U.S. Army Corps of Engineers

New England District
Waltham, Massachusetts

RELEASE ABATEMENT MEASURE COMPLETION REPORT AND RESPONSE ACTION OUTCOME FORMER BUILDINGS 1004 & 1014 DEVENS, MASSACHUSETTS

MADEP RTN 2-11210

Contract/Purchase Order No. DACW33-95-D-0004

Delivery Order No. 0004
DCN: VRA-111897-AAJO

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WESTON MANAGERS DESIGNERS/CONSULTANTS

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NOVEMBER 1997

Prepared for

U. S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Prepared by

Roy F. Weston, Inc.
One Wall Street, Manchester, NH. 03103

Work Order No. 03886-118-004-4800

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NEW ENGLAND DIVISION
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Sumanth M. Naik
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Principal Project Manager

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1.0 INTRODUCTION

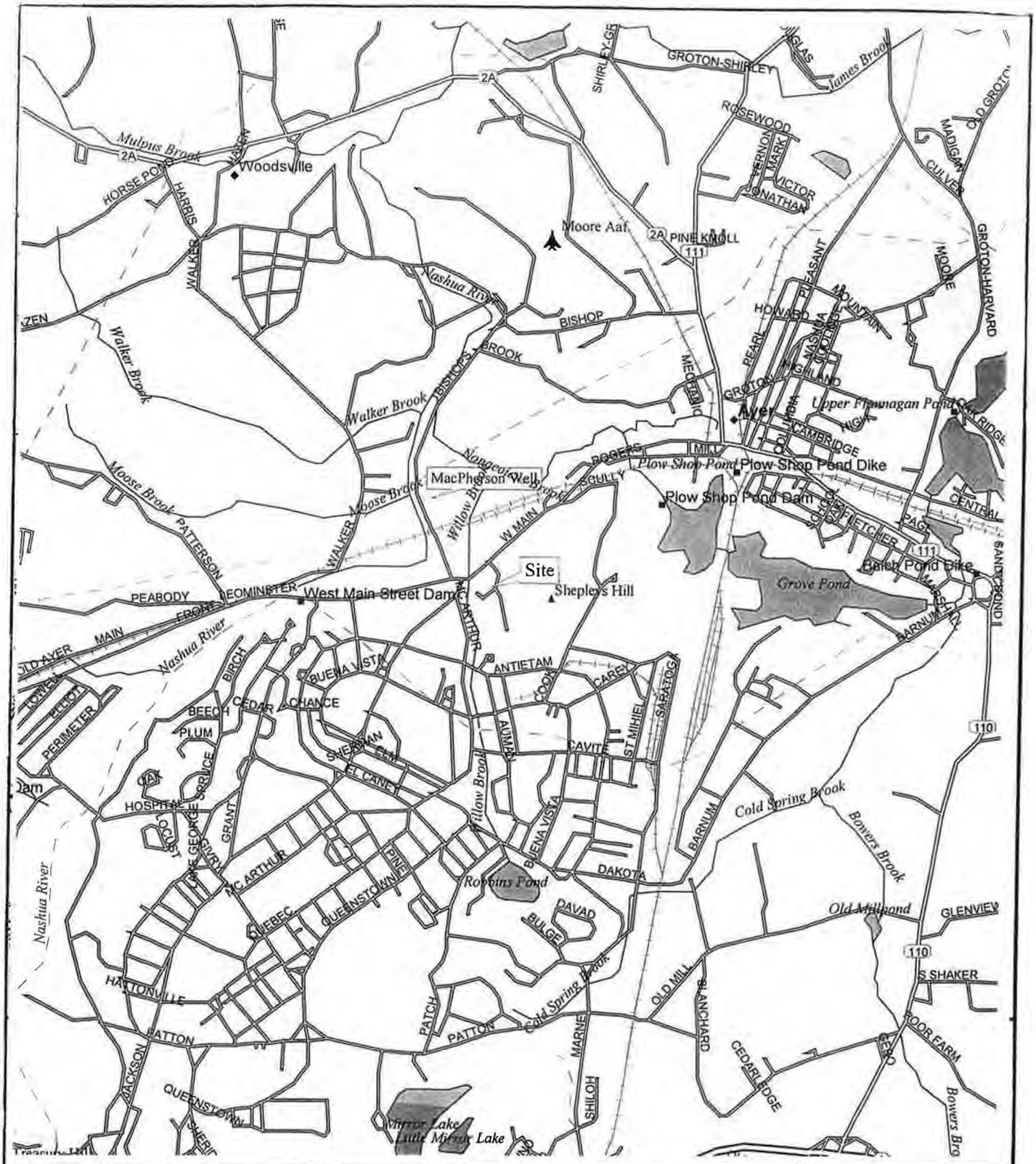
On behalf of the U.S Army Corps of Engineers, Roy F. Weston, Inc. (WESTON®) has prepared this Release Abatement Measure (RAM) Completion Report and Response Action Outcome (RAO) Statement for the Buildings 1004 and 1014 site at the former Fort Devens Verbeck Housing Complex (the Site). Transmittal forms for the RAO Statement (BWSC-104) and RAM Completion Report (BWSC-106) are provided as Attachments A and B, respectively.

The locations of the former Buildings 1004 and 1014 (the Site) at the former Fort Devens Verbeck Housing Complex were the subject of a RAM Plan which was submitted to the Massachusetts Department of Environmental Protection (MA DEP) on October 7, 1996 by Barnes and Jarnis, Inc. (B&J). The RAM was initiated to perform remedial activities associated with a release of fuel oil at the former locations of Buildings 1004 and 1014. During demolition of the two buildings, a pit containing oily residue, and oil-contaminated soil, were discovered beneath the concrete basement floor slab of each building. The releases of oil appeared to be associated with the former use of each basement as a boiler room, but did not appear to be associated with the underground storage tanks (UST), fuel supply lines or distribution systems which were previously removed from the buildings. Figure 1 shows the general Site location and Figure 2 shows the detailed location of Buildings 1004 and 1014 at the former Verbeck Housing Area in Devens, MA.

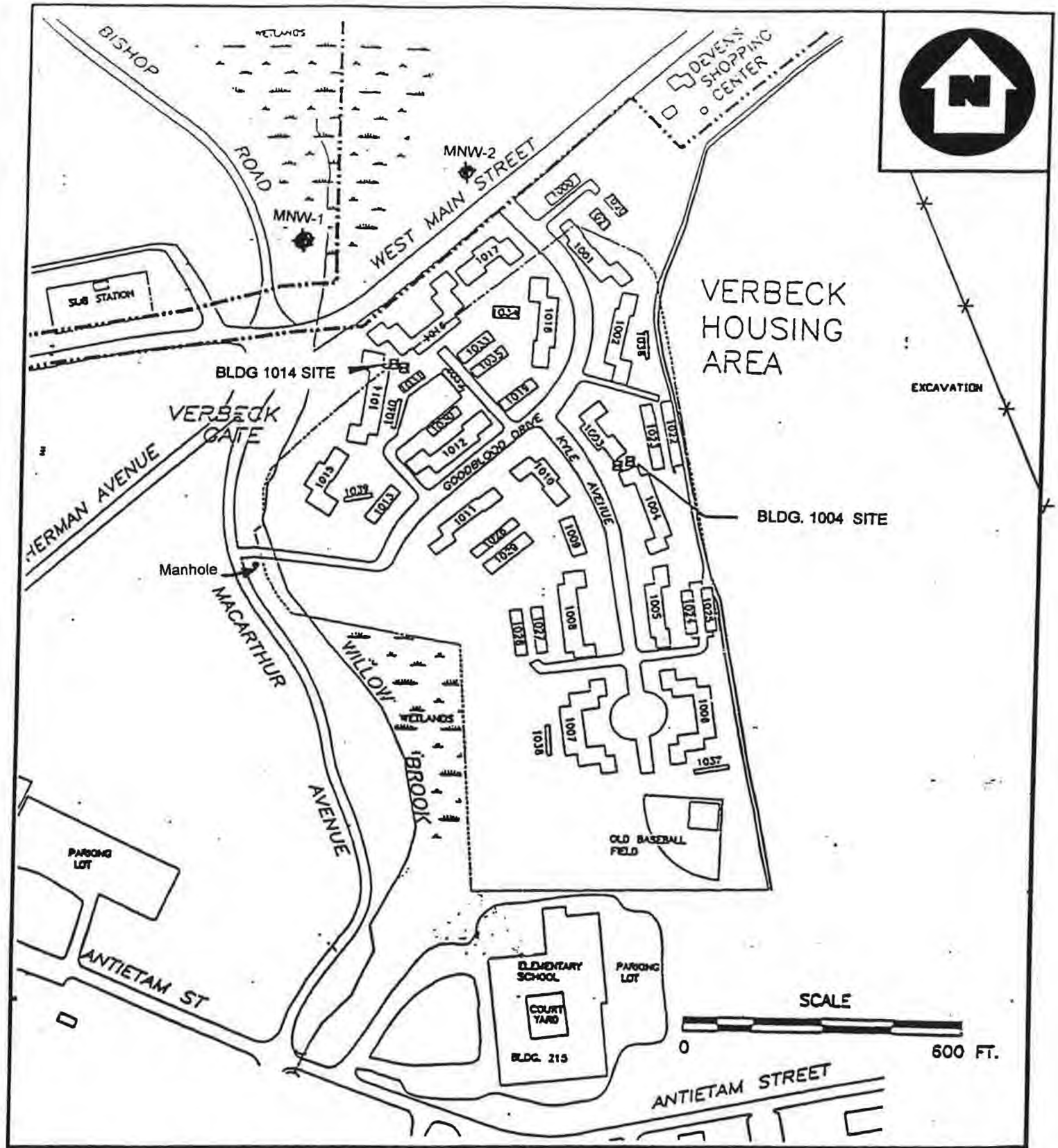
Soil samples collected by B&J from Building 1004 pit were analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOC) and polynuclear aromatic hydrocarbons (PAH). Detected concentrations of TPH and three PAH exceeded respective Reportable Concentrations (RC) for Soil Category RCS-1, which are applicable to the Site. The detected concentrations constituted a release of oil and hazardous materials (OHM) to the environment requiring notification to the MA DEP within 120 days, pursuant to the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000, Section 40.0315. A Release Notification Form was submitted on October 7, 1996 and the release was identified under the omnibus RTN for Devens (RTN # 2-11210).

The RAM Plan was prepared by B&J in accordance with 310 CMR 40.0444 to address proposed soil removal activities at Buildings 1004 and 1014. The MA DEP verbally approved the RAM Plan on October 11, 1996 (Barnes and Jarnis, Jan. 1997).

The Massachusetts Government Land Bank, c/o Devens Commerce Center (DCC), 43 Buena Vista Street, Building 12, Fort Devens, MA. 01433, assumed responsibility for "Phase I" of the RAM. Barnes and Jarvis performed the excavation and removal of 100 cubic yards each at Building 1004 and 1014. No additional excavation was done at Building 1014. However, upon excavation of the 100 cubic yards of contaminated soil at Building 1004, additional petroleum contamination was noticed in the soil, requiring additional RAM activities to be performed under "Phase II" of the RAM. In accordance with the approved RAM plan, the U. S. Army assumed responsibility for the implementation of Phase II of the RAM, which included excavation of up to a total of approximately 1400 cubic yards of contaminated soil by Roy F. Weston, Inc. (WESTON®) acting as the remedial action contractor for the U. S. Army. The Licensed Site Professional (LSP) of record was changed from Mr. Alton Day Stone of Pennoni Associates Inc. (PAI) (LSP #4058) to



VERBECK SITE – BLDGS. 1004 AND 1014 DEVENS, MASSACHUSETTS	DEPARTMENT OF THE ARMY NEW ENGLAND DISTRICT CORPS OF ENGINEERS WALTHAM, MASSACHUSETTS
GENERAL SITE LOCATION	WESTON MANAGERS DESIGNERS/CONSULTANTS DEVENS MASSACHUSETTS DRAWN DATE MAY 1997 FIGURE NO. 1



VERBECK HOUSING AREA DEVENS, MASSACHUSETTS	DEPARTMENT OF THE ARMY NEW ENGLAND DISTRICT CORPS OF ENGINEERS WALTHAM, MASSACHUSETTS
DETAILED LOCATION OF BLDGS. 1004 & 1014	WESTON MANAGERS DESIGNERS/CONSULTANTS DEVENS MASSACHUSETTS DRAWN DATE MAY 1997 FIGURE NO. 2

Mr. Anthony F. Andronico of WESTON (LSP #6105). The letter documenting the change in LSP of record is provided as Attachment C.

2.0 RELEASE AND SITE DESCRIPTIONS

For the purposes of this RAM Closure Report, "the Site" refers to the locations of the former Buildings 1004 and 1014, which were demolished and removed from the Devens property, and soil and/or groundwater in the vicinity of these building locations to which OHM were released. The Site is situated at the former Verbeck Housing Complex, a former residential housing complex owned by the U.S. Army, which has since been demolished.

2.1 Site Physical Features

The Site is a level, unwooded plain, approximately 23 acres in extent, formerly occupied by buildings of the former Verbeck Housing Complex, within Devens, MA. The Site is situated adjacent to West Main Street of Ayer township to the north, which is a public road, and is separated from the road by a chain-link fence. The Site is bound by MacArthur Avenue to the West, the former Fort Devens Elementary School and its baseball field to the south, and a wooded hill to the east, which are all properties within Devens. The demolition activities have left most of the Site bare with several trees from the original housing complex still intact. Soil on the Site is generally sandy, with some gravel. The depth to the water table at the Site ranges from 12 to 16 feet below ground surface at the Building 1004 location and approximately 9 to 12 feet below ground surface at the Building 1014 location.

2.2 Description of Release

Former Buildings 1004 and 1014 had boilers situated in the subgrade basement, which were used to provide steam heat for the housing complex. The boilers were fired with No. 2 and/or No. 4 fuel oil.

2.2.1 Description of Release at Building 1004.

On September 7, 1996, during removal of the concrete basement floor slab, releases of oil to soil were observed at two locations:

1) a small pit with concrete walls, located at the southeast end of the building, approximately 4-feet wide x 5-feet long. Apparently, the pit had not been recently used. The pit contained oil-stained soil, and dark, oily residue. A small pocket of water and oil was observed in the pit. The purpose of the pit is not known, but probably was associated with the boiler system.
2) a sump in the basement floor slab, with a soil bottom. The sump may have been used to discharge boiler blowdown. The overall area of oil-stained soil observed at Building 1004 was approximately 10 feet x 20 feet. (Barnes and Jarnis, Jan. 1997).

A sample collected by B&J on September 9, 1996 from the oily soil in a pit beneath the basement floor slab of Building 1004 was analyzed for TPH, VOC and PAH. The following compounds and concentrations were detected: TPH - 5,000 ppm, benzo(a)anthracene- 1.8 ppm, benzo(b)fluoranthene - 23 ppm, and 2-methylnaphthalene - 3.2 ppm. VOCs were not detected. The detected concentrations exceeded respective RCS-1 Standards applicable to the Site.

A Release Notification Form to include both Building 1004 and Building 1014 releases, was submitted to the MA DEP under 120-day reporting conditions on October 7, 1996 (Barnes and Jarnis, 1997).

2.2.2 Description of Release at Building 1014.

On September 7, 1996, during removal of the concrete basement floor slab, releases of oil to soil were observed at two locations:

1) a small pit with concrete walls, located at the southeast end of the building, approximately 2-feet wide x 4-feet long. Apparently, the pit had not been recently used. The pit contained oil-stained soil, and dark, oily residue. A small pocket of water and oil was observed in the pit. The purpose of the pit is not known, but probably was associated with the boiler system.
2) a sump in the basement floor slab, with a soil bottom. The sump may have been used to discharge boiler blowdown. The overall area of oil-stained soil observed at Building 1004 was approximately 4 feet x 8 feet. (Barnes and Jarnis, Jan. 1997).

3.0 RELEASE ABATEMENT MEASURES

On October 1, 1996, a RAM Plan was prepared by PAI in accordance with 310 CMR 40.0444 and submitted to MA DEP, which was verbally approved by MA DEP on October 11, 1996.

The RAM Plan identified two phases of the RAM. Phase I of the RAM involved the excavation of up to 100 cubic yards of OHM-contaminated soil at each former building location, soil stockpiling, and disposal of contaminated soil via off-site recycling at a MA DEP-approved recycling facility, landfill disposal and re-use as a daily cover, or disposal at a RCRA facility. If additional excavation and remedial activities were necessary, Phase II was to be performed by the U. S. Army.

Phase I activities under the RAM at the former Building 1014 were conducted by B&J. Excavation of soils contaminated with oil and hazardous materials (OHM) was performed and completed on October 17, 1996. The soil contamination extended down to the water table which was encountered at 12 feet below grade. However, the soil contamination was not observed to extend below the water table. Quantities of excavation did not extend beyond the 100 cubic yards limit for Phase I of the RAM Plan (Barnes and Jarnis, Jan. 1997). A RAM Phase I Completion Report for Building 1014 was submitted by B&J in January 1997.

Phase I activities under the RAM at the former Building 1004 were performed by B&J on October 17 and 18, 1996. These activities included the excavation and off-site disposal of 100 cubic yards of OHM-contaminated soil. During the excavation activities, additional contamination was observed in the northern side of the excavation at the former location of the two 5,000-gallon USTs previously removed from the Site. The contamination appeared to extend below the water table. The soil was heavily stained and had a strong petroleum odor, and an oily sheen was also noticed on the water. Since the quantity of contaminated soil was greater than 100 cubic yards, further remedial action was turned over to the U. S. Army to initiate and perform Phase II activities under

the RAM Plan. The contaminated soil generated under the Phase I activities were transported by Bardon Trimount Environmental Services under Bill of Lading to their facility located at 651 Lake Street, Shrewsbury, Massachusetts (Barnes and Jarnis, Jan. 1997). A RAM Phase I Completion Report for Building 1004 was submitted by B&J in January 1997.

Phase II of the RAM Plan allowed for excavation of contaminated soils in excess of the 100 cubic yard threshold, excavation below the water table, dewatering to facilitate excavation, or additional response actions. Soil excavation and management in Phase II was to be performed in the same manner as in Phase I of the RAM Plan.

Remedial activities for Phase II of the RAM were performed by WESTON during November and December, 1996, in accordance with the approved RAM plan, except the volume of contaminated soil encountered was considerably greater than the 500 cubic yards initially anticipated, now totaling approximately 1400 cubic yards. A RAM Modification Form was filed with MA DEP on 18 December, 1996. MA DEP approved excavation of contaminated soils up to 1500 CY.

Phase II field activities are described in Section 3.1 below.

3.1 Excavation and Field Screen Sampling

WESTON mobilized to the former Building 1004 site on November 20, 1996. A dewatering system was mobilized to the site to facilitate excavation activities below the groundwater table. The dewatering system consisted of an oil/water separator and a filtration unit with two trains of two bag filters each and two granular activated carbon (GAC) columns.

Before commencement of excavation activities by WESTON, a concrete pad from the basement floor of the former boiler room was visible at the bottom of the excavation. Visible staining of the soil underneath the concrete pad was also noticed. An oily sheen on the groundwater and a strong petroleum odor in the soil on the north side of the concrete pad were also noticed. There was no sheen on the groundwater on the southern side of the concrete pad and the underlying silty soil in this area did not have any visible coloration or petroleum odor.

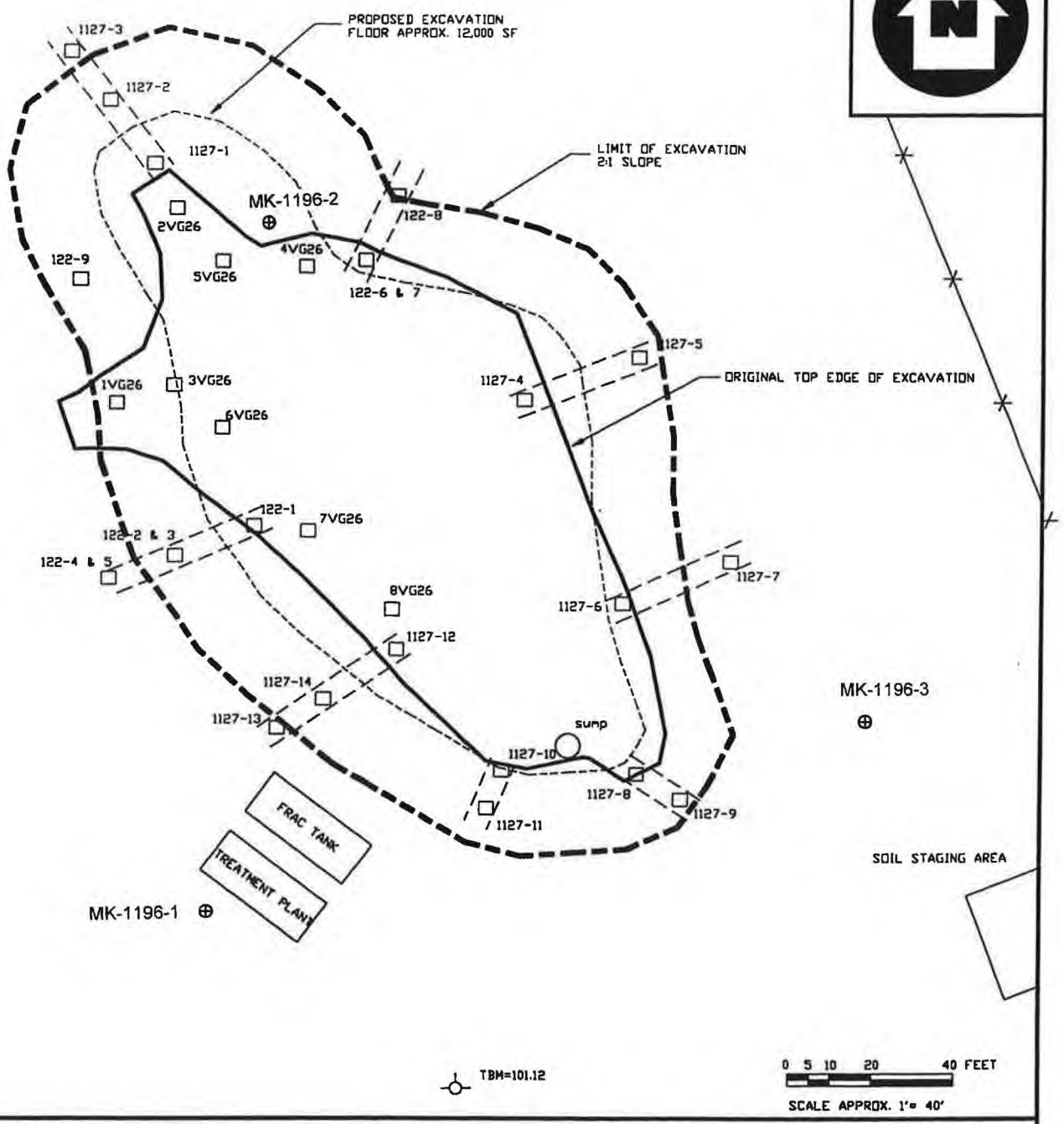
Preparations for dewatering were made by first placing a corrugated steel pipe to act as a sump, in a pit dug on the southern side of the excavation. This sump was surrounded by stone to prevent silt from being pumped into the oil/water separator and the GAC filtration system. Dewatering operations are described in Section 3.3 below.

WESTON began excavation activities by removing the concrete pad and placing it in a staging area adjacent to the excavation for future disposal. This staging area was prepared with 8-mil clear plastic sheets with berms all around. Pieces of the concrete slab were placed inside the bermed area and covered with plastic sheets to prevent rainwater or snow from coming into contact with the concrete slab. Presently, this concrete debris is being stored at the Central Storage Facility for future disposal. The oily sheen on the water was removed using sorbent pads and booms which have been stored in lined drums in a secure, lined and bermed staging area at the Central Storage Facility, awaiting offsite disposal.

The lateral extent of the petroleum contamination around the former location of the boiler room was not readily evident from the excavation existing at the end of Phase I of the RAM. Therefore, WESTON excavated test pits and trenches around the perimeter of the existing excavation to investigate the lateral extent of the soil contamination. These test pits were excavated down to the water table (approximately 13 ft. bgs). Figure 3 shows the locations of the test pits and trenches. Soil samples were collected from the bottom of these test pits and trenches and analyzed for TPH by modified method 418.1 using a Non-Dispersive Infrared Spectrometer (NDIR). Field screening results for these samples indicated a more widespread area of soil contamination than originally anticipated, thereby establishing new estimated limits of excavation as shown in Figure 4. This resulted in a higher estimate of contaminated soil, at approximately 1400 CY of soil.

Overburden soils were removed to a depth of approximately 6-8 ft. bgs around the new limits of excavation and sampled at regular intervals using headspace analysis and olfactory check to ensure that there was no contamination in the overburden soils in the 0-8 ft. bgs layer. Overburden soils were stockpiled adjacent to the excavation area for future backfill use. Between the depth of 8 ft. - 15 ft. bgs, soils were removed in 1-2 ft. layers and sampled using the NDIR at a frequency of one sample per approximately 100 cubic yards. Soils showing contamination greater than 500 ppm TPH were stockpiled as contaminated in a temporary stockpile area near the excavation area. Due to the large lateral extent of the excavation area, a gridding system was established with 15 ft x 15 ft. grids to spread field screening locations uniformly, as shown in Figure 4. Field screening samples were identified with a grid number and depth designation. During the excavation activities, the depth of the water table was approximately 12 ft. bgs. Soils were excavated in approximately 2 ft. layers and on an average, three levels of sampling were performed in each grid location -. level 01 (at 10 ft. bgs), level 02 (at 12 ft. bgs) and level 03 (at 14-15 ft. bgs). Due to the large area of the excavation and the high recharge rate of groundwater, excavation was performed in sections to minimize the infiltration of groundwater, and to allow excavation equipment into the middle of the excavation without jeopardizing equipment and personnel safety. Field screening results are shown in Attachment D of this document.

Field screening results indicated that the soil contamination was predominantly limited to a 2-3 ft. layer at a depth of 11-14 ft. bgs, where the soil was gravelly. At several locations in the vicinity of the former concrete pad location, the soils had a dark coloration from heavy petroleum contamination and a strong petroleum odor. During the excavation of these pockets of soil with heavy petroleum contamination, a dark sheen was introduced on the groundwater in these locations due to contact with the contaminated soil. Sorbent booms and pads were used to immediately mop up any floating product on the water until the water was clear of the product or sheen. These booms and pads were then stored in lined drums in a staging area pending characterization and future disposal at a licensed off-site disposal facility. Excavation was conducted to a depth of up to 2-3 ft. below the water table (approximately 14-15 ft. bgs) until field screening results indicated that TPH concentrations in the soil at the floor of the excavation was below cleanup criteria.



LEGEND

- TEST PIT
- FENCE
- LIMIT OF EXCAVATION
- TRENCH

VERBECK HOUSING AREA
FORMER BUILDING 1004
DEVENS, MASSACHUSETTS

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

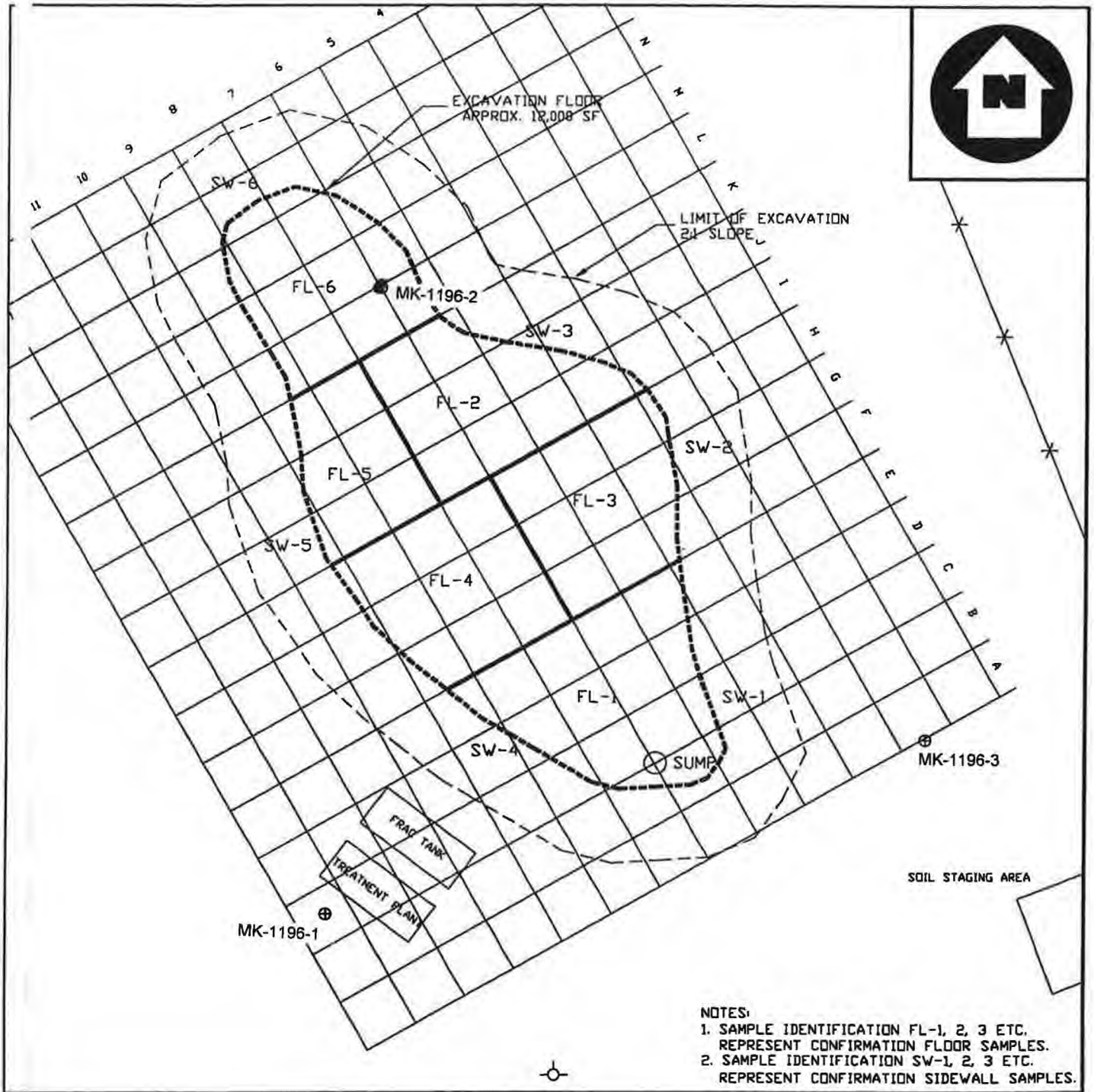
SITE SKETCH

LOCATION OF TEST PITS &
LIMITS OF EXCAVTION

WESTON MANAGERS DESIGNERS/CONSULTANTS ®
DEVENS MASSACHUSETTS

DRAWN MJW
DATE MAY 1997
FIGURE NO. 3

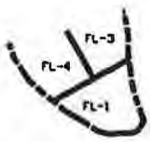
FILE IE:



LEGEND

LIMIT OF EXCAVATION

FENCE



BOUNDARY REPRESENTING CONFIRMATION SAMPLES AREAS

VERBECK HOUSING AREA
FORMER BUILDING 1004
DEVENS, MASSACHUSETTS

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

SITE SKETCH

SAMPLING LOCATIONS
FORMER BUILDING 1004

WESTON MANAGERS DESIGNERS/CONSULTANTS ®
DEVENS MASSACHUSETTS

DRAWN MJW
DATE MAY 1997
FIGURE NO. 4

Excavation was expanded in the lateral direction until field screening results indicated that the TPH concentrations of soils in the sidewalls were below cleanup criteria.

Approximately 1400 cubic yards of contaminated soil were excavated and stockpiled in the temporary stockpile area near the excavation area. After field screens indicated that the cleanup goal for soils had been reached, confirmation soil samples were collected for off-site laboratory analyses for Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH).

3.2 Dewatering

Dewatering of the excavation area was begun on the southern side of the excavation. Initially, approximately 8,000 - 10,000 gallons of water were pumped into the dewatering unit from the excavation area to facilitate excavation and sampling of the southern side of the excavation. Samples were collected from the influent, between carbon filters and the effluent of the filtration system and analyzed to ensure that the effluent was meeting the criteria of 1 ppm TPH to be discharged into the sanitary sewer system. The water samples were sent to Alpha Analytical Laboratories, Westboro, MA for analyses using the MA DEP methods for Extractable Petroleum Hydrocarbons (EPH)(Standard method), Volatile Petroleum Hydrocarbons (VPH) (Deluxe method) and Polynuclear Aromatic Hydrocarbons (PAH) by EPA method 8270. After analytical results indicated that the effluent met the discharge criteria, the DCC was notified and permission obtained before discharging the treated water into the sanitary sewer system. Figure 2 shows the location of the manhole along MacArthur Avenue at Devens where the treated water was discharged. A second batch of water samples was collected before additional water was discharged into the sanitary sewer system. Analytical results from the second batch of sampling indicated that the effluent met the discharge criteria into the sanitary sewer system, therefore, the treated water was discharged into the sanitary sewer system. A total of approximately 20,000 gallons of treated water was discharged into the sanitary sewer system. Table 1 summarizes positive analytical results for water samples collected from the dewatering unit. Attachment E contains the complete analytical result report for these samples.

3.3 Installation of Hydropunch and Monitoring Wells

Three hydropunch wells (mykrowells) were installed during the commencement of excavation activities at Building 1004, around the perimeter of the excavation area. These wells are identified as MK-1196-1 thru MK-1196-3 in Figure 3. The mykrowells were installed in order to investigate the lateral extent of contaminant migration in the groundwater and were located such as to encompass the estimated lateral boundaries of groundwater contamination. These mykrowells ranged in total depths from 15.0 to 17.0 feet bgs and utilized 10-ft screens at the bottom. Groundwater samples were collected from these mykrowells and analyzed at an offsite laboratory for MA DEP methods for EPH (Standard Method) and VPH (Deluxe Method), and PAH (EPA Method 8270). Analytical results indicated that there were elevated concentrations of EPH (34.4 ppm) in the sample from mykrowell MK1196-2, indicating contaminant migration in the

northwesterly direction. Concentrations of EPH, VPH and PAH were not detected in mykrowell samples MK1196-1 and MK1196-3.

At the conclusion of the excavation activities, additional hydropunch wells (mykrowells) were installed at the site. These are identified as MW-01 through MW-05 at the former Building 1014 location, and MW-06 through MW-10 near the former Building 1004 location, as shown in Figure 5. The mykrowells at Building 1014 location were installed to encompass the former location of the boiler room, which was surveyed from existing landmarks around the area. The mykrowells at the Building 1004 location were installed to intercept the general direction of groundwater flow away from Building 1004 (believed to be in the northwesterly direction). The depths of these mykrowells averaged approximately 19.0 ft. bgs. Mykrowell MW08 near Building 1004 could not be sampled since it was dry.

Table 2 summarizes the positive analytical results for EPH, VPH and PAH concentrations for groundwater samples from the mykrowells. Complete laboratory analytical reports are included in Attachment F.

In an effort to investigate the extent of contaminant migration in the groundwater away from the locations of Buildings 1004 and 1014, four permanent groundwater monitoring wells were installed at the Site during April 1997. Three of these wells were installed north and northwest of the Building 1004 site, and the fourth was installed north of Building 1014 as shown in Figure 5.
These wells were installed upon approval by MA DEP of their locations as proposed in a letter from WESTON®'s LSP to MA DEP on April 9, 1997 (included in Attachment G). Groundwater samples from these wells were analyzed by the MA DEP Method EPH (Deluxe). These monitoring wells are 2" standard PVC wells ranging in depth from 19 ft. bgs to 20 ft. bgs.

The locations of the permanent groundwater monitoring wells were based on the general flow of groundwater at the Site, which is in a northerly direction(ETA, 1995). The well locations were chosen such that they would not be within the footprint of any building structures that would be part of the proposed Job Corps Center (Miller Dyer and Spears, Inc.).

Additionally, two existing permanent monitoring wells MNW-1 and MNW-2 located north of West Main Street in Ayer (see Figure 2 for location) were sampled and analyzed for EPH Deluxe. These wells were sampled to investigate the potential for migration of TPH contamination towards the MacPherson well.

The locations of the twelve remaining hydropunch wells and six permanent monitoring wells (VBM-97-01X thru VBM-97-04X as well as MNW-1 and MNW-2) were surveyed, and the depths to groundwater were measured from the top of casing of each well during May 1997 (see table G-1 in Attachment G). This was done in order to determine the groundwater elevation and thereby, the direction of groundwater flow. A second round of groundwater sampling was performed during September 1997 per direction from MADEP to measure TPH concentrations in the groundwater as well as depth of the water table to evaluate contaminant concentrations in the groundwater due to seasonal variations (see Table G-1 in Attachment G for depth to water during September 1997). Figure 6 shows groundwater elevation contours derived from the measurements of groundwater

depths during May 1997, which indicates that the groundwater at the Site flows in a northerly direction from the Site towards the MacPherson well which is located approximately 2000 feet north of the Site (well shown in Figure 1). Groundwater elevations measured in September 1997 indicate that the groundwater flow continues to be in a northerly direction from the Site.

Table 3 summarizes the analytical results from groundwater sampling from the permanent monitoring wells performed during April 1997 as well as September 1997 . Attachment G contains well boring logs for these permanent monitoring wells.

3.4 Confirmation and Waste Characterization Sampling

A total of twelve confirmation soil samples were collected - six from the floor and six from the sidewalls. The floor samples were spaced uniformly over the footprint of the excavation (approximately 50 ft. apart) and the sidewall samples were spaced approximately 50 ft. apart. Figure 4 shows the locations where the confirmation soil samples were collected.

Analytical results from the confirmation sample analyses indicate that the concentrations no VPH or PAH compounds detected, and the detected concentrations of EPH in the soils of the floor and sidewalls of the excavation, at the conclusion of excavation activities, meet cleanup criteria. Table 4 summarizes the positive analytical results from offsite analyses of confirmation soil samples. Attachment H contains the complete laboratory analytical report from confirmation soil sampling.

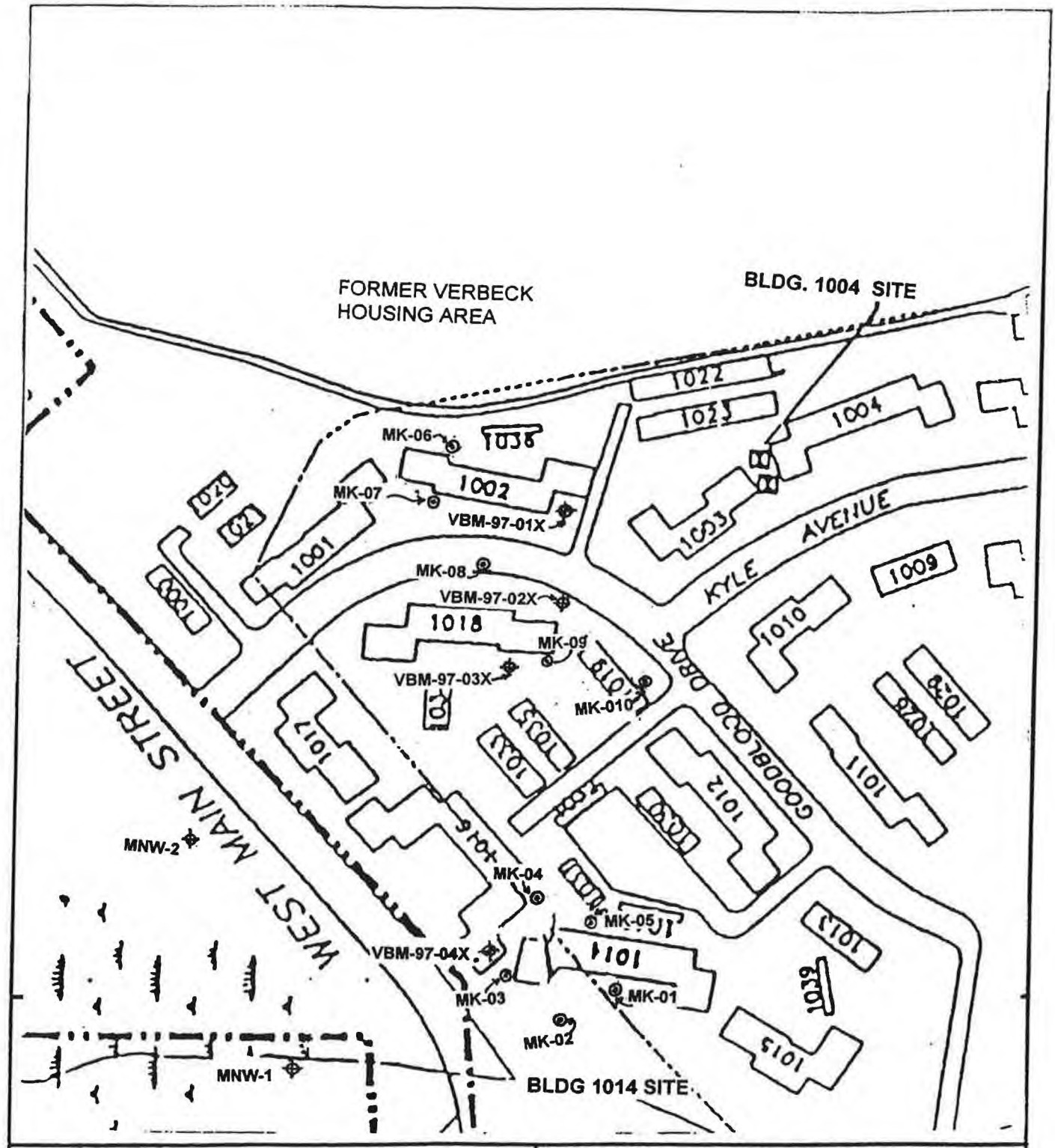
A total of seven waste characterization samples were collected as composites from the contaminated soil stockpile and sent for analyses for TPH by IR, VOCs by EPA Method 8260, Polychlorinated Biphenyls (PCBs)/Pesticides by EPA Method 8080, Total RCRA Metals and RCRA Characteristics. Attachment I contains analytical results from soil waste characterization analyses. These analytical results indicate that the contaminant concentrations in the excavated soils meet the MA DEP criteria for soil reuse as landfill cover per the MA DEP Policy #BWP-94-037, April 1994.

3.5 Backfill

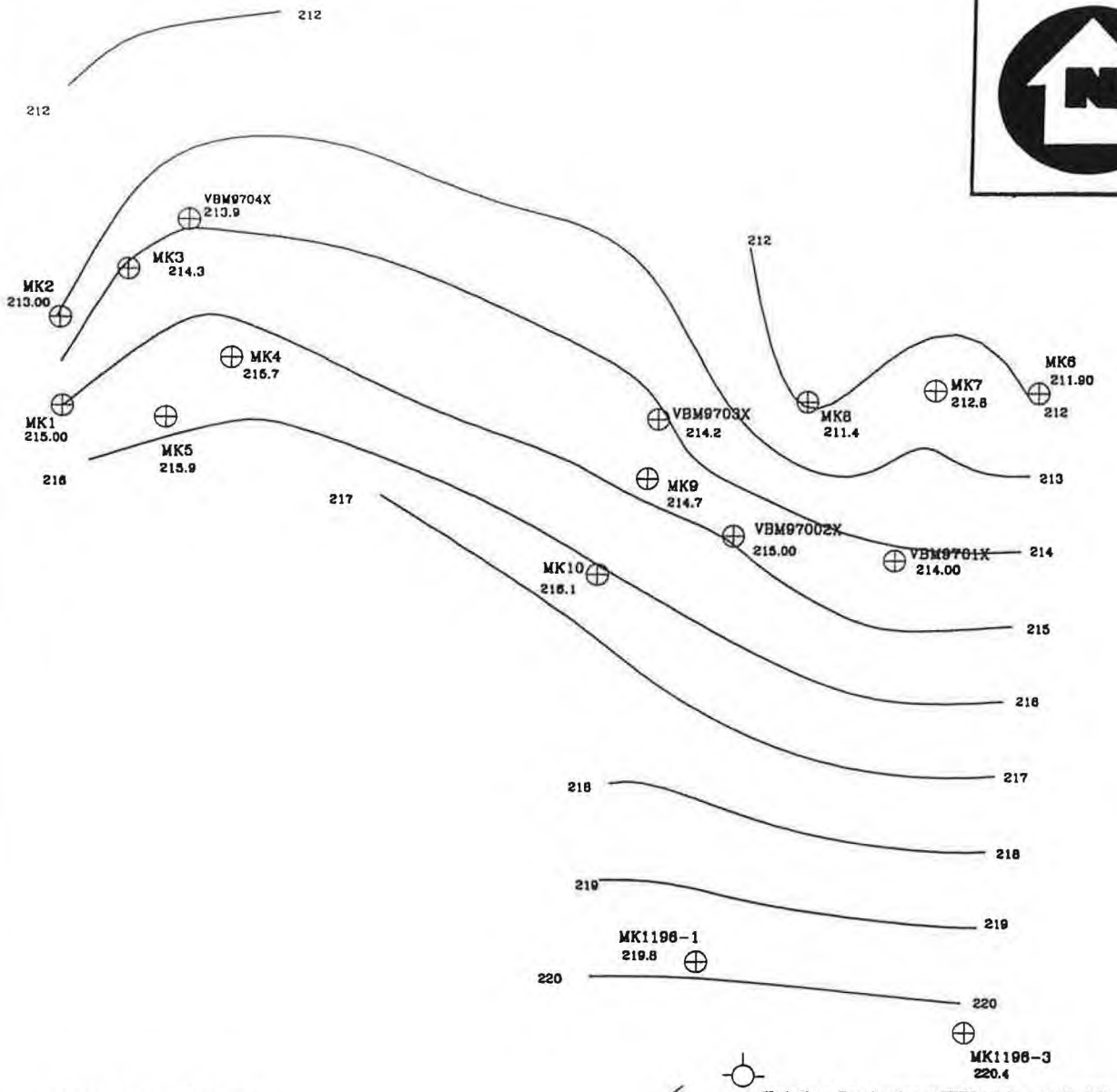
The excavation was backfilled with approximately 1400 cubic yards of clean imported fill material. The fill material was sampled prior to backfilling the excavation and analyzed at an offsite laboratory for VOCs, SVOCs, TPH, RCRA Metals, PCBs/Pesticides and RCRA Characteristics. Analytical results showed that the fill material did not have any exceedances of acceptable upper concentrations of these analytes (Attachment J). The fill material was imported after receipt of the analytical results and backfilling operations were performed thereafter.

4.0 RISK CHARACTERIZATION

This Risk Assessment (RA) evaluates potential risks of harm to human health, public welfare, safety, and the environment. This assessment was conducted in accordance with the



VERBECK SITE -BLDGS. 1004 AND 1014 DEVENS, MASSACHUSETTS	DEPARTMENT OF THE ARMY NEW ENGLAND DISTRICT CORPS OF ENGINEERS WALTHAM, MASSACHUSETTS
LOCATION OF MONITORING WELLS	WESTON MANAGERS DESIGNERS/CONSULTANTS DEVENS MASSACHUSETTS DRAWN DATE MAY 1997 FIGURE NO. 5



LEGEND

⊕ Monitoring Well Location

MK1196-3 Monitoring Well Number

220.4 Groundwater Elevation

Groundwater Elevations relative to Temp. Bench Mark (existing fire hydrant(TBM Elev. 228.96)

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

GROUNDWATER ELEVATIONS
VERBECK SITE AREA

WESTON MANAGERS DESIGNERS/CONSULTANTS
DEVENS MASSACHUSETTS

DRAWN

DATE MAY 1997

FIGURE NO. 6

Massachusetts Contingency Plan (MCP). Current and reasonably foreseeable future human exposure to contaminants at this Site would occur predominantly through contact with groundwater or soil. Each contaminant found at the Site has an existing or proposed MCP Method 1 Standard. Proposed standards for the EPH and VPH compounds were taken from the January 17, 1997 public hearing draft revisions to the MCP, without modification. By definition, the use of these standards is considered a Method 2 RA..

4.1 Identification of Human Receptors

Proposed future use for the Site is a Job Corps Center with residential dormitories. Therefore, potential future human receptors will include on-site residents.

The Site is situated within Zone II of the MacPherson well, a source of water supply for Devens and is therefore subject to MCP Method 1, category GW-1 groundwater standards. The MacPherson well is located approximately 2,000 feet northwest of the Site area. Populations obtaining drinking water from this aquifer are potential human receptors.

4.2 Identification of Environmental Receptors

Based on the proposed layout of the Job Corps Center buildings at the Site (Miller Dyer and Spears, Inc. Oct. 1996), a majority of the Site will be covered by buildings and paved areas. No wildlife communities have been identified on-site. Willow Brook is located approximately 800 feet west of Building 1004 and 150 feet west of Building 1014. The Site does not lie within the 100-year floodplain. The nearest environmental receptor is a small wetland area located southwest of the Site along Willow Brook. No other sensitive receptors are located in the immediate vicinity of the former locations of Buildings 1004 and 1014.

4.3 Identification of Site Activities and Uses

As detailed in the sections 4.1 and 4.2 above, future use for the Site is for a Job Corps Center with residential dormitories.

4.4 Identification of Site Groundwater and Soil Categories

Groundwater at the Site is subject to MCP Method 1 GW-1 Standards as the Site is within a Zone II area. Because construction in the area is planned, the entire site will conservatively be assumed to meet GW-2 standards. Finally, as with all groundwater in Massachusetts, category GW-3 also applies. Due to the proposed nature of the future use being residential, frequency of use by children and adults is conservatively considered high with a high intensity of use, and therefore MCP Method 1 soil category S1 is applicable to the Site.

4.5 Identification of Contaminants of Concern and Exposure Points

4.5.1 Soil at Building 1014 location

After contaminated soil excavation was completed at Building 1014 location, a total of six confirmation soil samples were collected by B&J and analyzed for TPH by modified EPA Method 8100, PAH by EPA Method 8100 and VOCs by EPA Method 8020. Analytical results for these soil samples indicated no detectable concentrations of these analytes (B&J, Jan.1997). Based on this data, soil is not considered an exposure point at Building 1014 location of the Site.

4.5.2 Soil at Building 1004 location

After contaminated soil excavation was completed at Building 1004 location, a total of twelve confirmation soil samples were collected from the bottom and sidewalls of the excavation at depths less than 15 feet below ground surface. These samples were analyzed by MA DEP Method for EPH and VPH. Analytical results shown in Table 4 indicate that soils at depths less than 15 feet below ground surface show concentrations below both current MCP Method 1 Standards for TPH and proposed MCP Method 1 Standards for the various aliphatic and aromatic hydrocarbon ranges.

4.5.3 Groundwater

Groundwater samples were collected by WESTON as follows:

- 2 dewatering influent samples (1004-I1-1121 and 1004-I2-1126)
- 13 hydropunch monitoring wells (MK-01 thru 05 at Bldg. 1014; MK-1196-1 thru 3 and MK-06 thru 10 at Bldg. 1004)
- 4 newly installed monitoring wells (VBM-97-01X thru VBM-97-04X)
- 2 existing monitoring wells (MNW-1 and MNW-2)

The influent and hydropunch monitoring well samples were analyzed for EPH and VPH by the Draft MA DEP Methods (note - the PAHs in the influent samples were analyzed via EPA Method 8270 to achieve lower detection limits than possible using EPH Methods). The new and existing monitoring wells were analyzed for EPH. The groundwater analytical results are summarized in Tables 1 through 3.

4.5.4 Contaminants of Concern

Based on the soil and groundwater analytical data, contaminants of concern for groundwater at both locations (Building 1004 and Building 1014), and for soil at Building 1004 location have been identified as summarized in Table 5. As stated previously, since no contaminants were detected in soil at Building 1014 location, it has not been included as an exposure point.

4.6 Identification of Exposure Point Concentrations

4.6.1 Soil

Table 6 shows the average concentrations of each compound of concern detected in category S1/GW-1 (soils at a depth less than 15 feet below ground surface). Only those locations where soil samples showed detectable concentrations of VPH or EPH were included in the average concentration calculation for Building 1004. These samples are 1004-SW1, 1004-SW3, 1004-FL1 and 1004-FL5D. For non-detect results for any target analytes in these samples, a value of one-half of the analytical detection limit was used to calculate the average concentration. These averaged concentrations represent the exposure point concentrations for soils at depths less than 15 feet below ground surface. No contamination was found at depths greater than 15 feet deep at Building 1004 location. Average soil concentrations were compared to the MCP Method 1 Standards for soil category S-1 which is the most stringent category, and the comparison indicates no exceedance of these standards.

4.6.2 Groundwater

Analytical results of groundwater samples where contaminants were detected were considered exposure points. Samples included those from the influent of the dewatering and filtration unit, hydropunch wells and permanent monitoring wells as included in Tables 2 and 3. The sample results have been averaged over time to represent exposure point concentrations. The calculated exposure point concentrations are individually compared to the MCP Method 1 GW-1 Standards as shown in Table 7.

Data from well MK-1196-2 and the first influent sample (1004-I1-1121) were not used in the calculation of the exposure point concentrations, because the relatively higher concentrations detected in those samples are not representative of post-remediation conditions. Well MK-1196-2 was removed when excavation extended beyond its location. The second influent sample (1004-I2-1126) is considered to be a more representative sample from the excavation and dewatering area.

4.7 Characterization of Risk of Harm

The contaminants of concern at the Site are petroleum-related compounds. As discussed in Section 4.6 above, concentrations of contaminants of concern in the soil or groundwater at both Building 1004 and Building 1014 do not exceed applicable MCP Method 1 Standards.

The groundwater and average soil concentrations at the Site do not exceed Method 1 standards for category S1/GW-1 soil or category GW-1, GW-2 or GW-3 groundwater. Based on the proposed future use of the Site, and in accordance with 310 CMR 40.1012 (2)(b), an activity and use limitation to control future exposure is not required. Therefore, there is concluded to be no significant risk of harm posed to human health, public welfare, or the environment posed for both current and future conditions.

The release of chemicals at the Site associated with the former Buildings 1004 and 1014 have resulted in residual contamination of soil and groundwater. The residual contaminants in soil and groundwater do not pose a threat of fire or explosion, and based on the nature of the contamination, will not exhibit corrosive, reactive, or flammable characteristics described in 310 CMR 40.0347. Therefore, there is concluded to be no significant risk of harm to safety posed by the contaminants detected at the Site under both current and reasonably foreseeable future uses.

5.0 MANAGEMENT OF REMEDIATION WASTE

Remediation waste generated from Phase II of the RAM at the Building 1004 site include approximately 1400 cubic yards of petroleum-contaminated soil, five (5) 55-gallon drums of petroleum-contaminated sorbent pads, booms and personnel protective gear (Tyvek suits, gloves, booties, etc), twenty one (21) 55-gallon drums of spent carbon resulting from the evacuation of the carbon columns associated with the dewatering and filtration units and one half (0.5) drum of petroleum contaminated rinse waters resulting from the decontamination of the oil-water separator. The spent carbon, sorbent pads and booms were disposed of at BFI Carbon Limestone Facility in Lowelville, Ohio(see Attachment K for copies of the Hazardous Waste Manifest and Disposal Certificates). The oily rinse waters were disposed of at United Industrial in Meriden, Connecticut.

The excavated TPH-contaminated soils have been stored in the Central Storage Facility stockpile area at Devens. These soils have been placed over a 20-mil High-Density Polyethylene (HDPE) liner in a bermed staging area. A drainage system consisting of perforated PVC pipes and a collection sump have also been installed to collect any leachate from the stockpiled soil. The contaminated soil stockpile has been covered with a 10-mil reinforced HDPE liner with factory-welded seams.

6.0 FEASIBILITY OF ACHIEVING BACKGROUND

Based on analytical results of confirmatory soil samples for EPH and VPH, EPH compounds were detected above the analytical detection limit and assumed background levels for three of the twelve soil samples, at Building 1004. However, these EPH concentrations are below the MCP Method 1 Standard category S-1 for soils. Soil concentrations were at the assumed background levels (non-detect) at Building 1014.

Analytical results of groundwater samples from hydropunch and permanent monitoring wells indicate the presence of EPH compounds above analytical detection limits and assumed background levels. In accordance with 310 CMR 40.0860, WESTON® has evaluated the feasibility of reducing the concentration of petroleum hydrocarbons in the subsurface soils and groundwater to background levels. While it is technically feasible to excavate the soils (former boiler room of Building 1004) and treat the groundwater in the vicinity of the source(s) of contamination in order to meet background levels, the additional cost to excavate the soil and

treat the groundwater is disproportionate to the incremental benefit of risk reduction, environmental restoration and monetary and non-pecuniary values.

7.0 CONCLUSIONS

At the former location of Buildings 1004 and 1014, a release of OHM to soil and groundwater was identified during site demolition. A RAM was performed which included recycling of approximately 100 CY of TPH-contaminated soil from the Building 1014 location, and removal of approximately 1400 CY of TPH-contaminated soil at the Building 1004 location. In addition, approximately 20,000 gallons of groundwater were pumped from the Building 1004 location and treated by GAC filtration. Following remediation, confirmatory soil and groundwater sampling was performed through the installation of thirteen hydropunch wells, and four new and two existing permanent monitoring wells. Analytical results from confirmation soil sampling performed by WESTON® and B&J indicate that all soils with TPH concentrations above the cleanup goal of 500 ppm have been removed from the Building 1004 and Building 1014 locations.

A Method 2 Risk Assessment was performed which indicates that the residual levels of hydrocarbons remaining in soil and groundwater do not pose a significant risk of harm to human health, safety, public welfare, and the environment. Although, residual contamination exists in soil and groundwater at levels which exceed background, the additional cost to achieve background conditions at the Site are disproportionate to the incremental benefit of risk reduction, environmental restoration and monetary and non-pecuniary values. As a result, no further actions are required at this site and a Class A-2 Response Action Outcome Statement is attached to this RAM Completion Report.

REFERENCES

Barnes and Jarnis, Inc., Release Abatement Measure, Phase I Completion Report, MA DEP RTN 2-11210 for Verbeck Housing Complex- Building 1004, January 1997.

Barnes and Jarnis, Inc., Release Abatement Measure, Phase I Completion Report, MA DEP RTN 2-11210 for Verbeck Housing Complex- Building 1014, January 1997.

Massachusetts Department of Environmental Protection, Reuse and Disposal of Contaminated Soils at Landfills, Bureau of Waste Prevention Interim Policy # BWP-94-037, April 1994.

Massachusetts Department of Environmental Protection, Massachusetts Contingency Plan, 9 September 1996 and Revisions dated October 31, 1997.

Miller Dyer and Spears, Inc. Composite Utility Plan, Fort Devens Job Corps Center, Drawing No. C3, 31 October 1996.

Engineering Technologies, Inc., "Detailed Flow Model for Main and North Post, Fort Devens, MA, May 19, 1995.

TABLE 1
POSITIVE ANALYTICAL RESULTS OF WATER SAMPLES FROM THE WATER TREATMENT PLANT

	ROUND 1 SAMPLING			ROUND 2 SAMPLING		
SAMPLE ID	**1004-I1-1121**	**1004-C1-1121**	**1004-E1-1121**	**1004-I2-1126**	**1004-C2-1126**	**1004-E2-1126**
Units	**(ug/l)**	**(ug/l)**	**(ug/l)**	**(ug/l)**	**(ug/l)**	**(ug/l)**
Sample Location	**Influent**	**Between Carbo columns**	**Effluent**	**Influent**	**Between Carbon columns**	**Effluent**
Date Sampled	**11/21/96**	**11/21/96**	**11/21/96**	**11/26/96**	**11/26/96**	**11/26/96**
VPH						
C5-C8 Aliphatics	ND	ND	ND	ND	ND	ND
C9-C12 Aliphatics	290	ND	ND	67	ND	ND
C9-C10 Aromatics	79	ND	ND	16	ND	ND
o-Xylene	2.4	ND	ND	ND	ND	ND
Naphthalene	18	ND	ND	ND	ND	ND
EPH						
C9-C18 Aliphatics	4120	600	417	ND	ND	ND
C19-C36 Aliphatics	1030	ND	ND	ND	ND	ND
C10-C22 Aromatics	3130	3300	ND	158	ND	ND
PAH						
Acenaphthene	0.54	ND	ND	ND	ND	ND
Naphthalene	0.8	ND	ND	ND	ND	ND
Phenanthrene	1.6	ND	ND	ND	ND	ND
Pyrene	0.95	ND	ND	ND	ND	ND
2-Methylnaphthalene	2.3	ND	ND	ND	ND	ND

TABLE 2
POSTIVE ANALYTICAL RESULTS OF WATER SAMPLES FROM HYDROPUNCH WELLS

SAMPLE ID	MK-1196-1	MK-1196-2*	MK-1196-3	MK-1196-3D	1014-MW-01	1014-MW-02	1014-MW-03	1014-MW-04	1014-MW-05	1004-MW-01
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Date Sampled	11/22/96	11/22/96	11/22/96	11/22/96	1/22/97	1/22/97	1/22/97	1/22/97	1/22/97	1/21/97
VPH										
C5-C8 Aliphatics	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND
C9-C12 Aliphatics	ND	27.5	ND	ND	ND	ND	ND	ND	ND	ND
C9-C10 Aromatics	ND	170	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	23	ND	ND	ND	ND	ND	ND	ND	ND
EPH										
C9-C18 Aliphatics	ND	2270	ND	ND	86	ND	ND	97	ND	118
C19-C36 Aliphatics	ND	57.4	ND	ND	360	250	ND	ND	ND	245
C10-C22 Aromatics	ND	32100	ND	ND	ND	ND	ND	ND	ND	48
PAH										
Phenanthrene	ND	70	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ND	16	ND	ND	ND	ND	ND	ND	ND	ND

Note: Hydropunch well MK-1196-2 was removed during excavation since limits of soil contamination extended around the well location

TABLE 2

POSTIVE ANALYTICAL RESULTS OF WATER SAMPLES FROM HYDROPUNCH WELLS

SAMPLE ID	1004-MW-02	1004-MW-04	1004-MW-04D	1004-MW-05
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Date Sampled	1/22/97	1/23/97	1/23/97	1/21/97
VPH				
C5-C8 Aliphatics	ND	ND	ND	ND
C9-C12 Aliphatics	ND	ND	ND	ND
C9-C10 Aromatics	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
EPH				
C9-C18 Aliphatics	105	ND	ND	ND
C19-C36 Aliphatics	84	131	ND	ND
C10-C22 Aromatics	81	337	ND	69
PAH				
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

TABLE 3

POSITIVE ANALYTICAL RESULTS OF GROUNDWATER SAMPLES FROM PERMANENT MONITORING WELLS

SAMPLE ID	VBM-97-01X	VBM-97-02X	VBM-97-03X	VBM-97-04X	VBM-97-04XA	MNW-1	MNW-2
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Date Sampled	4/17/97	4/17/97	4/17/97	4/17/97	4/17/97	4/17/97	4/17/97
EPH							
C9-C18 Aliphatics	90	72	168	150	130	72	89
C19-C36 Aliphatics	58	ND	ND	ND	ND	ND	ND
C10-C22 Aromatics	27	40	176	210	153	83	43

SAMPLE ID	VBM-97-01X2	VBM-97-02X2	VBM-97-03X	VBM-97-03X2	VBM-97-04X2	MNW-12	MNW-22
Units	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Date Sampled	9/23/97	9/23/97	9/23/97	9/23/97	9/23/97	9/23/97	9/23/97
EPH							
C9-C18 Aliphatics	73	ND	ND	ND	ND	ND	ND
C19-C36 Aliphatics	ND	ND	ND	ND	ND	ND	ND
C10-C22 Aromatics	ND	ND	ND	ND	ND	22	ND

Table 4
SUMMARY OF POSITIVE ANALYTICAL RESULTS OF CONFIRMATION
SOIL SAMPLES

SAMPLE ID	1004-SW1	1004-SW2	1004-SW3	1004-SW4	1004-SW5	1004-SW6	1004-FL1	1004-FL2	1004-FL3	1004-FL4	1004-FL5	1004-FL5D	1004-FL6
Units	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Date Sampled	12/4/96	12/4/96	12/23/96	12/23/96	12/23/96	12/23/96	12/4/96	12/23/96	12/5/96	12/23/96	12/23/96	12/23/96	12/16/96
VPH													
C5-C8 Aliphatics	1.93	ND	ND	ND	ND	ND	7.83	ND	ND	ND	ND	ND	ND
C9-C12 Aliphatics	3.3	ND	ND	ND	ND	ND	84.3	ND	ND	ND	ND	ND	ND
C9-C10 Aromatics	0.602	ND	ND	ND	ND	ND	18.7	ND	ND	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND	ND	ND	0.217	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	3.13	ND	ND	ND	ND	ND	ND
EPH													
C9-C18 Aliphatics	ND	ND	ND	ND	ND	ND	113	ND	ND	ND	ND	ND	ND
C19-C36 Aliphatics	ND	ND	ND	ND	ND	ND	21.7	ND	ND	ND	ND	ND	ND
C10-C22 Aromatics	ND	ND	81.3	ND	ND	ND	56.6	ND	ND	ND	ND	8.46	ND

Table 5
IDENTIFICATION OF CONTAMINANTS OF CONCERN

COMPOUND	DETECTED IN SOIL SAMPLES (BUILDING 1004)	DETECTED IN GROUNDWATER (BLDGS. 1004 & 1014)
VPH		
C5-C8 Aliphatics	x	
C9-C12 Aliphatics	x	x
C9-C10 Aromatics	x	x
o-Xylene	x	
Naphthalene	x	x
EPH		
C9-C18 Aliphatics	x	x
C19-C36 Aliphatics	x	x
C10-C22 Aromatics	x	x
Acenaphthene	x	
Benzo(a)anthracene	x	
Benzo(a)pyrene	x	
Benzo(b)fluoranthene	x	
Benzo(ghi)perylene	x	
Benzo(k)fluoranthene	x	
Chrysene	x	
Fluoranthene	x	
Indeno(1,2,3-c,d)pyrene	x	
Naphthalene	x	
Phenanthrene	x	
Pyrene	x	
2-Methylnaphthalene		x

x- indicates detection of contaminant in the soil or groundwater above detection limit.

Table 6
EXPOSURE POINT CONCENTRATIONS FOR SOIL

SAMPLE ID	1004-SW1		1004-SW3		1004-FL1		1004-FL5		Average	Max.	MCP
Units	(ppm)		(ppm)		(ppm)		(ppm)		Soil Conc.	Soil Conc.	S1 Std
VPH									(ppm)	(ppm)	(ppm)
C5-C8 Aliphatics	**1.93**		0.1	U	**7.83**		0.1	U	2.490	7.83	***100***
C9-C12 Aliphatics	**3.3**		0.1	U	**84.3**		0.1	U	21.950	84.30	***1000***
C9-C10 Aromatics	**0.602**		0.1	U	**18.7**		0.1	U	4.876	18.70	***100***
o-Xylene	0.05	U	0.05	U	**0.217**		0.05	U	0.092	0.22	***500***
Naphthalene	0.05	U	0.05	U	**3.13**		0.05	U	0.820	3.13	***4***
EPH											
C9-C18 Aliphatics	2.5	U	2.5	U	**113**		2.5	U	30.125	113.00	***1000***
C19-C36 Aliphatics	2.5	U	2.5	U	**21.7**		2.5	U	7.300	21.70	***2500***
C10-C22 Aromatics	2.5	U	**81.3**		**56.6**		**5.48**	U	36.470	81.30	***200***
Benzo(a)anthracene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***0.7***
Benzo(a)pyrene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***0.7***
Benzo(b)fluoranthene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***0.7***
Benzo(ghi)perylene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***1000***
Benzo(k)fluoranthene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***7***
Chrysene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***7***
Fluoranthene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***1000***
Indeno(1,2,3-c,d)pyrene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***0.7***
Naphthalene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***4***
Phenanthrene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***100***
Pyrene	0.35	U	0.35	U	0.35	U	0.35	U	0.350	0.35	***700***
The most stringent standard of categories S-1/GW-1, S1/GW-2 or S1/GW-3 is listed, including EPH/VPH standards											
which became effective on October 31, 1997.											
U - indicates non-detect; concentrations shown represent a value of one-half of the analytical detection limit.											

TABLE 7
EXPOSURE POINT CONCENTRATIONS FOR GROUNDWATER

SAMPLE ID	1004-I2-1126		1014-MW-01		1014-MW-02		1014-MW-04		1004-MW-01		1004-MW-02		1004-MW-04**		1004-MW-05	
Units	(ppm)		(ppm)		(ppm)		(ppm)		(ppm)		(ppm)		(ppm)		(ppm)	
Date Sampled	11/26/96		1/22/97		1/22/97		1/22/97		1/21/97		1/22/97		1/23/97		1/21/97	
VPH																
C5-C8 Aliphatics	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	
C9-C12 Aliphatics	**0.067**		0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	
C9-C10 Aromatics	**0.016**		0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	
o-Xylene	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	
Naphthalene	0.001	U	0.001		0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	
EPH																
C9-C18 Aliphatics	0.025	U	**0.086**		0.025	U	**0.097**		**0.059**		**0.105**		0.025	U	0.025	
C19-C36 Aliphatics	0.025	U	**0.36**		**0.25**	U	0.025	U	**0.245**		**0.084**		**0.078**		0.025	
C10-C22 Aromatics	**0.158**		0.001	U	0.02	U	0.01	U	**0.048**		**0.081**		**0.17**		**0.069**	
Acenaphthene	0.001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	
Naphthalene	0.001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	
Phenanthrene	0.001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	
Pyrene	0.001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	
2-Methylnaphthalene	0.001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	

Notes: MCP Standards shown are effective as of October 31, 1997.

Conc. for monit. well samples VBM-97-01X, VBM-97-02X, VBM-97-03X, VBM-97-04X, MNW-1 & MNW-2 represent ave. values from two rounds of sampling.

U-indicates non-detect; conc. shown represent a value of one-half of the anal detection limit.

** =ave. of duplicate samples

NA-Not Analyzed

TABLE 7
EXPOSURE POINT CONCENTRATIONS FOR GROUNDWATER

SAMPLE ID	VBM-97-01X		VBM-97-02X		VBM-97-03X**		VBM-97-04X**		MNW-1		MNW-2		MCP	MCP	MCP
Units	(ppm)		(ppm)		(ppm)		(ppm)		(ppm)		(ppm)		GW-1 Std.	GW-2 Std.	GW-3 Std.
Date Sampled	4/17/97		4/17/97		4/17/97		4/17/97		4/17/97		4/17/97		*(ppm)*	*(ppm)*	*(ppm)*
VPH															
C5-C8 Aliphatics	NA		NA		NA		NA		NA		NA		*0.4*	*1*	*40*
C9-C12 Aliphatics	NA		NA		NA		NA		NA		NA		*4*	*1*	*20*
C9-C10 Aromatics	NA		NA		NA		NA		NA		NA		*2*	*5*	*4*
o-Xylene	NA		NA		NA		NA		NA		NA		*10*	*6*	*50*
Naphthalene	NA		NA		NA		NA		NA		NA		*0.02*	*6*	*6*
EPH															
C9-C18 Aliphatics	**0.082**		**0.049**		**0.097**		**0.083**		**0.049**		**0.057**		*4*	*1*	*20*
C19-C36 Aliphatics	**0.054**		0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	*5*	*not appl.*	*50*
C10-C22 Aromatics	**0.019**		**0.066**		**0.093**		**0.096**		**0.047**		**0.027**		*0.2*	*50*	*30*
Acenaphthene	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	*0.02*	*not appl.*	*5*
Naphthalene	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	*0.02*	*6*	*6*
Phenanthrene	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	*0.3*	*not appl.*	*0.05*
Pyrene	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	*0.2*	*not appl.*	*3*
2-Methylnaphthalene	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	*0.01*	*20*	*3*

Notes: MCP Standards shown are effective as of October 31, 1997.

Conc. for monit. well samples VBM-97-01X, VBM-97-02X, VBM-97-03X, VBM-97-04X, MNW-1 & MNW-2 represent ave. values from two rounds of sampling.

U-indicates non-detect; conc. shown represent a value of one-half of the anal detection limit.

** =ave. of duplicate samples

NA-Not Analyzed

ATTACHMENT A
RAO Statement Transmittal Form BWSC-104

Massachusetts Department of Environmental Protection **BWSC-104**
Bureau of Waste Site Cleanup

RESPONSE ACTION OUTCOME (RAO) STATEMENT & DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

Release Tracking Number: 2 - 11210

A. SITE OR DOWNGRADIENT PROPERTY LOCATION:

Site Name: (optional) Verbeck Complex, Oil Release

Street: McArthur Avenue, Fort Devens Location Aid: Buildings 1004 and 1014

City/Town: Fort Devens, Ayer ZIP Code: 01433-0000

☐ Check here if this Site location is Tier Classified.

If a Tier I Permit has been issued, state the Permit Number:

Related Release Tracking Numbers that this Form Addresses:

If submitting an RAO Statement, you must document the location of the Site or the location and boundaries of the Disposal Site subject to this Statement. If submitting an RAO Statement for a PORTION of a Disposal Site, you must document the location and boundaries for both the portion subject to this submittal and, to the extent defined, the entire Disposal Site. If submitting a Downgradient Property Status Submittal, you must provide a site plan of the property subject to the submittal and, to the extent defined, the Disposal Site.

B. THIS FORM IS BEING USED TO: (check all that apply)

☑ Submit a **Response Action Outcome (RAO) Statement** (complete Sections A, B, C, D, E, F, H, I, J and L).

☐ Check here if this is a revised RAO Statement. Date of Prior Submittal:

☑ Check here if any Response Actions remain to be taken to address conditions associated with any of the Releases whose Release Tracking Numbers are listed above. This RAO Statement will record only an RAO-Partial Statement for those Release Tracking Numbers.

Specify Affected Release Tracking Numbers: see attachment

☐ Submit an optional **Phase I Completion Statement supporting an RAO Statement or Downgradient Property Status Submittal** (complete Sections A, B, H, I, J, and L).

☐ Submit a **Downgradient Property Status Submittal** (complete Sections A, B, G, H, I, J and K).

☐ Check here if this is a revised Downgradient Property Status Submittal. Date of Prior Submittal:

☐ Submit a **Termination of a Downgradient Property Status Submittal** (complete Sections A, B, I, J and L).

☐ Submit a **Periodic Review Opinion evaluating the status of a Temporary Solution** (complete Sections A, B, H, I, J and L).

Specify one: ☐ For a Class C RAO ☐ For a Waiver Completion Statement indicating a Temporary Solution

Provide Submittal Date of RAO Statement or Waiver Completion Statement:

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

☐ Assessment and/or Monitoring Only

☑ Removal of Contaminated Soils

☑ Re-use, Recycling or Treatment

◉ On Site ◉ Off Site Est. Vol.: 1600 cubic yards

Describe: see Section D attachemnt

☐ Landfill ○ Cover ○ Disposal Est. Vol.: _____ cubic yards

☐ Removal of Drums,Tanks or Containers

Describe :

☐ Removal of Other Contaminated Media

Specify Type and Volume:

☑ Other Response Actions

Describe : GAC filtration of 20,000 gal of groundwater

☑ Deployment of Absorbant or Contaminent Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor Extraction

☐ Structure Venting System

☑ Product or NAPL Recovery

☐ Groundwater Treatment Systems

☐ Air Sparging

☐ Temporary Water Supplies

☐ Temporary Evacuation or Relocation of Residents

☐ Fencing and Sign Posting

SECTION C IS CONTINUED ON THE NEXT PAGE.

RESPONSE ACTION OUTCOME (RAO) STATEMENT & DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

Release Tracking Number: 2 - 11210

C. DESCRIPTION OF RESPONSE ACTIONS: (continued)

☐ Check here if any Response Action(s) that serve as the basis for this RAO Statement involve the use of Innovative Technologies. (DEP is interested in using this information to create an Innovative Technologies Clearinghouse.)

Describe Technologies: _____

D. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste was sent to an off-site facility, answer the following questions)

Name of Facility: see attachment

Town and State: _____

Quantity of Remediation Waste Transported to Date: _____

E. RESPONSE ACTION OUTCOME CLASS:

Specify the Class of Response Action Outcome that applies to the Site or Disposal Site. Select **ONLY** one Class:

☐ **Class A-1 RAO**: Specify one of the following:

○ Contamination has been reduced to background levels.

○ A Threat of Release has been eliminated.

☑ **Class A-2 RAO**: You **MUST** provide justification that reducing contamination to background levels is infeasible.

☐ **Class A-3 RAO**: You **MUST** provide both an implemented Activity and Use Limitation (AUL) and justification that reducing contamination to background levels is infeasible.

If applicable, provide the earlier of the AUL expiration date or date the design life of the remedy will end: _____

☐ **Class B-1 RAO**: Specify one of the following:

○ Contamination is consistent with background levels

○ Contamination is **NOT** consistent with background levels.

☐ **Class B-2 RAO**: You **MUST** provide an implemented AUL.

If applicable, provide the AUL expiration date : _____

☐ **Class C RAO**: ☐ Check here if you will conduct post-RAO Operation, Maintenance and Monitoring at the Site.

Specify One: ○ Passive Operation and Maintenance ○ Monitoring Only

○ Active Operation and Maintenance (defined at 310 CMR 40.0006)

F. RESPONSE ACTION OUTCOME INFORMATION:

☐ If an RAO Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.

☐ Check here if submitting one or more AULs. You must attach an AUL Transmittal Form (BWSC-113) and a copy of each implemented AUL related to this RAO Statement. Specify the type of AUL(s) below: (required for all Class A-3 RAOs and Class B-2 RAOs)

○ Notice of Activity and Use Limitation ○ Grant of Environmental Restriction Number of AULs attached: _____

Specify the Risk Characterization Method(s) used to achieve the RAO described above and all Soil and Groundwater Categories applicable to the Site.

More than one Soil Category and more than one Groundwater Category may apply at a Site.
Be sure to check off all APPLICABLE categories, even if more stringent soil and groundwater standards were met.

Risk Characterization Method(s) Used:	☐ Method 1	☑ Method 2	☐ Method 3
Soil Category(ies) Applicable:	☑ S-1	☐ S-2	☐ S-3
Groundwater Category(ies) Applicable:	☑ GW-1	☑ GW-2	☑ GW-3

> When submitting any Class A-1 RAO or a Class B-1 RAO where contamination is consistent with background levels, do NOT specify a Risk Characterization Method.

> When submitting any Class A-2 RAO or a Class B-1 RAO where contamination is NOT consistent with background levels, you cannot use an AUL to maintain a level of no significant risk. Therefore, you must meet S-1 Soil Standards, if using Risk Characterization Method 1.

Massachusetts Department of Environmental Protection **BWSC-104**
Bureau of Waste Site Cleanup

RESPONSE ACTION OUTCOME (RAO) STATEMENT & DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM

Release Tracking Number: 2 - 11210

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

G. DOWNGRADIENT PROPERTY STATUS SUBMITTAL:

☐ If a Downgradient Property Status Submittal Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.

☐ Check here if a Release(s) of Oil or Hazardous Material(s), other than that which is the subject of this submittal, has occurred at this property.

Release Tracking Number(s): _____

◯ Check here if the Releases identified above require further Response Actions pursuant to 310 CMR 40.0000.

Required documentation for a Downgradient Property Status Submittal includes, but is not limited to, copies of notices provided to owners and operators of both upgradient and downgradient abutting properties and of any known or suspected source properties.

H. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> *if Section B indicates that a **Downgradient Property Status Submittal** is being provided,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in 310 CMR 40.0183(2)(b), and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that either an **RAO Statement, Phase I Completion Statement and/or Periodic Review Opinion** is being provided,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

☐ Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

LSP Name: Anthony F. Andronico LSP #: 6105 Stamp:

Telephone: 617-204-2702 Ext.: _____

FAX: (optional) 617-204-2701

Signature: Anthony F. Andronico

Date: 11/21/97

I. PERSON MAKING SUBMITTAL:

Name of Organization: US Army DRFTA

Name of Contact: James C. Chambers Title: BRAC Environmental Coordinator

Street: 30 Quebec St.

City/Town: Devens State MA ZIP Code: 01433-0000

Telephone: 508-796-3134 Ext.: 311 FAX: (optional) 508-796-3133

J. RELATIONSHIP TO SITE OF PERSON MAKING SUBMITTAL: (check one)

☑ RP or PRP Specify: ◯ Owner ◯ Operator ◯ Generator ◯ Transporter Other RP or PRP: Former Owner

☐ Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ Any Other Person Submitting This Form Specify Relationship: _____

RESPONSE ACTION OUTCOME (RAO) STATEMENT & DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

Release Tracking Number
2 - 11210

K. CERTIFICATION OF PERSON SUBMITTING DOWNGRADIENT PROPERTY STATUS SUBMITTAL:

I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of the/those individual(s) immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge, information and belief, true, accurate and complete; (iii) that, to the best of my knowledge, information and belief, I/the person(s) or entity(ies) on whose behalf this submittal is made satisfy(ies) the criteria in 310 CMR 40.0183(2); (iv) that I/the person(s) or entity(ies) on whose behalf this submittal is made have provided notice in accordance with 310 CMR 40.0183(5); and (v) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is/are aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: _____ Title: _____
(signature)

For: _____ Date: _____
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

L. CERTIFICATION OF PERSON MAKING SUBMITTAL:

If you are completing only a Downgradient Property Status Submittal, you do not need to complete this section of the form.

I, James C. Chambers, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: James C Chambers Title: BRAC Environmental Coordinator
(signature)

For: US Army DRFTA Date: 25 NOV 97
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.

Response Sction Outcome (RAO) Statement &
Downgradient Property Status Transmittal Form

RTN 2-11210

Section B attachment

This RAO is for the Oil Release at the Verbeck Housing Complex. The RTN used for this release was the omnibus RTN used for the entire Devens site. The RAO applies only to the Verbeck Housing area Oil Release.

Section D attachment:

Remediation Waste was sent to the following locations:

During "Phase 1" of the RAM, 200 cubic yards of petroleum contaminated soils were transported to Bardon Trimount Environmental Services in Shrewsbury, MA for recycling.

During "Phase 2" of the RAM, the following wastes were generated and disposed as follows:

1400 cubic yards of petroleum contaminated soils were transferred to the Central Storage Facility at Devens for long term storage;

Five (5) 55-gallon drumsof petroleum contaminated sorbent pads, booms and personnel protective gear (tyvek suits, gloves, etc.) and twenty one (21) 55-gallon drums of spent carbon were disposed at BFI Carbon-Limestone disposal facility in Lowelville, OH; and,

One half (0.5) 55-gallon drum of petroleum contaminated rinse waters resulting from the decontamination of the oil-water separator were disposed at United Industrial in Meridan, CT.

ATTACHMENT B
RAM Transmittal Form BWSC-106

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 - 11210

A. SITE LOCATION:

Site Name: (optional) Verbeck Complex, Oil Release

Street: McArthur Avenue, Fort Devens

Location Aid: Buildings 1004 and 1014

City/Town: Fort Devens, Ayer

ZIP Code: 01433-0000

☐ Check here if a Tier Classification Submittal has been provided to DEP for this Release Tracking Number.

Related Release Tracking Numbers That This RAM or URAM Addresses:

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ Submit a **RAM Plan** (complete Sections A, B, C, D, E, F, J, K, L and M).

☐ Check here if this RAM Plan is an update or modification of a previously approved written RAM Plan. Date Submitted:

☐ Submit a **RAM Status Report** (complete Sections A, B, C, E, J, K, L and M).

☑ Submit a **RAM Completion Statement** (complete Sections A, B, C, D, E, G, J, K, L and M).

☐ Confirm or Provide **URAM Notification** (complete Sections A, B, H, K, L and M).

☐ Submit a **URAM Status Report** (complete Sections A, B, C, E, J, K, L and M).

☐ Submit a **URAM Completion Statement** (complete Sections A, B, C, D, E, I, J, K, L and M).

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. SITE CONDITIONS:

☑ Check here if the source of the Release or Threat of Release is known.

If yes, check all sources that apply: ☐ UST ☐ Pipe/Hose/Line ☐ AST ☐ Drums ☐ Transformer ☐ Boat ☐ Tanker Truck ☐ Vehicle ☑ Other Specify: Pit beneath former oil burner/boiler

Identify Media and Receptors Affected: (check all that apply) ☐ Air ☑ Groundwater ☐ Surface Water ☐ Sediments ☑ Soil ☐ Wetlands ☐ Storm Drain ☐ Paved Surface ☐ Private Well ☐ Public Water Supply ☐ Zone 2 ☐ Residence ☐ School ☐ Unknown ☐ Other Specify:

Identify Release and/or Threat of Release Conditions at Site: (check all that apply)

☐ 2 and 72 Hour Reporting Condition(s) ☑ 120 Day Reporting Condition(s) ☐ Other Condition(s)

Describe: Release of TPH and (4) PAH to soil. Concentrations exceed RCS-1.

RAMs may be conducted concurrently with an IRA only with written DEP approval
URAMs may not be conducted if any 2 or 72 Hour conditions exist at the site.

Identify Oils and Hazardous Materials Released: (check all that apply) ☑ Oils ☐ Chlorinated Solvents ☐ Heavy Metals ☑ Others Specify: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, 2-methylnaphthalan

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

☐ Assessment and/or Monitoring Only

☑ Excavation of Contaminated Soils

☐ Re-use, Recycling or Treatment

◯ On Site ◯ Off Site Est. Vol.: _____ cubic yards

Describe: _____

☑ Store ◯ On Site ◑ Off Site Est. Vol.: 1500 cubic yards

☑ Deployment of Absorbant or Containment Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor Extraction

☐ Structure Venting System

☑ Product or NAPL Recovery

SECTION D IS CONTINUED ON THE NEXT PAGE.

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 - 11210

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

- ☐ Landfill ◯ Cover ◯ Disposal Est. Vol.: _____ cubic yards
- ☐ Removal of Drums, Tanks or Containers
  - Describe: _____
- ☐ Removal of Other Contaminated Media
  - Specify Type and Volume: _____
- ☑ Other Response Actions — Describe: Dewatering and GAC treatment of groundwater
- ☐ Groundwater Treatment Systems
- ☐ Air Sparging
- ☐ Temporary Water Supplies
- ☐ Temporary Evacuation or Relocation of Residents
- ☐ Fencing and Sign Posting

See 310 CMR 40.0442 for limitations on the scope and type of RAMs.
See 310 CMR 40.0464 for performance standards for URAMs.

☐ Check here if this RAM or URAM involves the use of Innovative Technologies. DEP is interested in using this information to aid in creating an Innovative Technologies Clearinghouse.

Describe Technologies: _____

E. TRANSPORT OF REMEDIATION WASTE:

(if Remediation Waste has been sent to an off-site facility, answer the following questions)

Name of Facility: see attachment to RAO form

Town and State: _____

Quantity of Remediation Waste Transported to Date: _____

F. RAM PLAN:

☐ Check here if this RAM Plan received previous oral approval from DEP as a continuation of a Limited Removal Action (LRA).

Date of Oral Approval: _____

☐ If a RAM Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment. See 310 CMR 40.0444(2) to learn when a fee is not required.

☐ Check here if the RAM Plan is proposed for a Transition Site. If this is the case, you may need to attach an LSP Evaluation Opinion prior to undertaking the RAM, if not previously provided. See 310 CMR 40.0600 for further information about Transition Sites.

G. RAM COMPLETION STATEMENT:

☐ If a RAM Compliance Fee is required in connection with submission of the RAM Completion Statement, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment. You owe this fee when submitting a RAM Completion Statement if you received oral approval of a RAM that continued an LRA, and have NOT previously submitted a RAM Plan and accompanying fee.

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement, you must submit a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the RAM Completion Statement.

H. URAM NOTIFICATION:

Identify Location Type: (check all that apply) ☐ Public Right of Way ☐ Utility Easement ☐ Private Property

Identify Utility Type: (check all that apply) ☐ Sanitary/Combined Sewerage ☐ Water ☐ Drainage ☐ Natural Gas ☐ Telephone ☐ Steam Lines ☐ Telecommunications ☐ Electric ☐ Other Specify: _____

☐ Check here if you provided DEP with previous oral notification of this URAM. Date of Oral Notice: _____

☐ Check here if the property owner was NOT contacted prior to initiation of the URAM. If this is the case, you must attach an explanation of why the owner was not contacted, including the date and time when contact ultimately occurred.

☐ Check here if this URAM will occur in connection with the construction of new public utilities. If this is the case, document the nature and extent of encountered contamination, the scope and expense of necessary mitigation and the benefits amd limitations of project alternatives.

With the exception stated below, the person undertaking the URAM must provide the name and license number of an LSP engaged or employed in connection with the URAM:

LSP Name: _____ LSP License Number: _____

LSP information is not required if the URAM is limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated either by a Hazardous Material or a mixture of a Hazardous Material and Oil.

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 - 11210

I. URAM COMPLETION STATEMENT:

☐ Check here if this URAM was limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated by either a Hazardous Material or a mixture of a Hazardous Material and Oil.

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the URAM Completion Statement, you must submit either a Release Abatement Measure (RAM) Plan or a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the URAM Completion Statement.

J. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> *if Section B of this form indicates that a **Release Abatement Measure Plan** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a **Release Abatement Measure Status Report** or a **Utility-Related Abatement Measure Status Report** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a **Release Abatement Measure Completion Statement** or a **Utility-Related Abatement Measure Completion Statement** is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

☐ Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

LSP Name: Anthony F. Andronico LSP #: 6105 Stamp:

Telephone: 617-204-2702 Ext.:

FAX: (optional) 617-204-2701

Signature: Anthony F. Andronico

Date: 11/21/97

COMMONWEALTH OF MASSACHUSETTS
ANTHONY F. ANDRONICO
No. 6105
REGISTERED
LICENSED SITE PROFESSIONAL

An LSP Opinion is not required for a Utility-Related Abatement Measure Notification.

An LSP Opinion is not required for a URAM Completion Statement if the URAM is limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated either by Hazardous Material or a mixture of Hazardous Material and Oil.

K. PERSON UNDERTAKING RAM OR URAM:

Name of Organization: US Army DRFTA - BRAC Environmental Office

Name of Contact: James C. Chambers Title: BRAC Environmental Coordinator

Street: 30 Quebec St.

City/Town: Devens State MA ZIP Code: 01433-0000

Telephone: 508-796-3134 Ext.: 311 FAX: (optional) 508-796-3133

☐ Check here if there has been a change in person undertaking the RAM or URAM.

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 - 11210

L. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RAM or URAM: (check one)

☑ RP or PRP Specify: ○ Owner ○ Operator ○ Generator ○ Transporter Other RP or PRP: Former Owner

☐ Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ Any Other Person Undertaking RAM or URAM Specify Relationship: _____

M. CERTIFICATION OF PERSON UNDERTAKING RAM OR URAM:

I, James C. Chambers, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: James C Chambers (signature) Title: BRAC Environmental Coordinator

For: US Army DRFTA- BRAC Environmental Office (print name of person or entity recorded in Section K) Date: 25 NOV 97

Enter address of person providing certification, if different from address recorded in Section K:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

ATTACHMENT C
CHANGE OF LSP LETTER

Roy F. Weston, Inc.
Suite B125
187 Ballardvale Street
Wilmington, Massachusetts 01887-1062
508-988-7000 • Fax 508-988-7093

November 15, 1996

Ms. Lynne Welsh
Massachusetts Department of Environmental Protection
627 Main Street
Worcester, MA 01608

Re: Release Abatement Measure
Verbeck Complex - Buildings 1004 and 1014
Devens, MA
RTN 2-11210
DCN-VRA-111596-AAFF

Dear Ms. Welsh:

The purpose of this letter is to notify you of a change in the LSP of Record for the above-referenced Release Abatement Measure (RAM). The RAM Plan for this work was submitted to MA DEP on October 7, 1996. As stated in the RAM Plan, the Devens Commerce Center assumed responsibility for Phase 1 of the RAM, and Mr. Alton Stone of Pennoni Associates, Inc. was the LSP for Phase 1 of the RAM.

Phase 1 of the excavation proceeded as planned, and upon excavation of 100 cubic yards of soil, additional petroleum contaminated soils remained in the excavation. Excavation also extended into groundwater, and a slight sheen was visible on the standing water in the excavation. The excavated soil is currently stockpiled at the excavation site. In accordance with the provisions of the approved RAM Plan, the U.S. Army is assuming responsibility for implementation of Phase 2 of the RAM, and I will be serving as the LSP of record for completion of the RAM. CENED plans to excavate up to an additional 500 cubic yards of soil under Phase 2 of the RAM. Excavation dewatering, treatment and on-site discharge of the treated effluent will be performed as specified in Section 5.3 of the approved RAM.

In addition, one modification to the RAM is proposed. Section 6.0 of the approved RAM states that excavated soils will be transported to a MA DEP approved recycling facility within 120 days of generation. CENED would like to store the excavated soils at the temporary soil storage facility located at Building 202 at Devens. This temporary storage is expected to extend beyond 120 days, until the final disposition of all the soil at the Building 2 storage area occurs. Transfer

of the soils to the Building 2 storage area would not occur under a MA DEP Bill of Lading or manifast, but information of the volume of soil, date of transfer, and location of storage will be recorded.

A RAM Modification form documenting the changes described above is enclosed. Your approval of the modification is requested. If you have any questions relative to this information, please contact Mr. Mark Applebee of CENED at 617-647-8227, or me at 508-988-7000.

Very truly yours,

ROY F. WESTON, INC.

Anthony F. Andronico, LSP
Principal Project Manager

AFA:mhs

Enclosure
cc: Mark Applebee, CENED
Dave Salvador, MA DEP
Alton Stone, PAI
Deborah Gevalt, H&A
Ronald Ostrowski, Devens Commerce Center
Tom Abdella, WESTON

ATTACHMENT D
FIELD SCREENING RESULTS

FIELD SCREENING RESULTS -BLDG. 1004 EXCAVATION

Sample ID	Date Sampled	TPH (ppm) NDIR	Dilution Factor NDIR	COMMENTS
1VG	11/18/96	47J	1:1	
2VG	11/18/96	43J	1:1	Excavation Perimeter samples
3VG	11/18/96	44J	1:1	
4VG	11/18/96	56J	1:1	
5VG	11/18/96	44J	1:1	
6VG	11/18/96	43J	1:1	
7VG	11/18/96	53J	1:1	
8VG	11/18/96	57J	1:1	
9VG	11/18/96	58J	1:1	
10VG	11/18/96	42J	1:1	
11VG	11/18/96	1488U	10:1	
12VG	11/18/96	902	1:1	
1VG19	11/19/96	104J	1:1	
2VG19	11/19/96	30J	1:1	Samples taken from existing
3VG19	11/19/96	62J	1:1	soil stockpiles
4VG19	11/19/96	58J	1:1	outside excavation.
5VG19	11/19/96	64J	1:1	(used 2 point calibration curve)
6VG19	11/19/96	52J	1:1	Sample taken at bottom of sump pit.
1VG20	11/20/96	66J	1:1	Sample taken SE of concrete pad.
2VG20	11/20/96	43J	1:1	Samples taken at same location but different depths
3VG20	11/20/96	1454U*	1:1	2VG20 @ 8' bgs and 3VG @ 12' bgs
1BVG25	11/25/96	1858U*	1:1	Sample taken NW of concrete pad.
2BVG25	11/25/96	115J	1:1	Sample taken on NW sidewall.
3VG25	11/25/96	27J	1:1	Sample taken from E side wall
4VG25	11/25/96	1718U*	1:1	Sample taken from N sidewall
1VG26	11/26/96	37J	1:1	Samples taken from test pits
2VG26	11/26/96	3,571U	10:1	on far NW side of excavation.
3VG26	11/26/96	127	1:1	
4VG26	11/26/96	144J	1:1	
5VG26	11/26/96	658	1:1	
6VG26	11/26/96	2166U	10:1	Samples taken from floor
7VG26	11/26/96	4234U	10:1	at the bottom of the
8VG26	11/26/96	3640U	10:1	South sidewall.
1VG27	11/27/96	1727U	1:1	For location of followingsamples
2VG27	11/27/96	37J	1:1	see Figure 4
3AVG27	11/27/96	17J	1:1	
3BVG27	11/27/96	57J	1:1	
4AVG27	11/27/96	911	1:1	
4BVG27	11/27/96	108J	1:1	
5VG27	11/27/96	60J	1:1	
6VG27	11/27/96	77J	1:1	
7AVG27	11/27/96	78J	1:1	
7BVG27	11/27/96	80J	1:1	
8AVG27	11/27/96	41J	1:1	
8BVG27	11/27/96	51J	1:1	
9AVG27	11/27/96	47J	1:1	
9BVG27	11/27/96	47J	1:1	
9CVG27	11/27/96	40J	1:1	

FIELD SCREENING RESULTS -BLDG. 1004 EXCAVATION

10AVG27	11/27/96	53J	1:1	
10BVG27	11/27/96	50J	1:1	
10CVG27	11/27/96	39J	1:1	
11AVG27	11/27/96	42J	1:1	
11BVG27	11/27/96	44J	1:1	
11CVG27	11/27/96	79J	1:1	
12AVG27	11/27/96	66J	1:1	
12BVG27	11/27/96	609	1:1	
12CVG27	11/27/96	3,585U	5:1	
13AVG27	11/27/96	55J	1:1	
13BVG27	11/27/96	50J	1:1	
13CVG27	11/27/96	39J	1:1	
14AVG27	11/27/96	68J	1:1	
14BVG27	11/27/96	43J	1:1	
14CVG27	11/27/96	57J	1:1	
1VG02	12/2/96	1614U	5:1	
2VG02	12/2/96	60J	1:1	
3VG02	12/2/96	55J	1:1	
4VG02	12/2/96	55J	1:1	
5VG02	12/2/96	87J	1:1	
6VG02	12/2/96	66J	1:1	
7VG02	12/2/96	115J	1:1	
8VG02	12/2/96	66J	1:1	
9VG02	12/2/96	102J	1:1	
1VG	12/4/96	73J	1:1	
3VG	12/4/96	92J	1:1	
4VG	12/4/96	101J	1:1	
5VG	12/4/96	49J	1:1	
E701	12/4/96	131J	1:1	
E702	12/4/96	87J	1:1	
E703	12/4/96	2056U	10:1	
D701	12/4/96	130	1:1	
FL1	12/4/96	803	1:1	
SW1	12/4/96	91J	1:1	
H601	12/4/96	261	1:1	
H603	12/4/96	115J	1:1	
K601	12/4/96	991U	1:1	
K603	12/4/96	117J	1:1	
SW02	12/4/96	96J	1:1	
H403	12/5/96	6,260U	10:1	
G603	12/5/96	56J	1:1	
G503	12/5/96	277	1:1	
I403	12/5/96	91J	1:1	
J403	12/5/96	46J	1:1	
I502	12/5/96	1,404U	10:1	
FL03	12/5/96	88J/225	1:1	
FL02	12/5/96	111J	1:1	
SW3	12/5/96	89J	1:1	
E702	12/6/96	2000U	10:1	
E703	12/6/96	2690U	10:1	
E802	12/6/96	178	1:1	

FIELD SCREENING RESULTS -BLDG. 1004 EXCAVATION

D802	12/6/96	148	1:1	
F701	12/6/96	142	1:1	
E701A	12/6/96	10550U	10:1	
F602	12/6/96	601	1:1	
E603	12/6/96	87J	1:1	
D701RE	12/6/96	140	1:1	
E604	12/9/96	60J	1:1	
E903	12/9/96	58J	1:1	
E703	12/9/96	302	1:1	
DP01	12/9/96	153	1:1	
DP02	12/9/96	2230U	10:1	
DP03	12/9/96	141	1:1	
DP04	12/9/96	1082U	1:1	
G601	12/10/96	89J	1:1	
G801	12/10/96	3640U	10:1	
SWO4	12/10/96	69J	1:1	
FL04	12/10/96	95J	1:1	
K503	12/10/96	79	1:1	
J603	12/10/96	92J	1:1	
J602	12/10/96	81J	1:1	
G602	12/10/96	110J	1:1	
G603	12/10/96	896U	10:1	
G702	12/10/96	231	1:1	
G902	12/10/96	4960U	10:1	
G903	12/10/96	74440U	10:1	
G1003	12/10/96	620	1:1	
F903	12/10/96	158	1:1	
G904	12/10/96	109J	1:1	
G803	12/10/96	5980U	10:1	
F1003	12/10/96	78U	1:1	
H802	12/11/96	3500U	10:1	
H902	12/11/96	1890U	10:1	
H901	12/11/96	79J	1:1	
H702	12/11/96	56J	1:1	
H8+701A	12/11/96	955U	1:1	
H8+701B	12/11/96	875	1:1	
H803	12/11/96	127	1:1	
H903	12/11/96	87	1:1	
H1002	12/12/96	332	1:1	
I902	12/12/96	52J	1:1	
SP	12/12/96	119J	1:1	
SW05	12/12/96	85	1:1	
FL05	12/12/96	100J	1:1	
DT1	12/12/96	2460U	10:1	
DT2	12/12/96	221	1:1	
DT3	12/12/96	70	1:1	
L801	12/13/96	40J	1:1	
L802	12/13/96	1510U	10:1	
M801	12/13/96	119J	1:1	
M802	12/13/96	40J	1:1	
L701	12/13/96	39J	1:1	

FIELD SCREENING RESULTS -BLDG. 1004 EXCAVATION

L702	12/13/96	2341U	10:1	
M701	12/13/96	2574U	10:1	
M702	12/13/96	6665U	10:1	
L602	12/16/96	39J	1:1	
M602	12/16/96	2270U	10:1	
N703	12/16/96	7060U	10:1	
N702	12/16/96	41J	1:1	
N701	12/16/96	45J	1:1	
M502	12/16/96	60J	1:1	
M703	12/16/96	67J	1:1	
N704	12/16/96	40J	1:1	
L703	12/16/96	54J	1:1	
L803	12/16/96	41J	1:1	
L903	12/16/96	308	1:1	
N803	12/16/96	44J	1:1	
J804	12/16/96	43J	1:1	
K803	12/16/96	34J	1:1	
M803	12/16/96	51J	1:1	
DB-03	12/18/96	36J	1:1	
O8-03	12/18/96	34J	1:1	
J7-08	12/20/96	299	1:1	
K7-03	12/20/96	66J	1:1	
L7-03	12/20/96	63J	1:1	
SW-06	12/23/96	59J	1:1	
SW-03	12/23/96	46J	1:1	
FL-04	12/23/96	66J	1:1	
SW-05	12/23/96	74J	1:1	
SW-04	12/23/96	40J	1:1	
FL-02	12/23/96	48J	1:1	
FL-05	12/23/96	39J	1:1	

- J indicates the result is below the lowest calibration point.
-U indicates the result is above the highest calibration point.

ATTACHMENT E
ANALYTICAL RESULTS FOR TREATED WATER SAMPLES

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Sam Niak
Project Number:
Site:

Laboratory Job Number: L9608738
Invoice Number: 88851
Date Received: 21-NOV-96
Date Reported: 22-NOV-96
Delivery Method: Client

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9608738-01	1004-E1-1121	
L9608738-02	1004-C1-1121	
L9608738-03	1004-I1-1121	
L9608738-04	1004-TB	

Authorized by:

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9608738-01	**Date Collected:**	21-NOV-96
	1004-E1-1121	**Date Received :**	21-NOV-96
Sample Matrix:	WATER	**Date Reported :**	22-NOV-96
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	21-Nov	22-Nov
Acenaphthene	ND	ug/l	0.46				
2-Chloronaphthalene	ND	ug/l	0.48				
Fluoranthene	ND	ug/l	0.46				
Naphthalene	ND	ug/l	0.35				
Benzo(a)anthracene	ND	ug/l	0.50				
Benzo(a)pyrene	ND	ug/l	0.16				
Benzo(b)fluoranthene	ND	ug/l	0.56				
Benzo(k)fluoranthene	ND	ug/l	0.56				
Chrysene	ND	ug/l	0.50				
Acenaphthylene	ND	ug/l	0.42				
Anthracene	ND	ug/l	0.40				
Benzo(ghi)perylene	ND	ug/l	0.24				
Fluorene	ND	ug/l	0.43				
Phenanthrene	ND	ug/l	0.42				
Dibenzo(a,h)anthracene	ND	ug/l	0.78				
Indeno(1,2,3-cd)pyrene	ND	ug/l	0.48				
Pyrene	ND	ug/l	0.45				
1-Methylnaphthalene	ND	ug/l	1.1				
2-Methylnaphthalene	ND	ug/l	0.29				
SURROGATE RECOVERY							
Nitrobenzene-d5	75.0	%					
2-Fluorobiphenyl	49.0	%					
4-Terphenyl-d14	22.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608881-01
1004-I2-112696

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	27-Nov	03-Dec	DB
SURROGATE RECOVERY								
Chloro-octadecane	68.0	%						
o-Terphenyl	90.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608881-02
1004-E2-112696
Sample Matrix: WATER

Date Collected: 26-NOV-96
Date Received : 26-NOV-96
Date Reported : 03-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	
Volatile Petroleum Hydrocarbon				39	Draft 1.0		28-Nov	D
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
---	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	10.0					
C9-C12 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C10 Aromatics, Equiv.	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
---	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
1,2,4-Trimethylbenzene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	90.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Nov	03-Dec	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608881-02
1004-E2-112696

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	27-Nov	03-Dec	DB
SURROGATE RECOVERY								
Chloro-octadecane	72.0	%						
o-Terphenyl	102.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608881-03
1004-C2-112696
Sample Matrix: WATER

Date Collected: 26-NOV-96
Date Received : 26-NOV-96
Date Reported : 03-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	
Volatile Petroleum Hydrocarbon				39	Draft 1.0		28-Nov	I
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
---	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	10.0					
C9-C12 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C10 Aromatics, Equiv.	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
---	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
1,2,4-Trimethylbenzene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	**75.0**	**%**						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Nov	03-Dec	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L9608881-03
1004-C2-112696

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	27-Nov	03-Dec	DB
SURROGATE RECOVERY								
Chloro-octadecane	76.0	%						
o-Terphenyl	93.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608881-04
1004-TB2-112696
Sample Matrix: WATER

Date Collected: 26-NOV-96
Date Received : 26-NOV-96
Date Reported : 03-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Volatile Petroleum Hydrocarbon				39	Draft 1.0		28-Nov	D
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	10.0					
C9-C12 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C10 Aromatics, Equiv.	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
1,2,4-Trimethylbenzene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	110.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9608881

Parameter	MS %	MSD %	RPD
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01-03			
Nonane (C9)	31	28	10
Tetradecane (C14)	62	58	7
Nonadecane (C19)	84	79	6
Eicosane (C20)	75	71	5
Octacosane (C28)	155	144	7
Naphthalene	54	59	9
Acenaphthene	74	74	0
Anthracene	64	59	8
Pyrene	119	114	4
Chrysene	113	125	10
SURROGATE RECOVERY			
Chloro-octadecane	70	68	3
o-Terphenyl	105	90	15

REFERENCES

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

WESTON Analytics Use Only

Client USACENED / WESTON

Est. Final Proj. Sampling Date ______

Work Order # ______

Project Contact/Phone # SAM NAIK 508-772-7190

AD Project Manager ______

QC ______ Del ______ TAT RUSH

Date Rec'd ______ Date Due ______

Account # ______

	VOA	BNA	Pest/PCB	Herb	MADEP VPH 40ml	MADEP EPH	PAH 8270	Metal	CN
Refrigerator #									
#/Type Container – Liquid					2/G	2/G	2/G		
#/Type Container – Solid									
Volume – Liquid					40ml	1L	1L		
Volume – Solid									
Preservatives									

ANALYSES REQUESTED → ORGANIC (VOA, BNA, Pest/PCB, Herb, MADEP VPH 40ml, MADEP EPH, PAH 8270); INORG (Metal, CN)

WESTON Analytics Use Only

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	MADEP VPH	MADEP EPH	PAH 8270	Metal	CN
	1004-I2-112696			W	11/26/96	0230 pm					X	X	X		
	1004-E2-112696			↓	↓	↓					X	X	X		
	1004-C2-112696			↓	↓	↓					X	X	X		
	1004-TB2-112696			↓	↓	↓					X				

MATRIX CODES:
- S - Soil
- SE - Sediment
- SO - Solid
- SL - Sludge
- W - Water
- O - Oil
- A - Air
- DS - Drum Solids
- DL - Drum Liquids
- L - EP/TCLP Leachate
- WI - Wipe
- X - Other
- F - Fish

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1. ______
2. ______
3. ______
4. ______
5. ______
6. ______

WESTON Analytics Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # ______
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
S. Naik	[illegible]	11/26/96	0300 hr				

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Bill Dale
Project Number:
Site:

Laboratory Job Number: L9608882
Invoice Number: 89197
Date Received: 26-NOV-96
Date Reported: 05-DEC-96
Delivery Method: Client

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9608882-01	1004-I2-112696	
L9608882-02	1004-E2-112696	
L9608882-03	1004-C2-112696	

Authorized by

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608882-01
1004-I2-112696
Sample Matrix: WATER

Date Collected: 26-NOV-96
Date Received : 26-NOV-96
Date Reported : 05-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Polynuclear Aromatics by GC/MS				6	625		27-Nov 02-Dec	IG
Acenaphthene	ND	ug/l	2.4					
2-Chloronaphthalene	ND	ug/l	2.5					
Fluoranthene	ND	ug/l	2.4					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.1					
Benzo(b)fluoranthene	ND	ug/l	2.9					
Benzo(k)fluoranthene	ND	ug/l	2.9					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.1					
Benzo(ghi)perylene	ND	ug/l	4.1					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	4.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.9					
Pyrene	ND	ug/l	2.3					
1-Methylnaphthalene	ND	ug/l	5.7					
2-Methylnaphthalene	ND	ug/l	1.5					
SURROGATE RECOVERY								
Nitrobenzene-d5	88.0	%						
2-Fluorobiphenyl	89.0	%						
4-Terphenyl-d14	97.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608882-02
1004-E2-112696
Sample Matrix: WATER

Date Collected: 26-NOV-96
Date Received : 26-NOV-96
Date Reported : 05-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Polynuclear Aromatics by GC/MS				6	625		27-Nov 02-Dec	I
Acenaphthene	ND	ug/l	1.9					
2-Chloronaphthalene	ND	ug/l	1.9					
Fluoranthene	ND	ug/l	1.9					
Naphthalene	ND	ug/l	1.4					
Benzo(a)anthracene	ND	ug/l	2.0					
Benzo(a)pyrene	ND	ug/l	2.4					
Benzo(b)fluoranthene	ND	ug/l	2.2					
Benzo(k)fluoranthene	ND	ug/l	2.2					
Chrysene	ND	ug/l	2.0					
Acenaphthylene	ND	ug/l	1.7					
Anthracene	ND	ug/l	1.6					
Benzo(ghi)perylene	ND	ug/l	3.2					
Fluorene	ND	ug/l	1.7					
Phenanthrene	ND	ug/l	1.7					
Dibenzo(a,h)anthracene	ND	ug/l	3.1					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.0					
Pyrene	ND	ug/l	1.8					
1-Methylnaphthalene	ND	ug/l	4.5					
2-Methylnaphthalene	ND	ug/l	1.2					
SURROGATE RECOVERY								
Nitrobenzene-d5	88.0	%						
2-Fluorobiphenyl	98.0	%						
4-Terphenyl-d14	75.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9608882-03	**Date Collected:**	26-NOV-96
	1004-C2-112696	**Date Received :**	26-NOV-96
Sample Matrix:	WATER	**Date Reported :**	05-DEC-96
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Polynuclear Aromatics by GC/MS				6	625	27-Nov	02-Dec	IG
Acenaphthene	ND	ug/l	1.9					
2-Chloronaphthalene	ND	ug/l	2.0					
Fluoranthene	ND	ug/l	1.9					
Naphthalene	ND	ug/l	1.5					
Benzo(a)anthracene	ND	ug/l	2.0					
Benzo(a)pyrene	ND	ug/l	2.5					
Benzo(b)fluoranthene	ND	ug/l	2.3					
Benzo(k)fluoranthene	ND	ug/l	2.3					
Chrysene	ND	ug/l	2.0					
Acenaphthylene	ND	ug/l	1.7					
Anthracene	ND	ug/l	1.7					
Benzo(ghi)perylene	ND	ug/l	3.3					
Fluorene	ND	ug/l	1.8					
Phenanthrene	ND	ug/l	1.7					
Dibenzo(a,h)anthracene	ND	ug/l	3.2					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.1					
Pyrene	ND	ug/l	1.8					
1-Methylnaphthalene	ND	ug/l	4.6					
2-Methylnaphthalene	ND	ug/l	1.2					
SURROGATE RECOVERY								
Nitrobenzene-d5	80.0	%						
2-Fluorobiphenyl	87.0	%						
4-Terphenyl-d14	77.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9608882

Parameter	MS %	MSD %	RPD
Semi-volatile Organic by GC/MS MS/MSD for sample(s) 01-03			
p-Chloro-m-cresol	82	68	19
2-Chlorophenol	42	30	33
4-Nitrophenol	23	16	36
Pentachlorophenol	21	18	15
Phenol	32	18	56
Acenaphthene	81	70	15
1,2,4-Trichlorobenzene	62	59	5
1,4-Dichlorobenzene	47	37	24
2,4-Dinitrotoluene	95	88	8
N-Nitrosodipropylamine	87	53	49
Pyrene	94	84	11
SURROGATE RECOVERY			
2-Fluorophenol	21	12	55
Phenol-d6	35	21	50
Nitrobenzene-d5	84	50	51
2-Fluorobiphenyl	80	71	12
2,4,6-Tribromophenol	58	42	32
4-Terphenyl-d14	94	88	7

REFERENCES

6. Methods for Organic Chemical Analysis of Municipal and Industrial Waste Water. EPA 600/4-82-057. 1982.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client USACENED / WESTON

Est. Final Proj. Sampling Date

Work Order #

Project Contact/Phone # SAM NAIK 508-712-7190

AD Project Manager

QC ____ Del ____ TAT RUSH

Date Rec'd ____ Date Due ____

Account #

Refrigerator #												
#/Type Container	Liquid					2/G	2/G	2/G				
	Solid											
Volume	Liquid					40ml	1l	1L				
	Solid											
Preservatives												
ANALYSES REQUESTED →		ORGANIC							INORG			
		VOA	BNA	Pest/PCB	Herb	MADEP VPH	MADEP EPH	PAH 8270	Metal	CN		

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	VOA	BNA	Pest/PCB	Herb	MADEP VPH	MADEP EPH	PAH 8270	Metal	CN							
	1004-I2-112696			W	11/26/96	0230pm					X	X	X									
	1004-E2-112696			↓	↓	↓					X	X	X									
	1004-C2-112696			↓	↓	↓					X	X	X									
	1004-TB2-112696			↓	↓	↓					X											

(↑ WESTON Analytics Use Only ↑)

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
S. Naik	[illegible]	4/26/96	0300hr				

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

WESTON Analytics Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # ________
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

ATTACHMENT F
ANALYTICAL RESULTS FOR HYDROPUNCH WELLS

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.	**Laboratory Job Number:** L9608825
Address: 88 Pine Street	**Invoice Number:** 89159
Fort Devens, MA 01433	**Date Received:** 25-NOV-96
Attn: Mike Wagner	**Date Reported:** 04-DEC-96
Project Number:	**Delivery Method:** Client
Site: Fort Devens	

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9608825-01	1004-1196-1-A	Work Order #038861180044870
L9608825-02	1004-1196-1-B	Work Order #038861180044870
L9608825-03	1004-1196-2-A	Work Order #038861180044870
L9608825-04	1004-1196-2-B	Work Order #038861180044870
L9608825-05	1004-1196-3-A	Work Order #038861180044870
L9608825-06	1004-1196-3-B	Work Order #038861180044870
L9608825-07	1004-1196-3D-A	Work Order #038861180044870
L9608825-08	1004-1196-3D-B	Work Order #038861180044870

Authorized by: _____

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-01
1004-1196-1-A
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		27-Nov	DB
C5-C8 Aliphatics	ND	ug/l	2.00					
C9-C12 Aliphatics	ND	ug/l	2.00					
C9-C10 Aromatics	ND	ug/l	2.00					
---	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C12 Aliphatics, Equiv.	ND	ug/l	0.100					
C9-C10 Aromatics, Equiv.	ND	ug/l	2.00					
VPH, Total	ND	ug/l	2.00					
---	-							
Benzene	ND	ug/l	2.00					
Toluene	ND	ug/l	2.00					
Ethylbenzene	ND	ug/l	2.00					
p/m-Xylene	ND	ug/l	2.00					
o-Xylene	ND	ug/l	2.00					
Methyl tert butyl ether	ND	ug/l	2.00					
Naphthalene	ND	ug/l	2.00					
1,2,4-Trimethylbenzene	ND	ug/l	2.00					
SURROGATE RECOVERY								
2,5-Dibromotoluene	87.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	26-Nov	28-Nov	D
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608825-01
1004-1196-1-A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	26-Nov	28-Nov	DB
SURROGATE RECOVERY								
Chloro-octadecane	58.0	%						
o-Terphenyl	62.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-02
1004-1196-1-B
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	IL
Polynuclear Aromatics by GC/MS				1	8270	26-Nov	28-Nov	IG
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	80.0	%						
2-Fluorobiphenyl	76.0	%						
4-Terphenyl-d14	71.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-03
1004-1196-2-A
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		28-Nov	DB
C5-C8 Aliphatics	4.30	ug/l	2.00					
C9-C12 Aliphatics	550.	ug/l	2.00					
C9-C10 Aromatics	170.	ug/l	2.00					
---	-							
C5-C8 Aliphatics, Equiv.	2.20	ug/l	1.00					
C9-C12 Aliphatics, Equiv.	27.5	ug/l	0.100					
C9-C10 Aromatics, Equiv.	170.	ug/l	2.00					
VPH, Total	200.	ug/l	2.00					
---	-							
Benzene	ND	ug/l	2.00					
Toluene	ND	ug/l	2.00					
Ethylbenzene	ND	ug/l	2.00					
p/m-Xylene	ND	ug/l	2.00					
o-Xylene	ND	ug/l	2.00					
Methyl tert butyl ether	ND	ug/l	2.00					
Naphthalene	23.0	ug/l	2.00					
1,2,4-Trimethylbenzene	ND	ug/l	2.00					
SURROGATE RECOVERY								
2,5-Dibromotoluene	118.	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	26-Nov	28-Nov	DB
C9-C18 Aliphatics	45400	ug/l	50.0					
C19-C36 Aliphatics	11500	ug/l	50.0					
C10-C22 Aromatics	32100	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	2270	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	57.4	ug/l	0.250					
C10-C22 Aromatics, Equiv.	32100	ug/l	20.0					
EPH, Total	34400	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608825-03
1004-1196-2-A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	26-Nov	28-Nov	DB
SURROGATE RECOVERY								
Chloro-octadecane	1450	%						
o-Terphenyl	762.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-04
1004-1196-2-B
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Polynuclear Aromatics by GC/MS				1	8270	26-Nov	28-Nov	IG
Acenaphthene	ND	ug/l	23.					
2-Chloronaphthalene	ND	ug/l	24.					
Fluoranthene	ND	ug/l	23.					
Naphthalene	ND	ug/l	18.					
Benzo(a)anthracene	ND	ug/l	25.					
Benzo(a)pyrene	ND	ug/l	30.					
Benzo(b)fluoranthene	ND	ug/l	28.					
Benzo(k)fluoranthene	ND	ug/l	28.					
Chrysene	ND	ug/l	25.					
Acenaphthylene	ND	ug/l	21.					
Anthracene	ND	ug/l	20.					
Benzo(ghi)perylene	ND	ug/l	40.					
Fluorene	ND	ug/l	22.					
Phenanthrene	70.	ug/l	21.					
Dibenzo(a,h)anthracene	ND	ug/l	39.					
Indeno(1,2,3-cd)pyrene	ND	ug/l	38.					
Pyrene	16.	ug/l	8.0					
1-Methylnaphthalene	ND	ug/l	56.					
2-Methylnaphthalene	ND	ug/l	14.					
SURROGATE RECOVERY								
Nitrobenzene-d5	86.0	%						
2-Fluorobiphenyl	101.	%						
4-Terphenyl-d14	88.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-05
1004-1196-3-A
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Volatile Petroleum Hydrocarbon				39	Draft 1.0		27-Nov	D
C5-C8 Aliphatics	ND	ug/l	2.00					
C9-C12 Aliphatics	ND	ug/l	2.00					
C9-C10 Aromatics	ND	ug/l	2.00					
---	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C12 Aliphatics, Equiv.	ND	ug/l	0.100					
C9-C10 Aromatics, Equiv.	ND	ug/l	2.00					
VPH, Total	ND	ug/l	2.00					
---	-							
Benzene	ND	ug/l	2.00					
Toluene	ND	ug/l	2.00					
Ethylbenzene	ND	ug/l	2.00					
p/m-Xylene	ND	ug/l	2.00					
o-Xylene	ND	ug/l	2.00					
Methyl tert butyl ether	ND	ug/l	2.00					
Naphthalene	ND	ug/l	2.00					
1,2,4-Trimethylbenzene	ND	ug/l	2.00					
SURROGATE RECOVERY								
2,5-Dibromotoluene	96.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	26-Nov	28-Nov	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608825-05
1004-1196-3-A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	26-Nov	28-Nov	DB
SURROGATE RECOVERY								
Chloro-octadecane	79.0	%						
o-Terphenyl	69.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-06
1004-1196-3-B
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	II
Polynuclear Aromatics by GC/MS				1	8270	26-Nov	27-Nov	IG
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	52.0	%						
2-Fluorobiphenyl	57.0	%						
4-Terphenyl-d14	51.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-07
1004-1196-3D-A
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		27-Nov	DB
C5-C8 Aliphatics	ND	ug/l	2.00					
C9-C12 Aliphatics	ND	ug/l	2.00					
C9-C10 Aromatics	ND	ug/l	2.00					
---	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C12 Aliphatics, Equiv.	ND	ug/l	0.100					
C9-C10 Aromatics, Equiv.	ND	ug/l	2.00					
VPH, Total	ND	ug/l	2.00					
---	-							
Benzene	ND	ug/l	2.00					
Toluene	ND	ug/l	2.00					
Ethylbenzene	ND	ug/l	2.00					
p/m-Xylene	ND	ug/l	2.00					
o-Xylene	ND	ug/l	2.00					
Methyl tert butyl ether	ND	ug/l	2.00					
Naphthalene	ND	ug/l	2.00					
1,2,4-Trimethylbenzene	ND	ug/l	2.00					
SURROGATE RECOVERY								
2,5-Dibromotoluene	91.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	26-Nov	28-Nov	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9608825-07
1004-1196-3D-A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	L
Extractable Petroleum Hydrocarbon Only continued				40	Draft 1.0	26-Nov	28-Nov	Da
SURROGATE RECOVERY								
Chloro-octadecane	60.0	%						
o-Terphenyl	86.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9608825-08
1004-1196-3D-B
Sample Matrix: WATER

Date Collected: 22-NOV-96
Date Received : 25-NOV-96
Date Reported : 04-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Polynuclear Aromatics by GC/MS				1	8270	26-Nov	27-Nov	IG
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	67.0	%						
2-Fluorobiphenyl	63.0	%						
4-Terphenyl-d14	42.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9608825

Parameter	MS %	MSD %	RPD
Semi-volatile Organic by GC/MS MS/MSD for sample(s) 02,04,06,08			
Acenaphthene	92	106	14
1,2,4-Trichlorobenzene	76	88	15
1,4-Dichlorobenzene	60	72	18
2,4-Dinitrotoluene	104	110	6
N-Nitrosodipropylamine	78	88	12
Pyrene	118	134	13
SURROGATE RECOVERY			
Nitrobenzene-d5	84	94	11
2-Fluorobiphenyl	100	114	13
4-Terphenyl-d14	82	94	14
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01,03,05,07			
Nonane (C9)	17	16	6
Tetradecane (C14)	46	40	14
Nonadecane (C19)	75	72	4
Eicosane (C20)	76	75	1
Octacosane (C28)	122	109	11
Naphthalene	40	68	52
Acenaphthene	60	75	22
Anthracene	44	50	13
Pyrene	94	102	8
Chrysene	101	105	4
SURROGATE RECOVERY			
Chloro-octadecane	60	59	2
o-Terphenyl	82	84	2

ALPHA ANALYTICAL LABORATORIES
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client WESTON / ACUE

Est. Final Proj. Sampling Date

Work Order # 03885-116-004-4870

Project Contact/Phone # Mike Wagner 505 772-7190

AD Project Manager

QC ____ Del ____ TAT Standard

Date Rec'd ____ Date Due ____

Account # ____

Refrigerator #																			
#/Type Container	Liquid							2	2	2									
	Solid																		
Volume	Liquid							40	1L	1L									
	Solid																		
Preservatives																			

ANALYSES REQUESTED →	ORGANIC							INORG										
	VOA	BNA	Pest/PCB	Herb	VPH Deluxe	EPH STD	8270 PAH only	Metal	CN									
WESTON Analytics Use Only																		

MATRIX CODES: S - Soil; SE - Sediment; SO - Solid; SL - Sludge; W - Water; O - Oil; A - Air; DS - Drum Solids; DL - Drum Liquids; L - EP/TCLP Leachate; WI - Wipe; X - Other; F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected													
	1004-1196-1-A			W	11/22/96	0930					2	2							
	1004-1196-1-B			W	11/22/96	1420							2						
	1004-1196-2-A			W	11/22/96	0900					2	2							
	1004-1196-2B			W	11/22/96	1445							2						
	1004-1196-3A			W	11/22/96	1000					2	2							
	1004-1196-3B			W	11/22/96	1500							2						
	1004-1196-3D-A			W	11/22/96	1000					2	2							
	1004-1196-3D-B			W	11/22/96	1500							2						

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

Trip Blank listed on COC for site P16.

DATE/REVISIONS:

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____

WESTON Analytics Use Only

Samples were: 1) Shipped ___ or Hand Delivered ___ Airbill # ____ 2) Ambient or Chilled 3) Received in Good Condition Y or N 4) Labels Indicate Properly Preserved Y or N 5) Received Within Holding Times Y or N

COC Tape was: 1) Present on Outer Package Y or N 2) Unbroken on Outer Package Y or N 3) Present on Sample Y or N 4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

Relinquished by	Received by	Date	Time
[signature]	Johnson	11/25/96	850

Relinquished by	Received by	Date	Time

RFW 2121-001/A-7/91 ____ L372 ____ L373 ____ L375 ____ L377 ____ L378 Ref# ____ Cooler# ____ 381-596a

DEC 04 96 WED 01:02 PM

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ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.

Address: 88 Pine Street
Fort Devens, MA 01433

Attn: Tom Abdella

Project Number: 4800

Site: Verbeck Site

Laboratory Job Number: L9700562

Invoice Number: 1696

Date Received: 23-JAN-97

Date Reported: 30-JAN-97

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9700562-01	1014-MW-01	1004/1014
L9700562-02	1014-MW-02	1004/1014
L9700562-03	1014-MW-03	1004/1014
L9700562-04	1014-MW-04	1004/1014
L9700562-05	1014-MW-05	1004/1014
L9700562-06	1004-MW-01	1004/1014
L9700562-07	1004-MW-02	1004/1014
L9700562-08	1004-MW-04	1004/1014
L9700562-09	1004-MW-05	1004/1014
L9700562-10	1004-TB	1004/1014
L9700562-11	1004-MW-04D	1004/1014

Authorized by:

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-01
1014-MW-01
Sample Matrix: WATER

Date Collected: 22-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan	D
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	73.0	%						
2-Fluorobiphenyl	49.0	%						
4-Terphenyl-d14	19.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-01
1014-MW-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	84.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	86.0	ug/l	50.0					
C19-C36 Aliphatics	360.	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	446.	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	60.0	%						
o-Terphenyl	98.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9700562-02	**Date Collected:**	22-JAN-97
	1014-MW-02	**Date Received :**	23-JAN-97
Sample Matrix:	WATER	**Date Reported :**	30-JAN-97
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan	D
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	17.0	%						
2-Fluorobiphenyl	65.0	%						
4-Terphenyl-d14	18.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-02
1014-MW-02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	100.	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	250.	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	250.	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	89.0	%						
o-Terphenyl	112.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-03
1014-MW-03
Sample Matrix: WATER

Date Collected: 22-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	30-Jan	D
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	85.0	%						
2-Fluorobiphenyl	80.0	%						
4-Terphenyl-d14	20.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-03
1014-MW-03

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	89.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	69.0	%						
o-Terphenyl	104.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-04
1014-MW-04
Sample Matrix: WATER

Date Collected: 22-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	30-Jan	D
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	74.0	%						
2-Fluorobiphenyl	67.0	%						
4-Terphenyl-d14	42.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-04
1014-MW-04

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	82.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	97.0	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	97.0	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	63.0	%						
o-Terphenyl	111.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-05
1014-MW-05
Sample Matrix: WATER

Date Collected: 22-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan I
Acenaphthene	ND	ug/l	2.3				
2-Chloronaphthalene	ND	ug/l	2.4				
Fluoranthene	ND	ug/l	2.3				
Naphthalene	ND	ug/l	1.8				
Benzo(a)anthracene	ND	ug/l	2.5				
Benzo(a)pyrene	ND	ug/l	3.0				
Benzo(b)fluoranthene	ND	ug/l	2.8				
Benzo(k)fluoranthene	ND	ug/l	2.8				
Chrysene	ND	ug/l	2.5				
Acenaphthylene	ND	ug/l	2.1				
Anthracene	ND	ug/l	2.0				
Benzo(ghi)perylene	ND	ug/l	4.0				
Fluorene	ND	ug/l	2.2				
Phenanthrene	ND	ug/l	2.1				
Dibenzo(a,h)anthracene	ND	ug/l	3.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8				
Pyrene	ND	ug/l	2.2				
1-Methylnaphthalene	ND	ug/l	5.6				
2-Methylnaphthalene	ND	ug/l	1.4				
SURROGATE RECOVERY							
Nitrobenzene-d5	92.0	%					
2-Fluorobiphenyl	61.0	%					
4-Terphenyl-d14	41.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-05
1014-MW-05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	90.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	72.0	%						
o-Terphenyl	136.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-06
1004-MW-01
Sample Matrix: WATER

Date Collected: 21-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan I
Acenaphthene	ND	ug/l	2.3				
2-Chloronaphthalene	ND	ug/l	2.4				
Fluoranthene	ND	ug/l	2.3				
Naphthalene	ND	ug/l	1.8				
Benzo(a)anthracene	ND	ug/l	2.5				
Benzo(a)pyrene	ND	ug/l	3.0				
Benzo(b)fluoranthene	ND	ug/l	2.8				
Benzo(k)fluoranthene	ND	ug/l	2.8				
Chrysene	ND	ug/l	2.5				
Acenaphthylene	ND	ug/l	2.1				
Anthracene	ND	ug/l	2.0				
Benzo(ghi)perylene	ND	ug/l	4.0				
Fluorene	ND	ug/l	2.2				
Phenanthrene	ND	ug/l	2.1				
Dibenzo(a,h)anthracene	ND	ug/l	3.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8				
Pyrene	ND	ug/l	2.2				
1-Methylnaphthalene	ND	ug/l	5.6				
2-Methylnaphthalene	ND	ug/l	1.4				
SURROGATE RECOVERY							
Nitrobenzene-d5	80.0	%					
2-Fluorobiphenyl	82.0	%					
4-Terphenyl-d14	41.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-06
1004-MW-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	73.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	118.	ug/l	50.0					
C19-C36 Aliphatics	245.	ug/l	50.0					
C10-C22 Aromatics	48.0	ug/l	20.0					
EPH, Total	411.	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	78.0	%						
o-Terphenyl	126.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9700562-07	**Date Collected:**	22-JAN-97
	1004-MW-02	**Date Received :**	23-JAN-97
Sample Matrix:	WATER	**Date Reported :**	30-JAN-97
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan I
Acenaphthene	ND	ug/l	2.3				
2-Chloronaphthalene	ND	ug/l	2.4				
Fluoranthene	ND	ug/l	2.3				
Naphthalene	ND	ug/l	1.8				
Benzo(a)anthracene	ND	ug/l	2.5				
Benzo(a)pyrene	ND	ug/l	3.0				
Benzo(b)fluoranthene	ND	ug/l	2.8				
Benzo(k)fluoranthene	ND	ug/l	2.8				
Chrysene	ND	ug/l	2.5				
Acenaphthylene	ND	ug/l	2.1				
Anthracene	ND	ug/l	2.0				
Benzo(ghi)perylene	ND	ug/l	4.0				
Fluorene	ND	ug/l	2.2				
Phenanthrene	ND	ug/l	2.1				
Dibenzo(a,h)anthracene	ND	ug/l	3.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8				
Pyrene	ND	ug/l	2.2				
1-Methylnaphthalene	ND	ug/l	5.6				
2-Methylnaphthalene	ND	ug/l	1.4				
SURROGATE RECOVERY							
Nitrobenzene-d5	104.	%					
2-Fluorobiphenyl	90.0	%					
4-Terphenyl-d14	31.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-07
1004-MW-02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	82.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	105.	ug/l	50.0					
C19-C36 Aliphatics	84.0	ug/l	50.0					
C10-C22 Aromatics	81.0	ug/l	20.0					
EPH, Total	270.	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	84.0	%						
o-Terphenyl	142.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-08
1004-MW-04
Sample Matrix: WATER

Date Collected: 21-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan
Acenaphthene	ND	ug/l	2.3				
2-Chloronaphthalene	ND	ug/l	2.4				
Fluoranthene	ND	ug/l	2.3				
Naphthalene	ND	ug/l	1.8				
Benzo(a)anthracene	ND	ug/l	2.5				
Benzo(a)pyrene	ND	ug/l	3.0				
Benzo(b)fluoranthene	ND	ug/l	2.8				
Benzo(k)fluoranthene	ND	ug/l	2.8				
Chrysene	ND	ug/l	2.5				
Acenaphthylene	ND	ug/l	2.1				
Anthracene	ND	ug/l	2.0				
Benzo(ghi)perylene	ND	ug/l	4.0				
Fluorene	ND	ug/l	2.2				
Phenanthrene	ND	ug/l	2.1				
Dibenzo(a,h)anthracene	ND	ug/l	3.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8				
Pyrene	ND	ug/l	2.2				
1-Methylnaphthalene	ND	ug/l	5.6				
2-Methylnaphthalene	ND	ug/l	1.4				
SURROGATE RECOVERY							
Nitrobenzene-d5	32.0	%					
2-Fluorobiphenyl	29.0	%					
4-Terphenyl-d14	12.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-08
1004-MW-04

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	87.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	131.	ug/l	50.0					
C10-C22 Aromatics	337.	ug/l	20.0					
EPH, Total	468.	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	102.	%						
o-Terphenyl	156.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-09
1004-MW-05
Sample Matrix: WATER

Date Collected: 21-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan
Acenaphthene	ND	ug/l	2.3				
2-Chloronaphthalene	ND	ug/l	2.4				
Fluoranthene	ND	ug/l	2.3				
Naphthalene	ND	ug/l	1.8				
Benzo(a)anthracene	ND	ug/l	2.5				
Benzo(a)pyrene	ND	ug/l	3.0				
Benzo(b)fluoranthene	ND	ug/l	2.8				
Benzo(k)fluoranthene	ND	ug/l	2.8				
Chrysene	ND	ug/l	2.5				
Acenaphthylene	ND	ug/l	2.1				
Anthracene	ND	ug/l	2.0				
Benzo(ghi)perylene	ND	ug/l	4.0				
Fluorene	ND	ug/l	2.2				
Phenanthrene	ND	ug/l	2.1				
Dibenzo(a,h)anthracene	ND	ug/l	3.9				
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8				
Pyrene	ND	ug/l	2.2				
1-Methylnaphthalene	ND	ug/l	5.6				
2-Methylnaphthalene	ND	ug/l	1.4				
SURROGATE RECOVERY							
Nitrobenzene-d5	36.0	%					
2-Fluorobiphenyl	39.0	%					
4-Terphenyl-d14	12.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-09
1004-MW-05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	79.0	%						
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	69.0	ug/l	20.0					
EPH, Total	69.0	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	64.0	%						
o-Terphenyl	118.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9700562-10
1004-TB
Sample Matrix: WATER

Date Collected: 22-JAN-97
Date Received : 23-JAN-97
Date Reported : 30-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Jan
C5-C8 Aliphatics	ND	ug/l	20.0				
C9-C12 Aliphatics	ND	ug/l	20.0				
C9-C10 Aromatics	ND	ug/l	20.0				
VPH, Total	ND	ug/l	20.0				
----------	-						
Benzene	ND	ug/l	20.0				
Toluene	ND	ug/l	20.0				
Ethylbenzene	ND	ug/l	20.0				
p/m-Xylene	ND	ug/l	20.0				
o-Xylene	ND	ug/l	20.0				
Methyl tert butyl ether	ND	ug/l	20.0				
Naphthalene	ND	ug/l	20.0				
SURROGATE RECOVERY							
2,5-Dibromotoluene	121.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9700562-11	**Date Collected:**	23-JAN-97
	1004-MW-04D	**Date Received :**	23-JAN-97
Sample Matrix:	WATER	**Date Reported :**	30-JAN-97
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2 Vial,4 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Polynuclear Aromatics by GC/MS				1	8270	24-Jan	29-Jan	DB
Acenaphthene	ND	ug/l	2.3					
2-Chloronaphthalene	ND	ug/l	2.4					
Fluoranthene	ND	ug/l	2.3					
Naphthalene	ND	ug/l	1.8					
Benzo(a)anthracene	ND	ug/l	2.5					
Benzo(a)pyrene	ND	ug/l	3.0					
Benzo(b)fluoranthene	ND	ug/l	2.8					
Benzo(k)fluoranthene	ND	ug/l	2.8					
Chrysene	ND	ug/l	2.5					
Acenaphthylene	ND	ug/l	2.1					
Anthracene	ND	ug/l	2.0					
Benzo(ghi)perylene	ND	ug/l	4.0					
Fluorene	ND	ug/l	2.2					
Phenanthrene	ND	ug/l	2.1					
Dibenzo(a,h)anthracene	ND	ug/l	3.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	3.8					
Pyrene	ND	ug/l	2.2					
1-Methylnaphthalene	ND	ug/l	5.6					
2-Methylnaphthalene	ND	ug/l	1.4					
SURROGATE RECOVERY								
Nitrobenzene-d5	49.0	%						
2-Fluorobiphenyl	44.0	%						
4-Terphenyl-d14	19.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9700562-11
1004-MW-04D

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Jan
C5-C8 Aliphatics	ND	ug/l	20.0				
C9-C12 Aliphatics	ND	ug/l	20.0				
C9-C10 Aromatics	ND	ug/l	20.0				
VPH, Total	ND	ug/l	20.0				
----------	-						
Benzene	ND	ug/l	20.0				
Toluene	ND	ug/l	20.0				
Ethylbenzene	ND	ug/l	20.0				
p/m-Xylene	ND	ug/l	20.0				
o-Xylene	ND	ug/l	20.0				
Methyl tert butyl ether	ND	ug/l	20.0				
Naphthalene	ND	ug/l	20.0				
SURROGATE RECOVERY							
2,5-Dibromotoluene	101.	%					
Extractable Petroleum Hydrocarbon Only				40	Draft 1.0	27-Jan	30-Jan
C9-C18 Aliphatics	ND	ug/l	50.0				
C19-C36 Aliphatics	ND	ug/l	50.0				
C10-C22 Aromatics	ND	ug/l	20.0				
EPH, Total	ND	ug/l	50.0				
SURROGATE RECOVERY							
Chloro-octadecane	54.0	%					
o-Terphenyl	12.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9700562

Parameter	MS %	MSD %	RPD
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01-09,11			
Nonane (C9)	23	23	0
Tetradecane (C14)	47	50	6
Nonadecane (C19)	102	106	4
Eicosane (C20)	101	106	5
Octacosane (C28)	108	138	24
Naphthalene	41	50	20
Acenaphthene	69	84	20
Anthracene	58	69	17
Pyrene	94	103	9
Chrysene	149	153	3
SURROGATE RECOVERY			
Chloro-octadecane	71	79	11
o-Terphenyl	84	94	11

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ALPHA
Analytical Laboratories, Inc.

8 Walkup Drive
Westborough, MA 01581-1019
508-898-9220 FAX 508-898-9193

CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

NO. 7271

Sheet 1 of 2

Company Name:	Project Number:	Project Name/Location:	Date Received in Lab:	Date Due:
ROY F. WESTON, Inc.	4800 P.O. Number:	VERBECK SITE; 1004/1014	1/23	1/30

Company Address:	Phone Number:	Project Manager:	Alpha Job Number: (Lab use only)
BLDG. 3701 BARNUM ROAD DEVENS, MA. 01433	508-772-7100 FAX No.: 508-772-7251	TOM ABDELLA	9700562

Container Codes: P = Plastic V = Vial C = Cube G = Glass A = Amber Glass B = Bacteria Container O = Other

MATRIX / SOURCE CODES: MW = Monitoring Well, RO = Runoff, O = Outfall, W = Well, LF = Landfill, L = Lake/Pond/Ocean, I = Influent, E = Effluent, DW = Drinking Water, R = River Stream, S = Soil, SG = Sludge, B = Bottom Sediment, X1 = Other, X2 = Other

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix/Source	Method Preserve. (number of containers): Unpres.	Ice	Nitric	Sulfuric	HCl	Other	Solubles - F.F.	Sampling: Date	Time	Analysis Requested
562. 1	1014-MW-01	4x1LA 2x40ml V	W		X			X			1/22/97	1000	EPH SAD, VPH Deluxe, PAH by 8270
2	1014-MW-02	4x1LA 2x40ml V			X			X			1/22/97	1000	EPH SAD, VPH Deluxe, PAH by 8270
3	1014-MW-03	4x1LA 2x40ml V			X			X			1/22/97	1100	EPH SAD, VPH Deluxe, PAH by 8270
4	1014-MW-04	4x1LA 2x40ml V			X			X			1/22/97	1100	EPH SAD, VPH Deluxe, PAH by 8270
5	1014-MW-05	4x1LA 2x40ml V			X			X			1/22/97	1100	EPH SAD, VPH Deluxe, PAH by 8270
6	1004-MW-01	4x1LA 2x40ml V			X			X			1/21/97	1500	EPH SAD, VPH Deluxe, PAH by 8270
7	1004-MW-02	4x1LA 2x40ml V			X			X			1/21/97	0900	EPH SAD, VPH Deluxe, PAH by 8270
~~—~~	~~1004-MW-03~~	~~4x1LA 2x40ml V~~											~~EPH SAD, VPH Deluxe, PAH by 8270~~
~~—~~	~~1004-MW-03D~~	~~4x1LA 2x40ml V~~											~~EPH SAD, VPH Deluxe, PAH by 8270~~
8	1004-MW-04	4x1LA 2x40ml V	W		X			X			1/21/97	1400	EPH SAD, VPH Deluxe, PAH by 8270

Sampler's Signature	Affiliation	Date	Time
JGERMAN	WESTON	1/23/97	1000

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1			1/23/97	1000
2			1/23/97	1700
3				
4				

ADDITIONAL COMMENTS:

* EPH & VPH analyses are by MADEP methods.
* 1004-MW-03 & 1004-MW-03D NOT SAMPLED DUE TO DRY WELL.

ALPHA
Analytical Laboratories, Inc.

Eight Walkup Drive
Westborough, MA 01581-1019
508-898-9220 FAX 508-898-9193

CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No. 72532
Sheet 2 of 2

Company Name:	Project Number:	Project Name / Location:	Date Received in Lab:	Date Due:
ROY F. WESTON, INC.	4500 P.O. Number:	VERBECK SITE: 1004/1014	1/23	1/30

Company Address:	Phone Number:	Project Manager:	Alpha Job Number: (Lab use only)
BLDG 3701 BARNUM ROAD DEVENS, MA. 01433	508-772-7650 FAX No.: 508-772-7251	TOM ABDELLA	9700562

Container Codes: P = Plastic V = Vial C = Cube G = Glass A = Amber Glass B = Bacteria Container O = Other

MATRIX / SOURCE CODES: MW = Monitoring Well, RO = Runoff, O = Outfall, W = Well, LF = Landfill, L = Lake/Pond/Ocean, I = Influent, E = Effluent, DW = Drinking Water, R = River Stream, S = Soil, SG = Sludge, B = Bottom Sediment, X1 = Other, X2 = Other

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers): Unpres.	Ice	Nitric	Sulfuric	HCl	Other	Solubles - F.F.	Sampling: Date	Time	Analysis Requested
562.9	1004-MW-05	~~4x1 L A~~ 2x40ml V	W		X			X			1/21/97	1400	EPH S/S, VPH Deluxe, PAH by 8270
10	1004-TB	1x40 ml V	|		X			X			1/24/97	1000	VPH Deluxe N/C
11	1004-MW-~~05D~~ 04D	4x1 L A 2x40ml V	|		X			X			1/23/97	0900	EPH S/S, VPH Deluxe, PAH by 8270.
			↓										

Sampler's Signature	Affiliation	Date	Time
J GERMAN	WESTON	1/24/97	1000

ADDITIONAL COMMENTS: Analyses for EPH & VPH are by MADEP EPH & VPH methods

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1		DR Miller	1/20/97	1000
2	DR Miller		1/23/97	1700
3				
4				

Form No. QOP/06-03

ATTACHMENT G
LETTER PROPOSING WELL LOCATIONS,
ANALYTICAL RESULTS FROM PERMANENT
MONITORING WELLS SAMPLING
AND WELL LOGS

Roy F. Weston, Inc.
Building 3701
Barnum Road
Fort Devens, Massachusetts 01433
508-772-7190 • Fax 508-772-7251

Mailing Address:
Roy F. Weston, Inc.
P.O. Box 425
Ayer, Massachusetts 01432-0425

April 9, 1997

Mr. David Salvadore
MA Department of Environmental Protection
627 Main Street
Worcester, MA 01605

Re: Release Abatement Measures
Verbeck Complex - Buildings 1004 and 1014
Devens, MA
RTN 2-11210

Dear Mr. Salvadore:

Roy F. Weston, Inc. (WESTON) is submitting this letter on behalf of the US Army DRFTA - BRAC Environmental Office for the above-referenced site. In accordance with the approved RAM Plans for these sites, as modified, groundwater samples were collected from microwells at these sites and analyzed for Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH). The groundwater sample analyses showed low levels of EPH, as summarized in Tables 1 and 2, attached. In accordance with the RAM, standard 2 inch monitoring wells will be installed.

The proposed locations for the monitoring wells to be installed are depicted on Figure 1, attached. A site plan, which depicts the former Verbeck Housing area, the MacPherson water supply well, and the approximate locations of existing monitoring wells MNW-1 and MNW-2, is also enclosed for reference (Figure 2). The proposed monitoring well locations have been selected based on the locations of the former contamination source areas, groundwater flow direction, and the planned locations for the Job Corps Center buildings to be constructed on the site by the Devens Commerce Center (DCC). The proposed building locations are shown on Figure 1, and the wells are proposed in locations which fall outside the footprints of the proposed buildings. Installation of 4 monitoring wells, in the locations depicted on Figure 1, is proposed. These wells will be sampled and analyzed for EPH. In addition, existing monitoring wells MNW-1 and MNW-2 will also be sampled for EPH. No sampling for VPH is proposed because VPH compounds are not expected to be present at these locations based on the historical uses of the site, the types of petroleum products used at the site, and the soil and groundwater sampling data generated during the RAM.

Your concurrence with the proposed monitoring well locations and analysis procedures is requested. We have tentatively arranged for a driller to install these wells on Friday, April 11, 1997, therefore we would greatly appreciate a response as soon as possible. If you have any questions or comments, please do not hesitate to contact Mark Applebee of the U.S. Army Corps of Engineers at (617) 647-8227, or me at (617) 204-2702.

Very truly yours,

Thomas J. Abdella for

Anthony F. Andronico, LSP
Principal Project Manager

cc: M. Applebee
T. Abdella
J. E. Rodgers, DMJM/HTB

vbk-well.doc

TABLE 1
VERBECK SITE
SUMMARY OF ANALYTICAL RESULTS
OF GROUNDWATER SAMPLES

MONITORING WELL NO.	*DATE WELL INSTALLED*	*SAMPLE ID*	*SAMPLE LOCATION*	*EPH Conc. (ppm)*	*VPH Conc. (ppm)*	*PAH Conc. (ppm)*
MK-01	1/22/97	1014-MW-01	Bldg. 1014	0.446	ND	ND
MK-02	1/22/97	1014-MW-02	Bldg. 1014	0.25	ND	ND
MK-03	1/22/97	1014-MW-03	Bldg. 1014	ND	ND	ND
MK-04	1/22/97	1014-MW-04	Bldg. 1014	0.097	ND	ND
MK-05	1/22/97	1014-MW-05	Bldg. 1014	ND	ND	ND
MK-06	1/21/97	1004-MW-01	Bldg. 1004	0.411	ND	ND
MK-07	1/21/97	1004-MW-02	Bldg. 1004	0.27	ND	ND
MK-08*	1/21/97	1004-MW-03	Bldg. 1004	NS	NS	NS
MK-09	1/21/97	1004-MW-04	Bldg. 1004	0.468	ND	ND
MK-09	1/21/97	1004-MW-04D	Bldg. 1004	ND	ND	ND
MK-10	1/21/97	1004-MW-05	Bldg. 1004	0.069	ND	ND

ND - Non-detect
NS - Not Sampled
* - Well MK-08 was dry and could not be sampled.

ROY F. WESTON, INC
VERBECK SITE
TABLE 2
SUMMARY OF ANALYTICAL RESULTS
EXTRACTABLE PETROLEUM HYDROCARBONS

		Well No:	MK-01	MK-02	MK-03	MK-04	MK-05	MK-06	MK-07	MK-08	MK-09	MK-10
		Sample No:	1014-MW-01	1014-MW-02	1014-MW-03	1014-MW-04	1014-MW-05	1004-MW-01	1004-MW-02	1004-MW-03	1004-MW-04	1004-MW-05
		MADEP GW-1 Std.										
C9-C18	Aliphatics	4.0 ppm	0.086	ND	ND	0.097	ND	0.118	0.105	Dry Well	ND	ND
C19-C36	Aliphatics	5.0 ppm	0.36	0.25	ND	ND	ND	0.245	0.084	-	0.131	ND
C10-C22	Aromatics	0.2 ppm	ND	ND	ND	ND	ND	0.048	0.081	-	0.337	0.069

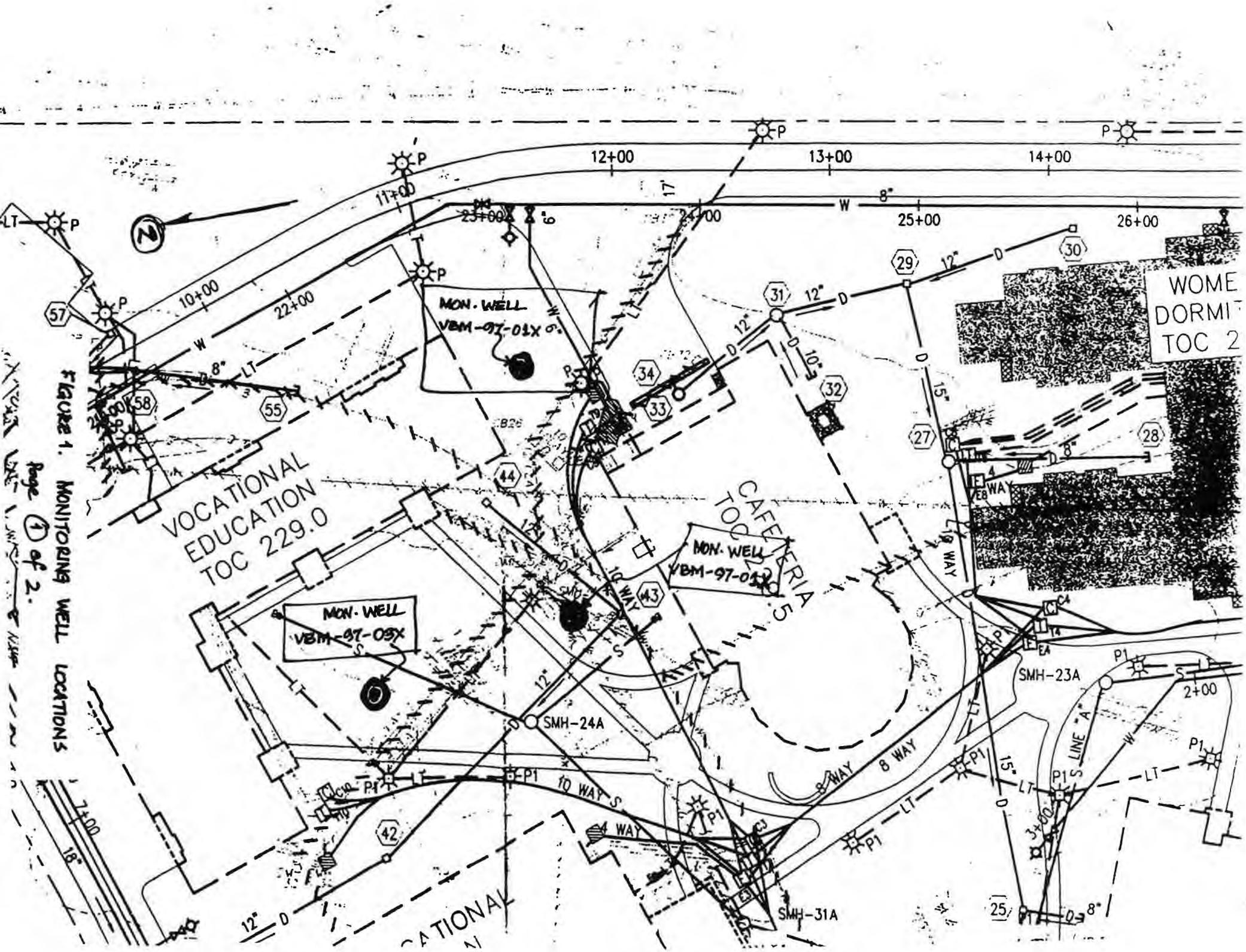


FIGURE 1. MONITORING WELL LOCATIONS

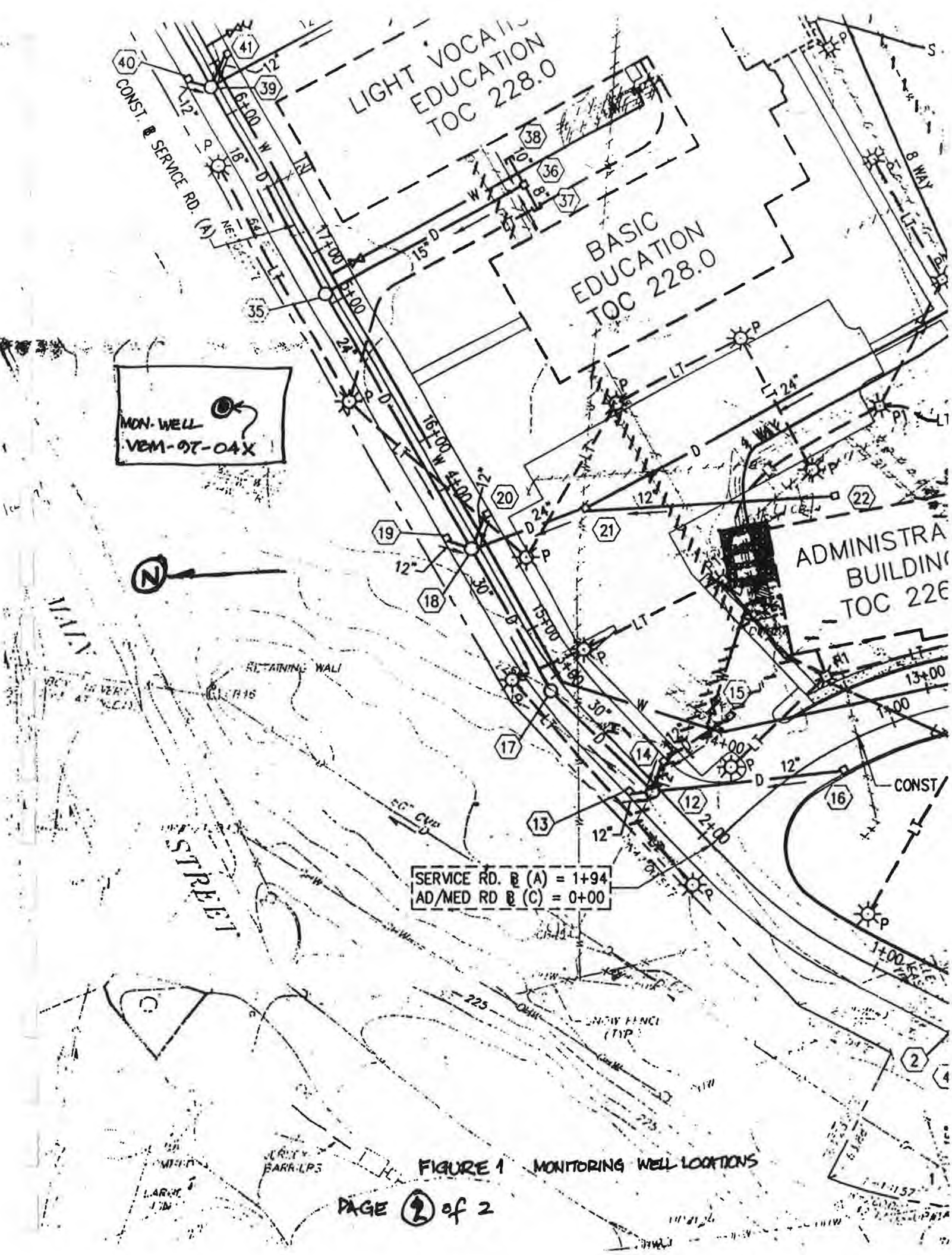


FIGURE 1 MONITORING WELL LOCATIONS

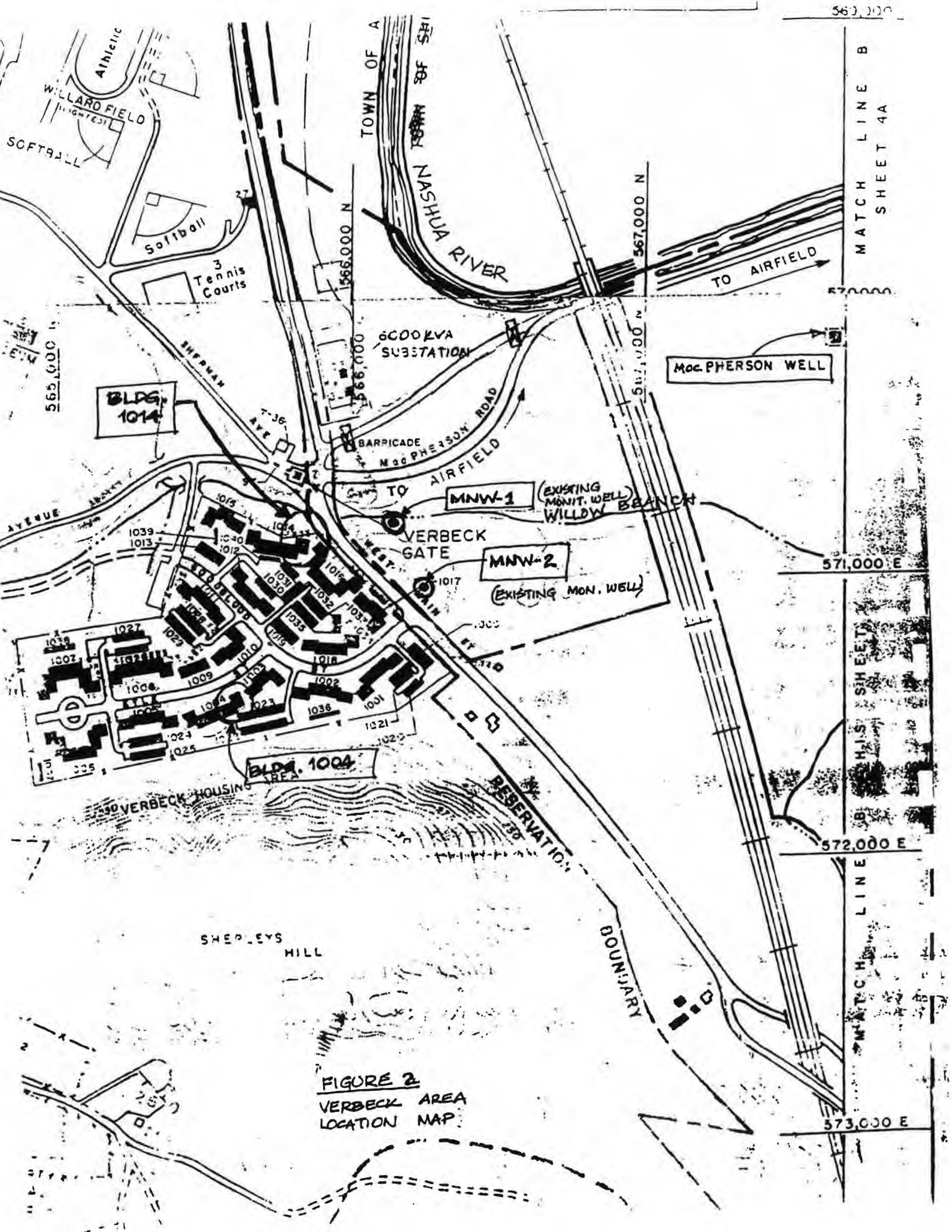


FIGURE 2
VERBECK AREA
LOCATION MAP

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Tom Abdella
Project Number: 4800-10
Site: Verbeck Site

Laboratory Job Number: L9702884
Invoice Number: 3953
Date Received: 17-APR-97
Date Reported: 24-APR-97
Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9702884-01	VBM-97-01X	Devens, MA
L9702884-02	VBM-97-02X	Devens, MA
L9702884-03	VBM-97-03X	Devens, MA
L9702884-04	VBM-97-04X	Devens, MA
L9702884-05	VBM-97-04XA	Devens, MA
L9702884-06	MNW-1	Devens, MA
L9702884-07	MNW-2	Devens, MA

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9702884-01
VBM-97-01X
Sample Matrix: WATER

Date Collected: 17-APR-97
Date Received : 17-APR-97
Date Reported : 24-APR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	21-Apr	24-Apr
C9-C18 Aliphatics	90.0	ug/l	50.0				
C19-C36 Aliphatics	58.0	ug/l	50.0				
C10-C22 Aromatics	27.0	ug/l	20.0				
EPH, Total	175.	ug/l	50.0				
----------	-						
Acenaphthene	ND	ug/l	20.0				
Acenaphthylene	ND	ug/l	20.0				
Anthracene	ND	ug/l	20.0				
Benzo(a)anthracene	ND	ug/l	20.0				
Benzo(a)pyrene	ND	ug/l	50.0				
Benzo(b)fluoranthene	ND	ug/l	50.0				
Benzo(ghi)perylene	ND	ug/l	50.0				
Benzo(k)fluoranthene	ND	ug/l	50.0				
Chrysene	ND	ug/l	50.0				
Dibenzo(a,h)anthracene	ND	ug/l	50.0				
Fluoranthene	ND	ug/l	50.0				
Fluorene	ND	ug/l	50.0				
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0				
Naphthalene	ND	ug/l	50.0				
Phenanthrene	ND	ug/l	50.0				
Pyrene	ND	ug/l	50.0				
2-Methylnaphthalene	ND	ug/l	50.0				
SURROGATE RECOVERY							
Chloro-octadecane	73.0	%					
o-Terphenyl	92.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9702884-02
VBM-97-02X
Sample Matrix: WATER

Date Collected: 17-APR-97
Date Received : 17-APR-97
Date Reported : 24-APR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	21-Apr	24-Apr	SE
C9-C18 Aliphatics	72.0	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	40.0	ug/l	20.0					
EPH, Total	122.	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	63.0	%						
o-Terphenyl	106.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

WESTON
MANAGERS DESIGNERS/CONSULTANTS

TEST BORING LOG

BORING NO. VBM-97-03(1)

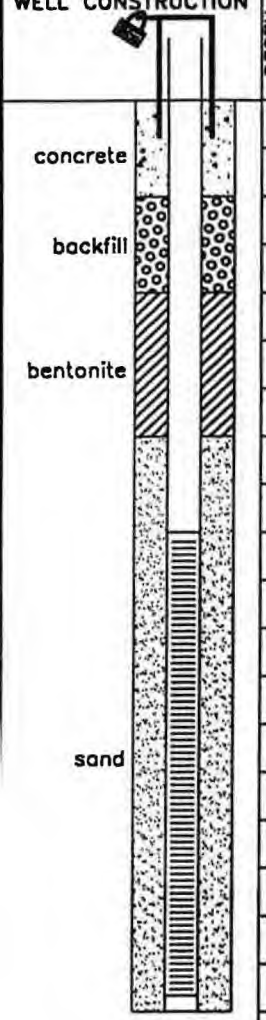
PROJECT: Fort Devens – Verbeck Housing Area
SHEET NO. 1 OF 1

CLIENT: U.S. Army Corps of Engineers, New England Division
JOB NO. 03886-118-004

BORING CONTRACTOR: Environmental Drilling, Inc. RIG: Acker
ELEVATION (ground)

GROUNDWATER					CAS.	SAMP.	CORE	TUBE
DATE	TIME	WATER ELEVATION	DATUM	TYPE	HSA	SS		
4/11/97		11.2 ft	BGS	DIA.	4 1/4"ID	1 7/8"OD		
				WT.		150#		
				FALL		30"		

DATE STARTED 4/11/97
DATE FINISHED 4/11/97
DRILLER J. Grasser
INSPECTOR A. Easterday



5' steel protective casing, 4" ID, with locking cap

Screen: 2" PVC with 0.010" slots

Riser: 2" PVC

DEPTH (FEET)	SAMPLE NO.	REC./PEN. (In.)	BLOWS PER 6 INCHES	CLASSIFICATION	REMARKS
0	S-1	8/24	4-5	Brownish-tan, dry, m. SAND, little silt, trace f. gravel. Piece of gravel lodged in spoon.	
			5-12		
				4.5'	
			9	Tan, dry, m.-c. SAND, little f. gravel, trace silt. Mod. sorted. Piece of black-gray Schist at 5.0'.	
5	S-2	12/24	14-20		
			17		
			7		
10	S-3	14/24	16-15	Tan, wet, m.-c. SAND, little f. gravel, trace silt. Wet at 10.9'. Fe staining at 10.9'-11.0'. Mod. sorted.	
			12		
			5		
15	S-4	16/24	5-9	Tan, saturated, m. SAND, some f. sand, trace silt. Well sorted. Faint odor at 20.0'-20.5'.	
			13		
			6		
20	S-5	24/24	7-8		
			10	21.5'	
				END OF BORING	
25					
30					

TEST BORING LOG

BORING NO. VBM-97-04X

PROJECT: Fort Devens – Verbeck Housing Area | SHEET NO. 1 OF 1

CLIENT: U.S. Army Corps of Engineers, New England Division | JOB NO. 03886-118-004

BORING CONTRACTOR: Environmental Drilling, Inc. | RIG: Acker | ELEVATION (ground)

GROUNDWATER					CAS.	SAMP.	CORE	TUBE	
DATE	TIME	WATER ELEVATION	DATUM	TYPE	HSA	SS			DATE STARTED 4/11/97
4/11/97		9.9 ft	BGS	DIA.	4 1/4" ID	1 7/8" OD			DATE FINISHED 4/11/97
				WT.		150#			DRILLER J. Grasser
				FALL		30"			INSPECTOR A. Easterday

WELL CONSTRUCTION	DEPTH (FEET)	SAMPLE NO.	REC./PEN. (In.)	BLOWS PER 6 INCHES	CLASSIFICATION	REMARKS
concrete	0	S-1	12/24	5-10	Black-brown, dry, ORGANICS and m. SAND, some f. gravel, trace silt. Poorly sorted.	
				20-16		
backfill						
					4.5'	
				10		
	5	S-2	18/24	10-9	Tan, damp, f. SAND, some m. sand, little silt. Well sorted.	
bentonite				9		
				4		
	10	S-3	14/24	5-6	Tan-brown, wet-saturated, m.-c. SAND, some f. sand, little gravel, trace silt.	
				9		
sand						
				3		
	15	S-4	18/24	6-10		
				13		
				3		
	20	S-5	20/24	5-9		
				22	21.5'	
					END OF BORING	
	25					
	30					

5' steel protective casing, 4" ID, with locking cap

Screen: 2" PVC with 0.010" slots

Riser: 2" PVC

ALPHA
Analytical Laboratories, Inc.

Eight Walkup Drive
Westborough, MA 01581-1019
508-898-9220 FAX 508-898-9193

CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No. 1016

Sheet 1 of 1

Company Name:	Project Number:	Project Name / Location:	Date Received in Lab:	Date Due:
ROY F. WESTON, Inc	VERBECK SITE P.O. Number:	DEVENS, MA	9/23	5-DAY TAT

Company Address:	Phone Number:	Project Manager:	Alpha Job Number: (Lab use only)
Bldg 3701 Barnum Rd Devens, MA 01433	508-772-7690 FAX No.: 772-7251	SAM NAIK	9707477

Container Codes: P = Plastic V = Vial C = Cube G = Glass A = Amber Glass B = Bacteria Container O = Other

MATRIX / SOURCE CODES: (MW) = Monitoring Well, RO = Runoff, O = Outfall, W = Well, LF = Landfill, L = Lake/Pond/Ocean, I = Influent, E = Effluent, DW = Drinking Water, R = River Stream, S = Soil, SG = Sludge, B = Bottom Sediment, X1 = Other, X2 = Other

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers): Unpres.	Ice	Nitric	Sulfuric	HCl	Other	Solubles - F.F.	Sampling: Date	Time	Analysis Requested
7472-1	MNW-12	2/A	MW					X			9/23/97	1130	EPH Deluxe
2	MNW-22	2/A	MW					X			"	1200	"
3	VBM-97-01X2	2/A	MW					X			"	1400	"
4	VBM-97-02X2	2/A	MW					X			"	1400	"
5	VBM-97-03X2	2/A	MW					X			"	1430	"
6	VBM-97-04X2	2/A	MW					X			"	1500	"
7	VBM-97-03X2A	2/A	MW					X			"	1430	"

Sampler's Signature	Affiliation	Date	Time
	WESTON	9/23/97	

ADDITIONAL COMMENTS:
5-DAY TAT
FAX RESULTS TO SAM NAIK 508-772-7251

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1			9/23/97	1705
2				
3				
4				

Form No. QOP/06-03

TABLE G-1
GROUNDWATER MONITORING WELL SURVEY
TABULATION OF DEPTH TO WATER AND GROUNDWATER ELEVATIONS

Well No.	Top of Casing Elev.	Date of Survey	Depth to Water from Top of Casing (ft)	Date of Depth Measurement	Groundwater Elevation
MK- 1	227.7	3-Apr-97	12.7	23-Apr-97	215.0
MK- 2	226.9	3-Apr-97	13.9	23-Apr-97	213.0
MK- 3	226.5	3-Apr-97	12.2	23-Apr-97	214.3
MK- 4	227.5	3-Apr-97	11.9	23-Apr-97	215.7
MK- 5	227.5	3-Apr-97	11.7	23-Apr-97	215.9
MK- 6	230.6	3-Apr-97	18.7	23-Apr-97	211.9
MK- 7	229.4	3-Apr-97	16.7	23-Apr-97	212.8
MK- 8	229.1	3-Apr-97	17.8	23-Apr-97	211.4
MK- 9	229.6	3-Apr-97	15.0	23-Apr-97	214.7
MK- 10	231.1	3-Apr-97	15.1	23-Apr-97	216.1
MK- 1196-1	228.43	3-Apr-97	8.6	23-Apr-97	219.8
MK- 1196-3	230.94	3-Apr-97	10.5	23-Apr-97	220.4
VBM-97- 01X	231.09	24-May-97	17.1	23-Apr-97	214.0
VBM-97- 02X	230.57	24-May-97	15.6	23-Apr-97	215.0
VBM-97- 03X	229.62	24-May-97	15.5	23-Apr-97	214.2
VBM-97- 04X	227.82	24-May-97	13.9	23-Apr-97	213.9
MNW-1	216.36	24-May-97	6.7	23-Apr-97	209.6
MNW-2	225.81	24-May-97	15.3	23-Apr-97	210.5
VBM-97- 01X	231.09	23-Sep-97	19.5	23-Apr-97	211.6
VBM-97- 02X	230.57	23-Sep-97	17.7	23-Apr-97	212.9
VBM-97- 03X	229.62	23-Sep-97	18.2	23-Apr-97	211.4
VBM-97- 04X	227.82	23-Sep-97	16.85	23-Apr-97	211.0
MNW-1	216.36	23-Sep-97	7.81	23-Apr-97	208.6
MNW-2	225.81	23-Sep-97	19.3	23-Apr-97	206.5

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Sam Naik
Project Number:
Site: Verbeck Site

Laboratory Job Number: L9707472
Invoice Number: 8616
Date Received: 23-SEP-97
Date Reported: 30-SEP-97
Delivery Method: Client

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9707472-01	MNW-12	Devens, MA
L9707472-02	MNW-22	Devens, MA
L9707472-03	VBM-97-01X2	Devens, MA
L9707472-04	VBM-97-02X2	Devens, MA
L9707472-05	VBM-97-03X2	Devens, MA
L9707472-06	VBM-97-04X2	Devens, MA
L9707472-07	VBM-97-03X2A	Devens, MA

Authorized by:

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-01
MNW-12
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	22.0	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	74.0	%						
o-Terphenyl	88.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-02
MNW-22
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	78.0	%						
o-Terphenyl	90.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-03
VBM-97-01X2
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	73.0	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	73.0	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	74.0	%						
o-Terphenyl	76.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-04
VBM-97-02X2
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	62.0	%						
o-Terphenyl	86.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-05
VBM-97-03X2
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	62.0	%						
o-Terphenyl	80.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-06
VBM-97-04X2
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	460.	%						
o-Terphenyl	710.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9707472-07
VBM-97-03X2A
Sample Matrix: WATER

Date Collected: 23-SEP-97
Date Received : 23-SEP-97
Date Reported : 30-SEP-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Sep	26-Sep	SE
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
EPH, Total	ND	ug/l	50.0					
----------	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	62.0	%						
o-Terphenyl	80.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9707472

Parameter	MS %	MSD %	RPD
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01-07			
Nonane (C9)	13	19	38
Tetradecane (C14)	39	45	14
Nonadecane (C19)	64	83	26
Eicosane (C20)	76	94	21
Octacosane (C28)	52	58	11
Naphthalene	38	47	21
Acenaphthene	57	64	12
Anthracene	70	79	12
Pyrene	59	70	17
Chrysene	53	65	20
SURROGATE RECOVERY			
Chloro-octadecane	72	74	3
o-Terphenyl	70	85	19

REFERENCES

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ATTACHMENT H
ANALYTICAL RESULTS FOR CONFIRMATION SOIL SAMPLING

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

ORIGINAL

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Tom Abdella
Project Number:
Site: USACE NEO

Laboratory Job Number: L9609256
Invoice Number: 89523
Date Received: 10-DEC-96
Date Reported: 13-MAR-97
Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9609256-01	1004-SW1	
L9609256-02	1004-FL1	
L9609256-03	1004-FL3	
L9609256-04	1004-SW02	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609256-01
1004-SW1
Sample Matrix: SOIL

Date Collected: 04-DEC-96
Date Received : 10-DEC-96
Date Reported : 13-MAR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	II
Solids, Total	83.	%	0.10	3	2540B		16-Dec	ST
Volatile Petroleum Hydrocarbon				39	Draft 1.0		16-Dec	DI
C5-C8 Aliphatics	1930	ug/kg	200.					
C9-C12 Aliphatics	3300	ug/kg	200.					
C9-C10 Aromatics	602.	ug/kg	200.					
VPH, Total	5780	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
1,2,4-Trimethylbenzene	ND	ug/Kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	91.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609256-01
1004-SW1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	11-Dec	13-Dec
C9-C18 Aliphatics	ND	ug/kg	5000				
C19-C36 Aliphatics	ND	ug/kg	5000				
C10-C22 Aromatics	ND	ug/kg	5000				
----------	-						
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.				
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0				
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000				
EPH, Total	ND	ug/kg	5000				
----------	-						
Acenaphthene	ND	ug/kg	700.				
Acenaphthylene	ND	ug/kg	700.				
Anthracene	ND	ug/kg	700.				
Benzo(a)anthracene	ND	ug/kg	700.				
Benzo(a)pyrene	ND	ug/kg	700.				
Benzo(b)fluoranthene	ND	ug/kg	700.				
Benzo(ghi)perylene	ND	ug/kg	700.				
Benzo(k)fluoranthene	ND	ug/kg	700.				
Chrysene	ND	ug/kg	700.				
Dibenzo(a,h)anthracene	ND	ug/kg	700.				
Fluoranthene	ND	ug/kg	700.				
Fluorene	ND	ug/kg	700.				
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.				
Naphthalene	ND	ug/kg	700.				
Phenanthrene	ND	ug/kg	700.				
Pyrene	ND	ug/kg	700.				
2-Methylnaphthalene	ND	ug/kg	700.				
SURROGATE RECOVERY							
Chloro-octadecane	55.0	%					
o-Terphenyl	122.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609256-02
1004-FL1
Sample Matrix: SOIL

Date Collected: 04-DEC-96
Date Received : 10-DEC-96
Date Reported : 13-MAR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Solids, Total	83.	%	0.10	3	2540B		16-Dec	ST
Volatile Petroleum Hydrocarbon				39	Draft 1.0		16-Dec	DB
C5-C8 Aliphatics	7830	ug/kg	200.					
C9-C12 Aliphatics	84300	ug/kg	200.					
C9-C10 Aromatics	18700	ug/kg	200.					
VPH, Total	111000	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	217.	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	3130	ug/kg	100.					
1,2,4-Trimethylbenzene	ND	ug/Kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	119.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609256-02
1004-FL1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	11-Dec	13-Dec
C9-C18 Aliphatics	113000	ug/kg	5000				
C19-C36 Aliphatics	21700	ug/kg	5000				
C10-C22 Aromatics	56600	ug/kg	5000				
---	-						
C9-C18 Aliphatics, Equiv.	5660	ug/kg	250.				
C19-C36 Aliphatics, Equiv.	108.	ug/kg	25.0				
C10-C22 Aromatics, Equiv.	56600	ug/kg	5000				
EPH, Total	62400	ug/kg	5000				
---	-						
Acenaphthene	ND	ug/kg	700.				
Acenaphthylene	ND	ug/kg	700.				
Anthracene	ND	ug/kg	700.				
Benzo(a)anthracene	ND	ug/kg	700.				
Benzo(a)pyrene	ND	ug/kg	700.				
Benzo(b)fluoranthene	ND	ug/kg	700.				
Benzo(ghi)perylene	ND	ug/kg	700.				
Benzo(k)fluoranthene	ND	ug/kg	700.				
Chrysene	ND	ug/kg	700.				
Dibenzo(a,h)anthracene	ND	ug/kg	700.				
Fluoranthene	ND	ug/kg	700.				
Fluorene	ND	ug/kg	700.				
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.				
Naphthalene	ND	ug/kg	700.				
Phenanthrene	ND	ug/kg	700.				
Pyrene	ND	ug/kg	700.				
2-Methylnaphthalene	ND	ug/kg	700.				
SURROGATE RECOVERY							
Chloro-octadecane	102.	%					
o-Terphenyl	257.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609256-03
1004-FL3
Sample Matrix: SOIL

Date Collected: 05-DEC-96
Date Received : 10-DEC-96
Date Reported : 13-MAR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	II
Solids, Total	78.	%	0.10	3	2540B		16-Dec	ST
Volatile Petroleum Hydrocarbon				39	Draft 1.0		16-Dec	DE
C5-C8 Aliphatics	ND	ug/kg	256.					
C9-C12 Aliphatics	ND	ug/kg	256.					
C9-C10 Aromatics	ND	ug/kg	256.					
VPH, Total	ND	ug/kg	256.					
----------	-							
Benzene	ND	ug/kg	128.					
Toluene	ND	ug/kg	128.					
Ethylbenzene	ND	ug/kg	128.					
p/m-Xylene	ND	ug/kg	128.					
o-Xylene	ND	ug/kg	128.					
Methyl tert butyl ether	ND	ug/kg	128.					
Naphthalene	ND	ug/kg	128.					
1,2,4-Trimethylbenzene	ND	ug/Kg	128.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	72.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609256-03
1004-FL3

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	11-Dec	13-Dec
C9-C18 Aliphatics	ND	ug/kg	6410				
C19-C36 Aliphatics	ND	ug/kg	6410				
C10-C22 Aromatics	ND	ug/kg	6410				
----------	-						
C9-C18 Aliphatics, Equiv.	ND	ug/kg	321.				
C19-C36 Aliphatics, Equiv.	ND	ug/kg	32.1				
C10-C22 Aromatics, Equiv.	ND	ug/kg	6410				
EPH, Total	ND	ug/kg	6410				
----------	-						
Acenaphthene	ND	ug/kg	897.				
Acenaphthylene	ND	ug/kg	897.				
Anthracene	ND	ug/kg	897.				
Benzo(a)anthracene	ND	ug/kg	897.				
Benzo(a)pyrene	ND	ug/kg	897.				
Benzo(b)fluoranthene	ND	ug/kg	897.				
Benzo(ghi)perylene	ND	ug/kg	897.				
Benzo(k)fluoranthene	ND	ug/kg	897.				
Chrysene	ND	ug/kg	897.				
Dibenzo(a,h)anthracene	ND	ug/kg	897.				
Fluoranthene	ND	ug/kg	897.				
Fluorene	ND	ug/kg	897.				
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	897.				
Naphthalene	ND	ug/kg	897.				
Phenanthrene	ND	ug/kg	897.				
Pyrene	ND	ug/kg	897.				
2-Methylnaphthalene	ND	ug/kg	897.				
SURROGATE RECOVERY							
Chloro-octadecane	61.0	%					
o-Terphenyl	108.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609256-04
1004-SW02
Sample Matrix: SOIL

Date Collected: 04-DEC-96
Date Received : 10-DEC-96
Date Reported : 13-MAR-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Solids, Total	85.	%	0.10	3	2540B		16-Dec	ST
Volatile Petroleum Hydrocarbon				39	Draft 1.0		16-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
1,2,4-Trimethylbenzene	ND	ug/Kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	75.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609256-04
1004-SW02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	11-Dec	13-Dec
C9-C18 Aliphatics	ND	ug/kg	5000				
C19-C36 Aliphatics	ND	ug/kg	5000				
C10-C22 Aromatics	ND	ug/kg	5000				
----------	-						
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.				
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0				
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000				
EPH, Total	ND	ug/kg	5000				
----------	-						
Acenaphthene	ND	ug/kg	700.				
Acenaphthylene	ND	ug/kg	700.				
Anthracene	ND	ug/kg	700.				
Benzo(a)anthracene	ND	ug/kg	700.				
Benzo(a)pyrene	ND	ug/kg	700.				
Benzo(b)fluoranthene	ND	ug/kg	700.				
Benzo(ghi)perylene	ND	ug/kg	700.				
Benzo(k)fluoranthene	ND	ug/kg	700.				
Chrysene	ND	ug/kg	700.				
Dibenzo(a,h)anthracene	ND	ug/kg	700.				
Fluoranthene	ND	ug/kg	700.				
Fluorene	ND	ug/kg	700.				
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.				
Naphthalene	ND	ug/kg	700.				
Phenanthrene	ND	ug/kg	700.				
Pyrene	ND	ug/kg	700.				
2-Methylnaphthalene	ND	ug/kg	700.				
SURROGATE RECOVERY							
Chloro-octadecane	59.0	%					
o-Terphenyl	114.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9609256

Parameter	MS %	MSD %	RPD
Volatile Petroleum Hydrocarbon-Spike Recovery MS/MSD for sample(s) 01-04			
2-Methylpentane	56	56	0
Toluene	67	68	1
1,2,4-Trimethylbenzene	63	66	5
SURROGATE RECOVERY			
2,5-Dibromotoluene	93	100	7
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01-04			
Nonane (C9)	21	22	5
Tetradecane (C14)	57	61	7
Nonadecane (C19)	87	80	8
Eicosane (C20)	90	83	8
Octacosane (C28)	121	98	21
Naphthalene	47	88	61
Acenaphthene	66	110	50
Anthracene	57	73	25
Pyrene	106	58	59
Chrysene	154	29	137
SURROGATE RECOVERY			
Chloro-octadecane	46	20	79
o-Terphenyl	76	112	38

REFERENCES

3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

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ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609528-05
1004-FL06
Sample Matrix: SOIL

Date Collected: 16-DEC-96
Date Received : 19-DEC-96
Date Reported : 08-JAN-97

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass,1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Solids, Total	79.	%	0.10	3	2540B		23-Dec	ST
Volatile Petroleum Hydrocarbon				39	Draft 1.0		20-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	253.					
C9-C12 Aliphatics	ND	ug/kg	253.					
C9-C10 Aromatics	ND	ug/kg	253.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	127.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	12.7					
C9-C10 Aromatics, Equiv.	ND	ug/kg	253.					
VPH, Total	ND	ug/kg	253.					
----------	-							
Benzene	ND	ug/kg	127.					
Toluene	ND	ug/kg	127.					
Ethylbenzene	ND	ug/kg	127.					
p/m-Xylene	ND	ug/kg	127.					
o-Xylene	ND	ug/kg	127.					
Methyl tert butyl ether	ND	ug/kg	127.					
Naphthalene	ND	ug/kg	127.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	87.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609528-05
1004-FL06

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Extractable Petroleum Hydrocarbon				40	Draft 1.0	20-Dec	23-Dec
C9-C18 Aliphatics	ND	ug/kg	6330				
C19-C36 Aliphatics	ND	ug/kg	6330				
C10-C22 Aromatics	ND	ug/kg	6330				
---	-						
C9-C18 Aliphatics, Equiv.	ND	ug/kg	316.				
C19-C36 Aliphatics, Equiv.	ND	ug/kg	31.6				
C10-C22 Aromatics, Equiv.	ND	ug/kg	6330				
EPH, Total	ND	ug/kg	6330				
---	-						
Acenaphthene	ND	ug/kg	886.				
Acenaphthylene	ND	ug/kg	886.				
Anthracene	ND	ug/kg	886.				
Benzo(a)anthracene	ND	ug/kg	886.				
Benzo(a)pyrene	ND	ug/kg	886.				
Benzo(b)fluoranthene	ND	ug/kg	886.				
Benzo(ghi)perylene	ND	ug/kg	886.				
Benzo(k)fluoranthene	ND	ug/kg	886.				
Chrysene	ND	ug/kg	886.				
Dibenzo(a,h)anthracene	ND	ug/kg	886.				
Fluoranthene	ND	ug/kg	886.				
Fluorene	ND	ug/kg	886.				
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	886.				
Naphthalene	ND	ug/kg	886.				
Phenanthrene	ND	ug/kg	886.				
Pyrene	ND	ug/kg	886.				
2-Methylnaphthalene	ND	ug/kg	886.				
SURROGATE RECOVERY							
Chloro-octadecane	41.0	%					
o-Terphenyl	34.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9609528

Parameter	MS %	MSD %	RPD
Volatile Petroleum Hydrocarbon-Spike Recovery MS/MSD for sample(s) 05			
2-Methylpentane	56	56	0
Toluene	67	68	1
1,2,4-Trimethylbenzene	63	66	5
SURROGATE RECOVERY			
2,5-Dibromotoluene	93	100	7
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 05			
Nonane (C9)	5	6	18
Tetradecane (C14)	57	49	15
Nonadecane (C19)	114	104	9
Eicosane (C20)	112	105	6
Octacosane (C28)	149	116	25
Naphthalene	36	37	3
Acenaphthene	54	55	2
Anthracene	43	43	0
Pyrene	69	70	1
Chrysene	124	124	0
SURROGATE RECOVERY			
Chloro-octadecane	80	58	32
o-Terphenyl	51	55	8

REFERENCES

3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

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We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: Roy F. Weston, Inc.
Address: 88 Pine Street
Fort Devens, MA 01433
Attn: Tom Abdella
Project Number: 4800
Site: Verbeck Gate Building 1004

Laboratory Job Number: L9609585
Invoice Number: 89875
Date Received: 23-DEC-96
Date Reported: 30-DEC-96
Delivery Method: Client

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9609585-01	1004 SW06	Devens
L9609585-02	1004 SW03	Devens
L9609585-03	1004 FL04	Devens
L9609585-04	1004 SW05	Devens
L9609585-05	1004 SW04	Devens
L9609585-06	1004 FL02	Devens
L9609585-07	1004 FL05	Devens
L9609585-08	1004 FL05 D	Devens
L9609585-09	ER100401	Devens
L9609585-10	1004 TP	Devens

Authorized by:

Scott McLean - Laboratory Director

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-01
1004 SW06
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Solids, Total	80.	%	0.10	3	2540B		26-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	116.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-01
1004 SW06

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	27-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
----------	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
----------	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	47.0	%						
o-Terphenyl	62.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-02
1004 SW03
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS
Solids, Total	80.	%	0.10	3	2540B		26-Dec
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Dec DR
C5-C8 Aliphatics	ND	ug/kg	200.				
C9-C12 Aliphatics	ND	ug/kg	200.				
C9-C10 Aromatics	ND	ug/kg	200.				
---	-						
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.				
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0				
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.				
VPH, Total	ND	ug/kg	200.				
---	-						
Benzene	ND	ug/kg	100.				
Toluene	ND	ug/kg	100.				
Ethylbenzene	ND	ug/kg	100.				
p/m-Xylene	ND	ug/kg	100.				
o-Xylene	ND	ug/kg	100.				
Methyl tert butyl ether	ND	ug/kg	100.				
Naphthalene	ND	ug/kg	100.				
SURROGATE RECOVERY							
2,5-Dibromotoluene	94.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-02
1004 SW03

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	27-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	81300	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	81300	ug/kg	5000					
EPH, Total	81300	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	50.0	%						
o-Terphenyl	68.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-03
1004 FL04
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	J
Solids, Total	80.	%	0.10	3	2540B		26-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		29-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	108.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-03
1004 FL04

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
----------	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
----------	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	53.0	%						
o-Terphenyl	50.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-04
1004 SW05
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Solids, Total	96.	%	0.10	3	2540B		26-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	118.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-04
1004 SW05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	50.0	%						
o-Terphenyl	64.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-05
1004 SW04
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory
Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	
Solids, Total	95.	%	0.10	3	2540B		26-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	119.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-05
1004 SW04

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	45.0	%						
o-Terphenyl	56.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-06
1004 FL02
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory
Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I.
Solids, Total	80.	%	0.10	3	2540B		26-Dec	S'
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	121.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-06
1004 FL02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	45.0	%						
o-Terphenyl	5.00	%	*					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-07
1004 FL05
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Solids, Total	82.	%	0.10	3	2540B		26-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	93.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-07
1004 FL05

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	ND	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	ND	ug/kg	5000					
EPH, Total	ND	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	42.0	%						
o-Terphenyl	75.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-08
1004 FL05 D
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial,1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Solids, Total	80.	%	0.10	3	2540B		27-Dec	S
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	91.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-08
1004 FL05 D

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	24-Dec	28-Dec	DB
C9-C18 Aliphatics	ND	ug/kg	5000					
C19-C36 Aliphatics	ND	ug/kg	5000					
C10-C22 Aromatics	8460	ug/kg	5000					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/kg	250.					
C19-C36 Aliphatics, Equiv.	ND	ug/kg	25.0					
C10-C22 Aromatics, Equiv.	8460	ug/kg	5000					
EPH, Total	8460	ug/kg	5000					
---	-							
Acenaphthene	ND	ug/kg	700.					
Acenaphthylene	ND	ug/kg	700.					
Anthracene	ND	ug/kg	700.					
Benzo(a)anthracene	ND	ug/kg	700.					
Benzo(a)pyrene	ND	ug/kg	700.					
Benzo(b)fluoranthene	ND	ug/kg	700.					
Benzo(ghi)perylene	ND	ug/kg	700.					
Benzo(k)fluoranthene	ND	ug/kg	700.					
Chrysene	ND	ug/kg	700.					
Dibenzo(a,h)anthracene	ND	ug/kg	700.					
Fluoranthene	ND	ug/kg	700.					
Fluorene	ND	ug/kg	700.					
Indeno(1,2,3-c,d)pyrene	ND	ug/kg	700.					
Naphthalene	ND	ug/kg	700.					
Phenanthrene	ND	ug/kg	700.					
Pyrene	ND	ug/kg	700.					
2-Methylnaphthalene	ND	ug/kg	700.					
SURROGATE RECOVERY								
Chloro-octadecane	45.0	%						
o-Terphenyl	49.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-09
ER100401
Sample Matrix: WATER

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3 Vial,2 Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	II
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DB
C5-C8 Aliphatics	ND	ug/l	20.0					
C9-C12 Aliphatics	ND	ug/l	20.0					
C9-C10 Aromatics	ND	ug/l	20.0					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/l	10.0					
C9-C12 Aliphatics, Equiv.	ND	ug/l	1.00					
C9-C10 Aromatics, Equiv.	ND	ug/l	20.0					
VPH, Total	ND	ug/l	20.0					
----------	-							
Benzene	ND	ug/l	20.0					
Toluene	ND	ug/l	20.0					
Ethylbenzene	ND	ug/l	20.0					
p/m-Xylene	ND	ug/l	20.0					
o-Xylene	ND	ug/l	20.0					
Methyl tert butyl ether	ND	ug/l	20.0					
Naphthalene	ND	ug/l	20.0					
SURROGATE RECOVERY								
2,5-Dibromotoluene	96.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9609585-09
ER100401

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	ID
Extractable Petroleum Hydrocarbon				40	Draft 1.0	26-Dec	27-Dec	DB
C9-C18 Aliphatics	ND	ug/l	50.0					
C19-C36 Aliphatics	ND	ug/l	50.0					
C10-C22 Aromatics	ND	ug/l	20.0					
---	-							
C9-C18 Aliphatics, Equiv.	ND	ug/l	2.50					
C19-C36 Aliphatics, Equiv.	ND	ug/l	0.250					
C10-C22 Aromatics, Equiv.	ND	ug/l	20.0					
EPH, Total	ND	ug/l	20.0					
---	-							
Acenaphthene	ND	ug/l	20.0					
Acenaphthylene	ND	ug/l	20.0					
Anthracene	ND	ug/l	20.0					
Benzo(a)anthracene	ND	ug/l	20.0					
Benzo(a)pyrene	ND	ug/l	50.0					
Benzo(b)fluoranthene	ND	ug/l	50.0					
Benzo(ghi)perylene	ND	ug/l	50.0					
Benzo(k)fluoranthene	ND	ug/l	50.0					
Chrysene	ND	ug/l	50.0					
Dibenzo(a,h)anthracene	ND	ug/l	50.0					
Fluoranthene	ND	ug/l	50.0					
Fluorene	ND	ug/l	50.0					
Indeno(1,2,3-c,d)pyrene	ND	ug/l	50.0					
Naphthalene	ND	ug/l	50.0					
Phenanthrene	ND	ug/l	50.0					
Pyrene	ND	ug/l	50.0					
2-Methylnaphthalene	ND	ug/l	50.0					
SURROGATE RECOVERY								
Chloro-octadecane	45.0	%						
o-Terphenyl	63.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9609585-10
1004 TP
Sample Matrix: SOIL

Date Collected: 23-DEC-96
Date Received : 23-DEC-96
Date Reported : 30-DEC-96

Condition of Sample: Satisfactory
Field Prep: None

Number & Type of Containers: 1 Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP	DATES ANALYSIS	I
Volatile Petroleum Hydrocarbon				39	Draft 1.0		30-Dec	DI
C5-C8 Aliphatics	ND	ug/kg	200.					
C9-C12 Aliphatics	ND	ug/kg	200.					
C9-C10 Aromatics	ND	ug/kg	200.					
----------	-							
C5-C8 Aliphatics, Equiv.	ND	ug/kg	100.					
C9-C12 Aliphatics, Equiv.	ND	ug/kg	10.0					
C9-C10 Aromatics, Equiv.	ND	ug/kg	200.					
VPH, Total	ND	ug/kg	200.					
----------	-							
Benzene	ND	ug/kg	100.					
Toluene	ND	ug/kg	100.					
Ethylbenzene	ND	ug/kg	100.					
p/m-Xylene	ND	ug/kg	100.					
o-Xylene	ND	ug/kg	100.					
Methyl tert butyl ether	ND	ug/kg	100.					
Naphthalene	ND	ug/kg	100.					
SURROGATE RECOVERY								
2,5-Dibromotoluene	100.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9609585

Parameter	Value 1	Value 2	RPD	Units
Extractable Petroleum Hydrocarbon DUPLICATE for sample(s) 01-08				
C9-C18 Aliphatics	ND	ND	NC	ug/kg
C19-C36 Aliphatics	ND	ND	NC	ug/kg
C10-C22 Aromatics	ND	ND	NC	ug/kg
C9-C18 Aliphatics, Equiv.	ND	ND	NC	ug/kg
C19-C36 Aliphatics, Equiv.	ND	ND	NC	ug/kg
C10-C22 Aromatics, Equiv.	ND	ND	NC	ug/kg
EPH, Total	ND	ND	NC	ug/kg
Acenaphthene	ND	ND	NC	ug/kg
Acenaphthylene	ND	ND	NC	ug/kg
Anthracene	ND	ND	NC	ug/kg
Benzo(a)anthracene	ND	ND	NC	ug/kg
Benzo(a)pyrene	ND	ND	NC	ug/kg
Benzo(b)fluoranthene	ND	ND	NC	ug/kg
Benzo(ghi)perylene	ND	ND	NC	ug/kg
Benzo(k)fluoranthene	ND	ND	NC	ug/kg
Chrysene	ND	ND	NC	ug/kg
Dibenzo(a,h)anthracene	ND	ND	NC	ug/kg
Fluoranthene	ND	ND	NC	ug/kg
Fluorene	ND	ND	NC	ug/kg
Indeno(1,2,3-c,d)pyrene	ND	ND	NC	ug/kg
Naphthalene	ND	ND	NC	ug/kg
Phenanthrene	ND	ND	NC	ug/kg
Pyrene	ND	ND	NC	ug/kg
1-Methylnaphthalene	ND	ND	NC	ug/kg
SURROGATE RECOVERY				
Chloro-octadecane	47.0	45.0	4	%
o-Terphenyl	62.0	61.0	2	%

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9609585

Parameter	MS %	MSD %	RPD
Volatile Petroleum Hydrocarbon-Spike Recovery MS/MSD for sample(s) 01-08,10			
2-Methylpentane	100	112	11
Toluene	74	96	26
1,2,4-Trimethylbenzene	93	103	10
SURROGATE RECOVERY			
2,5-Dibromotoluene	95	104	9
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 01-08			
Nonane (C9)	50	23	74
Tetradecane (C14)	72	55	27
Nonadecane (C19)	109	103	6
Eicosane (C20)	112	107	5
Octacosane (C28)	145	138	5
Naphthalene	45	56	22
Acenaphthene	65	75	14
Anthracene	49	50	2
Pyrene	81	83	2
Chrysene	124	131	5
SURROGATE RECOVERY			
Chloro-octadecane	66	64	3
o-Terphenyl	71	76	7
Extractable Petroleum Hydrocarbon Spike Recovery MS/MSD for sample(s) 09			
Nonane (C9)	46	42	9
Tetradecane (C14)	56	59	5
Nonadecane (C19)	104	114	9
Eicosane (C20)	108	119	10
Octacosane (C28)	151	157	4
Naphthalene	29	52	57
Acenaphthene	39	68	54
Anthracene	25	48	63
Pyrene	52	86	49
Chrysene	89	140	45
SURROGATE RECOVERY			
Chloro-octadecane	84	87	4
o-Terphenyl	46	76	49

REFERENCES

3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

39. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

40. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Draft 1.0, Massachusetts Department of Environmental Protection, 1995.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

ETHOD Method number by which analysis was performed.

ID Initials of the analyst.

LIMITATION OF LIABILITIES

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"e strongly urge our clients to comply with EPA protocol regarding sample olume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

ALPHA
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CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No. [illegible]

Sheet 1 of 1

Company Name:	Project Number:	Project Name / Location:	Date Received in Lab:	Date Due:
Roy F Weston Inc	4800 P.O. Number:	Verbeck Gate Bldg 1004, Devens	12/23	12/30

Company Address:	Phone Number:	Project Manager:	Alpha Job Number: (Lab use only)
Bldg 3701 Barnum Rd Devens MA 01433	508-772-7190 FAX No.: 508-772-7251	Tom Abdella Contact: Sam Naik	9609555

Container Codes: P = Plastic V = Vial C = Cube G = Glass A = Amber Glass B = Bacteria Container O = Other

MATRIX / SOURCE CODES: MW = Monitoring Well, RO = Runoff, O = Outfall, W = Well, LF = Landfill, L = Lake/Pond/Ocean, I = Influent, E = Effluent, DW = Drinking Water, R = River Stream, S = Soil, SG = Sludge, B = Bottom Sediment, X1 = Other, X2 = Other

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers): Unpres.	Ice	Nitric	Sulfuric	HCl	Other MeOH	Solubles - F.E.	Sampling Date	Sampling Time	Analysis Requested
9585.1	1004 SW06	1 40z G 1 40ml A	S		X X				X		12/23/96	0800	EPH Deluxe VPH Deluxe TS
2	1004 SW03	1 40z G 1 40ml A	S		X X				X		12/23/96	0815	EPH Deluxe VPH Deluxe
3	1004 FL04	1 40z G 1 40ml A	S		X X				X		12/23/96	0830	EPH Deluxe VPH Deluxe
4	1004 SW05	1 40z G 1 40ml A	S		X X				X		12/23/96	0845	EPH Deluxe VPH Deluxe
5	1004 SW04	1 40z G 1 40ml A	S		X X				X		12/23/96	0900	EPH Deluxe VPH Deluxe
6	1004 FL02	1 40z G 1 40ml A	S		X X				X		12/23/96	0915	EPH Deluxe VPH Deluxe
7	1004 FL05	1 40z G 1 40ml A	S		X X				X		12/23/96	0930	EPH Deluxe VPH Deluxe
8	1004 FL05D	1 40z G 1 40ml A	S		X X				X		12/23/96	0930	EPH Deluxe VPH Deluxe
9	ER 100401	2 1L A 4 40ml A	~~DW~~ ER		X X			X X			12/23/96	1000	Equipment Rinsate EPH-D VPH-D
10	1004 TP	1 40ml A	MCII		X				X		12/23/96	1230	Trip Blank VPH

Sampler's Signature	Affiliation	Date	Time

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	Robert E O'Hara	[illegible]	12/23/96	1555
2				
3				
4				

ADDITIONAL COMMENTS:
1004 SW06 (VPH) 10.2g Soil
1004 SW03 (VPH) 10.2g Soil
1004 FL04 (VPH) 10.1g Soil
1004 SW05 (VPH) 10.9g Soil
1004 SW04 (VPH) 10.1g Soil
1004 FL02 - 10.7g Soil (VPH)
1004 FL05 (VPH) - 10.0g Soil
1004 FL05D (VPH) - 10.2g Soil

Form No [illegible]/06

ATTACHMENT I
ANALYTICAL RESULTS FOR WASTE CHARACTERIZATION SAMPLING

PROJECT NARRATIVE

The following items relate to the samples and analytical data contained in this report.

- The sample temperature upon receipt by the laboratory was 2°C, which is within the temperature acceptability range of 2°C to 6°C.
- All solid sample results are reported on a "dry weight" basis except RCRA Characteristics, which are reported on an as received basis.
- Note any comments at the bottom of the tables in appendices B and C.
- Due to high levels of target analytes present in the unspiked sample, matrix spike recoveries are not available for batch #Q2T62632 (Total Petroleum Hydrocarbons by IR). Batch acceptance is based on method spike recoveries which are within QC limits.

The following relate to the timeliness and completeness of the analytical data reported:

- Data was reported to Mr. Sam Naik on Friday, December 27, 1996, at Roy F. Weston, Inc., Devens, Massachusetts. The following parameters were not reported within the required time frame:

PARAMETER	REASON FOR DELAY
TPH/IR	GC review of data.

SAMPLE INFORMATION SUMMARY

Sample Id	Lab Id	Sample Date	Matrix	Method	QC Batch #	Prep Date	Analysis Date	Hold Met	Dry Wgt	Run #	Analyst
1004WC01	JQ6456	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9458	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4902	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77442	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77451	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77417	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4384	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12838	Lucy R.
1004WC02	JQ6457	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9459	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4903	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77443	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77452	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77418	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4385	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12839	Lucy R.
1004WC03	JQ6458	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9460	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4904	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77444	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77453	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77419	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4386	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12840	Lucy R.
1004WC04	JQ6459	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9461	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4907	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77445	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77454	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77420	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4387	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12841	Lucy R.

SAMPLE INFORMATION SUMMARY

Sample Id	Lab Id	Sample Date	Matrix	Method	QC Batch #	Prep Date	Analysis Date	Hold Met	Dry Wgt	Run #	Analyst
1004WC05	JQ6460	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9463	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4908	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77446	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77455	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77421	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4388	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12842	Lucy R.
1004WC06	JQ6461	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9465	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4909	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77447	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77456	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77422	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/21/96	Yes	Yes	TR4389	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12843	Lucy R.
1004WC07	JQ6462	12/18/96	Solid	1.7.1.1			12/22/96	N/A	N/A		Klopp L.
			Solid	1020			12/22/96	Yes	N/A		Klopp L.
			Solid	160.3			12/20/96	N/A	N/A		Delong T.
			Solid	418.1	Q2T62632	12/23/96	12/26/96	Yes	Yes	IR9466	Kelly J.
			Solid	6010A	Q2M9202	12/22/96	12/24/96	Yes	Yes	IM4910	Henschen S.
			Solid	7.3.3.2	Q2I5882	12/24/96	12/24/96	Yes	No	I77448	Klopp L.
			Solid	7.3.4.2	Q2I5883	12/24/96	12/24/96	Yes	No	I77457	Klopp L.
			Solid	7471A	Q2G9203	12/23/96	12/24/96	Yes	Yes	I77423	Henschen S.
			Solid	8080	Q2P62628	12/20/96	12/22/96	Yes	Yes	TR4392	DeLong W.
			Solid	8260	Q2V5757	12/20/96	12/20/96	Yes	Yes	C12844	Lucy R.
TRIP BLK	JQ6463	12/18/96	Aqueous	8260	Q1V5760	12/23/96	12/23/96	Yes	N/A	A11905	Marabito T.

APPENDIX A

DATA SUMMARY REPORT

DATA SUMMARY REPORT

DATE: 12/27/96

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Company: ROY F. WESTON, INC.

Parameters	Units	1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
1E GCMS VOA TIC								
-Methyl-2-(4-methylpentyl)cyc	mg/kg	.649 J	-	.494 J	-	-	-	-
7-Pentatriacontene	mg/kg	1.06 J	-	-	-	-	-	-
ycloheptane, methyl-	mg/kg	.842 J	-	.909 J	-	.224 J	-	-
yclopentane, 1-methyl-3-(1-me	mg/kg	.657 J	-	-	-	-	-	-
ecane, 4-methyl-	mg/kg	.936 J	.202 J	.741 J	.572 J	.288 J	.301 J	.206 J
odecane	mg/kg	.860 J	.278 J	.704 J	.539 J	.437 J	.520 J	.348 J
eptane, 3-ethyl-	mg/kg	.481 J	-	.428 J	-	-	-	-
ctane, 2,6-dimethyl-	mg/kg	.742 J	-	-	-	-	-	-
ridecane	mg/kg	.623 J	.238 J	.547 J	.455 J	.309 J	.423 J	.312 J
ndecane, 2,6-dimethyl-	mg/kg	.852 J	.290 J	.755 J	.560 J	.474 J	.439 J	.319 J
ndecane, 2,6-dimethyl-,	mg/kg	-	.166 J	-	-	-	-	-
yclohexane, butyl-	mg/kg	-	.158 J	-	.552 J	-	-	-
aphthalene, 1,2,3,4-tetrahydr	mg/kg	-	.134 J	-	-	-	.197 J	.151 J
ctane, 2,3-dimethyl-	mg/kg	-	.167 J	-	-	.133 J	-	-
ndecane	mg/kg	-	.243 J	.756 J	.650 J	.411 J	-	.282 J
rans-1,3-Diethylcyclopentane	mg/kg	-	.297 J	-	-	-	-	-
nknown	mg/kg	-	.174 J	.556 J	-	-	-	-
exadecane, 2,6,11,15-tetramet	mg/kg	-	-	.594 J	-	-	-	-
yclohexane, methyl-	mg/kg	-	-	-	.606 J	-	-	-
ycloctanone, 2-methyl-	mg/kg	-	-	-	.642 J	-	-	-
ecane	mg/kg	-	-	-	.380 J	-	-	-
aphthalene, decahydro-2-methy	mg/kg	-	-	-	.436 J	-	-	-
yclohexane, 2-propenyl-	mg/kg	-	-	-	-	.263 J	-	-
yclopentane, (2-methylpropyl)	mg/kg	-	-	-	-	.197 J	-	.185 J
onane, 3-methyl-	mg/kg	-	-	-	-	.256 J	-	-
-Dotriacontanol	mg/kg	-	-	-	-	-	.315 J	-
-Eicosanol	mg/kg	-	-	-	-	-	.374 J	.209 J
yclohexane, 2-butyl-1,1,3-tri	mg/kg	-	-	-	-	-	.309 J	-
ecane, 2,6,7-trimethyl-	mg/kg	-	-	-	-	-	.393 J	.262 J
eptane, 2,6-dimethyl-	mg/kg	-	-	-	-	-	.448 J	-
-Hexacosanol	mg/kg	-	-	-	-	-	-	.282 J

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Parameters	Units	1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
V10 Wet Chemistry								
Flash Point, Seta Flash	Deg C	>93	>93	>93	>93	>93	>93	>93
Reactive Cyanide	mg/kg	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Reactive Sulfide	mg/kg	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
Solids, Total	%	95.0	94.7	96.2	95.6	91.9	92.4	93.9
pH (Electrode)	std	6.35	7.56	6.93	6.09	5.94	6.63	6.73

Parameters	Units	1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
S13 GC PP PCB's								
Aroclor 1016	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1221	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1232	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1242	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1248	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1254	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173
Aroclor 1260	mg/kg	<.173	<.175	<.168	<.171	<.180	<.179	<.173

DATA SUMMARY REPORT

DATE: 12/27/96

Company: ROY F. WESTON, INC.

Parameters	Units							
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
R00 TPHC by IR								
Petroleum Hydrocarbons (IR)	mg/kg	1640	999	1620	997	608	600	463

Parameters	Units							
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
:50 Total RCRA Metals								
Arsenic	mg/kg	14.9	18.8	16.6	18.9	12.5	10.4	8.14
Barium	mg/kg	7.82	9.02	9.38	7.73	16.9	9.64	7.56
Cadmium	mg/kg	<.495	<.500	<.500	<.500	<.485	<.500	<.481
Chromium	mg/kg	5.08	7.36	7.64	5.01	19.7	5.27	4.63
Lead	mg/kg	<7.43	<7.50	<7.50	<7.50	<7.28	<7.50	<7.21
Mercury	mg/kg	<.007	<.007	<.007	.011	<.007	.016	<.006
Selenium	mg/kg	<7.43	<7.50	<7.50	<7.50	<7.28	<7.50	<7.21
Silver	mg/kg	<.990	<1.00	<1.00	<1.00	<.971	<1.00	<.962

Parameters	Units							
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
V20 GCMS TCL Volatiles								
Chloromethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Bromomethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Vinyl chloride	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Chloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Methylene chloride	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Parameters	Units	1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
Sample Point ID:		1004WC01	1004WC02	1004WC03	1004WC04	1004WC05	1004WC06	1004WC07
ASC Sample Number:		JQ6456	JQ6457	JQ6458	JQ6459	JQ6460	JQ6461	JQ6462
Sample Date:		961218	961218	961218	961218	961218	961218	961218
Facility Code:		300595	300595	300595	300595	300595	300595	300595
V20 GCMS TCL Volatiles								
Acetone	mg/kg	<.011	<.010	<.01	<.010	<.011	<.011	<.011
Carbon disulfide	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,1-Dichloroethene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,1-Dichloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,2-Dichloroethene (total)	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Chloroform	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,2-Dichloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
2-Butanone	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,1,1-Trichloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Carbon tetrachloride	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Bromodichloromethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,2-Dichloropropane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
cis-1,3-Dichloropropene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Trichloroethene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Dibromochloromethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,1,2-Trichloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Benzene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
trans-1,3-Dichloropropene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Bromoform	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
4-Methyl-2-pentanone	mg/kg	<.011	<.010	<.01	<.010	<.011	<.011	<.011
2-Hexanone	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Tetrachloroethene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
1,1,2,2-Tetrachloroethane	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Toluene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Chlorobenzene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Ethylbenzene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Styrene	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005
Xylenes	mg/kg	<.005	<.005	<.005	<.005	<.005	<.005	<.005

DATA SUMMARY REPORT

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Company: ROY F. WESTON, INC.

	Sample Point ID:	TRIP BLK
	ASC Sample Number:	JQ6463
	Sample Date:	961218
	Facility Code:	300595
Parameters	Units	
L1E GCMS VOA TIC		
Unk hydrocarbon	mg/L	.005 J
unknown	mg/L	.005 J

	Sample Point ID:	TRIP BLK
	ASC Sample Number:	JQ6463
	Sample Date:	961218
	Facility Code:	300595
Parameters	Units	
V20 GCMS TCL Volatiles.,		
Chloromethane	mg/L	<.005
Bromomethane	mg/L	<.005
Vinyl chloride	mg/L	<.005
Chloroethane	mg/L	<.005
Methylene chloride	mg/L	<.005
Acetone	mg/L	<.010
Carbon disulfide	mg/L	<.005
1,1-Dichloroethene	mg/L	<.005
1,1-Dichloroethane	mg/L	<.005
1,2-Dichloroethene (total)	mg/L	<.005
Chloroform	mg/L	<.005
1,2-Dichloroethane	mg/L	<.005
2-Butanone	mg/L	<.005
1,1,1-Trichloroethane	mg/L	<.005
Carbon tetrachloride	mg/L	<.005
Bromodichloromethane	mg/L	<.005
1,2-Dichloropropane	mg/L	<.005
cis-1,3-Dichloropropene	mg/L	<.005
Trichloroethene	mg/L	<.005
Dibromochloromethane	mg/L	<.005
1,1,2-Trichloroethane	mg/L	<.005
Benzene	mg/L	<.005
trans-1,3-Dichloropropene	mg/L	<.005

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Sample Point ID:	TRIP BLK
ASC Sample Number:	JQ6463
Sample Date:	961218
Facility Code:	300595

Parameters	Units	
V20 GCMS TCL Volatiles		
Bromoform	mg/L	<.005
4-Methyl-2-pentanone	mg/L	<.010
2-Hexanone	mg/L	<.005
Tetrachloroethene	mg/L	<.005
1,1,2,2-Tetrachloroethane	mg/L	<.005
Toluene	mg/L	<.005
Chlorobenzene	mg/L	<.005
Ethylbenzene	mg/L	<.005
Styrene	mg/L	<.005
Xylenes	mg/L	<.005

APPENDIX B

QUANTITATIVE RESULTS

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	95.0	.100	-	
pH (Electrode)	std	6.35	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	94.7	.100	-	
pH (Electrode)	std	7.56	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	96.2	.100	-	
pH (Electrode)	std	6.93	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	95.6	.100	-	
pH (Electrode)	std	6.09	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	91.9	.100	-	
pH (Electrode)	std	5.94	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	92.4	.100	-	
pH (Electrode)	std	6.63	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

CV10 Wet Chemistry

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ6462

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5882
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5883
Solids, Total	%	93.9	.100	-	
pH (Electrode)	std	6.73	-	-	
Flash Point, Seta Flash	Deg C	>93	-	-	

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	14.9	7.43	ND	Q2M9202
Barium	7.82	.990	ND	Q2M9202
Cadmium	ND	.495	ND	Q2M9202
Chromium	5.08	.990	ND	Q2M9202
Lead	ND	7.43	ND	Q2M9202
Mercury	ND	.007	ND	Q2G9203
Selenium	ND	7.43	ND	Q2M9202
Silver	ND	.990	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	18.8	7.50	ND	Q2M9202
Barium	9.02	1.00	ND	Q2M9202
Cadmium	ND	.500	ND	Q2M9202
Chromium	7.36	1.00	ND	Q2M9202
Lead	ND	7.50	ND	Q2M9202
Mercury	ND	.007	ND	Q2G9203
Selenium	ND	7.50	ND	Q2M9202
Silver	ND	1.00	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	16.6	7.50	ND	Q2M9202
Barium	9.38	1.00	ND	Q2M9202
Cadmium	ND	.500	ND	Q2M9202
Chromium	7.64	1.00	ND	Q2M9202
Lead	ND	7.50	ND	Q2M9202
Mercury	ND	.007	ND	Q2G9203
Selenium	ND	7.50	ND	Q2M9202
Silver	ND	1.00	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	18.9	7.50	ND	Q2M9202
Barium	7.73	1.00	ND	Q2M9202
Cadmium	ND	.500	ND	Q2M9202
Chromium	5.01	1.00	ND	Q2M9202
Lead	ND	7.50	ND	Q2M9202
Mercury	.011	.007	ND	Q2G9203
Selenium	ND	7.50	ND	Q2M9202
Silver	ND	1.00	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	12.5	7.28	ND	Q2M9202
Barium	16.9	.971	ND	Q2M9202
Cadmium	ND	.485	ND	Q2M9202
Chromium	19.7	.971	ND	Q2M9202
Lead	ND	7.28	ND	Q2M9202
Mercury	ND	.007	ND	Q2G9203
Selenium	ND	7.28	ND	Q2M9202
Silver	ND	.971	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	10.4	7.50	ND	Q2M9202
Barium	9.64	1.00	ND	Q2M9202
Cadmium	ND	.500	ND	Q2M9202
Chromium	5.27	1.00	ND	Q2M9202
Lead	ND	7.50	ND	Q2M9202
Mercury	.016	.007	ND	Q2G9203
Selenium	ND	7.50	ND	Q2M9202
Silver	ND	1.00	ND	Q2M9202

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ6462

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	8.14	7.21	ND	Q2M9202
Barium	7.56	.962	ND	Q2M9202
Cadmium	ND	.481	ND	Q2M9202
Chromium	4.63	.962	ND	Q2M9202
Lead	ND	7.21	ND	Q2M9202
Mercury	ND	.006	ND	Q2G9203
Selenium	ND	7.21	ND	Q2M9202
Silver	ND	.962	ND	Q2M9202

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	1640	138	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	999	139	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	1620	137	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	997	137	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	608	36.0	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	600	35.1	ND	Q2T62632

IR00 TPHC by IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ6462

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	463	34.8	ND	Q2T62632

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.173	ND	Q2P62628
Aroclor 1221	ND	.173	ND	Q2P62628
Aroclor 1232	ND	.173	ND	Q2P62628
Aroclor 1242	ND	.173	ND	Q2P62628
Aroclor 1248	ND	.173	ND	Q2P62628
Aroclor 1254	ND	.173	ND	Q2P62628
Aroclor 1260	ND	.173	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.175	ND	Q2P62628
Aroclor 1221	ND	.175	ND	Q2P62628
Aroclor 1232	ND	.175	ND	Q2P62628
Aroclor 1242	ND	.175	ND	Q2P62628
Aroclor 1248	ND	.175	ND	Q2P62628
Aroclor 1254	ND	.175	ND	Q2P62628
Aroclor 1260	ND	.175	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.168	ND	Q2P62628
Aroclor 1221	ND	.168	ND	Q2P62628
Aroclor 1232	ND	.168	ND	Q2P62628
Aroclor 1242	ND	.168	ND	Q2P62628
Aroclor 1248	ND	.168	ND	Q2P62628
Aroclor 1254	ND	.168	ND	Q2P62628
Aroclor 1260	ND	.168	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.171	ND	Q2P62628
Aroclor 1221	ND	.171	ND	Q2P62628
Aroclor 1232	ND	.171	ND	Q2P62628
Aroclor 1242	ND	.171	ND	Q2P62628
Aroclor 1248	ND	.171	ND	Q2P62628
Aroclor 1254	ND	.171	ND	Q2P62628
Aroclor 1260	ND	.171	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.180	ND	Q2P62628
Aroclor 1221	ND	.180	ND	Q2P62628
Aroclor 1232	ND	.180	ND	Q2P62628
Aroclor 1242	ND	.180	ND	Q2P62628
Aroclor 1248	ND	.180	ND	Q2P62628
Aroclor 1254	ND	.180	ND	Q2P62628
Aroclor 1260	ND	.180	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.179	ND	Q2P62628
Aroclor 1221	ND	.179	ND	Q2P62628
Aroclor 1232	ND	.179	ND	Q2P62628
Aroclor 1242	ND	.179	ND	Q2P62628
Aroclor 1248	ND	.179	ND	Q2P62628
Aroclor 1254	ND	.179	ND	Q2P62628
Aroclor 1260	ND	.179	ND	Q2P62628

GS13 GC PP PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ6462

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aroclor 1016	ND	.173	ND	Q2P62628
Aroclor 1221	ND	.173	ND	Q2P62628
Aroclor 1232	ND	.173	ND	Q2P62628
Aroclor 1242	ND	.173	ND	Q2P62628
Aroclor 1248	ND	.173	ND	Q2P62628
Aroclor 1254	ND	.173	ND	Q2P62628
Aroclor 1260	ND	.173	ND	Q2P62628

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.011	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.011	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC01	JQ6456

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
1-Methyl-2-(4-methylpentyl)cyc	.649	-	-	Q2V5757
Dodecane	.860	-	-	Q2V5757
Tridecane	.623	-	-	Q2V5757
17-Pentatriacontene	1.06	-	-	Q2V5757
Octane, 2,6-dimethyl-	.742	-	-	Q2V5757
Decane, 4-methyl-	.936	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.852	-	-	Q2V5757
Cycloheptane, methyl-	.842	-	-	Q2V5757
Heptane, 3-ethyl-	.481	-	-	Q2V5757
Cyclopentane, 1-methyl-3-(1-me	.657	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.010	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.010	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC02	JQ6457

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
trans-1,3-Diethylcyclopentane	.297	-	-	Q2V5757
unknown	.174	-	-	Q2V5757
Dodecane	.278	-	-	Q2V5757
Tridecane	.238	-	-	Q2V5757
Octane, 2,3-dimethyl-	.167	-	-	Q2V5757
Undecane	.243	-	-	Q2V5757
Decane, 4-methyl-	.202	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.290	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.166	-	-	Q2V5757
Cyclohexane, butyl-	.158	-	-	Q2V5757
Naphthalene, 1,2,3,4-tetrahydr	.134	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.01	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.01	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC03	JQ6458

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
unknown	.556	-	-	Q2V5757
1-Methyl-2-(4-methylpentyl)cyc	.494	-	-	Q2V5757
Dodecane	.704	-	-	Q2V5757
Tridecane	.547	-	-	Q2V5757
Hexadecane, 2,6,11,15-tetramet	.594	-	-	Q2V5757
Undecane	.756	-	-	Q2V5757
Decane, 4-methyl-	.741	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.755	-	-	Q2V5757
Cycloheptane, methyl-	.909	-	-	Q2V5757
Heptane, 3-ethyl-	.428	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.010	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.010	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC04	JQ6459

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Cyclohexane, methyl-	.606	-	-	Q2V5757
Dodecane	.539	-	-	Q2V5757
Decane	.380	-	-	Q2V5757
Tridecane	.455	-	-	Q2V5757
Undecane	.650	-	-	Q2V5757
Decane, 4-methyl-	.572	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.560	-	-	Q2V5757
Cyclooctanone, 2-methyl-	.642	-	-	Q2V5757
Cyclohexane, butyl-	.552	-	-	Q2V5757
Naphthalene, decahydro-2-methy	.436	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.011	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.011	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC05	JQ6460

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Dodecane	.437	-	-	Q2V5757
Tridecane	.309	-	-	Q2V5757
Octane, 2,3-dimethyl-	.133	-	-	Q2V5757
Undecane	.411	-	-	Q2V5757
Cyclohexane, 2-propenyl-	.263	-	-	Q2V5757
Decane, 4-methyl-	.288	-	-	Q2V5757
Cyclopentane, (2-methylpropyl)-	.197	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.474	-	-	Q2V5757
Nonane, 3-methyl-	.256	-	-	Q2V5757
Cycloheptane, methyl-	.224	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.011	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.011	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC06	JQ6461

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Dodecane	.520	-	-	Q2V5757
Tridecane	.423	-	-	Q2V5757
1-Eicosanol	.374	-	-	Q2V5757
Decane, 4-methyl-	.301	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.439	-	-	Q2V5757
Decane, 2,6,7-trimethyl-	.393	-	-	Q2V5757
Cyclohexane, 2-butyl-1,1,3-tri	.309	-	-	Q2V5757
Naphthalene, 1,2,3,4-tetrahydr	.197	-	-	Q2V5757
Heptane, 2,6-dimethyl-	.448	-	-	Q2V5757
1-Dotriacontanol	.315	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ5462

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5757
Bromomethane	ND	.005	ND	Q2V5757
Vinyl chloride	ND	.005	ND	Q2V5757
Chloroethane	ND	.005	ND	Q2V5757
Methylene chloride	ND	.005	ND	Q2V5757
Acetone	ND	.011	ND	Q2V5757
Carbon disulfide	ND	.005	ND	Q2V5757
1,1-Dichloroethene	ND	.005	ND	Q2V5757
1,1-Dichloroethane	ND	.005	ND	Q2V5757
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5757
Chloroform	ND	.005	ND	Q2V5757
1,2-Dichloroethane	ND	.005	ND	Q2V5757
2-Butanone	ND	.005	ND	Q2V5757
1,1,1-Trichloroethane	ND	.005	ND	Q2V5757
Carbon tetrachloride	ND	.005	ND	Q2V5757
Bromodichloromethane	ND	.005	ND	Q2V5757
1,2-Dichloropropane	ND	.005	ND	Q2V5757
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Trichloroethene	ND	.005	ND	Q2V5757
Dibromochloromethane	ND	.005	ND	Q2V5757
1,1,2-Trichloroethane	ND	.005	ND	Q2V5757
Benzene	ND	.005	ND	Q2V5757
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5757
Bromoform	ND	.005	ND	Q2V5757
4-Methyl-2-pentanone	ND	.011	ND	Q2V5757
2-Hexanone	ND	.005	ND	Q2V5757
Tetrachloroethene	ND	.005	ND	Q2V5757
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5757
Toluene	ND	.005	ND	Q2V5757
Chlorobenzene	ND	.005	ND	Q2V5757
Ethylbenzene	ND	.005	ND	Q2V5757
Styrene	ND	.005	ND	Q2V5757
Xylenes	ND	.005	ND	Q2V5757

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	1004WC07	JQ6462

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Dodecane	.348	-	-	Q2V5757
1-Hexacosanol	.282	-	-	Q2V5757
Tridecane	.312	-	-	Q2V5757
1-Eicosanol	.209	-	-	Q2V5757
Undecane	.282	-	-	Q2V5757
Naphthalene, 1,2,3,4-tetrahydr	.151	-	-	Q2V5757
Decane, 4-methyl-	.206	-	-	Q2V5757
Cyclopentane, (2-methylpropyl)	.185	-	-	Q2V5757
Undecane, 2,6-dimethyl-	.319	-	-	Q2V5757
Decane, 2,6,7-trimethyl-	.262	-	-	Q2V5757

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL Volatiles

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	TRIP BLK	JQ6463

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Chloromethane	ND	.005	ND	Q1V5760
Bromomethane	ND	.005	ND	Q1V5760
Vinyl chloride	ND	.005	ND	Q1V5760
Chloroethane	ND	.005	ND	Q1V5760
Methylene chloride	ND	.005	ND	Q1V5760
Acetone	ND	.010	ND	Q1V5760
Carbon disulfide	ND	.005	ND	Q1V5760
1,1-Dichloroethene	ND	.005	ND	Q1V5760
1,1-Dichloroethane	ND	.005	ND	Q1V5760
1,2-Dichloroethene (total)	ND	.005	ND	Q1V5760
Chloroform	ND	.005	ND	Q1V5760
1,2-Dichloroethane	ND	.005	ND	Q1V5760
2-Butanone	ND	.005	ND	Q1V5760
1,1,1-Trichloroethane	ND	.005	ND	Q1V5760
Carbon tetrachloride	ND	.005	ND	Q1V5760
Bromodichloromethane	ND	.005	ND	Q1V5760
1,2-Dichloropropane	ND	.005	ND	Q1V5760
cis-1,3-Dichloropropene	ND	.005	ND	Q1V5760
Trichloroethene	ND	.005	ND	Q1V5760
Dibromochloromethane	ND	.005	ND	Q1V5760
1,1,2-Trichloroethane	ND	.005	ND	Q1V5760
Benzene	ND	.005	ND	Q1V5760
trans-1,3-Dichloropropene	ND	.005	ND	Q1V5760
Bromoform	ND	.005	ND	Q1V5760
4-Methyl-2-pentanone	ND	.010	ND	Q1V5760
2-Hexanone	ND	.005	ND	Q1V5760
Tetrachloroethene	ND	.005	ND	Q1V5760
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q1V5760
Toluene	ND	.005	ND	Q1V5760
Chlorobenzene	ND	.005	ND	Q1V5760
Ethylbenzene	ND	.005	ND	Q1V5760
Styrene	ND	.005	ND	Q1V5760
Xylenes	ND	.005	ND	Q1V5760

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595	TRIP BLK	JQ6463

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
unknown	.005	-	-	Q1V5760
Unk hydrocarbon	.005	-	-	Q1V5760

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

APPENDIX C

QUALITY ASSURANCE DATA

QUALITY ASSURANCE REPORT

Joblink: 621927

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
1,1-Dichloroethene	mg/l	0	.0500	.0408	82 L	83-112L 1-234M	TRIP BLK	0	.0500	.0515	103	80-113L 1-234M	.0500	.0541	108	5	0-15L	Q1V5760	75L 100M
Benzene	mg/l	0	.0500	.0385	77 L	89-112L 37-151M	TRIP BLK	0	.0500	.0516	103	86-115L 37-151M	.0500	.0525	105	2	0-12L		
Chlorobenzene	mg/l	0	.0500	.0398	80 L	90-110L 37-160M	TRIP BLK	0	.0500	.0511	102	86-112L 37-160M	.0500	.0534	107	5	0-11L		
Toluene	mg/l	0	.0500	.0397	79 L	88-111L 47-150M	TRIP BLK	0	.0500	.0536	107	83-115L 47-150M	.0500	.0541	108	.9	0-13L		
Trichloroethene	mg/l	0	.0500	.0393	79 L	85-114L 71-157M	TRIP BLK	0	.0500	.0491	98	81-116L 71-157M	.0500	.0528	106	8	0-19L		

QUALITY ASSURANCE REPORT

Joblink: 621927

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
Aroclor 1260	mg/kg	0	.858	.773	90	80-143L 8-127M	1004WC01	0	.886	.655	74	73-150L 8-127M	.898	.669	74	0	0-39L	Q2P62628	100L 100M
Petroleum Hydrocarbons (IR)	mg/kg	0	67.7	58.5	86	67-110L												Q2T62632	100L
1,1-Dichloroethene	mg/kg	0	.0500	.0464	93	80-113L 1-234M	R203	0	.0579	.0493	85	76-119L 1-234M	.0580	.0493	85	0	0-20L	Q2V5757	100L 100M
Benzene	mg/kg	0	.0500	.0527	105	85-113L 37-151M	R203	0	.0579	.0564	97	85-117L 37-151M	.0580	.0567	98	1	0-13L		
Chlorobenzene	mg/kg	0	.0500	.0520	104	89-110L 37-160M	R203	0	.0579	.0563	97	85-112L 37-160M	.0580	.0564	97	0	0-10L		
Toluene	mg/kg	0	.0500	.0538	108	87-111L 47-150M	R203	0	.0579	.0606	105	79-125L 47-150M	.0580	.0595	103	2	0-15L		
Trichloroethene	mg/kg	0	.0500	.0520	104	84-113L 71-157M	R203	0	.0579	.0712	123	65-127L 71-157M	.0580	.0675	116	6	0-21L		

QUALITY ASSURANCE REPORT

Joblink: 621927

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
Mercury	mg/kg	0	.250	.236	94	81-114L 75-125M	1004WC07	0	.258	.287	111	53-117L 80-120M	.258	.306	119L	6	0-26C 0-20M	Q2G9203	75L 80M
Reactive Cyanide	mg/kg	0	1020	36.7	4	1-50 L												Q2I5882	100L
Reactive Sulfide	mg/kg	0	1400	400	29	10-100L												Q2I5883	100L
Arsenic	mg/kg	0	202	204	101	83-110L 75-125M	SC-061-0	0	239	226	95	62-110L 80-120M	239	224	94	.9	0-17C 0-20M	Q2M9202	100L 100M
Barium	mg/kg	0	201	199	99	88-110L 75-125M	SC-061-0	48.1	238	276	96	60-116L 80-120M	238	274	95	.7	0-18C 0-20M		
Beryllium	mg/kg	0	5.02	4.98	99	87-110L 75-125M	SC-061-0	.323	5.93	6.12	98	67-110L 80-120M	5.93	6.09	97	.5	0-19C 0-20M		
Cadmium	mg/kg	0	5.02	5.05	101	83-110L 75-125M	SC-061-0	.569	5.93	6.34	97	44-110L 80-120M	5.93	6.28	96	1	0-27C 0-20M		
Chromium	mg/kg	0	20.1	20.6	102	80-110L 75-125M	SC-061-0	11.6	23.7	38.6	114	40-127L 80-120M	23.7	38.1	112	1	0-26C 0-20M		
Lead	mg/kg	0	50.0	51.3	103	78-111L 75-125M	SC-061-0	70.0	59.1	137	113	44-124L 80-120M	59.1	136	112	.7	0-32C 0-20M		
Selenium	mg/kg	0	201	194	97	83-110L 75-125M	SC-061-0	0	238	207	87	61-110L 80-120M	238	206	87	.5	0-18C 0-20M		
Silver	mg/kg	0	5.04	5.54	110	68-121L 75-125M	SC-061-0	0	5.96	5.76	97	31-110L 80-120M	5.96	5.99	101	4	0-39C 0-20M		

QUALITY ASSURANCE REPORT

Joblink: 621927

Compound(s)		SAMPLE DUPLICATE					POST SPIKE						ICP SERIAL DILUTION					
		Sample Id.	Sample Conc.	Dup. Conc.	RPD	RPD Limit	Spiked Sample Id.	Unspk Conc. mg/l	Added Conc. mg/l	Spiked Conc. mg/l	% Rec.	Rec. Limits	Sample Id.	Sample Conc. mg/l	Dil. Conc. mg/l	% Diff	Limit	Batch #
Mercury	mg/kg	1004WC07	224	.00419	224M	.010M												Q2G9203
Arsenic	mg/kg	SC-061-0	1.37	-2.50														
Barium	mg/kg	SC-061-0	48.1	47.4	.70	24 M							SC-061-0	.0115	-.0680			Q2M9202
Beryllium	mg/kg	SC-061-0	.323	.319	.004								SC-061-0	.403	.400	.7	0-10M	Q2M9202
Cadmium	mg/kg	SC-061-0	.569	.556	.013								SC-061-0	.00270	.00225	100		Q2M9202
Chromium	mg/kg	SC-061-0	11.6	11.4	2	0-20M							SC-061-0	.00476	.00120	100		Q2M9202
Lead	mg/kg	SC-061-0	70.0	67.5	4	0-20M							SC-061-0	.0969	.0950	2		Q2M9202
Selenium	mg/kg	SC-061-0	-1.19	-2.61									SC-061-0	.586	.535	9		Q2M9202
Silver	mg/kg	SC-061-0	-.167	-.0189									SC-061-0	-1.-02	.0246			Q2M9202
													SC-061-0	-1.-03	.0115			Q2M9202

SUMMARY OF ANALYTICAL METHODOLOGY

Joblink # 621927

REFERENCE		TITLE
1.7.1.1	CLP	pH Electrometric Measurement
1020	SW-846	Flash Point, Setaflash
418.1	MCAWW	Petroleum Hydrocarbons, Total Recoverable
6010A	SW-846	Inductively Coupled Plasma Atomic Emmision Spectroscopy
7.3.3.2	SW-846	Test Method to Determine HCN Released from Wastes
7.3.4.2	SW-846	Test Method to Determine HS Released from Wastes
7471A	SW-846	Mercury in Solid Waste (Manual Cold-Vapor Technique)
8080	SW-846	Organochlorine Pesticides and/or PCBs
8260	SW-846	GC/MS for Volatile Organics

QUALITY ASSURANCE DATA
SURROGATE SUMMARY REPORT

SURROGATE ID	F048	F096	# OUT
QC BATCH: Q2P62628 Solid (Pesticide compounds by GC)			
SAMPLE ID			
1004WC01	91	73	0
1004WC01 MD	89	67	0
1004WC01 MS	89	66	0
1004WC02	94	73	0
1004WC03	92	69	0
1004WC04	91	71	0
1004WC05	94	73	0
1004WC06	88	68	0
1004WC07	96	74	0
METHOD BLK	91	90	0
METHOD SPK	101	97	0
QC LIMITS	(30-130)	(30-130)	

SURROGATE ID	A047	B185	B668	# OUT
QC BATCH: Q1V5760 Aqueous (Volatile organics by MS)				
SAMPLE ID				
METHOD BLK	100	99	101	0
METHOD SPK	98	96	95	0
TRIP BLK	97	97	96	0
TRIP BLK MD	103	103	103	0
TRIP BLK MS	104	100	78 *	1
QC LIMITS	(76-114)	(88-110)	(86-115)	
QC BATCH: Q2V5757 Solid (Volatile organics by MS)				
SAMPLE ID				
1004WC01	104	106	90	0
1004WC02	111	88	95	0
1004WC03	110	88	92	0
1004WC04	111	90	98	0
1004WC05	109	85	81	0
1004WC06	111	82	97	0
1004WC07	108	82	82	0
METHOD BLK	110	89	99	0
METHOD SPK	99	99	98	0
R203 MD	89	92	87	0
R203 MS	95	102	88	0
QC LIMITS	(70-121)	(81-117)	(74-121)	

SURROGATE ID

A047 = 1,2-Dichloroethane-D4
B185 = Toluene-D8
B668 = Bromofluorobenzene
F048 = Decachlorobiphenyl (PCB)
F096 = 2,4,5,6-TCMX (PCB)

* Values outside of method quality control limits
D Sample was diluted, however, some surrogates may be reported if results were observed.

It is laboratory policy to allow one surrogate per sample fraction (acid, base-neutral or pesticide) to exceed the stated QC limits. This policy is based upon the USEPA SOW for the Contract Laboratory Program (CLP).

LABORATORY CERTIFICATIONS

STATE	AGENCY	NUMBER
Alabama	ADEM	40830
Alaska	AKDEC	N/A
Arizona	AZDOHS	AZ0533
California	CADOH	1178
Colorado	CODOH	OH113
Connecticut	CTDPH & AS	PH-0154
Florida	FLHRS	E87537
Delaware	DEHSS	OH113
Iowa	IADNR	129
Kansas	KSDHE	E-10202
Louisiana	LADOHH	92-10
Maryland	MDDHMH	210
Massachusetts	MADEP	M-OH113
New Hampshire	NHDES	2490
New Jersey	NJDEP	74603
New York	NYDOH	10712
North Carolina	NCDEM	392
Ohio	OHEPA	OH113
Oklahoma	OKDEQ	9216
Pennsylvania	PADER	68-450
Rhode Island	RIDOH	214/142
South Carolina	SCDEHNR	92002
Tennessee	TNDOH/TNDEC	2978
Utah	UTDOH	E-288
Virginia	VADGS	00011
Washington	WADOE	C154
Wisconsin	WIDNR	999037160

Validated by:

- o US Army Corps of Engineers ..... Chemical Analysis in Various Matrices

Approvals:

- o USDA ..... Permit for Importing Soils
- o Florida DEP ..... Quality Assurance Plan #930034
- o Naval Facilities Engineering Service Center ..... Chemical Analysis in Various Matrices

METHODOLOGY REFERENCES

ASTM	*American Society for Testing and Materials*, 1985, edition.
MCAWW	*Methods for Chemical Analysis of Water and Wastes*, April 1979 and Update #1 March 1983.
CLP	USEPA Contract Laboratory Program, Document #OLMO3.0, update August 1994 #OLMO3.1 and Document #ILMO4.0.
EPA-500	*USEPA Methods for the Determination of Organic Compounds in Drinking Water*, EPA-600/4-88/039 July 1991 and Supplement II (EPA/600/R-92-129) August 1992.
EPA-600	*USEPA Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, 40CFR, 136, APP.A. July 1992.
NIOSH	*National Institute for Occupational Safety and Health*, 3rd edition, 1984.
SMEWW	*Standard Methods for the Examination of Water and Wastewater*, 18th edition, 1992.
STOA	*Spot Tests In Organic Analysis*, 7th edition, 1966.
SW-846	*Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, 3rd edition, Updates I and II, September 1986 to January 1995.
(1)	This method was modified to incorporate the use of Boron Trifluoride (BF3) as the derivatizing reagent according to Method 6640 in *SMEWW*, 18th edition, 1992.
Title 22	*Waste Extraction Test*, Title 22, Section 66261.126 Appendix 2 of the California Administrative Code, May 1991.
LUFT	*California Leaking Underground Fuel Tank Field Manual*, October 1989.

REPORT KEY

%	=	Percent
<	=	Less than
>	=	Greater than
µg/kg	=	Microgram per kilogram (ppb)
µg/L	=	Microgram per liter (ppb)
µg/SMP	=	Microgram per sample (Tedlar Bag)
µg/smp	=	Microgram per sample
µg/W	=	Microgram per wipe
BTU/lb	=	British thermal units per pound
CV	=	Conventionals
Deg. C	=	Degrees Celsius
DRO	=	Diesel Range Organics
EP TOX	=	Extraction Procedure Toxicity
GC	=	Gas Chromatography Instrument
GC/MS	=	Gas Chromatography/Mass Spectrometer Instrument
gm/cc	=	Grams per cubic centimeter
GRO	=	Gasoline Range Organics
IR	=	Infrared Spectrophotometric
J	=	Estimated value due to calculated result < detection limit or result is from GC/MS library search
L	=	Laboratory
M	=	Method
µm/cm	=	MicroMho per centimeter
mg/kg	=	Milligram per kilogram (ppm)
mg/L	=	Milligram per liter (ppm)
mg/m^3	=	Milligram per cubic meter
mg/SMP	=	Milligram per sample
mg/W	=	Milligram per wipe
n/a	=	Not applicable
ND	=	Not detected at or above stated detection limit
ng/SMP	=	Nanogram per sample
NVR	=	Not a valid recovery
PCB	=	Polychlorinated Biphenyls (PCBs)
pCi/l	=	Picocurie per liter
ppb	=	Parts per billion
ppm	=	Parts per million
RCRA	=	Resource Conservation and Recovery Act
SOW	=	Statement of Work
std	=	Result is relative to standard pH units
TCLP	=	Toxicity Characteristic Leaching Procedure
Unk	=	Unknown

APPENDIX D

SAMPLE RECEIPT DOCUMENTATION

OHM Remediation Services Corp.

300595

CHAIN-OF-CUSTODY RECORD

LAB COPY
Form 0019
Field Technical Services
Rev. 08/89

187311

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME: Roy F. Weston Inc.
PROJECT LOCATION: Ft. Devens MA / Verbeck Gate
PROJ. NO.: VRA's
PROJECT CONTACT: Sam Naik
PROJECT TELEPHONE NO.: (508) 772-7190
CLIENT'S REPRESENTATIVE: USACE NED
PROJECT MANAGER/SUPERVISOR: Tom Abdella

ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS): VOA's w TIC's 8260 / 8240; Total RCRA metals 6010A/7471A; Total RCRA Char / Various; PCB's 8080; TPH 418.1

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	VOA's w TIC's	Total RCRA metals	Total RCRA Char	PCB's	TPH				REMARKS
1	1004 WC 01	12/18/96	1700	✓		All samples from a dirty soil stockpile. Sandy/Silty soil	1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
2	1004 WC 02	12/18/96	1710	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
3	1004 WC 03	12/18/96	1715	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
4	1004 WC 04	12/18/96	1720	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
5	1004 WC 05	12/18/96	1730	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
6	1004 WC 06	12/18/96	1740	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	X	x	x	x	x				
7	1004 WC 07	12/18/96	1750	✓			1 x 1L, 1 x 4oz, 2 x 40 ml VOA	x	x	x	x	x				
8	Trip Blank	12/19/96	1150				2 x 40 ml VOA	X								
9																
0																

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	1-8	Robert O'Hara	Fed Ex	12/19/96	14:00
2	1-8	Fedex 140881110631	Angela A. Schimmel	12-20-96	1239
3					
4					

REMARKS: * 5 DAY TAT
Temp Blank Included
All samples preserved to 4°C
Trip Blank Included

2°C AB

SAMPLER'S SIGNATURE: Robert E. O'Hara 12/19/96

"SAMPLE RECEIPT FORM"

Project: 300595 Tote____ Box____ Bucket____ COC #: 187311

Cooler #: _____ COC #: _____

Cooler #: _____ COC #: _____

Cooler #: _____ COC #: _____

Use other side of this form to note further details concerning check-in problems and to specify and describe any action(s) regarding the resolution(s) of problem(s).

1) Have designated person initial here to acknowledge receipt of sample(s) ~~18~~ (date) 12/20/96

2) Were sample custody seals on outside of cooler? If Yes, how many & where? ✓ yes ___

[1] front [1] back [___] right side [___] left side ___ of ___ intact

seal date: 12/19/96 name: ROBERT O'HARA

3) Were custody papers sealed in a plastic bag & taped inside to the lid? ✓ yes ___

4) Were custody papers filled out properly (ink, signed, etc.)? ✓ yes ___ no

5) Samples came via: [___] A/B [✓] FED EX? [___] UPS [___] H/D [___] other

Attach & enter air bill or invoice number here: 1408811016031

6) Describe packing: [___] sorbent [___] bubble pk [___] paper [___] cardboard [___] rags
[___] vermiculite [___] foam [___] peanuts [___] tyvek [___] other: _____

7) Temperature = 2°C (Acceptance Range = 2 to 6°C) Blk ✓ Smp ___ Cooler ___ ✓ yes ___ no

8) Were all bottles sealed in separate plastic bags? ✓ yes ___ no

9) Did all bottles arrive unbroken & in good condition? ✓ yes ___ no

10) Were Custody Seals on sample jar lids? If YES, were they intact upon arrival?
Seal Date: _____ Name: _____ ___ yes ✓ no

11) Labels complete? ✓ yes ___ no

12) Labels agree with custody papers? If NO, list on other side. ✓ yes ___ no

[___] Matrix on COC and jar don't agree

13) Correct containers? ✓ yes ___ no

14) Were preservatives used when required? ✓ yes ___ no

15) Was a sufficient amount of sample sent for tests indicated? ✓ yes ___ no

16) Bubbles in VOA vials? If YES, list samples on other side. ___ N/A ___ yes ✓ no

pH Range:

[___] Metals 0 to 2 [___] Sulfide > 9 [___] COD < 2

[___] Oil & Grease 0 to 2 [___] Hardness < 2 [___] TOC < 2

[___] Cyanide > 12 [___] Phenols < 2 [___] _____

[___] Health Warnings Listed

ATTACHMENT J
ANALYTICAL RESULTS FOR BACKFILL MATERIAL SAMPLING

OHM Remediation Services Corp.
A Subsidiary of OHM Corporation

ANALYTICAL DIVISION

Laboratory Analysis

Report(s) #622064

Client: Roy F. Weston, Inc.
Devens, MA

Attn: Sam Naik

Project: 300595

Date Samples Received: January 23, 1997 **Date Data Due:** January 24, 1997

Date Order Received: January 23, 1997 **Date Data Reported:** January 24, 1997

Reviewed and Approved by: Joseph A. Hnatow *Date:* January 27, 1997
Joseph A. Hnatow, Laboratory Manager

PROJECT NARRATIVE

The following items relate to the samples and analytical data contained in this report.

- The sample temperature upon receipt by the laboratory was 4°C, which is within the temperature acceptability range of 2°C to 6°C.
- All solid sample results are reported on a "dry weight" basis except Reactive Cyanide and Reactive Sulfide, which are reported on an as received basis.
- Note any comments at the bottom of the tables in appendices B and C.
- The Heptachlor and Silver matrix spike recoveries were outside method QC limits for batch #Q2P70124 (Pesticides and/or PCBs by GC). However, the laboratory QC limits were not exceeded. This should be considered when evaluating the data.
- Some method spike recoveries and matrix spike recoveries were outside laboratory QC limits for batch #Q2P70124 (Pesticides and/or PCBs by GC). However, method QC limits were not exceeded. This should be considered when evaluating the data.
- The Methylene Chloride in sample #1004-TB-03 could be the result of laboratory contamination. This should be considered when evaluating the data.

The following relate to the timeliness and completeness of the analytical data reported:

- All data was reported within the required time frame. Data was reported to Mr. Sam Naik on Friday, January 24, 1997, at Roy F. Weston, Inc., Devens, Massachusetts.

APPENDIX A

DATA SUMMARY REPORT

SAMPLE INFORMATION SUMMARY

Sample Id	Lab Id	Sample Date	Matrix	Method	QC Batch #	Prep Date	Analysis Date	Hold Met	Dry Wgt	Run #	Analyst
1004-BF-03	JQ7186	01/22/97	Solid	160.3			01/23/97	N/A	N/A		McFarlane D.
			Solid	418.1	Q2T70132	01/23/97	01/24/97	Yes	Yes	IR9645	Lucy R.
			Solid	6010A	Q2M9303	01/24/97	01/24/97	Yes	Yes	IM6242	Henschen S.
			Solid	7.3.3.2	Q2I5941	01/24/97	01/24/97	Yes	No	I78595	Smith D.
			Solid	7.3.4.2	Q2I5940	01/24/97	01/24/97	Yes	No	I78591	Smith D.
			Solid	7471A	Q2G9304	01/24/97	01/24/97	Yes	Yes	I78588	Henschen S.
			Solid	8080	Q2P70124	01/23/97	01/23/97	Yes	Yes	ZF8558	Kunselman A.
			Solid	8260	Q2V5827	01/23/97	01/23/97	Yes	Yes	C13290	Kelly J.
			Solid	8270	Q2C70131	01/23/97	01/23/97	Yes	Yes	E13615	Bigelow K.
1004-BF-04	JQ7187	01/22/97	Solid	160.3			01/23/97	N/A	N/A		McFarlane D.
			Solid	418.1	Q2T70132	01/23/97	01/24/97	Yes	Yes	IR9646	Lucy R.
			Solid	6010A	Q2M9303	01/24/97	01/24/97	Yes	Yes	IM6240	Henschen S.
			Solid	7.3.3.2	Q2I5941	01/24/97	01/24/97	Yes	No	I78596	Smith D.
			Solid	7.3.4.2	Q2I5940	01/24/97	01/24/97	Yes	No	I78592	Smith D.
			Solid	7471A	Q2G9304	01/24/97	01/24/97	Yes	Yes	I78586	Henschen S.
			Solid	8080	Q2P70124	01/23/97	01/23/97	Yes	Yes	ZF8559	Kunselman A.
			Solid	8260	Q2V5827	01/23/97	01/23/97	Yes	Yes	C13291	Kelly J.
			Solid	8270	Q2C70131	01/23/97	01/23/97	Yes	Yes	E13616	Bigelow K.
1004-TB-03	JQ7188	01/22/97	Aqueous	8260	Q1V5828	01/23/97	01/23/97	Yes	N/A	C13299	Lucy R.

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

	Sample Point ID:	1004-BF-03	1004-BF-04
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
GS05 GC Pesticides and PCB's			
Aldrin	mg/kg	<.017	<.018
Alpha-BHC	mg/kg	<.017	<.018
Beta-BHC	mg/kg	<.017	<.018
Chlordane	mg/kg	<.170	<.176
4,4'-DDD	mg/kg	<.017	<.018
4,4'-DDE	mg/kg	<.017	<.018
4,4'-DDT	mg/kg	<.017	<.018
Delta-BHC	mg/kg	<.017	<.018
Dieldrin	mg/kg	<.017	<.018
Endosulfan sulfate	mg/kg	<.017	<.018
Endosulfan I	mg/kg	<.017	<.018
Endosulfan II	mg/kg	<.017	<.018
Endrin	mg/kg	<.017	<.018
Endrin aldehyde	mg/kg	<.017	<.018
Endrin ketone	mg/kg	<.017	<.018
Gamma-BHC (Lindane)	mg/kg	<.017	<.018
Heptachlor	mg/kg	<.017	<.018
Heptachlor epoxide	mg/kg	<.017	<.018
Methoxychlor	mg/kg	<.017	<.018
Toxaphene	mg/kg	<.340	<.353
Aroclor 1016	mg/kg	<.170	<.176
Aroclor 1221	mg/kg	<.170	<.176
Aroclor 1232	mg/kg	<.170	<.176
Aroclor 1242	mg/kg	<.170	<.176
Aroclor 1248	mg/kg	<.170	<.176
Aroclor 1254	mg/kg	<.170	<.176
Aroclor 1260	mg/kg	<.170	<.176

DATA SUMMARY REPORT

DATE: 01/27/97

PAGE: 1

Company: ROY F. WESTON, INC.

	Sample Point ID:	**1004-BF-03**	**1004-BF-04**
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
CL1E GCMS VOA TIC			
Additional Peaks not Present	mg/kg	N/A	N/A

	Sample Point ID:	**1004-BF-03**	**1004-BF-04**
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
CL1F GCMS SVA TIC			
2-Pentanone, 4-hydroxy-4-methy	mg/kg	6.43 J	7.97 J

	Sample Point ID:	**1004-BF-03**	**1004-BF-04**
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
CV10 Wet Chemistry			
Reactive Cyanide	mg/kg	<10.0	<10.0
Reactive Sulfide	mg/kg	<25.0	<25.0
Solids, Total	%	97.7	91.7

DATA SUMMARY REPORT

DATE: 01/27/97

PAGE: 4

Company: ROY F. WESTON, INC.

Sample Point ID:	**1004-BF-03**	**1004-BF-04**
ASC Sample Number:	JQ7186	JQ7187
Sample Date:	970122	970122
Facility Code:	300595C	300595C

Parameters	Units		
MS22 GCMS TCL BNA			
Benzo(k)fluoranthene	mg/kg	<.339	<.364
Benzo(ghi)perylene	mg/kg	<.339	<.364
Benzo(a)pyrene	mg/kg	<.339	<.364
bis(2-Chloroethyl) ether	mg/kg	<.339	<.364
bis(2-Chloroethoxy)methane	mg/kg	<.339	<.364
bis(2-Chloroisopropyl)ether	mg/kg	<.339	<.364
bis(2-Ethylhexyl)phthalate	mg/kg	<.339	<.364
4-Bromophenyl phenyl ether	mg/kg	<.339	<.364
Butylbenzylphthalate	mg/kg	<.339	<.364
Carbazole	mg/kg	<.339	<.364
4-Chloroaniline	mg/kg	<.339	<.364
p-Chloro-m-cresol	mg/kg	<.339	<.364
2-Chloronaphthalene	mg/kg	<.339	<.364
2-Chlorophenol	mg/kg	<.339	<.364
4-Chlorophenyl phenyl ether	mg/kg	<.339	<.364
Chrysene	mg/kg	<.339	<.364
Dibenzo(a,h)anthracene	mg/kg	<.339	<.364
Dibenzofuran	mg/kg	<.339	<.364
Di-n-butyl phthalate	mg/kg	<.339	<.364
1,2-Dichlorobenzene	mg/kg	<.339	<.364
1,3-Dichlorobenzene	mg/kg	<.339	<.364
1,4-Dichlorobenzene	mg/kg	<.339	<.364
3,3'-Dichlorobenzidine	mg/kg	<.339	<.364
2,4-Dichlorophenol	mg/kg	<.339	<.364
Diethyl phthalate	mg/kg	<.339	<.364
Dimethyl phthalate	mg/kg	<.339	<.364
2,4-Dimethylphenol	mg/kg	<.339	<.364
4,6-Dinitro-o-cresol	mg/kg	<.339	<.364
2,4-Dinitrophenol	mg/kg	<.339	<.364
2,4-Dinitrotoluene	mg/kg	<.339	<.364
2,6-Dinitrotoluene	mg/kg	<.339	<.364
Di-n-octyl phthalate	mg/kg	<.339	<.364
Fluoranthene	mg/kg	<.339	<.364
Fluorene	mg/kg	<.339	<.364
Hexachlorobenzene	mg/kg	<.339	<.364

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

	Sample Point ID:	1004-BF-03	1004-BF-04
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
IR00 TPHC by IR			
Petroleum Hydrocarbons (IR)	mg/kg	<6.73	<7.20

	Sample Point ID:	1004-BF-03	1004-BF-04
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
ME50 Total RCRA Metals			
Arsenic	mg/kg	<7.68	<8.18
Barium	mg/kg	17.8	15.0
Cadmium	mg/kg	<.512	<.545
Chromium	mg/kg	2.86	2.68
Lead	mg/kg	<7.68	<8.18
Mercury	mg/kg	<.007	<.007
Selenium	mg/kg	<7.68	<8.18
Silver	mg/kg	<1.02	<1.09

	Sample Point ID:	1004-BF-03	1004-BF-04
	ASC Sample Number:	JQ7186	JQ7187
	Sample Date:	970122	970122
	Facility Code:	300595C	300595C
Parameters	Units		
MS22 GCMS TCL BNA			
Acenaphthene	mg/kg	<.339	<.364
Acenaphthylene	mg/kg	<.339	<.364
Anthracene	mg/kg	<.339	<.364
Benzo(a)anthracene	mg/kg	<.339	<.364
Benzo(b)fluoranthene	mg/kg	<.339	<.364

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Sample Point ID:	**1004-BF-03**	**1004-BF-04**
ASC Sample Number:	JQ7186	JQ7187
Sample Date:	970122	970122
Facility Code:	300595C	300595C

Parameters	Units		
MV20 GCMS TCL Volatiles			
Chloromethane	mg/kg	<.005	<.005
Bromomethane	mg/kg	<.005	<.005
Vinyl chloride	mg/kg	<.005	<.005
Chloroethane	mg/kg	<.005	<.005
Methylene chloride	mg/kg	<.005	<.005
Acetone	mg/kg	<.01	<.010
Carbon disulfide	mg/kg	<.005	<.005
1,1-Dichloroethene	mg/kg	<.005	<.005
1,1-Dichloroethane	mg/kg	<.005	<.005
1,2-Dichloroethene (total)	mg/kg	<.005	.005
Chloroform	mg/kg	<.005	<.005
1,2-Dichloroethane	mg/kg	<.005	<.005
2-Butanone	mg/kg	<.005	<.005
1,1,1-Trichloroethane	mg/kg	<.005	<.005
Carbon tetrachloride	mg/kg	<.005	<.005
Bromodichloromethane	mg/kg	<.005	<.005
1,2-Dichloropropane	mg/kg	<.005	<.005
cis-1,3-Dichloropropene	mg/kg	<.005	<.005
Trichloroethene	mg/kg	<.005	<.005
Dibromochloromethane	mg/kg	<.005	<.005
1,1,2-Trichloroethane	mg/kg	<.005	<.005
Benzene	mg/kg	<.005	<.005
trans-1,3-Dichloropropene	mg/kg	<.005	<.005
Bromoform	mg/kg	<.005	<.005
4-Methyl-2-pentanone	mg/kg	<.01	<.010
2-Hexanone	mg/kg	<.005	<.005
Tetrachloroethene	mg/kg	<.005	<.005
1,1,2,2-Tetrachloroethane	mg/kg	<.005	<.005
Toluene	mg/kg	<.005	<.005
Chlorobenzene	mg/kg	<.005	<.005
Ethylbenzene	mg/kg	<.005	<.005
Styrene	mg/kg	<.005	<.005
Xylenes	mg/kg	<.005	<.005

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Sample Point ID:	1004-BF-03	1004-BF-04
ASC Sample Number:	JQ7186	JQ7187
Sample Date:	970122	970122
Facility Code:	300595C	300595C

Parameters	Units		
MS22 GCMS TCL BNA			
Hexachlorobutadiene	mg/kg	<.339	<.364
Hexachlorocyclopentadiene	mg/kg	<.339	<.364
Hexachloroethane	mg/kg	<.339	<.364
Indeno(1,2,3-cd)pyrene	mg/kg	<.339	<.364
Isophorone	mg/kg	<.339	<.364
2-Methylnaphthalene	mg/kg	<.339	<.364
2-Methylphenol	mg/kg	<.339	<.364
4-Methylphenol	mg/kg	<.339	<.364
N-Nitrosodi-n-propylamine	mg/kg	<.339	<.364
N-Nitrosodiphenylamine	mg/kg	<.339	<.364
Naphthalene	mg/kg	<.339	<.364
2-Nitroaniline	mg/kg	<.339	<.364
3-Nitroaniline	mg/kg	<.339	<.364
4-Nitroaniline	mg/kg	<.339	<.364
Nitrobenzene	mg/kg	<.339	<.364
2-Nitrophenol	mg/kg	<.339	<.364
4-Nitrophenol	mg/kg	<.339	<.364
Pentachlorophenol	mg/kg	<.339	<.364
Phenanthrene	mg/kg	<.339	<.364
Phenol	mg/kg	<.339	<.364
Pyrene	mg/kg	<.339	<.364
1,2,4-Trichlorobenzene	mg/kg	<.339	<.364
2,4,5-Trichlorophenol	mg/kg	<.339	<.364
2,4,6-Trichlorophenol	mg/kg	<.339	<.364

DATA SUMMARY REPORT

Company: ROY F. WESTON, INC.

Sample Point ID: 1004-TB-03
ASC Sample Number: JQ7188
Sample Date: 970122
Facility Code: 300595C

Parameters	Units	
MV20 GCMS TCL Volatiles		
4-Methyl-2-pentanone	mg/L	<.010
2-Hexanone	mg/L	<.005
Tetrachloroethene	mg/L	<.005
1,1,2,2-Tetrachloroethane	mg/L	<.005
Toluene	mg/L	<.005
Chlorobenzene	mg/L	<.005
Ethylbenzene	mg/L	<.005
Styrene	mg/L	<.005
Xylenes	mg/L	<.005
1,2,3-Trichloropropane	mg/L	<.005
1,2-Trans-dichloroethylene	mg/L	<.005
2-Chloroethylvinyl ether	mg/L	<.050
Acrolein	mg/L	<.025
Acrylonitrile	mg/L	<.005
Dibromomethane	mg/L	<.005
Dichlorodifluoromethane	mg/L	<.005
Trichlorofluoromethane	mg/L	<.005
Vinyl acetate	mg/L	<.025

APPENDIX B

QUANTITATIVE RESULTS

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	ND	7.68	ND	Q2M9303
Barium	17.8	1.02	ND	Q2M9303
Cadmium	ND	.512	ND	Q2M9303
Chromium	2.86	1.02	ND	Q2M9303
Lead	ND	7.68	ND	Q2M9303
Mercury	ND	.007	ND	Q2G9304
Selenium	ND	7.68	ND	Q2M9303
Silver	ND	1.02	ND	Q2M9303

CV10 WET CHEMISTRY

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds		Sample Results	Detection Limits	Blank Results	Batch Number
Reactive Cyanide	mg/kg	ND	10.0	ND	Q2I5941
Reactive Sulfide	mg/kg	ND	25.0	ND	Q2I5940
Solids, Total	%	91.7	.100	-	

GS05 GC Pesticides and PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aldrin	ND	.017	ND	Q2P70124
Alpha-BHC	ND	.017	ND	Q2P70124
Beta-BHC	ND	.017	ND	Q2P70124
Chlordane	ND	.170	ND	Q2P70124
4,4'-DDD	ND	.017	ND	Q2P70124
4,4'-DDE	ND	.017	ND	Q2P70124
4,4'-DDT	ND	.017	ND	Q2P70124
Delta-BHC	ND	.017	ND	Q2P70124
Dieldrin	ND	.017	ND	Q2P70124
Endosulfan sulfate	ND	.017	ND	Q2P70124
Endosulfan I	ND	.017	ND	Q2P70124
Endosulfan II	ND	.017	ND	Q2P70124
Endrin	ND	.017	ND	Q2P70124
Endrin aldehyde	ND	.017	ND	Q2P70124
Endrin ketone	ND	.017	ND	Q2P70124
Gamma-BHC (Lindane)	ND	.017	ND	Q2P70124
Heptachlor	ND	.017	ND	Q2P70124
Heptachlor epoxide	ND	.017	ND	Q2P70124
Methoxychlor	ND	.017	ND	Q2P70124
Toxaphene	ND	.340	ND	Q2P70124
Aroclor 1016	ND	.170	ND	Q2P70124
Aroclor 1221	ND	.170	ND	Q2P70124
Aroclor 1232	ND	.170	ND	Q2P70124
Aroclor 1242	ND	.170	ND	Q2P70124
Aroclor 1248	ND	.170	ND	Q2P70124
Aroclor 1254	ND	.170	ND	Q2P70124
Aroclor 1260	ND	.170	ND	Q2P70124

ME50 Total RCRA Metals

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Arsenic	ND	8.18	ND	Q2M9303
Barium	15.0	1.09	ND	Q2M9303
Cadmium	ND	.545	ND	Q2M9303
Chromium	2.68	1.09	ND	Q2M9303
Lead	ND	8.18	ND	Q2M9303
Mercury	ND	.007	ND	Q2G9304
Selenium	ND	8.18	ND	Q2M9303
Silver	ND	1.09	ND	Q2M9303

IR00 TPHC BY IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	ND	6.73	ND	Q2T70132

GS05 GC Pesticides and PCB's

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Aldrin	ND	.018	ND	Q2P70124
Alpha-BHC	ND	.018	ND	Q2P70124
Beta-BHC	ND	.018	ND	Q2P70124
Chlordane	ND	.176	ND	Q2P70124
4,4'-DDD	ND	.018	ND	Q2P70124
4,4'-DDE	ND	.018	ND	Q2P70124
4,4'-DDT	ND	.018	ND	Q2P70124
Delta-BHC	ND	.018	ND	Q2P70124
Dieldrin	ND	.018	ND	Q2P70124
Endosulfan sulfate	ND	.018	ND	Q2P70124
Endosulfan I	ND	.018	ND	Q2P70124
Endosulfan II	ND	.018	ND	Q2P70124
Endrin	ND	.018	ND	Q2P70124
Endrin aldehyde	ND	.018	ND	Q2P70124
Endrin ketone	ND	.018	ND	Q2P70124
Gamma-BHC (Lindane)	ND	.018	ND	Q2P70124
Heptachlor	ND	.018	ND	Q2P70124
Heptachlor epoxide	ND	.018	ND	Q2P70124
Methoxychlor	ND	.018	ND	Q2P70124
Toxaphene	ND	.353	ND	Q2P70124
Aroclor 1016	ND	.176	ND	Q2P70124
Aroclor 1221	ND	.176	ND	Q2P70124
Aroclor 1232	ND	.176	ND	Q2P70124
Aroclor 1242	ND	.176	ND	Q2P70124
Aroclor 1248	ND	.176	ND	Q2P70124
Aroclor 1254	ND	.176	ND	Q2P70124
Aroclor 1260	ND	.176	ND	Q2P70124

MS22 GCMS TCL BNA

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Acenaphthene	ND	.339	ND	Q2C70131
Acenaphthylene	ND	.339	ND	Q2C70131
Anthracene	ND	.339	ND	Q2C70131
Benzo(a)anthracene	ND	.339	ND	Q2C70131
Benzo(b)fluoranthene	ND	.339	ND	Q2C70131
Benzo(k)fluoranthene	ND	.339	ND	Q2C70131
Benzo(ghi)perylene	ND	.339	ND	Q2C70131
Benzo(a)pyrene	ND	.339	ND	Q2C70131
bis(2-Chloroethyl) ether	ND	.339	ND	Q2C70131
bis(2-Chloroethoxy)methane	ND	.339	ND	Q2C70131
bis(2-Chloroisopropyl)ether	ND	.339	ND	Q2C70131
bis(2-Ethylhexyl)phthalate	ND	.339	ND	Q2C70131
4-Bromophenyl phenyl ether	ND	.339	ND	Q2C70131
Butylbenzylphthalate	ND	.339	ND	Q2C70131
Carbazole	ND	.339	ND	Q2C70131
4-Chloroaniline	ND	.339	ND	Q2C70131
p-Chloro-m-cresol	ND	.339	ND	Q2C70131
2-Chloronaphthalene	ND	.339	ND	Q2C70131
2-Chlorophenol	ND	.339	ND	Q2C70131
4-Chlorophenyl phenyl ether	ND	.339	ND	Q2C70131
Chrysene	ND	.339	ND	Q2C70131
Dibenzo(a,h)anthracene	ND	.339	ND	Q2C70131
Dibenzofuran	ND	.339	ND	Q2C70131
Di-n-butyl phthalate	ND	.339	ND	Q2C70131
1,2-Dichlorobenzene	ND	.339	ND	Q2C70131
1,3-Dichlorobenzene	ND	.339	ND	Q2C70131
1,4-Dichlorobenzene	ND	.339	ND	Q2C70131
3,3'-Dichlorobenzidine	ND	.339	ND	Q2C70131
2,4-Dichlorophenol	ND	.339	ND	Q2C70131
Diethyl phthalate	ND	.339	ND	Q2C70131
Dimethyl phthalate	ND	.339	ND	Q2C70131
2,4-Dimethylphenol	ND	.339	ND	Q2C70131
4,6-Dinitro-o-cresol	ND	.339	ND	Q2C70131
2,4-Dinitrophenol	ND	.339	ND	Q2C70131
2,4-Dinitrotoluene	ND	.339	ND	Q2C70131
2,6-Dinitrotoluene	ND	.339	ND	Q2C70131
Di-n-octyl phthalate	ND	.339	ND	Q2C70131
Fluoranthene	ND	.339	ND	Q2C70131
Fluorene	ND	.339	ND	Q2C70131
Hexachlorobenzene	ND	.339	ND	Q2C70131
Hexachlorobutadiene	ND	.339	ND	Q2C70131
Hexachlorocyclopentadiene	ND	.339	ND	Q2C70131
Hexachloroethane	ND	.339	ND	Q2C70131
Indeno(1,2,3-cd)pyrene	ND	.339	ND	Q2C70131
Isophorone	ND	.339	ND	Q2C70131
2-Methylnaphthalene	ND	.339	ND	Q2C70131
2-Methylphenol	ND	.339	ND	Q2C70131
4-Methylphenol	ND	.339	ND	Q2C70131
N-Nitrosodi-n-propylamine	ND	.339	ND	Q2C70131
N-Nitrosodiphenylamine	ND	.339	ND	Q2C70131

IR00 TPHC BY IR

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Petroleum Hydrocarbons (IR)	ND	7.20	ND	Q2T70132

CL1F GCMS SVA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
2-Pentanone, 4-hydroxy-4-methy	6.43	-	-	Q2C70131

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MS22 GCMS TCL BNA

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Naphthalene	ND	.339	ND	Q2C70131
2-Nitroaniline	ND	.339	ND	Q2C70131
3-Nitroaniline	ND	.339	ND	Q2C70131
4-Nitroaniline	ND	.339	ND	Q2C70131
Nitrobenzene	ND	.339	ND	Q2C70131
2-Nitrophenol	ND	.339	ND	Q2C70131
4-Nitrophenol	ND	.339	ND	Q2C70131
Pentachlorophenol	ND	.339	ND	Q2C70131
Phenanthrene	ND	.339	ND	Q2C70131
Phenol	ND	.339	ND	Q2C70131
Pyrene	ND	.339	ND	Q2C70131
1,2,4-Trichlorobenzene	ND	.339	ND	Q2C70131
2,4,5-Trichlorophenol	ND	.339	ND	Q2C70131
2,4,6-Trichlorophenol	ND	.339	ND	Q2C70131

3-Methyl- and 4-Methylphenol coelute and are reported as the total

MS22 GCMS TCL BNA

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Naphthalene	ND	.364	ND	Q2C70131
2-Nitroaniline	ND	.364	ND	Q2C70131
3-Nitroaniline	ND	.364	ND	Q2C70131
4-Nitroaniline	ND	.364	ND	Q2C70131
Nitrobenzene	ND	.364	ND	Q2C70131
2-Nitrophenol	ND	.364	ND	Q2C70131
4-Nitrophenol	ND	.364	ND	Q2C70131
Pentachlorophenol	ND	.364	ND	Q2C70131
Phenanthrene	ND	.364	ND	Q2C70131
Phenol	ND	.364	ND	Q2C70131
Pyrene	ND	.364	ND	Q2C70131
1,2,4-Trichlorobenzene	ND	.364	ND	Q2C70131
2,4,5-Trichlorophenol	ND	.364	ND	Q2C70131
2,4,6-Trichlorophenol	ND	.364	ND	Q2C70131

3-Methyl- and 4-Methylphenol coelute and are reported as the total

MS22 GCMS TCL BNA

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Acenaphthene	ND	.364	ND	Q2C70131
Acenaphthylene	ND	.364	ND	Q2C70131
Anthracene	ND	.364	ND	Q2C70131
Benzo(a)anthracene	ND	.364	ND	Q2C70131
Benzo(b)fluoranthene	ND	.364	ND	Q2C70131
Benzo(k)fluoranthene	ND	.364	ND	Q2C70131
Benzo(ghi)perylene	ND	.364	ND	Q2C70131
Benzo(a)pyrene	ND	.364	ND	Q2C70131
bis(2-Chloroethyl) ether	ND	.364	ND	Q2C70131
bis(2-Chloroethoxy)methane	ND	.364	ND	Q2C70131
bis(2-Chloroisopropyl)ether	ND	.364	ND	Q2C70131
bis(2-Ethylhexyl)phthalate	ND	.364	ND	Q2C70131
4-Bromophenyl phenyl ether	ND	.364	ND	Q2C70131
Butylbenzylphthalate	ND	.364	ND	Q2C70131
Carbazole	ND	.364	ND	Q2C70131
4-Chloroaniline	ND	.364	ND	Q2C70131
p-Chloro-m-cresol	ND	.364	ND	Q2C70131
2-Chloronaphthalene	ND	.364	ND	Q2C70131
2-Chlorophenol	ND	.364	ND	Q2C70131
4-Chlorophenyl phenyl ether	ND	.364	ND	Q2C70131
Chrysene	ND	.364	ND	Q2C70131
Dibenzo(a,h)anthracene	ND	.364	ND	Q2C70131
Dibenzofuran	ND	.364	ND	Q2C70131
Di-n-butyl phthalate	ND	.364	ND	Q2C70131
1,2-Dichlorobenzene	ND	.364	ND	Q2C70131
1,3-Dichlorobenzene	ND	.364	ND	Q2C70131
1,4-Dichlorobenzene	ND	.364	ND	Q2C70131
3,3'-Dichlorobenzidine	ND	.364	ND	Q2C70131
2,4-Dichlorophenol	ND	.364	ND	Q2C70131
Diethyl phthalate	ND	.364	ND	Q2C70131
Dimethyl phthalate	ND	.364	ND	Q2C70131
2,4-Dimethylphenol	ND	.364	ND	Q2C70131
4,6-Dinitro-o-cresol	ND	.364	ND	Q2C70131
2,4-Dinitrophenol	ND	.364	ND	Q2C70131
2,4-Dinitrotoluene	ND	.364	ND	Q2C70131
2,6-Dinitrotoluene	ND	.364	ND	Q2C70131
Di-n-octyl phthalate	ND	.364	ND	Q2C70131
Fluoranthene	ND	.364	ND	Q2C70131
Fluorene	ND	.364	ND	Q2C70131
Hexachlorobenzene	ND	.364	ND	Q2C70131
Hexachlorobutadiene	ND	.364	ND	Q2C70131
Hexachlorocyclopentadiene	ND	.364	ND	Q2C70131
Hexachloroethane	ND	.364	ND	Q2C70131
Indeno(1,2,3-cd)pyrene	ND	.364	ND	Q2C70131
Isophorone	ND	.364	ND	Q2C70131
2-Methylnaphthalene	ND	.364	ND	Q2C70131
2-Methylphenol	ND	.364	ND	Q2C70131
4-Methylphenol	ND	.364	ND	Q2C70131
N-Nitrosodi-n-propylamine	ND	.364	ND	Q2C70131
N-Nitrosodiphenylamine	ND	.364	ND	Q2C70131

MV20 GCMS TCL VOLATILES

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5827
Bromomethane	ND	.005	ND	Q2V5827
Vinyl chloride	ND	.005	ND	Q2V5827
Chloroethane	ND	.005	ND	Q2V5827
Methylene chloride	ND	.005	ND	Q2V5827
Acetone	ND	.01	ND	Q2V5827
Carbon disulfide	ND	.005	ND	Q2V5827
1,1-Dichloroethene	ND	.005	ND	Q2V5827
1,1-Dichloroethane	ND	.005	ND	Q2V5827
1,2-Dichloroethene (total)	ND	.005	ND	Q2V5827
Chloroform	ND	.005	ND	Q2V5827
1,2-Dichloroethane	ND	.005	ND	Q2V5827
2-Butanone	ND	.005	ND	Q2V5827
1,1,1-Trichloroethane	ND	.005	ND	Q2V5827
Carbon tetrachloride	ND	.005	ND	Q2V5827
Bromodichloromethane	ND	.005	ND	Q2V5827
1,2-Dichloropropane	ND	.005	ND	Q2V5827
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5827
Trichloroethene	ND	.005	ND	Q2V5827
Dibromochloromethane	ND	.005	ND	Q2V5827
1,1,2-Trichloroethane	ND	.005	ND	Q2V5827
Benzene	ND	.005	ND	Q2V5827
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5827
Bromoform	ND	.005	ND	Q2V5827
4-Methyl-2-pentanone	ND	.01	ND	Q2V5827
2-Hexanone	ND	.005	ND	Q2V5827
Tetrachloroethene	ND	.005	ND	Q2V5827
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5827
Toluene	ND	.005	ND	Q2V5827
Chlorobenzene	ND	.005	ND	Q2V5827
Ethylbenzene	ND	.005	ND	Q2V5827
Styrene	ND	.005	ND	Q2V5827
Xylenes	ND	.005	ND	Q2V5827

CL1F GCMS SVA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
2-Pentanone, 4-hydroxy-4-methy	7.97	-	-	Q2C70131

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL VOLATILES

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Chloromethane	ND	.005	ND	Q2V5827
Bromomethane	ND	.005	ND	Q2V5827
Vinyl chloride	ND	.005	ND	Q2V5827
Chloroethane	ND	.005	ND	Q2V5827
Methylene chloride	ND	.005	ND	Q2V5827
Acetone	ND	.010	ND	Q2V5827
Carbon disulfide	ND	.005	ND	Q2V5827
1,1-Dichloroethene	ND	.005	ND	Q2V5827
1,1-Dichloroethane	ND	.005	ND	Q2V5827
1,2-Dichloroethene (total)	.005	.005	ND	Q2V5827
Chloroform	ND	.005	ND	Q2V5827
1,2-Dichloroethane	ND	.005	ND	Q2V5827
2-Butanone	ND	.005	ND	Q2V5827
1,1,1-Trichloroethane	ND	.005	ND	Q2V5827
Carbon tetrachloride	ND	.005	ND	Q2V5827
Bromodichloromethane	ND	.005	ND	Q2V5827
1,2-Dichloropropane	ND	.005	ND	Q2V5827
cis-1,3-Dichloropropene	ND	.005	ND	Q2V5827
Trichloroethene	ND	.005	ND	Q2V5827
Dibromochloromethane	ND	.005	ND	Q2V5827
1,1,2-Trichloroethane	ND	.005	ND	Q2V5827
Benzene	ND	.005	ND	Q2V5827
trans-1,3-Dichloropropene	ND	.005	ND	Q2V5827
Bromoform	ND	.005	ND	Q2V5827
4-Methyl-2-pentanone	ND	.010	ND	Q2V5827
2-Hexanone	ND	.005	ND	Q2V5827
Tetrachloroethene	ND	.005	ND	Q2V5827
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q2V5827
Toluene	ND	.005	ND	Q2V5827
Chlorobenzene	ND	.005	ND	Q2V5827
Ethylbenzene	ND	.005	ND	Q2V5827
Styrene	ND	.005	ND	Q2V5827
Xylenes	ND	.005	ND	Q2V5827

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-03	JQ7186

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Additional Peaks not Present	N/A	-	-	Q2V5827

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

MV20 GCMS TCL VOLATILES

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-TB-03	JQ7188

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Chloromethane	ND	.005	ND	Q1V5828
Bromomethane	ND	.005	ND	Q1V5828
Vinyl chloride	ND	.005	ND	Q1V5828
Chloroethane	ND	.005	ND	Q1V5828
Methylene chloride	.006	.005	ND	Q1V5828
Acetone	ND	.010	ND	Q1V5828
Carbon disulfide	ND	.005	ND	Q1V5828
1,1-Dichloroethene	ND	.005	ND	Q1V5828
1,1-Dichloroethane	ND	.005	ND	Q1V5828
1,2-Dichloroethene (total)	ND	.005	ND	Q1V5828
Chloroform	ND	.005	ND	Q1V5828
1,2-Dichloroethane	ND	.005	ND	Q1V5828
2-Butanone	ND	.005	ND	Q1V5828
1,1,1-Trichloroethane	ND	.005	ND	Q1V5828
Carbon tetrachloride	ND	.005	ND	Q1V5828
Bromodichloromethane	ND	.005	ND	Q1V5828
1,2-Dichloropropane	ND	.005	ND	Q1V5828
cis-1,3-Dichloropropene	ND	.005	ND	Q1V5828
Trichloroethene	ND	.005	ND	Q1V5828
Dibromochloromethane	ND	.005	ND	Q1V5828
1,1,2-Trichloroethane	ND	.005	ND	Q1V5828
Benzene	ND	.005	ND	Q1V5828
trans-1,3-Dichloropropene	ND	.005	ND	Q1V5828
Bromoform	ND	.005	ND	Q1V5828
4-Methyl-2-pentanone	ND	.010	ND	Q1V5828
2-Hexanone	ND	.005	ND	Q1V5828
Tetrachloroethene	ND	.005	ND	Q1V5828
1,1,2,2-Tetrachloroethane	ND	.005	ND	Q1V5828
Toluene	ND	.005	ND	Q1V5828
Chlorobenzene	ND	.005	ND	Q1V5828
Ethylbenzene	ND	.005	ND	Q1V5828
Styrene	ND	.005	ND	Q1V5828
Xylenes	ND	.005	ND	Q1V5828
1,2,3-Trichloropropane	ND	.005	ND	Q1V5828
1,2-Trans-dichloroethylene	ND	.005	ND	Q1V5828
2-Chloroethylvinyl ether	ND	.050	ND	Q1V5828
Acrolein	ND	.025	ND	Q1V5828
Acrylonitrile	ND	.005	ND	Q1V5828
Dibromomethane	ND	.005	ND	Q1V5828
Dichlorodifluoromethane	ND	.005	ND	Q1V5828
Trichlorofluoromethane	ND	.005	ND	Q1V5828
Vinyl acetate	ND	.025	ND	Q1V5828

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-BF-04	JQ7187

Compounds	Sample Results mg/kg	Detection Limits mg/kg	Blank Results mg/kg	Batch Number
Additional Peaks not Present	N/A	-	-	Q2V5827

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

APPENDIX C

QUALITY ASSURANCE DATA

CL1E GCMS VOA TIC

Company Name	Facility	Sample Point	ASC Sample No.
ROY F. WESTON, INC.	300595C	1004-TB-03	JQ7188

Compounds	Sample Results mg/L	Detection Limits mg/L	Blank Results mg/L	Batch Number
Additional Peaks not Present	N/A	-	-	Q1V5828

The results listed above for the Tentatively Identified Compounds are considered estimated concentrations since a 1:1 response is assumed.

QUALITY ASSURANCE REPORT

Joblink: 622064

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
1,2,4-Trichlorobenzene	mg/kg	0	3.33	2.15	65	53-110L 44-142M	1004-BF-03	0	3.36	1.87	56	37-115L 44-142M	3.39	2.12	63	12	0-25L	Q2C70131	100L 100M
1,4-Dichlorobenzene	mg/kg	0	3.33	2.20	66	51-110L 20-124M	1004-BF-03	0	3.36	1.72	51	32-112L 20-124M	3.39	2.02	60	16	0-28L		
2,4-Dinitrotoluene	mg/kg	0	3.33	2.46	74	66-110L 39-139M	1004-BF-03	0	3.36	2.39	71	44-110L 39-139M	3.39	2.54	75	5	0-24L		
2-Chlorophenol	mg/kg	0	5.00	3.17	63	48-110L 23-134M	1004-BF-03	0	5.03	2.84	56	37-110L 23-134M	5.08	3.38	67	18	0-29L		
4-Nitrophenol	mg/kg	0	5.00	3.43	69	63-114L 1-132M	1004-BF-03	0	5.03	3.13	62	45-131L 1-132M	5.08	3.06	60	3	0-26L		
Acenaphthene	mg/kg	0	3.33	2.31	69	56-110L 47-145M	1004-BF-03	0	3.36	2.27	68	44-119L 47-145M	3.39	2.43	72	6	0-21L		
Isophorone	mg/kg	0	3.33	2.32	70	59-110L 21-196M	1004-BF-03	0	3.36	2.18	65	51-110L	3.39	2.39	71	9	0-23L		
N-Nitrosodi-n-propylamine	mg/kg	0	3.33	2.33	70	58-110L 1-230M	1004-BF-03	0	3.36	2.15	64	50-110L 1-230M	3.39	2.40	71	10	0-26L		
Pentachlorophenol	mg/kg	0	5.00	3.80	76	47-128L 14-176M	1004-BF-03	0	5.03	3.69	73	30-133L 14-176M	5.08	3.93	77	5	0-31L		
Phenol	mg/kg	0	5.00	3.63	73	48-110L 5-112M	1004-BF-03	0	5.03	3.17	63	36-114L 5-112M	5.08	3.93	77	20	0-25L		
Pyrene	mg/kg	0	3.33	2.53	76	63-110L 52-115M	1004-BF-03	0	3.36	2.49	74	50-124L 52-115M	3.39	2.61	77	4	0-28L		
p-Chloro-m-cresol	mg/kg	0	5.00	3.32	66	57-110L 22-147M	1004-BF-03	0	5.03	3.30	66	52-110L 22-147M	5.08	3.46	68	3	0-22L		
4,4'-DDD	mg/kg	0	1.67	1.83	110	64-118L 31-141M	1004-BF-03	0	1.68	2.01	120L	49-111L 31-141M	1.68	1.94	115L	4	0-24L	Q2P70124	95L 98M
4,4'-DDE	mg/kg	0	1.67	1.90	114	65-118L 30-145M	1004-BF-03	0	1.68	2.10	125	48-126L 30-145M	1.68	2.00	119	5	0-25L		
4,4'-DDT	mg/kg	0	1.67	1.90	114	70-128L 25-160M	1004-BF-03	0	1.68	2.11	126	46-140L 25-160M	1.68	2.02	120	5	0-23L		
Aldrin	mg/kg	0	1.67	1.75	105	57-110L 42-122M	1004-BF-03	0	1.68	1.96	117	44-123L 42-122M	1.68	1.85	110	6	0-25L		
Alpha-BHC	mg/kg	0	1.67	1.68	101	56-110L 37-134M	1004-BF-03	0	1.68	1.88	112L	39-111L 37-134M	1.68	1.77	105	6	0-22L		
Beta-BHC	mg/kg	0	1.67	1.70	102	62-111L 17-147M	1004-BF-03	0	1.68	1.86	111	43-133L 17-147M	1.68	1.78	106	5	0-22L		
Chlordane	mg/kg	0	3.33	3.53	106	64-112L 45-119M	1004-BF-03	0	3.36	3.89	116	53-131L 45-119M	3.37	3.70	110	5	0-23L		
Delta-BHC	mg/kg	0	1.67	1.66	99	53-115L 32-137M	1004-BF-03	0	1.68	1.86	111	30-127L 32-137M	1.68	1.75	104	7	0-20L		
Dieldrin	mg/kg	0	1.67	1.83	110	64-119L 36-146M	1004-BF-03	0	1.68	2.00	119	47-131L 36-146M	1.68	1.92	114	4	0-20L		
Endosulfan I	mg/kg	0	1.67	1.73	104	67-112L 45-153M	1004-BF-03	0	1.68	1.91	114	54-131L 45-153M	1.68	1.82	108	5	0-21L		
Endosulfan II	mg/kg	0	1.67	1.62	97	48-117L 1-202M	1004-BF-03	0	1.68	1.80	107	47-126L 1-202M	1.68	1.72	102	5	0-21L		
Endosulfan sulfate	mg/kg	0	1.67	1.70	102	39-119L 26-144M	1004-BF-03	0	1.68	1.91	114	34-114L 26-144M	1.68	1.82	108	5	0-26L		
Endrin	mg/kg	0	1.67	1.92	115	64-118L 30-147M	1004-BF-03	0	1.68	2.10	125L	57-121L 30-147M	1.68	2.00	119	5	0-22L		
Endrin aldehyde	mg/kg	0	1.67	1.46	87	33-110L	1004-BF-03	0	1.68	1.75	104	27-110L	1.68	1.63	97	7	0-28L		

QUALITY ASSURANCE REPORT

Joblink: 622064

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
1,1-Dichloroethene	mg/l	0	.0500	.0461	92	83-112L 1-234M	101SO231EB	0	.0500	.0498	100	80-113L 1-234M	.0500	.0468	94	6	0-15L	Q1V5828	100L 100M
Benzene	mg/l	0	.0500	.0460	92	89-112L 37-151M	101SO231EB	0	.0500	.0505	101	86-115L 37-151M	.0500	.0487	97	4	0-12L		
Chlorobenzene	mg/l	0	.0500	.0454	91	90-110L 37-160M	101SO231EB	0	.0500	.0483	97	86-112L 37-160M	.0500	.0479	96	1	0-11L		
Toluene	mg/l	0	.0500	.0458	92	88-111L 47-150M	101SO231EB	0	.0500	.0489	98	83-115L 47-150M	.0500	.0473	95	3	0-13L		
Trichloroethene	mg/l	0	.0500	.0470	94	85-114L 71-157M	101SO231EB	0	.0500	.0498	100	81-116L 71-157M	.0500	.0481	96	4	0-19L		

QUALITY ASSURANCE REPORT

Joblink: 622064

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
Mercury	mg/kg	0	.250	.264	106	81-114L 75-125M	1004-BF-04	0	.273	.233	85	53-117L 80-120M	.273	.225	82	3	0-26C 0-20M	Q2G9304	100L 100M
Reactive Sulfide	mg/kg	0	1400	488	35	10-100L												Q2I5940	100L
Reactive Cyanide	mg/kg	0	975	60.0	6	1-50 L												Q2I5941	100L
Arsenic	mg/kg	0	202	169	84	83-110L 75-125M	1004-BF-04	6.12	216	180	80	62-110L 80-120M	220	190	84	5	0-17C 0-20M	Q2M9303	96L 94M
Barium	mg/kg	0	201	174	87 L	88-110L 75-125M	1004-BF-04	15.0	215	201	87	60-116L 80-120M	220	209	88	4	0-18C 0-20M		
Cadmium	mg/kg	0	5.02	4.18	83	83-110L 75-125M	1004-BF-04	0	5.36	4.47	83	44-110L 80-120M	5.47	4.58	84	2	0-27C 0-20M		
Chromium	mg/kg	0	20.1	17.2	86	80-110L 75-125M	1004-BF-04	2.68	21.4	20.5	83	40-127L 80-120M	21.9	21.8	87	6	0-26C 0-20M		
Lead	mg/kg	0	50.0	43.3	87	78-111L 75-125M	1004-BF-04	3.20	53.4	45.9	80	44-124L 80-120M	54.5	47.5	81	3	0-32C 0-20M		
Selenium	mg/kg	0	201	168	84	83-110L 75-125M	1004-BF-04	0	215	175	81	61-110L 80-120M	219	182	83	4	0-18C 0-20M		
Silver	mg/kg	0	5.04	4.05	80	68-121L 75-125M	1004-BF-04	0	5.38	3.99	74 M	31-110L 80-120M	5.49	4.87	89	20	0-39C 0-20M		

QUALITY ASSURANCE REPORT

Joblink: 622064

Compound(s)		METHOD SPIKE					MATRIX SPIKE						SPIKE DUPLICATE					% COMPLETE	
		Blank Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Spiked Sample Id.	Unspk Conc.	Added Conc.	Spiked Conc.	% Rec.	Rec. Limits	Added Conc.	Spiked Conc.	% Rec.	RPD	RPD Limit	Batch #	%
Endrin ketone	mg/kg	0	1.67	1.77	106	47-121L	1004-BF-03	0	1.68	1.98	118	41-118L	1.68	1.89	113	4	0-30L		
Gamma-BHC (Lindane)	mg/kg	0	1.67	1.83	110	30-130L 32-127M	1004-BF-03	0	1.68	2.03	121	30-130L 32-127M	1.68	1.92	114	6	0-20L		
Heptachlor	mg/kg	0	1.67	1.70	102	57-110L 34-111M	1004-BF-03	0	1.68	1.88	112M	54-131L 34-111M	1.68	1.78	106	6	0-21L		
Heptachlor epoxide	mg/kg	0	1.67	1.68	101	63-113L 37-142M	1004-BF-03	0	1.68	1.85	110	57-133L 37-142M	1.68	1.75	104	6	0-23L		
Methoxychlor	mg/kg	0	1.67	1.75	105	62-133L	1004-BF-03	0	1.68	1.93	115	53-138L	1.68	1.85	110	4	0-21L		
alpha-Chlordane	mg/kg	0	1.67	1.75	105	67-110L 45-119M	1004-BF-03	0	1.68	1.93	115	54-134L 45-119M	1.68	1.83	109	5	0-24L		
gamma-Chlordane	mg/kg	0	1.67	1.78	107	67-111L 45-119M	1004-BF-03	0	1.68	1.96	117	57-130L 45-119M	1.68	1.87	111	5	0-23L		
Petroleum Hydrocarbons (IR)	mg/kg	1.76	67.7	60.6	87	67-110L	1004-BF-03	1.78	67.5	62.5	90	50-118L	69.0	62.9	89	1	0-33L	Q2T70132	100L
1,1-Dichloroethene	mg/kg	0	.0500	.0491	98	80-113L 1-234M	1004-BF-03	0	.0509	.0519	102	76-119L 1-234M	.0506	.0512	101	1	0-20L	Q2V5827	100L 100M
Benzene	mg/kg	0	.0500	.0476	95	85-113L 37-151M	1004-BF-03	0	.0509	.0508	100	85-117L 37-151M	.0506	.0496	98	2	0-13L		
Chlorobenzene	mg/kg	0	.0500	.0497	99	89-110L 37-160M	1004-BF-03	0	.0509	.0519	102	85-112L 37-160M	.0506	.0497	98	4	0-10L		
Toluene	mg/kg	0	.0500	.0468	94	87-111L 47-150M	1004-BF-03	0	.0509	.0518	102	79-125L 47-150M	.0506	.0451	89	14	0-15L		
Trichloroethene	mg/kg	0	.0500	.0472	94	84-113L 71-157M	1004-BF-03	0	.0509	.0513	101	65-127L 71-157M	.0506	.0490	97	4	0-21L		

Quality Assurance Data
Surrogate Summary Report

QC BATCH: Q2C70131 Solid (Semi-Volatile organics by MS)

SURROGATE ID	A159	B732	A121	A884	A158	B142	B449	F076
SAMPLE ID								
1004-BF-03	51	66	65	58	59	69	57	57
1004-BF-03 MD	62	75	80	64	72	81	68	66
1004-BF-03 MS	55	64	77	59	68	77	58	57
1004-BF-04	57	71	72	64	67	74	65	67
METHOD BLK	57	69	72	66	68	71	65	69
METHOD SPK	62	72	82	65	71	82	66	66
QC LIMITS	(25-121)	(24-113)	(19-122)	(23-120)	(30-115)	(18-137)	(20-130)	(20-130)

QC BATCH: Q2P70124 Solid (Pesticide compounds by GC)

SURROGATE ID	B816	A500	# OUT
SAMPLE ID			
1004-BF-03	120	123	0
1004-BF-03 MD	116	122	0
1004-BF-03 MS	125	126	0
1004-BF-04	116	122	0
METHOD BLK	98	115	0
METHOD SPK	108	116	0
QC LIMITS	(30-130)	(30-130)	

QC BATCH: Q1V5828 Aqueous (Volatile organics by MS)

SURROGATE ID	A047	B185	B668	# OUT
SAMPLE ID				
1004-TB-03	97	90	100	0
101SO231EB MD	96	96	99	0
101SO231EB MS	94	91	94	0
METHOD BLK	96	92	101	0
METHOD SPK	101	98	101	0
QC LIMITS	(76-114)	(88-110)	(86-115)	

QC BATCH: Q2V5827 Solid (Volatile organics by MS)

SURROGATE ID	A047	B185	B668	# OUT
SAMPLE ID				
1004-BF-03	103	90	101	0
1004-BF-03 MD	88	93	101	0
1004-BF-03 MS	94	104	104	0
1004-BF-04	103	90	100	0
METHOD BLK	105	91	104	0
METHOD SPK	99	102	95	0
QC LIMITS	(70-121)	(81-117)	(74-121)	

SURROGATE ID

A047 = 1,2-Dichloroethane-D4
B185 = Toluene-D8
B668 = Bromofluorobenzene
A159 = 2-Fluorophenol
B732 = Phenol-D6
A121 = 2,4,6-Tribromophenol
A884 = Nitrobenzene-D5
A158 = 2-Fluorobiphenyl
B142 = Terphenyl-D14
B816 = 2,4,5,6-Tetrachloro-m-xylene
A500 = Decachlorobiphenyl
B449 = 2-Chlorophenol-D4
F076 = 1,2-Dichlorobenzene-D4

* Values outside of method quality control limits
D Sample was diluted, however, some surrogates may be reported if results were observed.

It is laboratory policy to allow one surrogate per sample fraction (acid, base-neutral or pesticide) to exceed the stated QC limits. This policy is based upon the USEPA SOW for the Contract Laboratory Program (CLP).

QUALITY ASSURANCE REPORT

Joblink: 622064

Compound(s)		SAMPLE DUPLICATE					POST SPIKE						ICP SERIAL DILUTION					
		Sample Id.	Sample Conc.	Dup. Conc.	RPD	RPD Limit	Spiked Sample Id.	Unspk Conc. mg/l	Added Conc. mg/l	Spiked Conc. mg/l	% Rec.	Rec. Limits	Sample Id.	Sample Conc. mg/l	Dil. Conc. mg/l	% Diff	Limit	Batch #
Mercury	mg/kg	1004-BF-04	-2.-03	.00578														Q2G9304
Arsenic	mg/kg	1004-BF-04	6.12	5.53	.59								1004-BF-04	.0561	.0870	100		Q2M9303
Barium	mg/kg	1004-BF-04	15.0	15.3	2	0-20M							1004-BF-04	.138	.170	23 M	0-10M	Q2M9303
Cadmium	mg/kg	1004-BF-04	.0894	.0470									1004-BF-04	8.-04	.00225			Q2M9303
Chromium	mg/kg	1004-BF-04	2.68	2.73	.050	1.1M							1004-BF-04	.0246	.329	1240		Q2M9303
Lead	mg/kg	1004-BF-04	3.20	3.87	.67								1004-BF-04	.0293	-3.-03	100		Q2M9303
Selenium	mg/kg	1004-BF-04	2.41	.169									1004-BF-04	.0221	.125			Q2M9303
Silver	mg/kg	1004-BF-04	.421	-.538									1004-BF-04	.00386	-1.-02			Q2M9303

METHODOLOGY REFERENCES

ASTM	*American Society for Testing and Materials*, 1985, edition.
MCAWW	*Methods for Chemical Analysis of Water and Wastes*, April 1979 and Update #1 March 1983.
CLP	USEPA Contract Laboratory Program, Document #OLMO3.0, update August 1994 #OLMO3.1 and Document #ILMO4.0.
EPA-500	*USEPA Methods for the Determination of Organic Compounds in Drinking Water*, EPA-600/4-88/039 July 1991 and Supplement II (EPA/600/R-92-129) August 1992.
EPA-600	*USEPA Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*, 40CFR, 136, APP.A. July 1992.
NIOSH	*National Institute for Occupational Safety and Health*, 3rd edition, 1984.
SMEWW	*Standard Methods for the Examination of Water and Wastewater*, 18th edition, 1992.
STOA	*Spot Tests In Organic Analysis*, 7th edition, 1966.
SW-846	*Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, 3rd edition, Updates I and II, September 1986 to January 1995.
(1)	This method was modified to incorporate the use of Boron Trifluoride (BF3) as the derivatizing reagent according to Method 6640 in *SMEWW*, 18th edition, 1992.
Title 22	Waste Extraction Test, Title 22, Section 66261.126 Appendix 2 of the California Administrative Code, May 1991.
LUFT	*California Leaking Underground Fuel Tank Field Manual,* October 1989.

SUMMARY OF ANALYTICAL METHODOLOGY

Joblink # 622064

REFERENCE		TITLE
418.1	MCAWW	Petroleum Hydrocarbons, Total Recoverable
6010A	SW-846	Inductively Coupled Plasma Atomic Emmision Spectroscopy
7.3.3.2	SW-846	Test Method to Determine HCN Released from Wastes
7.3.4.2	SW-846	Test Method to Determine HS Released from Wastes
7471A	SW-846	Mercury in Solid Waste (Manual Cold-Vapor Technique)
8080	SW-846	Organochlorine Pesticides and/or PCBs
8260	SW-846	GC/MS for Volatile Organics
8270	SW-846	GC/MS for Semivolatile Organics

LABORATORY CERTIFICATIONS

STATE	AGENCY	NUMBER
Alabama	ADEM	40830
Alaska	AKDEC	N/A
Arizona	AZDOHS	AZ0533
California	CADOH	1178
Colorado	CODOH	OH113
Connecticut	CTDPH & AS	PH-0154
Florida	FLHRS	E87537
Delaware	DEHSS	OH113
Iowa	IADNR	129
Kansas	KSDHE	E-10202
Louisiana	LADOHH	92-10
Maryland	MDDHMH	210
Massachusetts	MADEP	M-OH113
New Hampshire	NHDES	2490
New Jersey	NJDEP	74603
New York	NYDOH	10712
North Carolina	NCDEM	392
Ohio	OHEPA	OH113
Oklahoma	OKDEQ	9216
Pennsylvania	PADER	68-450
Rhode Island	RIDOH	214/142
South Carolina	SCDEHNR	92002
Tennessee	TNDOH/TNDEC	2978
Utah	UTDOH	E-288
Virginia	VADGS	00011
Washington	WADOE	C154
Wisconsin	WIDNR	999037160

Validated by:

- o US Army Corps of Engineers ..... Chemical Analysis in Various Matrices

Approvals:

- o USDA ..... Permit for Importing Soils
- o Florida DEP ..... Quality Assurance Plan #930034
- o Naval Facilities Engineering Service Center ..... Chemical Analysis in Various Matrices

REPORT KEY

%	=	Percent
<	=	Less than
>	=	Greater than
µm/cm	=	MicroMho per centimeter
µg/kg	=	Microgram per kilogram (ppb)
µg/L	=	Microgram per liter (ppb)
µg/SMP	=	Microgram per sample (Tedlar Bag)
µg/smp	=	Microgram per sample
µg/W	=	Microgram per wipe
BTU/lb	=	British Thermal Units per pound
CV	=	Conventionals
Deg. C	=	Degrees Celsius
DRO	=	Diesel Range Organics
EP TOX	=	Extraction Procedure Toxicity
GC	=	Gas Chromatography Instrument
GC/MS	=	Gas Chromatography/Mass Spectrometer Instrument
gm/cc	=	Grams per cubic centimeter
GRO	=	Gasoline Range Organics
IR	=	Infrared Spectrophotometric
J	=	Estimated value due to calculated result < detection limit or result is from GC/MS library search
L	=	Laboratory
M	=	Method
mg/kg	=	Milligram per kilogram (ppm)
mg/L	=	Milligram per liter (ppm)
mg/m^3	=	Milligram per cubic meter
mg/SMP	=	Milligram per sample
mg/W	=	Milligram per wipe
n/a	=	Not applicable
ND	=	Not detected at or above stated detection limit
ng/SMP	=	Nanogram per sample
NVR	=	Not a valid recovery
PCB	=	Polychlorinated Biphenyls (PCBs)
pCi/l	=	Picocurie per liter
ppb	=	Parts per billion
ppm	=	Parts per million
RCRA	=	Resource Conservation and Recovery Act
SOW	=	Statement of Work
std	=	Result is relative to standard pH units
TCLP	=	Toxicity Characteristic Leaching Procedure
Unk	=	Unknown

APPENDIX D

SAMPLE RECEIPT DOCUMENTATION

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Client: USACE NED
Est. Final Proj. Sampling Date:
Work Order #:
Project Contact/Phone #: SAM NAIK
AD Project Manager: TOM ABBELLA
QC: Del: TAT: 24-hr
Date Rec'd: Date Due:
Account #:

	VOA	BNA	Pest/PCB	Herb	SVOCs	Pest/PCBs	TPH-IR	Metal	CN						
Refrigerator #															
#/Type Container – Liquid															
#/Type Container – Solid	2/g				2/8	2/g	2/g	2/8		2/8	2/y				
Volume – Liquid															
Volume – Solid	40ml				500ml	500ml	500ml	500ml		500ml	500ml				
Preservatives	Ice				Ice	Ice	Ice	Ice		Ice	Ice				
ANALYSES REQUESTED →	ORGANIC							INORG							

WESTON Analytics Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	8260				8270	8080	418.1	RCRA		Reac Cy	Reac Sulfide				
	1004-BF-03			S	1/22/97	1100	X				X	X	X	X		X	X	2-500ml 2-40ml			
	1004-BF-04			S	↓	↓	X				X	X	X	X		X	X	1-40ml			
	1004-TB-03			W	↓	↓	X														

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

RUSH 24 hr-TATs

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

WESTON Analytics Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___
Airbill # ___
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
[signature]		1/22/97	1500				
FedEx	[signature]	1-23-97	1035				

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

RFW 21-21-001/A-7/91 ___ L372 ___ L373 ___ L375 ___ L377 ___ L378 Ref# ___ Cooler# ___ 381-596a

ATTACHMENT K
COPIES OF HAZARDOUS WASTE MANIFEST
CERTIFICATES OF WASTE DISPOSAL

GENERAL CHEMICAL CORPORATION
CERTIFICATE OF DISPOSAL

Generator Devens RFTA

Address AFRC - FMD DPW EM Box 19 Devens, MA

Manifest # MAK005847

Removal Date 6/6/97

End Disposal Facility BFI Carbon Limestone

Disposal Method Landfill

Disposal Date 6/16/97, 6/26/97

Outgoing Manifest # MAK05953, MAK06086

Common Name of Waste Spent Carbon

DOT Description Non Regulated Material

Waste Codes MA99

Waste Tracking Dept.