

SHEPLEY'S HILL LANDFILL SUPPLEMENTAL GROUNDWATER AND LANDFILL CAP ASSESSMENT FOR LONG-TERM MONITORING AND MAINTENANCE – ADDENDUM REPORT

SHEPLEY'S HILL LANDFILL

FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MA

AUGUST 2011

BOOK 4 OF 4

Prepared for:
US Army Corp of Engineers
New England District
Concord, Massachusetts

Prepared by:
Sovereign Consulting Inc.
Contract No.: W912WJ-10-D-0003
Delivery Order: 0002



Attachment F, Continued



ANALYTICAL REPORT

Lab Number:

L1012168

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/16/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012168

Report Date:

08/16/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012168-01	SHP-05-046B-U	DEVENS, MA	08/09/10 09:55
L1012168-02	SHP-05-045A-U	DEVENS, MA	08/09/10 11:15
L1012168-03	SHM-05-041B-U	DEVENS, MA	08/09/10 13:05
L1012168-04	GP-10-12-065-F	DEVENS, MA	08/09/10 08:15
L1012168-05	GP-10-13-039-F	DEVENS, MA	08/09/10 14:05
L1012168-06	GP-10-24-015-U	DEVENS, MA	08/09/10 15:21

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012168

Report Date:

08/16/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.), Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the results for the Dissolved Inorganic Carbon analysis only. The results for all other analyses will be issued under separate cover.

Sample Receipt

The DIC container for sample ID "DUP-080910-U" was listed on the Chain of Custody, but not received in the laboratory. The analysis was cancelled at the client's request.

Dissolved Inorganic Carbon

L1012168-01 through -06 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

WG427753-1: A Filter Blank was not provided; therefore, the sample batch is reported with a Method Blank.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

. .

Date: 08/16/10

INORGANICS & MISCELLANEOUS

Project Name:

SHL TASK 0002

Lab Number:

L1012168

08/16/10

Project Number: AC001

Report Date:

SAMPLE RESULTS

Lab ID:

L1012168-01

Client ID: Sample Location:

SHP-05-046B-U DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 09:55

Date Received:

08/09/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	150		mg/l	20	**	20	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012168

Project Number: AC001

Sample Location:

Report Date:

08/16/10

SAMPLE RESULTS

Lab ID:

L1012168-02

Client ID:

SHP-05-045A-U

Matrix:

DEVENS, MA

Date Collected:

08/09/10 11:15

Date Received:

08/09/10

Field Prep:

Not Specified

Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	48		mg/l	8.0		8	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012168

Project Number: AC001

Report Date: 08/16/10

SAMPLE RESULTS

Lab ID:

L1012168-03

Client ID:

SHM-05-041B-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/09/10 13:05

Date Received:

08/09/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	32		mg/l	8.0	-	8	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002 Lab Number:

L1012168

Project Number: AC001

Report Date:

08/16/10

SAMPLE RESULTS

Lab ID:

L1012168-04 GP-10-12-065-F

Date Collected: Date Received: 08/09/10 08:15

Client ID: Sample Location:

DEVENS, MA

08/09/10

Matrix:

Water

Not Specified Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	56		mg/l	8.0	**	8	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012168

Report Date:

08/16/10

SAMPLE RESULTS

Lab ID:

L1012168-05

Client ID:

GP-10-13-039-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 14:05

Date Received:

08/09/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	160		mg/l	20	-	20	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012168

Project Number: AC001

Report Date:

08/16/10

SAMPLE RESULTS

Lab ID:

L1012168-06

Client ID: Sample Location: GP-10-24-015-U DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 15:21

Date Received:

08/09/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	20		mg/l	8.0		8	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002 Lab Number:

L1012168

08/16/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter General Chemistry for sa	Result Qualifier	Units	RL 7753-1	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Inorganic Carbon	ND	mg/l	1.0	_	1	08/10/10 00:45	08/16/10 07:30	30,5310C(M)	DW

Lab Control Sample Analysis
Batch Quality Control

SHL TASK 0002 Batch Quality Cont

Lab Number:

L1012168

Report Date:

08/16/10

	LCS		LCSD		%Recovery			
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	RPD Limits

Associated sample(s): 01-06 Batch: WG427753-2

AC001

Dissolved Inorganic Carbon

Project Name:

Project Number:

97

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012168

Report Date:

08/16/10

Parameter	Nat	ive Sample	Duplic	ate Sampl	e Units	RPD	Qual	RPD Limits
Associated sample(s): 01-06	QC Batch ID: WG427753-3	QC Sample:	L1012168-01	Client ID:	SHP-05-046B-U			
Dissolved Inorganic Carbon		150		150	mg/l	0		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Lab Number: L1012168 Project Number: AC001 Report Date: 08/16/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В

Present/Intact

A

Present/Intact

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012168-01A	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-01B	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-01X	Amber 250ml unpreserved	В	6	4	Y	Present/Intact	SPECWC()
L1012168-02A	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-02B	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-02X	Amber 250ml unpreserved	В	6	4	Y	Present/Intact	SPECWC()
L1012168-03A	Vial H2SO4 preserved split	Α	N/A	3	Y	Present/Intact	SPECWC()
L1012168-03B	Vial H2SO4 preserved split	Α	N/A	3	Y	Present/Intact	SPECWC()
L1012168-03X	Amber 250ml unpreserved	Α	6	3	Y	Present/Intact	SPECWC()
L1012168-04A	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-04B	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-04X	Amber 250ml unpreserved	В	6	4	Y	Present/Intact	SPECWC()
L1012168-05A	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-05B	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012168-05X	Amber 250ml unpreserved	В	6	4	Y	Present/Intact	SPECWC()
L1012168-06A	Vial H2SO4 preserved split	Α	N/A	3	Y	Present/Intact	SPECWC()
L1012168-06B	Vial H2SO4 preserved split	Α	N/A	3	Υ	Present/Intact	SPECWC()
L1012168-06X	Amber 250ml unpreserved	Α	6	3	Υ	Present/Intact	SPECWC()
L1012168-06B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()

Project Name: SHL TASK 0002 Lab Number: L1012168
Project Number: AC001 Report Date: 08/16/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

 Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable.

NC. -Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The eodes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria: however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis.

Report Format: Data Usability Report



 Project Name:
 SHL TASK 0002
 Lab Number:
 L1012168

 Project Number:
 AC001
 Report Date:
 08/16/10

Data Qualifiers

RE Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

SHL TASK 0002

Lab Number:

L1012168

Project Number:

AC001

Report Date:

08/16/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate, Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180 1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500NH3-B, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307, NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-06-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ QQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B, Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters; MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited*. *Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2 D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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ANALYTICAL REPORT

Lab Number:

L1012243

Client:

Sovereign Consulting

905B South Main Street

Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/03/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012243-01	GP-10-24-025-F	DEVENS, MA	08/09/10 16:01
L1012243-02	GP-10-24-025-U	DEVENS, MA	08/09/10 16:01
L1012243-03	GP-10-24-035-F	DEVENS, MA	08/09/10 16:33
L1012243-04	GP-10-24-035-U	DEVENS, MA	08/09/10 16:33
L1012243-05	GP-10-24-045-F	DEVENS, MA	08/09/10 17:12
L1012243-06	GP-10-24-045-U	DEVENS, MA	08/09/10 17:12
L1012243-07	GP-10-24-055-F	DEVENS, MA	08/09/10 17:58
L1012243-08	GP-10-24-055-U	DEVENS, MA	08/09/10 17:58
L1012243-09	GP-10-25-025-F	DEVENS, MA	08/10/10 09:32
L1012243-10	GP-10-25-025-U	DEVENS, MA	08/10/10 09:32
L1012243-11	GP-10-25-035-F	DEVENS, MA	08/10/10 10:19
L1012243-12	GP-10-25-035-U	DEVENS, MA	08/10/10 10:19
L1012243-13	GP-10-25-045-F	DEVENS, MA	08/10/10 11:06
L1012243-14	GP-10-25-045-U	DEVENS, MA	08/10/10 11:06
L1012243-15	GP-10-13-049-F	DEVENS, MA	08/09/10 16:05
L1012243-16	GP-10-13-059-F	DEVENS, MA	08/10/10 08:30
L1012243-17	GP-10-13-059-U	DEVENS, MA	08/10/10 08:30
L1012243-18	GP-10-13-069-F	DEVENS, MA	08/10/10 10:50
L1012243-19	GP-10-13-079-F	DEVENS, MA	08/10/10 12:15
L1012243-20	RB2-081010-U	DEVENS, MA	08/10/10 13:30
L1012243-21	RB-081010-U	DEVENS, MA	08/10/10 10:15
L1012243-22	DUP-081010-F	DEVENS, MA	08/10/10 10:19
L1012243-23	DUP-081010-U	DEVENS, MA	08/10/10 10:19
L1012243-24	DUP2-081010-F	DEVENS, MA	08/10/10 11:06
L1012243-25	DUP2-081010-U	DEVENS, MA	08/10/10 11:06
L1012243-26	GP-10-22-011-F	DEVENS, MA	08/10/10 13:43
L1012243-27	GP-10-22-011-U	DEVENS, MA	08/10/10 13:43
L1012243-28	GP-10-22-021-F	DEVENS, MA	08/10/10 14:28
L1012243-29	GP-10-22-021-U	DEVENS, MA	08/10/10 14:28
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SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

The Dissolved Inorganic Carbon results will be issued under separate cover.

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

The samples were received at the laboratory requiring filtration for Dissolved Organic Carbon; however, samples L1012243-02, -04, -06, -08 and -15 were received beyond the recommended 24 hour holding time required for filtration. The samples were filtered and preserved appropriately.

SHL TASK 0002

Project Number: AC

AC001

Lab Number:

L1012243

Report Date:

09/03/10

Case Narrative (continued)

Dissolved Metals

L1012243-03, -05, -07, -11 and -13 have elevated detection limits for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved. L1012243-15, -18, -22 and -24 have elevated detection limits for all analytes, except Mercury, due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

The WG427204-4/-5 MS/MSD recoveries, performed on L1012243-09, are above the acceptance criteria for Calcium (122%/125%) and Iron (123%/124%). A post digestion spike was performed with acceptable recoveries of Calcium (96%) and Iron (101%). The parent sample (L1012243-09) result for Iron is qualified with a "J". Calcium is a non-target analyte on the parent sample; therefore, no qualification of the result is required. The WG427204-4/-5 MS/MSD recoveries for Sodium (149%/149%), performed on L1012243-09, are invalid because the sample concentration is greater than four times the spike amount added.

The WG429637-3 MS recovery, performed on L1012243-15, is below the acceptance criteria for Mercury (76%); however, the associated LCS recovery was within criteria. No further action was taken. The parent sample (L1012243-15) result should be qualified with a "UJ". In addition, the associated MS/MSD RPD is above the acceptance criteria for Mercury (29%).

Total Metals

L1012243-04, -06, -08, -12, -14, -23 and -25 have elevated detection limits for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

The WG427203-4/-5 MS/MSD recoveries for Aluminum (210%/70%), Iron (400%/0%), and Sodium (148%/78%), performed on L1012243-10, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG427203-4 MS recovery, performed on L1012243-10, is above the acceptance criteria for Calcium (141%). A post digestion spike was performed with an acceptable recovery of 84%. Calcium is a non-target analyte on the parent sample (L1012243-10); therefore, no qualification of the result is required.

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

Case Narrative (continued)

Dissolved Organic Carbon

L1012243-06 has an elevated detection limit due to the dilution required by the sample matrix.

The WG427583-4 Laboratory Duplicate RPD (42%), performed on L1012243-04, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

Solids, Total Suspended

L1012243-10 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

L1012243-12 has an elevated detection limit due to the dilution required by the sample matrix.

Nitrogen, Nitrate

L1012243-15 was analyzed with the method required holding time exceeded due to instrument failure.

Chloride

L1012243-19 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 09/03/10

METALS

Project Name:

SHL TASK 0002

L1012243-01

GP-10-24-025-F

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

Lab ID: Client ID:

SAMPLE RESULTS

Date Collected:

08/09/10 16:01

Sample Location: DEVENS, MA Date Received: Field Prep:

08/10/10 See Narrative

Matrix:

Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	0.39	J	ug/i	0.500	0.113	1	08/11/10 16:10	0 08/17/10 05:11	EPA 3005A	1,6020A	ВМ
Iron Dissolved	1180		uo/l	50.0	8 41	1	08/11/10 16:1	0.08/17/10.05:11	FPA 3005A	1.6020A	BM

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

Sample Location:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-02

Client ID:

GP-10-24-025-U DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:01

Date Received:

08/10/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough l	_ab									.0
Arsenic, Total	1.61		ug/l	0.500	0.113	1	08/11/10 18:5	0 08/17/10 07:31	EPA 3005A	1,6020A	ВМ
Iron, Total	2260		ug/l	50.0	8.41	1	08/11/10 18:5	0 08/17/10 07:31	EPA 3005A	1,6020A	вм

 Project Name:
 SHL TASK 0002
 Lab Number:
 L1012243

 Project Number:
 AC001
 Report Date:
 09/03/10

SAMPLE RESULTS

Lab ID: L1012243-03 Date Collected: 08/09/10 16:33
Client ID: GP-10-24-035-F Date Received: 08/10/10
Sample Location: DEVENS, MA Field Prep: See Narrative
Matrix: Water

Analytical Method Dilution Date Date Prep Factor Prepared Analyzed Method **Parameter** Result Qualifier Units RL MDL Analyst Dissolved Metals - Westborough Lab 1,6020A ВМ Arsenic, Dissolved 0.89 2.00 0.452 4 08/11/10 16:10 08/17/10 05:17 EPA 3005A ug/l 2630 1,6020A Iron, Dissolved 200 33.6 4 08/11/10 16:10 08/17/10 05:17 EPA 3005A ВМ ug/l

Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-04 GP-10-24-035-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:33

Date Received:

08/10/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	stborough L	_ab									
Arsenic, Total	5.03		ug/l	2.00	0.452	4	08/11/10 18:5	0 08/17/10 07:37	EPA 3005A	1,6020A	вм
Iron, Total	5550		ug/l	200	33.6	4	08/11/10 18:5	0 08/17/10 07:37	EPA 3005A	1,6020A	ВМ

Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-05 GP-10-24-045-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 17:12

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	310		ug/i	5.00	1.13	10	08/11/10 16:1	0 08/17/10 05:24	EPA 3005A	1,6020A	вм
Iron, Dissolved	100000		ug/l	500	84.1	10	08/11/10 16:1	0 08/17/10 05:24	EPA 3005A	1,6020A	вм

Project Name: SHL

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-06

Client ID: Sample Location: GP-10-24-045-U DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 17:12

Date Received:

08/10/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	303		ug/l	5.00	1.13	10	08/11/10 18:5	0 08/17/10 07:43	EPA 3005A	1,6020A	ВМ
Iron, Total	99000		ug/l	500	84.1	10	08/11/10 18:5	0 08/17/10 07:43	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-07

Client ID:

GP-10-24-055-F

Sample Location: Matrix: DEVENS, MA

Water

Date Collected:

08/09/10 17:58

Date Received:

08/10/10

Field Prep:

See Narrative

Analytical Dilution Date Date Prep Method Factor Prepared Analyzed Method Units Analyst Qualifier RL MDL **Parameter** Result Dissolved Metals - Westborough Lab Arsenic, Dissolved 615 5.00 1.13 10 08/11/10 16:10 08/17/10 05:30 EPA 3005A 1,6020A BM ug/l Iron, Dissolved 81500 500 84.1 10 08/11/10 16:10 08/17/10 05:30 EPA 3005A 1,6020A BM ug/l

Project Name:

SHL TASK 0002

Project Number: AC

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-08

Client ID: Sample Location: GP-10-24-055-U DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 17:58

Date Received:

08/10/10

Field Prep:

Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
stborough L	_ab										
629		ug/l	5.00	1.13	10	08/11/10 18:50	0 08/17/10 07:49	EPA 3005A	1,6020A	вм	
91100		ug/l	500	84.1	10	08/11/10 18:5	0 08/17/10 07:49	EPA 3005A	1,6020A	вм	
	stborough L	stborough Lab 629	stborough Lab 629 ug/l	stborough Lab 629 ug/l 5.00	stborough Lab 629 ug/l 5.00 1.13	Result Qualifier Units RL MDL Factor stborough Lab 629 ug/l 5.00 1.13 10	Result Qualifier Units RL MDL Factor Prepared stborough Lab 629 ug/l 5.00 1.13 10 08/11/10 18:5	Result Qualifier Units RL MDL Factor Prepared Analyzed stborough Lab 629 ug/l 5.00 1.13 10 08/11/10 18:50 08/17/10 07:49	Result Qualifier Units RL MDL Factor Prepared Analyzed Method stborough Lab 629 ug/l 5.00 1.13 10 08/11/10 18:50 08/17/10 07:49 EPA 3005A	Result Qualifier Units RL MDL Factor Prepared Analyzed Method stborough Lab 629 ug/l 5.00 1.13 10 08/11/10 18:50 08/17/10 07:49 EPA 3005A 1,6020A	Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method Analyst stborough Lab 629 ug/l 5.00 1.13 10 08/11/10 18:50 08/17/10 07:49 EPA 3005A 1,6020A BM

Project Name: SHL TASK 0002

Project Number: AC001

Report Date:

Lab Number:

L1012243 09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-09

Client ID:

GP-10-25-025-F

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/10/10 09:32

Date Received: Field Prep:

08/10/10

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	0.4	J	ug/l	0.500	0.113	1	08/11/10 16:10	0 08/17/10 05:54	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	1770	J	ug/l	50.0	8.41	1	08/11/10 16:10	0 08/17/10 05:54	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-10

Client ID:

GP-10-25-025-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 09:32

Date Received:

08/10/10

Field Prep:

Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
estborough l	_ab									
44.0		ug/l	0.500	0.113	1	08/11/10 18:5	0 08/17/10 08:14	EPA 3005A	1,6020A	вм
35700		ug/I	50.0	8.41	1	08/11/10 18:5	0 08/17/10 08:14	EPA 3005A	1,6020A	вм
	estborough l 44.0	estborough Lab 44.0	estborough Lab 44.0 ug/l	estborough Lab 44.0 ug/l 0.500	estborough Lab 44.0 ug/l 0.500 0.113	Result Qualifier Units RL MOL Factor estborough Lab 44.0 ug/l 0.500 0.113 1	Result Qualifier Units RL MDL Factor Prepared estborough Lab 44.0 ug/l 0.500 0.113 1 08/11/10 18:5	Result Qualifier Units RL MDL Factor Prepared Analyzed estborough Lab 44.0 ug/l 0.500 0.113 1 08/11/10 18:50 08/17/10 08:14	Result Qualifier Units RL MDL Factor Prepared Analyzed Method estborough Lab 44.0 ug/l 0.500 0.113 1 08/11/10 18:50 08/17/10 08:14 EPA 3005A	Result Qualifier Units RL MDL Factor Prepared Analyzed Method Method estborough Lab 44.0 ug/l 0.500 0.113 1 08/11/10 18:50 08/17/10 08:14 EPA 3005A 1,6020A

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-11

Client ID:

GP-10-25-035-F

Sample Location: Matrix:

Sodium, Dissolved

DEVENS, MA

Water

186000

ug/l

200

36.4

Date Collected:

08/11/10 16:10 08/17/10 06:18 EPA 3005A

08/10/10 10:19

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	18.7	J	ug/I	20,0	3.82	2	08/11/10 16:10	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	0.58	J	ug/l	1.00	0.226	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	вм
Calcium, Dissolved	18600		ug/I	200	25.3	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	1.08		ug/I	1.00	0.372	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	вм
Iron, Dissolved	2250		ug/I	100	16.8	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.15	J	ug/l	1.00	0.100	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	2200		ug/l	200	8.20	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	618		ug/l	2.00	0.272	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	вм
Nickel, Dissolved	6.42		ug/I	1.00	0.360	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	5240		ug/l	200	36.3	2	08/11/10 16:1	0 08/17/10 06:18	EPA 3005A	1,6020A	вм

1,6020A

ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-12

Client ID:

GP-10-25-035-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 10:19

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst	
Total Metals - Wes	tborough L	_ab										
Aluminum, Total	4660		ug/l	20.0	3.82	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Arsenic, Total	10.9		ug/l	1.00	0.226	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	вм	
Calcium, Total	20100		ug/l	200	25.3	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	вм	
Chromium, Total	74.3		ug/l	1.00	0,372	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	вм	
Iron, Total	15600		ug/l	100	16.8	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Lead, Total	25.5		ug/I	1.00	0.100	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	вм	
Magnesium, Total	3420		ug/l	200	8.20	2	08/11/10 18:50	0 08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Manganese, Total	801		ug/l	2.00	0.272	2	08/11/10 18:5	0 08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Nickel, Total	28.2		ug/l	1.00	0.360	2	08/11/10 18:5	0 08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Potassium, Total	6650		ug/l	200	36.3	2	08/11/10 18:5	0 08/17/10 08:38	EPA 3005A	1,6020A	ВМ	
Sodium, Total	198000		ug/l	200	36.4	2	08/11/10 18:5	0 08/17/10 08:38	EPA 3005A	1,6020A	вм	

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-13

Client ID:

GP-10-25-045-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - W	/estboro	ugh Lab									
Aluminum, Dissolved	11,3	J	ug/l	40.0	7.64	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	35.1		ug/l	2.00	0.452	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	43600		ug/l	400	50.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.78	J	ug/l	2.00	0.744	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	71000		ug/I	200	33.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	5170		ug/l	400	16.4	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	4550		ug/l	4.00	0.544	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	вм
Nickel, Dissolved	9.54		ug/l	2.00	0.720	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	7120		ug/l	400	72.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	вм
Sodium, Dissolved	51900		ug/I	400	72.8	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-14

Client ID:

GP-10-25-045-U

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

	F	11	е	ŀ

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - West	borough L	_ab									
Aluminum, Total	2060		ug/l	40.0	7.64	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	ВМ
Arsenic, Total	37.3		ug/l	2.00	0.452	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм
Calcium, Total	42800		ug/l	400	50.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм
Chromium, Total	55.0		ug/l	2.00	0.744	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	ВМ
Iron, Total	76700		ug/I	200	33.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	ВМ
Lead, Total	13,8		ug/l	2.00	0.200	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	ВМ
Magnesium, Total	5530		ug/l	400	16.4	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм
Manganese, Total	4540		ug/I	4.00	0.544	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	ВМ
Nickel, Total	23.5		ug/l	2.00	0.720	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм
Potassium, Total	7680		ug/l	400	72.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм
Sodium, Total	52500		ug/l	400	72.8	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-15

Sample Location:

GP-10-13-049-F DEVENS, MA

Matrix:

Water

12.9

Date Collected:

08/09/10 16:05

Date Received: Field Prep:

08/10/10 See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Aluminum, Dissolved	12.5	J	ug/l	50.0	9.56	5	08/11/10 16:10	0 08/17/10 06:30	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.81	J	ug/I	2.50	0.600	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	12.2		ug/l	2.50	0.565	5	08/11/10 16:10	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	98.6		ug/l	2.50	0.475	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	2.50	0.295	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	2.50	0.295	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	103000		ug/l	500	63.3	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	2.66		ug/l	2.50	0.930	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	6.98		ug/I	2.50	0.265	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	2.62		ug/l	2.50	0.590	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	7840		ug/l	250	42.0	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.54	J.	ug/l	2 50	0.250	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	19200		ug/l	500	20.5	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	6700		ug/l	5.00	0 680	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 11:11	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	6.88		ug/l	2.50	0.900	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	19200		ug/l	500	90.8	5	08/11/10 16:1	0 08/17/10 06;30	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	5,00	2.03	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	2.50	0.425	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	51600		ug/l	500	91.0	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND		ug/l	2.50	0.155	5 *	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	2.50	0.385	5	08/11/10 16:1	0 08/17/10 06:30	EPA 3005A	1,6020A	вм

25.0

ug/l

8.12

5

08/11/10 16:10 08/17/10 06:30 EPA 3005A

1,6020A

BM

Zinc, Dissolved

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

Lab ID:

Client ID:

L1012243-16

Date Collected:

08/10/10 08:30

Sample Location:

GP-10-13-059-F DEVENS, MA

Date Received: Field Prep:

08/11/10 16:10 08/17/10 06:36 EPA 3005A

08/10/10 See Narrative

Matrix:

Water

	110,200,200										
Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	8.44	J	ug/l	10.0	1.91	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.19	J	ug/l	0.500	0.120	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	102		ug/I	0.500	0.113	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Barium, Dissolved	244		ug/l	0.500	0.095	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/I	0.500	0.059	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	84000		ug/l	100	12.6	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Chromium, Dissolved	1.55		ug/l	0.500	0.186	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	0.790		ug/I	0.500	0.053	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.38	J	ug/l	0.500	0.118	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Iron, Dissolved	74500		ug/l	50.0	8.41	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	14100		ug/l	100	4.10	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	BN
Manganese Dissolved	592		ug/l	1.00	0 136	i	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 11:16	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	4.75		ug/l	0.500	0.180	4	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Potassium, Dissolved	17400		ug/l	100	18.2	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Selenium, Dissolved	0.57	J	ug/l	1.00	0.406	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Sodium, Dissolved	. 24600		ug/l	100	18.2	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND.		.ug/l	0,500	0.031	. 1.	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	0.34	J	ug/l	0.500	0.077	1	08/11/10 16:1	0 08/17/10 06:36	EPA 3005A	1,6020A	ВМ

SAMPLE RESULTS

1,6020A

BM

Zinc, Dissolved

1.98

ug/l

5.00

1.62

Project Name: Project Number: SHL TASK 0002

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-17

Client ID:

GP-10-13-059-U

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/10/10 08:30

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	_ab									
Aluminum, Total	16000		ug/l	10.0	1.91	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Arsenic, Total	120		ug/l	0.500	0.113	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Calcium, Total	80700		ug/l	100	12.6	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Chromium, Total	48.4		ug/l	0.500	0.186	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	вм
Iron, Total	87100		ug/l	50.0	8.41	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Lead, Total	17.0		ug/l	0.500	0.050	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Magnesium, Total	16400		ug/l	100	4.10	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Manganese, Total	682		ug/l	1.00	0.136	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Nickel, Total	35.4		ug/l	0.500	0.180	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Potassium, Total	18400		ug/l	100	18.2	1	08/11/10 18:50	0 08/17/10 08:50	EPA 3005A	1,6020A	ВМ
Sodium Total	26900		ua/l	100	18.2	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1.6020A	BM

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-18

Client ID:

GP-10-13-069-F

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/10/10 10:50

Date Received:

08/10/10

Fiel

te neceived.	06/10/10
ld Prep:	See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - W	/estboro	ugh Lab									
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	1060		ug/l	5 00	1.13	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Barium, Dissolved	68,3		ug/l	5.00	0.950	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	56700		ug/l	1000	126	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	10.5		ug/I	5.00	0.530	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	79800		ug/l	500	84 1	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	ND		ug/l	5.00	0 500	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	7960		ug/I	1000	41.0	10	08/11/10 16:11	0 08/17/10 06:42	EPA 3005A	1,6020A	BN
Manganese Dissolved	3630		ug/l	100	1.36	10	08/11/10 16:11	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	0 08/27/10 11:18	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	9.15		ug/l	5.00	1.80	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	9000		ug/l	1000	182.	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	5 00	0.850	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Sodium, Dissolved	13900		ug/l	1000	182.	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1,6020A	вм
Thallium, Dissolved.	ND .		ug/l	5,00.	0.310	-10	.08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	, 1,6020A	вм
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	вм
Zinc, Dissolved	26.6	J	ug/l	50.0	16.2	10	08/11/10 16:10	0 08/17/10 06:42	EPA 3005A	1,6020A	ВМ

Project Name: SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-19

Client ID:

GP-10-13-079-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 12:15

Date Received:

08/10/10

Field Prep:

08/11/10 16:10 08/17/10 07:01 EPA 3005A

08/11/10 16:10 08/17/10 07:01 EPA 3005A

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	5.88	J	ug/l	10.0	1.91	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	0.16	J	ug/l	0.500	0.120	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	123		ug/I	0.500	0.113	1	08/11/10 16:10	0 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	12.9		ug/l	0.500	0.095	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	вм

Antimony, Dissolved	0.16	J	ug/l	0.500	0.120	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	123		ug/l	0.500	0.113	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Barium, Dissolved	12.9		ug/l	0.500	0.095	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	10	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0,500	0.059	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Calcium, Dissolved	32300		ug/l	100	12.6	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.26	J	ug/l	0.500	0.186	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	1.43		ug/l	0.500	0.053	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.980		ug/l	0.500	0.118	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Iron, Dissolved	5580		ug/l	50.0	8.41	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Lead, Dissolved	0.12	J	ug/l	0.500	0.050	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	3850		ug/l	100	4.10	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	218		ug/l	1.00	0.136	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/I	0.2000	0.0120	1	08/26/10 14:20 08/27/10 11:20	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	4.42		ug/l	0.500	0.180	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	вм
Potassium, Dissolved	4700		ug/l	100	18.2	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	35900		ug/l	100	18.2	1	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND.	~	ug/l	0.500	0.031	1 -	08/11/10 16:10 08/17/10 07:01	EPA 3005A	1,6020A	ВМ

1,6020A

1,6020A

BM

BM

Vanadium, Dissolved

Zinc, Dissolved

0.14

7.59

ug/l

ug/l

0.500

5.00

0.077

1.62

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

Lab ID:

L1012243-20

Client ID:

RB2-081010-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 13:30

Date Received:

08/10/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough l	_ab									
Aluminum, Total	2.52	J	ug/l	10.0	1.91	1	08/11/10 18:50	0 08/27/10 23:59	EPA 3005A	1,6020A	ВМ
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/11/10 18:50	0 08/27/10 23:59	EPA 3005A	1,6020A	вм
Calcium, Total	ND		ug/l	100	12.6	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.24	J	ug/l	0.500	0.186	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	вм
Iron, Total	12.3	J	ug/l	50.0	8.41	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	вм
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	ВМ
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	ВМ
Manganese, Total	ND		ug/l	1.00	0 136	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	ВМ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	вм
Potassium, Total	ND		ug/l	100	18.2	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1,6020A	вм
Sodium Total	ND		ua/l	100	18.2	1	08/11/10 18:5	0 08/27/10 23:59	EPA 3005A	1.6020A	BM

SAMPLE RESULTS

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-21

Client ID: Sample Location: RB-081010-U DEVENS, MA

Matrix:

Water

Date Collected:

Date Received:

08/10/10 10:15

Field Prep:

08/10/10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	3.04	J	ug/l	10.0	1.91	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ
Arsenic, Total	ND		ug/I	0.500	0.113	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	вм
Calcium, Total	25.5	·Ú	ug/l	100	12.6	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	вм
Chromium, Total	0.33	J	ug/l	0.500	0.186	*	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	вм
Iron, Total	19.1	J	ug/l	50.0	8.41	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	вм
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	вм
Manganese, Total	0.15	J	ug/l	1.00	0.136	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ
Nickel, Total	ND		ug/I	0,500	0.180	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ
Potassium, Total	ND		ug/l	100	18.2	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ
Sodium, Total	34.2	J	ug/l	100	18.2	1	08/11/10 18:50	0 08/17/10 09:02	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number: AC001

....

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-22

Client ID: Sample Location: DUP-081010-F DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 10:19

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	6.72	J	ug/l	20.0	3.82	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	1.00	0.240	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	1.18		ug/l	1.00	0.226	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Barium, Dissolved	38.8		ug/l	1.00	0.190	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	1.00	0.118	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/I	1.00	0.118	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Calcium, Dissolved	19400		ug/l	200	25.3	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.94	J	ug/l	1.00	0.372	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	1.15		ug/l	1.00	0.106	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	0.72	J	ug/l	1.00	0.236	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	2320		ug/l	100	16.8	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	1_00	0.100	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	2280		ug/I	200	8.20	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	BM
Manganese, Dissolved	658		ug/l	2 00	0.272	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/I	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 11:21	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	6.51		ug/l	1.00	0.360	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Potassium, Dissolved	5590		ug/l	200	36.3	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	2.00	0.812	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	1.00	0.170	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Sodium, Dissolyed	202000		ug/l	200	36.4	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Thallium, Dissolved	0.11	J	ug/l	1.00	0.062	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/I	1.00	0.154	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	вм
Zinc, Dissolved	15.7		ug/l	10.0	3.25	2	08/11/10 16:1	0 08/17/10 07:07	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-23

Client ID:

DUP-081010-U DEVENS, MA

Sample Location: Matrix:

Sodium, Total

Water

196000

Date Collected:

Date Received:

08/10/10 10:19 08/10/10

Field

None

1	Prep:		

08/11/10 18:50 08/17/10 09:08 EPA 3005A

						Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	4580		ug/l	20.0	3.82	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм
Arsenic, Total	10.9		ug/l	1.00	0.226	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм
Calcium, Total	19500		ug/l	200	25.3	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	ВМ
Chromium, Total	74.1		ug/l	1.00	0.372	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	ВМ
Iron, Total	15300		ug/l	100	16.8	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм
Lead, Total	25.7		ug/l	1.00	0.100	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм
Magnesium, Total	3350		ug/l	200	8.20	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	ВМ
Manganese, Total	772		ug/I	2.00	0.272	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	ВМ
Nickel, Total	27.4		ug/l	1.00	0.360	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм
Potassium, Total	6500		ug/l	200	36.3	2	08/11/10 18:5	0 08/17/10 09:08	EPA 3005A	1,6020A	вм

36.4

200

ug/l

1,6020A

вм

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

Lab ID: Client ID: L1012243-24 DUP2-081010-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	9.92	J	ug/I	40.0	7.64	4	08/11/10 16:10	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Antimony, Dissolved	ND		ug/I	2.00	0.480	4	08/11/10 16:10	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	34.9		ug/l	2.00	0.452	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Barium, Dissolved	51.9		ug/I	2.00	0.380	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Calcium, Dissolved	42800		ug/l	400	50.6	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	45.2		ug/l	2.00	0.212	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	ND		ug/l	2,00	0.472	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	69000		ug/l	200	33.6	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	5070		ug/l	400	16.4	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	BN₁
Manganese Dissolved	4430		ug/l	4 00	0.544	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1 6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 11:23	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	9.69		ug/l	2.00	0.720	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Potassium, Dissolved	7040		ug/l	400	72.6	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Sodium, Dissolved	52600		ug/l	400	72.8	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм
Thallium, Dissolved	0.21	" J	ug/l	2.00 ,	0.124	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	35.9		ug/l	20.0	6.50	4	08/11/10 16:1	0 08/17/10 07:13	EPA 3005A	1,6020A	вм

SAMPLE RESULTS

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-25

Sample Location:

DUP2-081010-U DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	ab									
Aluminum, Total	2300		ug/l	40.0	7.64	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	ВМ
Arsenic, Total	38.0		ug/I	2.00	0.452	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Calcium, Total	41800		ug/l	400	50.6	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Chromium, Total	57.4		ug/l	2.00	0.744	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Iron, Total	76700		ug/l	200	33.6	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	ВМ
Lead, Total	12.5		ug/l	2.00	0.200	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	ВМ
Magnesium, Total	5510		ug/l	400	16.4	4	08/11/10 18:5	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Manganese, Total	4460		ug/l	4.00	0.544	4	08/11/10 18:5	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Nickel, Total	24.5		ug/l	2.00	0.720	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	вм
Potassium, Total	7790		ug/l	400	72.6	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	ВМ
Sodium, Total	50700		ug/l	400	72.8	4	08/11/10 18:50	0 08/17/10 09:26	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-26

Client ID: Sample Location:

GP-10-22-011-F DEVENS, MA

ug/l

50.0

Matrix:

Iron, Dissolved

Water

753

Date Collected:

08/10/10 13:43

Date Received:

08/11/10 16:10 08/17/10 07:19 EPA 3005A

08/10/10

Field Prep:

See Narrative

1,6020A

BM

Dilution Date Date Prep **Analytical** Method Method Analyzed Factor Units MDL Prepared Parameter Result Qualifier RL Analyst Dissolved Metals - Westborough Lab Arsenic, Dissolved 0.37 ug/l 0.500 0.113 08/11/10 16:10 08/17/10 07:19 EPA 3005A 1,6020A BM

8.41

Project Name: Project Number: SHL TASK 0002

AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-27

Client ID:

GP-10-22-011-U

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

Date Received:

08/10/10 13:43 08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	0.510		ug/l	0.500	0.113	1	08/11/10 18:5	0 08/17/10 09:33	EPA 3005A	1,6020A	ВМ
Iron Total	844		ug/I	50.0	841	1	08/11/10 18:5	0.08/17/10.09:33	FPA 3005A	1.6020A	BM

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-28

Client ID:

GP-10-22-021-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 14:28

Date Received:

08/10/10

Field Prep:

See Narrative

Analytical Dilution Prep Date Date Factor Prepared Analyzed Method Method **Parameter** Result Qualifier Units MDL RL **Analyst** Dissolved Metals - Westborough Lab 1,6020A Arsenic, Dissolved 0.510 0.500 0.113 08/11/10 16:10 08/17/10 07:25 EPA 3005A ВМ ug/l 1120 08/11/10 16:10 08/17/10 07:25 EPA 3005A 1.6020A Iron, Dissolved 50.0 8.41 ВМ ug/l

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-29

Client ID:

GP-10-22-021-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 14:28

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	1.71		ug/l	0.500	0.113	1	08/11/10 18:5	0 08/17/10 09:39	EPA 3005A	1,6020A	ВМ
Iron, Total	2310		ug/l	50.0	8.41	1	08/11/10 18:5	0 08/17/10 09:39	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012243 09/03/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter	Resul	t Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough	Lab f	or sample(s):	02,04	06,08,10	,12,14,	17,20-21,2	3,25,27,2 Bat	ch: WG4272	03-1	
Aluminum, Total	3.54	J	ug/l	10.0	1.91	1	08/11/10 18:50	08/17/10 03:28	3 1,6020A	ВМ
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 03:28	1,6020A	вм
Calcium, Total	ND		ug/l	100	12.6	1	08/11/10 18:50	08/17/10 03:28	1,6020A	вм
Chromium, Total	ND		ug/l	0 500	0.186	1	08/11/10 18:50	08/17/10 03:28	1,6020A	вм
Iron, Total	17	a J	ug/l	50,0	8.41	1	08/11/10 18:50	08/17/10 03:28	8 1,6020A	ВМ
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:50	08/17/10 03:20	8 1,6020A	вм
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:50	08/17/10 03:28	8 1,6020A	вм
Manganese, Total	ND		ug/l	1.00	0.136	1	08/11/10 18:50	08/17/10 03:28	8 1,6020A	вм
Nickel, Total	ND		ug/l	0.500	0.180	1	08/11/10 18:50	08/17/10 03:28	8 1,6020A	вм
Potassium, Total	21.4	J	ug/l	100	18.2	1	08/11/10 18:50	08/17/10 03:2	8 1,6020A	вм
Sodium, Total	36.5	J	ug/l	100	18.2	1	08/11/10 18:50	08/17/10 03:2	8 1,6020A	вм

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifie	r Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westbo	orough Lab for sa	mple(s): 01	,03,05,0	7,09,1	1,13,15-16	,18-19,22,24,2	Batch: WG	427204-1	
Aluminum, Dissolved	2.47 J	ug/l	10.0	1.91	Ĭ	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Antimony, Dissolved	ND	ug/I	0 500	0.120	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Arsenic, Dissolved	ND .	ug/l	0.500	0.113	1	08/11/10:16:10	08/17/10 03:22	1,6020A	вм
Banum, Dissolved	ND .	ug/1	0.500	. 0.095	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Beryllium, Dissolved	ND	ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Cadmium, Dissolved	ND	ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Calcium, Dissolved	14.2 J	ug/l	100	12.6	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Chromium, Dissolved	ND	ug/l	0.500	0.186	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Cobalt, Dissolved	ND	ug/l	0.500	0.053	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Copper, Dissolved	ND	ug/l	0.500	0.118	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Iron, Dissolved	15.5 J	ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Lead, Dissolved	ND	ug/l	0.500	0.050	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Magnesium, Dissolved	ND	ug/l	100	4.10	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Manganese, Dissolved	ND	ug/l	1.00	0.136	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Nickel, Dissolved	ND	ug/l	0.500	0.180	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012243

09/03/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Potassium, Dissolved	20.3	J	ug/l	100	18.2	- 1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Sodium, Dissolved	47.2	J	ug/l	100	18.2	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/11/10 16:10	08/17/10 03:22	1,6020A	вм
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ
Zinc, Dissolved	ND		ug/l	5,00	1.62	1	08/11/10 16:10	08/17/10 03:22	1,6020A	ВМ

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Dissolved Metals - Wes	stborough Lab for samp	ole(s): 15	-16,18-	19,22,2	4 Batch:	WG429637-1			
Mercury, Dissolved	ND	ug/l	0.2000	0.0120	4	08/26/10 14:20	08/27/10 11:07	7 1,7470A	EZ

Prep Information

Digestion Method: EPA 7470A



Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

Parameter	LCS %Recove		LCSD %Recovery	Qual	%Recove		Qual	RPD Limits
Total Metals - Westborough Lab	Associated sample(s):	02,04,06,08	,10,12,14,17,20-2	1,23,25,27,2	Batch:	WG427203-2		
Aluminum, Total	100				80-120			
Arsenic, Total	105				80-120			
Calcium, Total	112		.4		80-120			
Chromium, Total	100				80-120			
Iron, Total	116				80-120	o t o		
Lead, Total	105		4		80-120			
Magnesium, Total	109				80-120			
Manganese, Total	105		*		80-120			
Nickel, Total	107		*		80-120			
Potassium, Total	109				80-120			
Sodium, Total	107				80-120	4.		

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05,07,09,11,13,15-16,18-1	9,22,24,2 Batch:	WG427204-2	
Aluminum, Dissolved	. 97		80-120		
Antimony, Dissolved	97		80-120	1.6	
Arsenic, Dissolved	102	5	80-120	2	
Barium, Dissolved	101	*	80-120	4-	
Beryllium, Dissolved	108		80-120		
Cadmium, Dissolved	110		80-120	1.5	
Calcium, Dissolved	106		80-120	.4	
Chromium, Dissolved	98	o ∗ -1	80-120		
Cobalt, Dissolved	105 .	¥	80-120	1.9	
Copper, Dissolved	_104	-	80-120		
Iron, Dissolved	111		80-120		
Lead, Dissolved	101	9	80-120	14	
Magnesium, Dissolved	105	-	80-120	16	
Manganese, Dissolved	103	•	80-120		
Nickel, Dissolved	104	*	80-120	4.0	
Potassium, Dissolved	104		80-120		
Selenium, Dissolved	108		80-120	-20	
Silver, Dissolved	98		80-120		
Sodium, Dissolved	106	*	80-120		
Thallium, Dissolved	97	*	80-120	7 - 2	
Vanadium, Dissolved	102	- 2	80-120		

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05,07,09,11,13,15-16,	18-19,22,24,2 Batch:	WG427204-2	
Zinc, Dissolved	103		80-120	(8)	
Dissolved Metals - Westborough Lab	Associated sample(s):	15-16,18-19,22,24 Batch:	WG429637-2		
Mercury, Dissolved	109	-	80-120	50%	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough L L1012243-10 Client ID: GF	ab Associated 2-10-25-025-U	sample(s)	: 02,04,06,08	,10,12,14,17,	20-21,23	,25,27,2	QC Batch ID:	WG4272	203-4 WG4	127203-	5 QC	Sample
Aluminum, Total	18400	2000	22600	210		19800	70		80-120	13		20
Arsenic, Total	44.0	120	168	103		159	96		80-120	6		20
Calcium, Total	22600	10000	36700	141	Q	33700	111		80-120	9		20
Chromium, Total	176	200	393	108		358	91		80-120	9		20
Iron, Total	35700	1000	39700	400		35300	0		80-120	12		20
Lead, Total	62.3	510	614	108		580	102		80-120	6		20
Magnesium, Total	7580	10000	19100	115		17400	98		80-120	9		20
Manganese, Total	418	500	971	111		904	97		80-120	7		20
Nickel, Total	60.1	500	595	107		550	98		80-120	8		20
Potassium, Total	6030	10000	17200	112		15900	99		80-120	8		20
Sodium, Total	94200	10000	109000	148		102000	78		80-120	7		20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Wes Sample: L1012243-09	stborough Lab Assoc Client ID: GP-10-2		(s): 01,03,	05,07,09,11,13,	15-16,	18-19,22,24,2	QC Batch II	D: WG427204-4	WG427204-5	QC
Aluminum, Dissolved	10,2	2000	1980	98		1970	98	80-120	1	20
Antimony, Dissolved	ND	500	500	100		516	103	80-120	3	20
Arsenic, Dissolved	ND	120	129	108		130	108	80-120	1	20
Barium, Dissolved	17.9	2000 -	2010	100		2070	103	80-120	3	20
Beryllium, Dissolved	ND	50	55.8	112		56.0	112	80-120	0	20
Cadmium, Dissolved	ND	51	56.4	110		58.9	115	80-120	4	20
Calcium, Dissolved	19400	10000	31600	122	Q	31900	125	Q 80-120	1	20
Chromium, Dissolved	ND	200	192	96		196	98	80-120	2	20
Cobalt, Dissolved	1.44	500	528	105		535	107	80-120	1	20
Copper, Dissolved	0.800	250	262	104		263	105	80-120	0	20
Iron, Dissolved	1770	1000	3000	123	Q	3010	124	Q 80-120	0	20
Lead, Dissolved	ND	510	524	103		536	105	80-120	2	20
Magnesium, Dissolved	2490	10000	13100	106		13200	107	80-120	1	20
Manganese, Dissolved	91.8	500	608	103		616	105	80-120	1	20
Nickel, Dissolved	5.31	500°	516	102		523	104	80-120	1	20
Potassium, Dissolved	2650	10000	13300	106		13500	108	80-120	1	20
Selenium, Dissolved	ND	120	126	105		124	103	80-120	2	20
Silver, Dissolved	ND	50 .	40.4	81		46.0	92	80-120	13	20
Sodium, Dissolved	87100	10000	102000	149		102000	149	80-120	0	20
Thallium, Dissolved	ND	120	118	98		120	100	80-120	2	20
Vanadium, Dissolved	ND	500	510	102		518	104	80-120	2	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Sample: L1012243-09 Client IE	Lab Associ CP-10-2		s): 01,03,	05,07,09,11,13,18	5-16,18-19,22,24,2	QC Batch ID: \	WG427204-4	WG427204-5	QC
Zinc, Dissolved	17.5	500	534	103	538	104	80-120	1	20
Dissolved Metals - Westborough Client ID: GP-10-13-049-F	Lab Associ	ated sample(s	s): 15-16,	18-19,22,24 QC	Batch ID: WG429	9637-3 WG42963	37-4 QC San	nple: L101224:	3-15
Mercury, Dissolved	ND	1.	0.7657	76	Q 0.8035	80	80-120	29 Q	20

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-02

Client ID:

GP-10-24-025-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:01

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	36		mg/I	5.0	NA	1	-	08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-04

GP-10-24-035-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:33

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	64		mg/l	5.0	NA	1		08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	1.5		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-06

Client ID:

GP-10-24-045-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 17:12

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	E-								
Solids, Total Suspended	96		mg/l	5.0	NA	1	(4)	08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	4.4		mg/l	2.0	2.0	2	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-08 GP-10-24-055-U

Date Received:

08/09/10 17:58

Client ID: Sample Location: DEVENS, MA

Date Collected: Field Prep:

08/10/10 None

Matrix:

Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	440		mg/l	5.0	NA	1	-	08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	5.9		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-10

Client ID:

GP-10-25-025-U

Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 09:32

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	730		mg/l	25	NA	5		08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	1.4		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name: SHL TASK 0002 Lab Number:

L1012243 Project Number: AC001 Report Date: 09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-12

Client ID:

GP-10-25-035-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 10:19

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifler	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	1								
Solids, Total Suspended	240		mg/l	10	NA	2		08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	1.6		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

Matrix:

L1012243-14

Client ID:

GP-10-25-045-U DEVENS, MA

Sample Location:

Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	160		mg/l	5.0	NA	1	-	08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	3.6		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

Project Name: SHL TASK 0002

Lab Number:

L1012243

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-15

Client ID:

GP-10-13-049-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:05

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab)								
Alkalinity, Total	490		mg CaCO3/L	2.0	NA	1		08/11/10 13:05	30,2320B	JO
Nitrogen, Ammonia	17.3		mg/l	0.075	0.017	1	08/11/10 15:30	08/12/10 00:11	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1		08/11/10 01:07	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	36		mg/l	20	7.0	1		08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	7.7		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
Anions by Ion Chromatog	graphy - West	borough	Lab							
Chloride	46		mg/l	0.50	0.07	1	(+)	08/14/10 05:10	44,300.0	AU
Nitrogen, Nitrate	0.024	J	mg/l	0.05	0.01	1	-	08/11/10 20:39	44,300.0	AU
Sulfate	0.58	J	mg/l	1.0	0.12	1	*	08/14/10 05:10	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-16

Client ID:

GP-10-13-059-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 08:30

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab								
Alkalinity, Total	470	mg CaCO3/L	2.0	NA	1		08/11/10 13:05	30,2320B	JO
Nitrogen, Ammonia	14.3	mg/l	0.075	0.017	1	08/11/10 15:30	08/12/10 00:16	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1		08/11/10 01:08	30,4500NO2-B	DD
Sulfide	ND	mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	38	mg/l	20	7.0	1	7	08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	7.8	mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
Anions by Ion Chromatog	raphy - West	borough Lab							
Chloride	17	mg/l	0.50	0.07	1	1.5	08/14/10 03:46	44,300.0	AU
Nitrogen, Nitrate	0.06	mg/l	0.05	0.01	1	-	08/11/10 20:51	44,300 0	AU
Sulfate	ND	mg/l	1.0	0,12	1	-	08/14/10 03:46	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-17 GP-10-13-059-U

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 08:30

Date Received:

08/10/10

Field Prep:

None

Dilution Date Date **Analytical** Factor Prepared Method Qualifier Units RL MDL Analyzed Result Analyst **Parameter** General Chemistry - Westborough Lab Solids, Total Suspended 890 08/13/10 17:45 30,2540D DW mg/l 5.0 NA

Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-18

Client ID:

GP-10-13-069-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 10:50

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab)								
Alkalinity, Total	310		mg CaCO3/L	2.0	NA	1	*	08/11/10 13:05	30,2320B	JO
Nitrogen, Ammonia	5.91		mg/l	0.075	0.017	1	08/11/10 15:30	08/12/10 00:34	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1		08/11/10 01:09	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	47		mg/l	20	7.0	1		08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	5.2		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
Anions by Ion Chromatog	graphy - West	borough	Lab							
Chloride	20		mg/l	0.50	0.07	1	2	08/14/10 03:58	44,300.0	AU
Nitrogen, Nitrate	0.07		mg/l	0.05	0.01	1		08/11/10 21:27	44,300.0	AU
Sulfate	0.56	J	mg/l	1.0	0.12	1	-	08/14/10 03:58	44,300.0	AU

Project Name:

SHL TASK 0002

Lab Number:

L1012243

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-19

Client ID:

GP-10-13-079-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 12:15

Date Received:

08/10/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab)								
Alkalinity, Total	77		mg CaCO3/L	2.0	NA	1	49	08/11/10 13:05	30,2320B	JO
Nitrogen, Ammonia	0.384		mg/l	0.075	0.017	1	08/11/10 15:30	08/12/10 00:35	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1		08/11/10 01:09	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	13	J	mg/l	20	7.0	1	-	08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	1.7		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
Anions by Ion Chromatog	graphy - West	tborough	Lab							
Chloride	66	0.00-20	mg/l	1.0	0.13	2		08/14/10 04:22	44,300.0	AU
Nitrogen, Nitrate	0.37		mg/l	0.05	0.01	1		08/11/10 21:39	44,300.0	AU
Sulfate	8.7		mg/l	1.0	0.12	1	14	08/14/10 04:10	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012243-27

Client ID:

GP-10-22-011-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 13:43

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab									
Solids, Total Suspended	ND		mg/l	5.0	NA	1		08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	1.4		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
			100			1	08/10/10 21:45			

Project Name: SHL TASK 0002 Lab Number:

L1012243

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012243-29

GP-10-22-021-U

DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 14:28

Date Received:

08/10/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	48		mg/l	5.0	NA	1	4	08/13/10 17:45	30,2540D	DW
Dissolved Organic Carbon	2.4		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW

L1012243

Project Name: SHL TASK 0002

SK 0002 Lab Number:

Project Number: AC001 Report Date: 09/03/10

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough La	b for san	nple(s):	15-16,18-1	9 Batch	WG427	7002-2			
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	9	08/11/10 01:04	30,4500NO2-B	DD
General Chemistry - W	estborough La	b for san	nple(s):	15-16,18-1	9 Batch	WG427	129-2			
Alkalinity, Total	ND		mg CaC	O3/L 2.0	NA	1	- Q.,	08/11/10 13:05	30,2320B	JO
General Chemistry - W	estborough La	b for san	nple(s):	15-16,18-1	9 Batch	WG427	7160-1			
Nitrogen, Ammonia	ND		mg/l	0.075	0,017	-1	08/11/10 15:30	08/12/10 00:05	30,4500NH3-BH	AT AT
General Chemistry - W	estborough La	b for san	nple(s):	15-16,18-1	9 Batch	WG427	7447-1			
Sulfide	ND		mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S2-AD	AT
General Chemistry - W	estborough La	b for san	nple(s):	15-16,18-1	9 Batch	WG427	7493-1			
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:40	44,410.4	DW
General Chemistry - W	estborough La	b for san	nple(s):	02,04,06,0	8,10,12,1	4,17,27,2	29 Batch: WO	3427580-1		
Solids, Total Suspended	ND		mg/l	5.0	NA	1		08/13/10 17:45	30,2540D	DW
eneral Chemistry - W	estborough La	b for san	nple(s):	02,04,06,0	8,10,12,1	4-16,18-	19,27,29 Bate	ch: WG42758	33-1	
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/10/10 21:45	08/13/10 07:28	30,5310C	DW
Anions by Ion Chromat	ography - Wes	tborough	Lab for	sample(s):	15-16,1	8-19 Ba	tch: WG4276	47-1		
Nitrogen, Nitrale	ND		mg/l	0.05	0.01	1		08/11/10 18:51	44,300.0	AU
Anions by Ion Chromat	ography - Wes	tborough	Lab for	sample(s):	15-16,1	8-19 Ba	atch: WG4278	41-1		
Chloride	ND		mg/l	0.50	0.07	1	-	08/13/10 17:22	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	4	08/13/10 17:22	44,300.0	AU

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

Report Date:

L1012243 09/03/10

Parameter	LCS Recovery		_CSD ecovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s)	: 15-16,18-19	Batch:	WG427002-1				
Nitrogen, Nitrite	100				90-110	100		20
General Chemistry - Westborough Lab	Associated sample(s)	: 15-16,18-19	Batch:	WG427129-1				
Alkalinity, Total	105		18		80-115	*		4
General Chemistry - Westborough Lab	Associated sample(s):	: 15-16,18-19	Batch:	WG427160-2				
Nitrogen, Ammonia	98		18		80-120	¥.		20
General Chemistry - Westborough Lab	Associated sample(s):	15-16,18-19	Batch:	WG427447-2				
Sulfide	96		*		75-125			
General Chemistry - Westborough Lab	Associated sample(s):	: 15-16,18-19	Batch:	WG427493-2				
Chemical Oxygen Demand	99		9		95-105	4		
General Chemistry - Westborough Lab	Associated sample(s):	02,04,06,08,	10,12,14	-16,18-19,27,2	9 Batch: WG	3427583-2		
Dissolved Organic Carbon	98		2		90-110	4.		
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s):	15-16,18-	19 Batch: V	VG427647-2			
Nitrogen, Nitrate	92		4		90-110	2		

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

Parameter	LC:		LCSD Recovery		%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough	Lab A	ssociated sample(s):	15-16,18-19	Batch:	WG427841-2		
Chloride	98	5	1		90-110		
Sulfate	10	00	4		90-110	-	

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recovery Qual Limits	RPD Qua	RPD Limits
General Chemistry - Westbore 049-F	ough Lab Asso	ciated sampl	e(s): 15-1	6,18-19 QC E	Batch ID	: WG427002	-3 QC San	nple: L1012243-15	Client ID:	GP-10-13-
Nitrogen, Nitrite	ND	0.1	0.10	100		-		85-115	4	20
General Chemistry - Westboro	ough Lab Asso	ciated sampl	e(s): 15-1	6,18-19 QC E	Batch ID	: WG427129	-3 QC San	nple: L1012243-19	Client ID:	GP-10-13-
Alkalinity, Total	77	100	180	99		æ	3	86-116	- 2	4
General Chemistry - Westbord 049-F	ough Lab Asso	ciated sampl	e(s): 15-1	6,18-19 QC E	Batch ID:	: WG427160-	-3 QC Sam	ple: L1012243-15	Client ID:	GP-10-13-
Nitrogen, Ammonia	17.3	4 -	21.5	105			+	80-120	1971	20
General Chemistry - Westbord 079-F	ough Lab Asso	ciated sampl	e(s): 15-1	6,18-19 QC E	Batch ID:	: WG427447-	-3 QC Sam	ple: L1012243-19	Client ID:	GP-10-13-
Sulfide	ND	0.24	0.19	79		7	*	75-125	i e	20
General Chemistry - Westbord 049-F	ough Lab Asso	ciated sampl	e(s): 15-1	6,18-19 QC E	Batch ID:	: WG427493-	3 QC Sam	ple: L1012243-15	Client ID:	GP-10-13-
Chemical Oxygen Demand	36	238	280	103		<u>.</u>	-	80-120	1-1	20
General Chemistry - Westbord Client ID: GP-10-25-025-U	ough Lab Asso	ciated sampl	e(s): 02,04	4,06,08,10,12,1	14-16,18	-19,27,29	QC Batch ID:	WG427583-3 C	QC Sample: L	.1012243-1
Dissolved Organic Carbon	1_4	4	5.8	111		÷	÷	79-120		20
Anions by Ion Chromatograph Client ID: GP-10-13-049-F	y - Westborou	gh Lab Assoc	ciated sam	nple(s): 15-16,1	8-19 C	QC Batch ID:	WG427647-	3 WG427647-4 (QC Sample:	_1012243-1
Nitrogen, Nitrate	ND	0.4	0.40	100		0.40	100	80-122	0	15

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012243

Report Date:

09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	y RPD	RPD Limits
Anions by Ion Chromatography Client ID: GP-10-13-049-F	- Westborou	gh Lab Asso	ciated san	nple(s): 15-16,18-19	QC Batch	ID: WG427841-3	WG427841-4	QC Sample	: L1012243-15
Chloride	46	4	50	87	48	53	40-151	4	18
Sulfate	ND	8 :	7.3	91	7.1	89	60-140	3	20

Lab Duplicate Analysis Batch Quality Control

SHL TASK 0002

Project Number: AC001

Project Name:

Parameter		ive Sample	Duplica	ate Sample	Units	RPD	Qual R	PD Limits
General Chemistry - Westborough Lab	Associated sample(s):	15-16,18-19	QC Batch ID:	WG427002-4	QC Sample:	L1012165	5-07 Client II	: DUP Sample
Nitrogen, Nitrite		0.01J		0.01J	mg/l	NC		20
General Chemistry - Westborough Lab 049-F	Associated sample(s):	15-16,18-19	QC Batch ID:	WG427129-4	QC Sample:	L1012243	3-15 Client II); GP-10-13-
Alkalinity, Total	, ,	490		500	mg CaCO3/L	2		4
General Chemistry - Westborough Lab 049-F	Associated sample(s):	15-16,18-19	QC Batch ID:	WG427160-4	QC Sample:	L1012243	3-15 Client II): GP-10-13-
Nitrogen, Ammonia	4	17.3		17.3	mg/l	0		20
General Chemistry - Westborough Lab 069-F	Associated sample(s):	15-16,18-19	QC Batch ID:	WG427447-4	QC Sample:	L1012243	3-18 Client IE): GP-10-13-
Sulfide	£	ND		ND	mg/l	NC		20
General Chemistry - Westborough Lab 049-F	Associated sample(s):	15-16,18-19	QC Batch ID:	WG427493-4	QC Sample:	L1012243	3-15 Client II): GP-10-13-
Chemical Oxygen Demand		36.		34	mg/l	6		20
General Chemistry - Westborough Lab ID: GP-10-25-025-U	Associated sample(s):	02,04,06,08,1	10,12,14,17,27,	29 QC Batch	ID: WG42758	0-2 QC	Sample: L10	12243-10 Client
Solids, Total Suspended		730		660	mg/l	10		32
General Chemistry - Westborough Lab Client ID: GP-10-24-035-U	Associated sample(s):	02,04,06,08,	10,12,14-16,18	-19,27,29 QC	Batch ID: WG	427583-4	QC Sample	e: L1012243-04
Dissolved Organic Carbon	8	1.5		2.3	mg/l	42	Q	20

Lab Duplicate Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012243

Report Date:

09/03/10

Parameter	Nat	ive Sample	Dupl	icate Sample	Units	RPD	RPD Limits			
Anions by Ion Chromatography - Westborough Lab GP-10-13-049-F	Associate	d sample(s):	15-16,18-19	QC Batch ID:	WG427647-5	QC Sample:	L1012243-15	Client ID:		
Nitrogen, Nitrate		0.024J		0.026J	mg/l	NC		15		
Anions by Ion Chromatography - Westborough Lab GP-10-13-049-F	Associate	d sample(s):	15-16,18-19	QC Batch ID:	WG427841-5	QC Sample:	L1012243-15	Client ID:		
Chloride		46.		46	mg/l	0		18		
Sulfate	1	0.58J		0.59J	mg/l	NC		20		

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Project Name: SHL TASK 0002

Lab Number: L1012243 Project Number: AC001 Report Date: 09/03/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В Present/Intact C Present/Intact Present/Intact A D Present/Intact

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012243-01A	Plastic 250ml HNO3 preserved	В	<2	3.0	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012243-02A	Plastic 1000ml unpreserved	В	6	3.0	Y	Present/Intact	TSS-2540(7)
L1012243-02B	Plastic 250ml HNO3 preserved	Α	<2	3.1	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-02C	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-02D	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-02X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-03A	Plastic 250ml HNO3 preserved	В	<2	3.0	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012243-04A	Plastic 1000ml unpreserved	В	6	3.0	Y	Present/Intact	TSS-2540(7)
L1012243-04B	Plastic 250ml HNO3 preserved	В	<2	3.0	NA	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-04C	Vial H2SO4 preserved split	В	N/A	3.0	NA	Present/Intact	DOC-5310(28)
L1012243-04D	Vial H2SO4 preserved split	В	N/A	3.0	NA	Present/Intact	DOC-5310(28)
L1012243-04X	Amber 250ml unpreserved	B	6	3.0	NA	Present/Intact	DOC-5310(28) ³
L1012243-05A	Plastic 250ml HNO3 preserved	В	<2	3.0	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012243-06A	Plastic 1000ml unpreserved	В	6	3.0	Y	Present/Intact	TSS-2540(7)
L1012243-06B	Plastic 250ml HNO3 preserved	В	<2	3.0	NA	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-06C	Vial H2SO4 preserved split	В	N/A	3.0	NA	Present/Intact	DOC-5310(28)
L1012243-06D	Vial H2SO4 preserved split	В	N/A	3.0	NA	Present/Intact	DOC-5310(28)
L1012243-06X	Amber 250ml unpreserved	В	6	3.0	NA	Present/Intact	DOC-5310(28)
L1012243-07A	Plastic 250ml HNO3 preserved	Α	<2	3.1	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012243-08A	Plastic 1000ml unpreserved	C	6	3.2	Y	Present/Intact	TSS-2540(7)

Project Number: AC001

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	pH	deg C	Pres	Seal	Analysis(*)
L1012243-08B	Plastic 250ml HNO3 preserved	Α	<2	3.1	NA	Present/intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-08C	Vial H2SO4 preserved split	C	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-08D	Vial H2SO4 preserved split	C	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-08X	Amber 250ml unpreserved	C	6	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-09A	Plastic 250ml HNO3 preserved	С	<2	3.2	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012243-09B	Plastic 250ml HNO3 preserved	С	<2	3.2	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012243-10A	Plastic 1000ml unpreserved	C	6	3.2	Y	Present/Intact	TSS-2540(7)
L1012243-10B	Plastic 250ml HNO3 preserved	С	<2	3.2	NA	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-10C	Vial H2SO4 preserved split	С	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-10D	Vial H2SO4 preserved split	C	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-10E	Plastic 250ml HNO3 preserved	С	<2	3,2	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012243-10X	Amber 250ml unpreserved	C	6	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-11A	Plastic 250ml HNO3 preserved	В	<2	3.0	Y	Present/Intact	DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-AS-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180)
L1012243-12A	Plastic 1000ml unpreserved	C	6	3.2	Y	Present/Intact	TSS-2540(7)
L1012243-12B	Plastic 250ml HNO3 preserved	A	<2	3.1	NA	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-
8.10.1	Ta # 54						6020T(180),DOD-PB- 6020T(180)
L1012243-12C	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-12D	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-12X	Amber 250ml unpreserved	Α	6	3.1	NA	Present/Intact	DOC-5310(28)

Project Number: AC001

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012243-13A	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Present/Intact	DOD-FE-6020S(180), DOD-MG-6020S(180), DOD-CR-6020S(180), DOD-MN-6020S(180), DOD-NA-6020S(180), DOD-NA-6020S(180), DOD-NB-6020S(180), DOD-PB-6020S(180), DOD-AS-6020S(180), DOD-AL-6020S(180), DOD-K-6020S(180)
L1012243-14A	Plastic 1000ml unpreserved	D	6	4.0	Y	Present/Intact	TSS-2540(7)
L1012243-14B	Plastic 250ml HNO3 preserved	Α	<2	3.1	NA	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012243-14C	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-14D	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-14X	Amber 250ml unpreserved	Α	6	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-15A	Plastic 250ml unpreserved	В	6	3.0	Y	Present/Intact	ALK-T-2320(14)
L1012243-15B	Plastic 250ml HNO3 preserved	В	<2	3.0	Υ	Present/Intact	DOD-BA-6020S(180), DOD-FE-6020S(180), DOD-MG-6020S(180), DOD-CR-6020S(180), DOD-CR-6020S(180), DOD-MN-6020S(180), DOD-TL-6020S(180), DOD-AG-6020S(180), DOD-CA-6020S(180), DOD-NA-6020S(180), DOD-NA-6020S(180), DOD-NI-6020S(180), DOD-NI-6020S(
		3 4	x			i.	6020S(180),DOD-CD- 6020S(180),DOD-BE- 6020S(180),DOD-CU- 6020S(180),DOD-ZN- 6020S(180),DOD-AL- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)
L1012243-15C	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-15D	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-15E	Plastic 250ml unpreserved	В	6	3.0	Y	Present/Intact	NO2-4500NO2(2)
L1012243-15F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1012243-15G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012243-15H	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1012243-15I	Plastic 500ml H2SO4 preserved	В	<2	3.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012243-15J	Plastic 500ml unpreserved	В	6	3.0	Y	Present/Intact	SO4-300(28), CL-300(28), NO3-300(2)
L1012243-15X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-16A	Plastic 250ml unpreserved	C	6	3,2	Y	Present/Intact	ALK-T-2320(14)
L1012243-16B	Plastic 250ml HNO3 preserved	C	<2	3.2	NA	Preseni/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-SB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012243-16C	Vial H2SO4 preserved split	С	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-16D	Vial H2SO4 preserved split	C	N/A	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-16E	Plastic 250ml unpreserved	C	6	3.2	NA	Present/Intact	NO2-4500NO2(2)
L1012243-16F	Plastic 250ml Zn Acetate/NaOH pr	C	>12	3 2	NA.	Present/Intact	SULFIDE-4500(7)
L1012243-16G	Plastic 250ml Zn Acetate/NaOH pr	C	>12	3.2	NA.	Present/Intact	SULFIDE-4500(7)
L1012243-16H	Plastic 250ml Zn Acetate/NaOH pr	C	>12	3.2	NA	Present/Intact	SULFIDE-4500(7)
L1012243-16	Plastic 500ml H2SO4 preserved	C	<2	3.2	NA	Present/Intact	COD-410(28),NH3-4500(28)
L1012243-16J	Plastic 500ml unpreserved	C .,	6, .	3.2	NA	Present/Intact	SO4-300(28), CL-300(28), NO3- 300(2)
L1012243-16X	Amber 250ml unpreserved	С	6	3.2	NA	Present/Intact	DOC-5310(28)
L1012243-17A	Plastic 500ml HNO3 preserved	C	<2	3.2	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012243-17B	Plastic 1000ml unpreserved	C	6	3.2	Y	Present/Intact	TSS-2540(7)
L1012243-18A	Plastic 250ml unpreserved	Α	6	3.1	Y	Present/Intact	ALK-T-2320(14)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012243-18B	Plastic 250ml HNO3 preserved	Α	<2	3.1	NA	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-CD-6020S(180),DOD-BE-6020S(180),DOD-BE-6020S(180),DOD-CU-6020S(180),DOD-ZN-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-AL-6020S(180),DOD-AL-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S
L1012243-18C	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-18D	Vial H2SO4 preserved split	Α	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-18E	Plastic 250ml unpreserved	Α	6	3.1	NA	Present/Intact	NO2-4500NO2(2)
L1012243-18F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.1	NA	Present/Intact	SULFIDE-4500(7)
L1012243-18G	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4.0	NA	Present/Intact	SULFIDE-4500(7)
L1012243-18H	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4.0	NA	Present/Intact	SULFIDE-4500(7)
L1012243-18I	Plastic 500ml H2SO4 preserved	D	<2	4.0	NA	Present/Intact	COD-410(28),NH3-4500(28)
L1012243-18J	Plastic 500ml unpreserved	Α	6	3.1	NA	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012243-18X	Amber 250ml unpreserved	Α	6	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-19A	Plastic 250ml unpreserved	D	6	4.0	Y	Present/Intact	ALK-T-2320(14)
L1012243-19B	Plastic 250ml HNO3 preserved	D	<2	4.0	NA	Present/Intact	DOD-BA-6020S(180),DOD-FE- 6020S(180),DOD-MG- 6020S(180),DOD-SB-
					ell .		6020S(180),DOD-CR- 6020S(180),DOD-MN- 6020S(180),DOD-TL- 6020S(180),DOD-CO- 6020S(180),DOD-CA- 6020S(180),DOD-NA- 6020S(180),DOD-NI- 6020S(180),DOD-PB- 6020S(180),DOD-V- 6020S(180),DOD-AS- 6020S(180),DOD-CD- 6020S(180),DOD-BE- 6020S(180),DOD-ZN- 6020S(180),DOD-ZN- 6020S(180),DOD-AL- 6020S(180),DOD-AL- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-BE- 6020S(180),DOD-BE- 6020S(180),DOD-BE- 6020S(180),DOD-BE- 6020S(180),DOD-BE- 6020S(180),DOD-BE- 6020S(180),DOD-BE-

Project Number: AC001

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012243-19C	Vial H2SO4 preserved split	D	N/A	4.0	NA	Present/Intact	DOC-5310(28)
L1012243-19D	Vial H2SO4 preserved split	D	N/A	4.0	NA	Present/Intact	DOC-5310(28)
L1012243-19E	Plastic 250ml unpreserved	D	6	4.0	NA	Present/Intact	NO2-4500NO2(2)
L1012243-19F	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4.0	NA	Present/Intact	SULFIDE-4500(7)
L1012243-19G	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4.0	NA	Present/Intact	SULFIDE-4500(7)
L1012243-19H	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4.0	NA	Present/Intact	SULFIDE-4500(7)
L1012243-191	Plastic 500ml H2SO4 preserved	D	<2	4.0	NA	Present/Intact	COD-410(28),NH3-4500(28)
L1012243-19J	Plastic 500ml unpreserved	D	6	4.0	NA	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012243-19X	Amber 250ml unpreserved	D	6	4.0	NA	Present/Intact	DOC-5310(28)
L1012243-20A	Plastic 500ml HNO3 preserved	D	<2	4.0	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012243-21A	Plastic 500ml HNO3 preserved	С	<2	3.2	Υ	Present/intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012243-22A	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE- 6020S(180),DOD-MG- 6020S(180),DOD-SB- 6020S(180),DOD-CR- 6020S(180),DOD-MN-
per -	man mag	(A			-	1.1. (6020S(180),DOD-TL-
							6020S(180),DOD-CO- 6020S(180),DOD-CA- 6020S(180),DOD-CA- 6020S(180),DOD-NI- 6020S(180),DOD-NI- 6020S(180),DOD-V- 6020S(180),DOD-AS- 6020S(180),DOD-CD- 6020S(180),DOD-CD- 6020S(180),DOD-CU- 6020S(180),DOD-CU- 6020S(180),DOD-CU- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666. <u>Organic Parameters</u>: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. NELAP Accredited. Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited.*Non-Potable Water (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2_D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN C	F CUSTO	OY ,	AGE	or_3_	Date	Rec'd	in Lab	r e	8	o li			AL	PHA	Job# 1/01224	3
WESTBORO, MA MANSFIELD, MA	Project Informat	ion			Rep	ort In	forma	tion -	Data	Deliv	/erat	oles	Mark Street		Information	
TEL: 508-898-9220 YEL: 508-822-9300 FAX: 508-898-9193 FAX: 508-822-3288	Project Name: S	HL T	ash ood	12	Ü F	4X		SEN	MAIL	EDI	R		o s	ame a	as Client info PO#:	
Client Information	Project Location:				UA	10.7		□ Add		-	11.0			-		
Client: Savereign Consulting Irc	Project #: ACC				Regu	atory	/ Regi	ireme	ents/F	Repo	rt Lir					
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Mansfield, MA GOONE	ALPHA Quote #:				140		taken.	MPTI	/E CE	RTA	INTY	′ C	T RE	ASO	NABLE CONFIDENCE PR	ото
Phone: 502-339-3200	Turn-Around Tir	ne			1.5 70.00	s 🗆				TELLY			Requir		OG? (If yes see note in Comm	ents)
Fax: 508-339-3248		C/CCC			1	s D									otocols) Required?	isins)
Email: pmcbuin@Scucen.com	Date Due:	RUSH	Confirmed of pra-my	oproviul)	ANALYSIS	1	1	11	1	1	1	1	11	1/	SAMPLE HANDLIN	lG
These samples have been previously analyzed by Alph Other Project Specific Requirements/Com		7110			18	1	//	1	1.	1	/	/	11	1	Filtration_	
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ALPHA Lab ID. (Lab Use Only). Sample ID	Date	Time	Matrix	Initials	14	3/	X/3	5/03	12	8/		A SS	5/0	1	Sample Specific Commen	ts
12243 OF GP-10-24-025-F	8/9/10	1601	GW	JAR			-				3	1			4	
62 GP-10-24-025-U	3/9/10	1601	CW	JAR					V	/	V					1
63 GP-10-24-035-F	8/9/10	1633	GW	JAR								1				
ON GP-10-24-035-LI	8/9/10	1633	GW	JAR	-				V	VI	1					
155 GP-10-24-045-F	8/4/10	17/2	GW	JAR			1			2.1	H.	1			_	
GG-10-24-045-U	8/9/10	1712	64	SAR	-		-		1	/	1				1	
64 GP-10-24-055-F	8/9/10	1758	GW	JAR	-	7	+		V	+	1	1		-		1
08 GP-10-24-055-U	8/4/10	1758	GW	SAR	1	1			1	V	-	+				3
09 GRIU-25-025-F	8/10/10	0932	GW	JAR		1						V			MS/MSD metals only	
6 CP-10-25-025-U	8/10/10	0932	GW	JAR					V	V	1			-	MS/MSD metals only	1
PLEASE ANSWER QUESTIONS ABOVE!			Cont	ainer Type	P.	0 1	P	100	P	A.	PF	P	P		Please printiclearly, legibly a	nd com-
IS YOUR PROJECT MA MCP or CT RCP?	Relanguished By:		Dat 8/10/1	eservative e/Time	A)	A	ved By:	A	A	8	1/41	C	163	pletely. Samples can not be in and turnaround time clock start unit any ambiguities an /All samples submitted are sa Addas Jerms Antic children	logged will not a resolv
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WESTEORO, MA MANSFIELD. MA	Project Inf	formation	on			Re	port	Infor	mati	ion -	Data	Deli	veral	oles		Billing	Infor	matic	on	V 1 20,000 (120)	
TEL: 508-898-9220 TEL: 508-822-9300 FAX: 508-898-9193 FAX: 508-822-3288	Project Name						FAX			Ø EN					1	J Same	as Clie	ent Inf	o PO#	5	
Client Information	Project Local	tion:	Jeven's	MA			ADEX		-	⊒ Add	100			- 76.00							
Client: Sovereign Consulting Inc	Project#:	ACC	00/					Pro			ints/		rt Li			- 0	200	-		_	
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Mansfield MA 02048	ALPHA Quot	te #:				MA	MCF	PR	ະຣຸບເ	NPTf	VE C	ERT	AINT	Υ	CT	REAS	ONAB	LE C	ONFIDE	NCE PRO	OTO-
Phone: 508 - 339 - 3200	Turn-Arou	und Tim	ie .					O No								quired?			1 /0 1		
Fax: 508-339-3248	Standard		RUSH (only a	maliament if are an	national)	a	res	MIND	1	Are C	TRC	(Re	asona	ble C	onfi	dence F	Protocol	s) Re	quired?		
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13 GP-10-25-045-F	81	10/10	1106	GW	JAR							ī.,				V					1
6 CP-10-25-045- U	8/	lello	1106	GW	JAR						1	1	14	1	1						3
5 GP-10-13-049-F	8/	19/10	1605	GW	JJC	V	V	V	V	V		1	1.4	1	1	1			-		9
68-10-13-059-F	8/	lolo	6836	GW	33C	V	V	V	V	V		1		1		1					9
6P-10-13-059-U	8	leoleu	0830	GW	JJC						V	- 1	1	1	1						2
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ANALYTICAL REPORT

Lab Number:

L1012251

Client:

Sovereign Consulting

905B South Main Street

Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/17/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012251

Report Date:

08/17/10

Alpha		
Sample ID	Client ID	-

	Circuit in
L1012251-01	GP-10-24-025-U
L1012251-02	GP-10-24-035-U

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L1012251-12	GP-10-22-011-U
L1012251-13	GP-10-22-021-U

Sample Collection Location

DEVENS,	MA
DEVENS,	MA

DEVENS,	MA
DEVENS,	MA

Date/Time

08/09/10	16:01
08/09/10	16:33

08/09/10 17:58

08/10/10 09:32

08/10/10 10:19 08/10/10 11:06



Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012251

Report Date:

08/17/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report, Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the Dissolved Inorganic Carbon results. The results of all other analyses will be issued under separate cover.

Sample Receipt

The samples were received at the laboratory requiring filtration; however, samples "GP-10-24-025-U", "GP-10-24-035-U", "GP-10-24-045-U", and "GP-10-24-055-U" were received beyond the recommended 24 hour holding time required for filtration. The samples were filtered and preserved appropriately.

Dissolved Inorganic Carbon

L1012251-01 through -13 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

Serial_No:08171014:53

Project Name:

SHL TASK 0002

0.12 // 1011

Lab Number:

L1012251

Project Number:

AC001

Report Date:

08/17/10

Case Narrative (continued)

WG427832: A Laboratory Duplicate was performed in lieu of a Matrix Spike.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

609 Season Kelly Stenstrom

Authorized Signature:

Title: Technical Director/Representative

Date: 08/17/10

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012251

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-01

Client ID:

GP-10-24-025-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/09/10 16:01

Date Received:

08/10/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	15		mg/l	8.0	(**	8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002 Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-02 GP-10-24-035-U Date Collected:

08/09/10 16:33

Client ID: Sample Location: DEVENS, MA

Matrix:

Water

Date Received:	08/10/10
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry Dissolved Inorganic Carbon	37		mg/l	8.0		8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-03

Client ID:

GP-10-24-045-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/09/10 17:12

Date Received:

08/10/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	60		mg/l	8.0	-	8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-04 GP-10-24-055-U

Date Collected:

08/09/10 17:58

Client ID: Sample Location:

DEVENS, MA

08/10/10

Matrix:

Water

Date Received: Not Specified Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	96		mg/l	20	**	20	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-05

Client ID:

GP-10-25-025-U DEVENS, MA

Result

Qualifier

Units

mg/l

RL

8.0

8

Sample Location: Matrix:

Parameter

General Chemistry Dissolved Inorganic Carbon Water

13

Date Collected:

08/10/10 09:32

Date Received:

08/10/10

Field Prep:

08/10/10 21:45 08/16/10 07:30

Not Specified

30,5310C(M)

Dilution Date Analytical Date Factor Prepared Analyzed Method Analyst

DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-06 GP-10-25-035-U

Client ID:

Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 10:19

Date Received:

08/10/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	43		mg/l	8.0		8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012251

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID: Client ID: L1012251-07 GP-10-25-045-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 11:06

Date Received:

08/10/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	61		mg/l	8.0	544	8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date: 08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-08 GP-10-13-049-F

08/09/10 16:05

Client ID: Sample Location: DEVENS, MA

Date Received: Field Prep:

Date Collected:

08/10/10 21:45 08/16/10 07:30

08/10/10 Not Specified

30,5310C(M)

DW

Matrix:

Dissolved Inorganic Carbon

Water

170

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										

20

mg/l

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012251

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-09

Client ID:

GP-10-13-059-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 08:30

Date Received:

08/10/10

Field Prep:

Not Specified

p:

....

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	130		mg/l	20		20	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name: SHL TASK 0002 Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-10 GP-10-13-069-F

08/10/10 10:50

Client ID: Sample Location: DEVENS, MA

Date Received:

Date Collected:

08/10/10

Matrix:

Water

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	100		mg/l	20	-	20	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012251

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-11

Client ID:

GP-10-13-079-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 12:15

Date Received:

08/10/10

Field Prep:

Not Specified

Dilution Date Analytical Date Factor Method **Parameter** Result Qualifier Units RL MDL Prepared Analyzed Analyst **General Chemistry** Dissolved Inorganic Carbon 20 8.0 08/10/10 21:45 08/16/10 07:30 30,5310C(M) DW mg/l

Project Name: SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

SAMPLE RESULTS

Lab ID:

L1012251-12 GP-10-22-011-U

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 13:43

Date Received:

08/10/10

Field Prep:

Not Specified

Dilution Date Date Analytical Factor Prepared Analyzed Method **Parameter** Result Qualifier Units MDL **Analyst General Chemistry** Dissolved Inorganic Carbon 8.0 8 08/10/10 21:45 08/16/10 07:30 30,5310C(M) DW 15 mg/l

Project Name:

SHL TASK 0002

Lab Number: Report Date:

L1012251

08/17/10

Project Number: AC001

SAMPLE RESULTS

Lab ID:

L1012251-13

Client ID:

GP-10-22-021-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 14:28

Date Received:

08/10/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	24		mg/l	8.0		8	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number: AC001

Report Date:

08/17/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sa	mple(s): 01-13 Bato	h: WG42	7832-1						
Dissolved Inorganic Carbon	ND	mg/l	1.0	4	1	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

Lab Control Sample Analysis Batch Quality Control

Lab Number:

L1012251

Project Number:	AC001	18		Report Date:	08/17/10

%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	RPD Limits
,	%Recovery	%Recovery Qual	%Recovery Qual %Recovery	%Recovery Qual %Recovery Qual	%Recovery Qual %Recovery Qual Limits	%Recovery Qual %Recovery Qual Limits RPD	%Recovery Qual %Recovery Qual Limits RPD Qual

Associated sample(s): 01-13 Batch: WG427832-2

SHL TASK 0002

Dissolved Inorganic Carbon

Project Name:

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012251

Report Date:

08/17/10

Parameter	NatNat	tive Sample	Duplicate Samp	le Units	RPD	Qual	RPD Limits
Associated sample(s): 01-13	QC Batch ID: WG427832-3	QC Sample:	L1012251-02 Client ID:	GP-10-24-035-U			
Dissolved Inorganic Carbon		37	35	mg/l	6		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Lab Number: L1012251 Project Number: AC001 Report Date: 08/17/10

Sample Receipt and Container Information

YES Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В Present/Intact C Present/Intact A Present/Intact D Present/Intact

	Container Info	ormation			Temp			
	Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
	L1012251-01A	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-01B	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-01X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	SPECWC()
	L1012251-02A	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-02B	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-02X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	SPECWC()
	L1012251-03A	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-03B	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-03X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	SPECWC()
	L1012251-04A	Vial H2SO4 preserved split	С	N/A	3.2	Y	Present/Intact	SPECWC()
	L1012251-04B	Vial H2SO4 preserved split	C	N/A	3.2	Y	Present/Intact	SPECWC()
	L1012251-04X	Amber 250ml unpreserved	С	6	3.2	Υ	Present/Intact	SPECWC()
	L1012251-05A	Vial H2SO4 preserved split	C	N/A	3.2	Y	Present/Intact	SPECWC()
	L1012251-05B	Vial H2SO4 preserved split	C	N/A	3.2	Y	Present/Intact	SPECWC()
7	L1012251-05X	Amber 250ml unpreserved	C	6	3.2	Y	Present/Intact	SPECWC()
	L1012251-06A	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
	L1012251-06B	Vial H2SO4 preserved split	A	N/A	3.1	Υ	Present/Intact	SPECWC()
	L1012251-06X	Amber 250ml unpreserved	Α	6	3.1	Y	Present/Intact	SPECWC()
	L1012251-07A	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
	L1012251-07B	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
	L1012251-07X	Amber 250ml unpreserved	Α	6	3.1	Y	Present/Intact	SPECWC()
	L1012251-08A	Vial H2SO4 preserved split	В	N/A	3.0	Y	Present/Intact	SPECWC()
	L1012251-08B	Vial H2SO4 preserved split	В	N/A	3.0	Υ	Present/Intact	SPECWC()

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012251 **Report Date:** 08/17/10

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012251-08X	Amber 250ml unpreserved	В	6	3.0	Y	Present/Intact	SPECWC()
L1012251-09A	Vial H2SO4 preserved split	С	N/A	.3.2	Y	Present/Intact	SPECWC()
L1012251-09B	Vial H2SO4 preserved split	С	N/A	3.2	Υ	Present/Intact	SPECWC()
L1012251-09X	Amber 250ml unpreserved	C	6	3.2	Y	Present/Intact	SPECWC()
L1012251-10A	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-10B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-10X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	SPECWC()
L1012251-11A	Vial H2SO4 preserved split	D	N/A	4.0	Y	Present/Intact	SPECWC()
L1012251-11B	Vial H2SO4 preserved split	D	N/A	4.0	Y	Present/Intact	SPECWC()
L1012251-11X	Amber 250ml unpreserved	D	6	4.0	Y	Present/Intact	SPECWC()
L1012251-12A	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-12B	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-12X	Amber 250ml unpreserved	Α	6	3.1	Υ	Present/Intact	SPECWC()
L1012251-13A	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-13B	Vial H2SO4 preserved split	Α	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-13X	Amber 250ml unpreserved	Α	6	3.1	Y	Present/Intact	SPECWC()

Project Name:

SHL TASK 0002

Lab Number:

L1012251

Project Number:

AC001

Report Date:

08/17/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS,

MDL • Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable.

NC Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI Not Ignitable.

Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration.
 The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to
assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the
absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- 1 The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.

Report Format: Data Usability Report

ALPHA

Project Name: SH

SHL TASK 0002

Lab Number:

L1012251

Project Number:

AC001

Report Date:

08/17/10

Data Qualifiers

RE Analytical results are from sample re-extraction.

J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

ALPHA

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012251

Report Date:

08/17/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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

DUPHA

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9223B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters: Total Coliform – MF mendo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Potalicides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500NH-B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.).

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,TI, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-06-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1,

SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B, Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev 7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B.

Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA

8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666, <u>Organic</u> Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited*. *Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited. Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2¯D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense <u>Certificate/Lab ID</u>: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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180 915 1

Page 32 of 32



ANALYTICAL REPORT

Lab Number:

L1012323

Client:

Sovereign Consulting

905B South Main Street

Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/07/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012323-01	GP-10-22-031-F	DEVENS, MA	08/10/10 15:16
L1012323-02	GP-10-22-031-U	DEVENS, MA	08/10/10 15:16
L1012323-03	GP-10-22-041-F	DEVENS, MA	08/10/10 16:00
L1012323-04	GP-10-22-041-U	DEVENS, MA	08/10/10 16:00
L1012323-05	GP-10-22-051-F	DEVENS, MA	08/10/10 16:45
L1012323-06	GP-10-22-051-U	DEVENS, MA	08/10/10 16:45
L1012323-07	GP-10-22-061-F	DEVENS, MA	08/10/10 17:45
L1012323-08	GP-10-22-061-U	DEVENS, MA	08/10/10 17:45
L1012323-09	GP-10-26-011-F	DEVENS, MA	08/11/10 08:34
L1012323-10	GP-10-26-011-U	DEVENS, MA	08/11/10 08:34
L1012323-11	GP-10-26-021-F	DEVENS, MA	08/11/10 09:12
L1012323-12	GP-10-26-021-U	DEVENS, MA	08/11/10 09:12
L1012323-13	GP-10-26-031-F	DEVENS, MA	08/11/10 09:56
L1012323-14	GP-10-26-031-U	DEVENS, MA	08/11/10 09:56
L1012323-15	GP-10-26-041-F	DEVENS, MA	08/11/10 10:40
L1012323-16	GP-10-26-041-U	DEVENS, MA	08/11/10 10:40
L1012323-17	GP-10-26-051-F	DEVENS, MA	08/11/10 11:15
L1012323-18	GP-10-26-051-U	DEVENS, MA	08/11/10 11:15
L1012323-19	GP-10-26-061-F	DEVENS, MA	08/11/10 12:06
L1012323-20	GP-10-26-061-U	DEVENS, MA	08/11/10 12:06
L1012323-21	GP-10-26-071-F	DEVENS, MA	08/11/10 13:15
L1012323-22	GP-10-26-071-U	DEVENS, MA	08/11/10 13:15
L1012323-23	GP-10-15-039-F	DEVENS, MA	08/11/10 09:10
L1012323-24	GP-10-15-049-F	DEVENS, MA	08/11/10 10:45
L1012323-25	GP-10-15-049-U	DEVENS, MA	08/11/10 10:45
L1012323-26	GP-10-15-059-F	DEVENS, MA	08/11/10 14:10
L1012323-27	GP-10-27-025-F	DEVENS, MA	08/11/10 15:38
L1012323-28	GP-10-27-025-U	DEVENS, MA	08/11/10 15:38
L1012323-29	RB-081110-U	DEVENS, MA	08/11/10 10:15
L1012323-30	RB2-081110-U	DEVENS, MA	08/11/10 15/00Рна
PLANT 2325-37	DUP-081110-F	DEVENS, MA	08/11/10 09:12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012323-32	DUP-081110-U	DEVENS, MA	08/11/10 09:12
L1012323-33	DUP2-081110-F	DEVENS, MA	08/11/10 15:38
L1012323-34	DUP2-081110-U	DEVENS, MA	08/11/10 15:38

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

The results for Dissolved Inorganic Carbon will be issued under separate cover.

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

The samples were received at the laboratory requiring filtration for Dissolved Organic Carbon; however, samples L1012323-02, -04, -06 and -08 were received beyond the recommended 24 hour holding time required for filtration. The samples were filtered and preserved appropriately.

Serial No:09071011:50

Project Name: Project Number: SHL TASK 0002

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Case Narrative (continued)

Dissolved Metals

L1012323-01, -03, -05, -07, -17, -19 and -21 have elevated detection limits for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

L1012323-23 and -24 have elevated detection limits for all analytes, except Mercury, due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG427366-5 MSD recovery, performed on L1012323-09, is above the acceptance criteria for Iron (123%). A post digestion spike was performed with an acceptable recovery of 107%. The parent sample (L1012323-09) result is qualified with a "J" for Iron.

Total Metals

L1012323-02, -04, -06, -08, -18, -20, -22 and -25 have elevated detection limits for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

Solids, Total Suspended

L1012323-20 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

The WG427579-2 Laboratory Duplicate RPD (36%), performed on L1012323-20, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

Chloride

L1012323-26 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.

t, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 09/07/10

METALS

Serial_No:Q9071011:50

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-01

Client ID:

GP-10-22-031-F DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 15:16

Date Received:

08/11/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	0.75	J	ug/l	2.50	0,565	5	08/12/10 13:50	0 08/17/10 09:45	EPA 3005A	1,6020A	вм
Iron, Dissolved	1780		ug/I	250	42.0	5	08/12/10 13:50	0 08/17/10 09:45	EPA 3005A	1,6020A	ВМ

Serial_No:09071011:50

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-02

Client ID:

GP-10-22-031-U DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 15:16

Date Received:

08/11/10

Field Prep:

Not Specified

rep: Not S

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	2.65		ug/l	2.50	0.565	5	08/12/10 20:4	0 08/17/10 12:17	EPA 3005A	1,6020A	вм
Iron, Total	3240		ug/l	250	42.0	5	08/12/10 20:4	0 08/17/10 12:17	' EPA 3005A	1,6020A	вм

Serial_No:09071011:50

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-03

Client ID:

GP-10-22-041-F DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 16:00

Date Received:

08/11/10

Field Prep:

See Narrative

Analytical Method Dilution Date Date Prep Factor Prepared Analyzed Method Qualifler Units MDL **Parameter** Result RL **Analyst** Dissolved Metals - Westborough Lab 1,6020A ВМ 14.5 2.00 0.452 08/12/10 13:50 08/17/10 09:51 EPA 3005A Arsenic, Dissolved ug/l 4 1,6020A Iron, Dissolved 36100 200 4 08/12/10 13:50 08/17/10 09:51 EPA 3005A ВМ ug/l 33.6

Project Name:

SHL TASK 0002

AC001

Lab Number:

L1012323

Project Number:

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-04

Client ID:

GP-10-22-041-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/10/10 16:00

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	15.8		ug/l	2.00	0.452	4	08/12/10 20:4	0 08/17/10 12:23	EPA 3005A	1,6020A	вм
Iron, Total	35300		ug/l	200	33.6	4	08/12/10 20:4	0 08/17/10 12:23	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

L1012323-05

GP-10-22-051-F DEVENS, MA

Sample Location: Matrix:

Lab ID:

Client ID:

Water

Date Collected:

08/10/10 16:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	ND		ug/l	5.00	1.13	10	08/12/10 13:50	0 08/17/10 09:57	EPA 3005A	1,6020A	вм
Iron, Dissolved	5010		ug/I	500	84.1	10	08/12/10 13:50	0 08/17/10 09:57	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-06

Client ID:

GP-10-22-051-U

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

0

Date Received:

08/10/10 16:45

Jale Receive

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	5.02		ug/l	5.00	1.13	10	08/12/10 20:4	0 08/17/10 12:30	EPA 3005A	1,6020A	вм
Iron, Total	7580		ug/l	500	84.1	10	08/12/10 20:4	0 08/17/10 12:30	EPA 3005A	1,6020A	ВМ

Project Name: SHL T

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

Lab ID:

Matrix:

L1012323-07

Client ID:

GP-10-22-061-F

Sample Location:

DEVENS, MA Water Date Collected:

08/10/10 17:45

Date Received:

08/11/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	3.53		ug/l	2.00	0.452	4	08/12/10 13:5	0 08/17/10 10:03	EPA 3005A	1,6020A	вм
Iron, Dissolved	4490		ug/l	200	33.6	4	08/12/10 13:5	0 08/17/10 10:03	EPA 3005A	1,6020A	вм

SAMPLE RESULTS

Project Name: SHL TASK 0002

Report Date:

L1012323

Project Number:

AC001

Lab Number:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-08

Client ID: Sample Location: GP-10-22-061-U DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 17:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	.ab									
Arsenic, Total	6.56		ug/l	2.00	0.452	4	08/12/10 20:4	0 08/17/10 12:36	EPA 3005A	1,6020A	вм
Iron, Total	6750		ug/l	200	33.6	4	08/12/10 20:4	0 08/17/10 12:36	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-09

GP-10-26-011-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 08:34

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	12.4		ug/l	10,0	1.91	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	0.18	J	ug/l	0.500	0,113	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	6570		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	716	J	ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	1190		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	вм
Manganese, Dissolved	59.8		ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	вм
Nickel, Dissolved	2.99		ug/i	0.500	0.180	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	3390		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	вм
Sodium, Dissolved	14300		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-10

Sample Location:

GP-10-26-011-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 08:34

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough l	_ab									
Aluminum, Total	94.0		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Arsenic, Total	0.600		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	вм
Calcium, Total	6190		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.500		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Iron, Total	854		ug/l	50.0	8,41	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Lead, Total	0.14	J	ug/I	0.500	0.050	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Magnesium, Total	1240		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Manganese, Total	67.1		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Nickel, Total	3.15		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Potassium, Total	3570		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	ВМ
Sodium, Total	13100		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-11

GP-10-26-021-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 09:12

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	12.2		ug/l	10.0	1.91	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	0.39	J	ug/l	0.500	0.113	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	16100		ug/I	100	12.6	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.32	J	ug/l	0.500	0.186	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	1170		ug/I	50.0	8.41	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.13	J	ug/l	0.500	0.050	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	1990		ug/I	100	4.10	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	103		ug/l	1.00	0.136	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Nickel, Dissolved	4.15		ug/l	0.500	0.180	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	3280		ug/I	100	18.2	1	08/12/10 13:50	0 08/17/10 10:52	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	35000		ua/l	100	18.2	1	08/12/10 13:56	0.08/17/10 10:52	EPA 3005A	1,6020A	BM

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-12

Client ID:

GP-10-26-021-U

Sample Location: Matrix:

Date Collected:

08/11/10 09:12

Date Received:

08/11/10

Field Prep:

Not Specified

DEVENS, MA Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	777		ug/l	10.0	1.91	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Arsenic, Total	2.07		ug/l	0.500	0.113	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	вм
Calcium, Total	15100		ug/l	100	12.6	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Chromium, Total	4.66		ug/I	0.500	0.186	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	вм
Iron, Total	2090		ug/l	50.0	8.41	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	вм
Lead, Total	0.630		ug/l	0.500	0.050	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Magnesium, Total	1960		ug/I	100	4.10	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Manganese, Total	129		ug/l	1.00	0,136	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Nickel, Total	5.68		ug/l	0.500	0.180	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	вм
Potassium, Total	3160		ug/I	100	18.2	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ
Sodium, Total	33100		ug/I	100	18.2	1	08/12/10 20:4	0 08/17/10 13:24	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-13

Client ID:

GP-10-26-031-F

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/11/10 09:56

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	0.540		ug/l	0.500	0.113	1	08/12/10 13:5	0 08/17/10 10:58	EPA 3005A	1,6020A	вм
Iron, Dissolved	1350		ug/l	50.0	8.41	1	08/12/10 13:5	0 08/17/10 10:58	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-14

Client ID:

GP-10-26-031-U

Matrix:

DEVENS, MA

Water

Date Collected:

(

08/11/10 09:56

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	2.86		ug/l	0.500	0.113	1	08/12/10 20:40	0 08/17/10 13:30	EPA 3005A	1,6020A	ВМ
Iron, Total	4180		ug/l	50.0	8.41	1	08/12/10 20:40	0 08/17/10 13:30	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-15

GP-10-26-041-F

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 10:40

Date Received:

08/11/10

Field Prep:

See Narrative

Analytical Method Dilution Date Date Prep Factor Prepared Analyzed Method **Parameter** Result Qualifler Units MDL Analyst RL Dissolved Metals - Westborough Lab 0.45 1,6020A Arsenic, Dissolved 0.500 0.113 08/12/10 13:50 08/17/10 11:04 EPA 3005A BM ug/l 1,6020A Iron, Dissolved 1940 ug/l 50.0 08/12/10 13:50 08/17/10 11:04 EPA 3005A BM 8.41

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

Lab ID:

SAMPLE RESULTS

L1012323-16

Client ID: Sample Location: GP-10-26-041-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 10:40

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	4.00		ug/l	0.500	0.113	1	08/12/10 20:40	0 08/17/10 13:37	EPA 3005A	1,6020A	вм
Iron, Total	6290		ug/l	50.0	8.41	1	08/12/10 20:40	0 08/17/10 13:37	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

Lab ID:

SAMPLE RESULTS

Date Collected:

08/11/10 11:15

Client ID:

L1012323-17 GP-10-26-051-F

Date Received:

08/11/10

Sample Location:

DEVENS, MA

Matrix:

Water

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	ND		ug/l	5.00	1.13	10	08/12/10 13:5	0 08/17/10 11:10	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	3140		ua/l	500	84.1	10	08/12/10 13:5	0 08/17/10 11:10	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-18

Client ID:

GP-10-26-051-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 11:15

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	4.86	J	ug/l	5.00	1.13	10	08/12/10 20:40	0 08/17/10 13:43	B EPA 3005A	1,6020A	ВМ
Iron, Total	7180		ug/l	500	84.1	10	08/12/10 20:40	0 08/17/10 13:43	3 EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

of a 12 control of the 12 control of the 1

Lab ID:

L1012323-19

Client ID:

GP-10-26-061-F DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 12:06

Date Received:

08/11/10

Field Prep:

See Narrative

Analytical Method Dilution Prep Date Date Factor Prepared Analyzed Method Result Qualifier Units RL MDL **Analyst Parameter** Dissolved Metals - Westborough Lab ND 1,6020A ВМ Arsenic, Dissolved 5.00 10 08/12/10 13:50 08/17/10 11:16 EPA 3005A ug/l 1.13 3840 1,6020A ВМ Iron, Dissolved 500 84.1 10 08/12/10 13:50 08/17/10 11:16 EPA 3005A ug/l

SAMPLE RESULTS

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-20

Client ID:

GP-10-26-061-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 12:06

Date Received:

08/11/10

Field Prep:

Description	Decut	Qualifier	Units	Di	MDI	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	A
Parameter	Result	Qualifier	Units	RL	MDL	1 00101	· repaired	7,110,7200	Motivoa	700 9760	Analyst
Total Metals - We	estborough L	_ab									
Arsenic, Total	6.48		ug/l	5.00	1.13	10	08/12/10 20:4	0 08/17/10 13:49	EPA 3005A	1,6020A	вм
Iron, Total	11900		ug/l	500	84.1	10	08/12/10 20:4	0 08/17/10 13:49	EPA 3005A	1,6020A	вм

Project Name: SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-21 GP-10-26-071-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 13:15

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved	1.96	J	ug/l	5.00	1.13	10	08/12/10 13:50	0 08/17/10 11:22	EPA 3005A	1,6020A	вм
Iron, Dissolved	3310		ug/l	500	84.1	10	08/12/10 13:50	0 08/17/10 11:22	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-22

Client ID:

GP-10-26-071-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

Date Received:

08/11/10 13:15

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	stborough L	_ab									
Arsenic, Total	3.58	J	ug/l	5.00	1.13	10	08/12/10 20:40	0 08/17/10 13:55	EPA 3005A	1,6020A	вм
Iron, Total	6430		ug/l	500	84.1	10	08/12/10 20:40	0 08/17/10 13:55	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-23

Client ID: Sample Location:

GP-10-15-039-F DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:10

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals	- Westborou	igh Lab									
Aluminum, Dissolved	18.5	J	ug/l	40.0	7.64	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	1740		ug/l	2.00	0.452	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Barium, Dissolved	124		ug/l	2.00	0,380	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Calcium, Dissolved	45600		ug/l	400	50.6	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Chromium, Dissolved	1.52	J	ug/l	2.00	0.744	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	8.62		ug/l	2.00	0.212	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	ND		ug/l	2.00	0.472	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Iron, Dissolved	101000		ug/l	200	33.6	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/I	2,00	0.200	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Magnesium, Dissolve	d 4500		ug/l	400	16.4	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Manganese, Dissolve	d 3410		ug/l	4.00	0.544	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1.6020A	вм
Mercury, Dissolved	0.04278	J	ug/l	0.2000	0.0120	1	08/30/10 12:20	0 08/30/10 16:13	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	8.06		ug/l	2.00	0.720	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	8240		ug/l	400	72.6	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	1,6020A	вм
Sodium, Dissolved	7280		ug/I	400	72.8	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	, ND .		ug/l	2.00	0.124	4	08/12/10 13:50	0 08/17/10 11:28	EPA 3005A	, 1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4		0 08/17/10 11:28		1,6020A	ВМ
Zinc, Dissolved	9.26	J	ug/l	20.0	6.50	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number: Report Date:

L1012323

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-24

Client ID: Sample Location: GP-10-15-049-F DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 10:45

Date Received:

08/11/10

Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - \	Vestboro	ugh Lab									
Aluminum, Dissolved	ND		ug/l	100	19,1	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	16600		ug/l	5.00	1.13	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	17.3		úg/l	5.00	0.950	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	49400		ug/l	1000	126.	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	41.2		ug/l	5.00	0.530	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	ND		ug/I	5.00	1,18	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	119000		ug/l	500	84.1	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	6920		ug/l	1000	41 0	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	10500		ug/l	10.0	1 36	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	0.03205	J	ug/l	0.2000	0.0120	1	08/30/10 12:2	0 08/30/10 16:25	EPA 7470A	1.7470A	EZ
Nickel, Dissolved	19.5		ug/I	5.00	1.80	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	7520		ug/l	1000	182	10	08/12/10 13:5	0 08/17/10 11;35	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/t	10.0	4.06	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/t	5.00	0.850	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Sodium, Dissolved	12000		ug/f	1000	182.	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND	7	ug/I	5.00	0.310	10 7	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	вм
Vanadium, Dissolved	ND	74 0	ug/l	5.00	0.770	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	18.7	J	ug/I	50.0	16.2	10	08/12/10 13:5	0 08/17/10 11:35	EPA 3005A	1,6020A	BM

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-25

Client ID: Sample Location: GP-10-15-049-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 10:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	_ab									
Aluminum, Total	2080		ug/l	200	38.2	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Arsenic, Total	17200		ug/l	10.0	2.26	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	ВМ
Calcium, Total	47700		ug/l	2000	253.	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Chromium, Total	5.05	J	ug/l	10.0	3.72	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Iron, Total	126000		ug/l	1000	168.	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Lead, Total	2.98	J	ug/l	10.0	1.00	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Magnesium, Total	7360		ug/l	2000	82.0	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Manganese, Total	10500		ug/l	20.0	2.72	20	08/12/10 20:40	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Nickel, Total	23.5		ug/l	10.0	3.60	20	08/12/10 20:4	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Potassium, Total	8130		ug/l	2000	363.	20	08/12/10 20:4	0 08/17/10 14:01	EPA 3005A	1,6020A	вм
Sodium, Total	12200		ug/l	2000	364.	20	08/12/10 20:4	0 08/17/10 14:01	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-26

Client ID:

GP-10-15-059-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 14:10

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	34.5		ug/l	10.0	1.91	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.49	Ĵ	ug/l	0.500	0.120	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	278		ug/l	0.500	0,113	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	7.87		ug/l	0.500	0.095	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	7	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	32100		ug/l	100	12.6	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.510		ug/l	0.500	0.186	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	0.640		ug/l	0.500	0.053	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	2.22		ug/l	0.500	0.118	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Iran, Dissolved	300		ug/l	50.0	8.41	4	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/I	0.500	0.050	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	3950		ug/l	100	4 10	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Manganese, Dissolved	466		ug/l	1.00	0 136	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1.6020A	вм
Mercury, Dissolved	ND		ug/l	0 2000	0 0120	9	08/30/10 12:2	0 08/30/10 16:27	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.49		ug/l	0.500	0.180	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Potassium, Dissolved	6410		ug/l	100	18.2	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	32300		ug/l	100	18.2	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Thallium, Dissolved	0.04	J.	ug/l	0.500	0.031	1	08/12/10 13:5	0 08/17/10 11:53	EPA: 3005A	1,6020A	вм
Vanadium, Dissolved	2.23	10	ug/l	0.500	0,077	1	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм
Zinc, Dissolved	3.05	J	ug/l	5.00	1.62	7	08/12/10 13:5	0 08/17/10 11:53	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-27

Date Collected:

08/11/10 15:38

Client ID: Sample Location: GP-10-27-025-F DEVENS, MA

Matrix:

Water

Date Received: 08/11/10
Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	16.2		ug/l	10.0	1.91	1	08/12/10 13:50	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	1.03		ug/l	0.500	0.113	1	08/12/10 13:50	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	5210		ug/l	100	12.6	1	08/12/10 13:50	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.34	J	ug/l	0.500	0.186	Ť	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	вм
Iron, Dissolved	773		ug/l	50.0	8.41	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	960		ug/l	100	4.10	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	44.9		ug/l	1.00	0.136	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Nickel, Dissolved	2.37		ug/l	0.500	0.180	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	вм
Potassium, Dissolved	3260		ug/l	100	18.2	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	52600		ug/l	100	18,2	1	08/12/10 13:5	0 08/17/10 11:59	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

C001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-28

Client ID:

GP-10-27-025-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 15:38

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	.ab									
Aluminum, Total	891		ug/l	10.0	1.91	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Arsenic, Total	2.77		ug/l	0.500	0.113	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Calcium, Total	5570		ug/l	100	12.6	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Chromium, Total	3.71		ug/l	0.500	0.186	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Iron, Total	1640		ug/l	50.0	8.41	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	вм
Lead, Total	2.03		ug/l	0.500	0.050	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	вм
Magnesium, Total	1140		ug/l	100	4.10	1	08/12/10 20:40	0 08/17/10 14:19	EPA 3005A	1,6020A	вм
Manganese, Total	56.2		ug/l	1.00	0.136	1	08/12/10 20:4	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Nickel, Total	3.71		ug/l	0.500	0.180	1	08/12/10 20:4	0 08/17/10 14:19	EPA 3005A	1,6020A	вм
Potassium, Total	3180		ug/l	100	18.2	1	08/12/10 20:4	0 08/17/10 14:19	EPA 3005A	1,6020A	ВМ
Sodium, Total	55200		ug/l	100	18.2	1	08/12/10 20:4	0 08/17/10 14:19	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

Lab ID: Client ID:

L1012323-29

08/11/10 10:15

Sample Location:

RB-081110-U DEVENS, MA

Matrix:

Water

Date Collected: 08/11/10 Date Received: Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough l	_ab									
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	вм
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Calcium, Total	44.2	J	ug/l	100	12.6	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.29	J	ug/l	0.500	0.186	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Iron, Total	18.6	J	ug/l	50.0	8.41	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Lead, Total	ND		ug/l	0.500	0.050	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	вм
Magnesium, Total	ND		ug/l	100	4.10	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Potassium, Total	24.6	J	ug/l	100	18.2	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ
Sodium, Total	58,5	J	ug/I	100	18.2	1	08/12/10 20:4	0 08/17/10 14:25	EPA 3005A	1,6020A	ВМ

SAMPLE RESULTS

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-30

Client ID: Sample Location:

RB2-081110-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 15:00

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	2.26	J	ug/l	10.0	1.91	1	08/12/10 20:40	0 08/17/10 14:32	EPA 3005A	1,6020A	вм
Arsenic, Total	0.12	J	ug/I	0.500	0,113	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Calcium, Total	53.5	J	ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.26	J	ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Iron, Total	18	J	ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Lead, Total	0.1	J	ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Magnesium, Total	ND		ug/l	100	4.10	1	08/12/10 20:40	0 08/17/10 14:32	EPA 3005A	1,6020A	ВМ
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/12/10 20:40	0 08/17/10 14:32	EPA 3005A	1,6020A	вм
Nickel, Total	ND		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	вм
Potassium, Total	19.4	J	ug/l	100	18.2	1	08/12/10 20:40	0 08/17/10 14:32	EPA 3005A	1,6020A	вм
Sodium, Total	43	J	ug/I	100	18.2	1	08/12/10 20:40	0 08/17/10 14:32	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID:

L1012323-31 DUP-081110-F

DEVENS, MA

Date Collected: Date Received: 08/11/10 09:12

Sample Location: Matrix:

Water

08/11/10 See Narrative

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestborou	igh Lab									
Aluminum, Dissolved	9.64	J	ug/I	10.0	1.91	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	0.650		ug/l	0.500	0.113	ì	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	15.3		ug/l	0.500	0.095	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	0,500	0.059	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	вм
Calcium, Dissolved	15700		ug/l	100	12.6	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.22	J	ug/l	0.500	0.186	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	1.31		ug/l	0.500	0.053	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	0.630		ug/l	0.500	0.118	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	1140		ug/l	50.0	8.41	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	1900		ug/l	100	4 10	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1.6020A	ви
Manganese, Dissolved	103		ug/l	1 00	0.136	1	08/12/10 13 50	0 08/17/10 12:05	EPA 3005A	1.6020A	ВМ
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 12:20	0 08/30/10 16:29	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	3.98		ug/l	0.500	0.180	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	3210		ug/l	100	18.2	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	0.79	J	ug/l	1.00	0.406	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	34200		ug/l	100.	18.2	4.1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND .		-ug/l -	0:500	0.031	1-	-08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	- 1,6020A	BM ⁻
Vanadium, Dissolved	0.19	J	ug/l	0.500	0.077	1	08/12/10 13:50	0 08/17/10 12:05	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	11.8		ug/l	5.00	1.62	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-32

Client ID:

DUP-081110-U

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/11/10 09:12

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	_ab									
Aluminum, Total	584		ug/l	10.0	1.91	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Arsenic, Total	1.72		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Calcium, Total	16100		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Chromium, Total	3.99		ug/l	0.500	0.186	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Iron, Total	1800		ug/l	50.0	8.41	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Lead, Total	0.540		ug/l	0.500	0.050	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Magnesium, Total	1820		ug/l	100	4.10	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Manganese, Total	120		ug/l	1.00	0.136	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	вм
Nickel, Total	4.99		ug/l	0.500	0.180	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	вм
Potassium, Total	3020		ug/l	100	18.2	1	08/12/10 20:4	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ
Sodium, Total	37300		ug/l	100	18.2	1	08/12/10 20:40	0 08/17/10 14:38	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Lab ID;

L1012323-33

Client ID:

DUP2-081110-F

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/11/10 15:38

Date Received:

08/11/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	17.1		ug/l	10.0	1.91	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	0.38	J	ug/l	0.500	0.113	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Barium, Dissolved	14.8		ug/l	0.500	0.095	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/I	0.500	0.059	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	5380		ug/l	100	12.6	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.33	J	ug/l	0.500	0.186	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	0.560		ug/l	0.500	0.053	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.44	J	ug/l	0.500	0.118	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Iron, Dissolved	804		ug/l	50.0	8.41	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Lead, Dissolved	0.06	J	ug/l	0.500	0 050	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	984		ug/l	100	4.10	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	BN
Manganese, Dissolved	45.5		ug/l	1 00	0 136	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1.6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 12:20	0 08/30/10 16:31	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.17		ug/l	0.500	0 180	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Potassium, Dissolved	3210		ug/l	100	18.2	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/I	0.500	0.085	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Sodium, Dissolved	53000		ug/l	100	18.2	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND		_ug/l	0.500	0.031	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM .
Vanadium, Dissolved	0.21	J	ug/l	0.500	0.077	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1.6020A	вм
Zinc, Dissolved	3.27	J	ug/l	5.00	1.62	1	08/12/10 13:50	0 08/17/10 12:11	EPA 3005A	1,6020A	вм

SAMPLE RESULTS

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-34

Client ID:

DUP2-081110-U

Matrix:

DEVENS, MA

Sample Location:

Water

Date Collected:

08/11/10 15:38

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	.ab									
Aluminum, Total	789		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Arsenic, Total	1.11		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Calcium, Total	5550		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Chromium, Total	3.16		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Iron, Total	1510		ug/I	50.0	8.41		08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	ВМ
Lead, Total	1.73		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Magnesium, Total	1120		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	ВМ
Manganese, Total	53.0		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	ВМ
Nickel, Total	3.48		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	ВМ
Potassium, Total	3160		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм
Sodium, Total	57400		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Method Blank Analysis Batch Quality Control

Parameter	Result C	ualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Wes	stborough Lab	for same	ole(s): 01	,03,05,0	07,09,1	1,13,15,17	,19,21,23-24,2	Batch: WG	127366-1	
Aluminum, Dissolved	2.62	Ĵ	ug/l	10.0	1,91	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	0.500	0,120	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Barium, Dissolved	ND		ug/l	0.500	0.095	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Calcium, Dissolved	ND		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Iron, Dissolved	19.6	J	ug/l	50.0	8.41	10	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Manganese, Dissolved	0.15	J	ug/I	1.00	0.136	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/12/10 13:50	08/17/10 03:34	1 6020A	BM
Potassium Dissolved	218	J	ug/l	100	182	1	08/12/10 13:50	08/17/10 03:34	1 6020A	вм
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Silver, Dissolved	ND		ug/I	0.500	0.085	3	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Sodium, Dissolved	31.3	j	ug/I	100	18.2	1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/12/10 13:50	08/17/10 03:34	1,6020A	ВМ
Zinc, Dissolved	ND		ųg/l	5.00	1.62	. 1	08/12/10 13:50	08/17/10 03:34	1,6020A	вм

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	t Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytica Method	Analyst
Total Metals - Westboroug	h Lab fo	or sample(s):	02,04,0	06,08,10	,12,14,	16,18,20,2	2,25,28-3 Bat	ch: WG4274	45-1	
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 03:40	1,6020A	ВМ
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 03:40	1,6020A	ВМ
Calcium, Total	14.9	J	ug/l	100	12.6	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Chromium, Total	ND		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 03:40	1,6020A	ВМ

Project Name: SHL TASK 0002 Lab Number: L1012323

Project Number: AC001 Report Date: 09/07/10

Method Blank Analysis Batch Quality Control

Iron, Total	10.7	J	ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Lead, Total	ND		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Magnesium, Total	ND		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Manganese, Total	ND		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Nickel, Total	ND		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Potassium, Total	ND		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 03:40	1,6020A	вм
Sodium, Total	29.2	J	ug/l	100	18.2	1	08/12/10 20:40	08/17/10 03:40	1,6020A	ВМ

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Dissolved Metals - Wes	stborough Lab for samp	ole(s): 23	-24,26,3	31,33	Batch: WG	430111-1			
Mercury, Dissolved	ND	ug/l	0.2000	0.0120	1	08/30/10 12:20	08/30/10 16:22	1,7470A	EZ

Prep Information

Digestion Method: EPA 7470A



Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual		covery nits	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05	5,07,09,11,13,15,	17,19,21,2	23-24,2	Batch:	WG427366-2		
Aluminum, Dissolved	99				80-	120			
Antimony, Dissolved	100		*		80-	120			
Arsenic, Dissolved	102				80-	120	¥		
Barium, Dissolved	101		-		80-	120	4.0		
Beryllium, Dissolved	108		÷		80-	120			
Cadmium, Dissolved	113				80-	120			
Calcium, Dissolved	105				80-	120			
Chromium, Dissolved	98		*		80-	120			
Cobalt, Dissolved	106		3		80-	120	+		
Copper, Dissolved	105		į.		80-	120	(-		
Iron, Dissolved	113		40		80-	120	4		
Lead, Dissolved	102				80-	120			
Magnesium, Dissolved	105		21		80-	120	*		
Manganese, Dissolved	106		91		80-	120	*		
Nickel, Dissolved	104				80-	120	*		
Potassium, Dissolved	107		•		80-	120			
Selenium, Dissolved	104		150		80-	120			
Silver, Dissolved	101		*		80-	120	(*)		
Sodium, Dissolved	106				80-	120	+		
Thallium, Dissolved	98				80-	120	8.		
Vanadium, Dissolved	102		-		80-	120			

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05,07,09,11,13,15,17,19,21,23-	24,2 Batch	: WG427366-2	
Zinc, Dissolved	104		80-120	Ď.	
Total Metals - Westborough Lab Ass	sociated sample(s): 02,	04,06,08,10,12,14,16,18,20,22,25,28-3	Batch: W	G427445-2	
Aluminum, Total	92 ·	4	80-120	4.	
Arsenic, Total	96	127	80-120	4	
Calcium, Total	99	4	80-120	(*)	
Chromium, Total	91		80-120		
Iron, Total	103⋅	((8))	80-120		
Lead, Total	97		80-120		
Magnesium, Total	99	121	80-120	16	
Manganese, Total	96	100	80-120	*	
Nickel, Total	97	1-1	80-120		
Potassium, Total	100	Y	80-120		
Sodium, Total	106		80-120	*	
Dissolved Metals - Westborough Lab	Associated sample(s):	23-24,26,31,33 Batch: WG430111-	2		
Mercury, Dissolved	116		80-120	9-	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Wes Sample: L1012323-09	stborough Lab Assoc Client ID: GP-10-2		e(s): 01,03,	05,07,09,11,13	.15,17,1	9,21,23-24,2	QC Batch	ID: WO	3427366-4	WG4273	66-5	QC
Aluminum, Dissolved	12.4	2000	1960	97		2070	103		80-120	5		20
Antimony, Dissolved	ND	500	500	100		525	105		80-120	5		20
Arsenic, Dissolved	ND	120	125	104		128	107		80-120	2		20
Barium, Dissolved	16.5	2000	2040	101		2150	107		80-120	5		20
Beryllium, Dissolved	ND	50	54.0	108		55.3	111		80-120	2		20
Cadmium, Dissolved	ND	51	57.6	113		60.3	118		80-120	5		20
Calcium, Dissolved	6570	10000	17800	112		17200	106		80-120	3		20
Chromium, Dissolved	ND	200 ,	195	98		205	102		80-120	5		20
Cobalt, Dissolved	0.830	500 .	529	106		562	112		80-120	6		20
Copper, Dissolved	0.500	250	261	104		275	110		80-120	5		20
Iron, Dissolved	716	1000	1830	111		1950	123	Q	80-120	6		20
Lead, Dissolved	ND	510	528	104		551	108		80-120	4		20
Magnesium, Dissolved	1190	10000	11800	106		12300	111		80-120	4		20
Manganese, Dissolved	59.8	500 ;	579	104		614	111		80-120	6		20
Nickel, Dissolved	2.99	500	520	103		552	110		80-120	6		20
Potassium, Dissolved	3390	10000:	14200	108		14900	115		80-120	5		20
Selenium, Dissolved	ND	120	127	106		131	109		80-120	3		20
Silver, Dissolved	ND	50	49.8	100		52.5	105		80-120	5		20
Sodium, Dissolved	14300	10000	25700	114		24000	97		80-120	7		20
Thallium, Dissolved	ND	120	119	99		123	102		80-120	3		20
Vanadium, Dissolved	ND	500	508	102		538	108		80-120	6		20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	Native Sample	MS - Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westboroug Sample: L1012323-09 Client	h Lab Associ ID: GP-10-26		(s): 01,03,	05,07,09,11,13,15,	17,19,21,23-24,	,2 QC Batch ID:	WG427366-4	WG427366-5	QC
Zinc, Dissolved	8.07	500	528	104	548	108	80-120	4	20
Total Metals - Westborough Lal L1012323-10 Client ID: GP-1		sample(s): 0	02,04,06,08	3,10,12,14,16,18,2	0,22,25,28-3	QC Batch ID: WG4	27445-3 WG	427445-4 QC	Sample:
Aluminum, Total	94.0	2000	2060	98	2040	97	80-120	1	20
Arsenic, Total	0.600	120	127	105	125	104	80-120	2	20
Calcium, Total	6190	10000	16400	102	16300	101	80-120	1	20
Chromium, Total	0.500	200	197	98	193	96	80-120	2	20
Iron, Total	854	1000	1960	111	1920	107	80-120	2	20
Lead, Total	ND	510	538	105	530	104	80-120	1	20
Magnesium, Total	1240	10000	11900	107	11700	105	80-120	2	20
Manganese, Total	67.1	500	602	107	586	104	80-120	3	20
Nickel, Total	3,15	500	526	104	514	102	80-120	2	20
Potassium, Total	3570	10000	14100	105	14100	105	80-120	0	20
Sodium, Total	13100	10000	23100	100	23500	104	80-120	2	20
Dissolved Metals - Westboroug GP-10-15-039-F	h Lab Associ	ated sample	(s): 23-24,	26,31,33 QC Bat	ch ID: WG4301	11-3 WG430111-4	4 QC Sample	e: L1012323-2	3 Client
Mercury, Dissolved	ND	1 -	1.124	112	1.073	107	80-120	5	20

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-02

Client ID:

GP-10-22-031-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 15:16

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab)								
Solids, Total Suspended	51		mg/l	5.0	NA	1		08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	1.5		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-04

Client ID:

GP-10-22-041-U

Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 16:00

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	68		mg/l	5.0	NA	1		08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	2.8		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-06

Client ID:

GP-10-22-051-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 16:45

Date Received:

ed: 08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab)								
Solids, Total Suspended	160		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	3.0		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Lab Number:

Project Number: AC001 Report Date: 09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-08 GP-10-22-061-U

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 17:45

L1012323

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	670		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	2.3		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-10

Client ID:

GP-10-26-011-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 08:34

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	13		mg/l	5.0	NA	1		08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-12

Client ID:

GP-10-26-021-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:12

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	ė,								
Solids, Total Suspended	22		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	ND		mg/I	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-14

Client ID:

GP-10-26-031-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:56

Date Received:

veu.

08/11/10 Not Spec

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab)								
Solids, Total Suspended	56		mg/l	5.0	NA	1		08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002 Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-16

Client ID:

GP-10-26-041-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 10:40

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	320		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	1.7		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-18

Client ID:

GP-10-26-051-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 11:15

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab	1								
Solids, Total Suspended	120		mg/l	5.0	NA	1	100	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	2.4		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-20

Client ID:

GP-10-26-061-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 12:06

Date Received:

08/11/10

Field Prep:

Date	Date	Analytical	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	2300		mg/l	10	NA	2		08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	4.5		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-22

Client ID:

GP-10-26-071-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 13:15

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	160		mg/f	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	3.9		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Name: SHL TASK 0002 Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-23

Client ID:

GP-10-15-039-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:10

Date Received:

08/11/10

Field Prep: See Narrative

Parameter	Result	Qualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab	i							
Alkalinity, Total	340	mg CaCC	03/L 2.0	NA	1		08/12/10 10:12	30,23208	JO
Nitrogen, Ammonia	7.52	mg/l	0.075	0.017	1	08/12/10 15:00	08/16/10 21:57	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1		08/12/10 20:14	30,4500NO2-B	DD
Sulfide	ND	mg/l	0.10	0.10	1	08/17/10 17:00	08/17/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	25	mg/l	20	7.0	1	-	08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	4.9	mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW
Anions by Ion Chromatog	graphy - West	borough Lab							
Chloride	5.0	mg/l	0.50	0.07	1	*	08/16/10 19:49	44,300.0	ED
Nitrogen, Nitrate	0.06	mg/l	0.05	0.01	1	-	08/12/10 01:16	44,300.0	AU
Sulfale	0.58	J mg/l	1.0	0,12	1	*	08/16/10 19:49	44,300.0	ED
					1				

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-24

Client ID:

GP-10-15-049-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 10:45

Date Received:

08/11/10

Field Prep:

See Narrative

Parameter	Result	Qualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab	1							
Alkalinity, Total	330	mg CaCO3/L	2.0	NA	1		08/12/10 10:12	30,2320B	JO
Nitrogen, Ammonia	2.61	mg/l	0.075	0.017	1	08/12/10 15:00	08/16/10 21:58	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	4	08/12/10 20:15	30,4500NO2-B	DD
Sulfide	ND	mg/l	0.10	0.10	1	08/17/10 17:00	08/17/10 18:00	30,4500\$2-AD	AT
Chemical Oxygen Demand	40	mg/l	20	7.0	1	*	08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	3.0	mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW
Anions by Ion Chromatog	graphy - West	borough Lab							
Chloride	12	mg/l	0.50	0.07	1	*	08/16/10 18:37	44,300.0	ED
Nitrogen, Nitrate	0.05	mg/l	0.05	0,01	1		08/12/10 01:28	44,300.0	AU
Sulfate	4.2	mg/l	1.0	0.12	1		08/16/10 18:37	44,300.0	ED

Project Name: SHL TASK 0002

Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID: Client ID: L1012323-25 GP-10-15-049-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 10:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab									
Solids, Total Suspended	190		mg/l	5.0	NA	1		08/13/10 16:35	30,2540D	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-26

Client ID:

GP-10-15-059-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 14:10

Date Received:

08/11/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Alkalinity, Total	89		mg CaCO3/L	2.0	NA	1		08/12/10 10:12	30,2320B	JO
Nitrogen, Ammonia	0.508		mg/l	0.075	0.017	1	08/12/10 15:00	08/16/10 22:01	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1		08/12/10 20:15	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/17/10 17:00	08/17/10 18:00	30,4500S2-AD	AT
Chemical Oxygen Demand	22		mg/l	20	7.0	1		08/13/10 13:44	44,410.4	DW
Dissolved Organic Carbon	4.0		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW
Anions by Ion Chromatog	graphy - West	borough	Lab							
Chloride	59		mg/l	1.0	0.13	2	4	08/16/10 19:37	44,300.0	ED
Nitrogen, Nitrate	0.48		mg/l	0.05	0.01	1		08/12/10 01:40	44,300.0	AU
Sulfate	15		mg/l	1.0	0.12	1	-	08/16/10 18:49	44,300.0	ED

Project Name: SHL TASK 0002

Lab Number:

L1012323

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012323-28

Client ID:

GP-10-27-025-U

Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 15:38

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - West	borough Lab									
Solids, Total Suspended	40		mg/l	5.0	NA	1	•	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qua	lifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab fo	or sample(s):	23-24,26	Batch:	WG427279	-2			
Alkalinity, Total	ND	mg CaCo	O3/L 2.0	NA	1	100	08/12/10 10:12	30,2320B	JO
General Chemistry - We	stborough Lab fo	or sample(s):	23-24,26	Batch:	WG427397	-1.			
Nitrogen, Ammonia	0.0178	J mg/l	0.075	0.017	1	08/12/10 15:00	08/16/10 21:41	30,4500NH3-BH	H AT
General Chemistry - We	stborough Lab fo	or sample(s):	23-24,26	Batch:	WG427402	-2			
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	4	08/12/10 20:13	30,4500NO2-B	DD
General Chemistry - We	stborough Lab fo	or sample(s):	23-24,26	Batch:	WG427493	-1			
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	<u>.</u>	08/13/10 13:40	44,410.4	DW
General Chemistry - We	stborough Lab fo	or sample(s):	02,04,06,	08,10,12	2,14,16,18,20	0,22,25,28 E	Batch: WG42	7579-1	
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Anions by Ion Chromato	graphy - Westbo	rough Lab for	sample(s): 23-24	,26 Batch:	WG427650-	1.		
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1		08/11/10 18:51	44,300.0	AU
nions by Ion Chromato	graphy - Westbo	rough Lab for	sample(s): 23-24	1,26 Batch:	WG428007-	1		
Chloride	ND	mg/l	0.50	0.07	1	2	08/16/10 18:01	44,300 0	ED
Sulfale	ND	mg/l	1.0	0.12	i i	4	08/16/10 18:01	44,300 0	ED
General Chemistry - We	stborough Lab fo	or sample(s):	23-24,26	Batch:	WG428140	-1			
Sulfide	ND	mg/l	0.10	0.10	1.	08/17/10 17:00	08/17/10 18:00	30,4500S2-AE) AT
General Chemistry - We	stborough Lab fo	or sample(s):	02,04,06,	08,10,12	2,14,16,18,20	0,22-24,26,2	Batch: WG	428227-1	
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	08/12/10 01:30	08/18/10 07:21	30,5310C	DW

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	' Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	Batch: V	VG427279-				
Alkalinity, Total	110.		*		80-115	21		4
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	Batch: V	VG4273 97- 2	2			
Nitrogen, Ammonia	98 📜				80-120	-		20
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	Batch: V	VG427402-1				
Nitrogen, Nitrite	100		-		90-110			20
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	Batch: V	VG427493-2	12			
Chemical Oxygen Demand	90,				95-105			
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s): 23-24,26	Batch: \	NG427650-2			
Nitrogen, Nitrate	92				90-110	2.4		
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s): 23-24,26	Batch: \	VG428007-2			
Chloride	98				90-110			
Sulfate	90				90-110	(*)		
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	Batch: W	VG428140-2				
Sulfide	96		2		75-125	2		

Lab Control Sample Analysis Batch Quality Control

Lab Number:

L1012323

Report Date:

09/07/10

4		
2		

LCS-LCSD %Recovery Limits Parameter %Recovery %Recovery RPD **RPD Limits**

General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22-24,26,2 Batch: WG428227-2

Dissolved Organic Carbon

Project Name:

Project Number:

SHL TASK 0002

AC001

90-110

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits		RPD Qual Limits
General Chemistry - Westbor	ough Lab Asso	ciated samp	le(s): 23-24	4,26 QC Bato	h ID: W	G427279-3	QC Sample	e: L101	2323-26	Client ID	: GP-10-15-059
F		9.									
Alkalinity, Total	89	100	190	101		*	8		86-116		4
General Chemistry - Westbor	ough Lab Asso	ociated samp	le(s): 23-24	4,26 QC Bato	h ID: W	G427397-3	QC Sample	e: L101	2323-26	Client ID	: GP-10-15 - 059
Nitrogen, Ammonia	0.508	4 ;	4.27	94		(2)			80-120	*	20
General Chemistry - Westbor	ough Lab Asso	ciated sampl	le(s): 23-24	4,26 QC Bato	h ID: W	G427402-3	QC Sample	e: L101	2323-23	Client ID	: GP-10-15-039
Nitrogen, Nitrite	ND	01 .	0.10	100		4	-		85-115	1	20
General Chemistry - Westbor	ough Lab Asso	ciated sample	le(s): 23-24	1,26 QC Bato	h ID: W	G427493-3	QC Sample	e: L101	2243-15	Client ID	: MS Sample
Chemical Oxygen Demand	36	238	280	103					80-120	o¥ i	20
Anions by Ion Chromatograph Client ID: GP-10-15-059-F	ny - Westborou	gh Lab Asso	ciated sam	ple(s): 23-24,2	6 QC	Batch ID: W	/G427650-3 \	NG427	650-4 QC	C Sample	L1012323-26
Nitrogen, Nitrate	0.48	04 .	0.84	90		0.85	93		80-122	1	15
Anions by Ion Chromatograph Client ID: GP-10-15-039-F	ny - Westborou	gh Lab Asso	ciated sam	ple(s): 23-24,2	6 QC	Batch ID: W	/G428007-3 \	NG428	007-4 QC	Sample	L1012323-23
Chloride	5.0	4 -	8.6	90		8.6	90		40-151	0	18
Sulfate	ND	8 .	8.0	100		8.2	102		60-140	2	20
General Chemistry - Westbor F	ough Lab Asso	ciated sampl	e(s): 23-24	1,26 QC Batc	h ID: W	G428140-3	QC Sample	e: L101	2323-26	Client ID:	GP-10-15-059
Sulfide	ND	0.24	0.19	79		12	÷		75-125	2	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found %	MSD Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Wes		ciated samp	ole(s): 02,04	4,06,08,10,12,14,1	6,18,20,22-24,26,2	QC Batch	ID: WG428227-3	QC Sar	nple:
	stborough Lab Asso GP-10-22-041-U	ciated samp	ole(s): 02,0	4,06,08,10,12,14,1	6,18,20,22-24,26,2	QC Batch	ID: WG428227-3	QC Sar	mple:

Lab Duplicate Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Parameter	Nati	ive Sample	Dup	licate Samp	le Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab F	Associated sample(s):	23-24,26	QC Batch ID:	WG427279	9-4 QC Sample:	L1012323-23	Client ID:	GP-10-15-039-
Alkalinity, Total		340		330	mg CaCO3/L	3		4
General Chemistry - Westborough Lab F	Associated sample(s):	23-24,26	QC Batch ID:	WG427397	-4 QC Sample:	L1012323-26	Client ID:	GP-10-15-059-
Nitrogen, Ammonia		0.508		0.554	mg/l	9		20
General Chemistry - Westborough Lab F	Associated sample(s):	23-24,26	QC Batch ID:	WG427402	-4 QC Sample:	L1012323-26	Client ID:	GP-10-15-059-
Nitrogen, Nitrite	* **	0.01J		0.01J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	QC Batch ID:	WG427493	-4 QC Sample:	L1012243-15	Client ID:	DUP Sample
Chemical Oxygen Demand		36.		34	mg/l	6		20
General Chemistry - Westborough Lab 20 Client ID: GP-10-26-061-U	Associated sample(s):	02,04,06,0	8,10,12,14,16,	18,20,22,25,	28 QC Batch II): WG427579	-2 QC Sa	mple: L1012323-
Solids, Total Suspended	9:	2300		1600	mg/l	36	Q	32
Anions by <mark>Ion Chromatography - Wes</mark> tbo 10-15-059-F	orough Lab Associated	l sample(s):	23-24,26 C	C Batch ID:	WG427650-5	QC Sample: L	.1012323-2	6 Client ID: GP-
Nitrogen, Nitrate	4	0.48		0.47	mg/l	2		15
Anions by Ion Chromatography - Westbo 10-15-039-F	prough Lab Associated	sample(s):	23-24,26 C	C Batch ID:	WG428007-5	QC Sample: L	1012323-2	3 Client ID: GP-
Chloride	7.	5.0		4.9	mg/l	2		18
Sulfate	,	0.58J		0.6J	mg/l	NC		20

Lab Duplicate Analysis Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012323

Report Date:

09/07/10

Parameter	ameter Native S		Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	23-24,26	QC Batch ID: WG428140-4	QC Sample:	L1012323-23	Client ID: GP-10-15-039-
Sulfide		ND	ND	mg/l	NC	20
General Chemistry - Westborough Lab L1012323-12 Client ID: GP-10-26-021		02,04,06,0	8,10,12,14,16, 18,20,22-24,2 6	6,2 QC Batch	ID: WG42822	7-4 QC Sample:
Dissolved Organic Carbon		ND	1.0	mg/l	NC	20

45 5

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012323 Report Date: 09/07/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В Present/Intact C Present/Intact A Present/Intact D Present/Intact

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012323-01A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180), DOD-AS-6020S(180)
L1012323-02A	Plastic 1000ml unpreserved	Α	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-02B	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012323-02C	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	DOC-5310(28)
L1012323-02D	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-02E	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-03A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012323-04A	Plastic 1000ml unpreserved	Α	7	29	Y	Present/Intact	TSS-2540(7)
L1012323-04B	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-AS-6020T(180), DOD-FE- 6020T(180)
L1012323-04C	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-04D	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-04E	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-05A	Plastic 250ml HNO3 preserved	D	<2	4	Υ.	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012323-06A	Plastic 1000ml unpreserved	Α	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-06B	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-06C	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	DOC-5310(28)
L1012323-06D	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-06E	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-07A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012323-08A	Plastic 1000ml unpreserved	Α	7	2.9	Y	Present/Intact	TSS-2540(7)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012323-08B	Plastic 250ml HNO3 preserved	A	<2	2.9	Υ	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-08C	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-08D	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-08E	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-09A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180)
L1012323-09B	Plastic 250ml HNO3 preserved	Α	<2	2.9	Y	Present/Intact	DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180)
L1012323-10A	Plastic 1000ml unpreserved	A	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-10B	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012323-10C	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-
	3	E			, ,	<u>.</u>	6020T(180),DOD-CA- 6020T(180),DOD-MN- 6020T(180),DOD-AL- 6020T(180),DOD-CR- 6020T(180),DOD-K- 6020T(180),DOD-MG- 6020T(180),DOD-FE- 6020T(180),DOD-PB- 6020T(180),DOD-PB-
L1012323-10D	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	DOC-5310(28)
L1012323-10E	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-10F	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)

Project Name:

SHL TASK 0002

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012323-11A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Infact	DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-MN-6020S(180),DOD-MN-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180)
L1012323-12A	Plastic 1000ml unpreserved	C	7	5.1	Y	Present/Intact	TSS-2540(7)
L1012323-12B	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012323-12C	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	DOC-5310(28)
L1012323-12D	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-12E	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-13A	Plastic 250ml HNO3 preserved	В	<2	2.6	Υ	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012323-14A	Plastic 1000ml unpreserved	C	7	5.1	Y	Present/Intact	TSS-2540(7)
L1012323-14B	Plastic 250ml HNO3 preserved	В	<2	2.6	Υ	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-14C	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-14D	Vial H2SO4 preserved split	В	N/A	26	Y	Present/Intact	DOC-5310(28)
L1012323-14E	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-15A	Plastic 250ml HNO3 preserved	В	<2	2.6	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012323-16A	Plastic 1000ml unpreserved	C	7	5,1	- Y	Present/Intact	TSS-2540(7)
L1012323-16B	Plastic 250ml HNO3 preserved	В'	<2	2.6	Υ Υ	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-16C	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-16D	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-16E	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-17A	Plastic 250ml HNO3 preserved	C	<2	5.1	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012323-18A	Plastic 1000ml unpreserved	C	7	5.1	Y	Present/Intact	TSS-2540(7)
L1012323-18B	Plastic 250ml HNO3 preserved	C	<2	5.1	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-18C	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	DOC-5310(28)
L1012323-18D	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012323-18E	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012323-19A	Plastic 250ml HNO3 preserved	C	<2	5.1	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012323-20A	Plastic 1000ml unpreserved	С	7	5.1	Y	Present/Intact	TSS-2540(7)
L1012323-20B	Plastic 250ml HNO3 preserved	C	<2	5.1	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-20C	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-20D	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-20E	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-21A	Plastic 250ml HNO3 preserved	В	<2	2.6	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS- 6020S(180)
L1012323-22A	Plastic 1000ml unpreserved	C	7	5.1	Y	Present/Intact	TSS-2540(7)
L1012323-22B	Plastic 250ml HNO3 preserved	В	<2	2.6	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE- 6020T(180)
L1012323-22C	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-22D	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-22E	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-23A	Plastic 500ml unpreserved	С	7	5.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012323-23B	Plastic 500ml H2SO4 preserved	C	<2	5.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012323-23C	Plastic 250ml HNO3 preserved	C	<2	5.1	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S
1-	2 3 - 10 - 13		Q(4,0)	-		5 10	6020S(180),DOD-CD- 6020S(180),DOD-BE-
Tage						, ,,	6020S(180),DOD-CU- 6020S(180),DOD-ZN- 6020S(180),DOD-AL- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)
L1012323-23D	Plastic 250ml unpreserved	Α	7	2.9	Y	Present/Intact	NO2-4500NO2(2)
L1012323-23E	Plastic 250ml Zn Acetate/NaOH pr	C	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012323-23F	Plastic 250ml Zn Acetate/NaOH pr	C	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012323-23G	Plastic 250ml Zn Acetate/NaOH pr	C	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012323-23H	Amber 250ml unpreserved	C	7	5.1	Y	Present/Intact	DOC-5310(28)
L1012323-23I	Plastic 250ml unpreserved	D	N/A	4	Y	Present/Intact	ALK-T-2320(14)

Project Number: AC001

	Container Info	rmation			Temp			
	Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
	L1012323-23J	Vial H2SO4 preserved split	С	N/A	5.1	Y	Present/Intact	DOC-5310(28)
	L1012323-23K	Vial H2SO4 preserved split	C	N/A	5.1	Y	Present/Intact	DOC-5310(28)
	L1012323-24A	Plastic 500ml unpreserved	В	7	2,6	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
	L1012323-24B	Plastic 500ml H2SO4 preserved	В	<2	2.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
	L1012323-24C	Plastic 250ml HNO3 preserved	В	<2	2.6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-SB-6020S(180),DOD-SB-6020S(180),DOD-BE-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
	L1012323-24D	Plastic 250ml unpreserved	В	7	2.6	Y	Present/Intact	NO2-4500NO2(2)
	L1012323-24E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	26	Y	Present/Intact	SULFIDE-4500(7)
	L1012323-24F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
	L1012323-24G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
	L1012323-24H	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	DOC-5310(28)
	L1012323-241	Plastic 250ml unpreserved	В	N/A	2.6	Y	Present/Intact	ALK-T-2320(14)
	L1012323-24J	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
	L1012323-24K	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
١	L1012323-25A	Plastic 1000ml unpreserved	Α .	7	2.9	Y	Present/Intact	TSS-2540(7)
	L1012323-25B	Plastic 250ml HNO3 preserved	В	<2	2.6	Y	Present/Intact	DOD-NA-6020T(180), DOD-NI-6020T(180), DOD-CA-6020T(180), DOD-MN-6020T(180), DOD-AL-6020T(180), DOD-AS-6020T(180), DOD-CR-6020T(180), DOD-K-6020T(180), DOD-HG-6020T(180), DOD-FE-6020T(180), DOD-PB-6020T(180), DOD-PB-6020T(180)
	L1012323-26A	Plastic 500ml unpreserved	В	7	2.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
	L1012323-26B	Plastic 500ml H2SO4 preserved	В	<2	2,6	Y	Present/Intact	COD-410(28),NH3-4500(28)

Project Number: AC001

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	The Victor of the	Pres	Seal	Analysis(*)
L1012323-26C	Plastic 250ml HNO3 preserved	В	<2	26	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-SB-6020S(180),DOD-SB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-XN-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-26D	Plastic 250ml unpreserved	В	7	2.6	Y	Present/Intact	NO2-4500NO2(2)
L1012323-26E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26H	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-26I	Plastic 250ml unpreserved	В	N/A	2.6	Y	Present/Intact	ALK-T-2320(14)
L1012323-26J	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-26K	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-27A	Plastic 250ml HNO3 preserved	A	<2	2.9	Y	Present/Intact	DOD-FE-6020S(180),DOD-MG- 6020S(180),DOD-CR- 6020S(180),DOD-MN- 6020S(180),DOD-NA- 6020S(180),DOD-NI- 6020S(180),DOD-PB- 6020S(180),DOD-AS- 6020S(180),DOD-AL-
100	7 7 10 10 10 10	- w	8.5		1	OLC WILL	6020S(180),DOD-K-6020S(180)
L1012323-28A	Plastic 1000ml unpreserved	A	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-28B	Plastic 250ml HNO3 preserved	Α	<2	2.9	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012323-28C	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	DOC-5310(28)

Project Number: AC001

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Report Date: 09/07/10

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012323-28D	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-28E	Vial H2SO4 preserved split	Α	N/A	2,9	Y	Present/Intact	DOC-5310(28)
L1012323-29A	Plastic 250ml HNO3 preserved	С	<2	5.1	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012323-30A	Plastic 250ml HNO3 preserved	Α	<2	29	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012323-31A	Plastic 250ml HNO3 preserved	D	<2	4	Ý	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-MG-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-V-6020S(180),DOD-AS-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-BE-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-
1 1 1					-1	2	6020S(180),DOD-ZN- 6020S(180),DOD-AL-
		,					6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)
L1012323-32A	Plastic 250ml HNO3 preserved	D	<2	4	Υ	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012323-33A	Plastic 250ml HNO3 preserved	A	<2	2.9	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-MN-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NB-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-34A	Plastic 250ml HNO3 preserved	A	<2	2.9	Υ	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-MG-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)

Project Name:

SHL TASK 0002

Lab Number:

L1012323

Project Number:

AC001

Report Date:

09/07/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD Laboratory Control Sample Duplicate: Refer to LCS.

MDL • Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI · Not Ignitable.

RL Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A -Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis.

Report Formal: DU Report with "J" Qualifiers

ALPHA

Project Number: AC001 Lab Number:

L1012323

Report Date:

09/07/10

Data Qualifiers

RE · Analytical results are from sample re-extraction.

· Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).

- Not detected at the method detection limit (MDL) for the sample. ND

DU Report with "J" Qualifiers Report Format:

Lab Number:

Project Name: SHL TASK 0002

L1012323 **Project Number:** AC001 Report Date: 09/07/10

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1 Third Edition. Updates I - IIIA, 1997.

- Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-30 WPCF, 18th Edition, 1992.
- Methods for the Determination of Inorganic Substances in Environmental Samples, 44 EPA/600/R-93/100, August 1993.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.1, issued April 22, 2009

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform - Colilert (SM9223 P/A), E. Coli. - Colilert (SM9223 P/A), HPC - Pour Plate (SM9215B), Fecal Coliform -MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane. Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform - MF mEndo (SM9222B), Total Coliform - MTF (SM9221B), HPC - Pour Plate (SM9215B), Fecal Coliform - MF m-FC (SM9222D), Fecal Coliform - A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodjum, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity, Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 45 E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA-EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Ti)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics) (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307 NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1,

SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B, Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B.

Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666. <u>Organic</u> Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. NELAP Accredited. Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2⁻D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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ALPHALab IO (Lab, Use Only)	Sample ID	Col	lection Time	Sample Matrix	Sampler's Initials	10	100	1/4	MIN	1/3	12	13	意	10		0	Samp	ole Speci	fic Comme	nts
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ى2 ئالى	RB2-081110-U	8/11/10	1500	GW	225	1								1	1				1014	
100	DUP-081110-F	8/11/10	0912	GW	JAR		6		H				3		(7)-	TAL	- 1"	32	
	DIP-081110- U	8/11/10	0912	GW	JAR									1	1				abold.	
	DUP2-081110-F	8/11/10	153 P	GW	JAR	1				6			N		1	7	TAL	7	Sans	
	DIF2-091110-U	Flulio	1538	GV	SAR			2							1	1		M	2)	
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PLEASE ANSWI	ER QUESTIONS ABOVE!		F	Cont	alner Type	P	P	Р	P	P	P	A	P	PF	1	,	Please	DTINGE H	nVe legibly	andrew
IS YOUR F	PO IECT -			Pr	eservalive		A	A	Da	17/E	A.		_				Die leib in and	Sateple	steamoù o a one o c	ogo.
	or CT RCP?	Relinquished By:			e/Time	1	2			a By:			-	pa	teryl	ne	startium	anta	th done	e e i
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RM NO: 01-01 (rev. 14:	CCT-07)	par		10/14	10 11	77	_		_			25	4	81	THE STATE OF THE S	ערט	T- 384 6			



ANALYTICAL REPORT

Lab Number:

L1012332

Client:

Sovereign Consulting

905B South Main Street

Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/20/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012332

Report Date:

08/20/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012332-01	GP-10-22-031-U	DEVENS, MA	08/10/10 15:16
L1012332-02	GP-10-22-041-U	DEVENS, MA	08/10/10 16:00
L1012332-03	GP-10-22-051-U	DEVENS, MA	08/10/10 16:45
L1012332-04	GP-10-22-061-U	DEVENS, MA	08/10/10 17:45
L1012332-05	GP-10-26-011-U	DEVENS, MA	08/11/10 08:34
L1012332-06	GP-10-26-021-U	DEVENS, MA	08/11/10 09:12
L1012332-07	GP-10-26-031-U	DEVENS, MA	08/11/10 09:56
L1012332-08	GP-10-26-041-U	DEVENS, MA	08/11/10 10:40
L1012332-09	GP-10-26-051-U	DEVENS, MA	08/11/10 11:15
L1012332-10	GP-10-26-061-U	DEVENS, MA	08/11/10 12:06
L1012332-11	GP-10-26-071-U	DEVENS, MA	08/11/10 13:15
L1012332-12	GP-10-15-039-F	DEVENS, MA	08/11/10 09:10
L1012332-13	GP-10-15-049-F	DEVENS, MA	08/11/10 10:45
L1012332-14	GP-10-15-059-F	DEVENS, MA	08/11/10 14:10
L1012332-15	GP-10-27-025-U	DEVENS, MA	08/11/10 15:38

Project Name: Project Number: SHL TASK 0002

AC001

Lab Number:

L1012332

Report Date:

08/20/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e., Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses will be issued under separate cover.

Sample Receipt

L1012332-01 through -04: The samples were received at the laboratory requiring filtration for Dissolved Inorganic Carbon; however, the samples were received beyond the recommended 24 hour holding time required for filtration. The samples were filtered and preserved appropriately.

Dissolved Inorganic Carbon

L1012332-01 through -15 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number:

AC001

Report Date:

08/20/10

Case Narrative (continued)

WG428392: A Matrix Spike could not be performed due to insufficient sample volume available for analysis. WG428392: The Filter Blank was re-analyzed for confirmation purposes. The results of the re-analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

ALPHA

Date: 08/20/10

INORGANICS & MISCELLANEOUS

The second of th

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-01

Client ID: Sample Location:

GP-10-22-031-U DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 15:16

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	26		mg/l	8.0	-	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012332

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-02 GP-10-22-041-U

08/10/10 16:00

Client ID:

DEVENS, MA

Date Collected: Date Received:

08/11/10

Sample Location: Matrix:

Water

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	36		ma/l	8.0	***	8	08/12/10 01:30	08/19/10 07:35	30.5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-03

Client ID:

GP-10-22-051-U

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/10/10 16:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	68		mg/l	8.0		8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-04

Client ID: Sample Location: GP-10-22-061-U DEVENS, MA

Matrix:

Water

Date Collected:

08/10/10 17:45

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	63		mg/l	8.0		8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-05 GP-10-26-011-U

08/11/10 08:34

Client ID: Sample Location:

DEVENS, MA

Date Collected: Date Received:

08/11/10

Field Prep:

Not Specified

Matrix:

Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	14		mg/l	8.0	**	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-06

Client ID:

GP-10-26-021-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 09:12

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry						\$14 5	1 - 1			
Dissolved Inorganic Carbon	17		mg/l	8.0	-	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID: Client ID: L1012332-07 GP-10-26-031-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:56

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	22		mg/l	8.0	**	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID: Client ID: L1012332-08 GP-10-26-041-U

DEVENS, MA

Matrix:

Sample Location:

Water

Date Collected:

08/11/10 10:40

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	26		mg/l	8.0	-	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-09

Client ID: Sample Location:

GP-10-26-051-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 11:15

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	48		mg/l	8.0	-	8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-10

Client ID:

GP-10-26-061-U DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 12:06

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifler	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	98		mg/l	20		20	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001 Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-11

Client ID:

Sample Location:

GP-10-26-071-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 13:15

Date Received:

08/11/10

Field Prep:

Not Specified

Dilution Date Analytical Date Qualifier MDL Factor Prepared Analyzed Method Units RL **Analyst Parameter** Result **General Chemistry** Dissolved Inorganic Carbon DW 20 20 08/12/10 01:30 08/19/10 07:35 30,5310C(M) 110 mg/l

Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012332

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-12

Client ID:

Sample Location:

GP-10-15-039-F DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 09:10

Date Received:

08/11/10

Field Prep:

See Narrative

Analytical Method Dilution Date Date Factor Prepared MDL Analyzed Parameter Result Qualifler Units RL Analyst **General Chemistry** Dissolved Inorganic Carbon 150 20 20 08/12/10 01:30 08/19/10 07:35 30,5310C(M) DW mg/l

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-13

Client ID:

GP-10-15-049-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/11/10 10:45

Date Received:

08/11/10

Field Prep:

See Narrative

Result	Qualifler	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
64		mg/l	8.0		8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW
						Result Qualifler Units RL MDL Factor	Result Qualifier Units RL MDL Factor Prepared	Result Qualifler Units RL MDL Factor Prepared Analyzed	Result Qualifier Units RL MDL Factor Prepared Analyzed Method

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number:

AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-14

Client ID:

GP-10-15-059-F

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/11/10 14:10

Date Received:

08/11/10

See Narrative

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	20		mg/l	8.0		8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

SAMPLE RESULTS

Lab ID:

L1012332-15

Client ID: Sample Location:

GP-10-27-025-U DEVENS, MA

Matrix:

Water

Date Collected:

08/11/10 15:38

Date Received:

08/11/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	12		mg/I	8.0		8	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012332

Report Date:

08/20/10

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for san	nple(s): 0°	1-15 Bato	h: WG42	8392-1						
Dissolved Inorganic Carbon	ND		mg/l	1.0		1	08/12/10 01:30	08/19/10 07:35	30,5310C(M)	DW

Lab Control Sample Analysis Batch Quality Control

Lab Number:

L1012332

Report Date:

08/20/10

Project Number: AC001

Associated sample(s): 01-15

SHL TASK 0002

Project Name:

LCS LCSD %Recovery Limits Parameter %Recovery Qual

Batch: WG428392-2

%Recovery

Qual

RPD

Qual

RPD Limits

Dissolved Inorganic Carbon

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012332

Report Date:

08/20/10

Parameter	. Nat	ive Sample	Duplic	ate Sampl	e Units	RPD	Qual	RPD Limits
Associated sample(s): 01-15	QC Batch ID: WG428392-3	QC Sample: L	1012332-01	Client ID:	GP-10-22-031-U			
Dissolved Inorganic Carbon	-	26		25	mg/l	4		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Lab Number: L1012332 Project Number: AC001 Report Date: 08/20/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В Present/Intact C Present/Intact A Present/Intact D Present/Intact

	Container Info			Temp				
	Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
	L1012332-01A	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	SPECWC()
	L1012332-01B	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-01C	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-02A	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	SPECWC()
	L1012332-02B	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	SPECWC()
	L1012332-02C	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	SPECWC()
	L1012332-03A	Amber 250ml unpreserved	D	7	4	Υ	Present/Intact	SPECWC()
	L1012332-03B	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-03C	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-04A	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	SPECWC()
	L1012332-04B	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	SPECWC()
	L1012332-04C	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	SPECWC()
	L1012332-05A	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	SPECWC()
	L1012332-05B	Vial H2SO4 preserved split	D	N/A	4	. Y	Present/Intact	SPECWC()
-4	L1012332-05C	Vial H2SO4 preserved split	Ď *	N/A	4	Ý	Present/Intact	SPECWC()
	L1012332-06A	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	SPECWC()
	L1012332-06B	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-06C	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
	L1012332-07A	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	SPECWC()
	L1012332-07B	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
	L1012332-07C	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
	L1012332-08A	Amber 250ml unpreserved	В	7	2.6	Υ	Present/Intact	SPECWC()
	L1012332-08B	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012332 **Report Date**: 08/20/10

Container Info	Container Information			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012332-08C	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-09A	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	SPECWC()
L1012332-09B	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
L1012332-09C	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
L1012332-10A	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	SPECWC()
L1012332-10B	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-10C	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-11A	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	SPECWC()
L1012332-11B	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-11C	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-12A	Amber 250ml unpreserved	D	7	4	Y	Present/Intact	SPECWC()
L1012332-12B	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
L1012332-12C	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	SPECWC()
L1012332-13A	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	SPECWC()
L1012332-13B	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-13C	Vial H2SO4 preserved split	Α	N/A	2,9	Y	Present/Intact	SPECWC()
L1012332-14A	Amber 250ml unpreserved	В	7	2.6	Y	Present/Intact	SPECWC()
L1012332-14B	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-14C	Vial H2SO4 preserved split	В	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-15A	Amber 250ml unpreserved	Α	7	2.9	Y	Present/Intact	SPECWC()
L1012332-15B	Vial H2SO4 preserved split	Α	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-15C	Vial H2SO4 preserved split	Α	N/A	2,9	Y	Present/Intact	SPECWC()

Container Comments

L1012332-01B

L1012332-01C

L1012332-02B

L1012332-02C

L1012332-03B

L1012332-03C

L1012332-04B

L1012332-04C

L1012332-05B

L1012332-05C

Serial_No:08201015:35

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012332

Report Date: 08/20/10

Container Information

Container ID Container Type

Temp

Cooler pH deg C Pres Seal

Analysis(*)

Container Comments

L1012332-06B

L1012332-06C

L1012332-07B

L1012332-07C

L1012332-08B

L1012332-08C

L1012332-09B

L1012332-09C

L1012332-10B

L1012332-10C

L1012332-11B

L1012332-11C

L1012332-12B L1012332-12C

L1012332-13B

L1012332-13C

L1012332-14B

L1012332-14C

L1012332-15B

L1012332-15C

Project Name: SHL TASK 0002 Lab Number: L1012332
Project Number: AC001 Report Date: 08/20/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

 MS Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable.

 Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI -Not Ignitable.

Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration.
 The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis.

Report Format: Data Usability Report



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Data Qualifiers

RE Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

SHL TASK 0002

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Lab Number:

L1012332

Project Number: AC001

Report Date:

08/20/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF, 18th Edition, 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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

DLPHA

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate.

Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. <u>Organic Parameters</u>: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Parameters: PCBs, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev. 7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B, Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID . 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited. Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2⁻D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 903B, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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Phone: 508-	339-3200	Turn-Around	Time			Ø.	Yes	O No	1						3.00			OG? (If	yes se	ee note in Comme	nts)
Fax: 50-8-	339-3248	M Standard	D RUSH	(only confirmed if pre	-approvedt)	0	res	SZ No	1.2	Are CT	RC	P (Re	ason	able	Con	fider	ice Pr	otocols) Requ	ired?	
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ALPHA Lab ID (Lab Use Only)	Sample ID		lection Time	Sample Matrix	Sampler's	1	12	4/1/2	11/1	1/2	12/	3	et a	1/2	100		(Please specify below) e Specific Comments	_
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	GP-10-15-059-F	8/11/10	1410	GW	356	1	V	V	1/	v	1	1			1			0
	GP-10-27-625-F	8/11/10	1538	Gw	TAR.		-				- 1	TE.			V	+		+
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ANALYTICAL REPORT

Lab Number:

L1012632

Client:

Sovereign Consulting

905B South Main Street

Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/07/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: SHL TASK 0002

Lab Number: L1012632 **Project Number:** AC001 Report Date: 09/07/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012632-01	GP-10-14-039-F	DEVENS, MA	08/16/10 09:50
L1012632-02	GP-10-14-039-U	DEVENS, MA	08/16/10 09:50
L1012632-03	GP-10-14-049-F	DEVENS, MA	08/16/10 11:20
L1012632-04	GP-10-14-049-U	DEVENS, MA	08/16/10 11:20
L1012632-05	GP-10-14-059-F	DEVENS, MA	08/16/10 13:00
L1012632-06	GP-10-14-069-F	DEVENS, MA	08/16/10 14:35
L1012632-07	GP-10-14-069-U	DEVENS, MA	08/16/10 14:35
L1012632-08	DUP-081610-F	DEVENS, MA	08/16/10 11:20
L1012632-09	DUP-081610-U	DEVENS, MA	08/16/10 11:20
L1012632-10	RB-081610-U	DEVENS, MA	08/16/10 15:30

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

The results for Dissolved Inorganic Carbon will be issued under separate cover.

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

Dissolved Metals

L1012632-03, -05, -06 and -08 have elevated detection limits for all analytes, except Mercury, due to the

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

Case Narrative (continued)

dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

The WG428117-1 Method Blank, associated with L1012632-01, -03, -05, -06 and -08, has a concentration greater than one half the reporting limit for Antimony. The results for samples L1012632-01, -03 and -05 are qualified with a "B". Samples L1012632-06 and -08 were non-detect for Antimony and require no qualification. The WG428117-3/-4 MS/MSD recoveries for Calcium (138%/135%) and Iron (310%/300%), performed on L1012632-01, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG428117-5 Post Digestion Spike recovery for Manganese was outside the DoD acceptance criteria of 75-125%; therefore, the parent sample (L1012632-01) result is qualified with a "J" for Manganese.

Total Metals

L1012632-04, -07 and -09 have elevated detection limits for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved.

The WG428116-3/-4 MS/MSD recoveries for Calcium (145%/143%) and Iron (380%/400%), performed on L1012632-02, are invalid because the sample concentrations are greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 09/07/10

METALS

SHL TASK 0002

Lab Number:

L1012632

Project Number:

Sample Location:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-01

Client ID:

GP-10-14-039-F

Matrix:

DEVENS, MA

Water

Date Collected:

08/16/10 09:50

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	4.84	Ĵ	ug/l	10.0	1.91	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.14	JB	ug/l	0.500	0.120	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	14.4		ug/l	0.500	0.113	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Barium, Dissolved	49.8		ug/l	0.500	0.095	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	62700		ug/l	100	12.6	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.610		ug/l	0.500	0.186	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	0.31	J	ug/l	0.500	0.053	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.27	J	ug/l	0.500	0.118	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Iron, Dissolved	18700		ug/l	50.0	8.41	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0 050	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	7010		ug/l	100	4.10	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Manganese, Dissolved	670	J	ug/l	1.00	0.136	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	0.01239	J	ug/l	0.2000	0.0120	1	08/30/10 18:32	2 08/31/10 12:26	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	3.00		ug/l	0.500	0.180	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм
Potassium, Dissolved	4160		ug/l	100	18.2	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	0.54	J	ug/l	1.00	0.406	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	17800		ug/I	100	18.2	4	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	'ND '		ug/l	0.500	0.031	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм.
Vanadium, Dissolved	0.36	·J	ug/l	0.500	0.077	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вМ
Zinc, Dissolved	4.59	J	ug/l	5.00	1.62	1	08/17/10 20:00	0 08/19/10 14:17	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-02

Client ID:

GP-10-14-039-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 09:50

Date Received:

Field Prep:

08/16/10

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	1980		ug/I	10.0	1.91	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Arsenic, Total	39.1		ug/l	0.500	0.113	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Calcium, Total	63300		ug/l	100	12.6	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Chromium, Total	15.2		ug/l	0.500	0.186	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Iron, Total	22800		ug/l	50.0	8.41	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Lead, Total	4.17		ug/l	0.500	0.050	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	ВМ
Magnesium, Total	7610		ug/l	100	4.10	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Manganese, Total	783		ug/I	1.00	0.136	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	ВМ
Nickel, Total	11.2		ug/l	0.500	0.180	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	ВМ
Potassium, Total	4860		ug/l	100	18,2	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	вм
Sodium, Total	16800		ug/l	100	18.2	1	08/17/10 20:0	0 08/19/10 15:24	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-03

Client ID: Sample Location: GP-10-14-049-F DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 11:20

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	35.8	J	ug/l	40.0	7.64	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	8.0	JB	ug/l	2.00	0.480	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	772		ug/l	2.00	0.452	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	вм
Barium, Dissolved	88.0		ug/l	2.00	0.380	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	50600		ug/l	400	50.6	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	1.51	J	ug/l	2.00	0,212	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	ND		ug/I	2.00	0.472	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	66900		ug/l	200	33.6	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	3880		ug/l	400	16.4	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	2540		ug/I	4.00	0.544	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:3:	2 08/31/10 12:31	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	3.05		ug/l	2.00	0.720	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	7140		ug/l	400	72.6	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	вм
Sodium, Dissolved	7780		ug/l	400	72.8	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND	40	ug/l	2.00	0.124	4	08/17/10 20:0	0 08/19/10 14:41	EPÁ 3005A	1,6020A	ВМ
Vanadium, Dissolved	1.81	J	ug/l	2.00	0.308	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	ND		ug/l	20.0	6.50	4	08/17/10 20:0	0 08/19/10 14:41	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number:

AC001

Report Date:

09/07/10

Lab ID:

SAMPLE RESULTS

Date Collected:

08/16/10 11:20

Client ID: Sample Location: L1012632-04 GP-10-14-049-U DEVENS, MA

Date Received:

08/16/10

Matrix:

Water

Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	.ab									
Aluminum, Total	2400		ug/I	40.0	7.64	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	ВМ
Arsenic, Total	774		ug/l	2.00	0.452	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм
Calcium, Total	49100		ug/l	400	50.6	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	ВМ
Chromium, Total	7.80		ug/l	2.00	0.744	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм
Iron, Total	66000		ug/l	200	33.6	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	ВМ
Lead, Total	3.61		ug/l	2.00	0.200	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм
Magnesium, Total	4370		ug/l	400	16.4	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм
Manganese, Total	2420		ug/l	4.00	0.544	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	ВМ
Nickel, Total	9.25		ug/l	2.00	0.720	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм
Potassium, Total	7640		ug/l	400	72.6	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	ВМ
Sodium, Total	7280		ug/l	400	72.8	4	08/17/10 20:0	0 08/19/10 15:48	EPA 3005A	1,6020A	вм

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-05

Client ID:

GP-10-14-059-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/16/10 13:00

Date Received:

08/16/10

Field Prep:

See	Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Antimony, Dissolved	1.21	JB	ug/l	5.00	1.20	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	2400		ug/l	5.00	1.13	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Barium, Dissolved	15.6		ug/l	5.00	0.950	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	52900		ug/l	1000	126.	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	13.0		ug/l	5,00	0.530	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Copper, Dissolved	ND		ug/l	5,00	1.18	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Iron, Dissolved	88200		ug/l	500	84.1	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	4730		ug/l	1000	41.0	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Manganese, Dissolved	6800		ug/l	10.0	1.36	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	2 08/31/10 12:33	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	4.75	J	ug/l	5.00	1.80	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Potassium, Dissolved	6940		ug/l	1000	182.	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	вм
Sodium, Dissolved	14000		ug/l	1000	182.	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND.	4	üg/l	5.00	0.310	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм
Zinc, Dissolved	23.6	J	ug/I	50.0	16.2	10	08/17/10 20:00	0 08/19/10 14:47	EPA 3005A	1,6020A	вм

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-06

Client ID:

GP-10-14-069-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

. 1

Date Received:

08/16/10 14:35

Field Prep:

08/16/10 See Narrative

Parameter	Result	Qualifler	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - W	Vestboro	ugh Lab									
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	5110		ug/l	5.00	1.13	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	19.6		ug/I	5.00	0.950	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/I	5.00	0.590	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Calcium, Dissolved	36200		ug/I	1000	126.	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	21.5		ug/I	5.00	0.530	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	85400		ug/l	500	84.1	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/I	5.00	0.500	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	3020		ug/l	1000	41.0	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	BM
Manganese, Dissolved	3540		ug/I	10.0	1.36	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1.6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:33	2 08/31/10 12:39	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	8.73		ug/l	5.00	1.80	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Potassium, Dissolved	6680		ug/l	1000	182	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	5 00	0.850	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	5180		ug/I	1000	182.	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND ·		ug/l	5.00	0.310	10 -	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020Ä	вм
Vanadium, Dissolved	ND		ug/I	5.00	0.770	10	08/17/10 20:00	0 08/19/10 14:53	EPA 3005A	1,6020A	вм

1,6020A

ВМ

Zinc, Dissolved

ND

ug/l

50.0

16.2

10

08/17/10 20:00 08/19/10 14:53 EPA 3005A

Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-07

Client ID:

GP-10-14-069-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 14:35

Date Received:

08/16/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough L	.ab									
Aluminum, Total	5160		ug/l	100	19.1	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Arsenic, Total	5260		ug/l	5.00	1,13	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Calcium, Total	38500		ug/l	1000	126	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	вм
Chromium, Total	22.1		ug/l	5.00	1.86	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Iron, Total	95400		ug/l	500	84.1	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	вм
Lead, Total	5.56		ug/l	5.00	0.500	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Magnesium, Total	4250		ug/I	1000	41.0	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Manganese, Total	3700		ug/l	10.0	1.36	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Nickel, Total	21.2		ug/I	5.00	1.80	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Potassium, Total	7860		ug/l	1000	182	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	ВМ
Sodium, Total	5580		ug/l	1000	182.	10	08/17/10 20:0	0 08/19/10 15:54	EPA 3005A	1,6020A	вм

SHL TASK 0002

SAMPLE RESULTS

Lab Number:

L1012632

Project Number:

AC001

Report Date:

09/07/10

Lab ID:

L1012632-08

Client ID:

DUP-081610-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 11:20

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	36.7	J	ug/l	40.0	7.64	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	762		ug/I	2.00	0.452	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	вм
Barium, Dissolved	85.4		ug/l	2.00	0.380	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	48500		ug/l	400	50.6	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	1.4	J	ug/l	2.00	0.212	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	ND		ug/I	2.00	0.472	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Iron, Dissolved	64200		ug/l	200	33.6	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	3750		ug/l	400	16.4	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2440		ug/l	4.00	0.544	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	2 08/31/10 12:41	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.95		ug/l	2.00	0.720	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	6940		ug/l	400	72.6	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	7390		ug/l	400	72.8	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND	1100 y	ug/l	2.00	0.124	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	1.62	J	ug/l	2.00	0.308	4	08/17/10 20:00	0 08/19/10 14:59	EPA 3005A	1,6020A	BM
Zinc, Dissolved	ND		ug/l	20.0	6.50	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number:

AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-09

Client ID:

DUP-081610-U

Sample Location: Matrix:

DEVENS, MA Water

Date Collected:

08/16/10 11:20

Date Received:

08/16/10

rep:

F	ie	ld	F	r

None

						Dilution	Date	Date	Prep	Analytical	
Parameter	Result	Qualifier	Units	RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Total Metals - Wes	stborough L	.ab									
Aluminum, Total	6020		ug/l	40.0	7.64	4	08/17/10 20:00	0 08/19/10 16:00	EPA 3005A	1,6020A	вм
Arsenic, Total	792		ug/l	2.00	0.452	4	08/17/10 20:00	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Calcium, Total	49600		ug/l	400	50.6	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Chromium, Total	14.2		ug/l	2.00	0.744	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	вм
Iron, Total	69800		ug/l	200	33.6	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Lead, Total	9.02		ug/l	2.00	0.200	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	вм
Magnesium, Total	5130		ug/l	400	16.4	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Manganese, Total	2510		ug/I	4.00	0.544	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Nickel, Total	18.1		ug/I	2.00	0.720	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Potassium, Total	8080		ug/I	400	72.6	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ
Sodium, Total	7600		ug/l	400	72.8	4	08/17/10 20:0	0 08/19/10 16:00	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-10

Client ID:

Sample Location:

RB-081610-U DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 15:30

Date Received:

08/16/10

Field Prep:

N---

Prep:	None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/17/10 20:00	0 08/19/10 16:06	EPA 3005A	1,6020A	ВМ
Arsenic, Total	0.22	J	ug/I	0.500	0.113	1	08/17/10 20:00	0 08/19/10 16:06	EPA 3005A	1,6020A	ВМ
Calcium, Total	14.2	J	ug/l	100	12.6	1	08/17/10 20:00	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Chromium, Total	ND		ug/l	0.500	0.186	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Iron, Total	ND		ug/l	50.0	8.41	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Lead, Total	ND		ug/l	0.500	0.050	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Magnesium, Total	ND		ug/l	100	4.10	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Manganese, Total	0.2	J	ug/l	1.00	0.136	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Nickel, Total	ND		ug/l	0.500	0.180	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм
Potassium, Total	25.6	J	ug/I	100	18.2	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	ВМ
Sodium, Total	40.6	J	ug/l	100	18.2	1	08/17/10 20:0	0 08/19/10 16:06	EPA 3005A	1,6020A	вм

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
Total Metals - Westborough	Lab fo	r sample(s):	02,04,0	7,09-10	Batch	WG4281	116-1				
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Calcium, Total	14.3	J	ug/l	100	12.6	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Chromium, Total	ND		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Iron, Total	ND		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Lead, Total	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Magnesium, Total	ND		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Manganese, Total	ND		ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	ВМ	
Nickel, Total	ND		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Potassium, Total	21.3	J	ug/I	100	18.2	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	
Sodium, Total	34.4	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 13:47	7 1,6020A	вм	

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Q	ualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
Dissolved Metals - Westb	orough Lab	for samp	ole(s): 01	,03,05-0	80,60	Batch: Wo	G428117-1				
Aluminum, Dissolved	ND		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм	
Antimony, Dissolved	0.3	J	ug/l	0.500	0.120	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм	
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Barium, Dissolved	ND		ug/I	0.500	0.095	1 :	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	10
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм	
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм	
Calcium, Dissolved	14.3	J	ug/l	100	12.6	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм	
Iron, Dissolved	ND		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ	



Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number: AC001

Report Date:

09/07/10

Method Blank Analysis Batch Quality Control

Potassium, Dissolved	21.3	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ
Sodium, Dissolved	34.4	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/17/10 20:00	08/19/10 13:47	1,6020A	ВМ
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	08/17/10 20:00	08/19/10 13:47	1,6020A	вм

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Dissolved Metals - Wes	stborough Lab for sam	ole(s): 01	,03,05-0	80,60	Batch: WG	430167-1			
Mercury, Dissolved	ND	ug/l	0.2000	0.0120	1	08/30/10 18:32	08/31/10 12:22	2 1,7470A	EZ

Prep Information

Digestion Method: EPA 7470A



Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	LCS %Recovery Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab	Associated sample(s): 02,04,07,09-	10 Batch: WG4	28116-2				
Aluminum, Total	96			80-120			
Arsenic, Total	100	*		80-120			
Calcium, Total	106	ie.		80-120			
Chromium, Total	97			80-120			
Iron, Total	108			80-120			
Lead, Total	103			80-120	4		
Magnesium, Total	105	*		80-120	-		
Manganese, Total	103	-		80-120			
Nickel, Total	103.	•		80-120			
Potassium, Total	104	÷,		80-120	1.00		
Sodium, Total	114	\2X		80-120			

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	LÇS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06,08 Batch:	WG428117-2		
Aluminum, Dissolved	96		80-120		
Antimony, Dissolved	99	1,42	80-120	9	
Arsenic, Dissolved	100	(8)	80-120		
Barium, Dissolved	100		80-120	4.	
Beryllium, Dissolved	109	1.41	80-120	•	
Cadmium, Dissolved	110		80-120	×.	
Calcium, Dissolved	106		80-120		
Chromium, Dissolved	97		80-120		
Cobalt, Dissolved	105	4	80-120	+	
Copper, Dissolved	103		80-120	*	
Iron, Dissolved	108		80-120		
Lead, Dissolved	103	*	80-120	1	
Magnesium, Dissolved	105	2.	80-120	- 61	
Manganese, Dissolved	103		80-120	-1	
Nickel, Dissolved	103		80-120	,	
Potassium, Dissolved	104		80-120	+	
Selenium, Dissolved	106	4	80-120	2	
Silver, Dissolved	98		80-120	4	
Sodium, Dissolved	114	4	80-120		
Thallium, Dissolved	95		80-120	19"	
Vanadium, Dissolved	101	*	80-120	-	

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	LCS . %Recovery	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SD covery	9,	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06,08	Batch:	WG428117-2			
Zinc, Dissolved	103		(4)		80-120		
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06,08	Batch:	WG430167-2			
Mercury, Dissolved	110				80-120		20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recovery Qual Limits	y RPD	RPD Qual Limit
Total Metals - Westborough Lab GP-10-14-039-U	Associated	sample(s):	02,04,07,09-	10 QC Batc	h ID: W	G428116-3	WG428116-4	QC Sample: L	1012632-0	2 Client ID
Aluminum, Total	1980	2000.	4220	112		4190	110	80-120	1	20
Arsenic, Total	39.1	120	168	107		169	108	80-120	1	20
Calcium, Total	63300	10000	77800	145	77600		143	80-120	0	20
Chromium, Total	15.2	200	202	93		208 96		80-120	3	20
Iron, Total	22800	1000	26600	380		26800	400	80-120	1	20
Lead, Total	4.17	510	526	102	537	104	80-120	2	20	
Magnesium, Total	7610	10000	18200	106		18400	108	80-120	1	20
Manganese, Total	783	500	1340	111		1360	115	80-120	1	20
Nickel, Total	11.2	500	506	99		511	100	80-120	1	20
Potassium, Total	4860	10000	15300	104		15300	104	80-120	0	20
Sodium, Total	16800	10000	27600	108		27700	109	80-120	0	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Native MS MS MS er Sample Added Found %Recovery		MSD Found	IIIOD		Recovery Limits RPD			
Dissolved Metals - Westboroug GP-10-14-039-F	gh Lab Assoc	iated sample	(s): 01,03,	05-06,08 QCB	atch ID: WG4281	117-3 WG428117 - 4	QC Sample	: L1012632-01	Client ID
Aluminum, Dissolved	ND	2000	1910	96	1890	94	80-120	1	20
Antimony, Dissolved	ND	500	498	100	512	102	80-120	3	20
Arsenic, Dissolved	14.4	120	144	108	144	108	80-120	0	20
Barium, Dissolved	49.8	2000	2020	98	2070	101	80-120	2	20
Beryllium, Dissolved	ND	50	54.9	110	52.5	105	80-120	4	20
Cadmium, Dissolved	ND	51	55.8	109	57.3	112	80-120	3	20
Calcium, Dissolved	62700	10000	76500	138	76200	135	80-120	0	20
Chromium, Dissolved	0,610	200	192	96	193	96	80-120	1	20
Cobalt, Dissolved	ND	500	512	102	522	104	80-120	2	20
Copper, Dissolved	ND	250.	254	102	255	102	80-120	0	20
Iron, Dissolved	18700	1000	21800	310	21700	300	80-120	0	20
Lead, Dissolved	ND	510	525	103	530	104	80-120	1	20
Magnesium, Dissolved	7010	10000	17800	108	17500	105	80-120	2	20
Manganese, Dissolved	670	500	1210	108	1220	110	80-120	1	20
Nickel, Dissolved	3.00	500	505	100	511	102	80-120	1	20
Potassium, Dissolved	4160	10000	15000	108	14800	106	80-120	1	20
Selenium, Dissolved	ND	120	120	100	120	100	80-120	0	20
Silver, Dissolved	ND	50 -	48.6	98	49.3	99	80-120	1	20
Sodium, Dissolved	17800	10000	29400	116	28200	104	80-120	4	20
Thallium, Dissolved	ND	120	115	96	115	96	80-120	0	20
Vanadium, Dissolved	ND	500	500	100	507	101	80-120	1	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough GP-10-14-039-F	Lab Associa	ited sample(s	s): 01,03,	05-06,08 QC Batch	ID: WG428117	-3 WG428117-4	QC Sample:	L1012632-01	Client ID:
Zinc, Dissolved	ND	500	517	103	512	102	80-120	1	20
Dissolved Metals - Westborough GP-10-14-039-F	Lab Associa	ited sample(s	s): 01,03,	05-06,08 QC Batch	ID: WG430167	7-3 WG430167-4	QC Sample:	L1012632-01	Client ID:
Mercury, Dissolved	ND	1) -	1.071	107	1.099	110	80-120	3	20

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-01

Client ID:

GP-10-14-039-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 09:50

Date Received:

08/16/10

See Narrative Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab)								
Alkalinity, Total	300	п	ng CaCO3/L	2.0	NA	1	30	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	11.5		mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:29	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/I	0.02	0.002	1	4	08/16/10 22:26	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	26		mg/l	20	7.0	1	18	08/19/10 14:57	44,410.4	DW
Dissolved Organic Carbon	6.1		mg/l	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
Anions by Ion Chromatog	graphy - West	borough l	ab							
Chloride	11		mg/I	0.50	0.07	1		08/17/10 20:46	44,300.0	AU
Nitrogen, Nitrate	0.04	J	mg/l	0.05	0.01	1	6	08/17/10 20:46	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1		08/17/10 04:49	44,300.0	AU

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-02

Client ID:

GP-10-14-039-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 09:50

Date Received:

08/16/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	100								
Solids, Total Suspended	270		mg/l	5.0	NA	1		08/18/10 08:20	30,2540D	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-03

Client ID:

GP-10-14-049-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 11:20

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	(a								
Alkalinity, Total	290	mg	CaCO3/L	2.0	NA	1		08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	7.44		mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:31	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	6	08/16/10 22:27	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	38		mg/l	20	7.0	1		08/19/10 14:58	44,410.4	DW
Dissolved Organic Carbon	6.0		mg/l	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
Anions by Ion Chromatog	graphy - West	borough La	b							
Chloride	4.6		mg/l	0.50	0.07	1	-	08/17/10 20:58	44,300.0	AU
Nitrogen, Nitrate	0.028	J	mg/l	0.05	0.01	1	0.5	08/17/10 20:58	44,300.0	AU
Sulfate	0.51	J	mg/l	1.0	0.12	1	-	08/17/10 05:01	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number:

L1012632

Project Number: AC001

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-04

Client ID:

GP-10-14-049-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

Date Received:

08/16/10 11:20

08/16/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	320		mg/l	5.0	NA	1	+	08/18/10 08:20	30,2540D	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-05

Client ID:

GP-10-14-059-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/16/10 13:00

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier Units	s RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab								
Alkalinity, Total	340	mg CaC	O3/L 2.0	NA	1	÷	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	6.46	mg/	0.075	0.017	1	08/17/10 16:30	08/17/10 23:35	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND	mg/	0.02	0.002	1		08/16/10 22:27	30,4500NO2-B	DD
Sulfide	ND	mg/	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	43	mg/	20	7.0	1	4	08/19/10 14:58	44,410.4	DW
Dissolved Organic Carbon	4.7	mg/	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
Anions by Ion Chromatog	graphy - West	borough Lab							
Chloride	9.6	mg/	0.50	0.07	1	+	08/17/10 21:10	44,300.0	AU
Nitrogen, Nitrate	0.03	J mg/	0.05	0.01	1		08/17/10 21:10	44,300.0	AU
Sulfate	2.0	rng/	1.0	0.12	1	4	08/17/10 05:13	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-06 GP-10-14-069-F

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 14:35

Date Received:

08/16/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Alkalinity, Total	270		mg CaCO3/L	2.0	NA	1		08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	4.65		mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:36	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/16/10 22:28	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	41		mg/l	20	7.0	1		08/19/10 14:58	44,410.4	DW
Dissolved Organic Carbon	3.9		mg/l	1.0	1.0	.1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
Anions by Ion Chromatog	raphy - West	borough	Lab							
Chloride	3.3		mg/l	0.50	0.07	d.	4	08/17/10 21:22	44,300.0	AU
Nitrogen, Nitrate	0.014	J	mg/l	0.05	0.01	1	-	08/17/10 21:22	44,300.0	AU
Sulfate	1.4		mg/l	1.0	0.12	1		08/17/10 06:01	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

09/07/10

SAMPLE RESULTS

Lab ID:

L1012632-07

Client ID: Sample Location: GP-10-14-069-U DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 14:35

Date Received:

08/16/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab									
Solids, Total Suspended	620		mg/l	5.0	NA	1		08/18/10 08:20	30,2540D	DW



Project Name:

SHL TASK 0002

Lab Number:

L1012632

Project Number: AC001

Report Date: 09/07/10

Method Blank Analysis Batch Quality Control

Parameter	Result Q	ualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG427	901-2			
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1		08/16/10 22:25	30,4500NO2-B	DD
General Chemistry - Wes	stborough Lab	for sam	ple(s): 02	2,04,07 B	atch: W	/G427998	3-1			
Solids, Total Suspended	ND		mg/l	5.0	NA	1		08/18/10 08:20	30,2540D	DW
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG428	043-1			
Nitrogen, Ammonia	ND		mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:24	30,4500NH3-B	H AT
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG428	068-1			
Alkalinity, Total	ND		mg CaCO3	L 2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Anions by Ion Chromatog	graphy - Westl	borough	Lab for s	ample(s):	01,03,0	5-06 Ba	tch: WG4282	96-1		
Sulfate	ND		mg/l	1.0	0.12	1	-	08/17/10 00:49	44,300.0	AU
Anions by Ion Chromatog	graphy - Westl	orough	Lab for s	ample(s):	01,03,0	5-06 Ba	tch: WG4283	00-1		
Chloride	ND		mg/I	0,50	0.07	1	4	08/17/10 20:09	44,300.0	AU
trogen, Nitrate	ND		mg/l	0.05	0.01	1	9	08/17/10 20:09	44,300.0	AU
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG428	381-1			
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/19/10 14:56	44,410.4	DW
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG428	681-1			
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
General Chemistry - Wes	stborough Lab	for sam	ple(s): 0	1,03,05-06	Batch	: WG429	914-2			
Dissolved Organic Carbon	ND		mg/I	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
						3				

Lab Control Sample Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012632

Report Date:

Parameter	LCS %Recovery	Qual %	LCSD Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-0	Batch:	WG427901-	1			
Nitrogen, Nitrite	100				90-110			20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	Batch:	WG428043-2	2			
Nitrogen, Ammonia	98		140		80-120	1.00		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	Batch:	WG428068-2	2			
Alkalinity, Total	104		÷.		80-115			4
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s):	01,03,05-	-06 Batch: \	NG428296-2			
Sulfate	110		14		90-110	-		
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s):	01,03,05-	·06 Batch: \	NG428300-2			
Chloride	95 .				90-110	-		
Nitrogen, Nitrate	95		*		90-110	i.		
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	Batch:	WG428381-2	2			
Chemical Oxygen Demand	103		9		95-105			
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	Batch:	WG428681-2	2			
Sulfide	91		2		75-125			

Lab Control Sample Analysis Batch Quality Control

SHL TASK 0002 Batch Quality (

Lab Number:

L1012632

Report Date:

09/07/10

Parameter	LCS %Recovery		.CSD ecovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	Batch: WG429914-1			
Dissolved Organic Carbon	102			90-110	4.0	

Project Name:

Project Number:

AC001

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recovery Qual Limits	RPD Qua	RPD al Limits
General Chemistry - Westbore 039-F	ough Lab Asso	ciated samp	le(s): 01,0	3,05-06 QC	Batch ID:	: WG427901	-3 QC San	nple: L1012632-01	Client ID:	GP-10-14-
Nitrogen, Nitrite	ND	0.1	0.10	100		19		85-115		20
General Chemistry - Westbord	ough Lab Asso	ciated samp	le(s): 01,0	3,05-06 QC	Batch ID:	WG428043	-3 QC San	nple: L1012632-01	Client ID:	GP-10-14-
Nitrogen, Ammonia	11.5	4	15.6	102		+	-	80-120	(*)	20
General Chemistry - Westbord	ough Lab Asso	ciated samp	le(s): 01,0	3,05-06 QC	Batch ID:	WG428068	-3 QC San	nple: L1012444-14	Client ID:	MS Sample
Alkalinity, Total	18	100	120	105		÷		86-116		4
Anions by Ion Chromatograph Client ID: GP-10-14-069-F	ıy - Westborou	gh Lab Asso	ciated san	nple(s): 01,03,	05-06 C	QC Batch ID:	WG428296-	3 WG428296-4 C	C Sample:	L1012632-0
Sulfate	1,4	8	8.8	92		9.2	98	60-140	4	20
Anions by Ion Chromatograph Client ID: GP-10-14-069-F	y - Westborou	gh Lab Ass o	ciated san	nple(s): 01,03,0	05-06 C	QC Batch ID:	WG428300-	3 WG428300-4 C	C Sample:	L1012632-0
Chloride	3.3	4 , .	7.2	98		6.8	88	40-151	6	18
Nitrogen, Nitrate	ND	0.4	0.35	88		0.35	88	80-122	0	15
General Chemistry - Westbord	ough Lab Asso	ciated samp	le(s): 01,0	3,05-06 QC I	Batch ID:	WG428381	-3 QC Sam	nple: L1012632-01	Client ID:	GP-10-14-
Chemical Oxygen Demand	26	238.	300	115		4		80-120	~	20
General Chemistry - Westbord 059-F	ough Lab Asso	ciated samp	le(s): 01,0	3,05-06 QC I	Batch ID:	WG428681	-3 QC Sam	nple: L1012632-05	Client ID:	GP-10-14-
Sulfide	ND	0.24	0.19	79		÷	(+)	75-125	+	20

Matrix Spike Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Westbo	orough Lab Asso	ociated samp	le(s): 01,0	3,05-06 QC Batch	ID: WG429914	4-3 QC Sample	: L1012632-06	Client ID:	GP-10-14-
Dissolved Organic Carbon	3.9	4	8.3	109	-	2	79-120		20

Lab Duplicate Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Nat	ive Sample	Duplicate	e Sample	Units	RPD	Qual RPI	Limits
General Chemistry - Westborough Lab 039-F	Associated sample(s):	01,03,05-06	QC Batch ID: V	WG427901-	4 QC Sample:	L1012632-	01 Client ID:	GP-10-14-
Nitrogen, Nitrite	*	ND	N	ID	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s):	02,04,07	QC Batch ID: WG	427998-2	QC Sample: L1	012532-01	Client ID: DU	P Sample
Solids, Total Suspended		4600	45	600	mg/l	2		32
General Chemistry - Westborough Lab 049-F	Associated sample(s):	01,03,05-06	QC Batch ID: V	NG428043-	4 QC Sample:	L1012632-0	03 Client ID:	GP-10-14-
Nitrogen, Ammonia	27	7.44	7.4	45	mg/l	0		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05-06	QC Batch ID: V	NG428068-	4 QC Sample:	L1012444-	14 Client ID:	DUP Sample
Alkalinity, Total		18.	2	1	mg CaCO3/L	15	Q	4
Anions by Ion Chromatography - Westb GP-10-14-069-F	orough Lab Associated	d sample(s):	01,03,05-06 QC	Batch ID:	WG428296-5	QC Sample:	L1012632-06	Client ID:
Sulfate	- *	1.4	1.	.5	mg/l	7		20
nions by Ion Chromatography - Westb GP-10-14-069-F	orough Lab Associated	d sample(s):	01,03,05-06 QC	Batch ID:	WG428300-5	QC Sample:	L1012632-06	Client ID:
Chloride		3.3	3.	.3	mg/l	0		18
Nitrogen, Nitrate		0.014J	0.01	13J	mg/l	NC		15
General Chemistry - Westborough Lab 39-F	Associated sample(s):	01,03,05-06	QC Batch ID: V	VG428381-	4 QC Sample:	L1012632-0	01 Client ID:	GP-10-14-
Chemical Oxygen Demand	8.7	26.	24	4	mg/l	8		20

Lab Duplicate Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012632

Report Date:

Parameter	Nati	ive Sample	Duplicate Sample	Units	RPD	RP	D Limits
General Chemistry - Westborough Lab 039-F	Associated sample(s):	01,03,05-06	QC Batch ID: WG428681-4	QC Sample:	L1012632-01	Client ID:	GP-10-14-
Sulfide	4.	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab 39-F	Associated sample(s):	01,03,05-06	QC Batch ID: WG429914-4	QC Sample:	L1012632-01	Client ID:	GP-10-14-
Dissolved Organic Carbon	. \$1	6.1	6.0	mg/l	2		20

Project Name: SHL TASK 0002

Lab Number: L1012632 Report Date: 09/07/10 Project Number: AC001

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

B Present/Intact

A Present/Intact

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012632-01A	Plastic 500ml unpreserved	В	7	6	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012632-01B	Plastic 500ml H2SO4 preserved	В	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012632-01C	Plastic 250ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-BA-6020S(180), DOD-FE-6020S(180), DOD-MG-6020S(180), DOD-MG-6020S(180), DOD-SB-6020S(180), DOD-CR-6020S(180), DOD-TL-6020S(180), DOD-CO-6020S(180), DOD-CA-6020S(180), DOD-NA-6020S(180), DOD-NA-6020S(180), DOD-NA-6020S(180), DOD-PB-6020S(180), DOD-PB-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-BE-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-CD-6020S(180), DOD-SE-6020S(180), DOD-SE-6020S(180), DOD-SE-6020S(180), DOD-HG-7470S(28)
L1012632-01D	Plastic 250ml unpreserved	В	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-01E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6"	Υ.	Present/Intact	SULFIDE-4500(7)
L1012632-01F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-01G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-01H	Plastic 250ml unpreserved	В	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-011	Amber 250ml unpreserved	В	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-01J	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-01K	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)

Project Number: AC001

Lab Number: L1012632 Report Date: 09/07/10

	Container Info	ormation			Temp				
	Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)	
	L1012632-01L	Plastic 250ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-V-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-ZN-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28))
	L1012632-02A	Plastic 1000ml unpreserved	В	7	6	Y	Present/Intact	TSS-2540(7)	
	L1012632-02B	Plastic 500ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)	
	L1012632-02C	Plastic 500ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-MG-6020T(180),DOD-FE-	
	4	4 4 4 4						6020T(180),DOD-PB-	3
C	1 1012622 024	Plantia F00ml uppraganged	D			V	*,	6020.T(180)	
	L1012632-03A	Plastic 500ml unpreserved	В	7	6	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)	
	L1012632-03B	Plastic 500ml H2SO4 preserved	В	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)	

Project Number: AC001

Lab Number: L1012632 **Report Date:** 09/07/10

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012632-03C	Plastic 250ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NB-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-BE-6020S(180),DOD-BE-6020S(180),DOD-CU-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-BE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-BE-6020S(180),DOD-B
L1012632-03D	Plastic 250ml unpreserved	В	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-03E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03H	Plastic 250ml unpreserved	В	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-03I	Amber 250ml unpreserved	В	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-03J	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-03K	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-04A	Plastic 1000ml unpreserved	В	7	6	Y	Present/Intact	TSS-2540(7)
L1012632-04B	Plastic 500ml HNO3 preserved	В	<2	6	Y	Present/intact	DOD-NA-6020T(180),DOD-NI- 6020T(180),DOD-CA- 6020T(180),DOD-MN- 6020T(180),DOD-AL- 6020T(180),DOD-AS- 6020T(180),DOD-CR- 6020T(180),DOD-K-
1,40 3	5 The State of the	1 10	-		4	* * * =	6020T(180),DOD-MG- 6020T(180),DOD-FE-
	2.727	7					6020T(180),DOD-PB- 6020T(180),DOD-PB- 6020T(180)
L1012632-05A	Plastic 500ml unpreserved	В	7	6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012632-05B	Plastic 500ml H2SO4 preserved	В	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)

Project Number: AC001

Lab Number: L1012632 **Report Date**: 09/07/10

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pH	deg C	Pres	Seal	Analysis(*)
L1012632-05C	Plastic 250ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-SB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-HG-7470S(28)
L1012632-05D	Plastic 250ml unpreserved .	В	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-05E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05H	Plastic 250ml unpreserved	В	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-05I	Amber 250ml unpreserved	В	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-05J	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-05K	Vial H2SO4 preserved split	В	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-06A	Plastic 500ml unpreserved	Α	7	6	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012632-06B	Plastic 500ml H2SO4 preserved	Α	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012632-06C	Plastic 250ml HNO3 preserved	Α	<2	6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE- 6020S(180),DOD-MG- 6020S(180),DOD-SB-
	V	0,		10.00		8 500	6020S(180),DOD-CR- 6020S(180),DOD-MN-
		lec .	27				6020S(180),DOD-TL- 6020S(180),DOD-CO- 6020S(180),DOD-AG- 6020S(180),DOD-NA- 6020S(180),DOD-NA- 6020S(180),DOD-NI- 6020S(180),DOD-PB- 6020S(180),DOD-V- 6020S(180),DOD-AS- 6020S(180),DOD-CD- 6020S(180),DOD-BE- 6020S(180),DOD-CU- 6020S(180),DOD-ZN- 6020S(180),DOD-AL- 6020S(180),DOD-AL- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)

Project Number: AC001

Lab Number: L1012632 Report Date: 09/07/10

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН		Pres	Seal	Analysis(*)
L1012632-06D	Plastic 250ml unpreserved	Α	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-06E	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-06F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-06G	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	6	Υ	Present/Intact	SULFIDE-4500(7)
L1012632-06H	Plastic 250ml unpreserved	Α	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-061	Amber 250ml unpreserved	Α	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-06J	Vial H2SO4 preserved split	Α	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-06K	Vial H2SO4 preserved split	Α	N/A	6	Y	Present/Intact	DOC-5310(28)
I 1012632-07A	Plastic 1000ml unpreserved	Α	7	6	Y	Present/Intact	TSS-2540(7)
L1012632-07B	Plastic 500ml HNO3 preserved	A	<2	6	Y	Present/Intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012632-08A	Plastic 500ml HNO3 preserved	В	<2	6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NB-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-09A	Plastic 500ml HNO3 preserved	В	<2	6	Y	Present/intact	DOD-NA-6020T(180),DOD-NI-6020T(180),DOD-NI-6020T(180),DOD-MN-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-HG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632 **Report Date:** 09/07/10

 Project Name:
 SHL TASK 0002
 Lab Number:
 L1012632

 Project Number:
 AC001
 Report Date:
 09/07/10

GLOSSARY

Acronyms

EPA Environmental Protection Agency.

 Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

 Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI Not Ignitable.

RE Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.

Report Format: DU Report with "J" Qualifiers



Project Name: SHL TASK 0002 Lab Number: L1012632
Project Number: AC001 Report Date: 09/07/10

Data Qualifiers

RE - Analytical results are from sample re-extraction.

J Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND Not detected at the method detection limit (MDL) for the sample.

Report Format: DU Report with "J" Qualifiers

L1012632

Lab Number:

Project Name: SHL TASK 0002

Project Number: AC001 Report Date: 09/07/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.1, issued April 22, 2009

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Polable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.4 504.8 SM6264B)

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-06-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (<u>Inorganic Parameters</u>: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. <u>Organic Parameters</u>: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B, Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (<u>Inorganic Parameters</u>: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. <u>Organic Parameters</u>: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B, Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C; EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited. Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

14

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2⁻D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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WESTBORD, MA	MANSFIELD, MA	Pro	oject Informa	tion			Re	port	Info	rmal	tion -	Data	a De	livera	bles	10000	Billing	g Informat	on	MADE TO SELECT	100	
TEL: 508-895-9220 FAX: 508-898-9193	TEL: 508-822-9300 FAX: 608-822-3288	Pro	ect Name: 5	HL Ta	14 000	2	1	FAX	-		XE					0	Same	as Client In	fo F	O#:		
Client Information	n	Pro	ect Location:	Deven	5 M	1	1	ADE						ables								
Client Jovere	ign Consilting I	Pro Pro	ect# AC	001		Janes an						ents		ort L		Ų						
	3 S. Main St		ect Manager.	Phil M	Bain	rugery st		-	d Pro	_	-	er G			-		_	E QA,				
Mansfel	d MA 000	48 ALI	HA Quote #:		ল ত্রুত্বর জেপ্টার্ক্স	M. 1674.									-		-	TA PARTY	ONF	DENCE PRO	то	
Phone: 508 - 3	59-3200	- 10	ırn-Around Ti	me					D N		200						quirec? n this S		see n	ote in Commer	nts)	
Fax: 50-8-3.	39- 3248	N/c	tandard "C	RUSH (only	19		u	Yes	X No	0	Are C	TRO	P (R	eason	able C	onfld	lence P	rotocols) Re	quire	5 ?		
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ALPHA Lab ID (Lab Use Only)	Samp	ole ID	Col	lection Time	Sample Matrix	Sampler:	5 //-	11	N N	N/K	73	1/2	1/3	St.	PHSS	\$/	5	4		ific Comments		L W S
12637.	GR-10-14-039	-F	8/12/10	0950	GW	JJC	V	V	V	V	V		V	45		1	1	MS/M	0	mobils cay	V	10
15 a 2 3 2 man	68-10-14-039		8/12/10	0950	GV	352						V			V	1		MS/MS	0 /	hotals Confy		3
3	G8-10-14-049-	F	8/1410	1120	GW	JJC	V	V	U	V	V		V			1				7	-	9
Ų	GP-10-14-049-	U	8/12/10	1120	GW	JJC						V	j		V	1						a
	69-10-14-059	-F	8/12/10	1300	GW	JJC	V	V	v	V	V		1			V	/				-	9
	GP-10-14-069	F	8/12/6	1435	6W	JJC	V	V.	V	V	V		V	-	Q.	L	1					9
The anti-viti enter at the of	GP-10-14-069-		9/14/10	1435	GW	376						V	10		1	1	T					2
3 4	600P-081610-1	P	8/12/10	1120	GW	22 C							L	-11		1	1	-	_			1
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WESTBORD, MA MANSFIELD, MA TEL: 508-898-9220 TEL: 508-822-9300 FAX: 508-898-9193 FAX: 508-822-3288	Project Information Project Name: SHL 7	54 00	<i>2</i> 2		port FAX		200			Deli ED	verab	les		-	Information as Client Info	PO#.	23410. (24)
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Client: Sovereign Consulting Inc -	Project#: 46001			The same		200			nts/		rt Liu						
Address: 905 B S. Main 5.+	Project Manager. Phil h	Mc Bain	Separate Sep			d-Pro	-	_		_		-	-	-	E QAPP		
Mansfeld MA 03048	ALPHA Quote #		South Co.	1	20.00		_								OCCUPATION.	FIDENCE PRO	то
Phone: 508 - 339 - 3200 - 3	Turn-Around Time										al Me					e note in Commer	nts)
Fax: 508-339-3248			10.11			C4				200					rotocols) Requi		
Email: precional sacon com	Date Due: 6/25/10				9/	1	1	12.	/	:/:	1	1	1	1	SAN	IPLE HANDLING	T 0 T
Other Project Specific Requirements/Com If MS is required, indicate in Sample Specific Common	ments/Detection Limits: ta which samples and what tests MS to MS every 20 soil samples) As noted Falled File	errel		ANALVO	12/10,	/	1	(10)	/	1	DA Metal	SHOW WHY O	Market # 1	1.66	S CO	etion one ** ot needed ab to do servation ab to do	# BOTT
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5 GP-10-14-049-F	8/146 T120	GW	JJC	V	V	0	V	V		V			V				9
= 7 4 GA10-14-049- U	Slets Co	GW	JJC						V			IV	1				a
8 GP-10-14-059-F	State (PE)6	GW	JJC	V	V	V	V	V		1			1		-		9
510 GP-10-14-069-F	8/12/6 CP365	6.4/	220	V	V	V	v	1		V.			V		1		9
7 GP-10-14-069- U	1 1 CARS 5	GW	320								3	1	1	٠.			2
4 GOUP-081610-P	dut 09726	GW	32 C				10				,	1	1				11
9 DUP-OBILIO-U	8/2/6 126	GW	27C						1		1	V	1				
10 RB-081610-U	Visitions	GW	37C							1		V					1
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TEL: 508-898-9220 FAX: 608-898-9193	TEL: 508-822-9300 FAX: 508-822-3188	Project Na	ame: SHL	Tasy	co	22	100	FA	7		AE	MAH	E	SR:		C	Sam	e es Client Info PO#:	
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	39-3206		round Time					Yes									uired'	? SDG? (If yes see note in Comme	nis)
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lbl NO: 01-01 (rev. 18-Ja	n-2010) Re	~ X	lyen	41	MI	0 /0	IF.	1	1	W	0		_	7	7	o 10	-	See reversels day 2 12	



ANALYTICAL REPORT

Lab Number:

L1012636

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/23/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012636

Report Date:

08/23/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012636-01	GP-10-14-039-F	DEVENS, MA	08/16/10 09:50
L1012636-02	GP-10-14-049-F	DEVENS, MA	08/16/10 11:20
L1012636-03	GP-10-14-059-F	DEVENS, MA	08/16/10 13:00
L1012636-04	GP-10-14-069-F	DEVENS, MA	08/16/10 14:35

Project Name:

SHL TASK 0002

Project Number: AC001 Lab Number:

L1012636

Report Date:

08/23/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the Dissolved Inorganic Carbon results. The results of all other analyses will be issued under separate cover.

Sample Receipt

The date collected was obtained from the sample labels and verified by the client.

Dissolved Inorganic Carbon

L1012636-01 through -04 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

A Laboratory Duplicate was performed in lieu of an LCSD and Matrix Spike.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 08/23/10

INORGANICS & MISCELLANEOUS

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012636

Report Date:

08/23/10

SAMPLE RESULTS

Lab ID:

L1012636-01

Client ID:

GP-10-14-039-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/16/10 09:50

Date Received:

08/16/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	78		mg/l	50	-	50	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012636

Project Number: AC001

Report Date:

08/23/10

SAMPLE RESULTS

Lab ID:

L1012636-02

Client ID:

GP-10-14-049-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/16/10 11:20

Date Received:

08/16/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	77		mg/l	40	**	40	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012636

Project Number: AC001

Report Date:

08/23/10

SAMPLE RESULTS

Lab ID:

L1012636-03 GP-10-14-059-F

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/16/10 13:00

Date Received:

08/16/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	82		mg/l	40		40	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012636

Project Number: AC001

Report Date:

08/23/10

SAMPLE RESULTS

Lab ID:

L1012636-04

Client ID:

GP-10-14-069-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/16/10 14:35

Date Received:

08/16/10

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	76		mg/t	40	••	40	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012636

08/23/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sa	mple(s): 01-04 Batc	h: WG42	8637-1						
Dissolved Inorganic Carbon	ND	mg/l	1.0	**	1	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Lab Control Sample Analysis Batch Quality Control

SHL TASK 0002 Batch Quality Contr

Lab Number:

L1012636

Report Date:

08/23/10

	LCS		LCSD		%Recovery			
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	RPD Limits

Associated sample(s): 01-04 Batch: WG428637-2

AC001

Dissolved Inorganic Carbon

Project Name:

Project Number:

110

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012636

Report Date:

08/23/10

Parameter	Nat	ive Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04	QC Batch ID: WG428637-3	QC Sample: L1	012636-04 Client ID: GF	P-10-14-069-F			
Dissolved Inorganic Carbon		76	90	mg/l	17		

Project Name:

Project Number: AC001

SHL TASK 0002

Serial_No:08231011:04

Project Name: SHL TASK 0002

Lab Number: L1012636 Project Number: AC001

Report Date: 08/23/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A

Absent

В

Absent

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012636-01A	Amber 250ml unpreserved	Α	N/A	6	Y	Absent	SPECWC()
L1012636-01B	Vial H2SO4 preserved split	Α	N/A	6	Y	Absent	SPECWC()
L1012636-01C	Vial H2SO4 preserved split	Α	N/A	6	Y	Absent	SPECWC()
L1012636-02A	Amber 250ml unpreserved	Α	N/A	6	Y	Absent	SPECWC()
L1012636-02B	Vial H2SO4 preserved split	Α	N/A	6	Y	Absent	SPECWC()
L1012636-02C	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-03A	Amber 250ml unpreserved	Α	N/A	6	Y	Absent	SPECWC()
L1012636-03B	Vial H2SO4 preserved split	Α	N/A	6	Y	Absent	SPECWC()
L1012636-03C	Vial H2SO4 preserved split	Α	N/A	6	Y	Absent	SPECWC()
L1012636-04A	Amber 250ml unpreserved	В	N/A	6	Y	Absent	SPECWC()
L1012636-04B	Vial H2SO4 preserved split	В	N/A	6	Y	Absent	SPECWC()
L1012636-04C	Vial H2SO4 preserved split	В	N/A	6	Y	Absent	SPECWC()

SHL TASK 0002

Lab Number:

L1012636

Project Number:

AC001

Report Date:

08/23/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable.

 Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI Not Ignitable.

REPART Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to
assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the
absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E · Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference;
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.

Report Format: Data Usability Report

ALPHA

Serial_No:08231011:04

L1012636

Lab Number:

Project Name: SHL TASK 0002

Project Number: AC001 Report Date: 08/23/10

Data Qualifiers

RE -Analytical results are from sample re-extraction.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name: SHI

SHL TASK 0002

Lab Number:

L1012636

Project Number:

AC001

Report Date:

08/23/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate.

Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters, Total Coliform – MF mendo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Poticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500NH3-B, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1,

SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B.

Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1; 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA

8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID: 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited. Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00065. *NELAP Accredited via NY-DOH*. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited. Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2¯D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B, Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (<u>Inorganic Parameters</u>: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, <u>Organic Parameters</u>: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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Control of the late beauty and the state	2-10-14-039-U	8/12/10	1120	GW	35C	V	V	V	V	V		V		-	L	-	MS/MSD	Metals Conly	
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ANALYTICAL REPORT

Lab Number:

L1012682

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/24/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012682

Report Date:

08/24/10

Alpha Sample ID	Client ID	Sample Location	Date/Time
L1012682-01	GP-10-14-079-F	DEVENS, MA	08/17/10 07:45
L1012682-02	GP-10-16-024-F	DEVENS, MA	08/17/10 16:15

Project Name: Project Number: SHL TASK 0002

AC001

Lab Number:

L1012682

Report Date:

08/24/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220

Report Submission

This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses will be issued under separate cover

Dissolved Inorganic Carbon

L1012682-01 and -02 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

A Laboratory Duplicate was performed in lieu of an LCSD and Matrix Spike.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 08/24/10

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012682

Report Date:

08/24/10

SAMPLE RESULTS

Lab ID:

L1012682-01

Client ID:

GP-10-14-079-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/17/10 07:45

Date Received:

08/17/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	53		mg/l	8.0	**	8	08/17/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012682

Project Number: AC001

Report Date:

08/24/10

SAMPLE RESULTS

Lab ID:

L1012682-02

Client ID: Sample Location:

GP-10-16-024-F DEVENS, MA

Matrix:

Water

Date Collected:

08/17/10 16:15

Date Received:

08/17/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method ,	Analyst
General Chemistry										
Dissolved Inorganic Carbon	12		mg/l	8.0	***	8	08/17/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012682

08/24/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sa	imple(s): 01-02 Bate	ch: WG42	8638-1						
Dissolved Inorganic Carbon	ND	mg/l	1.0	-	1	08/17/10 21:30	08/19/10 17:34	30,5310C(M)	DW

Lab Control Sample Analysis
Batch Quality Control

SHL TASK 0002

110

Lab Number:

L1012682

Report Date:

08/24/10

Parameter			LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s):	01-02	Batch:	WG428638-2							
Dissolved Inorganic Carbon			110							

Project Name:

Project Number:

AC001

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012682

Report Date:

08/24/10

Parameter	. Nat	ive Sample	Duplic	ate Sampl	e Units	RPD	Qual	RPD Limits
Associated sample(s): 01-02	QC Batch ID; WG428638-3	QC Sample:	L1012682-02	Client ID:	GP-10-16-024-F			
Dissolved Inorganic Carbon	**************************************	12		12	mg/l	0		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012682 Report Date: 08/24/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

В

Present/Intact

Α

Present/Intact

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pH	deg C	Pres	Seal	Analysis(*)
L1012682-01A	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012682-01B	Vial H2SO4 preserved split	В	N/A	4	Y	Present/Intact	SPECWC()
L1012682-01X	Amber 250ml unpreserved	В	6	4	Y	Present/Intact	SPECWC()
L1012682-02A	Vial H2SO4 preserved split	Α	N/A	3	Y	Present/Intact	SPECWC()
L1012682-02B	Vial H2SO4 preserved split	Α	N/A	3	Y	Present/Intact	SPECWC()
L1012682-02X	Amber 250ml unpreserved	Α	6	3	Y	Present/Intact	SPECWC()

SHL TASK 0002

Lab Number:

L1012682

Project Number:

AC001

Report Date:

08/24/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

 Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable.

 Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RE Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to
assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the
absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P . The RPD between the results for the two columns exceeds the method-specified criteria.
- -The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis.

Report Format: Data Usability Report

ALPHA

L1012682

Lab Number:

Project Name: SHL TASK 0002

Project Number: AC001 Report Date: 08/24/10

Data Qualifiers

RE -Analytical results are from sample re-extraction.

J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs),

ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

SHL TASK 0002

Lab Number:

L1012682

Project Number:

AC001

Report Date:

08/24/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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

ALPHA

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform - Colilert (SM9223 P/A), E. Coli. - Colilert (SM9223 P/A), HPC - Pour Plate (SM9215B), Fecal Coliform -MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform - MF mEndo (SM9222B), Total Coliform - MTF (SM9221B), HPC - Pour Plate (SM9215B), Fecal Coliform - MF m-FC (SM9222D), Fecal Coliform - A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity, Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for Ba, Be, Ca, Cd, Cr, Cu, Na, Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics) (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332. Microbiology Parameters: SM9215B; ENZ, SUB, SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn) (EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: SM6214B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: SM6214B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0.

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-06-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B, Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ QQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666. <u>Organic Parameters</u>: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. NELAP Accredited. Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00065. *NELAP Accredited via NY-DOH*. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2 D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

The state of the s

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

ESTBORO, MA EL: 508-890-9220 XX: 508-898-9193	MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288	Project Infor			4 000	,2		eport I FAX I ADE		T I	英E	MAIL	E Del	R		s		ing Inf			PO#:		
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ANALYTICAL REPORT

Lab Number:

L1012735

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/02/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012735-01	GP-10-16-034-F	DEVENS, MA	08/18/10 07:55
L1012735-02	GP-10-16-034-U	DEVENS, MA	08/18/10 07:55
L1012735-03	GP-10-16-054-F	DEVENS, MA	08/18/10 11:20
L1012735-04	GP-10-16-054-U	DEVENS, MA	08/18/10 11:20
L1012735-05	GP-10-16-064-F	DEVENS, MA	08/18/10 13:40
L1012735-06	DUP-081810-F	DEVENS, MA	08/18/10 11:20
L1012735-07	DUP-081810-U	DEVENS, MA	08/18/10 11:20
L1012735-08	RB-081810-U	DEVENS, MA	08/18/10 14:20

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.) Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

The Dissolved Inorganic Carbon results have been issued under separate cover.

Sample Receipt

The samples were Field Filtered for Dissolved Metals only,

Dissolved Metals

The WG429219-3/-4 MS/MSD recoveries, performed on L1012735-01, are above the acceptance criteria for

SHL TASK 0002

Lab Number:

L1012735

Project Number:

AC001

Report Date:

09/02/10

Case Narrative (continued)

Mercury (141%/138%); however, the associated LCS recovery is within criteria. A post-digestion spike was performed with an acceptable recovery of 121%. The parent sample (L1012735-01) should be qualified as "UJ" for Mercury.

Total Metals

L1012735-02 has elevated detection limits for all analytes, except Mercury, due to the dilution required by the high concentrations of target analytes.

The WG428722-4/-5 MS/MSD recoveries for Aluminum (165%/0%), Calcium (MSD at 74%), Iron (0%/0%) and Manganese (MSD at 44%), performed on L1012735-02, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG428722-4/-5 MS/MSD recoveries are below the acceptance criteria for Antimony (64%/64%), Arsenic (58%/50%), Magnesium (MSD at 75%), and Selenium (74%/74%). A post digestion spike was performed with acceptable recoveries of Antimony (103%), Arsenic (99%), Magnesium (94%) and Selenium (99%). The parent sample (L1012735-02) results are qualified with a "J".

The WG429220-4 MSD recovery, performed on L1012735-02, is above the acceptance criteria for Mercury (121%); however, the MS recovery and associated LCS recovery are within criteria. No further action was taken. The parent sample (L1012735-02) is gualified as "J" for Mercury.

Dissolved Organic Carbon

A Filter Blank was analyzed and had a result of 0.26 mg/l (ND).

Solids, Total Suspended

L1012735-02 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

Chloride

L1012735-03 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.



SHL TASK 0002

Lab Number:

L1012735

Project Number:

AC001

Report Date:

09/02/10

Case Narrative (continued)

Alkalinity, Total

The WG428685-3 MS recovery (80%), performed on L1012735-05, is below the acceptance criteria. This has been attributed to matrix interference.

The WG428685-4 Laboratory Duplicate RPD (5%), performed on L1012735-05, is above the acceptance criteria.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

Date: 09/02/10

METALS

SHL TASK 0002

Project Number:

Sample Location:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-01

Client ID:

GP-10-16-034-F DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 07:55

Date Received:

08/18/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	DI.							
	laathara			RL	MDL	Factor	Prepared	Analyzed	Method	Method	Analyst
Dissolved Metals - W	vestboro	ugh Lab									
Aluminum, Dissolved	42.3		ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.510		ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	1.97		ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	8.23		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	11	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	15000		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	0.22	J	ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	3.20		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	0.33	J	ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	138		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.06	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	2030		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved	580		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 12:53	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.93		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Polassium, Dissolved	6630		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	9100		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	0.1	J	ug/l	0.500	0.031	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	0.2	J	ug/l	0.500	0.077	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	3.37	1	ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-02

Client ID: Sample Location: GP-10-16-034-U DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 07:55

Date Received:

08/18/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westb	orough L	_ab									
Aluminum, Total	79600		ug/l	50.0	9.56	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Antimony, Total	3.20	J	ug/l	2.50	0.600	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Arsenic, Total	333	J	ug/l	2.50	0.565	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Barium, Total	558		ug/I	2.50	0.475	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Beryllium, Total	6.35		ug/l	2.50	0.295	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	вм
Cadmium, Total	1.36	J	ug/l	2.50	0.295	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Calcium, Total	57800		ug/l	500	63.3	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Chromium, Total	289		ug/l	2.50	0.930	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Cobalt, Total	122		ug/l	2.50	0.265	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Copper, Total	272		ug/l	2.50	0.590	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Iron, Total	145000		ug/l	250	42.0	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Lead, Total	245		ug/l	2.50	0.250	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Magnesium, Total	24700	J	ug/l	500	20.5	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	BM
Manganese, Total	5080		ug/l	5.00	0.680	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Mercury, Total	0.2714	J	ug/l	0.2000	0.0120	1	08/24/10 17:10	0 08/25/10 13:33	EPA 7470A	1,7470A	EZ
Nickel, Total	229		ug/l	2.50	0.900	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Potassium, Total	17100		ug/l	500	90.8	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Selenium, Total	6.39	J	ug/l	5.00	2.03	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Silver, Total	0.58	J	ug/l	2.50	0.425	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Sodium, Total	17600		ug/l	500	91.0	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Thallium, Total	1.91	, J	űg/l	2.50	0.155	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM .
Vanadium, Total	109		ug/l	2.50	0.385	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ
Zinc, Total	298		ug/l	25.0	8.12	5	08/20/10 18:45	5 08/24/10 06:07	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Lab Number:

L1012735

Project Number:

AC001

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-03

Client ID:

GP-10-16-054-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	16.9		ug/l	10.0	1.91	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	0.800		ug/l	0.500	0.120	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Arsenic, Dissolved	1.89		ug/l	0.500	0.113	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	8.15		ug/l	0.500	0.095	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Calcium, Dissolved	34700		ug/l	100	12.6	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.43	J	ug/l	0.500	0.186	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	0.740		ug/l	0 500	0.053	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Copper, Dissolved	1.45		ug/l	0.500	0.118	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Iron, Dissolved	277		ug/l	50.0	8.41	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.07	J	ug/I	0.500	0.050	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	3500		ug/l	100	4.10	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Manganese, Dissolved	84 0		ug/l	1.00	0.136	-1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:1	0 08/25/10 12:59	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.21		ug/l	0.500	0.180	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Potassium, Dissolved	4810		ug/I	100	18.2	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	0.43	J	ug/l	1.00	0.406	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Sodium, Dissolved	36000		ug/l	100	18.2	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	0.04	J	ug/I	0.500	0.031	1 -	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.29	J	ug/l	0.500	0.077	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	вм
Zinc, Dissolved	6.01		ug/l	5.00	1.62	1	08/22/10 12:0	0 08/24/10 05:43	EPA 3005A	1,6020A	ВМ

Project Number: AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID: Client ID: L1012735-04 GP-10-16-054-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough l	.ab									
Aluminum, Total	4030		ug/l	10.0	1.91	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	ВМ
Antimony, Total	2.82		ug/l	0.500	0.120	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Arsenic, Total	19.9		ug/l	0.500	0.113	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Barium, Total	25.9		ug/l	0.500	0.095	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	ВМ
Beryllium, Total	0.34	J.	ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Cadmium, Total	0.19	J	ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Calcium, Total	35200		ug/l	100	12.6	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Chromium, Total	25.0		ug/l	0.500	0.186	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	ВМ
Cobalt, Total	3.84		ug/l	0.500	0.053	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Copper, Total	23.6		ug/l	0.500	0.118	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Iron, Total	8900		ug/l	50.0	8.41	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Lead, Total	22.0		ug/l	0.500	0.050	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Magnesium, Total	4860		ug/l	100	4.10	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	BN.
Manganese, Total	180		ug/l	1.00	0.136	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/24/10 17:1	0 08/25/10 13:38	EPA 7470A	1,7470A	EZ
Nickel, Total	14.4		ug/l	0.500	0.180	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Potassium, Total	5840		ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Selenium, Total	0.82	J	ug/l	1.00	0.406	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Silver, Total	0.29	J	ug/l	0.500	0.085	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Sodium, Total	35600		ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	вм
Thallium, Total	0.1	· J.	ug/l	0.500	0:031	1.	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	ВМ
Vanadium, Total	7.83		ug/l	0.500	0.077	1	08/20/10 18:4	5 08/24/10 06:43	EPA 3005A	1,6020A	ВМ
Zinc, Total	40.2		ug/l	5.00	1.62	-1	08/20/10 18:4	5 08/24/10 06;43	EPA 3005A	1,6020A	вм

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-05

Client ID:

GP-10-16-064-F

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/18/10 13:40

Date Received:

08/18/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	4.17	J	ug/l	10.0	1.91	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Antimony, Dissolved	0.28	J	ug/l	0.500	0.120	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	445	:	ug/I	0.500	0.113	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	39.2		ug/l	0.500	0.095	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	31300		ug/l	100	12.6	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.36	J	ug/l	0.500	0.186	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	26.0		ug/l	0.500	0.053	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.47	J	ug/l	0.500	0.118	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	44700		ug/l	50.0	8.41	4	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.13	J	ug/I	0.500	0.050	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	6080		ug/l	100	4.10	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Manganese, Dissolved	777		ug/l	1.00	0.136	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/I	0.2000	0.0120	1	08/24/10 17:1	0 08/25/10 13:00	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	12.8		ug/l	0.500	0.180	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	12000		ug/I	100	18.2	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Sodium, Dissolved	16600		ug/l	100	18.2	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND.	3,81-	ug/l	0.500	0.031	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	вм
Vanadium, Dissolved	0.21	J	ug/l	0.500	0.077	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	3.97	J	ug/l	5.00	1.62	1	08/22/10 12:0	0 08/24/10 05:49	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Lab Number:

L1012735

Project Number:

AC001

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-06

Client ID:

DUP-081810-F

Sample Location: Matrix:

DEVENS, MA

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	18.9		ug/l	10.0	1.91	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.640		ug/l	0.500	0.120	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	2.05		ug/l	0.500	0.113	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	8.34		ug/l	0.500	0.095	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	0.500	0.059	Ť	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Calcium, Dissolved	35000		ug/l	100	12.6	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.38	J	ug/l	0.500	0.186	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	0.750		ug/l	0.500	0.053	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Copper, Dissolved	1.21		ug/l	0.500	0.118	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Iron, Dissolved	300		ug/I	50.0	8.41	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	3610		ug/l	100	4.10	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Manganese, Dissolved	86.0		ug/l	1.00	0.136	. 1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:1	0 08/25/10 13:02	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.27		ug/l	0.500	0.180	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	5040		ug/l	100	18.2	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved	36700		ug/l	100	18.2	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND		úg/l	0.500	0.031	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	0.42	J	ug/l	0.500	0.077	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ
Zinc, Dissolved	4.15	Ĵ	ug/l	5,00	1.62	1	08/22/10 12:0	0 08/24/10 05:55	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Lab Number:

L1012735

Project Number:

AC001

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-07

Client ID:

DUP-081810-U

Sample Location:

DEVENS, MA

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep:

Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	.ab									
Aluminum, Total	5710		ug/l	10.0	1.91	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Antimony, Total	3.60		ug/l	0.500	0.120	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Arsenic, Total	26,0		ug/l	0.500	0.113	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Barium, Total	32.5		ug/l	0.500	0.095	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Beryllium, Total	0.45	J	ug/l	0.500	0.059	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Cadmium, Total	0.23	J	ug/l	0.500	0.059	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Calcium, Total	33600		ug/l	100	12.6	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Chromium, Total	30,0		ug/l	0.500	0.186	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Cobalt, Total	4.57		ug/I	0.500	0.053	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Copper, Total	27.4		ug/l	0.500	0.118	1/	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Iron, Total	11400		ug/l	50.0	8.41	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Lead, Total	25.6		ug/l	0.500	0.050	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Magnesium, Total	5310		ug/I	100	4.10	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Manganese, Total	200		ug/l	1.00	0.136	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Mercury, Total	0.03683	J	ug/I	0 2000	0.0120	1	08/24/10 17:10	0 08/25/10 13:40	EPA 7470A	1,7470A	EZ
Nickel, Total	18.0		ug/l	0.500	0.180	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Polassium, Total	6060		ug/l	100	18.2	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Selenium, Total	0.93	J	ug/l	1.00	0.406	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Sodium, Total	35800		ug/l	100	18.2	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Thallium, Total	0.1	J	ug/l	0.500	0.031	1"	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	ВМ
Vanadium, Total	10.4		ug/!	0.500	0.077	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020Å	вм
Zinc, Total	47.5		ug/l	5.00	1.62	1	08/20/10 18:45	5 08/24/10 06:49	EPA 3005A	1,6020A	вм

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-08

Client ID: Sample Location: RB-081810-U

Matrix:

Date Collected:

08/18/10 14:20

Date Received:

08/18/10

Field Prep:

Not Specified

DEVENS, MA Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	stborough l	_ab									
Aluminum, Total	3.04	J	ug/l	10.0	1.91	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	вм
Antimony, Total	ND		ug/l	0.500	0.120	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	вм
Arsenic, Total	0.15	J	ug/l	0.500	0.113	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Barium, Total	ND		ug/l	0.500	0.095	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	вм
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Calcium, Total	25.1	J	ug/l	100	12.6	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.21	J	ug/I	0.500	0.186	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Copper, Total	0.14	J	ug/l	0.500	0.118	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Iron, Total	9.64	J	ug/l	50.0	8.41	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	вм
Lead, Total	ND		ug/i	0.500	0.050	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Magnesium, Total	ND		ug/l	100	4.10	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Manganese, Total	0 16	J	ug/l	1.00	0.136	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/24/10 17:1	0 08/25/10 13:42	EPA 7470A	1,7470A	EZ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Potassium, Total	ND		ug/I	100	18.2	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Selenium, Total	ND		ug/l	1.00	0.406	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Sodium, Total	28.3	J	ug/I	100	18.2	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Thallium, Total	ND	* * *	ug/l	, 0.500	0.031	. 1	08/20/10 18:4	5 08/24/10 06:55	ÉPA 3005A	1,6020A	*ВМ
Vanadium, Total	ND		ug/l	0.500	0.077	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ
Zinc, Total	1.84	J	ug/l	5.00	1,62	1	08/20/10 18:4	5 08/24/10 06:55	EPA 3005A	1,6020A	ВМ

Project Number: AC001

SHL TASK 0002

Report Date:

L1012735

Lab Number:

09/02/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westbo	rough Lab for sample(s)	02,04,0	07-08	Batch:	WG428722-	1			
Aluminum, Total	ND	ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Antimony, Total	ND	ug/l	0.500	0,120	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Arsenic, Total	ND	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Barium, Total	ND	ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Beryllium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Cadmium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Calcium, Total	ND	ug/l	100	12.6	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Chromium, Total	ND	ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Cobalt, Total	ND	ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Copper, Total	ND	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Iron, Total	ND	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Lead, Total	ND	ug/l	0.500	0.050	3.	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Magnesium, Total	ND	ug/l	100	4.10	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Manganese, Total	ND	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Nickel, Total	ND	ug/l	0.500	0.180	- 1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Potassium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Selenium, Total	ND	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Silver, Total	ND	ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Sodium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Thallium, Total	ND	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Vanadium, Total	ND	ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Zinc, Total	ND	ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
							O. Contraction of the Contractio		

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytica Method	l Analyst
Dissolved Metals - West	borough Lab for samp	ole(s): 01	,03,05-0	6 Bat	ch: WG42	8837-1			
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Antimony, Dissolved	ND	ug/l	0.500	0.120	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Barium, Dissolved	ND	ug/l	0.500	0.095	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм



Project Name: SHL TASK 0002 Lab Number:

L1012735

09/02/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Calcium, Dissolved	25.7	J	ug/l	100	12.6	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Chromium, Dissolved	ND		ug/I	0.500	0.186	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Copper, Dissolved	ND		ug/l	0.500	0,118	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Iron, Dissolved	10.3	J	ug/l	50.0	8.41	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Manganese, Dissolved	0.24	J	ug/l	1.00	0.136	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Potassium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Selenium, Dissolved	ND		ug/I	1.00	0.406	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Sodium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Zinc, Dissolved	2.12	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method Analyst
Dissolved Metals - Wes	tborough Lab for samp	ole(s): 01	,03,05-06 Ba	atch: WG42	9219-1		7 , and an
Mercury, Dissolved	ND	ug/l .	0.2000 0.012	.0 - 1 -	08/24/10 17:10	08/25/10 12:5	0 .1,7470A · EZ

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals - Westbord	ough Lab for sample(s): 02,04,0	7-08 B	atch:	WG429220-	1			
Mercury, Total	ND	ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 13:26	1,7470A	EZ



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012735

Report Date:

09/02/10

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	LCS %Recovery Qua	LCSD I %Recovery Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab	Associated sample(s): 02,04,07-	08 Batch: WG428722-2				
Aluminum, Total	93	*	80-120	1,6		
Antimony, Total	101		80-120	(4.)		
Arsenic, Total	100		80-120	1.2		
Barium, Total	102	4	80-120			
Beryllium, Total	104	15	80-120	•		
Cadmium, Total	111		80-120			
Calcium, Total	109		80-120	-		
Chromium, Total	97	4	80-120	100		
Cobalt, Total	105	*	80-120	9.		
Copper, Total	103		80-120	-2-1		
Iron, Total	106		80-120	18		
Lead, Total	103		80-120			
Magnesium, Total	100		80-120	-		
Manganese, Total	100		80-120			
Nickel, Total	103	4	80-120	9		
Potassium, Total	102	*	80-120			
Selenium, Total	103		80-120	2.0		
Silver, Total	99		80-120	+		
Sodium, Total	110	*	80-120	-		
Thallium, Total	96	4.	80-120			
Vanadium, Total	103	y.	80-120			

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab	Associated sample(s): 02,04,07-08	Batch: WG428722-2			
Zinc, Total	103	*	80-120		

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06 Batch: WG42883	7-2		
Aluminum, Dissolved	93		80-120	040	
Antimony, Dissolved	101	ú.	80-120		
Arsenic, Dissolved	105		80-120	4	
Barium, Dissolved	105		80-120		
Beryllium, Dissolved	104		80-120		
Cadmium, Dissolved	1311		80-120	141	
Calcium, Dissolved	108		80-120	i dh	
Chromium, Dissolved	96		80-120		
Cobalt, Dissolved	104		80-120	4	
Copper, Dissolved	102	v	80-120	4	
Iron, Dissolved	104	4	80-120		
Lead, Dissolved	102		80-120	· .	
Magnesium, Dissolved	101	.2.	80-120	· .	
Manganese, Dissolved	101		80-120	4	
Nickel, Dissolved	102		80-120		
Potassium, Dissolved	105		80-120		
Selenium, Dissolved	107		80-120		
Silver, Dissolved	101		80-120	141	
Sodium, Dissolved	113		80-120		
Thallium, Dissolved	98	4	80-120	· ·	
Vanadium, Dissolved	101	9	80-120		

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Zinc, Dissolved	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06 Batch: WG428837-	2		
Zinc, Dissolved	105		80-120		
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05-06 Batch: WG429219-	2		
Mercury, Dissolved	115	*	80-120		20
Total Metals - Westborough Lab Asso	ociated sample(s): 02,0	04,07-08 Batch: WG429220-2			
Mercury, Total	109		80-120		20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab 10-16-034-U	Associated	sample(s):	0 2,04,07-08	QC Batch II): WG4	28722-4	WG428722-5	QC San	nple: L10127	35-02	Clien	t ID: GP
Aluminum, Total	79600	2000	82900	165		77800	0		80-120	6		20
Antimony, Total	3.20	500	. 324	64	Q	323	64	Q	80-120	0		20
Arsenic, Total	333	120	403	58	Q	393	50	Q	80-120	3		20
Barium, Total	558	2000	2770	111		2590	102		80-120	7		20
Beryllium, Total	6.35	50	58.7	105		58.2	104		80-120	1		20
Cadmium, Total	ND	51	61.2	120		57.7	113		80-120	6		20
Calcium, Total	57800	10000	68900	111		65200	74		80-120	6		20
Chromium, Total	289	200	494	102		471	91		80-120	5		20
Cobalt, Total	122	500	637	103		614	98		80-120	4		20
Copper, Total	272	250 - ;	514	97		490	87		80-120	5		20
Iron, Total	145000	1000	139000	0		129000	0		80-120	7		20
Lead, Total	245	510	814	112		770	103		80-120	6		20
Magnesium, Total	24700	10000	34800	101		32200	75	Q	80-120	8		20
Manganese, Total	5080	500	5500	84		5300	44		80-120	4		20
Nickel, Total	229	500	723	99		690	92		80-120	5		20
Potassium, Total	17100	10000	27000	99		25600	85		80-120	5		20
Selenium, Total	6,39	120.	95.0	74	Q	95.3	74	Q	80-120	0		20
Silver, Total	ND	50	51.7	103		49.3	99		80-120	5		20
Sodium, Total	17600	10000	28600	110		28400	108		80-120	1		20
Thallium, Total	ND	120	120	100		115	96		80-120	4		20
Vanadium, Total	109	500	620	102		590	96		80-120	5		20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough 10-16-034-U	Lab Associated	sample(s): 0	02,04,07-08	QC Batch ID: \	WG428722-4	WG428722-5	QC Sample: L10127	735-02	Client ID: GP-
Zinc, Total	298	500	795	99	764	93	80-120	4	20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westbord GP-10-16-034-F	ough Lab Assoc	iated sample	e(s): 01,03,0	05-06 QC Batch	ID: WG428837-	3 WG428837-4	QC Sample: L1	012735-01	Client ID
Aluminum, Dissolved	42.3	2000	1980	97	1900	93	80-120	4	20
Antimony, Dissolved	0.510	500	524	105	516	103	80-120	2	20
Arsenic, Dissolved	1.97	120	131	108	129	106	80-120	2	20
Barium, Dissolved	8.23	2000 -	2130	106	2120	106	80-120	0	20
Beryllium, Dissolved	ND	50.	52.7	105	52.9	106	80-120	0	20
Cadmium, Dissolved	ND	51	59.0	116	57.9	114	80-120	2	20
Calcium, Dissolved	15000	10000	26500	115	25200	102	80-120	5	20
Chromium, Dissolved	ND	200	202	101	196	98	80-120	3	20
Cobalt, Dissolved	3.20	500	548	109	533	106	80-120	3	20
Copper, Dissolved	ND	250	269	108	259	104	80-120	4	20
Iron, Dissolved	138	1000	1230	109	1180	104	80-120	4	20
Lead, Dissolved	ND	510	540	106	529	104	80-120	2	20
Magnesium, Dissolved	2030	10000	12500	105	12100	101	80-120	3	20
Manganese, Dissolved	580	500	1100	104	1060	96	80-120	4	20
Nickel, Dissolved	2.93	500	539	107	516	103	80-120	4	20
Potassium, Dissolved	6630	10000	17400	108	16600	100	80-120	5	20
Selenium, Dissolved	ND	120	128	107	124	103	80-120	3	20
Silver, Dissolved	ND	50	51.6	103	50.7	101	80-120	2	20
Sodium, Dissolved	9100	10000	19500	104	19700	106	80-120	1	20
Thallium, Dissolved	ND	120	120	100	118	98	80-120	2	20
Vanadium, Dissolved	ND	500	533	107	514	103	80-120	4	20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Native Sample	MS . Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
h Lab Assoc	iated sample	e(s): 01,03,0	05-06 QC Batch II	D: WG428837-	3 WG428837-4	QC Sample: L	.1012735-0	Client ID
ND	500	531	106	530	106	80-120	0	20
n Lab Associ	iated sample	(s): 01,03,0	05-06 QC Batch II	D: WG429219-3	3 WG429219-4	QC Sample: L	.1012735-01	Client ID
ND	1	1,410	141	Q 1,379	138	Q 80-120	2	20
Associated	sample(s): 0	02,04,07-08	3 QC Batch ID: W	G429220-3 W	3429220-4 QC	Sample: L1012	2735-02 C	lient ID: GP
0.2714	1 -	1.465	119	1.483	121	Q 80-120	1	20
	Sample Lab Associated	Sample Added Lab Associated sample ND 500 Lab Associated sample ND 1 Associated sample(s): 0	Sample Added Found Lab Associated sample(s): 01,03,0 ND 500 531 Lab Associated sample(s): 01,03,0 ND 1 1,410 Associated sample(s): 02,04,07-08	Sample Added Found %Recovery n Lab Associated sample(s): 01,03,05-06 QC Batch II ND 500 531 106 n Lab Associated sample(s): 01,03,05-06 QC Batch II ND 1 1,410 141 Associated sample(s): 02,04,07-08 QC Batch ID: W	Sample Added Found %Recovery Found n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 ND 500 531 106 530 n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429219-3 ND 1 1,410 141 Q 1,379 Associated sample(s): 02,04,07-08 QC Batch ID: WG429220-3 WG429220-3	Sample Added Found %Recovery In Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 WG428837-4 ND 500 : 531 106 530 106 In Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429219-3 WG429219-4 ND 1 1,410 141 Q 1,379 138 Associated sample(s): 02,04,07-08 QC Batch ID: WG429220-3 WG429220-4 QC	Sample Added Found %Recovery Found %Recovery Limits n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 WG428837-4 QC Sample: L ND 500 531 106 530 106 80-120 n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429219-3 WG429219-4 QC Sample: L ND 1 1,410 141 Q 1,379 138 Q 80-120 Associated sample(s): 02,04,07-08 QC Batch ID: WG429220-3 WG429220-4 QC Sample: L1012	Sample Added Found %Recovery Limits RPD n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 WG428837-4 QC Sample: L1012735-01 ND 500 531 106 530 106 80-120 0 n Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429219-3 WG429219-4 QC Sample: L1012735-01 ND 1 1,410 141 Q 1,379 138 Q 80-120 2 Associated sample(s): 02,04,07-08 QC Batch ID: WG429220-3 WG429220-4 QC Sample: L1012735-02 City

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Lab Number:

L1012735

Project Number: AC001

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-01 GP-10-16-034-F

Client ID: Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 07:55

Date Received:

08/18/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab	1								
Alkalinity, Total	51		mg CaCO3/L	2.0	NA	1		08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	0.079		mg/l	0.075	0.017	1	08/19/10 12:30	08/20/10 21:53	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/18/10 23:06	30,4500NO2-B	DD
Sulfide	ND		mg/I	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500\$2-AD	AT
Chemical Oxygen Demand	19	J	mg/l	20	7.0	1		08/19/10 15:08	44,410.4	DW
Dissolved Organic Carbon	4.2		mg/l	1.0	1.0	1	08/19/10 01:00	08/23/10 18:29	30,5310C	DD
Anions by Ion Chromatog	graphy - West	borough	Lab							
Chloride	15	1 112	mg/l	0.50	0.07	1.		08/19/10 18:55	44,300.0	AU
Nitrogen, Nitrate	0.24		mg/l	0.05	0.01	1		08/19/10 18:55	44,300.0	AU
Sulfate	11		mg/l	1.0	0.12	1	4	08/19/10 18:55	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number:

L1012735

Project Number: AC001

Report Date: 09/02/10

SAMPLE RESULTS

Lab ID: Client ID:

L1012735-02 GP-10-16-034-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 07:55

Date Received:

08/18/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab									
Solids, Total Suspended	3000		mg/l	50	NA	10	1	08/20/10 09:55	30,2540D	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-03

Client ID:

GP-10-16-054-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

See Narrative

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - West	borough Lab									
Alkalinity, Total	74		mg CaCO3/L	2.0	NA	1	+	08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	0.173		mg/l	0.075	0.017	1	08/19/10 12:30	08/20/10 21:54	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	4		08/18/10 23:06	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	22		mg/l	20	7.0	1		08/19/10 15:08	44,410.4	DW
Dissolved Organic Carbon	2.1		mg/l	1.0	1.0	1	08/19/10 01:00	08/23/10 18:29	30,5310C	DD
Anions by Ion Chromatog	raphy - West	borough	Lab							
Chloride	64		mg/l	1.0	0.14	2		08/19/10 19:19	44,300.0	AU
Nitrogen, Nitrate	0.44		mg/l	0.05	0.01	1	4	08/19/10 19:07	44,300.0	AU
Sulfate	12		mg/l	1.0	0.12	1		08/19/10 19:07	44,300.0	AU

Project Name:

SHL TASK 0002

Lab Number:

L1012735

Project Number: AC001

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-04

Client ID:

GP-10-16-054-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab									
Solids, Total Suspended	160		mg/l	5.0	NA	1		08/20/10 09:55	30,2540D	DW

Project Name: SHL TASK 0002

Project Number: AC001 Lab Number:

L1012735

Report Date:

09/02/10

SAMPLE RESULTS

Lab ID:

L1012735-05

Client ID:

GP-10-16-064-F DEVENS, MA

Sample Location: Matrix:

Water

Date Collected:

08/18/10 13:40

Date Received:

08/18/10

See Narrative Field Prep:

Parameter	Result	Qualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab								
Alkalinity, Total	210	mg CaCO3/L	2.0	NA	1		08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	6.98	mg/l	0.075	0.017	1	08/19/10 12:30	08/20/10 21:55	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	4.00	08/18/10 23:07	30,4500NO2-B	DD
Sulfide	ND	mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
Chemical Oxygen Demand	24	mg/l	20	7.0	1		08/19/10 15:08	44,410.4	DW
Dissolved Organic Carbon	3.7	mg/l	1.0	1.0	1	08/19/10 01:00	08/23/10 18:29	30,5310C	DD
Anions by Ion Chromatog	raphy - West	borough Lab							
Chloride	7.1	mg/l	0.50	0.07	1	-	08/19/10 20:07	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	4	08/19/10 20:07	44,300.0	AU
Sulfate	7.3	mg/l	1.0	0.12	1	4	08/19/10 20:07	44,300.0	AU

SHL TASK 0002 Project Name:

Lab Number:

L1012735

Project Number: AC001

Report Date:

09/02/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qu	ualifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG428324	-2			
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	÷	08/18/10 23:05	30,4500NO2-B	DD
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG428381	-1			
Chemical Oxygen Demand	ND	mg/	20	7.0	1		08/19/10 14:56	44,410.4	DW
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG428535	j-1			
Nitrogen, Ammonia	ND	mg/	0.075	0.017	1	08/19/10 12:30	08/20/10 21:31	30,4500NH3-BH	I AT
Anions by Ion Chromat	ography - Westh	orough Lab fo	r sample(s): 01,03	3,05 Batch:	WG428558-	1		
Chloride	ND	mg/	0.50	0.07	1	¥	08/19/10 18:31	44,300,0	AU
Nitrogen, Nitrate	ND	mg/	0.05	0.01	1	÷	08/19/10 18:31	44,300.0	AU
Sulfate	ND	mg/	1 1.0	0.12	1	i 🤄	08/19/10 18:31	44,300.0	AU
General Chemistry - W	estborough Lab	for sample(s):	02,04 B	atch: W	G428579-1				
Solids, Total Suspended	ND	mg/	5.0	NA	1	- 2	08/20/10 09:55	30,2540D	DW
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG428684	I-1			
Sulfide	ND	mg/	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-AD	AT
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG428685	5-1			
Alkalinity, Total	ND	mg CaC	O3/L 2.0	NA	1	2	08/20/10 11:17	30,2320B	SD
General Chemistry - W	estborough Lab	for sample(s):	01,03,05	Batch:	WG429018	3-2			
Dissolved Organic Carbon	ND	mg	1.0	1.0	1	08/17/10 21:30	08/23/10 18:29	30,5310C	DD

Project Name:

SHL TASK 0002

Project Number: AC

AC001

Lab Number:

L1012735

Report Date:

Parameter	LCS. %Recovery	Qual 9	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s)	01,03,05	Batch: Wo	G428324-1				
Nitrogen, Nitrite	100		-5.		90-110	-		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: Wo	G428381-2				
Chemical Oxygen Demand	103		4.		95-105	+		
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: Wo	G4285 35-2				
Nitrogen, Ammonia	96		4.		80-120	15		20
Anions by Ion Chromatography - Westb	orough Lab Associate	d sample(s)	01,03,05	Batch: WG	6428558-2			
Chloride	98		, <u>\$</u> .		90-110	-9		
Nitrogen, Nitrate	100 -		100		90-110			
Sulfate	90				90-110	*		
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: Wo	G428684-2				
Sulfide	91		4		75-125	-2		
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: Wo	G428685-2				
Alkalinity, Total	106				80-115			4

90-110

SHL TASK 0002 Batch Quality C

Lab Number:

L1012735

Report Date:

09/02/10

Parameter	LCS: %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborou	gh Lab Associated sample(s):	01,03,05 Batch: WG429018-1			

Project Name:

Project Number:

Dissolved Organic Carbon

AC001

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012735

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Recov Qual Limi		RPD Qual Limits
General Chemistry - Westborou F	ugh Lab Asso	ciated samp	le(s): 01,03	3,05 QC Batc	h ID: W	/G428324-3	QC Sample	e: L1012735-0	1 Client ID	: GP-10-16-034
Nitrogen, Nitrite	ND	0.1	0.10	100		45	-	85-11	-	20
General Chemistry - Westboro	ugh Lab Asso	ciated samp	le(s): 01,03	3,05 QC Batc	h ID: W	G428381-3	QC Sample	e: L1012632-0	1 Client ID	: MS Sample
Chemical Oxygen Demand	26	238	300	115		÷	4.	80-12	20 -	20
General Chemistry - Westborou F	ugh Lab Asso	ciated samp	le(s): 01,03	3,05 QC Batc	h ID: W	G428535-3	QC Sample	e: L1012735-0	5 Client ID	: GP-10-16-064
Nitrogen, Ammonia	6.98	4	10.4	86		-	-	80-12	20 -	20
Anions by Ion Chromatography Client ID: GP-10-16-064-F	/ - Westborou	gh Lab Asso	ciated sam	ple(s): 01,03,0	5 QC	Batch ID: W	/G428558-3 \	WG428558-4	QC Sample	: L1012735-05
Chloride	7.1	4	11	98		11	98	40-15	51 0	18
Nitrogen, Nitrate	ND	0.4	0.36	90		0.35	88	80-12	22 3	15
Sulfate	7.3	8 *	15	96		15	96	60-14	0 0	20
General Chemistry - Westborou	ugh Lab Asso	ciated samp	le(s): 01,03	3,05 QC Batc	h ID: W	G428684-3	QC Sample	e: L1012735-0	1 Client ID	: GP-10-16-034
Sulfide	ND	0.24	0.18	75		0.2		75-12	25 +	20
General Chemistry - Westborou F	ugh Lab Asso	ociated samp	le(s): 01,03	3,05 QC Batc	h ID: W	/ G4286 85-3	QC Sample	e: L1012735-0	5 Client ID	: GP-10-16-064
Alkalinity, Total	210	100	290	80	Q	*		86-11	6 -	4
General Chemistry - Westborou F	ugh Lab Asso	ociated samp	le(s): 01,03	3,05 QC Batc	h ID: W	'G429018-3	QC Sample	e: L1012735-0	5 Client ID	: GP-10-16-064
Dissolved Organic Carbon	3.7	4	8.1	109		- 7		79-12	20 -	20

Lab Duplicate Analysis Batch Quality Control

Project Name: SHL TA

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012735

Report Date:

Parameter	Nat	ive Sample	Dup	licate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab F	Associated sample(s):	01,03,05	QC Batch ID:	WG428324-4	QC Sample:	L1012735-01	Client ID:	GP-10-16-034-
Nitrogen, Nitrite	3.5	ND		ND	mg/i	NC		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428381-4	QC Sample:	L1012632-01	Client ID:	DUP Sample
Chemical Oxygen Demand		26.		24	mg/l	8		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428535-4	QC Sample:	L1012735-05	Client ID:	GP-10-16-064-
Nitrogen, Ammonia	-	6.98		6.98	mg/l	0		20
Anions by Ion Chromatography - Westb I0-16-064-F	orough Lab Associated	d sample(s)	01,03,05	QC Batch ID: V	VG428558-5	QC Sample: L	1012735-0	5 Client ID: GP-
Chloride	**	7.1		7.1	mg/l	0		18
Nitrogen, Nitrate	7.2	ND		ND	mg/l	NC		15
Sulfate	*	7.3		7.1	mg/l	3		20
General Chemistry - Westborough Lab	Associated sample(s):	02,04 QC	Batch ID: W	G428579-2	QC Sample: L1	012735-02 Cli	ient ID: GI	P-10-16-034-U
Solids, Total Suspended		3000		2800	mg/l	7		32
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428684-4	QC Sample:	L1012735-05	Client ID:	GP-10-16-064-
Sulfide	V-	ND		ND	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428685-4	QC Sample:	L1012735-05	Client ID:	GP-10-16-064-
Alkalinity, Total		210		200	mg CaCO3/L	5	Q	4

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012735

Report Date:

09/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01,03,05	QC Batch ID: WG429018-4	QC Sample:	L1012679-01	Client ID: DUP Sample
Dissolved Organic Carbon	4.2	4.1	mg/l	2	20

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on:

Cooler Information Custody Seal

Cooler

В

Present/Intact

Α

Present/Intact

Container Info	ormation		Temp				
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012735-01A	Vial H2SO4 preserved split	Α	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-01B	Vial H2SO4 preserved split	Α	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-01C	Plastic 250ml unpreserved	В	N/A	3.9	Y	Present/Intact	ALK-T-2320(14)
L1012735-01D	Plastic 250ml HNO3 preserved	В	<2	3.9	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NB-6020S(180),DOD-PB-6020S(180),DOD-B-6020S(180),DOD-AS-6020S(180),DOD-BE-6020S(180),DOD-BE-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-CN-6020S(180),DOD-AL-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-

Project Number: AC001

Lab Number: L1012735 Report Date: 09/02/10

Container Inf	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012735-01E	Plastic 250ml HNO3 preserved	В	<2	3.9	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-BE-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-CU-6020S(180),DOD-AL-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-BE-6020S(180),DOD-SE-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012735-01F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-01G	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-01H	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-011	Plastic 500ml H2SO4 preserved	Α	<2	5.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-01J	Plastic 250ml unpreserved	В	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1012735-01K	Plastic 500ml unpreserved	Α	6	5.1	Y	Present/Intact	SO4-300(28) CL-300(28) NO3- 300(2)
L1012735-01X	Amber 250ml unpreserved	Α	6	5.1	Υ	Present/Intact	DOC-5310(28)
L1012735-02A	Plastic 500ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-TL-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-
4. 4 55	** * * * * * * * * * * * * * * * * * * *	4 4 4	8.			F 4 2 Fo	6020T(180),D@D-HG-
	_				4		7470T(28);DOD-SB- 6020T(180),DOD-AG- 6020T(180),DOD-AL- 6020T(180),DOD-AS- 6020T(180),DOD-BA- 6020T(180),DOD-K- 6020T(180),DOD-K- 6020T(180),DOD-MG- 6020T(180),DOD-FE- 6020T(180),DOD-CU- 6020T(180),DOD-CU- 6020T(180),DOD-PB- 6020T(180)

Project Number: AC001

Lab Number: L1012735 **Report Date:** 09/02/10

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012735-02B	Plastic 500ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-V-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-TL-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012735-02C	Plastic 1000ml unpreserved	Α	6	5.1	Y	Present/Intact	TSS-2540(7)
L1012735-03A	Vial H2SO4 preserved split	Α	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-03B	Vial H2SO4 preserved split	Α	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-03C	Plastic 250ml unpreserved	Α	N/A	5.1	Y	Present/Intact	ALK-T-2320(14)
L1012735-03D	Plastic 250ml HNO3 preserved	A	<2	5,1	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-AG-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-PB-6020S(180),DOD-V-
	State of the Control						6020S(180),DOD-AS-
***			- 1 -	¥ 10	3.		6020S(180),DOD-CD- 6020S(180),DOD-BE- 6020S(180),DOD-CU- 6020S(180),DOD-XN- 6020S(180),DOD-K- 6020S(180),DOD-K- 6020S(180),DOD-BE- 6020S(180),DOD-HG-7470S(28)
L1012735-03E	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-03F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-03G	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-03H	Plastic 500ml H2SO4 preserved	Α	<2	5.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-03I	Plastic 250ml unpreserved	Α	6	5.1	Y	Present/Intact	NO2-4500NO2(2)

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Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012735-03J	Plastic 500ml unpreserved	Α	6	5.1	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012735-03X	Amber 250ml unpreserved	A	6	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-04A	Plastic 500ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-SE-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-SB-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-BG-6020T(180),DOD-BG-6020T(180),DOD-HG-6020T(180),DOD-HG-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)
L1012735-04B	Plastic 1000ml unpreserved	Α	6	5.1	Υ	Present/Intact	TSS-2540(7)
L1012735-05A	Vial H2SO4 preserved split	В	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1012735-05B	Vial H2SO4 preserved split	В	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1012735-05C	Plastic 250ml unpreserved	В	N/A	3.9	Υ	Present/Intact	ALK-T-2320(14)
L1012735-05D	Plastic 250ml HNO3 preserved	В	<2	3.9	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-
" S I	12			3 2			6020S(180),DOD-NI-
		4,75					6020S(180),DOD-PB- 6020S(180),DOD-V- 6020S(180),DOD-CD- 6020S(180),DOD-CD- 6020S(180),DOD-BE- 6020S(180),DOD-CU- 6020S(180),DOD-ZN- 6020S(180),DOD-AL- 6020S(180),DOD-K- 6020S(180),DOD-SE- 6020S(180),DOD-HG-7470S(28)
L1012735-05E	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3,9	Y	Present/Intact	SULFIDE-4500(7)
L1012735-05F	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3.9	Υ	Present/Intact	SULFIDE-4500(7)
L1012735-05G	Plastic 250ml Zn Acetate/NaOH pr	В	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)

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Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012735-05H	Plastic 500ml H2SO4 preserved	В	<2	3.9	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-05I	Plastic 250ml unpreserved	В	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1012735-05J	Plastic 500ml unpreserved	В	6	3.9	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012735-05X	Amber 250ml unpreserved	В	6	3.9	Y	Present/Intact	DOC-5310(28)
L1012735-06A	Plastic 250ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-NI-6020S(180),DOD-SB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-ZN-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012735-07A	Plastic 500ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-SB-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-
e e e		41.			* . •,	TO THE STATE OF	6020T(180),DOD-BA- 6020T(180),DOD-CR- 6020T(180),DOD-K- 6020T(180),DOD-BE- 6020T(180),DOD-FE- 6020T(180),DOD-CU- 6020T(180),DOD-PB- 6020T(180),DOD-PB- 6020T(180)

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012735-08A	Plastic 500ml HNO3 preserved	A	<2	5.1	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-TL-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-CR-6020T(180),DOD-CR-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)

Container Comments

L1012735-01A

L1012735-01B

L1012735-03A

L1012735-03B

L1012735-05A

L1012735-05B

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GLOSSARY

Acronyms

EPA Environmental Protection Agency.

LCS Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

 NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI Not Ignitable.

Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to
assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the
absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method; Both the document from which the method originates and the analytical reference method, (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria: however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis.

Report Format: DU Report with "J" Qualifiers



SHL TASK 0002

Lab Number:

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Data Qualifiers

RE - Analytical results are from sample re-extraction.

 Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND -Not detected at the method detection limit (MDL) for the sample.

Report Format: DU Report with "J" Qualifiers

ΔLPHA

SHL TASK 0002

Project Number:

Lab Number:

L1012735

AC001

Report Date:

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REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.1, issued April 22, 2009

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9223B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity, Organic Parameters: PCBs, PCBs in Oil, Organic Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086,

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ, SUB, SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHA

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B, Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A; SM5310C, EPA 420.1, SM14 510C; EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015; Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources <u>Certificate/Lab ID</u>: 666. <u>Organic Parameters</u>: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited*. *Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality Certificate/Lab ID: T104704476-09-1. NELAP Accredited. Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2⁻D, 510C, 5210B, 5220D, 5310C, 5540C, Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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ORM NO: 01-01 (re	v. 18-J;	an-2010)	16	n	_	8-12	10	11	0	7	XA	MU	116	na		0/1	18/1	0 /	7 See reverse side.	



ANALYTICAL REPORT

Lab Number:

L1012737

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

08/25/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012737

Report Date:

08/25/10

Alpha		Sample	Collection			
Sample ID	Client ID	Location	Date/Time			
L1012737-01	GP-10-16-034-F	DEVENS, MA	08/18/10 07:55			
L1012737-02	GP-10-16-054-F	DEVENS, MA	08/18/10 11:20			
L1012737-03	GP-10-16-064-F	DEVENS, MA	08/18/10 13:40			

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012737

Report Date:

08/25/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g., more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses will be issued under separate cover.

Dissolved Inorganic Carbon

L1012737-01 through -03 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

A Laboratory Duplicate was performed in lieu of an LCSD and Matrix Spike.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Unany Michelle M. Morris

Title: Technical Director/Representative

Date: 08/25/10

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012737

Report Date:

08/25/10

SAMPLE RESULTS

Lab ID:

L1012737-01

Client ID:

GP-10-16-034-F Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 07:55

Date Received:

08/18/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	12		mg/l	8.0		8	08/19/10 01:00	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012737

Project Number: AC001

Report Date:

08/25/10

SAMPLE RESULTS

Lab ID:

L1012737-02

Client ID:

GP-10-16-054-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 11:20

Date Received:

08/18/10

Field Prep:

Not Specified

Dilution Date Date Analytical Qualifier **Factor** Prepared Method **Parameter** Result Units RL MDL Analyzed **Analyst General Chemistry** Dissolved Inorganic Carbon 8.0 8 08/19/10 01:00 08/19/10 17:34 30,5310C(M) DW mg/l 14

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012737

Report Date:

08/25/10

SAMPLE RESULTS

Lab ID:

L1012737-03 GP-10-16-064-F

Client ID: Sample Location: DEVENS, MA

Matrix:

Water

Date Collected:

08/18/10 13:40

Date Received:

08/18/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	46		mg/l	8.0	**	8	08/19/10 01:00	08/19/10 17:34	30,5310C(M)	DW

Project Name:

SHL TASK 0002

Lab Number:

L1012737

08/25/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sa	mple(s): 01-03 Bato	h: WG42	8639-1						
Dissolved Inorganic Carbon	ND	mg/l	1.0	**	1	08/19/10 01:00	08/19/10 17:34	30,5310C(M)	DW



Lab Control Sample Analysis Batch Quality Control

SHL TASK 0002

Project Number: AC001

Project Name:

Lab Number:

L1012737

Report Date:

08/25/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Associated sample(s): 01-03	Batch:	WG428639-2							
Dissolved Inorganic Carbon		110							

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012737

Report Date:

08/25/10

Parameter	. Na	tive Sample	Duplic	ate Sampl	e Units	RPD	Qual	RPD Limits
Associated sample(s): 01-03	QC Batch ID: WG428639-3	QC Sample:	L1012737-03	Client ID:	GP-10-16-064-F			
Dissolved Inorganic Carbon	1	46		45	mg/l	2		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Lab Number: L1012737 Report Date: 08/25/10 Project Number: AC001

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Present/Intact

Cooler Information Custody Seal

Cooler

A

В Present/Intact

Container Information Temp deg C Container ID **Container Type** Cooler pH Pres Seal Analysis(*) L1012737-01A Vial H2SO4 preserved split N/A 5.1 Present/Intact SPECWC() 5.1 L1012737-01B Vial H2SO4 preserved split A N/A Y Present/Intact SPECWC() L1012737-01X Amber 250ml unpreserved 6 5.1 Y Present/Intact SPECWC() L1012737-02A Vial H2SO4 preserved split 5.1 Y Present/Intact SPECWC() N/A L1012737-02B Vial H2SO4 preserved split A N/A 5.1 Y Present/Intact SPECWC() L1012737-02X Amber 250ml unpreserved Α 6 5.1 Y Present/Intact SPECWC() Vial H2SO4 preserved split В N/A 3.9 Y Present/Intact SPECWC() L1012737-03A L1012737-03B Vial H2SO4 preserved split В N/A 39 Y Present/Intact SPECWC() L1012737-03X Amber 250ml unpreserved В 6 3.9 Present/Intact SPECWC()

SHL TASK 0002

Lab Number:

L1012737

Project Number:

AC001

Report Date:

08/25/10

GLOSSARY

Acronyms

EPA Environmental Protection Agency.

LCS Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD Laboratory Control Sample Duplicate: Refer to LCS.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD Matrix Spike Sample Duplicate: Refer to MS.

NA Not Applicable,

NC • Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI -Not Ignitable.

RE. Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to
assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD).
 Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the
absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.

Report Format: Data Usability Report

ALPHA

Project Name:

SHL TASK 0002

Lab Number:

L1012737

Project Number:

AC001

Report Date:

08/25/10

Data Qualifiers

RE - Analytical results are from sample re-extraction.

Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



SHL TASK 0002

Lab Number:

L1012737

Project Number:

AC001

Report Date:

08/25/10

REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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

DLPHA

Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease, Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihatomethanes, Volatile Organics) (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHA

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1,

SM6251B, 524.2.)

Non-Potable Water (<u>Inorganic Parameters</u>: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. <u>Organic Parameters</u>: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B.

Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (<u>Inorganic Parameters</u>: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA

8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID: 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection <u>Certificate/Lab ID</u>: 68-03671. *NELAP Accredited*. *Non-Potable Water* (<u>Organic Parameters</u>: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited*. *Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2_D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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FORM NO: 01-01 (rev. 18-	Jan-2010)			· · · ·	10	1		0	/								



ANALYTICAL REPORT

Lab Number:

L1012830

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/03/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

09/03/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012830-01	GP-10-16-074-F	DEVENS, MA	08/19/10 07:25
L1012830-02	GP-10-16-074-U	DEVENS, MA	08/19/10 07:25
L1012830-03	GP-10-16-084-F	DEVENS, MA	08/19/10 09:40
L1012830-04	GP-10-16-084-U	DEVENS, MA	08/19/10 09:40
L1012830-05	GP-10-16-094-F	DEVENS, MA	08/19/10 12:35
L1012830-06	GP-10-16-094-U	DEVENS, MA	08/19/10 12:35
L1012830-07	DUP-081910-F	DEVENS, MA	08/19/10 09:40
L1012830-08	DUP-081910-U	DEVENS, MA	08/19/10 09:40
L1012830-09	RB2-081910-U	DEVENS, MA	08/19/10 14:00

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

09/03/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

The Dissolved Inorganic Carbon results will be issued under separate cover.

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

Dissolved Metals

L1012830-03 and -07 have elevated detection limits for all analytes, except Mercury, due to the dilutions

SHL TASK 0002

Lab Number:

L1012830 09/03/10

Project Number:

AC001

Report Date:

Case Narrative (continued)

required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG428838-3/-4 MS/MSD recoveries, performed on L1012830-01, are above the acceptance criteria for Arsenic (MS at 123%), Manganese (134%/122%), Potassium (MS at 125%) and Sodium (MS at 130%). A post digestion spike was performed with acceptable recoveries of Arsenic (110%), Potassium (100%) and Sodium (118%) and an unacceptable recovery of 220% for Manganese. The parent sample (L1012830-01) results are qualified with a "J" for these elements.

The WG428838-3/-4 MS/MSD recoveries for Calcium (155%/147%) and Iron (840%/610%), performed on L1012830-01, are invalid because the sample concentrations are greater than four times the spike amount added.

Total Metals

L1012830-04 and -08 have elevated detection limits for all analytes, except Mercury, due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG428723-4/-5 MS/MSD recoveries, performed on L1012830-02, are above the acceptance criteria for Arsenic (MS at 124%), Manganese (142%/128%), Potassium (132%/121%) and Sodium (MS at 126%). A post digestion spike was performed with acceptable recoveries of Arsenic (120%) and Potassium (122%) and unacceptable recoveries of Manganese (240%) and Sodium (122%). The parent sample (L1012830-02) results are qualified with a "J" for these elements.

The WG428723-4/-5 MS/MSD recoveries for Calcium (173%/156%) and Iron (1150%/870%), performed on L1012830-02, are invalid because the sample concentrations are greater than four times the spike amount added.

Dissolved Organic Carbon

A Filter Blank was analyzed and had a result of 0.25 mg/l (ND).

L1012830-01 has an elevated detection limit due to the dilution required by the elevated concentration present in the sample.

SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

Case Narrative (continued)

Chloride

L1012830-01 and -05 have elevated detection limits due to the dilutions required to quantitate the results within the calibration range.

Solids, Total Suspended

L1012830-02 and -06 have elevated detection limits due to the dilutions required by the sample matrices.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

lichelle M. Morris

Authorized Signature:

Title: Technical Director/Representative

Date: 09/03/10

METALS



SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012830-01

GP-10-16-074-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 07:25

Date Received:

08/19/10

See Narrative

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - V	Vestboro	ugh Lab									
Aluminum, Dissolved	7.02	J	ug/l	10.0	1.91	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.42	J	ug/l	0.500	0.120	1	08/22/10 12:00	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	216	J	ug/l	0.500	0.113	Ŧ	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Barium, Dissolved	36 3		ug/l	0.500	0.095	1	08/22/10 12:00	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved	ND		ug/l	0.500	0.059	4	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/I	0.500	0_059	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved	50900		ug/l	100	12.6	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Chromium, Dissolved	0.750		ug/l	0.500	0.186	4	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	4.66		ug/l	0.500	0.053	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.860		ug/l	0.500	0.118	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Iron, Dissolved	64200		ug/I	50.0	8.41	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.07	J	ug/f	0.500	0.050	4	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Magnesium, Dissolved	11800		ug/l	100	4.10	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Manganese, Dissolved	1330	J	ug/I	1.00	0 136	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Mercury, Dissolved	ND		ug/I	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 12:45	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	16.6		ug/I	0 500	0.180	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved	20400	J	ug/l	100	18.2	4	08/22/10 12:0	0 08/24/10 07:07	EPA.3005A	1,6020A	ВМ
Selenium, Dissolved	0.47	J	ug/l	1.00	0.406	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/I	0.500	0.085	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Sodium, Dissolved	31700	J	ug/I	100	18.2	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND	4 7	ug/f	0.500	0.031	193	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	0.1	J.	ug/l	0.500	0.077	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	вм
Zinc, Dissolved	6.87		ug/l	5,00	1.62	1	08/22/10 12:0	0 08/24/10 07:07	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Project Number:

AC001

L1012830-02

Lab ID: Client ID:

GP-10-16-074-U

Sample Location:

DEVENS, MA

Matrix:

Water

Lab Number:

L1012830

Report Date:

09/03/10

Date Collected:

Date Received:

08/19/10 07:25 08/19/10

Fie

one

eld Prep:	No

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	_ab									
Aluminum, Total	3540		ug/l	10.0	1,91	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Antimony, Total	1.00		ug/l	0.500	0.120	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Arsenic, Total	248	J	ug/l	0.500	0.113	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Barium, Total	59.0		ug/l	0.500	0.095	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Beryllium, Total	0.17	1	ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Calcium, Total	52200		ug/l	100	12.6	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Chromium, Total	44.2		ug/l	0.500	0.186	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Cobalt, Total	6.41		ug/l	0.500	0.053	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Copper, Total	14.5		ug/l	0.500	0.118	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Iron, Total	75900		ug/l	50.0	8,41	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Lead, Total	4.79		ug/l	0.500	0.050	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Magnesium, Total	12800		ug/l	100	4.10	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	BN.
Manganese, Total	1420	J	ug/l	1.00	0.136	. 1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Mercury, Total	ND		ug/l	0 2000	0.0120	1	08/26/10 14:2	0 08/27/10 12:06	EPA 7470A	1,7470A	EZ
Nickel, Total	24.6		ug/I	0,500	0.180	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Potassium, Total	21500	J	ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Selenium, Total	0.64	J	ug/l	1.00	0 406	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Sodium, Total	33000	J	ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Thallium, Total	0.06	J -	ug/l	0.500	0.031	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ
Vanadium, Total	3.08	11.0	ug/l	0.500	0.077	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	вм
Zinc, Total	24.0		ug/l	5.00	1.62	1	08/20/10 18:4	5 08/24/10 08:07	EPA 3005A	1,6020A	ВМ

SAMPLE RESULTS

SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012830-03

GP-10-16-084-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - W	estboro	ugh Lab									
Aluminum, Dissolved	ND		ug/l	40.0	7.64	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	248		ug/l	2.00	0.452	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Barium, Dissolved	56.6		ug/l	2.00	0.380	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Calcium, Dissolved	122000		ug/l	400	50.6	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Cobalt, Dissolved	5.45		ug/l	2.00	0.212	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Copper, Dissolved	0.61	J	ug/l	2,00	0,472	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	17200		ug/l	200	33.6	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	18200		ug/l	400	16.4	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Manganese, Dissolved	2920		ug/l	4.00	0.544	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	0 08/27/10 12:50	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	7.80		ug/I	2.00	0.720	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Potassium, Dissolved	5370		ug/l	400	72.6	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Sodium, Dissolved	42200		ug/l	400	72.8	4	08/22/10 12:00	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм
Zinc, Dissolved	14.2	J	ug/l	20.0	6.50	4	08/22/10 12:0	0 08/24/10 07:43	EPA 3005A	1,6020A	вм

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012830-04 GP-10-16-084-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough l	Lab									
Aluminum, Total	906		ug/I	40.0	7.64	4	08/20/10 18:45	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Antimony, Total	1.39	J	ug/I	2.00	0.480	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Arsenic, Total	256		ug/l	2.00	0.452	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Barium, Total	64.3		ug/l	2,00	0 380	4	08/20/10 18:45	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Beryllium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Cadmium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Calcium, Total	125000		ug/l	400	50.6	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Chromium, Total	10.5		ug/l	2.00	0.744	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Cobalt, Total	7.11		ug/l	2.00	0.212	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Copper, Total	9.33		ug/l	2.00	0.472	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Iron, Total	20600		ug/l	200	33.6	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Lead, Total	1.73	J	ug/l	2 00	0.200	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Magnesium, Total	18900		ug/l	400	16.4	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Manganese, Total	3120		ug/I	4.00	0.544	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	0 08/27/10 12:22	EPA 7470A	1,7470A	EZ
Nickel, Total	12.2		ug/l	2.00	0.720	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Potassium, Total	6240		ug/l	400	72.6	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Selenium, Total	ND		ug/l	4.00	1,62	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Silver, Total	ND		ug/l	2.00	0.340	4	08/20/10 18:4:	5 08/24/10 08:31	EPA 3005A	1,6020A	вм
Sodium, Total	45200		ug/l	400	72.8	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Thallium, Total .	. ND	1	ug/l	2.00	0.124	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Vanadium, Total	1.71	" J	ug/l	2.00	0.308	4	08/20/10 18:4	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ
Zinc, Total	13.9	J	ug/l	20.0	6.50	4	08/20/10 18:45	5 08/24/10 08:31	EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-05

08/19/10 12:35

Client ID: Sample Location: GP-10-16-094-F DEVENS, MA

Matrix:

Water

Date Collected: Date Received: 08/19/10 Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - W	/estboro	ugh Lab									
Aluminum, Dissolved	5,34	J	ug/l	10.0	1.91	1	08/22/10 12:00	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Antimony, Dissolved	0.23	J	ug/l	0.500	0.120	1	08/22/10 12:00	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Arsenic, Dissolved	3.44		ug/l	0.500	0.113	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Barium, Dissolved	10.1		ug/l	0.500	0.095	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Beryllium, Dissolved	ND		ug/l	0.500	0.059	Ť	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Calcium, Dissolved	34700		ug/l	100	12.6	7	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved	ND		ug/l	0,500	0.186	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved	1.54		ug/l	0,500	0.053	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Copper, Dissolved	4.32		ug/I	0.500	0.118	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Iron, Dissolved	625		ug/l	50.0	8.41	1.	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Lead, Dissolved	0.1	J	ug/I	0 500	0.050	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Magnesium, Dissolved	4100		ug/l	100	4,10	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Manganese, Dissolved	368		ug/l	1.00	0.136	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	i	08/26/10 14:2	0 08/27/10 12:52	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	8.07		ug/l	0 500	0.180	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Polassium, Dissolved	5210		ug/I	100	18.2	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	1.	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Sodium, Dissolved	34200		ug/I	100	18.2	1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Thallium, Dissolved	ND	÷ ·	ug/l	0,500	0.031	1.	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved	0.22	. 1	ug/l	0.500	0.077	1.	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм
Zinc, Dissolved	4.84	J	ug/l	5.00	1.62	-1	08/22/10 12:0	0 08/24/10 07:49	EPA 3005A	1,6020A	вм

Project Name: Project Number: SHL TASK 0002

Lab Number:

L1012830

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-06

Client ID:

GP-10-16-094-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 12:35

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough L	ab									
Aluminum, Total	2880		ug/l	10.0	1.91	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Antimony, Total	1.01		ug/l	0.500	0.120	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Arsenic, Total	19.3		ug/l	0.500	0.113	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Barium, Total	35.8		ug/I	0.500	0.095	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	ВМ
Beryllium, Total	E.0	J	ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Cadmium, Total	0.07	.J	ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	ВМ
Calcium, Total	39200		ug/l	100	12.6	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	ВМ
Chromium, Total	48.8		ug/l	0.500	0.186	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Cobalt, Total	5.08		ug/l	0.500	0.053	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Copper, Total	192		ug/l	0.500	0.118	1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Iron, Total	17500		ug/l	50.0	8.41	1	08/20/10 18:4	5 08/24/10 08:37	' EPA 3005A	1,6020A	вм
Lead, Total	8.58		ug/l	0.500	0 050	Ť	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Magnesium, Total	5320		ug/l	100	4.10	4	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Manganese, Total	620		ug/I	1.00	0.136	1	08/20/10 18:4	5 08/24/10 08:37	' EPA 3005A	1,6020A	ВМ
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 12:24	EPA 7470A	1.7470A	EZ
Nickel, Total	23.3		ug/l	0.500	0.180	1	08/20/10 18:4	5 08/24/10 08:37	PA 3005A	1,6020A	вм
Potassium, Total	6660		ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 08:37	PA 3005A	1,6020A	вм
Selenium, Total	0.58	J	ug/l	1,00	0.406	1	08/20/10 18:4	5 08/24/10 08:37	PA 3005A	1,6020A	вм
Silver, Total	ND		ug/l	0.500	0.085	.1	08/20/10 18:4	5 08/24/10 08:37	EPA 3005A	1,6020A	вм
Sodium, Total	36600		ug/l	100	18.2	1	08/20/10 18:4	5 08/24/10 08:37	FPA 3005A	1,6020A	вм
Thallium, Total	0.07	1	ug/l	. 0.500	0.031	9.	08/20/10 18:4	5 08/24/10 08:37	PA 3005A	1,6020A	BM
Vanadium, Total	3.78	医 # 4	ug/l	0.500	0.077	1	08/20/10 18:4	5 08/24/10 08:37	PA 3005A	1,6020A	ВМ
Zinc, Total	24.7		ug/l	5.00	1.62	1	08/20/10 18:4	15 08/24/10 08:37	7 EPA 3005A	1,6020A	ВМ

SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-07

Client ID: Sample Location: DUP-081910-F DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

See Narrative

Antimony, Dissolved ND ug/l 2 00 0.480 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Arsenic, Dissolved 249 ug/l 2.00 0.452 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Barium, Dissolved 59.4 ug/l 2.00 0.380 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Beryllium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cadmium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Calcium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Calcium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cobelt, Dissolved 556 ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.200 0.0120 1 08/28/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.200 0.0120 1 08/28/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved ND ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4	Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Antimony, Dissolved ND ug/l 2.00 0.480 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Arsenic, Dissolved 249 ug/l 2.00 0.452 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Barium, Dissolved 59.4 ug/l 2.00 0.380 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Beryllium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cadmium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Calcium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Calcium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cobelt, Dissolved 5.56 ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Coper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 7.2 4	Dissolved Metals -	Westboro	ugh Lab									
Arsenic, Dissolved 249 ug/l 2.00 0.452 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Barium, Dissolved 59.4 ug/l 2.00 0.380 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Beryllium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Cadmium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Calcium, Dissolved 12:1000 ug/l 400 50.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Cobalt, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Lead, Dissolved 17400 ug/l 2.00 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Mercury, Dissolved ND ug/l 0.200 0.0120 1 08/26/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Mercury, Dissolved ND ug/l 0.200 0.0120 1 08/26/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND ug/l 4.00 0.340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Selenium, Dissolved ND	Aluminum, Dissolved	14.1	J	ug/l	40.0	7.64	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Barium, Dissolved 59,4 Ug/l 2.00 0.380 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Antimony, Dissolved	ND		ug/I	2 00	0.480	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Beryllium, Dissolved ND Ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Calcium, Dissolved ND Ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Calcium, Dissolved ND Ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Chromium, Dissolved ND Ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Cobelt, Dissolved 5.56 Ug/l 2.00 0.212 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 1.04 J Ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 1.7400 Ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 0.2 J Ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 0.2 J Ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 18300 Ug/l 4.00 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 18300 Ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 18300 Ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 8.20 Ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved 8.20 Ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper, Dissolved ND Ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1.6020A BM Copper Cop	Arsenic, Dissolved	249		ug/l	2.00	0.452	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Cadmium, Dissolved ND ug/l 2.00 0.236 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Calcium, Dissolved 121000 ug/l 400 50.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cobalt, Dissolved 5.56 ug/l 2.00 0.212 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Inon, Dissolved 17400 ug/l 2.00 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 8.20 ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 0.00 0.00 0.00	Barium, Dissolved	59.4		ug/l	2.00	0.380	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Calcium, Dissolved 121000 ug/l 400 50.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cobalt, Dissolved 5.56 ug/l 2.00 0.212 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Coper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Iron, Dissolved 17400 ug/l 200 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.2000 0.0120 1 08/26/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved 8.20 ug/l 0.2000 0.0120 1 08/26/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10	Beryllium, Dissolved	ND		ug/l	2,00	0,236	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Chromium, Dissolved ND ug/l 2.00 0.744 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Cobalt, Dissolved 5.56 ug/l 2.00 0.212 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Iron, Dissolved 17400 ug/l 200 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Manganese, Dissolved 2990 ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.2000 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8.20 ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solium, Dissolved ND ug/l 4.00 72.8 4 08/22/10 1	Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Cobalt, Dissolved 5.56 ug/l 2.00 0.212 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Iron, Dissolved 17400 ug/l 200 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved 2990 ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mickel, Dissolved ND ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved <td>Calcium, Dissolved</td> <td>121000</td> <td></td> <td>ug/l</td> <td>400</td> <td>50.6</td> <td>4</td> <td>08/22/10 12:0</td> <td>0 08/24/10 07:55</td> <td>EPA 3005A</td> <td>1,6020A</td> <td>ВМ</td>	Calcium, Dissolved	121000		ug/l	400	50.6	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Copper, Dissolved 1.04 J ug/l 2.00 0.472 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Iron, Dissolved 17400 ug/l 200 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Lead, Dissolved 0.2 J ug/l 200 0 200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Manganese, Dissolved 2990 ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.200 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8:20 ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolve	Chromium, Dissolved	ND		ug/l	2.00	0,744	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Iron, Dissolved 17400 Ug/l 200 33.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Cobalt, Dissolved	5 56		ug/l	2.00	0.212	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Lead, Dissolved 0.2 J ug/l 2.00 0.200 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Manganese, Dissolved 2990 ug/l 4,00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.2000 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8.20 ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Solver, Dissolved <t< td=""><td>Copper, Dissolved</td><td>1.04</td><td>J</td><td>ug/l</td><td>2.00</td><td>0.472</td><td>4</td><td>08/22/10 12:0</td><td>0 08/24/10 07:55</td><td>EPA 3005A</td><td>1,6020A</td><td>вм</td></t<>	Copper, Dissolved	1.04	J	ug/l	2.00	0.472	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	вм
Magnesium, Dissolved 18300 ug/l 400 16.4 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Manganese, Dissolved 2990 ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.2000 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8:20 ug/l 2:00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 4:00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4:00 1:62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 2:00 0:340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved ND	Iron, Dissolved	17400		ug/l	200	33.6	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Manganese, Dissolved 2990 ug/l 4.00 0.544 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Mercury, Dissolved ND ug/l 0.2000 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8:20 ug/l 2:00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 4:00 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4:00 1:62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 2:00 0:340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved ND ug/l 4:00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND <t< td=""><td>Lead, Dissolved</td><td>0.2</td><td>J</td><td>ug/l</td><td>2.00</td><td>0 200</td><td>4</td><td>08/22/10 12:0</td><td>0 08/24/10 07:55</td><td>EPA 3005A</td><td>1,6020A</td><td>вм</td></t<>	Lead, Dissolved	0.2	J	ug/l	2.00	0 200	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	вм
Mercury, Dissolved ND ug/l 0 2000 0.0120 1 08/26/10 14:20 08/27/10 12:58 EPA 7470A 1,7470A EZ Nickel, Dissolved 8:20 ug/l 2:00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4:00 1:62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 2:00 0:340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved 42100 ug/l 4:00 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2:00 0:124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2:00 0:308 4 08/22/10 12:00 08/24/10 07:55 EP	Magnesium, Dissolved	18300		ug/l	400	164	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Nickel, Dissolved 8.20 ug/l 2.00 0.720 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Potassium, Dissolved 5500 ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 2.00 0.340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved 42100 ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Manganese, Dissolved	2990		ug/l	4.00	0.544	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Potassium, Dissolved 5500 ug/l 400 72.6 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Silver, Dissolved ND ug/l 2.00 0.340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved 42100 ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Mercury, Dissolved	ND		ug/l	0 2000	0.0120	1	08/26/10 14:2	0 08/27/10 12:58	EPA 7470A	1,7470A	EZ
Selenium, Dissolved ND ug/l 4.00 1.62 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BIM Silver, Dissolved ND ug/l 2.00 0.340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved 42100 ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Nickel, Dissolved	8 20		ug/l	2.00	0.720	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Silver, Dissolved ND ug/l 2.00 0.340 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Sodium, Dissolved 42100 ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Potassium, Dissolved	5500		ug/I	400	72.6	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Sodium, Dissolved 42100 ug/l 400 72.8 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Selenium, Dissolved	ND		ug/l	4.00	1 62	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	вм
Thallium, Dissolved ND ug/l 2.00 0.124 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
Vanadium, Dissolved ND ug/l 2.00 0.308 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Sodium, Dissolved	42100		ug/l	400	728	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
	Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	вм
Zinc, Dissolved 14.4 J ug/l 20.0 6.50 4 08/22/10 12:00 08/24/10 07:55 EPA 3005A 1,6020A BM	Vanadium, Dissolved	ND	***	ug/l	2.00	0.308	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ
- [- [- [- [- [- [- [- [- [- [Zinc, Dissolved	14.4	J	ug/l	20.0	6.50	4	08/22/10 12:0	0 08/24/10 07:55	EPA 3005A	1,6020A	ВМ

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID: Client ID: L1012830-08 DUP-081910-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifler	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Wes	tborough l	_ab									
Aluminum, Total	1460		ug/l	40.0	7.64	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Antimony, Total	0.81	J	ug/l	2.00	0.480	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Arsenic, Total	260		ug/l	2.00	0.452	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Barium, Total	67.4		ug/I	2.00	0.380	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Beryllium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Cadmium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Calcium, Total	128000		ug/l	400	50,6	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Chromium, Total	12.7		ug/l	2.00	0.744	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Cobalt, Total	7.30		ug/l	2.00	0.212	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Copper, Total	9.19		ug/l	2.00	0.472	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Iron, Total	21500		ug/l	200	33.6	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Lead, Total	2.23		ug/l	2.00	0.200	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Magnesium, Total	19700		ug/l	400	16.4	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	ВМ
Manganese, Total	3130		ug/l	4.00	0.544	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:2	0 08/27/10 12:26	EPA 7470A	1,7470A	EZ
Nickel, Total	13.7		ug/l	2.00	0.720	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Potassium, Total	6570		ug/l	400	72.6	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Selenium, Total	ND		ug/I	4.00	1.62	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Silver, Total	ND		ug/I	2.00	0.340	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Sodium, Total	45200		ug/l	400	72.8	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм
Thallium, Total	ND	-1	ug/l	2.00	0.124	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	BM .
Vanadium, Total	2.54		ug/l	2.00	0.308	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	BM
Zinc, Total	13.9	J	ug/l	20.0	6.50	4	08/20/10 18:4	5 08/24/10 08:55	EPA 3005A	1,6020A	вм

Project Name:

SHL TASK 0002

Lab Number:

L1012830

Project Number:

Sample Location:

AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-09

Client ID:

RB2-081910-U DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 14:00

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - We	stborough l	_ab									
Aluminum, Total	ND		ug/l	10.0	1.91	t	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Antimony, Total	ND		ug/I	0.500	0.120	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Barium, Total	ND		ug/l	0.500	0.095	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:4:	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Calcium, Total	14.4	J	ug/l	100	12.6	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Chromium, Total	0.35	J	ug/l	0.500	0.186	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Copper, Total	0.13	J	ug/I	0.500	0.118	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Iron, Total	17.6	J	ug/l	50.0	8.41	1	08/20/10 18:4:	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Lead, Total	ND		ug/l	0.500	0.050	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Magnesium, Total	ND		ug/l	100	4.10	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:26	0 08/27/10 12:31	EPA 7470A	1,7470A	EZ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Potassium, Total	ND		ug/I	100	18.2	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Selenium, Total	ND		ug/l	1.00	0.406	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Sodium, Total	ND		ug/l	100	18.2	i	08/20/10 18:4:	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Thallium, Total	· ND		ug/l	0.500	0.031	- 1-	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ
Vanadium, Total	ND	. 4	ug/l	0.500	0.077	ì	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	вм
Zinc, Total	ND		ug/l	5.00	1.62	1	08/20/10 18:4	5 08/24/10 09:01	EPA 3005A	1,6020A	ВМ

Lab Number:

L1012830

09/03/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough	Lab for sample(s	s): 02,04,0	06,08-09	Batch	WG428	723-1			
Aluminum, Total	ND	ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Antimony, Total	ND	ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Arsenic, Total	ND	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Barium, Total	ND	ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Beryllium, Total	ND	ug/l	0.500	0.059	i	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Cadmium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Calcium, Total	ND	ug/l	100	12.6	4	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Chromium, Total	ND	ug/l	0.500	0.186	4.	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Cobalt, Total	ND	ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Copper, Total	ND	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Iron, Total	ND	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Lead, Total	ND	ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Magnesium, Total	ND	ug/l	100	4.10	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Manganese, Total	ND	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Nickel, Total	ND	ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Potassium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Selenium, Total	ND	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Silver, Total	ND	ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Sodium, Total	ND	ug/l	100	18,2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Thallium, Total	ND	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 00:09	1,6020A	вм
Vanadium, Total	ND	ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ
Zinc, Total	ND	ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 00:09	1,6020A	ВМ

Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - West	oorough Lab for samp	ole(s): 01	,03,05,0	7 Bat	ch: WG42	8838-1			
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Antimony, Dissolved	ND	ug/l	0.500	0.120	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Barium, Dissolved	ND	ug/l	0.500	0.095	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ

Project Name:

SHL TASK 0002

Lab Number:

L1012830 09/03/10

Project Number: AC001

Report Date:

Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Cadmium, Dissolved	ND		ug/l	0,500	0.059	4	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Calcium, Dissolved	25.7	J	ug/l	100	12.6	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Chromium, Dissolved	ND		ug/l	0.500	0.186	-1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Cobalt, Dissolved	ND		ug/l	0,500	0.053	-1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Iron, Dissolved	10.3	ú	ug/l	50.0	8,41	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Manganese, Dissolved	0.24	J	ug/l	1.00	0.136	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Potassium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Silver, Dissolved	ND		ug/l	0.500	0.085	. 1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Sodium, Dissolved	ND		ug/l	100	18,2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/22/10 12:00	08/23/10 23:57	1,6020A	ВМ
Zinc, Dissolved	2.12	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/23/10 23:57	1,6020A	вм

Prep Information

Digestion Method: EPA 3005A

Parameter		Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	
Total Metals -	Westborough	Lab fo	or sample(s):	02,04,0	06,08-09	Batch	: WG4296	38-1	4		
Mercury, Total	~**	ND .	× 4	ug/l	0.2000	0.0120	1	08/26/10 14:20 .	08/27/10 12:19	9 1,7470A	EZ *

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytica Method	l Analyst
Dissolved Metals - We	stborough Lab for sam	ole(s): 01	,03,05,0	7 Bate	ch: WG42	9785-1			
Mercury, Dissolved	ND	ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:42	2 1,7470A	EZ



Serial_No:09031011:54

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

09/03/10

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	LCS %Recovery Qual	LCSD %Recovery Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Ass	sociated sample(s): 02,04,06,08-0	9 Batch: WG428723-2	4			
Aluminum, Total	93		80-120	4		
Antimony, Total	101	-	80-120	0.00		
Arsenic, Total	100		80-120			
Barium, Total	102	4.	80-120			
Beryllium, Total	104		80-120			
Cadmium, Total	101		80-120			
Calcium, Total	109		80-120			
Chromium, Total	97	*	80-120			
Cobalt, Total	105	4	80-120			
Copper, Total	103		80-120			
Iron, Total	106	3	80-120			
Lead, Total	103		80-120			
Magnesium, Total	100	× -	80-120			
Manganese, Total	100		80-120	(4)		
Nickel, Total	103		80-120			
Potassium, Total	102		80-120	*		
Selenium, Total			80-120			
Silver, Total	103 89	4.0	80-120			
Sodium, Total	110	4	80-120	*		
Thallium, Total	96 .		80-120			
Vanadium, Total	103	+	80-120	130		

SHL TASK 0002 Batch Quality Con

Lab Number:

L1012830

Report Date:

09/03/10

Parameter	LCS . %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab As	sociated sample(s); 02,04,06	,08-09 Batch: WG428723-2			
Zinc, Total	103		80-120	· •	

Project Name:

Project Number:

AC001

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

Parameter	LCS Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s):	01,03,05,07 Batch: WG428838	-2		
Aluminum, Dissolved	93		80-120	i i	
Antimony, Dissolved	101		80-120	De De	
Arsenic, Dissolved	105	3	80-120		
Barium, Dissolved	105	2	80-120		
Beryllium, Dissolved	104.	-2	80-120	-	
Cadmium, Dissolved	111	**	80-120		
Calcium, Dissolved	108		80-120		
Chromium, Dissolved	96	*	80-120		
Cobalt, Dissolved	104	1.2	80-120	*	
Copper, Dissolved	102	3	80-120	1.0	
Iron, Dissolved	104		80-120		
Lead, Dissolved	1,02		80-120		
Magnesium, Dissolved	101	*	80-120		
Manganese, Dissolved	101	4	80-120		
Nickel, Dissolved	102	-2	80-120		
Potassium, Dissolved	105	4	80-120	•	
Selenium, Dissolved	107		80-120	*	
Silver, Dissolved	101.	n 4 (1)	80-120		
Sodium, Dissolved	113		80-120	4	
Thallium, Dissolved	98		80-120	4	
Vanadium, Dissolved	101	*	80-120		

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab	Associated sample(s): 01,0	3,05,07 Batch: WG428838	-2		
Zinc, Dissolved	.105	-	80-120		
Total Metals - Westborough Lab Asso	ociated sample(s): 02,04,06	,08-09 Batch: WG429638-2	2		
Mercury, Total	112		80-120		20
Dissolved Metals - Westborough Lab	Associated sample(s): 01,0	3,05,07 Batch: WG429785	-2		
Mercury, Dissolved	111:	-	80-120	4	20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD		PD mits
Total Metals - Westborough Lab GP-10-16-074-U	Associated	sample(s): 0	2,04,06,08-	09 QC Batc	h ID: W	G428723-4	WG428723-5	QC S	Sample: L10	12830-0	2 Client	t ID:
Aluminum, Total	3540	2000.	5860	116		5740	110		80-120	2		20
Antimony, Total	1.00	500	517	103		496	99		80-120	4		20
Arsenic, Total	248	120	397	124	Q	385	114		80-120	3		20
Barium, Total	59.0	2000	2320	113		2190	106		80-120	6		20
Beryllium, Total	ND	50	53.8	108		50.9	102		80-120	6		20
Cadmium, Total	ND	51	60.8	119		58.0	114		80-120	5		20
Calcium, Total	52200	10000	69500	173		67800	156		80-120	2		20
Chromium, Total	44.2	200	253	104		248	102		80-120	2		20
Cobalt, Total	6.41	500	554	110		539	106		80-120	3		20
Copper, Total	14,5	250	281	107		274	104		80-120	3		20
Iron, Total	75900	1000	87400	1150		84600	870		80-120	3		20
Lead, Total	4.79	510	556	108		540	105		80-120	3		20
Magnesium, Total	12800	10000.	24800	120		24400	116		80-120	2		20
Manganese, Total	1420	500 :	2130	142	Q	2060	128	Q	80-120	3		20
Nickel, Total	24.6	500.	555	106		540	103		80-120	3		20
Potassium, Total	21500	10000	34700	132	Q	33600	121	Q	80-120	3		20
Selenium, Total	ND	120	127	106		126	105		80-120	ĺ		20
Silver, Total	ND	50	51.7	103		49.8	100		80-120	4		20
Sodium, Total	33000	10000	45600	126	Q	43700	107		80-120	4		20
Thallium, Total	ND	120	122	102		118	98		80-120	3		20
Vanadium, Total	3.08	500	536	106		524	104		80-120	2		20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough GP-10-16-074-U	Lab Associated	sample(s):	02,04,06,08	-09 QC Batch II	D: WG428723-4	WG428723-5	QC Sample: L10)12830-02	Client ID:
Zinc, Total	24.0	500	547	105	528	101	80-120	4	20

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westbo GP-10-16-074-F	rough Lab Assoc	iated sample	e(s): 01,03,0	05,07 QC Bat	ch ID:	WG428838-3	3 WG428838-4	QC Sample: L	.1012830-01	Client ID
Aluminum, Dissolved	ND	2000	1950	98		1930	96	80-120	1	20
Antimony, Dissolved	ND	500	533	107		531	106	80-120	0	20
Arsenic, Dissolved	216	120	364	123	Q	360	120	80-120	1	20
Barium, Dissolved	36.3	2000	2220	109		2220	109	80-120	0	20
Beryllium, Dissolved	ND	50	53.2	106		53.3	107	80-120	0	20
Cadmium, Dissolved	ND	51	58.8	115		58.9	115	80-120	0	20
Calcium, Dissolved	50900	10000	66400	155		65600	147	80-120	1	20
Chromium, Dissolved	0.750	200	202	101		200	100	80-120	1	20
Cobalt, Dissolved	4.66	500	553	110		544	108	80-120	2	20
Copper, Dissolved	0.860	250	265	106		264	105	80-120	0	20
Iron, Dissolved	64200	1000	72600	840		70300	610	80-120	3	20
Lead, Dissolved	ND	510	542	106		550	108	80-120	1	20
Magnesium, Dissolved	11800	10000	23400	116		23400	116	80-120	0	20
Manganese, Dissolved	1330	500	2000	134	Q	1940	122	Q 80-120	3	20
Nickel, Dissolved	16.6	500	550	107		543	105	80-120	1	20
Potassium, Dissolved	20400	10000	32900	125	Q	32100	117	80-120	2	20
Selenium, Dissolved	ND	120	130	108		130	108	80-120	0	20
Silver, Dissolved	ND	50	50.4	101		50.3	101	80-120	0	20
Sodium, Dissolved	31700	10000	44700	130	Q	43200	115	80-120	3	20
Thallium, Dissolved	ND	120	120	100		122	102	80-120	2	20
Vanadium, Dissolved	ND	500	526	105		522	104	80-120	1	20
		-								

Project Name:

SHL TASK 0002

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Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough GP-10-16-074-F	Lab Associ	ated sample(s): 01,03,0	05,07 QC Batch I	D: WG428838-3	WG428838-4	QC Sample: L	1012830-01	Client ID
Zinc, Dissolved	6.87	500	538	106	543	107	80-120	1	20
Total Metals - Westborough Lab GP-10-16-074-U	Associated	sample(s): 02	2,04,06,08	3-09 QC Batch ID	: WG429638-3	WG429638-4	QC Sample: L10)12830-02	Client ID:
Mercury, Total	ND	1	1.198	120	1.160	116	80-120	10	20
Dissolved Metals - Westborough GP-10-16-074-F	Lab Associ	ated sample(s): 01,03,0	05,07 QC Batch I	D: W G429785 -3	WG429785-4	QC Sample: L	1012830-01	Client ID
Mercury, Dissolved	ND	1 2	1.071	107	1.150	115	80-120	7	20

INORGANICS & MISCELLANEOUS

Serial_No:09031011:54

Project Name:

SHL TASK 0002

Lab Number:

L1012830

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-01

Client ID: Sample Location:

GP-10-16-074-F DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 07:25

Date Received:

08/19/10

See Narrative

Field Prep:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - West	borough Lab	i								
Alkalinity, Total	160		mg CaCO3/L	2.0	NA	1	-	08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	1.71		mg/l	0.075	0.017	1	08/20/10 18:15	08/25/10 20:33	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1		08/20/10 21:04	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/24/10 18:15	08/24/10 19:15	30,4500S2-AD	AT
Chemical Oxygen Demand	790		mg/l	20	7.0	1	*	08/24/10 15:22	44,410.4	SD
Dissolved Organic Carbon	15		mg/l	5.0	5.0	5	08/19/10 22:00	08/23/10 18:29	30,5310C	DD
Anions by Ion Chromatog	raphy - West	borough	Lab							
Chloride	56		mg/l	1.0	0.13	2	÷	08/20/10 23:12	44,300.0	AU
Nitrogen, Nitrate	0.43		mg/l	0.05	0.01	1	8	08/20/10 23:00	44,300.0	AU
Sulfate	9.7		mg/l	1.0	0.12	1	41	08/20/10 23:00	44,300.0	AU

Serial_No:09031011:54

Project Name: SHL TASK 0002 Lab Number:

L1012830

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-02

Client ID: Sample Location:

GP-10-16-074-U DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 07:25

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	tborough Lab									
Solids, Total Suspended	390		mg/l	10	NA	2		08/20/10 09:55	30,2540D	DW

Lab Number:

L1012830

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-03

Client ID:

GP-10-16-084-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected: 08/19/10 09:40 Date Received: 08/19/10

Field Prep:

See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - West	borough Lab).								
Alkalinity, Total	420		mg CaCO3/L	2.0	NA	1	4.	08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	0.224		mg/l	0.075	0.017	1.	08/20/10 18:15	08/25/10 20:35	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	4	08/20/10 21:04	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/24/10 18:15	08/24/10 19:15	30,4500S2-AD	AT
Chemical Oxygen Demand	43		mg/l	20	7.0	1	*	08/24/10 15:22	44,410.4	SD
Dissolved Organic Carbon	5.6		mg/l	1.0	1.0	1	08/19/10 22:00	08/23/10 18:29	30,5310C	DD
Anions by Ion Chromatog	raphy - West	borough	Lab							
Chloride	43		mg/l	0.50	0.07	1		08/21/10 00:24	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	+	08/21/10 00:24	44,300.0	AU
Sulfate	0.59	J	mg/l	1.0	0.12	1	9	08/21/10 00:24	44,300.0	AU

Serial_No:09031011:54

Project Name:

SHL TASK 0002

Lab Number:

L1012830

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-04

Client ID:

GP-10-16-084-U

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - We	stborough Lab									
Solids, Total Suspended	290		mg/l	5.0	NA	1		08/20/10 09:55	30,2540D	DW

Project Name:

SHL TASK 0002

Project Number: AC001

General Chemistry - Westborough Lab

Lab Number:

L1012830

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-05

Client ID:

GP-10-16-094-F

Result

Qualifier

Units

mg CaCO3/L

mg/l

mg/l

mg/l

Sample Location:

DEVENS, MA

Matrix:

Parameter

Alkalinity, Total

Nitrogen, Nitrite

Sulfide

Nitrogen, Ammonia

Water

110

0.159

0.02

ND

Date Collected:

08/19/10 12:35

AT

Date Received:

08/19/10

Field Prep:

See Narrative

08/24/10 18:15 08/24/10 19:15 30,4500S2-AD

RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst	
2.0	NA	1		08/20/10 11:17	30,2320B	SD	
0.075	0.017	1	08/20/10 18:15	08/25/10 20:36	30,4500NH3-BH	AT	
0.02	0.002	1		08/20/10 21:04	30,4500NO2-B	DD	

Chemical Oxygen Demand	48	mg/l	20	7.0	1		08/24/10 15:30	44.410.4	SD
Dissolved Organic Carbon	7.3	mg/l	1.0	1.0	1	08/19/10 22:00		30,5310C	DD
Anions by Ion Chromato	graphy - Westbo	rough Lab							
Chloride	68	mg/l	1.0	0.13	2	*	08/20/10 23:36	44,300.0	AU
Nitrogen, Nitrate	0.48	mg/l	0.05	0.01	1		08/20/10 23:24	44,300.0	AU
Sulfate	11	mg/l	1.0	0.12	1	**	08/20/10 23:24	44,300.0	AU

0.10

0.10

Serial_No:09031011:54

Project Name:

SHL TASK 0002

Lab Number:

L1012830

Project Number: AC001

Report Date:

09/03/10

SAMPLE RESULTS

Lab ID:

L1012830-06

Client ID: Sample Location:

GP-10-16-094-U DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 12:35

Date Received:

08/19/10

Field Prep:

None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Wes	stborough Lab									
Solids, Total Suspended	170		mg/l	10	NA	2	(6)	08/20/10 09:55	30,2540D	DW

Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

09/03/10

Method Blank Analysis Batch Quality Control

Result Qua	alifier Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
borough Lab 1	or sample(s):	02,04,06	Batch:	WG428579	-1			
ND	mg/l	5.0	NA	1	-	08/20/10 09:55	30,2540D	DW
borough Lab 1	for sample(s):	01,03,05	Batch:	WG428685	-1			
ND	mg CaCC	03/L 2.0	NA	1		08/20/10 11:17	30,2320B	SD
tborough Lab	for sample(s):	01,03,05	Batch:	WG428700	-1			
ND	mg/l	0.075	0.017	1	08/20/10 18:15	08/25/10 20:18	30,4500NH3-BH	TA I
tborough Lab	for sample(s):	01,03,05	Batch:	WG428725	-2			
ND	mg/l	0.02	0.002	1		08/20/10 21:03	30,4500NO2-B	DD
raphy - Westbo	orough Lab for	sample(s): 01,03	3,05 Batch:	WG428768-	1		
ND	mg/l	0.50	0.07	1	-	08/20/10 18:00	44,300.0	AU
ND	mg/l	0.05	0.01	1	4	08/20/10 18:00	44,300.0	AU
ND	mg/l	1.0	0.12	1	,	08/20/10 18:00	44,300.0	AU
tborough Lab	for sample(s):	01,03,05	Batch:	WG429018	-2			
ND	mg/l	1.0	1.0	1	08/17/10 21:30	08/23/10 18:29	30,5310C	DD
tborough Lab	for sample(s):	01,03,05	Batch:	WG429175	-1			
ND	mg/l	20	7,0	1		08/24/10 15:20	44,410.4	SD
tborough Lab	for sample(s):	01,03,05	Batch:	WG429287	-1			
ND	mg/l	0.10	0.10	1	08/24/10 18:15	08/24/10 19:15	30.4500S2-AD	AT
	tborough Lab f ND tborough Lab f ND tborough Lab f ND tborough Lab f ND raphy - Westbor ND ND ND ND tborough Lab f ND ND tborough Lab f ND ND tborough Lab f ND ND tborough Lab f ND tborough Lab f ND tborough Lab f ND tborough Lab f ND	tborough Lab for sample(s): ND mg/l tborough Lab for sample(s): ND mg CaCC tborough Lab for sample(s): ND mg/l tborough Lab for sample(s): ND mg/l raphy - Westborough Lab for ND mg/l ND mg/l tborough Lab for sample(s): ND mg/l	tborough Lab for sample(s): 02,04,06 ND mg/l 5.0 tborough Lab for sample(s): 01,03,05 ND mg CaCO3/L 2.0 tborough Lab for sample(s): 01,03,05 ND mg/l 0.075 tborough Lab for sample(s): 01,03,05 ND mg/l 0.02 traphy - Westborough Lab for sample(s) ND mg/l 0.50 ND mg/l 0.05 ND mg/l 1.0 tborough Lab for sample(s): 01,03,05 ND mg/l 1.0 tborough Lab for sample(s): 01,03,05 ND mg/l 1.0 tborough Lab for sample(s): 01,03,05 ND mg/l 20 tborough Lab for sample(s): 01,03,05 ND mg/l 20	tborough Lab for sample(s): 02,04,06 Batch: ND mg/l 5.0 NA tborough Lab for sample(s): 01,03,05 Batch: ND mg CaCO3/L 2.0 NA tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 0.075 0.017 tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 0.02 0.002 traphy - Westborough Lab for sample(s): 01,03 ND mg/l 0.50 0.07 ND mg/l 0.05 0.01 ND mg/l 0.05 0.01 tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 0.05 0.01 tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 1.0 0.12 tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 1.0 1.0 tborough Lab for sample(s): 01,03,05 Batch: ND mg/l 20 7.0 tborough Lab for sample(s): 01,03,05 Batch:	Result Qualifier Units RL MDL Factor tborough Lab for sample(s): 02,04,06 Batch: WG428579-WG428685 ND mg/l 5.0 NA 1 tborough Lab for sample(s): 01,03,05 Batch: WG428685 ND mg/l 0.03,05 Batch: WG428700 ND mg/l 0.075 0.017 1 tborough Lab for sample(s): 01,03,05 Batch: WG428725 ND mg/l 0.02 0.002 1 raphy - Westborough Lab for sample(s): 01,03,05 Batch: WG428725 ND mg/l 0.50 0.07 1 ND mg/l 0.05 0.01 1 ND mg/l 1.0 0.12 1 tborough Lab for sample(s): 01,03,05 Batch: WG429018 ND mg/l 1.0 1.0 1 tborough Lab for sample(s): 01,03,05 Batch: WG429175 ND m	Result Qualifier Units RL MDL Factor Prepared tborough Lab for sample(s): 02,04,06 Batch: WG428579-1 ND mg/l 5.0 NA 1 - tborough Lab for sample(s): 01,03,05 Batch: WG428685-1 NA 1 - ND mg/l 0.075 0.017 1 08/20/10 18:15 tborough Lab for sample(s): 01,03,05 Batch: WG428700-1 08/20/10 18:15 tborough Lab for sample(s): 01,03,05 Batch: WG428725-2 ND mg/l 0.02 0.002 1 - traphy - Westborough Lab for sample(s): 01,03,05 Batch: WG428768- ND mg/l 0.50 0.07 1 - ND mg/l 0.05 0.01 1 - tborough Lab for sample(s): 01,03,05 Batch: WG429018-2 08/17/10 21:30 tborough Lab for sample(s): 01,03,05 Batch: WG429175-1 08/17/10 21:30 tborough Lab for sample(s): 01,03,05 Batch: WG429287-1	Result Qualifier Units RL MDL Factor Prepared Analyzed thorough Lab for sample(s): 02,04,06 Batch: WG428579-1 ND mg/l 5.0 NA 1 - 08/20/10 09:55 thorough Lab for sample(s): 01,03,05 Batch: WG428685-1 ND mg CaCO3/L 2.0 NA 1 - 08/20/10 11:17 thorough Lab for sample(s): 01,03,05 Batch: WG428700-1 ND mg/l 0.075 0.017 1 08/20/10 18:15 08/25/10 20:18 thorough Lab for sample(s): 01,03,05 Batch: WG428725-2 ND mg/l 0.02 0.002 1 - 08/20/10 21:03 traphy - Westborough Lab for sample(s): 01,03,05 Batch: WG428768-1 ND mg/l 0.50 0.07 1 - 08/20/10 18:00 ND mg/l 0.05 0.01 1 - 08/20/10 18:00 ND mg/l 0.05 0.01 1 - 08/20/10 18:00 thorough Lab for sample(s): 01,03,05 Batch: WG429018-2 ND mg/l 1.0 0.12 1 08/17/10 21:30 08/23/10 18:29 thorough Lab for sample(s): 01,03,05 Batch: WG429175-1 ND mg/l 20 7.0 1 - 08/24/10 15:20 thorough Lab for sample(s): 01,03,05 Batch: WG429287-1	Result Qualifier Units RL MDL Factor Prepared Analyzed Method thorough Lab for sample(s): 02,04,06 Batch: WG428579-1 ND mg/l 5.0 NA 1 - 08/20/10 09:55 30,2540D thorough Lab for sample(s): 01,03,05 Batch: WG428685-1 ND mg/l 0.075 0.017 1 08/20/10 18:15 08/25/10 20:18 30,4500NH3-BF thorough Lab for sample(s): 01,03,05 Batch: WG428700-1 ND mg/l 0.075 0.017 1 08/20/10 18:15 08/25/10 20:18 30,4500NH3-BF thorough Lab for sample(s): 01,03,05 Batch: WG428725-2 ND mg/l 0.02 0.002 1 - 08/20/10 21:03 30,4500NO2-B traphy - Westborough Lab for sample(s): 01,03,05 Batch: WG428768-1 ND mg/l 0.50 0.07 1 - 08/20/10 18:00 44,300.0 ND mg/l 0.05 0.01 1 - 08/20/10 18:00 44,300.0 thorough Lab for sample(s): 01,03,05 Batch: WG429018-2 ND mg/l 1.0 0.12 1 08/17/10 21:30 08/23/10 18:29 30,5310C thorough Lab for sample(s): 01,03,05 Batch: WG429175-1 ND mg/l 20 7.0 1 - 08/24/10 15:20 44,410.4 thorough Lab for sample(s): 01,03,05 Batch: WG429287-1

SHL TASK 0002

Project Number: AC001

Project Name:

Lab Number:

L1012830

Report Date:

arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s)	: 01,03,05	Batch: WG	428685-2				
Alkalinity, Total	106				80-115	(+)		4
eneral Chemistry - Westborough Lab	Associated sample(s)	: 01,03,05	Batch: WG	428700-2				
Nitrogen, Ammonia	102				80-120	œ		20
eneral Chemistry - Westborough Lab	Associated sample(s)	01,03,05	Batch: WG	428725-1				
Nitrogen, Nitrite	100		4		90-110			20
nions by Ion Chromatography - Westh	orough Lab Associate	d sample(s	s): 01,03,05	Batch: WO	9428768-2			
Chloride	98				90-110	4		
Nitrogen, Nitrate	100				90-110			
Sulfate	95				90-110	*		
eneral Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: WG	429018-1				
Dissolved Organic Carbon	106				90-110			
eneral Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: WG	429175-2				
Chemical Oxygen Demand	103		2		95-105			

Lab Number:

L1012830

Report Date:

09/03/10

Parameter	LCS - %Recovery	9	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	Batch: WG429287-2			
Sulfide	91			75-125		

Project Name:

Project Number:

SHL TASK 0002

AC001

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Reco Qual Lim		RPD Qual Limits
General Chemistry - Westborou	igh Lab Asso	ciated samp	le(s): 01,03	,05 QC Bato	h ID: W	G428685-3	QC Sample	e: L1012735-0	5 Client ID	: MS Sample
Alkalinity, Total	210	100	290	80	Q	4	-2	86-1	16 -	4
General Chemistry - Westborou F	igh Lab Asso	ciated samp	le(s): 01,03	,05 QC Bato	h ID: W	G428700-3	QC Sample	e: L1012830-0	1 Client ID	: GP-10-16-074
Nitrogen, Ammonia	1.71	4	5.46	94		14		80-1	20 -	20
General Chemistry - Westborou F	igh Lab Asso	ociated sampl	e(s): 01,03	,05 QC Batc	h ID: W	G428725-3	QC Sample	e: L1012830-0	5 Client ID	: GP-10-16-094
Nitrogen, Nitrite	0.02	0.1	0.11	90		11.2	- 2	85-1	15 -	20
Anions by Ion Chromatography Client ID: GP-10-16-084-F	- Westborou	gh Lab Asso	ciated sam	ple(s): 01 ,03,0	5 QC	Batch ID: W	/G428768-3 V	VG428768-4	QC Sample	: L1012830-03
Chloride	43	4.	46	75		45	50	40-1	51 2	18
Nitrogen, Nitrate	ND	0.4	0.39	98		0.39	98	80-1	22 0	15
Sulfate	ND	8	8.3	104		8.2	102	60-1	40 1	20
General Chemistry - Westborou	gh Lab Asso	ciated sampl	e(s): 01,03	,05 QC Batc	h ID: W	G429018-3	QC Sample	: L1012735-0	5 Client ID	: MS Sample
Dissolved Organic Carbon	3.7	4	8.1	109			4	79-1	20 -	20
General Chemistry - Westborou F	gh Lab Asso	ciated sampl	e(s): 01,03	,05 QC Batc	h ID: W	G429175-3	QC Sample	e: L1012830-0	5 Client ID	: GP-10-16-094
Chemical Oxygen Demand	48	238	290	103			150	80-1	20 -	20
General Chemistry - Westboroug	gh Lab Asso	ciated sampl	e(s): 01,03	,05 QC Batc	h ID: W	G429287-3	QC Sample	e: L1012830-0	5 Client ID	: GP-10-16-094
Sulfide	ND	0.24	0,18	75		*		75-1	25	20

Lab Duplicate Analysis Batch Quality Control

Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012830

Report Date:

Parameter	Nat	ive Sample	Dup	licate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s):	02,04,06	QC Batch ID:	WG428579-2	QC Sample:	L1012735-02	Client ID:	DUP Sample
Solids, Total Suspended		3000		2800	mg/l	7		32
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428685-4	QC Sample:	L1012735-05	Client ID:	DUP Sample
Alkalinity, Total		210		200	mg CaCO3/L	5	Q	4
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428700-4	QC Sample:	L1012830-01	Client ID:	GP-10-16-074-
Nitrogen, Ammonia	£ 40	1.71		1.71	mg/l	0		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG428725-4	QC Sample:	L1012830-05	Client ID:	GP-10-16-094-
Nitrogen, Nitrite	9	0.02		0.02	mg/l	0		20
Anions by Ion Chromatography - Westb 10-16-084-F	oorough Lab Associated	d sample(s)	: 01 ,03,05 C	C Batch ID: W	G428768-5	QC Sample: L	1012830-0	3 Client ID: GP-
Chloride	R.	43.		47	mg/l	9		18
Nitrogen, Nitrate		ND		ND	mg/l	NC		15
Sulfate		0.59J		0.64J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG429018-4	QC Sample:	L1012679-01	Client ID:	DUP Sample
Dissolved Organic Carbon	*	4.2		4.1	mg/l	2		20
General Chemistry - Westborough Lab	Associated sample(s):	01,03,05	QC Batch ID:	WG429175-4	QC Sample:	L1012830-05	Client ID:	GP-10-16-094-
Chemical Oxygen Demand		48.		50	mg/l	4		20

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012830

Report Date:

09/03/10

Parameter	Nat	e Dup	licate Sample	Units	RPD		RPD Limits	
General Chemistry - Westborough Lab F	Associated sample(s):	01,03,05	QC Batch ID:	WG429287-4	QC Sample:	L1012830-05	Client ID:	GP-10-16-094-
Sulfide	*	ND		ND	mg/l	NC		20

Project Name:

Project Number: AC001

SHL TASK 0002

Serial No:09031011:54

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830 **Report Date**: 09/03/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

Α

Present/Intact

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-01A	Plastic 500ml unpreserved	Α	6	3.6	Υ	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012830-01B	Plastic 250ml unpreserved	Α	6	3.6	Y	Present/Intact	NO2-4500NO2(2)
L1012830-01C	Plastic 250ml unpreserved	Α	N/A	3.6	Y	Present/Intact	ALK-T-2320(14)
L1012830-01D	Plastic 500ml H2SO4 preserved	Α	<2	3.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012830-01E	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-01F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-01G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-01H	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-01I	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-01M	Plastic 500ml HNO3 preserved	Α	<2	3.6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S
· ·	· 10 · 10	*					6020\$(180),DOD-PB- 6020\$(180),DOD-V- 6020\$(180),DOD-A\$- 6020\$(180),DOD-CD- 6020\$(180),DOD-CU- 6020\$(180),DOD-ZN- 6020\$(180),DOD-AL- 6020\$(180),DOD-K- 6020\$(180),DOD-SE- 6020\$(180),DOD-HG-7470\$(28)

Project Number: AC001

Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-01N	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-BE-6020S(180),DOD-BE-6020S(180),DOD-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012830-01X	Amber 250ml unpreserved	Α	6	3.6	Υ	Present/Intact	DOC-5310(28)
L1012830-02A	Plastic 1000ml unpreserved	Α	6	3.6	Y	Present/Intact	TSS-2540(7)
L1012830-02M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-HG-7470T(28),DOD-HG-7470T(28),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180)
-	9 H				Œ	10.00	6020T(180),DOD-MG- 6020T(180),DOD-FE-
3. 12.4/	t and y			**	.0	6.0	-6020T(180),DOD-CU- 6020T(180),DOD-PB- 6020T(180)

Project Number: AC001

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	pН	deg C	Pres	Seal	Analysis(*)
L1012830-02N	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-MN-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012830-03A	Plastic 500ml unpreserved	Α	6	3.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012830-03B	Plastic 250ml unpreserved	Α	6	3.6	Y	Present/Intact	NO2-4500NO2(2)
L1012830-03C	Plastic 250ml unpreserved	Α	N/A	3.6	Y	Present/Intact	ALK-T-2320(14)
L1012830-03D	Plastic 500ml H2SO4 preserved	Α	<2	3.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012830-03E	Plastic 250ml Zn Acetale/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03G	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03H	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-03I	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-03M	Plastic 500ml HNO3 preserved	Α	<2	3.6	Υ	Present/Intact	DOD-BA-6020S(180),DOD-FE- 6020S(180),DOD-MG- 6020S(180),DOD-SB- 6020S(180),DOD-CR-
							6020\$(180),DOD-MN- 6020\$(180),DOD-TL- 6020\$(180),DOD-CO- 6020\$(180),DOD-AG- 6020\$(180),DOD-NA- 6020\$(180),DOD-NI- 6020\$(180),DOD-NI- 6020\$(180),DOD-NI- 6020\$(180),DOD-V- 6020\$(180),DOD-AS- 6020\$(180),DOD-CD- 6020\$(180),DOD-BE- 6020\$(180),DOD-CU- 6020\$(180),DOD-CU- 6020\$(180),DOD-AL- 6020\$(180),DOD-AL- 6020\$(180),DOD-K- 6020\$(180),DOD-K- 6020\$(180),DOD-SE- 6020\$(180),DOD-BE-

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Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-03X	Amber 250ml unpreserved	Α	6	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-04A	Plastic 1000ml unpreserved	Α	6	3.6	Y	Present/Intact	TSS-2540(7)
L1012830-04M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-SB-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-AS-6020T(180),DOD-CR-6020T(180),DOD-CR-6020T(180),DOD-BA-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-BE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)
L1012830-05A	Plastic 500ml unpreserved	Α	6	3.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3- 300(2)
L1012830-05B	Plastic 250ml unpreserved	Α	6	3.6	Y	Present/Intact	NO2-4500NO2(2)
L1012830-05C	Plastic 250ml unpreserved	A	N/A	3.6	Y	Present/Intact	ALK-T-2320(14)
L1012830-05D	Plastic 500ml H2SO4 preserved	Α	<2	3.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012830-05E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-05F	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-05G	Plastic 250ml Zn Acetate/NaOH pr	Α	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-05H	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-05I	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	DOC-5310(28)

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Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-05M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-6020S(180),DOD-AG-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-PB-6020S(180),DOD-AS-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CU-6020S(180),DOD-E-6020S(180),DOD-ZN-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012830-05X	Amber 250ml unpreserved	Α	6	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-06A	Plastic 1000ml unpreserved	Α	6	3.6	Y	Present/Intact	TSS-2540(7)
L1012830-06M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-SB-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-BE-
2 3 1	*					-	6020T(180),DOD-MG-
4 .				: \$0 a	**	199	6020T(180),DOD-FE- 6020T(180),DOD-CU- 6020T(180),DOD-PB- 6020T(180)

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Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-07M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-BA-6020S(180),DOD-FE-6020S(180),DOD-MG-6020S(180),DOD-SB-6020S(180),DOD-CR-6020S(180),DOD-TL-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-CA-6020S(180),DOD-NA-6020S(180),DOD-NA-6020S(180),DOD-NB-6020S(180),DOD-PB-6020S(180),DOD-PB-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-CD-6020S(180),DOD-ZN-6020S(180),DOD-ZN-6020S(180),DOD-K-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012830-08M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-ZN-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CA-6020T(180),DOD-CO-6020T(180),DOD-MN-6020T(180),DOD-MN-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AG-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-BC-6020T(180),DOD-BG-6020T(180),DOD-BG-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-CU-6020T(180),DOD-PB-
4 1 12W				V 2.40			6020T(180)

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Container Info	rmation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012830-09M	Plastic 500ml HNO3 preserved	A	<2	3.6	Y	Present/Intact	DOD-CD-6020T(180),DOD-NA-6020T(180),DOD-V-6020T(180),DOD-V-6020T(180),DOD-NI-6020T(180),DOD-NI-6020T(180),DOD-SE-6020T(180),DOD-CA-6020T(180),DOD-CA-6020T(180),DOD-MN-6020T(180),DOD-HG-7470T(28),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AL-6020T(180),DOD-BA-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-K-6020T(180),DOD-HG-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180),DOD-PB-6020T(180)

Container Comments

L1012830-01H

L1012830-011

L1012830-03H

L1012830-031

L1012830-05H

L1012830-05I

Project Name:

SHL TASK 0002

Lab Number:

L1012830

Project Number:

AC001

Report Date:

09/03/10

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS · Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD · Matrix Spike Sample Duplicate: Refer to MS.

NA · Not Applicable.

NC Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI Not Ignitable.

RL Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method (Example: EPA \$260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum_

Data Qualifiers

- Spectra identified as "Aldol Condensation Product"
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated B field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- P -The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix 0 spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- · Analytical results are from sample re-analysis. R

Report Format: DU Report with "J" Qualifiers

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Data Qualifiers

RE Analytical results are from sample re-extraction.

 Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL). This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample.

Report Format: DU Report with "J" Qualifiers



Project Name:

SHL TASK 0002

Project Number: AC001

Lab Number:

L1012830

Report Date:

09/03/10

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.1, issued April 22, 2009

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical lesting laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organic Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,TI)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307, NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A. 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A.

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1,

SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082. 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ QQA-QAM-025 Rev.7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B.

Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500Cl-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, S\M3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID: 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. NELAP Accredited. Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3,4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. NELAP Accredited via NY-DOH. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited. Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2_D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnapthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

WESTBÖRO, MA TEL: 508-898-9220 FAX: 508-898-9193	MANSFIELD, MA TEL: 508-822-9300 FAX; 508-822-3268	Project Informa	L Task			Repo	X	- 7	EMAIL	ED	R	able			as Client info PO #:		
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ANALYTICAL REPORT

Lab Number:

L1012831

Client:

Sovereign Consulting

905B South Main Street Mansfield, MA 02048

ATTN:

Phil McBain

Phone:

(508) 339-3200

Project Name:

SHL TASK 0002

Project Number:

AC001

Report Date:

09/06/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name:

SHL TASK 0002

Project Number:

AC001

Lab Number:

L1012831

Report Date:

09/06/10

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1012831-01	GP-10-16-074-F	DEVENS, MA	08/19/10 07:25
L1012831-02	GP-10-16-084-F	DEVENS, MA	08/19/10 09:40
L1012831-03	GP-10-16-094-F	DEVENS, MA	08/19/10 12:35

Project Name:

SHL TASK 0002

Lab Number:

L1012831

Project Number:

AC001

Report Date:

09/06/10

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

For additional information, please contact Client Services at 800-624-9220.

Report Submission

This report contains the Dissolved Inorganic Carbon results. The results of all other analyses were issued under separate cover.

Testing performed for the reported analyses followed the guidelines established under the DoD QSM 4.1, where applicable.

Dissolved Inorganic Carbon

L1012831-01, -02 and -03 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

Project Name:

SHL TASK 0002

Lab Number:

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Case Narrative (continued)

The WG430836-3 Laboratory Duplicate RPD (25%), performed on L1012831-02, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

A Matrix Spike could not be performed due to limited sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Michelle M. Morris

Title: Technical Director/Representative

- 100

Date: 09/06/10

INORGANICS & MISCELLANEOUS

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012831

Report Date:

09/06/10

SAMPLE RESULTS

Lab ID:

L1012831-01

Client ID: Sample Location:

GP-10-16-074-F DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 07:25

Date Received:

08/19/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	47		mg/l	8.0	-	8	08/19/10 22:00	09/02/10 20:14	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012831

Report Date:

09/06/10

SAMPLE RESULTS

Lab ID:

L1012831-02

Client ID:

GP-10-16-084-F

Sample Location:

DEVENS, MA

Matrix:

Water

Date Collected:

08/19/10 09:40

Date Received:

08/19/10

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	86		mg/l	20		20	08/19/10 22:00	09/02/10 20:14	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number:

L1012831

Project Number: AC001

Report Date:

09/06/10

SAMPLE RESULTS

Lab ID:

L1012831-03

Date Collected:

08/19/10 12:35

Client ID: Sample Location:

GP-10-16-094-F DEVENS, MA

Date Received:

08/19/10

Matrix:

Water

Field Prep:

Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	32		mg/l	20	-	20	08/19/10 22:00	09/02/10 20:14	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number:

L1012831

Report Date:

09/06/10

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sai	mple(s): 01-03 Bato	h: WG43	0836-1						
Dissolved Inorganic Carbon	ND	mg/l	1,0	-	1	08/19/10 22:00	09/02/10 20:14	30,5310C(M)	DW

Lab Control Sample Analysis
Batch Quality Control

SHL TASK 0002 Batch Quality Control

Lab Number:

L1012831

Report Date:

09/06/10

LCS LCSD %Recovery

Parameter %Recovery Qual %Recovery Qual Limits RPD Qual RPD Limits

Associated sample(s): 01-03 Batch: WG430836-2

AC001

Dissolved Inorganic Carbon

Project Name:

Project Number:

110

...

Lab Duplicate Analysis
Batch Quality Control

Lab Number:

L1012831

Report Date:

09/06/10

Parameter		tive Sample	Duplicate Sample	e Units	RPD	Qual	RPD Limits
Associated sample(s): 01-03	QC Batch ID: WG430836-3	QC Sample: L1	012831-02 Client ID:	GP-10-16-084-F			
Dissolved Inorganic Carbon		86	67	mg/l	25		

Project Name:

Project Number: AC001

SHL TASK 0002

Project Name: SHL TASK 0002

Lab Number: L1012831 Project Number: AC001 Report Date: 09/06/10

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Reagent H2O Preserved Vials Frozen on:

Cooler Information Custody Seal

Cooler

Present/Intact A

Container Info	ormation			Temp			
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1012831-01A	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-01B	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-01X	Amber 250ml unpreserved	Α	6	3.6	Y	Present/Intact	SPECWC()
L1012831-02A	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-02B	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-02X	Amber 250ml unpreserved	Α	6	3.6	Y	Present/Intact	SPECWC()
L1012831-03A	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-03B	Vial H2SO4 preserved split	Α	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-03X	Amber 250ml unpreserved	Α	6	3.6	Y	Present/Intact	SPECWC()

Project Name: SHL TASK 0002

Lab Number:

L1012831

Project Number:

AC001

Report Date:

09/06/10

GLOSSARY

Acronyms

EΡΛ - Environmental Protection Agency.

LCS. · Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD Laboratory Control Sample Duplicate: Refer to LCS.

MDL · Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS -Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD Matrix Spike Sample Duplicate: Refer to MS,

NA · Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI · Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example; EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- Spectra identified as "Aldol Condensation Product".
- -The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank.
- D · Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- -The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of H sample collection.
- The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- The RPD between the results for the two columns exceeds the method-specified criteria.
- The quality control sample exceeds the associated acceptance criteria. Note: This flag is not applicable for matrix Q spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- Analytical results are from sample re-analysis. R

Report Format: Data Usability Report

Project Name: 9

SHL TASK 0002

Lab Number:

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Data Qualifiers

RE Analytical results are from sample re-extraction.

Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name:

SHL TASK 0002

Lab Number:

L1012831

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AC001

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REFERENCES

30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF, 18th Edition, 1992.

The analyses performed on the sample(s) within this report are in accordance with the minimum established guidelines set forth in the Department of Defense Quality Systems Manual, Version 4.1, issued April 22, 2009

LIMITATION OF LIABILITIES

Alpha Analytical 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 shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical 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.

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



Certificate/Approval Program Summary

Last revised July 19, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB), 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D))

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E).)

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3.3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500NH3-B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624, ME DRO, ME GRO, MA EPH, MA VPH.)

Solid Waste/Soil (Organic Parameters: ME DRO, ME GRO, MA EPH, MA VPH.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba, Be, Ca, Cd, Cr, Cu, Na, Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Ti,Tl, V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N,

SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic SM4500CN-E, 4500F-C, 4500F

Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHA

Solid & Chemical Materials (<u>Inorganic Parameters</u>: SW-846 6010B, 7196A, 7471A, 7,3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. <u>Organic Parameters</u>: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935, NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500Cl-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev 7.)

New York Department of Health Certificate/Lab ID: 11148. NELAP Accredited.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B, Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14.510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID: 666. Organic Parameters: MA-EPH, MA-VPH.

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-03671. NELAP Accredited. Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624, 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00065. *NELAP Accredited via NY-DOH*. Refer to MA-DEP Certificate for Potable and Non-Potable Water. Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Texas Commisson on Environmental Quality <u>Certificate/Lab ID</u>: T104704476-09-1. *NELAP Accredited. Non-Potable Water* (<u>Inorganic Parameters</u>: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S2⁻D, 510C, 5210B, 5220D, 5310C, 5540C. <u>Organic Parameters</u>: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Department of Defense Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LACHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035, MassDEP EPH, MassDEP VPH.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **EPA 8260B:** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C:** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

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Attachment G

Attachment G



Marc Grant

Memo

To Sovereign Environmental

From Barbara Pugh cc

Chris Abate

Date June 29, 2010

Subject Evaluation of Methane in Groundwater

This memorandum summarizes an evaluation of the potential for methane gas intrusion into basement air from dissolved methane in groundwater. This evaluation was authorized by Sovereign Consulting Inc. (Sovereign) in an agreement between AMEC and Sovereign dated May 6, 2010. This evaluation, which will ultimately be submitted to the USACE, was performed in accordance with the draft Scope of Work (SOW) for the Devens RAC, dated March 16, 2010, and Section 2.4 in the 10/30/09 Draft Supplemental Investigation Workplan Volume 1 for Shepley's Hill Landfill prepared by AMEC. Specifically, this memorandum evaluates whether dissolved methane gas in groundwater from the landfill is an unacceptable hazard to nearby structures. Methane is not toxic at concentrations up to the lower explosive limit (LEL) and is an asphyxiant at higher concentrations. The primary concern is thus the possibility of methane gas explosion within structures. If necessary, the results will be used to assist in refining the existing remedial action objectives for the Shepley's Hill Landfill.

Although the initial SOW indicated that the evaluation would employ USEPA's vapor intrusion models (GW-SCREEN or GW-ADV models) and corresponding vapor intrusion guidance (USEPA, 2002), this evaluation was expanded to include other lines of evidence for methane vapor intrusion when limitations with USEPA's vapor intrusion models became apparent, as described in the results below. The results from USEPA's model also are included in this memorandum, with the limitations noted.

Background Information: USEPA's Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (USEPA, 2005) describes the evaluation of potential gas migration pathways, including lateral migration of gas from landfills through soil or utility pipe bedding and into indoor air in structures by vapor intrusion. The results of monitoring perimeter soil gas probes at the north end of the Shepley's Hill Landfill indicate that landfill gas is not migrating offsite laterally through the soil (ECC, 2009). This finding is based on recent improvements to the soil gas monitoring system in which appropriate soil depths are sampled. Although transport of gas to the east or west is not observed, dissolved methane has been detected in groundwater samples collected from monitoring wells north of the landfill. The measured concentrations of methane in groundwater samples collected between September 2007 and January 2008 ranged from 0.52 micrograms per liter (μg/L) to 7,410 μg/L or 7.4 milligrams per liter (mg/L). The concentration of methane dissolved in the groundwater entering the groundwater treatment plant to the north of the landfill has ranged between 4,100 μg/L (4.1 mg/L) and 12,000 μg/L (12 mg/L). Based solely on the aqueous solubility limit for methane,



about 22.7 mg/L of methane gas can dissolve in water at standard temperature and pressure. In a landfill environment, where landfill gas typically is comprised of 60% methane and 40% carbon dioxide by volume (and approximately less than 1% by volume for non-methane compounds including nitrogen, oxygen, hydrogen sulfide, hydrogen) (USEPA, 2005; MassDEP 2010), the maximum dissolved methane concentration is more likely not to exceed 15 mg/L (http://www.methane-stripping.com/html/methane_stripping_faqs.php). A factsheet about methane in groundwater was issued in 2006 by the United States Geological Survey, the West Virginia Department of Health and Human Resources, and the West Virginia Department of Environmental Protection Division of Water and Waste Management. The factsheet reports that although dissolved methane in groundwater is not explosive, methane will partition from groundwater to gasses in soil or the atmosphere. Methane gas can thus migrate to unvented indoor air, accumulating to concentrations approaching the lower explosive limit of 50,000 parts per million (ppmv) (or $3.2 \times 10^{+7} \, \mu g/m^3$). According to the USGS, this represents a hazardous condition due to the threat of explosion:

Because "the solubility of methane in water is between 28 and 30 mg/L, well water samples with concentrations of dissolved methane greater than 28 mg/L could liberate potentially explosive or flammable quantities of gas inside the well or in confined spaces in well houses or structures containing wells".

The United States Department of Interior Office of Surface Mining Reclamation and Enforcement, Appalachian Regional Coordinating Center in Pittsburgh, PA has produced a document entitled *The Investigation And Mitigation Of Fugitive Methane Hazards In Areas Of Coal Mining* (Eltschlager et al., 2001). The document deals specifically with the hazards of high methane concentrations associated with mining operations. It defines action levels for methane concentrations in groundwater in close proximity to confined spaces (basements or structures where a headspace could develop), including:

- No immediate action—for concentrations of methane below 10 mg/L;
- Warning, investigation—is warranted but no immediate action for methane concentrations between 10 and 28 mg/L;
- Immediate action—for concentrations of methane above 28 mg/L.

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Approach: A prediction of the concentration of methane in indoor air from methane in groundwater at the landfill was attempted using chemical and physical properties of methane and the USEPA's vapor intrusion model for groundwater sources (GW-SCR; USEPA, 2004). This model is a conservative screening level model designed to estimate indoor air concentrations from subsurface vapor intrusion by volatile contaminants into buildings and, consequently, is based on a number of simple assumptions regarding contaminant distribution and occurrence, subsurface characteristics, transport mechanisms, and building construction. The one-dimensional transport model considers upward diffusive transport of vapors in equilibrium concentrations from an infinite groundwater source through uncontaminated soil to an area below a basement or building foundation. The model then employs convective transport of the vapors into the indoor air space through cracks and openings at the building



foundation. The model assumes that both diffusive and convective transport is at steady state, and that neither sorption nor biodegradation occurs.

As noted previously, this is a safety evaluation of methane gas and not an evaluation of potential human health effects from methane toxicity. This evaluation uses USEPA's vapor intrusion model to estimate potential concentrations of methane in indoor air from dissolved methane in groundwater. The estimated indoor air concentration of methane is then compared to the lower explosive limit (LEL) for methane rather than estimating an exposure-based value for subsequent evaluation in a risk characterization because methane is not toxic at the lower explosive limit (i.e., methane is toxic at concentrations higher than the threshold for an explosion). At higher concentrations, methane toxicity occurs by its action as an asphyxiant (USEPA, 2005). The inputs used in the vapor intrusion model described below are considered to provide a "worst case" estimate of indoor air concentrations for this evaluation.

Model Inputs: Conservative assumptions were made about the methane concentrations in groundwater relative to the location of a hypothetical building. For the purpose of this evaluation, it was assumed that a dissolved methane concentration of 10 mg/L exists 10 feet directly below the basement of a building (i.e., 20 feet below ground surface assuming a 10-foot deep basement). This is conservative because a dissolved methane concentration of 10 mg/L is found only in a sample collected from deep groundwater from the groundwater treatment system, and is therefore much higher than that identified in the shallower groundwater near the surface. The groundwater treatment system is located 400 feet from an occupied building. It is noted that safety features assure that methane gas does not reach explosive levels at the groundwater treatment system building. According to USEPA, a 100 foot radius from a source is used to identify buildings that should be considered in an evaluation of vapor intrusion to indoor air (USEPA, 2002). At this site, the highest detected concentration of dissolved methane in groundwater within 100 feet of an occupied building was 7,410 µg/L in a sampled collected at a depth of 62 to 63 feet below the ground surface from well SHM05-41B, in January 2008. A much lower dissolved methane concentration of 8.88 µg/L was observed at the same time and location at a shallower interval of 42 to 44 feet below ground surface at this same monitoring well location. The implication is that the lower concentrations of methane in groundwater within 100 feet of an occupied building near the surface reduce the concern for vapor intrusion into buildings at the surface. As a result, the assumption used in this evaluation about the concentration of dissolved methane in groundwater at both a lateral distance and subsurface depth to a building relevant for vapor intrusion is a conservative over-estimate of actual dissolved methane concentrations in groundwater sources relevant for potential vapor intrusion of an occupied building.

The vadose zone soil was assumed in this evaluation to consist only of sandy soil. This is the most conservative selection for soil type with its low soil moisture content and large pore space. For volatile compounds such as methane, the assumption of sandy soil allows for the greatest potential diffusion. The vadose zone soil also was assumed to be homogenous in both type and properties in all horizontal planes, with no other soil type present at any horizon to impede transport. Furthermore, it was assumed that the soil strata do not influence vapor flow direction

¹ A risk characterization involves comparing estimates of exposure to toxicity values representing thresholds for adverse health effects. Methane is not considered carcinogenic to humans.



and that all diffusion occurs upwards. It is noted that the transport assumptions in this model do not include any impacts associated with atmospheric pressure. Furthermore, the model assumes that all methane originating from a subsurface source (groundwater) will enter the basement; no methane is assumed to flow around the basement structure without entering the indoor air space.

The chemical properties for methane used in the model include:

- Organic carbon partition coefficient (Koc) = 753 (Hazard Substances Data Bank as listed in http://www.dep.state.pa.us/physicalproperties)
- Diffusivity in air = 0.16 cm²/s (http://wps.com/LPG/WVU-review.html)
- Diffusivity in water = 0.0000149 cm²/s (http://www.dep.state.pa.us/physicalproperties)
- Pure component water solubility at 25° C = 22.7 mg/L (CRC Handbook of Chemistry and Physics as listed on http://www.dep.state.pa.us/physicalproperties)
- Henry's Law Constant at 25°C = 0.665 atm-m³/mol or 27.198 unitless (CRC Handbook of Chemistry and Physics as listed on http://www.dep.state.pa.us/physicalproperties)
- Normal boiling point = 111.6 °K (CRC Handbook of Chemistry and Physics as listed on http://www.dep.state.pa.us/physicalproperties)
- Critical temperature = 190.5 °K (http://encyclopedia.airliquide.com)
- Enthalpy of vaporization at the normal boiling point = 1,950 cal/mol (http://encyclopedia.airliquide.com)

<u>Results:</u> The model inputs and outputs are provided in Attachment 1 to this memorandum. Initially, the model was unable to calculate a positive value for the Enthalpy of Vaporization at average groundwater temperature parameter. This is likely due to the high volatility of methane (low enthalpy of vaporization at the normal boiling point, along with low critical temperature relative to the boiling point).

Critical temperatures of most VOCs are greater than the natural temperature of the soil column, but this is not so for methane. At that temperature and pressure most VOCs are vapors close to their condensation points, and are more sensitive to pressure and temperature changes than gasses. Being above its critical temperature in the soil column, methane is far removed from the liquid state, and is relatively resistant to liquefaction and volume changes due to pressure or temperature. In other words, methane is present as a gas rather than a vapor in the soil column, unlike most VOCs. For this reason, the Enthalpy of Vaporization value at average groundwater temperature was set to equal the Enthalpy of Vaporization at the normal boiling point (1,950 cal/mol). This is appropriate because the methane gas actually is above both its condensation and boiling point. The normally applied adjustment for cooler vapor temperature in groundwater relative to standard temperature (i.e., 12° C versus 25° C) is not needed since that would have little effect on the gas.



The estimated indoor air concentration of methane gas resulting from dissolved methane in groundwater is $3.19 \times 10^{+5} \, \mu g/m^3$ (or 477 ppmv). This conservative "worse-case" estimate of methane in indoor air is less than the LEL concentration of $3.34 \times 10^{+7} \, \mu g/m^3$ (or 50,000 ppmv).

Three additional estimates of methane concentrations in indoor air were derived to confirm the model results.

First, using only Henry's Law constant for methane and USEPA's default attenuation factor (USEPA, 2002). The Henry's Law constant is a proportionality constant that describes the equilibrium distribution of dilute concentrations of volatile, soluble chemicals between gas and liquid, proportional to the partial pressure of the substance. As noted previously, the Henry's Law constant for methane is 0.665 atm-m³/mol or 27.198 (unitless). It was used in this evaluation to predict from groundwater a soil gas concentration of methane assuming equilibrium conditions. The attenuation factor describes a steady state gas phase between indoor air and the source (USEPA, 2002). It is a generic measure of how soil and building properties limit the intrusion of organic vapors and gasses into overlying buildings. In general, chemical concentrations in groundwater will attenuate more than chemicals in soil gas due to impeded mass-transfer across the capillary fringe. The larger the attenuation factor produced by the model, the greater the intrusion of vapors or gasses into indoor air. A default attenuation value of 0.001 was used to estimate the indoor air concentration of methane from the methane in the groundwater. The details of this calculation estimating the extent of transport of dissolved methane (10 mg/L) from water to vadose soil to indoor air follow.

- 1) Assuming equilibrium, the dissolved methane concentration in groundwater (10,000 μ g/L) was estimated to exist in gas phase at a concentration of $2.7 \times 10^{+8} \mu$ g/m³.
 - [Methane]_{gw} x Henry's Law constant (unitless) x volume conversion factor (L/m³)
 - 0 10,000 μ g/L * 27.198 * 1000 L/m³ = 2.7 x 10⁺⁸ μ g/m³ (or 4.07 x 10⁺⁵ ppmv)
- 2) Using USEPA's default indoor air attenuation factor (α = 0. 001) (USEPA, 2002) to predict the indoor air concentration of methane from groundwater to indoor air as follows:
 - [Methane]_{soil gas} x α = [Methane]_{indoor air}
 - \circ 4.07 x 10⁺⁵ ppmv x 0.001 = 407 ppmv

This is consistent with the estimate provided by the model.

Second, even when assuming a 10-fold reduction in USEPA's default attenuation factor (α = 0.01), the predicted concentration of gas (4,069 ppmv) is well below the LEL for methane (50,000 ppmv).

Third, using the solubility limit of methane as the groundwater concentration (22.7 mg/L), the estimated indoor air concentrations range from 1,389 ppmv ($\alpha = 0.001$) to 13,890 ppmv ($\alpha = 0.01$), which are well below the methane LEL.

<u>Summary</u>: Based on this evaluation, dissolved methane at 10 mg/L in groundwater will not pose an explosive hazard, even within 10 feet of a building. Higher dissolved methane



concentrations in groundwater, up to the approximate solubility limit of 22.7 mg/L, still would not yield indoor air concentrations in excess of the LEL for methane (50,000 ppmv).



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ATTACHMENTS

Vapor Intrusion Model Output

DATA ENTRY SHEET

GW-SCREEN	CALCULATE RISK-BA	ASED GROUNDW	ATER CONCEN	TRATION (enter "X" in "YE	S" box)		
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				Parameters			
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		ulate risk-based concentration,	Default for residential exposures	Default for residential exposures	Default for residential exposures	Default for residential exposures	

CHEMICAL PROPERTIES SHEET

Diffusivity in air, D _a (cm ² /s)	Diffusivity in water, D _w (cm ² /s)	Henry's: law constant at reference temperature, H (atm-m³/mol)	Henry's law constant reference temperature, T _R (°C)	Enthalpy of vaporization at the normal boiling point. ΔH _{v,b} (cal/mol)	Normal boiling point, T _B	Critical temperature, T _c (°K)	Organic carbon partition coefficient, K _{oc} (cm ³ /g)	Pure component water solubility, S (mg/L)	Unit risk factor, URF (µg/m³)-1	Reference conc., RfC (mg/m³)
1.60E-01	1.49E-05	6.65E-01	25	1,950	111.60	190.50	7.53E+02	2.27E+01	0.0E+00	0.0E+00

END

INTERMEDIATE CALCULATIONS SHEET

Source- building separation, L _T (cm)	Vadose zone soil air-filled porosity, θ _a ^V (cm ³ /cm ³)	Vadose zone effective total fluid saturation, S _{te} (cm ³ /cm ³)	Vadose zone soil intrinsic permeability, k ₁ ' (cm ²)	Vadose zone soil relative air permeability, k _{rg} (cm²)	Vadose zone soil effective vapor permeability. k, (cm²)	Thickness of capillary zone, L _{cz} (cm)	Total porosity in capillary zone, n _{cz} (cm ³ /cm ³)	Air-filled porosity in capillary zone, θ _{a cz} (cm ³ /cm ³)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm ³ /cm ³)	Floor- wall seam perimeter X _{crack} (cm)	
409.6	0.321	0.003	9.92E-08	0,998	9.91E-08	17,05	0.375	0.122	0.253	4,000]
Bidg. ventilation rate, Q _{building} (cm ³ /s)	Area of enclosed space below grade, A _B (cm ²)	Crack- to-total area ratio, n (unitless)	Crack depth below grade, Z _{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature. $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature. H _{TS} (atm-n ² /mol)	Henry's law constant at ave. groundwater temperature, H'TS (unitless)	Vapor viscosity at ave, soil temperature, µts (g/cm-s)	Vadose zone effective diffusion coefficient, D ^{eff} _V (cm ² /s)	Capillary zone effective diffusion coefficient, Deff cz (cm²/s)	Total overall effective diffusion coefficient, Deff (cm²/s)	
2.54E+04	1.80E+06	2.22E-04	200	1,950	5.59E-01	2,40E+01	1.75E-04	2.59E-02	1.02E-03	1.29E-02]
Diffusion path length, L _d (cm)	Convection path length, L _p (cm)	Source vapor conc., C _{source} (µg/m ³)	Crack radius, r _{crack} (cm)	Average vapor flow rate into bldg., Q _{sol} (cm ³ /s)	Crack effective diffusion coefficient, District (cm²/s)	Area of crack, Acrack (cm²)	Exponent of equivalent foundation Peclet number, exp(Pe') (unitless)	Infinite source indoor attenuation coefficient, ux (unittess)	Infinite source bldg. conc., C _{building} (µg/m ³)	Unit risk factor, URF (µg/m²)*1	Reference conc. RfC (mg/m³)
409.6	200	2.40E+08	0.10	8.33E+01	2.59E-02	4.00E+02	9.56E+34	1.33E-03	3.19E+05	NA	NA.

END

Methane LEL 3.28E+07 ug/m³ Estimated Indoor Concentration is Below LEL

Notes:

Enthalpy of vaporization at ave. groundwater temperature (cal/mol) was assumed to equal Enthalpy of vaporization at Normal Boiling Point (cal/mol) (see Text) Infinite Source bldg. conc., is indoor air concentration of methane as estimated by the model. LEL = Lower Explosive Level for methane.