10E-03 | mg/kg/day | 8.57E-01 | mg/kg/day | 0.0071 |
| | | | | t-Amyl Methyl Ether | 52.5 | µg/L | 3.85E-05 | mg/kg/day | NA | NA | --- | 8.99E-05 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- | | | | | 0.0071 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0071 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0071 |
| Groundwater Total | | | | | | | | | | | 4.46E-06 | | | | | 0.0071 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 4.46E-06 | Total of Receptor Hazards Across All Media | | | | 0.0071 |

**Table 6-62**

**RAGS Part D TABLE 7.8.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.35 | µg/L | 4.11E-06 | mg/kg/day | NA | NA | --- | 9.59E-06 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0010 |
| | | from Well - DW17 | Exp. Route Total | | | | | | | | --- | | | | | 0.0010 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0010 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0010 |
| | Air | Air | Inhalation | Chloroform | 13.1 | µg/L | 9.63E-06 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 7.80E-07 | 2.25E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0016 |
| | | | Exp. Route Total | | | | | | | | 7.80E-07 | | | | | 0.0016 |
| | | Exposure Point Total | | | | | | | | | 7.80E-07 | | | | | 0.0016 |
| | Exposure Medium Total | | | | | | | | | | 7.80E-07 | | | | | 0.0016 |
| Groundwater Total | | | | | | | | | | | 7.80E-07 | | | | | 0.0026 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 7.80E-07 | | | | Total of Receptor Hazards Across All Media | 0.0026 |

**Table 6-63**

**RAGS Part D TABLE 7.9.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.30 | µg/L | 3.52E-06 | mg/kg/day | NA | NA | --- | 8.22E-06 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.00082 |
| | | from Well - DW20 | Exp. Route Total | | | | | | | | --- | | | | | 0.00082 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.00082 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.00082 |
| | Air | Air | Inhalation | Chloroform | 11.3 | µg/L | 8.26E-06 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 6.69E-07 | 1.93E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0014 |
| | | | Exp. Route Total | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| | | Exposure Point Total | | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| | Exposure Medium Total | | | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| Groundwater Total | | | | | | | | | | | 6.69E-07 | | | | | 0.0022 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | | | | | Total of Receptor Hazards Across All Media |
| | | | | | | | | | | | 6.69E-07 | | | | | 0.0022 |

**Table 6-64**

**RAGS Part D TABLE 7.10.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Well - DW21 | Ingestion | Benzene | 0.78 | µg/L | 9.16E-06 | mg/kg/day | 5.5E-02 | 1/mg/kg/day | 5.04E-07 | 2.14E-05 | mg/kg/day | 4.00E-03 | mg/kg/day | 0.0053 |
| | | | | MTBE | 35.0 | µg/L | 4.11E-04 | mg/kg/day | 4.0E-03 | 1/mg/kg/day | 1.64E-06 | 9.59E-04 | mg/kg/day | NA | NA | --- |
| | | | | t-Amyl Methyl Ether | 0.49 | µg/L | 5.75E-06 | mg/kg/day | NA | NA | --- | 1.34E-05 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 2.15E-06 | | | | | 0.0053 |
| | | Exposure Point Total | | | | | | | | | 2.15E-06 | | | | | 0.0053 |
| | Exposure Medium Total | | | | | | | | | | 2.15E-06 | | | | | 0.0053 |
| | Air | Air | Inhalation | Benzene | 29.3 | µg/L | 2.15E-05 | mg/kg/day | 2.7E-02 | 1/mg/kg/day | 5.80E-07 | 5.01E-05 | mg/kg/day | 8.60E-03 | mg/kg/day | 0.0058 |
| | | | | MTBE | 1,313 | µg/L | 9.63E-04 | mg/kg/day | NA | NA | --- | 2.25E-03 | mg/kg/day | 8.57E-01 | mg/kg/day | 0.0026 |
| | | | | t-Amyl Methyl Ether | 18.4 | µg/L | 1.35E-05 | mg/kg/day | NA | NA | --- | 3.15E-05 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 5.80E-07 | | | | | 0.0084 |
| | | Exposure Point Total | | | | | | | | | 5.80E-07 | | | | | 0.0084 |
| | Exposure Medium Total | | | | | | | | | | 5.80E-07 | | | | | 0.0084 |
| Groundwater Total | | | | | | | | | | | 2.73E-06 | | | | | 0.014 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media 2.73E-06 | | | | | Total of Receptor Hazards Across All Media 0.014 |

**Table 6-65**

**RAGS Part D TABLE 7.11.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW23 | Ingestion | 1,2-Dichloroethane | 0.27 | µg/L | 3.17E-06 | mg/kg/day | 9.1E-02 | 1/mg/kg/day | 2.88E-07 | 7.40E-06 | mg/kg/day | 2.00E-02 | mg/kg/day | 0.00037 |
| | | | | cis-1,2-Dichloroethene | 7.40 | µg/L | 8.69E-05 | mg/kg/day | NA | NA | --- | 2.03E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.020 |
| | | | | Trichloroethene | 2.90 | µg/L | 3.41E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 4.43E-07 | 7.95E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.01 |
| | | | Exp. Route Total | | | | | | | | 7.31E-07 | | | | | 0.03 |
| | | Exposure Point Total | | | | | | | | | 7.31E-07 | | | | | 0.03 |
| | Exposure Medium Total | | | | | | | | | | 7.31E-07 | | | | | 0.03 |
| | Air | Air | Inhalation | 1,2-Dichloroethane | 10.1 | µg/L | 7.43E-06 | mg/kg/day | 9.1E-02 | 1/mg/kg/day | 6.76E-07 | 1.73E-05 | mg/kg/day | 1.40E-03 | mg/kg/day | 0.012 |
| | | | | cis-1,2-Dichloroethene | 278 | µg/L | 2.04E-04 | mg/kg/day | NA | NA | --- | 4.75E-04 | mg/kg/day | NA | NA | --- |
| | | | | Trichloroethene | 109 | µg/L | 7.98E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 5.59E-07 | 1.86E-04 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.001 |
| | | | Exp. Route Total | | | | | | | | 1.23E-06 | | | | | 0.013 |
| | | Exposure Point Total | | | | | | | | | 1.23E-06 | | | | | 0.013 |
| | Exposure Medium Total | | | | | | | | | | 1.23E-06 | | | | | 0.013 |
| Groundwater Total | | | | | | | | | | | 1.97E-06 | | | | | 0.05 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 1.97E-06 | | | | Total of Receptor Hazards Across All Media | 0.05 |

**Table 6-66**

**RAGS Part D TABLE 7.12.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.59 | µg/L | 6.93E-06 | mg/kg/day | NA | NA | --- | 1.62E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0016 |
| | | from Well - DW25 | Exp. Route Total | | | | | | | | --- | | | | | 0.0016 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0016 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0016 |
| | Air | Air | Inhalation | Chloroform | 22.1 | µg/L | 1.62E-05 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 1.32E-06 | 3.79E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0027 |
| | | | Exp. Route Total | | | | | | | | 1.32E-06 | | | | | 0.0027 |
| | | Exposure Point Total | | | | | | | | | 1.32E-06 | | | | | 0.0027 |
| | Exposure Medium Total | | | | | | | | | | 1.32E-06 | | | | | 0.0027 |
| Groundwater Total | | | | | | | | | | | 1.32E-06 | | | | | 0.0043 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 1.32E-06 | | | | Total of Receptor Hazards Across All Media | 0.0043 |

**Table 6-67**

**RAGS Part D TABLE 7.13.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.83 | µg/L | 9.75E-06 | mg/kg/day | NA | NA | --- | 2.27E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0023 |
| | | from Well - DW28 | Exp. Route Total | | | | | | | | --- | | | | | 0.0023 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0023 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0023 |
| | Air | Air | Inhalation | Chloroform | 31.1 | µg/L | 2.28E-05 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 1.85E-06 | 5.33E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0038 |
| | | | Exp. Route Total | | | | | | | | 1.85E-06 | | | | | 0.0038 |
| | | Exposure Point Total | | | | | | | | | 1.85E-06 | | | | | 0.0038 |
| | Exposure Medium Total | | | | | | | | | | 1.85E-06 | | | | | 0.0038 |
| Groundwater Total | | | | | | | | | | | 1.85E-06 | | | | | 0.0061 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | | | | | Total of Receptor Hazards Across All Media |
| | | | | | | | | | | | 1.85E-06 | | | | | 0.0061 |

**Table 6-68**

**RAGS Part D TABLE 7.14.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.30 | µg/L | 3.52E-06 | mg/kg/day | NA | NA | --- | 8.22E-06 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.00082 |
| | | from Well - DW29 | Exp. Route Total | | | | | | | | --- | | | | | 0.00082 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.00082 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.00082 |
| | Air | Air | Inhalation | Chloroform | 11.3 | µg/L | 8.26E-06 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 6.69E-07 | 1.93E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0014 |
| | | | Exp. Route Total | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| | | Exposure Point Total | | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| | Exposure Medium Total | | | | | | | | | | 6.69E-07 | | | | | 0.0014 |
| Groundwater Total | | | | | | | | | | | 6.69E-07 | | | | | 0.0022 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | | | | | Total of Receptor Hazards Across All Media |
| | | | | | | | | | | | 6.69E-07 | | | | | 0.0022 |

**Table 6-69**

**RAGS Part D TABLE 7.15.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 1.46 | µg/L | 1.71E-05 | mg/kg/day | NA | NA | --- | 4.00E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0040 |
| | | from Well - DW30 | Exp. Route Total | | | | | | | | --- | | | | | 0.0040 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0040 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0040 |
| | Air | Air | Inhalation | Chloroform | 54.8 | µg/L | 4.02E-05 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 3.25E-06 | 9.38E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0067 |
| | | | Exp. Route Total | | | | | | | | 3.25E-06 | | | | | 0.0067 |
| | | Exposure Point Total | | | | | | | | | 3.25E-06 | | | | | 0.0067 |
| | Exposure Medium Total | | | | | | | | | | 3.25E-06 | | | | | 0.0067 |
| Groundwater Total | | | | | | | | | | | 3.25E-06 | | | | | 0.011 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 3.25E-06 | Total of Receptor Hazards Across All Media | | | | 0.011 |

**Table 6-70**

**RAGS Part D TABLE 7.16.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Trichloroethene | 1.16 | µg/L | 1.36E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.77E-07 | 3.18E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.01 |
| | | from Well - DW31 | Exp. Route Total | | | | | | | | 1.77E-07 | | | | | 0.01 |
| | | Exposure Point Total | | | | | | | | | 1.77E-07 | | | | | 0.01 |
| | Exposure Medium Total | | | | | | | | | | 1.77E-07 | | | | | 0.01 |
| | Air | Air | Inhalation | Trichloroethene | 43.5 | µg/L | 3.19E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 2.23E-07 | 7.45E-05 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.0004 |
| | | | Exp. Route Total | | | | | | | | 2.23E-07 | | | | | 0.0004 |
| | | Exposure Point Total | | | | | | | | | 2.23E-07 | | | | | 0.0004 |
| | Exposure Medium Total | | | | | | | | | | 2.23E-07 | | | | | 0.0004 |
| Groundwater Total | | | | | | | | | | | 4.01E-07 | | | | | 0.01 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 4.01E-07 | | | | Total of Receptor Hazards Across All Media | 0.01 |

**Table 6-71**

**RAGS Part D TABLE 7.17.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW33 | Ingestion | Chloroform | 0.46 | µg/L | 5.40E-06 | mg/kg/day | NA | NA | --- | 1.26E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0013 |
| | | | | Trichloroethene | 0.63 | µg/L | 7.40E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 9.62E-08 | 1.73E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.003 |
| | | | Exp. Route Total | | | | | | | | 9.62E-08 | | | | | 0.004 |
| | | Exposure Point Total | | | | | | | | | 9.62E-08 | | | | | 0.004 |
| | Exposure Medium Total | | | | | | | | | | 9.62E-08 | | | | | 0.004 |
| | Air | Air | Inhalation | Chloroform | 17.3 | µg/L | 1.27E-05 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 1.03E-06 | 2.95E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0021 |
| | | | | Trichloroethene | 23.6 | µg/L | 1.73E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.21E-07 | 4.05E-05 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.0002 |
| | | | Exp. Route Total | | | | | | | | 1.15E-06 | | | | | 0.0023 |
| | | Exposure Point Total | | | | | | | | | 1.15E-06 | | | | | 0.0023 |
| | Exposure Medium Total | | | | | | | | | | 1.15E-06 | | | | | 0.0023 |
| Groundwater Total | | | | | | | | | | | 1.24E-06 | | | | | 0.006 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 1.24E-06 | Total of Receptor Hazards Across All Media | | | | 0.006 |

**Table 6-72**

**RAGS Part D TABLE 7.18.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water | Ingestion | Chloroform | 0.63 | µg/L | 7.40E-06 | mg/kg/day | NA | NA | --- | 1.73E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0017 |
| | | from Well - DW40 | Exp. Route Total | | | | | | | | --- | | | | | 0.0017 |
| | | Exposure Point Total | | | | | | | | | --- | | | | | 0.0017 |
| | Exposure Medium Total | | | | | | | | | | --- | | | | | 0.0017 |
| | Air | Air | Inhalation | Chloroform | 23.6 | µg/L | 1.73E-05 | mg/kg/day | 8.1E-02 | 1/mg/kg/day | 1.40E-06 | 4.05E-05 | mg/kg/day | 1.40E-02 | mg/kg/day | 0.0029 |
| | | | Exp. Route Total | | | | | | | | 1.40E-06 | | | | | 0.0029 |
| | | Exposure Point Total | | | | | | | | | 1.40E-06 | | | | | 0.0029 |
| | Exposure Medium Total | | | | | | | | | | 1.40E-06 | | | | | 0.0029 |
| Groundwater Total | | | | | | | | | | | 1.40E-06 | | | | | 0.0046 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 1.40E-06 | | | | Total of Receptor Hazards Across All Media | 0.0046 |

**Table 6-73**

**RAGS Part D TABLE 7.19.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW1 | Ingestion | Trichloroethene | 0.80 | µg/L | 4.38E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 5.70E-08 |
| | | | Exp. Route Total | | | | | | | | 5.70E-08 |
| | | Exposure Point Total | | | | | | | | | 5.70E-08 |
| | Exposure Medium Total | | | | | | | | | | 5.70E-08 |
| Groundwater Total | | | | | | | | | | | 5.70E-08 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 5.70E-08 |

**Table 6-74**

**RAGS Part D TABLE 7.20.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW2 | Ingestion | Tetrachloroethene | 0.47 | µg/L | 2.58E-06 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 1.39E-06 |
| | | | | Trichloroethene | 14.3 | µg/L | 7.84E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.02E-06 |
| | | | Exp. Route Total | | | | | | | | 2.41E-06 |
| | | Exposure Point Total | | | | | | | | | 2.41E-06 |
| | Exposure Medium Total | | | | | | | | | | 2.41E-06 |
| Groundwater Total | | | | | | | | | | | 2.41E-06 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 2.41E-06 |

**Table 6-75**

**RAGS Part D TABLE 7.21.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW3 | Ingestion | Trichloroethene | 4.99 | µg/L | 2.73E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 3.55E-07 |
| | | | Exp. Route Total | | | | | | | | 3.55E-07 |
| | | Exposure Point Total | | | | | | | | | 3.55E-07 |
| | Exposure Medium Total | | | | | | | | | | 3.55E-07 |
| Groundwater Total | | | | | | | | | | | 3.55E-07 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 3.55E-07 |

**Table 6-76**

**RAGS Part D TABLE 7.22.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW4 | Ingestion | Chloroform | 0.26 | µg/L | 1.42E-06 | mg/kg/day | NA | NA | --- |
| | | | | Tetrachloroethene | 0.79 | µg/L | 4.33E-06 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 2.34E-06 |
| | | | | Trichloroethene | 70.4 | µg/L | 3.86E-04 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 5.01E-06 |
| | | | Exp. Route Total | | | | | | | | 7.35E-06 |
| | | Exposure Point Total | | | | | | | | | 7.35E-06 |
| | Exposure Medium Total | | | | | | | | | | 7.35E-06 |
| Groundwater Total | | | | | | | | | | | 7.35E-06 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 7.35E-06 |

**Table 6-77**

**RAGS Part D TABLE 7.23.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW9 | Ingestion | Trichloroethene | 0.74 | µg/L | 4.05E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 5.27E-08 |
| | | | Exp. Route Total | | | | | | | | 5.27E-08 |
| | | Exposure Point Total | | | | | | | | | 5.27E-08 |
| | Exposure Medium Total | | | | | | | | | | 5.27E-08 |
| Groundwater Total | | | | | | | | | | | 5.27E-08 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 5.27E-08 |

**Table 6-78**

**RAGS Part D TABLE 7.24.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW12 | Ingestion | Trichloroethene | 4.33 | µg/L | 2.37E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 3.08E-07 |
| | | | Exp. Route Total | | | | | | | | 1.05E-06 |
| | | Exposure Point Total | | | | | | | | | 1.05E-06 |
| | Exposure Medium Total | | | | | | | | | | 1.05E-06 |
| Groundwater Total | | | | | | | | | | | 1.05E-06 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 1.05E-06 |

**Table 6-79**

**RAGS Part D TABLE 7.25.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Well - DW15 | Ingestion | MTBE | 95.0 | µg/L | 5.21E-04 | mg/kg/day | 4.0E-03 | 1/mg/kg/day | 2.08E-06 |
| | | | | t-Amyl Methyl Ether | 1.40 | µg/L | 7.67E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 2.08E-06 |
| | | Exposure Point Total | | | | | | | | | 2.08E-06 |
| | Exposure Medium Total | | | | | | | | | | 2.08E-06 |
| Groundwater Total | | | | | | | | | | | 2.08E-06 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 2.08E-06 |

**Table 6-80**

**RAGS Part D TABLE 7.26.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW17 | Ingestion | Chloroform | 0.35 | µg/L | 4.11E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-81**

**RAGS Part D TABLE 7.27.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW20 | Ingestion | Chloroform | 0.30 | µg/L | 1.64E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-82**

**RAGS Part D TABLE 7.28.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machisport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Well - DW21 | Ingestion | Benzene | 0.78 | µg/L | 4.27E-06 | mg/kg/day | 5.5E-02 | 1/mg/kg/day | 2.35E-07 |
| | | | | MTBE | 35.0 | µg/L | 1.92E-04 | mg/kg/day | 4.0E-03 | 1/mg/kg/day | 7.67E-07 |
| | | | | t-Amyl Methyl Ether | 0.49 | µg/L | 2.68E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 1.00E-06 |
| | | Exposure Point Total | | | | | | | | | 1.00E-06 |
| | Exposure Medium Total | | | | | | | | | | 1.00E-06 |
| Groundwater Total | | | | | | | | | | | 1.00E-06 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 1.00E-06 |

**Table 6-83**

**RAGS Part D TABLE 7.29.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machisport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW23 | Ingestion | 1,2-Dichloroethane | 0.27 | µg/L | 1.48E-06 | mg/kg/day | 9.1E-02 | 1/mg/kg/day | 1.35E-07 |
| | | | | cis-1,2-Dichloroethene | 7.40 | µg/L | 4.05E-05 | mg/kg/day | NA | NA | --- |
| | | | | Trichloroethene | 2.90 | µg/L | 1.59E-05 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 2.07E-07 |
| | | | Exp. Route Total | | | | | | | | 3.41E-07 |
| | | Exposure Point Total | | | | | | | | | 3.41E-07 |
| | Exposure Medium Total | | | | | | | | | | 3.41E-07 |
| Groundwater Total | | | | | | | | | | | 3.41E-07 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 3.41E-07 |

**Table 6-84**

**RAGS Part D TABLE 7.30.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machisport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW25 | Ingestion | Chloroform | 0.59 | µg/L | 3.23E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-85**

**RAGS Part D TABLE 7.31.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machisport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW28 | Ingestion | Chloroform | 0.83 | µg/L | 4.55E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-86**

**RAGS Part D TABLE 7.32.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machisport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW29 | Ingestion | Chloroform | 0.30 | µg/L | 1.64E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-87**

**RAGS Part D TABLE 7.33.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW30 | Ingestion | Chloroform | 1.46 | µg/L | 8.00E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-88**

**RAGS Part D TABLE 7.34.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW31 | Ingestion | Trichloroethene | 1.16 | µg/L | 6.36E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 8.26E-08 |
| | | | Exp. Route Total | | | | | | | | 8.26E-08 |
| | | Exposure Point Total | | | | | | | | | 8.26E-08 |
| | Exposure Medium Total | | | | | | | | | | 8.26E-08 |
| Groundwater Total | | | | | | | | | | | 8.26E-08 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 8.26E-08 |

**Table 6-89**

**RAGS Part D TABLE 7.35.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW33 | Ingestion | Chloroform | 0.46 | µg/L | 2.52E-06 | mg/kg/day | NA | NA | --- |
| | | | | Trichloroethene | 0.63 | µg/L | 3.45E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 4.49E-08 |
| | | | Exp. Route Total | | | | | | | | 4.49E-08 |
| | | Exposure Point Total | | | | | | | | | 4.49E-08 |
| | Exposure Medium Total | | | | | | | | | | 4.49E-08 |
| Groundwater Total | | | | | | | | | | | 4.49E-08 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 4.49E-08 |

**Table 6-90**

**RAGS Part D TABLE 7.36.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk |
| | | | | | | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - DW40 | Ingestion | Chloroform | 0.63 | µg/L | 3.45E-06 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | --- |
| | | Exposure Point Total | | | | | | | | | --- |
| | Exposure Medium Total | | | | | | | | | | --- |
| Groundwater Total | | | | | | | | | | | --- |
| Total of Receptor Risks Across All Media | | | | | | | | | | | --- |

**Table 6-91**

**RAGS Part D TABLE 7.37.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: On-Site Prison Inmate
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tap Water from Well - WY3 | Ingestion | Dibromochloromethane | 0.43 | µg/L | 5.27E-06 | mg/kg/day | 8.4E-02 | 1/mg/kg/day | 4.42E-07 | 1.23E-05 | mg/kg/day | 2.00E-02 | mg/kg/day | 0.00061 |
| | | | | Trichloroethene | 0.65 | µg/L | 7.96E-06 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.03E-07 | 1.86E-05 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.003 |
| | | | Exp. Route Total | | | | | | | | 5.46E-07 | | | | | 0.004 |
| | | Exposure Point Total | | | | | | | | | 5.46E-07 | | | | | 0.004 |
| | Exposure Medium Total | | | | | | | | | | 5.46E-07 | | | | | 0.004 |
| | Air | Air | Inhalation | Dibromochloromethane | 16.1 | µg/L | 1.23E-05 | mg/kg/day | NA | NA | --- | 2.88E-05 | mg/kg/day | NA | NA | --- |
| | | | | Trichloroethene | 24.4 | µg/L | 1.87E-05 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.31E-07 | 4.35E-05 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.0003 |
| | | | Exp. Route Total | | | | | | | | 1.31E-07 | | | | | 0.0003 |
| | | Exposure Point Total | | | | | | | | | 1.31E-07 | | | | | 0.0003 |
| | Exposure Medium Total | | | | | | | | | | 1.31E-07 | | | | | 0.0003 |
| Groundwater Total | | | | | | | | | | | 6.76E-07 | | | | | 0.004 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 6.76E-07 | Total of Receptor Hazards Across All Media | | | | 0.004 |

**Table 6-92**

**RAGS Part D TABLE 7.38.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Howard Mountain | Ingestion | 1,3-Dichlorobenzene | 1.06 | µg/L | 1.24E-05 | mg/kg/day | NA | NA | --- | 2.90E-05 | mg/kg/day | 3.00E-03 | mg/kg/day | 0.010 |
| | | | | 1,4-Dichlorobenzene | 1.14 | µg/L | 1.34E-05 | mg/kg/day | 2.4E-02 | 1/mg/kg/day | 3.21E-07 | 3.12E-05 | mg/kg/day | 3.00E-02 | mg/kg/day | 0.0010 |
| | | | | Tetrachloroethene | 3.25 | µg/L | 3.82E-05 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 2.06E-05 | 8.90E-05 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.0089 |
| | | | | Trichloroethene | 660 | µg/L | 7.75E-03 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 1.01E-04 | 1.81E-02 | mg/kg/day | 6.00E-03 | mg/kg/day | 3.01 |
| | | | | Cis-1,2-Dichloroethene | 9.67 | µg/L | 1.14E-04 | mg/kg/day | NA | NA | --- | 2.65E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.026 |
| | | | Exp. Route Total | | | | | | | | 1.22E-04 | | | | | 3.06 |
| | | Exposure Point Total | | | | | | | | | 1.22E-04 | | | | | 3.06 |
| | Exposure Medium Total | | | | | | | | | | 1.22E-04 | | | | | 3.06 |
| | Air | Air | Inhalation | 1,3-Dichlorobenzene | 39.8 | µg/L | 2.92E-05 | mg/kg/day | NA | NA | --- | 6.81E-05 | mg/kg/day | NA | NA | --- |
| | | | | 1,4-Dichlorobenzene | 42.8 | µg/L | 3.14E-05 | mg/kg/day | 2.2E-02 | 1/mg/kg/day | 6.90E-07 | 7.32E-05 | mg/kg/day | 2.29E-01 | mg/kg/day | 0.00032 |
| | | | | Tetrachloroethene | 121.9 | µg/L | 8.94E-05 | mg/kg/day | 2.0E-02 | 1/mg/kg/day | 1.79E-06 | 2.09E-04 | mg/kg/day | 1.40E-01 | mg/kg/day | 0.0015 |
| | | | | Trichloroethene | 24,750 | µg/L | 1.82E-02 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.27E-04 | 4.24E-02 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.25 |
| | | | | Cis-1,2-Dichloroethene | 363 | µg/L | 2.66E-04 | mg/kg/day | NA | NA | --- | 6.21E-04 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 1.30E-04 | | | | | 0.25 |
| | | Exposure Point Total | | | | | | | | | 1.30E-04 | | | | | 0.25 |
| | Exposure Medium Total | | | | | | | | | | 1.30E-04 | | | | | 0.25 |
| Groundwater Total | | | | | | | | | | | 2.51E-04 | | | | | 3.31 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media 2.51E-04 | | | | | Total of Receptor Hazards Across All Media 3.31 |

**Table 6-93**

**RAGS Part D TABLE 7.39.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Howard Mountain | Ingestion | 1,3-Dichlorobenzene | 1.06 | µg/L | 5.81E-06 | mg/kg/day | NA | NA | --- | 6.78E-05 | mg/kg/day | 3.00E-03 | mg/kg/day | 0.023 |
| | | | | 1,4-Dichlorobenzene | 1.14 | µg/L | 6.25E-06 | mg/kg/day | 2.4E-02 | 1/mg/kg/day | 1.50E-07 | 7.29E-05 | mg/kg/day | 3.00E-02 | mg/kg/day | 0.0024 |
| | | | | Tetrachloroethene | 3.25 | µg/L | 1.78E-05 | mg/kg/day | 5.4E-01 | 1/mg/kg/day | 9.62E-06 | 2.08E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.021 |
| | | | | Trichloroethene | 660 | µg/L | 3.62E-03 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 4.70E-05 | 4.22E-02 | mg/kg/day | 6.00E-03 | mg/kg/day | 7.03 |
| | | | | Cis-1,2-Dichloroethene | 9.67 | µg/L | 5.30E-05 | mg/kg/day | NA | NA | --- | 6.18E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.062 |
| | | | Exp. Route Total | | | | | | | | 5.68E-05 | | | | | 7.14 |
| | | Exposure Point Total | | | | | | | | | 5.68E-05 | | | | | 7.14 |
| | Exposure Medium Total | | | | | | | | | | 5.68E-05 | | | | | 7.14 |
| Groundwater Total | | | | | | | | | | | 5.68E-05 | | | | | 7.14 |
| Total of Receptor Risks Across All Media | | | | | | | | | | | 5.68E-05 | Total of Receptor Hazards Across All Media | | | | 7.14 |

**Table 6-94**

**RAGS Part D TABLE 7.40.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Miller Mountain | Ingestion | 1,2,4-Trichlorobenzene | 4.0 | µg/L | 4.70E-05 | mg/kg/day | NA | NA | --- | 1.10E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.011 |
| | | | | Trichloroethene | 61.0 | µg/L | 7.16E-04 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 9.31E-06 | 1.67E-03 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.28 |
| | | | | Cis-1,2-Dichloroethene | 23.0 | µg/L | 2.70E-04 | mg/kg/day | NA | NA | --- | 6.30E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.063 |
| | | | Exp. Route Total | | | | | | | | 9.31E-06 | | | | | 0.35 |
| | | Exposure Point Total | | | | | | | | | 9.31E-06 | | | | | 0.35 |
| | Exposure Medium Total | | | | | | | | | | 9.31E-06 | | | | | 0.35 |
| | Air | Air | Inhalation | 1,2,4-Trichlorobenzene | 150 | µg/L | 1.10E-04 | mg/kg/day | NA | NA | --- | 2.57E-04 | mg/kg/day | 1.00E-03 | mg/kg/day | 0.26 |
| | | | Inhalation | Trichloroethene | 2,288 | µg/L | 1.68E-03 | mg/kg/day | 7.0E-03 | 1/mg/kg/day | 1.18E-05 | 3.92E-03 | mg/kg/day | 1.70E-01 | mg/kg/day | 0.023 |
| | | | | Cis-1,2-Dichloroethene | 863 | µg/L | 6.33E-04 | mg/kg/day | NA | NA | --- | 1.48E-03 | mg/kg/day | NA | NA | --- |
| | | | Exp. Route Total | | | | | | | | 1.18E-05 | | | | | 0.28 |
| | | Exposure Point Total | | | | | | | | | 1.18E-05 | | | | | 0.28 |
| | Exposure Medium Total | | | | | | | | | | 1.18E-05 | | | | | 0.28 |
| Groundwater Total | | | | | | | | | | | 2.11E-05 | | | | | 0.63 |
| | | | | | | | | | | Total of Receptor Risks Across All Media | 2.11E-05 | | | | Total of Receptor Hazards Across All Media | 0.63 |

**Table 6-95**

**RAGS Part D TABLE 7.41.RME**

**CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future

Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Exposure Route | Chemical of Potential Concern | EPC | | Cancer Risk Calculations | | | | | Non-Cancer Hazard Calculations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Units | Intake/Exposure Concentration | | CSF/Unit Risk | | Cancer Risk | Intake/Exposure Concentration | | RfD/RfC | | Hazard Quotient |
| | | | | | | | Value | Units | Value | Units | | Value | Units | Value | Units | |
| Groundwater | Groundwater | Tapwater from Miller Mountain | Ingestion | 1,2,4-Trichlorobenzene | 4.00 | µg/L | 2.19E-05 | mg/kg/day | NA | NA | --- | 2.56E-04 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.026 |
| | | | | Trichloroethene | 61.0 | µg/L | 3.34E-04 | mg/kg/day | 1.3E-02 | 1/mg/kg/day | 4.35E-06 | 3.90E-03 | mg/kg/day | 6.00E-03 | mg/kg/day | 0.65 |
| | | | | Cis-1,2-Dichloroethene | 23.0 | µg/L | 1.26E-04 | mg/kg/day | NA | NA | --- | 1.47E-03 | mg/kg/day | 1.00E-02 | mg/kg/day | 0.15 |
| | | | Exp. Route Total | | | | | | | | 4.35E-06 | | | | | 0.82 |
| | | Exposure Point Total | | | | | | | | | 4.35E-06 | | | | | 0.82 |
| | Exposure Medium Total | | | | | | | | | | 4.35E-06 | | | | | 0.82 |
| Groundwater Total | | | | | | | | | | | 4.35E-06 | | | | | 0.82 |
| | | | | | | | | | | | Total of Receptor Risks Across All Media | 4.35E-06 | | Total of Receptor Hazards Across All Media | | 0.82 |

**Table 6-100**

**TABLE 9.1.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW1 | Trichloroethene | 1.22E-07 | --- | --- | --- | 1.22E-07 | NA | 0.0037 | --- | --- | 0.0037 |
| | | | Chemical Total | 1.22E-07 | --- | --- | --- | 1.22E-07 | | 0.0037 | --- | --- | 0.0037 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.22E-07 | | | | | 0.0037 |
| | Exposure Medium Total | | | | | | | 1.22E-07 | | | | | 0.0037 |
| | Air | Water Vapors from Showerhead from Well - DW1 | Trichloroethene | --- | 1.54E-07 | --- | --- | 1.54E-07 | NA | --- | 0.00030 | --- | 0.00030 |
| | | | Chemical Total | --- | 1.54E-07 | --- | --- | 1.54E-07 | | --- | 0.00030 | --- | 0.00030 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.54E-07 | | | | | 0.000302 |
| | Exposure Medium Total | | | | | | | 1.54E-07 | | | | | 0.000302 |
| Groundwater Water Total | | | | | | | | 2.76E-07 | | | | | 0.0040 |
| Receptor Total | | | | | | | | 2.76E-07 | | | | | 0.0040 |

Total Risk Across All Media: 2.76E-07

Total Hazard Across All Media: 0.0040

**Table 6-101**

**TABLE 9.2.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW2 | Tetrachloroethene | 2.98E-06 | --- | --- | --- | 2.98E-06 | Liver | 0.0013 | --- | --- | 0.0013 |
| | | | Trichloroethene | 2.18E-06 | --- | --- | --- | 2.18E-06 | NA | 0.065 | --- | --- | 0.065 |
| | | | Chemical Total | 5.16E-06 | --- | --- | --- | 5.16E-06 | | 0.067 | --- | --- | 0.067 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.16E-06 | | | | | 0.067 |
| | Exposure Medium Total | | | | | | | 5.16E-06 | | | | | 0.067 |
| | Air | Water Vapors from Showerhead from Well - DW2 | Tetrachloroethene | --- | 2.59E-07 | --- | --- | 2.59E-07 | NA | --- | 0.00022 | --- | 0.00022 |
| | | | Trichloroethene | --- | 2.75E-06 | --- | --- | 2.75E-06 | NA | --- | 0.005 | --- | 0.005 |
| | | | Chemical Total | --- | 3.01E-06 | --- | --- | 3.01E-06 | | --- | 0.00562 | --- | 0.00562 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 3.01E-06 | | | | | 0.00562 |
| | Exposure Medium Total | | | | | | | 3.01E-06 | | | | | 0.00562 |
| Groundwater Water Total | | | | | | | | 8.18E-06 | | | | | 0.072 |
| Receptor Total | | | | | | | | 8.18E-06 | | | | | 0.072 |

Total Risk Across All Media: 8.18E-06

Total Hazard Across All Media: 0.072

Total Liver HI Across All Media: 0.0013

**Table 6-102**

**TABLE 9.3.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW3 | Trichloroethene | 7.62E-07 | --- | --- | --- | 7.62E-07 | NA | 0.023 | --- | --- | 0.023 |
| | | | Chemical Total | 7.62E-07 | --- | --- | --- | 7.62E-07 | | 0.023 | --- | --- | 0.023 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 7.62E-07 | | | | | 0.023 |
| | Exposure Medium Total | | | | | | | 7.62E-07 | | | | | 0.023 |
| | Air | Water Vapors from Showerhead from Well - DW3 | Trichloroethene | --- | 9.61E-07 | --- | --- | 9.61E-07 | NA | --- | 0.002 | --- | 0.002 |
| | | | Chemical Total | --- | 9.61E-07 | --- | --- | 9.61E-07 | | --- | 0.002 | --- | 0.002 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 9.61E-07 | | | | | 0.002 |
| | Exposure Medium Total | | | | | | | 9.61E-07 | | | | | 0.002 |
| Groundwater Water Total | | | | | | | | 1.72E-06 | | | | | 0.025 |
| Receptor Total | | | | | | | | 1.72E-06 | | | | | 0.025 |

Total Risk Across All Media: 1.72E-06

Total Hazard Across All Media: 0.025

**Table 6-103**

**TABLE 9.4.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW4 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.00071 | --- | --- | 0.00071 |
| | | | Tetrachloroethene | 5.01E-06 | --- | --- | --- | 5.01E-06 | Liver | 0.0022 | --- | --- | 0.0022 |
| | | | Trichloroethene | 1.07E-05 | --- | --- | --- | 1.07E-05 | NA | 0.32 | --- | --- | 0.32 |
| | | | Chemical Total | 1.58E-05 | --- | --- | --- | 1.58E-05 | | 0.32 | --- | --- | 0.32 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.58E-05 | | | | | 0.32 |
| | Exposure Medium Total | | | | | | | 1.58E-05 | | | | | 0.32 |
| | Air | Water Vapors from Showerhead from Well - DW4 | Chloroform | --- | 5.80E-07 | --- | --- | 5.80E-07 | NA | --- | 0.0012 | --- | 0.0012 |
| | | | Tetrachloroethene | --- | 4.35E-07 | --- | --- | 4.35E-07 | NA | --- | 0.00036 | --- | 0.00036 |
| | | | Trichloroethene | --- | 1.36E-05 | --- | --- | 1.36E-05 | NA | --- | 0.03 | --- | 0.03 |
| | | | Chemical Total | --- | 1.46E-05 | --- | --- | 1.46E-05 | | --- | 0.0281 | --- | 0.0281 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.46E-05 | | | | | 0.0281 |
| | Exposure Medium Total | | | | | | | 1.46E-05 | | | | | 0.0281 |
| Groundwater Water Total | | | | | | | | 3.03E-05 | | | | | 0.35 |
| Receptor Total | | | | | | | | 3.03E-05 | | | | | 0.35 |

Total Risk Across All Media: 3.03E-05

Total Hazard Across All Media: 0.35

Total Liver HI Across All Media: 0.0029

**Table 6-104**

**TABLE 9.5.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW9 | Trichloroethene | 1.13E-07 | --- | --- | --- | 1.13E-07 | NA | 0.0034 | --- | --- | 0.0034 |
| | | | Chemical Total | 1.13E-07 | --- | --- | --- | 1.13E-07 | | 0.0034 | --- | --- | 0.0034 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.13E-07 | | | | | 0.0034 |
| | Exposure Medium Total | | | | | | | 1.13E-07 | | | | | 0.0034 |
| | Air | Water Vapors from Showerhead from Well - DW9 | Trichloroethene | --- | 1.43E-07 | --- | --- | 1.43E-07 | NA | --- | 0.0003 | --- | 0.0003 |
| | | | Chemical Total | --- | 1.43E-07 | --- | --- | 1.43E-07 | | --- | 0.0003 | --- | 0.0003 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.43E-07 | | | | | 0.0003 |
| | Exposure Medium Total | | | | | | | 1.43E-07 | | | | | 0.0003 |
| Groundwater Water Total | | | | | | | | 2.56E-07 | | | | | 0.0037 |
| Receptor Total | | | | | | | | 2.56E-07 | | | | | 0.0037 |

Total Risk Across All Media: 2.56E-07

Total Hazard Across All Media: 0.0037

**Table 6-105**

**TABLE 9.6.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW12 | Tetrachloroethene | 1.59E-06 | --- | --- | --- | 1.59E-06 | Liver | 0.00068 | --- | --- | 0.00068 |
| | | | Trichloroethene | 6.61E-07 | --- | --- | --- | 6.61E-07 | NA | 0.020 | --- | --- | 0.020 |
| | | | Chemical Total | 2.25E-06 | --- | --- | --- | 2.25E-06 | | 0.020 | --- | --- | 0.020 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 2.25E-06 | | | | | 0.020 |
| | Exposure Medium Total | | | | | | | 2.25E-06 | | | | | 0.020 |
| | Air | Water Vapors from Showerhead from Well - DW12 | Tetrachloroethene | --- | 1.38E-07 | --- | --- | 1.38E-07 | NA | --- | 0.00011 | --- | 0.00011 |
| | | | Trichloroethene | --- | 8.34E-07 | --- | --- | 8.34E-07 | NA | --- | 0.0016 | --- | 0.0016 |
| | | | Chemical Total | --- | 9.72E-07 | --- | --- | 9.72E-07 | | --- | 0.0018 | --- | 0.0018 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 9.72E-07 | | | | | 0.0018 |
| | Exposure Medium Total | | | | | | | 9.72E-07 | | | | | 0.0018 |
| Groundwater Water Total | | | | | | | | 3.22E-06 | | | | | 0.022 |
| Receptor Total | | | | | | | | 3.22E-06 | | | | | 0.022 |

Total Risk Across All Media: 3.22E-06

Total Hazard Across All Media: 0.022

**Table 6-106**

**TABLE 9.7.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW15 | MTBE | 4.46E-06 | --- | --- | --- | 4.46E-06 | NA | --- | --- | --- | --- |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | 4.46E-06 | --- | --- | --- | 4.46E-06 | | --- | --- | --- | --- |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 4.46E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 4.46E-06 | | | | | --- |
| | Air | Water Vapors from Showerhead from Well - DW15 | MTBE | --- | --- | --- | --- | --- | Liver/Kidney | --- | 0.0071 | --- | 0.0071 |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | --- | --- | --- | --- | --- | | --- | 0.0071 | --- | 0.0071 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0071 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0071 |
| Groundwater Water Total | | | | | | | | 4.46E-06 | | | | | 0.0071 |
| Receptor Total | | | | | | | | 4.46E-06 | | | | | 0.0071 |

Total Risk Across All Media: 4.46E-06

Total Hazard Across All Media: 0.0071

Total Liver HI Across All Media: 0.0071

Total Kidney HI Across All Media: 0.0071

**Table 6-107**

**TABLE 9.8.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW17 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0010 | --- | --- | 0.0010 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0010 | --- | --- | 0.0010 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0010 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0010 |
| | Air | Water Vapors from Showerhead from Well - DW17 | Chloroform | --- | 7.80E-07 | --- | --- | 7.80E-07 | NA | --- | 0.0016 | --- | 0.0016 |
| | | | Chemical Total | --- | 7.80E-07 | --- | --- | 7.80E-07 | | --- | 0.0016 | --- | 0.0016 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 7.80E-07 | | | | | 0.0016 |
| | Exposure Medium Total | | | | | | | 7.80E-07 | | | | | 0.0016 |
| Groundwater Water Total | | | | | | | | 7.80E-07 | | | | | 0.0026 |
| Receptor Total | | | | | | | | 7.80E-07 | | | | | 0.0026 |

Total Risk Across All Media: 7.80E-07

Total Hazard Across All Media: 0.0026

Total Liver HI Across All Media: 0.0010

**Table 6-108**

**TABLE 9.9.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW20 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.00082 | --- | --- | 0.00082 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.00082 | --- | --- | 0.00082 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.00082 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.00082 |
| | Air | Water Vapors from Showerhead from Well - DW20 | Chloroform | --- | 6.69E-07 | --- | --- | 6.69E-07 | NA | --- | 0.0014 | --- | 0.0014 |
| | | | Chemical Total | --- | 6.69E-07 | --- | --- | 6.69E-07 | | --- | 0.0014 | --- | 0.0014 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 6.69E-07 | | | | | 0.0014 |
| | Exposure Medium Total | | | | | | | 6.69E-07 | | | | | 0.0014 |
| Groundwater Water Total | | | | | | | | 6.69E-07 | | | | | 0.0022 |
| Receptor Total | | | | | | | | 6.69E-07 | | | | | 0.0022 |

Total Risk Across All Media: 6.69E-07

Total Hazard Across All Media: 0.0022

Total Liver HI Across All Media: 0.00082

**Table 6-109**

**TABLE 9.10.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW21 | Benzene | 5.04E-07 | --- | --- | --- | 5.04E-07 | NA | 0.0053 | --- | --- | 0.0053 |
| | | | MTBE | 1.64E-06 | --- | --- | --- | 1.64E-06 | NA | --- | --- | --- | --- |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | 2.15E-06 | --- | --- | --- | 2.15E-06 | | 0.0053 | --- | --- | 0.0053 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 2.15E-06 | | | | | 0.0053 |
| | Exposure Medium Total | | | | | | | 2.15E-06 | | | | | 0.0053 |
| | Air | Water Vapors from Showerhead from Well - DW21 | Benzene | --- | 5.80E-07 | --- | --- | 5.80E-07 | NA | --- | 0.0058 | --- | 0.0058 |
| | | | MTBE | --- | --- | --- | --- | --- | Liver/Kidney | --- | 0.0026 | --- | 0.0026 |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | --- | 5.80E-07 | --- | --- | 5.80E-07 | | --- | 0.0026 | --- | 0.0026 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.80E-07 | | | | | 0.0026 |
| | Exposure Medium Total | | | | | | | 5.80E-07 | | | | | 0.0026 |
| Groundwater Water Total | | | | | | | | 2.73E-06 | | | | | 0.0080 |
| Receptor Total | | | | | | | | 2.73E-06 | | | | | 0.0080 |

Total Risk Across All Media: 2.73E-06

Total Hazard Across All Media: 0.0080

Total Liver HI Across All Media: 0.0026

Total Kidney HI Across All Media: 0.0026

**Table 6-110**

**TABLE 9.11.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW23 | 1,2-Dichloroethane | 2.88E-07 | --- | --- | --- | 2.88E-07 | Circulatory system | 0.00037 | --- | --- | 0.00037 |
| | | | Trichloroethene | 4.43E-07 | --- | --- | --- | 4.43E-07 | NA | 0.013 | --- | --- | 0.013 |
| | | | Chemical Total | 7.31E-07 | --- | --- | --- | 7.31E-07 | | 0.014 | --- | --- | 0.014 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 7.31E-07 | | | | | 0.014 |
| | Exposure Medium Total | | | | | | | 7.31E-07 | | | | | 0.014 |
| | Air | Water Vapors from Showerhead from Well - DW23 | 1,2-Dichloroethane | --- | 6.76E-07 | --- | --- | 6.76E-07 | NA | --- | 0.012 | --- | 0.012 |
| | | | Trichloroethene | --- | 5.59E-07 | --- | --- | 5.59E-07 | NA | --- | 0.0011 | --- | 0.0011 |
| | | | Chemical Total | --- | 1.23E-06 | --- | --- | 1.23E-06 | | --- | 0.0135 | --- | 0.0135 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.23E-06 | | | | | 0.0135 |
| | Exposure Medium Total | | | | | | | 1.23E-06 | | | | | 0.0135 |
| Groundwater Water Total | | | | | | | | 1.97E-06 | | | | | 0.027 |
| Receptor Total | | | | | | | | 1.97E-06 | | | | | 0.027 |

Total Risk Across All Media: 1.97E-06

Total Hazard Across All Media: 0.027

Total Circulatory System HI Across All Media: 0.00037

**Table 6-111**

**TABLE 9.12.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW25 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0016 | --- | --- | 0.0016 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0016 | --- | --- | 0.0016 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0016 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0016 |
| | Air | Water Vapors from Showerhead from Well - DW25 | Chloroform | --- | 1.32E-06 | --- | --- | 1.32E-06 | NA | --- | 0.0027 | --- | 0.0027 |
| | | | Chemical Total | --- | 1.32E-06 | --- | --- | 1.32E-06 | | --- | 0.0027 | --- | 0.0027 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.32E-06 | | | | | 0.0027 |
| | Exposure Medium Total | | | | | | | 1.32E-06 | | | | | 0.0027 |
| Groundwater Water Total | | | | | | | | 1.32E-06 | | | | | 0.0043 |
| Receptor Total | | | | | | | | 1.32E-06 | | | | | 0.0043 |

Total Risk Across All Media: 1.32E-06

Total Hazard Across All Media: 0.0043

Total Liver HI Across All Media: 0.0016

**Table 6-112**

**TABLE 9.13.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW28 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0023 | --- | --- | 0.0023 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0023 | --- | --- | 0.0023 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0023 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0023 |
| | Air | Water Vapors from Showerhead from Well - DW28 | Chloroform | --- | 1.85E-06 | --- | --- | 1.85E-06 | NA | --- | 0.0038 | --- | 0.0038 |
| | | | Chemical Total | --- | 1.85E-06 | --- | --- | 1.85E-06 | | --- | 0.0038 | --- | 0.0038 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.85E-06 | | | | | 0.0038 |
| | Exposure Medium Total | | | | | | | 1.85E-06 | | | | | 0.0038 |
| Groundwater Water Total | | | | | | | | 1.85E-06 | | | | | 0.0061 |
| Receptor Total | | | | | | | | 1.85E-06 | | | | | 0.0061 |

Total Risk Across All Media: 1.85E-06

Total Hazard Across All Media: 0.0061

Total Liver HI Across All Media: 0.0023

**Table 6-113**

**TABLE 9.14.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW29 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.00082 | --- | --- | 0.00082 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.00082 | --- | --- | 0.00082 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.00082 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.00082 |
| | Air | Water Vapors from Showerhead from Well - DW29 | Chloroform | --- | 6.69E-07 | --- | --- | 6.69E-07 | NA | --- | 0.0014 | --- | 0.00138 |
| | | | Chemical Total | --- | 6.69E-07 | --- | --- | 6.69E-07 | | --- | 0.0014 | --- | 0.0014 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 6.69E-07 | | | | | 0.0014 |
| | Exposure Medium Total | | | | | | | 6.69E-07 | | | | | 0.0014 |
| Groundwater Water Total | | | | | | | | 6.69E-07 | | | | | 0.002 |
| Receptor Total | | | | | | | | 6.69E-07 | | | | | 0.002 |

Total Risk Across All Media: 6.69E-07

Total Hazard Across All Media: 0.0022

Total Liver HI Across All Media: 0.00082

**Table 6-114**

**TABLE 9.15.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW30 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0040 | --- | --- | 0.0040 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0040 | --- | --- | 0.0040 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0040 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0040 |
| | Air | Water Vapors from Showerhead from Well - DW30 | Chloroform | --- | 3.25E-06 | --- | --- | 3.25E-06 | NA | --- | 0.0067 | --- | 0.0067 |
| | | | Chemical Total | --- | 3.25E-06 | --- | --- | 3.25E-06 | | --- | 0.0067 | --- | 0.0067 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 3.25E-06 | | | | | 0.0067 |
| | Exposure Medium Total | | | | | | | 3.25E-06 | | | | | 0.0067 |
| Groundwater Water Total | | | | | | | | 3.25E-06 | | | | | 0.011 |
| Receptor Total | | | | | | | | 3.25E-06 | | | | | 0.011 |

Total Risk Across All Media: 3.25E-06

Total Hazard Across All Media: 0.011

Total Liver HI Across All Media: 0.0040

**Table 6-115**

**TABLE 9.16.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW31 | Trichloroethene | 1.77E-07 | --- | --- | --- | 1.77E-07 | NA | 0.0053 | --- | --- | 0.0053 |
| | | | Chemical Total | 1.77E-07 | --- | --- | --- | 1.77E-07 | | 0.0053 | --- | --- | 0.0053 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.77E-07 | | | | | 0.0053 |
| | Exposure Medium Total | | | | | | | 1.77E-07 | | | | | 0.0053 |
| | Air | Water Vapors from Showerhead from Well - DW31 | Trichloroethene | --- | 2.23E-07 | --- | --- | 2.23E-07 | NA | --- | 0.0004 | --- | 0.0004 |
| | | | Chemical Total | --- | 2.23E-07 | --- | --- | 2.23E-07 | | --- | 0.0004 | --- | 0.0004 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 2.23E-07 | | | | | 0.0004 |
| | Exposure Medium Total | | | | | | | 2.23E-07 | | | | | 0.0004 |
| Groundwater Water Total | | | | | | | | 4.01E-07 | | | | | 0.0057 |
| Receptor Total | | | | | | | | 4.01E-07 | | | | | 0.0057 |

Total Risk Across All Media: 4.01E-07

Total Hazard Across All Media: 0.0057

**Table 6-116**

**TABLE 9.17.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW33 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0013 | --- | --- | 0.0013 |
| | | | Trichloroethene | 9.62E-08 | --- | --- | --- | 9.62E-08 | NA | 0.0029 | --- | --- | 0.0029 |
| | | | Chemical Total | 9.62E-08 | --- | --- | --- | 9.62E-08 | | 0.0041 | --- | --- | 0.0041 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 9.62E-08 | | | | | 0.0041 |
| | Exposure Medium Total | | | | | | | 9.62E-08 | | | | | 0.0041 |
| | Air | Water Vapors from Showerhead from Well - DW33 | Chloroform | --- | 1.03E-06 | --- | --- | 1.03E-06 | NA | --- | 0.0021 | --- | 0.0021 |
| | | | Trichloroethene | --- | 1.21E-07 | --- | --- | 1.21E-07 | NA | --- | 0.0002 | --- | 0.0002 |
| | | | Chemical Total | --- | 1.15E-06 | --- | --- | 1.15E-06 | | --- | 0.0023 | --- | 0.0023 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.15E-06 | | | | | 0.0023 |
| | Exposure Medium Total | | | | | | | 1.15E-06 | | | | | 0.0023 |
| Groundwater Water Total | | | | | | | | 1.24E-06 | | | | | 0.006 |
| Receptor Total | | | | | | | | 1.24E-06 | | | | | 0.006 |

Total Risk Across All Media: 1.24E-06

Total Hazard Across All Media: 0.006

Total Liver HI Across All Media: 0.0013

**Table 6-117**

**TABLE 9.18.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW40 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0017 | --- | --- | 0.0017 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0017 | --- | --- | 0.0017 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0017 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0017 |
| | Air | Water Vapors from Showerhead from Well - DW40 | Chloroform | --- | 1.40E-06 | --- | --- | 1.40E-06 | NA | --- | 0.0029 | --- | 0.0029 |
| | | | Chemical Total | --- | 1.40E-06 | --- | --- | 1.40E-06 | | --- | 0.0029 | --- | 0.0029 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.40E-06 | | | | | 0.0029 |
| | Exposure Medium Total | | | | | | | 1.40E-06 | | | | | 0.0029 |
| Groundwater Water Total | | | | | | | | 1.40E-06 | | | | | 0.0046 |
| Receptor Total | | | | | | | | 1.40E-06 | | | | | 0.0046 |

Total Risk Across All Media: 1.40E-06

Total Hazard Across All Media: 0.0046

Total Liver HI Across All Media: 0.0017

**Table 6-118**

**TABLE 9.19.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW1 | Trichloroethene | 5.70E-08 | --- | --- | --- | 5.70E-08 | NA | 0.0085 | --- | --- | 0.0085 |
| | | | Chemical Total | 5.70E-08 | --- | --- | --- | 5.70E-08 | | 0.0085 | --- | --- | 0.0085 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.70E-08 | | | | | 0.0085 |
| | Exposure Medium Total | | | | | | | 5.70E-08 | | | | | 0.0085 |
| Groundwater Water Total | | | | | | | | 5.70E-08 | | | | | 0.0085 |
| Receptor Total | | | | | | | | 5.70E-08 | | | | | 0.0085 |

Total Risk Across All Media 5.70E-08

Total Hazard Across All Media 0.0085

**Table 6-119**

**TABLE 9.20.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW2 | Tetrachloroethene | 1.39E-06 | --- | --- | --- | 1.39E-06 | Liver | 0.0030 | --- | --- | 0.0030 |
| | | | Trichloroethene | 1.02E-06 | --- | --- | --- | 1.02E-06 | NA | 0.15 | --- | --- | 0.15 |
| | | | Chemical Total | 2.41E-06 | --- | --- | --- | 2.41E-06 | | 0.16 | --- | --- | 0.16 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 2.41E-06 | | | | | 0.16 |
| | Exposure Medium Total | | | | | | | 2.41E-06 | | | | | 0.16 |
| Groundwater Water Total | | | | | | | | 2.41E-06 | | | | | 0.16 |
| Receptor Total | | | | | | | | 2.41E-06 | | | | | 0.16 |

Total Risk Across All Media: 2.41E-06

Total Hazard Across All Media: 0.16

Total Liver HI Across All Media: 0.0030

**Table 6-120**

**TABLE 9.21.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW3 | Trichloroethene | 3.55E-07 | --- | --- | --- | 3.55E-07 | NA | 0.053 | --- | --- | 0.053 |
| | | | Chemical Total | 3.55E-07 | --- | --- | --- | 3.55E-07 | | 0.053 | --- | --- | 0.053 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 3.55E-07 | | | | | 0.053 |
| | Exposure Medium Total | | | | | | | 3.55E-07 | | | | | 0.053 |
| Groundwater Water Total | | | | | | | | 3.55E-07 | | | | | 0.053 |
| Receptor Total | | | | | | | | 3.55E-07 | | | | | 0.053 |

Total Risk Across All Media 3.55E-07

Total Hazard Across All Media 0.053

**Table 6-121**

**TABLE 9.22.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW4 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0017 | --- | --- | 0.0017 |
| | | | Tetrachloroethene | 2.34E-06 | --- | --- | --- | 2.34E-06 | Liver | 0.0051 | --- | --- | 0.0051 |
| | | | Trichloroethene | 5.01E-06 | --- | --- | --- | 5.01E-06 | NA | 0.75 | --- | --- | 0.75 |
| | | | Chemical Total | 7.35E-06 | --- | --- | --- | 7.35E-06 | | 0.76 | --- | --- | 0.76 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 7.35E-06 | | | | | 0.76 |
| | Exposure Medium Total | | | | | | | 7.35E-06 | | | | | 0.76 |
| Groundwater Water Total | | | | | | | | 7.35E-06 | | | | | 0.76 |
| Receptor Total | | | | | | | | 7.35E-06 | | | | | 0.76 |

Total Risk Across All Media: 7.35E-06

Total Hazard Across All Media: 0.76

Total Liver HI Across All Media: 0.0067

**Table 6-122**

**TABLE 9.23.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW9 | Trichloroethene | 5.27E-08 | --- | --- | --- | 5.27E-08 | NA | 0.0079 | --- | --- | 0.0079 |
| | | | Chemical Total | 5.27E-08 | --- | --- | --- | 5.27E-08 | | 0.0079 | --- | --- | 0.0079 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.27E-08 | | | | | 0.0079 |
| | Exposure Medium Total | | | | | | | 5.27E-08 | | | | | 0.0079 |
| Groundwater Water Total | | | | | | | | 5.27E-08 | | | | | 0.0079 |
| Receptor Total | | | | | | | | 5.27E-08 | | | | | 0.0079 |

Total Risk Across All Media 5.27E-08

Total Hazard Across All Media 0.0079

**Table 6-123**

**TABLE 9.24.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW12 | Tetrachloroethene | 7.40E-07 | --- | --- | --- | 7.40E-07 | Liver | 0.0016 | --- | --- | 0.0016 |
| | | | Trichloroethene | 3.08E-07 | --- | --- | --- | 3.08E-07 | NA | 0.046 | --- | --- | 0.046 |
| | | | Chemical Total | 1.05E-06 | --- | --- | --- | 1.05E-06 | | 0.048 | --- | --- | 0.048 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.05E-06 | | | | | 0.048 |
| | Exposure Medium Total | | | | | | | 1.05E-06 | | | | | 0.048 |
| Groundwater Water Total | | | | | | | | 1.05E-06 | | | | | 0.048 |
| Receptor Total | | | | | | | | 1.05E-06 | | | | | 0.048 |

Total Risk Across All Media 1.05E-06

Total Hazard Across All Media 0.048

**Table 6-124**

**TABLE 9.25.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW15 | MTBE | 2.08E-06 | --- | --- | --- | 2.08E-06 | NA | --- | --- | --- | --- |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | 2.08E-06 | --- | --- | --- | 2.08E-06 | | --- | --- | --- | --- |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 2.08E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 2.08E-06 | | | | | --- |
| Groundwater Water Total | | | | | | | | 2.08E-06 | | | | | --- |
| Receptor Total | | | | | | | | 2.08E-06 | | | | | --- |

Total Risk Across All Media 2.08E-06

Total Hazard Across All Media ---

**Table 6-125**

**TABLE 9.26.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW17 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0010 | --- | --- | 0.0010 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0010 | --- | --- | 0.0010 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0010 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0010 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0010 |
| Receptor Total | | | | | | | | --- | | | | | 0.0010 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0010

Total Liver HI Across All Media: 0.0010

**Table 6-126**

**TABLE 9.27.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW20 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0019 | --- | --- | 0.0019 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0019 | --- | --- | 0.0019 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0019 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0019 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0019 |
| Receptor Total | | | | | | | | --- | | | | | 0.0019 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0019

Total Liver HI Across All Media: 0.0019

**Table 6-127**

**TABLE 9.28.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW21 | Benzene | 2.35E-07 | --- | --- | --- | 2.35E-07 | NA | 0.012 | --- | --- | 0.012 |
| | | | MTBE | 7.67E-07 | --- | --- | --- | 7.67E-07 | NA | --- | --- | --- | --- |
| | | | t-Amyl Methyl Ether | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | 1.00E-06 | --- | --- | --- | 1.00E-06 | | 0.012 | --- | --- | 0.012 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.00E-06 | | | | | 0.012 |
| | Exposure Medium Total | | | | | | | 1.00E-06 | | | | | 0.012 |
| Groundwater Water Total | | | | | | | | 1.00E-06 | | | | | 0.012 |
| Receptor Total | | | | | | | | 1.00E-06 | | | | | 0.012 |

Total Risk Across All Media 1.00E-06

Total Hazard Across All Media 0.012

**Table 6-128**

**TABLE 9.29.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW23 | 1,2-Dichloroethane | 1.35E-07 | --- | --- | --- | 1.35E-07 | Circulatory system | 0.00086 | --- | --- | 0.00086 |
| | | | Trichloroethene | 2.07E-07 | --- | --- | --- | 2.07E-07 | NA | 0.031 | --- | --- | 0.031 |
| | | | Chemical Total | 3.41E-07 | --- | --- | --- | 3.41E-07 | | 0.032 | --- | --- | 0.032 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 3.41E-07 | | | | | 0.032 |
| | Exposure Medium Total | | | | | | | 3.41E-07 | | | | | 0.032 |
| Groundwater Water Total | | | | | | | | 3.41E-07 | | | | | 0.032 |
| Receptor Total | | | | | | | | 3.41E-07 | | | | | 0.032 |

Total Risk Across All Media: 3.41E-07

Total Hazard Across All Media: 0.032

Total Circulatory System HI Across All Media: 0.00086

**Table 6-129**

**TABLE 9.30.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW25 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0038 | --- | --- | 0.0038 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0038 | --- | --- | 0.0038 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0038 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0038 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0038 |
| Receptor Total | | | | | | | | --- | | | | | 0.0038 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0038

Total Liver HI Across All Media: 0.0038

**Table 6-130**

**TABLE 9.31.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW28 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0053 | --- | --- | 0.0053 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0053 | --- | --- | 0.0053 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0053 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0053 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0053 |
| Receptor Total | | | | | | | | --- | | | | | 0.0053 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0053

Total Liver HI Across All Media: 0.0053

**Table 6-131**

**TABLE 9.32.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW29 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0019 | --- | --- | 0.0019 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0019 | --- | --- | 0.0019 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0019 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0019 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0019 |
| Receptor Total | | | | | | | | --- | | | | | 0.0019 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0019

Total Liver HI Across All Media: 0.0019

**Table 6-132**

**TABLE 9.33.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW30 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0093 | --- | --- | 0.0093 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0093 | --- | --- | 0.0093 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0093 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0093 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0093 |
| Receptor Total | | | | | | | | --- | | | | | 0.0093 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0093

Total Liver HI Across All Media: 0.0093

**Table 6-133**

**TABLE 9.34.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW31 | Trichloroethene | 8.26E-08 | --- | --- | --- | 8.26E-08 | NA | 0.012 | --- | --- | 0.012 |
| | | | Chemical Total | 8.26E-08 | --- | --- | --- | 8.26E-08 | | 0.012 | --- | --- | 0.012 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 8.26E-08 | | | | | 0.012 |
| | Exposure Medium Total | | | | | | | 8.26E-08 | | | | | 0.012 |
| Groundwater Water Total | | | | | | | | 8.26E-08 | | | | | 0.012 |
| Receptor Total | | | | | | | | 8.26E-08 | | | | | 0.012 |

Total Risk Across All Media 8.26E-08

Total Hazard Across All Media 0.012

**Table 6-134**

**TABLE 9.35.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW33 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0029 | --- | --- | 0.0029 |
| | | | Trichloroethene | 4.49E-08 | --- | --- | --- | 4.49E-08 | NA | 0.007 | --- | --- | 0.007 |
| | | | Chemical Total | 4.49E-08 | --- | --- | --- | 4.49E-08 | | 0.010 | --- | --- | 0.010 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 4.49E-08 | | | | | 0.010 |
| | Exposure Medium Total | | | | | | | 4.49E-08 | | | | | 0.010 |
| Groundwater Water Total | | | | | | | | 4.49E-08 | | | | | 0.010 |
| Receptor Total | | | | | | | | 4.49E-08 | | | | | 0.010 |

Total Risk Across All Media: 4.49E-08

Total Hazard Across All Media: 0.010

Total Liver HI Across All Media: 0.0029

**Table 6-135**

**TABLE 9.36.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - DW40 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0040 | --- | --- | 0.0040 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0040 | --- | --- | 0.0040 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0040 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0040 |
| Groundwater Water Total | | | | | | | | --- | | | | | 0.0040 |
| Receptor Total | | | | | | | | --- | | | | | 0.0040 |

Total Risk Across All Media: ---

Total Hazard Across All Media: 0.0040

Total Liver HI Across All Media: 0.0040

**Table 6-136**

**TABLE 9.37.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: On-Site Prison Inmate
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Well - WY3 | Dibromochloromethane | 4.42E-07 | --- | --- | --- | 4.42E-07 | Liver | 0.0006 | --- | --- | 0.0006 |
| | | | Trichloroethene | 1.03E-07 | --- | --- | --- | 1.03E-07 | NA | 0.0031 | --- | --- | 0.0031 |
| | | | Chemical Total | 5.46E-07 | --- | --- | --- | 5.46E-07 | | 0.0037 | --- | --- | 0.0037 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.46E-07 | | | | | 0.0037 |
| | Exposure Medium Total | | | | | | | 5.46E-07 | | | | | 0.0037 |
| | Air | Water Vapors from Showerhead from Well - WY3 | Dibromochloromethane | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Trichloroethene | --- | 1.31E-07 | --- | --- | 1.31E-07 | NA | --- | 0.0003 | --- | 0.0003 |
| | | | Chemical Total | --- | 1.31E-07 | --- | --- | 1.31E-07 | | --- | 0.0003 | --- | 0.0003 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.31E-07 | | | | | 0.0003 |
| | Exposure Medium Total | | | | | | | 1.31E-07 | | | | | 0.0003 |
| Groundwater Water Total | | | | | | | | 6.76E-07 | | | | | 0.0040 |
| Receptor Total | | | | | | | | 6.76E-07 | | | | | 0.0040 |

Total Risk Across All Media: 6.76E-07

Total Hazard Across All Media: 0.0040

Total Liver HI Across All Media: 0.00061

**Table 6-137**

**TABLE 9.38.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Howard Mountain | 1,3-Dichlorobenzene | --- | --- | --- | --- | --- | NA | 0.0097 | --- | --- | 0.0097 |
| | | | 1,4-Dichlorobenzene | 3.21E-07 | --- | --- | --- | 3.21E-07 | Liver | 0.0010 | --- | --- | 0.0010 |
| | | | Tetrachloroethene | 2.06E-05 | --- | --- | --- | 2.06E-05 | Liver | 0.0089 | --- | --- | 0.0089 |
| | | | Trichloroethene | 1.01E-04 | --- | --- | --- | 1.01E-04 | NA | 3.01 | --- | --- | 3.01 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | 0.026 | --- | --- | 0.026 |
| | | | Chemical Total | 1.22E-04 | --- | --- | --- | 1.22E-04 | | 3.06 | --- | --- | 3.06 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.22E-04 | | | | | 3.06 |
| | Exposure Medium Total | | | | | | | 1.22E-04 | | | | | 3.06 |
| | Air | Water Vapors from Showerhead from Howard Mountain | 1,3-Dichlorobenzene | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | 1,4-Dichlorobenzene | --- | 6.90E-07 | --- | --- | 6.90E-07 | Liver | --- | 0.00032 | --- | 0.00032 |
| | | | Tetrachloroethene | --- | 1.79E-06 | --- | --- | 1.79E-06 | NA | --- | 0.0015 | --- | 0.0015 |
| | | | Trichloroethene | --- | 1.27E-04 | --- | --- | 1.27E-04 | NA | --- | 0.25 | --- | 0.25 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | --- | 1.30E-04 | --- | --- | 1.30E-04 | | --- | 0.25 | --- | 0.25 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.30E-04 | | | | | 0.25 |
| | Exposure Medium Total | | | | | | | 1.30E-04 | | | | | 0.25 |
| Groundwater Water Total | | | | | | | | 2.51E-04 | | | | | 3.31 |
| Receptor Total | | | | | | | | 2.51E-04 | | | | | 3.31 |

Total Risk Across All Media: 2.51E-04

Total Hazard Across All Media: 3.31

Total Liver HI Across All Media: 0.010

**Table 6-138**

**TABLE 9.39.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Howard Mountain | 1,3-Dichlorobenzene | --- | --- | --- | --- | --- | NA | 0.023 | --- | --- | 0.023 |
| | | | 1,4-Dichlorobenzene | 1.50E-07 | --- | --- | --- | 1.50E-07 | Liver | 0.0024 | --- | --- | 0.0024 |
| | | | Tetrachloroethene | 9.62E-06 | --- | --- | --- | 9.62E-06 | Liver | 0.021 | --- | --- | 0.021 |
| | | | Trichloroethene | 4.70E-05 | --- | --- | --- | 4.70E-05 | NA | 7.03 | --- | --- | 7.03 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | 0.062 | --- | --- | 0.062 |
| | | | Chemical Total | 5.68E-05 | --- | --- | --- | 5.68E-05 | | 7.14 | --- | --- | 7.14 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 5.68E-05 | | | | | 7.14 |
| | Exposure Medium Total | | | | | | | 5.68E-05 | | | | | 7.14 |
| Groundwater Water Total | | | | | | | | 5.68E-05 | | | | | 7.14 |
| Receptor Total | | | | | | | | 5.68E-05 | | | | | 7.14 |

Total Risk Across All Media: 5.68E-05

Total Hazard Across All Media: 7.14

Total Liver HI Across All Media: 0.023

**Table 6-139**

**TABLE 9.40.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Miller Mountain | 1,2,4-Trichlorobenzene | --- | --- | --- | --- | --- | Adrenal | 0.011 | --- | --- | 0.011 |
| | | | Trichloroethene | 9.31E-06 | --- | --- | --- | 9.31E-06 | NA | 0.28 | --- | --- | 0.28 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | 0.063 | --- | --- | 0.063 |
| | | | Chemical Total | 9.31E-06 | --- | --- | --- | 9.31E-06 | | 0.35 | --- | --- | 0.35 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 9.31E-06 | | | | | 0.35 |
| | Exposure Medium Total | | | | | | | 9.31E-06 | | | | | 0.35 |
| | Air | Water Vapors from Showerhead from Miller Mountain | 1,2,4-Trichlorobenzene | --- | --- | --- | --- | --- | Liver | --- | 0.26 | --- | 0.26 |
| | | | Trichloroethene | --- | 1.18E-05 | --- | --- | 1.18E-05 | NA | --- | 0.023 | --- | 0.023 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | --- | --- | --- | --- |
| | | | Chemical Total | --- | 1.18E-05 | --- | --- | 1.18E-05 | | --- | 0.28 | --- | 0.28 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 1.18E-05 | | | | | 0.28 |
| | Exposure Medium Total | | | | | | | 1.18E-05 | | | | | 0.28 |
| Groundwater Water Total | | | | | | | | 2.11E-05 | | | | | 0.63 |
| Receptor Total | | | | | | | | 2.11E-05 | | | | | 0.63 |

Total Risk Across All Media: 2.11E-05

Total Hazard Across All Media: 0.63

Total Adrenal HI Across All Media: 0.011

Total Liver HI Across All Media: 0.26

**Table 6-140**

**TABLE 9.41.RME**

**SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

| Medium | Exposure Medium | Exposure Point | Chemical of Potential Concern | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tap Water from Miller Mountain | 1,2,4-Trichlorobenzene | --- | --- | --- | --- | --- | Adrenal | 0.026 | --- | --- | 0.026 |
| | | | Trichloroethene | 4.35E-06 | --- | --- | --- | 4.35E-06 | NA | 0.65 | --- | --- | 0.65 |
| | | | Cis-1,2-Dichloroethene | --- | --- | --- | --- | --- | NA | 0.15 | --- | --- | 0.15 |
| | | | Chemical Total | 4.35E-06 | --- | --- | --- | 4.35E-06 | | 0.82 | --- | --- | 0.82 |
| | | | | | | | | | | | | | |
| | | | Radionuclide Total | | | | | | | | | | |
| | | Exposure Point Total | | | | | | 4.35E-06 | | | | | 0.82 |
| | Exposure Medium Total | | | | | | | 4.35E-06 | | | | | 0.82 |
| Groundwater Water Total | | | | | | | | 4.35E-06 | | | | | 0.82 |
| Receptor Total | | | | | | | | 4.35E-06 | | | | | 0.82 |

Total Risk Across All Media: 4.35E-06

Total Hazard Across All Media: 0.82

Total Adrenal HI Across All Media: 0.026

**Table 6-141**

**TABLE 10.1.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW2 | Tetrachloroethene | 2.98E-06 | --- | --- | --- | 2.98E-06 | Liver | 0.0013 | --- | --- | 0.0013 |
| | | | Trichloroethene | 2.18E-06 | --- | --- | --- | 2.18E-06 | NA | 0.065 | --- | --- | 0.065 |
| | | | Chemical Total | 5.16E-06 | --- | --- | --- | 5.16E-06 | | 0.067 | --- | --- | 0.067 |
| | | Exposure Point Total | | | | | | 5.16E-06 | | | | | 0.067 |
| | Exposure Medium Total | | | | | | | 5.16E-06 | | | | | 0.067 |
| | Groundwater | Water Vapors from Showerhead | Tetrachloroethene | --- | 2.59E-07 | --- | --- | 2.59E-07 | NA | --- | 0.00022 | --- | 0.00022 |
| | | | Trichloroethene | --- | 2.75E-06 | --- | --- | 2.75E-06 | NA | --- | 0.0054 | --- | 0.0054 |
| | | | Chemical Total | --- | 3.01E-06 | --- | --- | 3.01E-06 | | --- | 0.0056 | --- | 0.0056 |
| | | Exposure Point Total | | | | | | 3.01E-06 | | | | | 0.0056 |
| | Exposure Medium Total | | | | | | | 3.01E-06 | | | --- | | 0.0056 |
| Groundwater Total | | | | | | | | 8.18E-06 | | | | | 0.072 |
| Receptor Total | | | | | | | | 8.18E-06 | | | | | 0.072 |
| | | | | | | | Total Risk Across All Media | 8.18E-06 | Total Hazard Across All Media | | | | 0.072 |

Total Liver HI Across All Media 0.0013

**Table 6-142**

**TABLE 10.2.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW4 | Tetrachloroethene | 5.01E-06 | --- | --- | --- | 5.01E-06 | Liver | 0.0022 | --- | --- | 0.0022 |
| | | | Trichloroethene | 1.07E-05 | --- | --- | --- | 1.07E-05 | NA | 0.32 | --- | --- | 0.32 |
| | | | Chemical Total | 1.58E-05 | --- | --- | --- | 1.58E-05 | | 0.32 | --- | --- | 0.32 |
| | | Exposure Point Total | | | | | | 1.58E-05 | | | | | 0.32 |
| | Exposure Medium Total | | | | | | | 1.58E-05 | | | | | 0.32 |
| | Groundwater | Water Vapors from Showerhead | Tetrachloroethene | --- | 4.35E-07 | --- | --- | 4.35E-07 | NA | --- | 0.00036 | --- | 0.00036 |
| | | | Trichloroethene | --- | 1.36E-05 | --- | --- | 1.36E-05 | NA | --- | 0.027 | --- | 0.027 |
| | | | Chemical Total | --- | 1.40E-05 | --- | --- | 1.40E-05 | | --- | 0.027 | --- | 0.027 |
| | | Exposure Point Total | | | | | | 1.40E-05 | | | | | 0.027 |
| | Exposure Medium Total | | | | | | | 1.40E-05 | | | --- | | 0.027 |
| Groundwater Total | | | | | | | | 2.98E-05 | | | | | 0.35 |
| Receptor Total | | | | | | | | 2.98E-05 | | | | | 0.35 |
| | | | | | | | Total Risk Across All Media | 2.98E-05 | | | | Total Hazard Across All Media | 0.35 |

**Table 6-143**

**TABLE 10.3.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW12 | Tetrachloroethene | 1.59E-06 | --- | --- | --- | 1.59E-06 | Liver | 0.00068 | --- | --- | 0.00068 |
| | | | Chemical Total | 1.59E-06 | --- | --- | --- | 1.59E-06 | | 0.00068 | --- | --- | 0.00068 |
| | | Exposure Point Total | | | | | | 1.59E-06 | | | | | 0.00068 |
| | Exposure Medium Total | | | | | | | 1.59E-06 | | | | | 0.00068 |
| | Groundwater | Water Vapors from Showerhead | Tetrachloroethene | --- | 1.38E-07 | --- | --- | 1.38E-07 | NA | --- | 0.00011 | --- | 0.00011 |
| | | | Chemical Total | --- | 1.38E-07 | --- | --- | 1.38E-07 | | --- | 0.00011 | --- | 0.00011 |
| | | Exposure Point Total | | | | | | 1.38E-07 | | | | | 0.00011 |
| | Exposure Medium Total | | | | | | | 1.38E-07 | | | --- | | 0.00011 |
| Groundwater Total | | | | | | | | 1.72E-06 | | | | | 0.00080 |
| Receptor Total | | | | | | | | 1.72E-06 | | | | | 0.00080 |
| | | | | | | | Total Risk Across All Media | 1.72E-06 | | | | Total Hazard Across All Media | 0.00080 |

**Table 6-144**

**TABLE 10.4.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW15 | MTBE | 4.46E-06 | --- | --- | --- | 4.46E-06 | NA | --- | --- | --- | --- |
| | | | Chemical Total | 4.46E-06 | --- | --- | --- | 4.46E-06 | | --- | --- | --- | --- |
| | | Exposure Point Total | | | | | | 4.46E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 4.46E-06 | | | | | --- |
| | Groundwater | Water Vapors from Well - DW15 | MTBE | --- | --- | --- | --- | --- | Liver/Kidney | --- | 0.0071 | --- | 0.0071 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | --- | 0.0071 | --- | 0.0071 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0071 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0071 |
| Groundwater Total | | | | | | | | 4.46E-06 | | | | | 0.0071 |
| Receptor Total | | | | | | | | 4.46E-06 | | | | | 0.0071 |
| | | | | | | | Total Risk Across All Media | 4.46E-06 | | | | Total Hazard Across All Media | 0.0071 |

| | |
|---|---|
| Total Kidney HI Across All Media | 0.0071 |
| Total Liver HI Across All Media | 0.0071 |

**Table 6-145**

**TABLE 10.5.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW21 | MTBE | 1.64E-06 | --- | --- | --- | 1.64E-06 | NA | --- | --- | --- | --- |
| | | | Chemical Total | 1.64E-06 | --- | --- | --- | 1.64E-06 | | --- | --- | --- | --- |
| | | Exposure Point Total | | | | | | 1.64E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 1.64E-06 | | | | | --- |
| | Groundwater | Water Vapors from Showerhead | MTBE | --- | --- | --- | --- | --- | Liver/Kidney | --- | 0.0026 | --- | 0.0026 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | --- | 0.0026 | --- | 0.0026 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0026 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0026 |
| Groundwater Total | | | | | | | | 1.64E-06 | | | | | 0.0026 |
| Receptor Total | | | | | | | | 1.64E-06 | | | | | 0.0026 |
| | | | | | | | Total Risk Across All Media | 1.64E-06 | | | | Total Hazard Across All Media | 0.0026 |

| | |
|---|---|
| Total Liver HI Across All Media | 0.0026 |
| Total Kidney HI Across All Media | 0.0026 |

**Table 6-146**

**TABLE 10.6.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0016 | --- | --- | 0.0016 |
| | | from Well - DW25 | Chemical Total | --- | --- | --- | --- | --- | | 0.0016 | --- | --- | 0.0016 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0016 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0016 |
| | Groundwater | Water Vapors from | Chloroform | --- | 1.32E-06 | --- | --- | 1.32E-06 | NA | --- | 0.0027 | --- | 0.0027 |
| | | Showerhead | Chemical Total | --- | 1.32E-06 | --- | --- | 1.32E-06 | | --- | 0.0027 | --- | 0.0027 |
| | | Exposure Point Total | | | | | | 1.32E-06 | | | | | 0.0027 |
| | Exposure Medium Total | | | | | | | 1.32E-06 | | | | | 0.0027 |
| Groundwater Total | | | | | | | | 1.32E-06 | | | | | 0.0043 |
| Receptor Total | | | | | | | | 1.32E-06 | | | | | 0.0043 |
| | | | | | | | Total Risk Across All Media | 1.32E-06 | | | | Total Hazard Across All Media | 0.0043 |

Total Liver HI Across All Media 0.0016

**Table 6-147**

**TABLE 10.7.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW28 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0023 | --- | --- | 0.0023 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0023 | --- | --- | 0.0023 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0023 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0023 |
| | Groundwater | Water Vapors from Showerhead | Chloroform | --- | 1.85E-06 | --- | --- | 1.85E-06 | NA | --- | 0.0038 | --- | 0.0038 |
| | | | Chemical Total | --- | 1.85E-06 | --- | --- | 1.85E-06 | | --- | 0.0038 | --- | 0.0038 |
| | | Exposure Point Total | | | | | | 1.85E-06 | | | | | 0.0038 |
| | Exposure Medium Total | | | | | | | 1.85E-06 | | | | | 0.0038 |
| Groundwater Total | | | | | | | | 1.85E-06 | | | | | 0.0061 |
| Receptor Total | | | | | | | | 1.85E-06 | | | | | 0.0061 |
| | | | | | | | Total Risk Across All Media | 1.85E-06 | | | | Total Hazard Across All Media | 0.0061 |

Total Liver HI Across All Media 0.0023

**Table 6-148**

**TABLE 10.8.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0040 | --- | --- | 0.0040 |
| | | from Well - DW30 | Chemical Total | --- | --- | --- | --- | --- | | 0.0040 | --- | --- | 0.0040 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0040 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0040 |
| | Groundwater | Water Vapors from | Chloroform | --- | 3.25E-06 | --- | --- | 3.25E-06 | NA | --- | 0.0067 | --- | 0.0067 |
| | | Showerhead | Chemical Total | --- | 3.25E-06 | --- | --- | 3.25E-06 | | --- | 0.0067 | --- | 0.0067 |
| | | Exposure Point Total | | | | | | 3.25E-06 | | | | | 0.0067 |
| | Exposure Medium Total | | | | | | | 3.25E-06 | | | | | 0.0067 |
| Groundwater Total | | | | | | | | 3.25E-06 | | | | | 0.011 |
| Receptor Total | | | | | | | | 3.25E-06 | | | | | 0.011 |
| | | | | | | | Total Risk Across All Media | 3.25E-06 | | | | Total Hazard Across All Media | 0.011 |

Total Liver HI Across All Media 0.0040

**Table 6-149**

**TABLE 10.9.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW33 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0013 | --- | --- | 0.0013 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0013 | --- | --- | 0.0013 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0013 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0013 |
| | Groundwater | Water Vapors from Showerhead | Chloroform | --- | 1.03E-06 | --- | --- | 1.03E-06 | NA | --- | 0.0021 | --- | 0.0021 |
| | | | Chemical Total | --- | 1.03E-06 | --- | --- | 1.03E-06 | | --- | 0.0021 | --- | 0.0021 |
| | | Exposure Point Total | | | | | | 1.03E-06 | | | | | 0.0021 |
| | Exposure Medium Total | | | | | | | 1.03E-06 | | | | | 0.0021 |
| Groundwater Total | | | | | | | | 1.03E-06 | | | | | 0.0034 |
| Receptor Total | | | | | | | | 1.03E-06 | | | | | 0.0034 |
| | | | | | | | Total Risk Across All Media | 1.03E-06 | Total Hazard Across All Media | | | | 0.0034 |

Total Liver HI Across All Media 0.0013

**Table 6-150**

**TABLE 10.10.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW40 | Chloroform | --- | --- | --- | --- | --- | Liver | 0.0017 | --- | --- | 0.0017 |
| | | | Chemical Total | --- | --- | --- | --- | --- | | 0.0017 | --- | --- | 0.0017 |
| | | Exposure Point Total | | | | | | --- | | | | | 0.0017 |
| | Exposure Medium Total | | | | | | | --- | | | | | 0.0017 |
| | Groundwater | Water Vapors from Showerhead | Chloroform | --- | 1.40E-06 | --- | --- | 1.40E-06 | NA | --- | 0.0029 | --- | 0.0029 |
| | | | Chemical Total | --- | 1.40E-06 | --- | --- | 1.40E-06 | | --- | 0.0029 | --- | 0.0029 |
| | | Exposure Point Total | | | | | | 1.40E-06 | | | | | 0.0029 |
| | Exposure Medium Total | | | | | | | 1.40E-06 | | | | | 0.0029 |
| Groundwater Total | | | | | | | | 1.40E-06 | | | | | 0.0046 |
| Receptor Total | | | | | | | | 1.40E-06 | | | | | 0.0046 |
| | | | | | | | Total Risk Across All Media | 1.40E-06 | | | | Total Hazard Across All Media | 0.0046 |

Total Liver HI Across All Media 0.0017

**Table 6-151**

**TABLE 10.11.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW2 | Tetrachloroethene | 1.39E-06 | --- | --- | --- | 1.39E-06 | Liver | 0.0030 | --- | --- | 0.0030 |
| | | | Trichloroethene | 1.02E-06 | --- | --- | --- | 1.02E-06 | NA | 0.15 | --- | --- | 0.15 |
| | | | Chemical Total | 2.41E-06 | --- | --- | --- | 2.41E-06 | | 0.16 | --- | --- | 0.16 |
| | | Exposure Point Total | | | | | | 2.41E-06 | | | | | 0.16 |
| | Exposure Medium Total | | | | | | | 2.41E-06 | | | | | 0.16 |
| Groundwater Total | | | | | | | | 2.41E-06 | | | | | 0.16 |
| Receptor Total | | | | | | | | 2.41E-06 | | | | | 0.16 |
| | | | | | | | Total Risk Across All Media | 2.41E-06 | | | | Total Hazard Across All Media | 0.16 |

**Table 6-152**

**TABLE 10.12.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Well - DW4 | Tetrachloroethene | 2.34E-06 | --- | --- | --- | 2.34E-06 | Liver | 0.0051 | --- | --- | 0.0051 |
| | | | Trichloroethene | 5.01E-06 | --- | --- | --- | 5.01E-06 | NA | 0.75 | --- | --- | 0.75 |
| | | | Chemical Total | 7.35E-06 | --- | --- | --- | 7.35E-06 | | 0.76 | --- | --- | 0.76 |
| | | Exposure Point Total | | | | | | 7.35E-06 | | | | | 0.76 |
| | Exposure Medium Total | | | | | | | 7.35E-06 | | | | | 0.76 |
| Groundwater Total | | | | | | | | 7.35E-06 | | | | | 0.76 |
| Receptor Total | | | | | | | | 7.35E-06 | | | | | 0.76 |
| | | | | | | | Total Risk Across All Media | 7.35E-06 | | | | Total Hazard Across All Media | 0.76 |

**Table 6-153**

**TABLE 10.13.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Current
Receptor Population: Resident
Receptor Age: Young Child (1-6 yrs)

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater | MTBE | 2.08E-06 | --- | --- | --- | 2.08E-06 | NA | --- | --- | --- | --- |
| | | | Chemical Total | 2.08E-06 | --- | --- | --- | 2.08E-06 | | --- | --- | --- | --- |
| | | Exposure Point Total | | | | | | 2.08E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 2.08E-06 | | | | | --- |
| Groundwater Total | | | | | | | | 2.08E-06 | | | | | --- |
| Receptor Total | | | | | | | | 2.08E-06 | | | | | --- |
| | | | | | | | Total Risk Across All Media | 2.08E-06 | | | | Total Hazard Across All Media | --- |

**Table 6-154**

**TABLE 10.14.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater | Tetrachloroethene | 2.06E-05 | --- | --- | --- | 2.06E-05 | Liver | 0.0089 | --- | --- | 0.0089 |
| | | from Howard | Trichloroethene | 1.01E-04 | --- | --- | --- | 1.01E-04 | NA | 3.01 | --- | --- | 3.01 |
| | | Mountain | Chemical Total | 1.21E-04 | --- | --- | --- | 1.21E-04 | | 3.02 | --- | --- | 3.02 |
| | | Exposure Point Total | | | | | | 1.21E-04 | | | | | 3.02 |
| | Exposure Medium Total | | | | | | | 1.21E-04 | | | | | 3.02 |
| | Groundwater | Water Vapors from | Tetrachloroethene | --- | 1.79E-06 | --- | --- | 1.79E-06 | NA | --- | 0.0015 | --- | 0.0015 |
| | | Showerhead from | Trichloroethene | --- | 1.27E-04 | --- | --- | 1.27E-04 | NA | --- | 0.25 | --- | 0.25 |
| | | Howard Mountain | Chemical Total | --- | 1.29E-04 | --- | --- | 1.29E-04 | | --- | 0.25 | --- | 0.25 |
| | | Exposure Point Total | | | | | | 1.29E-04 | | | | | 0.25 |
| | Exposure Medium Total | | | | | | | 1.29E-04 | | | --- | | 0.25 |
| Groundwater Total | | | | | | | | 2.50E-04 | | | | | 3.27 |
| Receptor Total | | | | | | | | 2.50E-04 | | | | | 3.27 |
| | | | | | | | Total Risk Across All Media | 2.50E-04 | | | | Total Hazard Across All Media | 3.27 |

Total Liver HI Across All Media 0.0089

**Table 6-155**

**TABLE 10.15.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Howard Mountain | Tetrachloroethene | 9.62E-06 | --- | --- | --- | 9.62E-06 | Liver | 0.021 | --- | --- | 0.021 |
| | | | Trichloroethene | 4.70E-05 | --- | --- | --- | 4.70E-05 | NA | 7.03 | --- | --- | 7.03 |
| | | | Chemical Total | 5.66E-05 | --- | --- | --- | 5.66E-05 | | 7.05 | --- | --- | 7.05 |
| | | Exposure Point Total | | | | | | 5.66E-05 | | | | | 7.05 |
| | Exposure Medium Total | | | | | | | 5.66E-05 | | | | | 7.05 |
| Groundwater Total | | | | | | | | 5.66E-05 | | | | | 7.05 |
| Receptor Total | | | | | | | | 5.66E-05 | | | | | 7.05 |
| | | | | | | | Total Risk Across All Media | 5.66E-05 | | | | Total Hazard Across All Media | 7.05 |

Total Liver HI Across All Media: 0.021

**Table 6-156**

**TABLE 10.16.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Miller Mountain | Trichloroethene | 9.31E-06 | --- | --- | --- | 9.31E-06 | NA | --- | --- | --- | --- |
| | | | Chemical Total | 9.31E-06 | --- | --- | --- | 9.31E-06 | | --- | --- | --- | --- |
| | | Exposure Point Total | | | | | | 9.31E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 9.31E-06 | | | | | --- |
| | Groundwater | Water Vapors from Showerhead | Trichloroethene | --- | 1.18E-05 | --- | --- | 1.18E-05 | NA | --- | 0.023 | --- | 0.023 |
| | | | Chemical Total | --- | 1.18E-05 | --- | --- | 1.18E-05 | | --- | 0.023 | --- | 0.023 |
| | | Exposure Point Total | | | | | | 1.18E-05 | | | | | 0.023 |
| | Exposure Medium Total | | | | | | | 1.18E-05 | | | --- | | 0.023 |
| Groundwater Total | | | | | | | | 2.11E-05 | | | | | 0.023 |
| Receptor Total | | | | | | | | 2.11E-05 | | | | | 0.023 |
| | | | | | | | Total Risk Across All Media | 2.11E-05 | | | | Total Hazard Across All Media | 0.023 |

**Table 6-157**

**TABLE 10.17.RME**

**RISK SUMMARY**

**REASONABLE MAXIMUM EXPOSURE**

**Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

| Medium | Exposure Medium | Exposure Point | Chemical | Carcinogenic Risk | | | | | Non-Carcinogenic Hazard Quotient | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ingestion | Inhalation | Dermal | External (Radiation) | Exposure Routes Total | Primary Target Organ(s) | Ingestion | Inhalation | Dermal | Exposure Routes Total |
| Groundwater | Groundwater | Tapwater from Miller Mountain | Trichloroethene | 4.35E-06 | --- | --- | --- | 4.35E-06 | NA | --- | --- | --- | --- |
| | | | Chemical Total | 4.35E-06 | --- | --- | --- | 4.35E-06 | | --- | --- | --- | --- |
| | | Exposure Point Total | | | | | | 4.35E-06 | | | | | --- |
| | Exposure Medium Total | | | | | | | 4.35E-06 | | | | | --- |
| Groundwater Total | | | | | | | | 4.35E-06 | | | | | --- |
| Receptor Total | | | | | | | | 4.35E-06 | | | | | --- |
| | | | | | | | Total Risk Across All Media | 4.35E-06 | Total Hazard Across All Media | | | | --- |

**Table 6-158**

**Vapor Intrusion Screening Analysis of Maximum Detection Concentrations for COPCs at Bucks Harbor Air Force Radar Tracking Station, Machiasport, Maine**

| Chemical of Potential Concern | Maximum[a] Concentration (µg/L) | Well Location of Maximum Concentration | Target Groundwater[b] Concentration (µg/L) | |
|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 4.00 | Miller | 3,400 | NC |
| 1,2-Dichloroethane | 0.35 | DW23 | 5.0 [c] | C |
| 1,3-Dichlorobenzene | 2.00 | Howard | 830 | NC |
| 1,4-Dichlorobenzene | 3.00 | Howard | 8,200 | NC |
| Benzene | 0.78 | DW21 | 5.0 [c] | C |
| Chloroform | 1.60 | DW30 | 80.0 [c] | C |
| Cis-1,2-Dichloroethene | 49.0 | Howard | 210 | NC |
| Dibromochloromethane | 0.82 | WY3 | 3.20 | C |
| MTBE | 95.0 | DW15 | 120,000 | NC |
| t-Amyl Methyl Ether | 1.40 | DW15 | NA | |
| Tetrachloroethene | 12.0 | Howard | 5.0 [c] | C |
| Trichloroethene | 1,820 | Howard | 5.0 [c] | C |

**Note:** Shading indicates the maximum concentration exceeds the target groundwater concentration.

[a] The maximum detected concentration was from all the drinking water, monitoring, and WY3 wells.

[b] Table 2c from *The Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater* (EPA, 2004).

[c] The target groundwater concentration is the MCL. (The MCL for chloroform is the total Trihalomethanes).

C= Cancer effects at a target risk of 1.0E-06.

NA = Not available.

NC = Noncancer effects, at a target hazard quotient of 1.0.

# APPENDIX F

# TOXICOLOGY PROFILES

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY



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ToxFAQ™ en Español 91k
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September 1997

# Public Health Statement for Benzene

CAS# 71-43-2

**This Public Health Statement is the summary chapter from the Toxicological Profile for benzene. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about benzene and the effects of exposure.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and are the sites targeted for long-term federal cleanup. Benzene has been found in at least 816 of the 1,428 current or former NPL sites. However, it's unknown how many NPL sites have been evaluated for this substance. As more sites are evaluated, the sites with benzene may increase. This information is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposed by breathing, eating, or drinking the substance or by skin contact.

If you are exposed to benzene, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to and your age, sex, diet, family traits, lifestyle, and state of health.

J K
L M N O P
Q R S
T U
V W X Y Z

**ATSDR RESOURCES**

ToxFAQs™

ToxFAQs™ en Español

Public Health Statements

Toxicological Profiles

Minimum Risk Levels

MMGs

MHMIs

Interaction Profiles

Priority List of Hazardous Substances

Division of Toxicology

### 1.1 What is benzene?

Benzene, also known as benzol, is a colorless liquid with a sweet odor. Benzene evaporates into air very quickly and dissolves slightly in water. Benzene is highly flammable. Most people can begin to smell benzene in air at 1.5–4.7 parts of benzene per million parts of air (ppm) and smell benzene in water at 2 ppm. Most people can begin to taste benzene in water at 0.5–4.5 ppm. Benzene is found in air, water, and soil.

Benzene found in the environment is from both human activities and natural processes. Benzene was first discovered and isolated from coal tar in the 1800s. Today, benzene is made mostly from petroleum sources. Because of its wide use, benzene ranks in the top 20 in production volume for chemicals produced in the United States. Various industries use benzene to make other chemicals, such as styrene (for Styrofoam® and other plastics), cumene (for various resins), and cyclohexane (for nylon and synthetic fibers). Benzene is also used for the manufacturing of some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Natural sources of benzene, which include volcanoes and forest fires, also contribute to the presence of benzene in the environment. Benzene is also a natural part of crude oil and gasoline and cigarette smoke.

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### 1.2 How might I be exposed to benzene?

Benzene is commonly found in the environment. Industrial processes are the main sources of benzene in the environment. Benzene levels in the air can increase from emissions from burning coal and oil, benzene waste and storage operations, motor vehicle exhaust, and evaporation from gasoline service stations. Since tobacco contains high levels of benzene, tobacco smoke is another source of benzene in air. Industrial discharge, disposal of products containing benzene, and gasoline leaks from underground storage tanks can release benzene into water and soil.

Benzene can pass into air from water and soil surfaces. Once in the air, benzene reacts with other chemicals and breaks down within a few days. Benzene in the air can attach to rain or snow and be carried back down to the ground.

Benzene in water and soil breaks down more slowly. Benzene is slightly soluble in water and can pass through the soil into underground water. Benzene in the environment does not build up in plants or animals.

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### 1.3 How can benzene enter and leave my body?

Most people are exposed to a small amount of benzene on a daily basis. You can be exposed to benzene in the outdoor environment, in the workplace, and in the home. Exposure of the general population to benzene is mainly through breathing air that contains benzene. The major sources of benzene exposure are tobacco smoke, automobile service stations, exhaust from motor vehicles, and industrial emissions. Vapors (or gases) from products that contain benzene, such as glues, paints, furniture wax, and detergents can also be a source of exposure. Auto exhaust and industrial emissions account for about 20% of the total nationwide exposure to benzene. About 50% of the entire nationwide exposure to benzene results from smoking tobacco or from exposure to tobacco smoke. The average smoker (32 cigarettes per day) takes in about 1.8 milligrams (mg) of benzene per day. This is about 10 times the average daily intake of nonsmokers.

Measured levels of benzene in outdoor air have ranged from 0.02 to 34 parts of benzene per billion parts of air (ppb) (1 ppb is 1,000 times less than 1 ppm). People living in cities or industrial areas are generally exposed to higher levels of benzene in air than those living in rural areas. Benzene levels in the home are usually higher than outdoor levels. People living around hazardous waste sites, petroleum refining operations, petrochemical manufacturing sites, or gas stations may be exposed to higher levels of benzene in air.

For most people, the level of exposure to benzene through food, beverages, or drinking water is not as high as through air. Typical drinking water contains less than 0.1 ppb benzene. Benzene has been detected in some bottled water, liquor, and food. Leakage from underground gasoline storage tanks or from landfills and hazardous waste sites containing benzene can result in benzene contamination of well water. People with benzene-contaminated tap water can be exposed from drinking the water or eating foods prepared with the water. In addition, exposure can result from breathing in benzene while showering, bathing, or cooking with contaminated water.

Individuals employed in industries that make or use benzene may be exposed to the highest levels of benzene. As many as 238,000 people may be occupationally exposed to benzene in the United States. These industries include benzene production (petrochemicals, petroleum refining, and coke and coal chemical manufacturing), rubber tire manufacturing, and storage or transport of benzene and petroleum products containing benzene. Other workers who may be exposed to benzene because of their occupations include steel workers, printers, rubber workers, shoe makers, laboratory technicians, firefighters, and gas station employees.

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### 1.4 How can benzene affect my health?

Benzene can enter your body through your lungs when you breathe contaminated air. It can also enter through your stomach and intestines when you eat food or drink water that contains benzene. Benzene can enter your body through skin contact with benzene-containing products such as gasoline.

When you are exposed to high levels of benzene in air, about half of the benzene you breathe in leaves your body when you breathe out. The other half passes through the lining of your lungs and enters your bloodstream. Animal studies show that benzene taken in by eating or drinking contaminated foods behaves similarly in the body to benzene that enters through the lungs. A small amount will enter your body by passing through your skin and into your bloodstream during skin contact with benzene or benzene-containing products. Once in the bloodstream, benzene travels throughout your body and can be temporarily stored in the bone marrow and fat. Benzene is converted to products, called metabolites, in the liver and bone marrow. Some of the harmful effects of benzene exposure are believed to be caused by these metabolites. Most of the metabolites of benzene leave the body in the urine within 48 hours after exposure.

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### 1.5 What levels of exposure have resulted in harmful health effects?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests.

One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the welfare of research animals, and scientists must comply with strict animal care guidelines.

After exposure to benzene, several factors determine whether harmful health effects will occur and if they do, what the type and severity of these health effects might be. These factors include the amount of benzene to which you are exposed and the length of time of the exposure. Most data involving effects of long-term exposure to benzene are from studies of workers employed in industries that make or use benzene. These workers were exposed

to levels of benzene in air far greater than the levels normally encountered by the general population. Current levels of benzene in workplace air are much lower than in the past. Because of this reduction, and the availability of protective equipment such as respirators, fewer workers have symptoms of benzene poisoning.

Brief exposure (5–10 minutes) to very high levels of benzene in air (10,000–20,000 ppm) can result in death. Lower levels (700–3,000 ppm) can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. In most cases, people will stop feeling these effects when they stop being exposed and begin to breathe fresh air.

Eating foods or drinking liquids containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, coma, and death. The health effects that may result from eating foods or drinking liquids containing lower levels of benzene are not known. If you spill benzene on your skin, it may cause redness and sores. Benzene in your eyes may cause general irritation and damage to your cornea.

Benzene causes problems in the blood. People who breathe benzene for long periods may experience harmful effects in the tissues that form blood cells, especially the bone marrow. These effects can disrupt normal blood production and cause a decrease in important blood components. A decrease in red blood cells can lead to anemia. Reduction in other components in the blood can cause excessive bleeding. Blood production may return to normal after exposure to benzene stops. Excessive exposure to benzene can be harmful to the immune system, increasing the chance for infection and perhaps lowering the body's defense against cancer.

Benzene can cause cancer of the blood-forming organs. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen. The International Agency for Cancer Research (IARC) has determined that benzene is carcinogenic to humans, and the EPA has determined that benzene is a human carcinogen. Long-term exposure to relatively high levels of benzene in the air can cause cancer of the blood-forming organs. This condition is called leukemia. Exposure to benzene has been associated with development of a particular type of leukemia called acute myeloid leukemia (AML).

Exposure to benzene may be harmful to the reproductive organs. Some women workers who breathed high levels of benzene for many months had irregular menstrual periods. When examined, these women showed a decrease in the size of their ovaries. However, exact exposure levels were unknown, and the studies of these women did not prove that benzene caused these effects. It is

not known what effects exposure to benzene might have on the developing fetus in pregnant women or on fertility in men. Studies with pregnant animals show that breathing benzene has harmful effects on the developing fetus. These effects include low birth weight, delayed bone formation, and bone marrow damage.

The health effects that might occur in humans following long-term exposure to food and water contaminated with benzene are not known. In animals, exposure to food or water contaminated with benzene can damage the blood and the immune system and can even cause cancer.

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**1.6 Is there a medical test to determine whether I have been exposed to benzene?**

Several tests can show if you have been exposed to benzene. Some of these tests may be available at your doctor's office. All of these tests are limited in what they can tell you. The test for measuring benzene in your breath must be done shortly after exposure. This test is not very helpful for detecting very low levels of benzene in your body. Benzene can be measured in your blood. However, since benzene disappears rapidly from the blood, measurements may be accurate only for recent exposures. In the body, benzene is converted to products called metabolites. Certain metabolites of benzene, such as phenol, muconic acid, and S-phenyl-N-acetyl cysteine (PhAC) can be measured in the urine. The amount of phenol in urine has been used to check for benzene exposure in workers. The test is useful only when you are exposed to benzene in air at levels of 10 ppm or greater. However, this test must also be done shortly after exposure, and it is not a reliable indicator of how much benzene you have been exposed to, since phenol is present in the urine from other sources (diet, environment). Measurement of muconic acid or PhAC in the urine is a more sensitive and reliable indicator of benzene exposure. The measurement of benzene in blood or of metabolites in urine cannot be used for making predictions about whether you will experience any harmful health effects. Measurement of all parts of the blood and measurement of bone marrow are used to find benzene exposure and its health effects.

For people exposed to relatively high levels of benzene, complete blood analyses can be used to monitor possible changes related to exposure. However, blood analyses are not useful when exposure levels are low.

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**1.7 What recommendations has the federal government made to protect human health?**

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH).

Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals, then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors.

Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for benzene include the following:

EPA has set the maximum permissible level of benzene in drinking water at 5 parts per billion (ppb). Because benzene can cause leukemia, EPA has set a goal of 0 ppb for benzene in drinking water and in water such as rivers and lakes. EPA estimates that 10 ppb benzene in drinking water that is consumed regularly or exposure to 0.4 ppb benzene in air over a lifetime could cause a risk of one additional cancer case for every 100,000 exposed persons. EPA recommends a maximum permissible level of benzene in water of 200 ppb for short-term exposures (10 days) for children.

EPA requires that the National Response Center be notified following a discharge or spill into the environment of 10 pounds or more of benzene.

The Occupational Safety and Health Administration (OSHA) regulates levels of benzene in the workplace. The maximum allowable amount of benzene in workroom air during an 8-hour workday, 40-hour workweek is 1 part per million (ppm). Since benzene can cause cancer, the National Institute for Occupational Safety and Health (NIOSH) recommends that all workers likely to be exposed to benzene wear special breathing equipment.

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**1.8 Where can I get more information?**
**If you have any more questions or concerns, please contact your community or state health or environmental quality department or:**

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop F-32
Atlanta, GA 30333

**Information line and technical assistance:**

Phone: 888-422-8737
FAX: (770)-488-4178

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact:**

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone: 800-553-6847 or 703-605-6000

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**References**

Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological profile for benzene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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ATSDR Information Center / ATSDRIC@cdc.gov / 1-888-422-8737

This page was updated on November 22, 2004

ATSDR
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY



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ToxFAQ™ en Español 28k
**Public Health Statement** 148k
Toxicological Profile 5MB
MMG 67k

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DATE

# Public Health Statement for Trichloroethylene

CAS# 79-01-6

**This Public Health Statement is the summary chapter from the Toxicological Profile for trichloroethylene. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about trichloroethylene and the effects of exposure.

The Environmental Protection Agency (EPA) has identified 1,428 hazardous waste sites as the most serious in the nation. These sites make up the National Priorities List (NPL) and are targeted for long-term federal clean-up. Trichloroethylene has been found in at least 861 NPL sites. However, it's unknown how many NPL sites have been evaluated for this substance. As EPA looks at more sites, the sites with trichloroethylene may increase. This is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it by breathing, eating, touching, or drinking.

If you are exposed to trichloroethylene, many factors will determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to and your age, sex, diet, family traits, lifestyle, and state of health.

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**ATSDR RESOURCES**

ToxFAQs™
ToxFAQs™ en Español
Public Health Statements
Toxicological Profiles
Minimum Risk Levels
MMGs
MHMIs
Interaction Profiles
Priority List of Hazardous Substances
Division of Toxicology

## 1.1 What is trichloroethylene?

Trichloroethylene is also known as Triclene and Vitran and by other trade names in industry. It is a nonflammable, colorless liquid at room temperature with a somewhat sweet odor and a sweet, burning taste. Trichloroethylene is now mainly used as a solvent to remove grease from metal parts. It is also used as a solvent in other ways and is used to make other chemicals. Trichloroethylene can also be found in some household products, including typewriter correction fluid, paint removers, adhesives, and spot removers. Most people can begin to smell trichloroethylene in air when there are around 100 parts of trichloroethylene per million parts of air (ppm).

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## 1.2 What happens to trichloroethylene when it enters the environment?

By far, the biggest source of trichloroethylene in the environment is evaporation from factories that use it to remove grease from metals. It can also enter the air and water when it is disposed of at chemical waste sites. It evaporates easily but can stay in the soil and in groundwater. Once it is in the air, about half will be broken down within a week. When trichloroethylene is broken down in the air, phosgene, a lung irritant, can be formed. Trichloroethylene can break down under high heat and alkaline conditions to form dichloroacetylene and phosgene. In the body, trichloroethylene may break down into dichloroacetic acid (DCA), trichloroacetic acid (TCA), chloral hydrate, and 2-chloroacetaldehyde. These products have been shown to be toxic to animals and are probably toxic to humans. Once trichloroethylene is in water, much will evaporate into the air; again, about half will break down within a week. It will take days to weeks to break down in surface water. In groundwater the breakdown is much slower because of the much slower evaporation rate. Very little trichloroethylene breaks down in the soil, and it can pass through the soil into underground water. It is found in some foods. The trichloroethylene found in foods is believed to come from contamination of the water used in food processing, or from food processing equipment cleaned with trichloroethylene. It does not build up in fish, but low levels have been found in them.

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## 1.3 How might I be exposed to trichloroethylene?

Trichloroethylene is found in the outdoor air at levels far less than 1 ppm. When measured several years ago, some of the water supplies in the United States were found to have trichloroethylene. The most recent monitoring study found average levels in surface water ranging from 0.0001 to 0.001 ppm of water and an average

level of 0.007 ppm in groundwater. About 400,000 workers are routinely exposed to trichloroethylene in the United States. The chemical can also get into the air or water in many ways, for example, at waste treatment facilities; by evaporation from paints, glues, and other products; or by release from factories where it is made. Another way you may be exposed is by breathing the air around factories that use the chemical. People living near hazardous waste sites may be exposed to it in the air or in their drinking water, or in the water used for bathing or cooking. Products that may contain trichloroethylene are some types of typewriter correction fluids, paints and paint removers, glues, spot removers, rug cleaning fluids, and metal cleaners.

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### 1.4 How can trichloroethylene enter and leave my body?

Trichloroethylene enters your body when you breathe air or drink water containing it. It can also enter your body if you get it on your skin. You could be exposed to contaminated water or air if you live near or work in a factory that uses trichloroethylene or if you live near a waste disposal site that contains trichloroethylene. If you breathe the chemical, about half the amount you breathe in will get into your bloodstream and organs. You will exhale the rest. If you drink trichloroethylene, most of it will be absorbed into your blood. If trichloroethylene comes in contact with your skin, some of it can enter your body, although not as easily as when you breathe or swallow it.

Once in your blood, your liver changes much of the trichloroethylene into other chemicals. The majority of these breakdown products leave your body in the urine within a day. You will also quickly breathe out much of the trichloroethylene that is in your bloodstream. Some of the trichloroethylene or its breakdown products can be stored in body fat for a brief period, and thus may build up in your body if exposure continues.

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### 1.5 How can trichloroethylene affect my health?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests.

One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the

welfare of research animals, and scientists must comply with strict animal care guidelines.

Trichloroethylene was once used as an anesthetic for surgery. People who are exposed to large amounts of trichloroethylene can become dizzy or sleepy and may become unconscious at very high levels. Death may occur from inhalation of large amounts. Many people have jobs where they work with trichloroethylene and can breathe it or get it on their skin. Some people who get concentrated solutions of trichloroethylene on their skin develop rashes. People who breathe moderate levels of trichloroethylene may have headaches or dizziness. It is possible that some people who breathe high levels of trichloroethylene may develop damage to some of the nerves in the face. People have reported health effects when exposed to the level of trichloroethylene at which its odor is noticeable. Effects have also occurred at much higher levels. The effects reported at high levels include liver and kidney damage and changes in heart beat. The levels at which these effects occur in humans are not well characterized. Animals that were exposed to moderate levels of trichloroethylene had enlarged livers, and high-level exposure caused liver and kidney damage.

It is uncertain whether people who breathe air or drink water containing trichloroethylene are at higher risk of cancer, or of having reproductive effects. More and more studies suggest that more birth defects may occur when mothers drink water containing trichloroethylene. People who used water for several years from two wells that had high levels of trichloroethylene may have had a higher incidence of childhood leukemia than other people, but these findings are not conclusive. In another study of trichloroethylene exposure from well water, increased numbers of children were reported to be born with heart defects, which is supported by data from some animal studies showing developmental effects of trichloroethylene on the heart. However, other chemicals were also in the water from this well and may have contributed to these effects.One study reported a higher number of children with a rare defect in the respiratory system and eye defects. Another study reported that the risk for neural tube defects and oral cleft palates were higher among mothers with trichloroethylene in their water during pregnancy. Children listed in the National Exposure Subregistry of persons exposed to trichloroethylene were reported to have higher rates of hearing and speech impairment. There are many questions regarding these reports. There were small numbers of children with defects and trichloroethylene levels at which the effects occurred were not defined well. Thus, it is not possible to make firm conclusions about the exact effects of trichloroethylene from these studies, and more studies need to be done.

We do not have any clear evidence that trichloroethylene alone in drinking water can cause leukemia or any other type of cancer in humans. As part of the National Exposure Subregistry, the Agency for Toxic Substances and Disease Registry (ATSDR) compiled data on 4,280 residents of three states (Michigan, Illinois, and Indiana) who had environmental exposure to trichloroethylene. It found no definitive evidence for an excess of cancers from trichloroethylene exposure. An increase of respiratory cancer was noted in older men, but this effect was thought to result from smoking rather than trichloroethylene exposure. A study in New Jersey found an association between leukemia in women and exposure to trichloroethylene in the drinking water. A study in Massachusetts found that exposure was associated with leukemia in children.In studies with people, there are many factors that are not fully understood. More studies need to be done to establish the relationship between exposure to trichloroethylene and cancer.

In studies using high doses of trichloroethylene in rats and mice, tumors in the lungs, liver, and testes were found, providing some evidence that high doses of trichloroethylene can cause cancer in experimental animals. Based on the limited data in humans regarding trichloroethylene exposure and cancer, and evidence that high doses of trichloroethylene can cause cancer in animals, the International Agency for Research on Cancer (IARC) has determined that trichloroethylene is probably carcinogenic to humans. Trichloroethylene has been nominated for listing in the National Toxicology Program (NTP) 9th Report on Carcinogens. Evaluation of this substance by the NTP review committee is ongoing.

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## 1.6 Is there a medical test to determine whether I have been exposed to trichloroethylene?

There are some tests that can show if you have been recently exposed to trichloroethylene since this chemical can be measured in your breath. Also, a doctor can have trichloroethylene or a number of breakdown products of trichloroethylene measured in your urine or blood. None of these tests, however, is routinely available at your doctor's office. If the measurements are done soon after the exposure, the breath levels can indicate whether you have been exposed to a large amount of trichloroethylene or only a small amount. Urine and blood tests can also show if you have been exposed to large amounts of this chemical. Because one of the breakdown products leaves your body very slowly, it can be measured in the urine for up to about 1 week after trichloroethylene exposure. However, exposure to other similar chemicals can produce the same breakdown products in your urine and blood. Therefore, these methods cannot determine for sure

whether you have been exposed to trichloroethylene.

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## 1.7 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH).

Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals, then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors.

Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for trichloroethylene include the following.

EPA has set a drinking water standard of 5 parts of trichloroethylene per one billion parts of water (ppb). One ppb is 1,000 times less than 1 ppm. This standard became effective on January 9, 1989, and applies to community water systems and those that serve the same 25 or more persons for at least 6 months. EPA requires industries to report spills of 1,000 pounds or more of trichloroethylene. It has been proposed that this level be reduced to 100 pounds.

Trichloroethylene levels in the workplace are regulated by the Occupational Safety and Health Administration (OSHA). The occupational exposure limit for an 8-hour workday, 40-hour workweek, is an average concentration of 100 ppm in air. The 15-minute average exposure in air that should not be exceeded at any time during a workday is 300 ppm. The OSHA standards are based on preventing central nervous system effects after trichloroethylene exposure.

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## 1.8 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or:**

Agency for Toxic Substances and Disease Registry
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Atlanta, GA 30333

**Information line and technical assistance:**

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ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact:**

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Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological profile for trichloroethylene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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ToxFAQ™ 42k

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A-Z INDEX

September 1997

# Public Health Statement for Tetrachloroethylene

CAS# 127-18-4

**This Public Health Statement is the summary chapter from the Toxicological Profile for tetrachloroethylene. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about tetrachloroethylene and the effects of exposure.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and are the sites targeted for long-term federal cleanup. Tetrachloroethylene has been found in at least 771 of the 1,430 current or former NPL sites. However, it's unknown how many NPL sites have been evaluated for this substance. As more sites are evaluated, the sites with tetrachloroethylene may increase. This is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposed by breathing, eating, or drinking the substance or by skin contact.

If you are exposed to tetrachloroethylene, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to

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J K
L M N O P
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and your age, sex, diet, family traits, lifestyle, and state of health.

## 1.1 What is tetrachloroethylene?

Tetrachloroethylene is a synthetic chemical that is widely used for dry cleaning of fabrics and for metal-degreasing operations. It is also used as a starting material (building block) for making other chemicals and is used in some consumer products. Other names for tetrachloroethylene include perchloroethylene, PCE, perc, tetrachloroethene, perclene, and perchlor. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part in 1 million parts of air (ppm) or more. In an experiment, some people could smell tetrachloroethylene in water at a level of 0.3 ppm.

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## 1.2 What happens to tetrachloroethylene when it enters the environment?

Tetrachloroethylene enters the environment mostly by evaporating into the air during use. It can also get into water supplies and the soil during disposal of sewage sludge and factory waste and when leaking from underground storage tanks. Tetrachloroethylene may also get into the air, soil, or water by leaking or evaporating from storage and waste sites. It can stay in the air for several months before it is broken down into other chemicals or is brought back down to the soil and water by rain.

Much of the tetrachloroethylene that gets into water and soil will evaporate into the air. However, because tetrachloroethylene can travel through soils quite easily, it can get into underground drinking water supplies. If it gets into underground water, it may stay there for many months without being broken down. If conditions are right, bacteria will break down some of it and some of the chemicals formed may also be harmful. Under some conditions, tetrachloroethylene may stick to the soil and stay there. It does not seem to build up in animals that live in water, such as fish, clams, and oysters. We do not know if it builds up in plants grown on land.

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## 1.3 How might I be exposed to tetrachloroethylene?

People can be exposed to tetrachloroethylene from environmental and occupational sources and from consumer products. Common environmental levels of tetrachloroethylene (called background levels) are several thousand times lower than levels found in some workplaces. Background levels are found in the air we breathe, in the water we drink, and in the food we eat. The chemical is found

most frequently in air and, less often, in water. Tetrachloroethylene gets into air by evaporation from industrial or dry cleaning operations. It is also released from areas where chemical wastes containing it are stored. It is frequently found in water. For example, tetrachloroethylene was found in 38% of 9,232 surface water sampling sites throughout the United States. There is no similar information on how often the chemical is found in air samples, but we know it is widespread. We do not know how often it is found in soil, but in one study, it was found in 5% of 359 sediment samples.

In general, tetrachloroethylene levels in air are higher in cities or industrial areas where it is in use more than in more rural or remote areas. You can smell it at levels of 1 ppm in air. However, the background level of tetrachloroethylene in air is usually less than 1 part in 1 billion parts of air (ppb). The air close to dry cleaning shops and chemical waste sites has levels of tetrachloroethylene higher than background levels. These levels are usually less than 1 ppm, the level at which you can smell it. Water, both above and below ground, may contain tetrachloroethylene. Levels in water are also usually less than 1 ppb. Levels in contaminated water near disposal sites are higher than levels in water f[illegible]vay from those sites. Water polluted with this chemical may have levels greater than 1 ppm. In soil, background levels are probably 100–1,000 times lower than 1 ppm.

You can also be exposed to tetrachloroethylene by using certain consumer products. Products that may contain it include water repellents, silicone lubricants, fabric finishers, spot removers, adhesives, and wood cleaners. Although uncommon, small amounts of tetrachloroethylene have been found in food, especially food prepared near a dry cleaning shop. When you bring clothes home from the dry cleaners, the clothes may release small amounts of tetrachloroethylene into the air. The full significance to human health of these exposures to small amounts of tetrachloroethylene is unknown, but to date, they appear to be relatively harmless. Tetrachloroethylene can also be found in the breast milk of mothers who have been exposed to the chemical.

The people with the greatest chance of exposure to tetrachloroethylene are those who work with it. According to estimates from a survey conducted by the National Institute for Occupational Safety and Health (NIOSH), more than 650,000 U.S. workers may be exposed.

For the general population, the estimated amount that a person might breathe per day ranges from 0.08 to 0.2 milligrams. The estimated amount that most people might drink in water ranges

from 0.0001 to 0.002 milligrams per day. These are very small amounts.

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## 1.4 How can tetrachloroethylene enter and leave my body?

Tetrachloroethylene can enter your body when you breathe air containing it. How much enters your body in this way depends on how much of the chemical is in the air, how fast and deeply you are breathing, and how long you are exposed to it. Tetrachloroethylene may also enter your body when you drink water or eat food containing the chemical. How much enters your body in this way depends on how much of the chemical you drink or eat. These two exposure routes are the most likely ways people will take in tetrachloroethylene. These are also the most likely ways that people living near areas polluted with the chemical, such as hazardous waste sites, might be exposed to it. If tetrachloroethylene is trapped against your skin, a small amount of it can pass through into your body. Very little tetrachloroethylene in the air can pass through your skin into your body.

Most tetrachloroethylene leaves your body from your lungs when you breathe out. This is true whether you take in the chemical by breathing, drinking, eating, or touching it. A small amount of the tetrachloroethylene is changed by your body (especially your liver) into other chemicals that are removed from your body in urine. Most of the changed tetrachloroethylene leaves your body in a few days. Some of it that you take in is found in your blood and other tissues, especially body fat. Part of the tetrachloroethylene that is stored in fat may stay in your body for several days or weeks before it is eliminated.

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## 1.5 How can tetrachloroethylene affect my health?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests.

One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the welfare of research animals, and scientists must comply with strict animal care guidelines.

Tetrachloroethylene has been used safely as a general anesthetic agent, so at high concentrations, it is known to produce loss of consciousness. When concentrations in air are high—particularly in closed, poorly ventilated areas—single exposures can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Irritation may result from repeated or extended skin contact with the chemical. As you might expect, these symptoms occur almost entirely in work (or hobby) environments when individuals have been accidentally exposed to high concentrations or have intentionally abused tetrachloroethylene to get a "high." In industry, most workers are exposed to levels lower than those causing dizziness, sleepiness, and other nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not definitely known. However, at levels found in the ambient air or drinking water, risk of adverse health effects is minimal. The effects of exposing babies to tetrachloroethylene through breast milk are unknown. Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethylene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known for sure if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage and liver and kidney cancers even though the relevance to people is unclear. Although it has not been shown to cause cancer in people, the U.S. Department of Health and Human Services has determined that tetrachloroethylene may reasonably be anticipated to be a human carcinogen. The International Agency for Research on Cancer (IARC) has determined that tetrachloroethylene is probably carcinogenic to humans. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant. Rats that were given oral doses of tetrachloroethylene when they were very young, when their brains were still developing, were hyperactive when they became adults. How tetrachloroethylene may affect the developing brain in human babies is not known.

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## 1.6 Is there a medical test to determine whether I have been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath alcohol measurements are used to determine the amount of alcohol in the blood. This test has been used to measure levels of the chemical in people living in areas where the air is contaminated with tetrachloroethylene or those exposed to the chemical through their work. Because it is stored in the body's fat and is slowly released into the bloodstream, it can be detected in the breath for weeks following a heavy exposure. Tetrachloroethylene can be detected in the blood. Also, breakdown products of the chemical can be detected in the blood and urine of people exposed to tetrachloroethylene. Trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene can be detected for several days after exposure. These tests are relatively simple to perform. The breath, blood, or urine must be collected in special containers and then sent to a laboratory for testing. Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed only to tetrachloroethylene.

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## 1.7 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include the EPA, the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and NIOSH.

Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals; then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors.

Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for tetrachloroethylene include the following:

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (mg/L) (0.005 ppm).

EPA has established regulations and procedures for dealing with tetrachloroethylene, which it considers a hazardous waste. Many regulations govern its disposal. If amounts greater than 100 pounds are released to the environment, the National Response Center of the federal government must be told immediately.

OSHA limits the amount of tetrachloroethylene that can be present in workroom air. This amount is limited to 100 ppm for an 8-hour workday over a 40-hour workweek. NIOSH recommends that tetrachloroethylene be handled as a chemical that might potentially cause cancer and states that levels of the chemical in workplace air should be as low as possible.

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## 1.8 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or:**

Agency for Toxic Substances and Disease Registry
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1600 Clifton Road NE, Mailstop F-32
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**Information line and technical assistance:**

Phone: 888-422-8737
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ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact:**

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY



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RELATED RESOURCES

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ToxFAQ™ en Español 26k
**Public Health Statement** 56k
Toxicological Profile 4.7MB

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August 1996

# Public Health Statement for 1,2-Dichloroethene

CAS# 540-59-0

**This Public Health Statement is the summary chapter from the Toxicological Profile for 1,2-dichloroethene. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about 1,2-dichloroethene and the effects of exposure.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and are the sites targeted for long-term federal cleanup activities. Cis-1,2-dichloroethene has been found in at least 146 of the 1,430 current or former NPL sites. Trans-1,2-dichloroethene has been found in at least 563 of the 1,430 current or former NPL sites. In 336 of the NPL sites, 1,2-dichloroethene was found but the isomer was not specified. However, it's unknown how many NPL sites have been evaluated for this substance. As more sites are evaluated, the sites with 1,2-dichloroethene may increase. This information is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposed by breathing, eating, or drinking the substance or by skin contact.

If you are exposed to 1,2-dichloroethene, many factors determine

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whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to and your age, sex, diet, family traits, lifestyle, and state of health.

## 1.1 What is 1,2-dichloroethene?

1,2-Dichloroethene is also called 1,2-dichloroethylene. It is a highly flammable, colorless liquid with a sharp, harsh odor. You can smell very small amounts of 1,2-dichloroethene in air (beginning at a level of about 17 parts per million or ppm). There are two forms of 1,2-dichloroethene; one form is called cis-1,2-dichloroethene and the other is called trans-1,2-dichloroethene. Sometimes both forms are present as a mixture. 1,2-Dichloroethene is used most often to produce solvents and in chemical mixtures.

1,2-Dichloroethene enters the environment through industrial activity of people. This chemical has been found in air, water, and soil. 1,2-Dichloroethene is released to the environment from chemical factories that make or use this chemical, from landfills and hazardous waste sites containing this chemical, from chemical spills, from burning of objects made of vinyl, and from breakdown of other chlorinated chemicals.

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## 1.2 What happens to 1,2-dichloroethene when it enters the environment?

1,2-Dichloroethene evaporates rapidly. When released to moist soil surfaces or to lakes, rivers, and other bodies of water, most of it evaporates into the air. Once in the air, it usually takes about 5-12 days for half of any amount of it to break down (half-life in air). 1,2-Dichloroethene that is below soil surfaces in landfills or hazardous waste sites may dissolve in water, seep deeper into the soil, and possibly contaminate groundwater. Some 1,2-dichloroethene may escape as a vapor. Once in groundwater, it takes about 13-48 weeks for half of a given amount to break down (half-life in water). There is a slight chance that small amounts of the 1,2-dichloroethene found in landfills will eventually break down into vinyl chloride, which is believed to be a more hazardous chemical.

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## 1.3 How might I be exposed to 1,2-dichloroethene?

You might be exposed to 1,2-dichloroethene by breathing contaminated air or by drinking contaminated tap water. If the tap water in your home is contaminated, you could also be breathing 1,2-dichloroethene vapors while cooking, bathing, or washing dishes. There are no known products you can buy that contain

1,2-dichloroethene. People who are most likely to be exposed live near landfills and hazardous waste sites that contain this chemical, work at factories where this chemical is made or used, work at 1,2-dichloroethene contaminated landfills, or work as firefighters. Job-related exposure results from breathing in 1,2-dichloroethene from workplace air or from touching contaminated chemicals or materials. According to a survey conducted between 1981 and 1983 by the National Institute for Occupational Safety and Health (NIOSH), an estimated 215 people in the United States may have been exposed to 1,2-dichloroethene while working.

People who live in cities or suburbs are more likely to be exposed than people living in rural areas. Most people who are exposed to 1,2-dichloroethene through air or water are exposed to very low levels, in the range of parts per million (ppm) to parts per billion (ppb).

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### 1.4 How can 1,2-dichloroethene enter and leave my body?

1,2-Dichloroethene can enter the body through your lungs when you breathe air contaminated with it, through your stomach and intestines when you eat food or drink water contaminated with it, or through your skin upon contact with the chemical.

When 1,2-dichloroethene enters the body, the blood and other tissues absorb it. It is broken down to other compounds in the liver. Animal studies have looked at how quickly the compound enters and leaves the body and what may happen to it in the body. These animal studies describe effects at levels far greater than those levels at which most people would be exposed. No studies show specifically how 1,2-dichloroethene enters a person's body and how it is changed or removed by the body.

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### 1.5 How can 1,2-dichloroethene affect my health?

Breathing high levels of trans-1,2-dichloroethene can make you feel nauseous, drowsy, and tired. Breathing very high levels of its vapor can kill you. When animals breathed high levels of trans-1,2-dichloroethene for short or longer periods of time, their livers and lungs were damaged. The effects were more severe with longer exposure times. Animals that breathed very high levels of trans-1,2-dichloroethene had damaged hearts. Animals given extremely high doses of cis- or trans-1,2-dichloroethene by mouth died. Lower oral doses of cis-1,2-dichloroethene caused effects on the blood, such as decreased numbers of red blood cells, and effects on the liver.

The long-term human health effects after exposure to low concentrations of 1,2-dichloroethene are not known. Results of a

recent animal study suggest that an exposed fetus may not grow as quickly as one that is not exposed. No studies have been done to see whether cancer in people or animals is caused by exposure to 1,2-dichloroethene; exposure has not been shown to affect fertility in people or animals

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## 1.6 Is there a medical test to determine whether I have been exposed to 1,2-dichloroethene?

Methods are available to measure concentrations of 1,2-dichloroethene in blood, urine, and tissues. However, these methods are not routinely used to determine whether a person has been exposed to this compound, because the expected breakdown products resulting from exposure to 1,2-dichloroethene may also result from exposure to other chemicals.

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## 1.7 What recommendations has the federal government made to protect human health?

The federal government has developed regulatory standards and guidelines to protect people from possible health effects of 1,2-dichloroethene in water and air. The EPA has established water quality guidelines to protect both aquatic life and people who eat fish and shellfish. The EPA Office of Drinking Water has set a drinking water regulation that states that water delivered to any user of a public water system shall not exceed 0.07 milligrams per liter (mg/L) for cis-1,2-dichloroethene and 0.1 mg/L for trans-1,2-dichloroethene. For very short-term exposures (1 day) for children, EPA advises that concentrations in drinking water should not be more than 4 mg/L for cis-1,2-dichloroethene or 20 mg/L for trans-1,2-dichloroethene. For 10-day exposures for children, EPA advises that drinking water concentrations should not be more than 3 mg/L for cis-1,2-dichloroethene or 2 mg/L for trans-1,2-dichloroethene. For industrial or waste disposal sites, any release of 1,000 pounds or more must be reported to the EPA.

The National Institute for Occupational Safety and Health (NIOSH) and the American Conference of Governmental Industrial Hygienists (ACGIH) have established guidelines for occupational exposure to cis- or trans-1,2-dichloroethene. Average concentrations should not exceed 200 ppm in the air

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## 1.8 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or:**

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## References

Agency for Toxic Substances and Disease Registry (ATSDR). 1996. Toxicological profile for 1,2-dichloroethene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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ToxFAQ™ 41k

September 2001

# Public Health Statement for 1,2-Dichloroethane

*(1,2-Dicloroetano)*

CAS# 107-06-2

**This Public Health Statement is the summary chapter from the Toxicological Profile for 1,2-dichloroethane. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about 1,2-dichloroethane and the effects of exposure. The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and are the sites targeted for long-term federal cleanup activities. 1,2-Dichloroethane has been found in at least 570 of the 1,585 current or former NPL sites. However, the total number of NPL sites evaluated for 1,2-dichloroethane is not known. As more sites are evaluated, the sites at which 1,2-dichloroethane is found may increase. This information is important because exposure to 1,2-dichloroethane may harm you and because these sites may be sources of exposure. When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposured by breathing, eating, or drinking the substance, or by skin contact. If you are exposed to 1,2-dichloroethane, many factors determine whether you will be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you are exposed to and your age, sex, diet, family traits, lifestyle, and state of health.

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## 1.1 What is 1,2-dichoroethane?

1,2-Dichloroethane is a clear, manufactured liquid that is not found naturally in the environment. It evaporates quickly at room temperature and has a pleasant smell and a sweet taste. 1,2-Dichloroethane burns with a smoky flame. At this time, the most common use of 1,2-dichloroethane is to make vinyl chloride, which is used to make a variety of plastic and vinyl products including polyvinyl chloride (PVC) pipes and other important construction materials, packaging materials, furniture and automobile upholstery, wall coverings, housewares, and automobile parts. 1,2-Dichloroethane is also used as a solvent and is added to leaded gasoline to remove lead. In the past, it was also found in small amounts in products that industries used to clean cloth, remove grease from metal, and break down oils, fats, waxes, resins, and rubber. In the household, 1,2-dichloroethane was formerly a component of some cleaning solutions and pesticides; some adhesives, such as those used to glue wallpaper or carpeting; and some paint, varnish, and finish removers. Although large amounts of 1,2-dichloroethane are produced today, most is used to make other chemical products. Small amounts of 1,2-dichloroethane that were released into water or soil evaporate into the air. 1,2-Dichloroethane that remains in soil from a spill or improper disposal can travel through the ground into water. The chemical may remain in water or soil for more than 40 days.

Chapter 4 of the toxicological profile contains more chemical and physical information about 1,2-dichloroethane. Chapter 5 has more information on its uses, and Chapter 6 tells about its presence in the environment.

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## 1.2 What happens to 1,2-dichoroethane when it enters the environment?

1,2-Dichloroethane can enter the environment when it is made, packaged, shipped, or used. Most 1,2-dichloroethane is released to the air, although some is released to rivers or lakes. 1,2-Dichloroethane could also enter soil, water, or air in large amounts in an accidental spill. 1,2-Dichloroethane evaporates into the air very fast from soil and water. In the air, it breaks down by reacting with other compounds formed by the sunlight. 1,2-Dichloroethane will stay in the air for more than 5 months before it is broken down. It may also be removed from air in rain or snow. Since it stays in the air for a while, the wind may carry it over large distances. In water, 1,2-dichloroethane breaks down very slowly and most of it will evaporate to the air. Only very small amounts are taken up by plants and fish. We do not know exactly how long 1,2-dichloroethane remains in water, but we do know that it remains longer in lakes than in rivers. In soil,

1,2-dichloroethane either evaporates into the air or travels down through soil and enters underground water. Small organisms living in soil and groundwater may transform it into other less harmful compounds, although this happens slowly. If a large amount of 1,2-dichloroethane enters soil from an accident, hazardous waste site, or landfill, it may travel a long way underground and contaminate drinking water wells.

More information on what happens to 1,2-dichloroethane in the environment can be found in Chapters 5 and 6 of the toxicological profile.

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### 1.3 How might I be exposed to 1,2-dichoroethane?

Humans are exposed to 1,2-dichloroethane mainly by breathing air or drinking water that contains 1,2-dichloroethane. Human exposure usually happens where the chemical has been improperly disposed of, or spilled onto the ground. However, low levels of 1,2-dichloroethane have also been found in the air near industries where it is made or used in manufacturing. Humans can be exposed to low levels of 1,2-dichloroethane through the skin or air by contact with old products made with 1,2-dichloroethane, such as cleaning agents, pesticides, and adhesives used to glue wallpaper and carpets. Such exposure is probably not enough to cause harmful health effects. 1,2-Dichloroethane has been found in U.S. drinking water at levels ranging from 0.05 to 64 parts of 1,2-dichloroethane per billion (ppb) parts of water. An average amount of 175 ppb has been found in 12% of the surface water and groundwater samples taken at 2,783 hazardous wastes sites. 1,2-Dichloroethane has also been found in the air near urban areas at levels of 0.10–1.50 ppb and near hazardous waste sites at levels of 0.01–0.003 ppb. Small amounts of 1,2-dichloroethane have also been found in foods. Humans may also be exposed to 1,2-dichloroethane through its use as a gasoline additive to reduce lead content, but these small levels are not expected to affect human health. This is probably not an important way that people are exposed to 1,2-dichloroethane in the United States, since leaded gasolines are rarely used today.

Additional information on levels in the environment and potential for human exposure are presented in Chapter 6 of the toxicological profile.

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### 1.4 How can 1,2-Dichloroethane enter and leave my body?

1,2-Dichloroethane can enter the body when people breathe air or drink water that contains 1,2-dichloroethane. Studies in animals also show that 1,2-dichloroethane can enter the body through the skin. Humans are most likely to be exposed at work and outside

the workplace by drinking water that contains 1,2-dichloroethane, or by breathing 1,2-dichloroethane that has escaped from contaminated water or soil into the air. Experiments in animals show that 1,2-dichloroethane that is breathed in or swallowed goes to many organs of the body, but usually leaves in the breath within 1 or 2 days. The breakdown products of 1,2-dichloroethane in the body leave quickly in the urine. Soil near hazardous waste sites probably does not have high amounts of 1,2-dichloroethane because it evaporates quickly into the air. This suggests that exposure near a hazardous waste site would most likely occur by breathing contaminated air rather than by touching contaminated soil.

Further information on how 1,2-dichloroethane can enter and leave the body is presented in Chapter 3 of the toxicological profile.

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### 1.5 How can 1,2-dichoroethane affect my health?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests. One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the welfare of research animals, and scientists must comply with strict animal care guidelines. People who were accidentally exposed to large amounts of 1,2-dichloroethane in the air or who swallowed 1,2-dichloroethane by accident, or on purpose, often developed nervous system disorders and liver and kidney disease. Lung effects were also seen after a large amount of 1,2-dichloroethane was inhaled. People often died from heart failure. We do not know what levels of 1,2-dichloroethane caused these effects, but they are probably high. Studies in laboratory animals also found that breathing or swallowing large amounts of 1,2-dichloroethane produced nervous system disorders, kidney disease, or lung effects. Reduced ability to fight infection was also seen in laboratory animals who breathed or swallowed 1,2-dichloroethane, but we do not know if this also occurs in humans. Longer-term exposure to lower doses also caused kidney disease in animals. So far, exposure to 1,2-dichloroethane has not been associated with cancer in humans. One study showed a relationship between increased cancer and exposure to pollutants in groundwater, including 1,2-dichloroethane, but the people were probably exposed to many other chemicals at the same time. Cancer was found in laboratory animals who were fed large doses

of 1,2-dichloroethane. When 1,2-dichloroethane was put on the skin of laboratory animals, they developed lung tumors. We are not sure whether breathing 1,2-dichloroethane causes cancer in animals. Because of the cancer findings in animals, the possibility of cancer in humans cannot be ruled out. The Department of Health and Human Services (DHHS) has determined that 1,2-dichloroethane may reasonably be expected to cause cancer. The International Agency for Research on Cancer (IARC) has determined that 1,2-dichloroethane can possibly cause cancer in humans. EPA has determined that 1,2-dichloroethane is a probable human carcinogen.

Additional information regarding the health effects of 1,2-dichloroethane can be found in Chapter 3 of the toxicological profile.

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## 1.6 How can 1,2-dichloroethane affect children?

This section discusses potential health effects from exposures during the period from conception to maturity at 18 years of age in humans. Children can be exposed to 1,2-dichloroethane by breathing contaminated air, and possibly by drinking contaminated water. In the past, 1,2-dichloroethane had been used in certain household items, such as cleaning products and adhesives, but is no longer used in these products. There is a possibility that using of one of these older household products containing 1,2-dichloroethane to clean floors or glue carpets could result in exposure, since children often crawl on floors and play on carpets. Such exposures would probably last a few days or less, since 1,2-dichloroethane evaporates very quickly. Children are not likely to be exposed to 1,2-dichloroethane from parents' clothing or other items removed from the workplace. Because 1,2-dichloroethane has been detected in human milk, it is possible that young children could be exposed to 1,2-dichloroethane from breast-feeding mothers who had been exposed to sources of 1,2-dichloroethane. There have been no studies of health effects in children exposed to 1,2-dichloroethane, and we have no reliable information on whether 1,2-dichloroethane causes birth defects in children. One study broadly suggests that heart problems could occur in the human fetus from mothers being exposed to 1,2-dichloroethane along with some other chemicals, but the information is not reliable enough for us to be sure whether 1,2-dichloroethane is responsible for the defects. Studies of pregnant laboratory animals indicate that it probably does not produce birth defects or affect reproduction. We do know, however, that when the pregnant animal is exposed to 1,2-dichloroethane, the fetus is probably also exposed. It is likely that children exposed to 1,2-dichloroethane after birth would show the same health effects that are expected to occur in adults, especially liver and kidney disease. There is no

information to determine whether children differ from adults in their sensitivity to the health effects of 1,2-dichloroethane.

More information regarding children's health and 1,2-dichloroethane can be found in Section 3.7 of the toxicological profile.

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## 1.7 How can families reduce the risk of exposure to 1,2-dichloroethane?

If your doctor finds that you have been exposed to significant amounts of 1,2-dichloroethane, ask whether your children might also be exposed. Your doctor might need to ask your state health department to investigate. In the past, 1,2-dichloroethane was used in small amounts in household products such as cleaning agents, pesticides, and wallpaper and carpet glue. It is possible that you may have old containers of such products in your home. Risk of exposure from this source could be eliminated if these older products were immediately discarded. Otherwise, household chemicals should be stored out of reach of young children to prevent accidental poisonings. Always store household chemicals in their original labeled containers. Never store household chemicals in containers that children would find attractive to eat or drink from, such as old soda bottles. Keep your Poison Control Center's number next to the phone. Sometimes older children sniff household chemicals in an attempt to get high. Your children may be exposed to 1,2-dichloroethane by inhaling products containing it. Talk with your children about the dangers of sniffing chemicals. The exposure of your family to 1,2-dichloroethane can be reduced by throwing away any household products that contain it. You may wish to contact your county health department for appropriate disposal methods. 1,2-Dichloroethane has been found in drinking water in the United States. Most of the time, 1,2-dichloroethane has been found in small amounts that do not pose a major health risk. You may want to contact your water supplier or local health department to get information about the levels of 1,2-dichloroethane in the drinking water.

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## 1.8 Is there a medical test to determine whether I have been exposed to 1,2-dichoroethane?

1,2-Dichloroethane has been found in the breath, blood, breast milk, and urine of exposed people. Because breath samples are easily collected, testing breathed-out or exhaled air is now a possible way to find out whether someone has recently been exposed to 1,2-dichloroethane. However, tests that measure small amounts in human breath, tissues, and fluids may not be available at your doctor's office because they require special equipment. Your physician can refer you to a facility where these tests are

done. Although these tests can show that you have been exposed to 1,2-dichloroethane, it is not possible to tell if you will experience any harmful health effects. Because 1,2-dichloroethane leaves the body fairly quickly, these methods are best for finding exposures that occurred within the last several days. Exposure to 1,2-dichloroethane at hazardous waste sites will probably include exposure to other organic compounds at the same time. Therefore, levels of 1,2-dichloroethane measured in the body by these methods may not show exposure to 1,2-dichloroethane only. Medical tests available at a doctor's office include lung-, liver-, and kidney-function tests, but these tests look for damage that has already occurred from general chemical exposure and do not determine the cause of damage. Damage could also be the result of lifestyle (e.g., drinking alcohol, smoking) or general exposure to environmental agents. Other methods to measure the effects of exposure to 1,2-dichloroethane (such as abnormal enzyme levels) do not measure the effects of exposure to 1,2-dichloroethane only, but measure effects of other chemicals as well.

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## 1.9 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH). Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals; then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors. Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for 1,2-dichloroethane include the following: The federal government has developed regulatory standards and guidelines to protect people from the possible health effects of 1,2-dichloroethane in air. OSHA has set a limit of 50 parts of 1,2-dichloroethane per million parts of air (ppm, 1 ppm is 1,000

times more than 1 ppb) in the workplace for an 8-hour day, 40-hour week. NIOSH recommends that a person not be exposed daily in the workplace to more than 1 ppm 1,2-dichloroethane for a 10-hour day, 40-hour week. NIOSH calls 1,2-dichloroethane a possible occupational carcinogen. EPA also calls the compound a probable human cancer-causing agent, based on experiments in animals. The federal government has also set regulatory standards and guidelines to protect people from the possible health effects of 1,2-dichloroethane in drinking water. EPA has set a limit in water of 0.005 milligrams of 1,2-dichloroethane per liter (5 ppb).

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## 1.10 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or**:

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop F-32
Atlanta, GA 30333

**Information line and technical assistance**:

Phone: 888-422-8737
FAX: (770)-488-4178

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact**:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone: 800-553-6847 or 703-605-6000

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## References

Agency for Toxic Substances and Disease Registry (ATSDR). 2001. Toxicological profile for 1,2-dichoroethane. *Update*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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September 2004

# Public Health Statement for Dichlorobenzenes

*Draft for Public Comment*

CAS# 1,2-Dichlorobenzene CAS# 95-50-1
1,3-Dichlorobenzene CAS# 541-73-1
1,4-Dichlorobenzene CAS# 106-46-7

**This Public Health Statement is the summary chapter from the Toxicological Profile for dichlorobenzenes. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about dichlorobenzenes (DCBs) and the effects of exposure to them.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. EPA then places these sites are on the National Priorities List (NPL) and targets them for federal long-term cleanup activities. 1,2-DCB, 1,3-DCB, and 1,4-DCB have been identified in at least 280, 176, and 331, respectively, of the 1,647 current or former NPL sites. Although the total number of NPL sites evaluated for these substances is not known, the number of sites at which DCBs are found could increase as more sites are evaluated. This information is important because these sites may be sources of exposure, and exposure to these substances might harm you.

When a substance is released either from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. Such a release does not always lead to exposure. You can be exposed to a substance only when you contact it-by breathing, eating, or drinking the substance or by skin contact.

Many factors will determine whether exposure to DCBs will harm

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you. These factors include the dose (how much), the duration (how long), and the way you contact them. You also must consider any other chemicals to which you are exposed and your age, sex, diet, family traits, lifestyle, and state of health.

## 1.1 What are dichlorobenzenes?

Each of the three types of DCBs (i.e., 1,2-DCB, 1,3-DCB, and 1,4-DCB) contains two chlorine atoms connected to one benzene molecule. 1,2-DCB is a colorless to pale yellow liquid used to make herbicides. 1,3-DCB is a colorless liquid used to make herbicides, insecticides, medicine, and dyes. 1,4-DCB, the most important of the three chemicals, is a colorless to white solid. It smells like mothballs and it is one of two chemicals commonly used to make mothballs. 1,4-DCB also is used to make deodorant blocks used in garbage cans and restrooms, and to help control odors in animal-holding facilities. 1,4-DCB has been used as an insecticide on fruit and as an agent to control mold and mildew growth on tobacco seeds, leather, and some fabrics. Recently, using 1,4-DCB to make resins has become very important.

When a package of 1,4-DCB is opened, it 'sublimates', that is, it slowly changes from a solid into a vapor, and enters the atmosphere. The vapor acts as a deodorizer and insect killer. Most of the 1,2-, 1,3-, and 1,4-DCB released into the environment is present as a vapor. DCBs can burn, but they do not burn easily. Most people begin to smell 1,4-DCB when it is in the air at a concentration of 0.18 parts per million (ppm) and 0.011 ppm in water.

DCBs do not occur naturally; chemical companies produce them to make products for home use and other chemicals such as herbicides and plastics.

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## 1.2 What happens to dichlorobenzenes when they enter the environment?

Most of the 1,4-DCB enters the environment when it is used in mothballs and in toilet-deodorizer blocks. Some 1,4-DCB is released to the air by factories that make or use it, and only a little is released to soil and water. Very little 1,4-DCB enters the environment from hazardous waste sites. Some 1,2 and 1,3-DCBs are released into the environment when used to make herbicides and when people use products that contain these chemicals. Companies that make 1,4-DCB also make unwanted amounts of 1,2-DCB during the process. 1,2-DCB is released to the environment when companies dispose of these unwanted supplies.

Because DCBs do not dissolve easily in water, the small amounts that enter water quickly evaporate into the air. If they are released

to groundwater, they may be transported through the ground to surface water. Sometimes, DCBs bind to soil and sediment. DCBs in soil usually are not easily broken down by soil organisms. Evidence suggests that plants and fish absorb DCBs. 1,4-DCB has been detected at concentrations of up to 470 parts per billion (ppb) in fish.

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### 1.3 How might I be exposed to dichlorobenzenes?

Humans are exposed to 1,4-DCB mainly by breathing vapors from 1,4-DCB products used in the home, such as mothballs and toilet-deodorizer blocks. Reported levels of 1,4-DCB in some homes and public restrooms have ranged from 0.291 to 272 parts of 1,4-DCB per billion parts (ppb) of air. 1,2- and 1,3-DCB are not found frequently in the air of homes and buildings because, unlike 1,4-DCB, these chemicals are not used in household products. Outdoor levels of 1,4-DCB range from 0.01 to 1 ppb and are much lower than levels in homes and buildings. Levels in the air around hazardous waste sites are low and range from 0.01 to 4.2 ppb. Outdoor air levels generally range from 0.01 to 0.1 ppb for 1,2-DCB and from 0.001 to 0.1 ppb for 1,3-DCB.

DCBs have been found in samples of drinking water from surface water sources. 1,4-DCB was found in 13% of surface water samples collected during a national survey. These samples contained about 0.008-154 ppb of 1,4-DCB. DCBs also have been found in drinking water from wells but at low concentrations. DCBs are found only infrequently in soil, but they have been detected in soil around hazardous waste sites in the United States.

DCBs have been detected in beef, pork, chicken, eggs, baked goods, soft drinks, butter, peanut butter, fruits, vegetables, and fish. However, the levels of DCBs in foods are generally low.

The average daily adult exposure of 1,4-DCB is about 35 micrograms ($\mu$g), which comes mainly from breathing 1,4-DCB vapors of released from products in homes and businesses. The average daily adult respiratory exposure of the other DCBs is about 1.8 $\mu$g for 1,2-DCB and about 0.8 $\mu$g for 1,3-DCB.

Individuals can be occupationally exposed to DCBs in workplace air at much higher levels than the general public is exposed. Levels measured in the air of factories that make or process 1,4-DCB products have ranged from 5.6 to 748 ppm of air. In addition, people who live or work near industrial facilities or hazardous waste sites that have high DCBs levels may have greater exposure to these compounds due to emissions from the facilities and waste sites. People who work or live in buildings where air fresheners, toilet block deodorants, or moth balls containing 1,4-DCB are used

also are expected to have a higher exposure to this compound, which could occur from skin contact as well as by breathing.

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### 1.4 How can dichlorobenzenes enter and leave my body?

The main way DCBs enter your body is through the lungs when you breathe in DCB vapors released in the workplace or in the home from use of products that contain it. When you breathe in these chemicals for a few hours, it is likely that some of the DCBs that have entered your body will get into your bloodstream.

DCBs also can get into your body if you drink water or eat certain foods that contain them, such as meat, chicken, eggs, or fish. Most of the DCBs that enter your body from food and water will get into your bloodstream. It is not likely that DBCs will enter your body through the skin if you touch products that contain them.

1,4-DCB used in the home could be accidentally swallowed, especially by young children. This possibility exists because household products that contain 1,4-DCB, particularly some kinds of mothballs and deodorant blocks, might be freely available in closets or bathrooms.

Most of the DCB that enters your body (perhaps more than 95%) leaves through the urine in less than a week. Small amounts (perhaps 1-2%) leave your body in the feces and in the air you breathe out. Tiny amounts remain in your fat and might stay there for a long time.

Most of the DCBs that enter your body are changed into other chemicals, mainly dichlorophenols. It is not known if these breakdown products are more or less harmful than the DCBs themselves.

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### 1.5 How can dichlorobenzenes affect my health?

Scientists use many tests to protect the public from harmful effects of toxic chemicals and to find ways for treating persons who have been harmed.

One way to learn whether a chemical will harm people is to determine how the body absorbs, uses, and releases the chemical. For some chemicals, animal testing may be necessary. Animal testing can help identify health problems such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method for getting information needed to make wise decisions that protect public health. Scientists have the responsibility to treat research animals with care and compassion. Scientists must comply with strict animal-care guidelines because laws today

protect the welfare of research animals.

Most of the information on health effects of DCBs is from studies of 1,2- and 1,4-DCB. Very little is known about the health effects of 1,3-DCB, especially in humans, but they are likely to be similar to those of the other DCBs.

Inhaling the vapor or dusts of 1,2-DCB and 1,4-DCB at very high concentrations could be very irritating to your eyes and nose and cause burning and tearing of the eyes, coughing, difficult breathing, and an upset stomach. These concentrations could occur in workplaces, but are much higher than you would be exposed to in the home. 1,4-DCB is the only DCB that is commonly used in household products (mainly mothballs and toilet-deodorizer blocks). Scientists have no evidence that the moderate use of common household products containing 1,4-DCB will cause any problems to your health. Some people reported health problems, such as dizziness, headaches, and liver problems, from very high levels of 1,4-DCB in the home. However, these people used very high amounts of 1,4-DCB products and continued to use the products for months or even years, even though they felt ill. People who ate 1,4-DCB products regularly for long periods (months to years) because of its sweet taste developed skin blotches and problems with red blood cells, such as anemia (iron-poor blood). Little information is available about the effects of skin contact with DCBs. 1,4-DCB might cause a burning feeling in your skin if you hold mothballs or toilet-deodorizer blocks against your skin for a long time.

Breathing or eating any of the DCBs caused harmful effects in the liver of laboratory animals. Animal studies also found that 1,2-DCB and 1,4-DCB caused effects in the kidneys and blood, and that 1,3-DCB caused thyroid and pituitary effects. There is no clear evidence that 1,2-DCB and 1,4-DCB impair reproduction or fetal development in animals at levels below those that also cause serious health effects in the mother, although there is an indication that 1,4-DCB can affect development of the nervous system after birth.

Lifetime exposure to 1,4-DCB by breathing or eating induced liver cancer in mice. 1,2-DCB was not carcinogenic in laboratory animals, and 1,3-DCB has not been tested for its potential to cause cancer. The animal studies suggest that 1,4-DCB could play a role in the development of cancer in humans, but we do not definitely know this. The U.S. Department of Health and Human Services (DHHS) has determined that 1,4-DCB might be a human carcinogen. The International Agency for Research on Cancer (IARC) determined that 1,4-DCB is possibly carcinogenic to humans. Both IARC and the EPA concluded that 1,2-DCB and

1,3-DCB are not classifiable as to human carcinogenicity.

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## 1.6 How can dichlorobenzenes affect children?

This section discusses potential health problems in people from exposures during conception to maturity (18 years of age).

Children are exposed to DCBs in many of the same ways adults are. It is possibile that mothballs and toilet bowl deodorant blocks containing 1,4-DCB could be played with or accidentally swallowed, especially by young children. Because children tend to be curious about unknown powders and liquids, and because these products might be easily accessible in cabinets, closets, or bathrooms, children could be at a higher risk of exposure to 1,4-DCB than adults.

Children who are exposed to DCBs are likely to exhibit the same effects as adults, although this is not known for certain. Thus, all health problems of DCBs observed in adults are of potential concern in children.

Children can also be exposed to DCBs prenatally, because all three isomers have been detected in placenta samples, as well as through breast feeding. There is no reliable evidence suggesting that DCBs cause birth defects, although animal data raise concern for effects of 1,4-DCB on postnatal development of the nervous system.

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## 1.7 How can families reduce the risk of exposure to dichlorobenzenes?

If your doctor finds that you (or a family member) have been exposed to substantial amounts of DCBs, ask whether your children also might have been exposed. Your doctor might need to ask your state health department to investigate.

You and your children could be exposed to 1,4-DCB in your home if you use consumer products that contain 1,4-DCB, such as some toilet bowl cleaners and mothballs. Exposure of children to 1,4-DCB can be minimized by discouraging them from playing with, swallowing, or having skin contact with treated products. These items should be stored out of reach of young children and kept in their original containers to prevent accidental poisonings. Keep your Poison Control Center's number by the phone.

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## 1.8 Is there a medical test to determine whether I have been exposed to dichlorobenzenes?

Several tests can be used to show if you have been exposed to DCBs. The most commonly used tests measure their dichlorophenol breakdown products in urine and blood. These tests require special equipment that is not routinely available in a doctor's office, but they can be performed in a special laboratory.

The presence of the dichlorophenol breakdown products in the urine indicates a person has been exposed to DCBs within the previous day or two. For example, detection of 2,5 dichlorophenol in urine is commonly used to determine worker exposure to 1,4-DCB in industrial settings. Another test measures levels of DCBs in your blood, but this is used less often. Neither of these tests can be used to show how high the level of DCB exposure was or to predict whether harmful health effects will follow.

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## 1.9 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. EPA, the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA) are some federal agencies that develop regulations for toxic substances. Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. The Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control and Prevention (CDC) are two federal agencies that develop recommendations for toxic substances.

Regulations and recommendations can be expressed as "not-to-exceed" levels-in other words, levels of a toxic substance in air, water, soil, or food that do not exceed a critical value that is usually based on levels that affect animals; they are then adjusted to levels that will help protect people. Sometimes these not-to-exceed levels differ among federal agencies because the agencies use different exposure times (for example, an 8-hour workday or a 24-hour day), different animal studies, or other factors.

Recommendations and regulations are periodically updated as more information becomes available. For the most current information, check with the federal agency that provides it.

The federal government has taken a number of steps to protect people from excessive exposure to 1,4-DCB. EPA has listed 1,4-DCB as a hazardous waste and has subjected it to hazardous waste regulations. EPA has set a maximum level of 75 micrograms

(μg) of 1,4-DCB per liter of drinking water. In addition, 1,4-DCB is a pesticide registered with EPA, and its manufacturers must provide certain kinds of information to EPA for it to be registered for use as a pesticide. OSHA has set a maximum level of 75 ppm for 1,4-DCB in workplace air for an 8-hour day, 40 hour workweek.

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## 1.10 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or:**

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop F-32
Atlanta, GA 30333

**Information line and technical assistance:**

Phone: 888-422-8737
FAX: (770)-488-4178

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact:**

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone: 800-553-6847 or 703-605-6000

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## References

Agency for Toxic Substances and Disease Registry (ATSDR). 2004. Toxicological profile for dichlorobenzenes. (*Draft for Public Comment*). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY



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September 1997

# Public Health Statement for Chloroform

CAS# 67-66-3

**This Public Health Statement is the summary chapter from the Toxicological Profile for chloroform. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about chloroform and the effects of exposure.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and the sites are targeted for long-term federal cleanup. Chloroform has been found in at least 717 of the 1,430 current or former NPL sites, including 6 in Puerto Rico and 1 in the Virgin Islands. However, it's unknown how many NPL sites have been evaluated for this substance. As more sites are evaluated, the sites with chloroform may increase. This is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposed by breathing, eating, or drinking the substance, or by skin contact.

If you are exposed to chloroform, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to and your

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**ATSDR RESOURCES**

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Public Health Statements
Toxicological Profiles
Minimum Risk Levels
MMGs
MHMIs
Interaction Profiles
Priority List of Hazardous Substances
Division of Toxicology

age, sex, diet, family traits, lifestyle, and state of health.

## 1.1 What is chloroform?

Chloroform is also known as trichloromethane or methyltrichloride. It is a colorless liquid with a pleasant, nonirritating odor and a slightly sweet taste. Most of the chloroform found in the environment comes from industry. It will only burn when it reaches very high temperatures. Chloroform was one of the first inhaled anesthetics to be used during surgery, but it is not used for anesthesia today. Nearly all the chloroform made in the United States today is used to make other chemicals, but some is sold or traded to other countries. We also import chloroform.

Chloroform enters the environment from chemical companies and paper mills. It is also found in waste water from sewage treatment plants and drinking water to which chlorine has been added. Chlorine is added to most drinking water and many waste waters to destroy bacteria. Small amounts of chloroform are formed as an unwanted product during the process of adding chlorine to water. Chloroform can enter the air directly from factories that make or use it and by evaporating from water and soil that contain it. It can enter water and soil when waste water that contains chlorine is released into water or soil. It may enter water and soil from spills and by leaks from storage and waste sites. There are many ways for chloroform to enter the environment, so small amounts of it are likely to be found almost everywhere.

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## 1.2 What happens to chloroform when it enters the environment?

Chloroform evaporates very quickly when exposed to air. Chloroform also dissolves easily in water, but does not stick to the soil very well. This means that it can travel down through soil to groundwater where it can enter a water supply. Chloroform lasts for a long time in both the air and in groundwater. Most chloroform in the air eventually breaks down, but this process is slow. The breakdown products in air include phosgene, which is more toxic than chloroform, and hydrogen chloride, which is also toxic. Some chloroform may break down in soil. Chloroform does not appear to build up in great amounts in plants and animals, but we may find some small amounts of chloroform in foods.

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## 1.3 How might I be exposed to chloroform?

You are probably exposed to small amounts of chloroform in your drinking water and in beverages (such as soft drinks) made using water that contains chloroform. You can also get chloroform in

your body by eating food, by breathing air, and by skin contact with water that contains it. You are most likely to be exposed to chloroform by drinking water and breathing indoor or outdoor air containing it. The amount of chloroform normally expected to be in the air ranges from 0.02 to 0.05 parts of chloroform per billion parts (ppb) of air and from 2 to 44 ppb in treated drinking water. However, in some places, chloroform concentrations may be higher than 44 ppb. It is estimated that the concentration of chloroform in surface water is 0.1 ppb, the concentration in untreated groundwater is 0.1 ppb, and the amount in soil is 0.1 ppb. As much as 610 ppb was found in air at a municipal landfill and up to 88 ppb was found in treated municipal drinking water. Drinking water derived from well water near a hazardous waste site contained 1,900 ppb, and groundwater taken near a hazardous waste site also contained 1,900 ppb. Surface water containing 394 ppb has also been found near a hazardous waste site; however, no more than 0.13 ppb has been found in soil at hazardous waste sites. Chloroform has been found in the air from all areas of the United States and in nearly all of the public drinking water supplies. We do not know how many areas have surface water, groundwater, or soil that contains chloroform.

The average amount of chloroform that you might be exposed to on a typical day by breathing air in various places ranges from 2 to 5 micrograms per day ($\mu$g/day) in rural areas, 6 to 200 $\mu$g/day in cities, and 80 to 2,200 $\mu$g/day in areas near major sources of the chemical. The estimated amount of chloroform you probably are exposed to in drinking water ranges from 4 to 88 $\mu$g/day. We cannot estimate the amounts that you may be exposed to by eating food and by coming into contact with water that has chloroform in it. People who swim in swimming pools absorbed chloroform through their skin. People who work at or near chemical plants and factories that make or use chloroform can be exposed to higher-than-normal amounts of chloroform. Higher exposures might occur in workers at drinking-water treatment plants, waste water treatment plants, and paper and pulp mills. People who operate waste-burning equipment may also be exposed to higher than normal levels. The National Institute for Occupational Safety and Health (NIOSH) estimated that 95,778 persons in the United States have occupational exposure to chloroform.

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## 1.4 How can chloroform enter and leave my body?

Chloroform can enter your body if you breathe air, eat food, or drink water that contains chloroform. Chloroform easily enters your body through the skin. Therefore, chloroform may also enter your body if you take a bath or shower in water containing chloroform. In addition, you can breathe in chloroform if the shower water is hot enough for chloroform to evaporate. Studies

in people and in animals show that after you breathe air or eat food that has chloroform in it, the chloroform can quickly enter your bloodstream from your lungs or intestines. Inside your body, chloroform is carried by the blood to all parts of your body, such as the fat, liver, and kidneys. Chloroform usually collects in body fat; however, its volatility ensures that it will eventually be removed once the exposure has been removed. Some of the chloroform that enters your body leaves unchanged in the air that you breathe out, and some chloroform in your body is broken down into other chemicals. These chemicals are known as breakdown products or metabolites, and some of them can attach to other chemicals inside the cells of your body and may cause harmful effects if they collect in high enough amounts in your body. Some of the metabolites also leave the body in the air you breathe out. Only a small amount of the breakdown products leaves the body in the urine and stool.

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### 1.5 How can chloroform affect my health?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests.

One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the welfare of research animals, and scientists must comply with strict animal care guidelines.

In humans, chloroform affects the central nervous system (brain), liver, and kidneys after a person breathes air or drinks liquids that contain large amounts of chloroform. Chloroform was used as an anesthetic during surgery for many years before its harmful effects on the liver and kidneys were recognized. Breathing about 900 parts of chloroform in a million parts of air (900 ppm or 900,000 ppb) for a short time causes fatigue, dizziness, and headache. If you breathe air, eat food, or drink water containing elevated levels of chloroform, over a long period, the chloroform may damage your liver and kidneys. Large amounts of chloroform can cause sores when the chloroform touches your skin.

We do not know whether chloroform causes harmful reproductive effects or birth defects in people. Miscarriages occurred in rats and mice that breathed air containing elevated levels (30 to 300

ppm) of chloroform during pregnancy and in rats that ate chloroform during pregnancy. Abnormal sperm were found in mice that breathed air containing elevated levels (400 ppm) of chloroform for a few days. Offspring of rats and mice that breathed chloroform during pregnancy had birth defects.

Results of studies of people who drank chlorinated water showed a possible link between the chloroform in chlorinated water and the occurrence of cancer of the colon and urinary bladder. Cancer of the liver and kidneys developed in rats and mice that ate food or drank water that had large amounts of chloroform in it for a long time. We do not know whether liver and kidney cancer would develop in people after long-term exposure to chloroform in drinking water. Based on animal studies, the Department of Health and Human Services (DHHS) has determined that chloroform may reasonably be anticipated to be a carcinogen (a substance that causes cancer). The International Agency for Research on Cancer (IARC) has determined that chloroform is possibly carcinogenic to humans (2B). The EPA has determined that chloroform is a probable human carcinogen.

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## 1.6 Is there a medical test to determine whether I have been exposed to chloroform?

Although we can measure the amount of chloroform in the air that you breathe out, and in blood, urine, and body tissues, we have no reliable test to determine how much chloroform you have been exposed to or whether you will experience any harmful health effects. The measurement of chloroform in body fluids and tissues may help to determine if you have come into contact with large amounts of chloroform. However, these tests are useful only a short time after you are exposed to chloroform because it leaves the body quickly. Because it is a breakdown product of other chemicals (chlorinated hydrocarbons), chloroform in your body might also indicate that you have come into contact with those other chemicals. Therefore, small amounts of chloroform in the body may indicate exposure to these other chemicals and may not indicate low chloroform levels in the environment. From blood tests to determine the amount of liver enzymes, we can tell whether the liver has been damaged, but we cannot tell whether the liver damage was caused by chloroform.

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## 1.7 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include EPA, the Occupational Safety and Health

Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH).

Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals; then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors.

Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for chloroform include the following:

The EPA sets rules for the amount of chloroform allowed in water. The EPA limit for total trihalomethanes, a class of chemicals that includes chloroform, in drinking water is 100 micrograms per liter ($\mu$g/L, 1 $\mu$g/L = 1 ppb in water). Furthermore, EPA requires that spills of 10 pounds or more of chloroform into the environment be reported to the National Response Center.

OSHA sets the levels of chloroform allowed in workplace air in the United States. A permissible occupational exposure limit is 50 ppm or 240 mg/m$^3$ (ceiling value) in air during an 8-hour workday, 40-hour workweek.

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## 1.8 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality department or**:

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop F-32
Atlanta, GA 30333

**Information line and technical assistance**:

Phone: 888-422-8737

FAX: (770)-488-4178

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact**:

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Agency for Toxic Substances and Disease Registry (ATSDR). 1997. Toxicological profile for chloroform. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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This page was updated on November 22, 2004

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September 2003

# Public Health Statement for Bromoform and Chlorodibromomethane

*Draft for Public Comment*

*(Bromoformo y Dibromoclorometano)*

CAS# Chlorodibromomethane 124-48-1
Bromoform 75-25-2

**This Public Health Statement is the summary chapter from the Toxicological Profile for chlorodibromomethane and bromoform. It is one in a series of Public Health Statements about hazardous substances and their health effects. A shorter version, the ToxFAQs™, is also available. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present. For more information, call the ATSDR Information Center at 1-888-422-8737.**

This public health statement tells you about bromoform and dibromochloromethane and the effects of exposure.

The Environmental Protection Agency (EPA) identifies the most serious hazardous waste sites in the nation. These sites make up the National Priorities List (NPL) and are the sites targeted for long-term federal cleanup activities. Bromoform and dibromochloromethane have been found in at least 141 and 172 of the 1,636 current or former NPL sites, respectively. However, the total number of NPL sites evaluated for this substance is not known. As more sites are evaluated, the sites at which bromoform and dibromochloromethane are found may increase. This information is important because exposure to this substance may harm you and because these sites may be sources of exposure.

When a substance is released from a large area, such as an industrial plant, or from a container, such as a drum or bottle, it enters the environment. This release does not always lead to exposure. You are exposed to a substance only when you come in contact with it. You may be exposed by breathing, eating, or drinking the substance, or by skin contact.

1.10 Where can I get more information?
References

**RELATED RESOURCES**
ToxFAQ™ 42k
ToxFAQ™ en Español 92k
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If you are exposed to bromoform or dichlorobromomethane, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), and how you come in contact with it. You must also consider the other chemicals you're exposed to and your age, sex, diet, family traits, lifestyle, and state of health.

## 1.1 What are bromoform and dibromochloromethane?

Bromoform (also known as tribromomethane) and dibromochloromethane are colorless to yellow, heavy, nonburnable liquids with a sweetish odor. These chemicals are possible contaminants of drinking water that has been chlorinated to kill bacteria and viruses that could cause serious waterborne infectious diseases. Bromoform and dibromochloromethane may form when chlorine reacts with other naturally occurring substances in water, such as decomposing plant material. Plants in the ocean also produce small amounts of these chemicals.

These chemicals are found mainly in water that originally came from surface sources, such as rivers and lakes. Springs and deep drilled wells usually contain very little of the substances that react with chlorine to form these chemicals; therefore, well and spring water is less likely a source of bromoform and dibromochloromethane than water from a reservoir (artificial lake). The amount of bromoform and dibromochloromethane in drinking water can change considerably from day to day, depending on the source, temperature, amount of plant material in the water, amount of chlorine added, and a variety of other factors.

In the past, bromoform was used by industry to dissolve dirt and grease and to make other chemicals, and it was also used in the early part of this century as a medicine to help children with whooping cough get to sleep. Currently, bromoform is only produced in small amounts for use in laboratories and in geological and electronics testing. Dibromochloromethane was used in the past to make other chemicals such as fire extinguisher fluids, spray can propellants, refrigerator fluid, and pesticides. It is now only used on a small scale in laboratories.

In the environment, bromoform and dibromochloromethane are not found as pure liquids, but instead, they are found either dissolved in water or evaporated into air as a gas. Both bromoform and dibromochloromethane are relatively stable in the air, but reactions with other chemicals in the air cause them to break down slowly (about 50% in 1 or 2 months). Any bromoform and dibromochloromethane in water or soil may also be broken down by bacteria, but the speed of this process is not known.

Further information on the properties, uses, and chemical identity of bromoform and dibromochloromethane in the environment may be found in Chapters 4, 5, and 6.

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## 1.2 What happens to bromoform and dibromochloromethane when they enter the environment?

Bromoform and dibromochloromethane enter the environment through the disposal of water that has been disinfected with chlorine or as vapors emitted from chlorinated water. These chemicals are also made naturally by plant-like organisms called algae in the oceans. Some part of bromoform and dibromochloromethane that enters the air is taken out of the air in rain. What is left in the air takes about 1-2 months for half of it to degrade. In water, bromoform and dibromochloromethane are slowly broken down at the water surface where oxygen is available, but break down much faster in deep water and in water that is underground where there is a lot less oxygen. Bromoform and dibromochloromethane are mobile in soils and may seep into groundwater. Bromoform and dibromochloromethane do not appear to concentrate in fish.

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## 1.3 How might I be exposed to bromoform and dibromochloromethane?

You are most likely to be exposed to bromoform and dibromochloromethane by drinking water that has been treated with chlorine. Usually, the levels in chlorinated drinking water are between 1 and 10 parts of bromoform and dibromochloromethane per billion parts of water (ppb). These are levels that are known to be without health effects. Bromoform and dibromochloromethane have also been detected in chlorinated swimming pools. When you are at a pool, you could be exposed by breathing some bromoform or dibromochloromethane that has evaporated into the air, or by uptake from the water through the skin. Neither dibromochloromethane nor bromoform are likely to be found in food.

If you live near a factory or laboratory that makes or uses dibromochloromethane or bromoform, you might be exposed to dibromochloromethane or bromoform in the air. Currently, bromoform is only used for geological and electronics testing. Dibromochloromethane is used on a small-scale in laboratories. Since neither dibromochloromethane nor bromoform have widespread use in this country, they are usually present in outside air only at very low levels (less than 0.01 ppb). Therefore, exposure to bromoform in the air is a minor route. Another place

where you might be exposed is near a chemical waste site where dibromochloromethane or bromoform has been allowed to leak into water or soil. In this case, you could be exposed if you drank the water or, to a lesser extent, got the soil on your skin. Further information on how you might be exposed to these chemicals is given in Chapter 6.

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## 1.4 How can bromoform and dibromochloromethane enter and leave my body?

Studies in animals or humans indicate that both bromoform and dibromochloromethane can easily enter your body after you drink them in water or breathe them in air. They can also enter your body after you get them on your skin (for example, by washing or showering in water containing these chemicals). After bromoform and dibromochloromethane enter your body, they are broken down to other compounds. These compounds, as well as bromoform and dibromochloromethane, are removed from the body by being breathed out through the lungs. These chemicals leave the body fairly rapidly and completely. Of the amount that enters the body, 50-90% leaves the body in 8 hours, so bromoform and dibromochloromethane do not tend to build up in the body. Further information on how bromoform and dibromochloromethane enter and leave your body is given in Chapter 3.

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## 1.5 Howcan bromoform and dibromochloromethane affect my health?

To protect the public from the harmful effects of toxic chemicals and to find ways to treat people who have been harmed, scientists use many tests.

One way to see if a chemical will hurt people is to learn how the chemical is absorbed, used, and released by the body; for some chemicals, animal testing may be necessary. Animal testing may also be used to identify health effects such as cancer or birth defects. Without laboratory animals, scientists would lose a basic method to get information needed to make wise decisions to protect public health. Scientists have the responsibility to treat research animals with care and compassion. Laws today protect the welfare of research animals, and scientists must comply with strict animal care guidelines.

The effects of bromoform and dibromochloromethane on your health depend on how much you take into your body. In general, the more you take in, the greater the chance that an effect will occur. Studies in animals or humans indicate that the main effect

of eating or breathing large amounts of these chemicals (for example, swallowing 1-4 drops of liquid bromoform, which is a much greater amount than that usually found in a glass of drinking water) is a slowing down of normal brain activities. The amount of dibromochloromethane taken by mouth that would affect humans is not known, but is probably about the same as for bromoform. Sleepiness or sedation occurs quickly after the chemicals enter your body. In humans, the usual result is only sleepiness, which tends to go away within a day. At higher amounts, or in extreme cases, a person may become unconsciousness or die.

Studies in animals indicate that exposure to high doses of bromoform or dibromochloromethane may also lead to injury to the liver and the kidneys within a short period of time. Exposure to low levels of bromoform or dibromochloromethane do not appear to seriously affect the brain, liver, or kidneys, but studies in animals indicate that long-term intake of either bromoform or dibromochloromethane can cause cancer. Although no cases of cancer in humans can be definitely attributed to these chemicals, this is an effect of special concern, since many people are exposed to low levels of bromoform and dibromochloromethane in chlorinated drinking water.

Studies in animals also suggest that neither bromoform nor dibromochloromethane has a high risk of affecting the chance of becoming pregnant or harming an unborn baby.

Further information on how bromoform and dibromochloromethane can affect the health of humans and animals is presented in Chapter 3.

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## 1.6 How can bromoform and dibromochloromethane affect children?

This section discusses potential health effects from exposures during the period from conception to maturity at 18 years of age in humans.

In the early 1900s, bromoform was given to children suffering from whooping cough, and several deaths resulted when children accidentally took overdoses. Children appeared drowsy, then lifeless, just before dying.

There are no studies in humans or laboratory animals that have examined whether the effects of bromoform dibromochloromethane change with age. Based on current knowledge of how the body functions, and what is known about what happens to these chemicals in the bodies of animals, there is no indication that children will be affected to a greater degree than

adults.

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## 1.7 How can families reduce the risk of exposure to bromoform and dibromochloromethane?

If your doctor finds that you have been exposed to significant amounts of bromoform and/or dibromochloromethane, ask whether your children might also be exposed. Your doctor might need to ask your state health department to investigate.

The risk of consuming bromoform or dibromochloromethane in chlorinated public drinking water varies with season, water temperature, water chemistry, disinfection method, and other factors. However, the health risks, associated with drinking non-disinfected water when there is evidence of pathogenic contamination (i.e., bacteria, viruses, etc.), are much greater than the risk of exposure to bromoform or dibromochloromethane.

There are water treatment methods that people can use in their homes (point-of-use filtration) to reduce exposure to bromoform and dibromochloromethane from chlorinated tap water. These include potential do-it-yourself methods such as connecting solid carbon block filters to your faucet and shower taps. Homeowners may discuss other home water treatment methods, including filtering, aeration or boiling, distillation, and/or activated charcoal, with a professional plumber or water well contractor. While bromoform is no longer used as a medicine, keeping children away from or supervising children with chemicals brought into the home, will reduce the potential for accidental exposures. The risk of exposure to bromoform and dibromochloromethane may be reduced by minimizing contact with water expected to have a higher levels of these chemicals, such as swimming pool water. When taking a bath or showering in water in which dibromochloromethane and/or bromoform is present, greater amounts of these chemicals evaporate into the air at hotter temperatures and during longer time periods. Opening the windows in bathrooms, and taking quick baths or showers may reduce the amount of chemical vapor that is inhaled or absorbed through the skin.

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## 1.8 Is there a medical test to determine whether i have been exposed to bromoform and dibromochloromethane?

If you are exposed to bromoform or dibromochloromethane, measurable levels of the chemicals can sometimes be detected in samples of your blood, breath, or fat. However, there is not enough information at present to use the results of such tests to estimate the level of exposure or to predict the nature or the severity of any health effects that might result. Since special equipment is needed,

these tests are not routinely performed in doctors' offices. Because bromoform and dibromochloromethane are eliminated from the body fairly quickly, these special laboratory tests are only effective in detecting recent exposures (within 1 or 2 days). Further information on how bromoform and dibromochloromethane can be measured in exposed humans is presented in Chapters 3 and 7.

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## 1.9 What recommendations has the federal government made to protect human health?

The federal government develops regulations and recommendations to protect public health. Regulations can be enforced by law. Federal agencies that develop regulations for toxic substances include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Food and Drug Administration (FDA). Recommendations provide valuable guidelines to protect public health but cannot be enforced by law. Federal organizations that develop recommendations for toxic substances include the Agency for Toxic Substances and Disease Registry (ATSDR) and the National Institute for Occupational Safety and Health (NIOSH).

Regulations and recommendations can be expressed in not-to-exceed levels in air, water, soil, or food that are usually based on levels that affect animals; then they are adjusted to help protect people. Sometimes these not-to-exceed levels differ among federal organizations because of different exposure times (an 8-hour workday or a 24-hour day), the use of different animal studies, or other factors.

Recommendations and regulations are also periodically updated as more information becomes available. For the most current information, check with the federal agency or organization that provides it. Some regulations and recommendations for bromoform include the following:

OSHA has set a legally enforceable limit of 0.5 ppm for bromoform in workroom air to protect workers during an 8-hour shift over a 40-hour work week.

EPA recommends that drinking water levels for bromoform should not be more than 0.7 parts per million (ppm) for bromoform and 0.7 ppm for dibromochloromethane.

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## 1.10 Where can I get more information?

**If you have any more questions or concerns, please contact your community or state health or environmental quality**

**department or**:

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road NE, Mailstop F-32
Atlanta, GA 30333

**Information line and technical assistance**:

Phone: 888-422-8737
FAX: (770)-488-4178

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

**To order toxicological profiles, contact**:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Phone: 800-553-6847 or 703-605-6000

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## References

Agency for Toxic Substances and Disease Registry (ATSDR). 2003. Toxicological profile for chlorodibromomethane and bromoform. *Draft for Public Comment*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

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