

**FINAL**



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

**SHEPLEY'S HILL LANDFILL**

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**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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012168  
**Report Date:** 08/16/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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

Project Name: SHL TASK 0002

Lab Number: L1012168

Project Number: AC001

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.

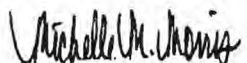
### Dissolved Inorganic Carbon

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  
**Project Number:** AC001

**Lab Number:** L1012168  
**Report Date:** 08/16/10

**SAMPLE RESULTS**

**Lab ID:** L1012168-01  
**Client ID:** SHP-05-046B-U  
**Sample Location:** 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
<b>General Chemistry</b>										
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

Report Date: 08/16/10

## SAMPLE RESULTS

Lab ID: L1012168-02

Date Collected: 08/09/10 11:15

Client ID: SHP-05-045A-U

Date Received: 08/09/10

Sample Location: DEVENS, MA

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	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

Date Collected: 08/09/10 13:05

Client ID: SHM-05-041B-U

Date Received: 08/09/10

Sample Location: DEVENS, MA

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	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

Date Collected: 08/09/10 08:15

Client ID: GP-10-12-065-F

Date Received: 08/09/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Lab Number: L1012168

Project Number: AC001

Report Date: 08/16/10

## SAMPLE RESULTS

Lab ID: L1012168-05

Date Collected: 08/09/10 14:05

Client ID: GP-10-13-039-F

Date Received: 08/09/10

Sample Location: DEVENS, MA

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	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

Date Collected: 08/09/10 15:21

Client ID: GP-10-24-015-U

Date Received: 08/09/10

Sample Location: DEVENS, MA

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	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

Project Number: AC001

Report Date: 08/16/10

**Method Blank Analysis**  
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-06 Batch: WG427753-1										
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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012168

Report Date: 08/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-06 Batch: WG427753-2								
Dissolved Inorganic Carbon	97							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012168

Report Date: 08/16/10

Parameter	Native Sample	Duplicate Sample	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: 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**

B Present/Intact

A Present/Intact

**Container Information**

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

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012168

Project Number: AC001

Report Date: 08/16/10

## 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 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".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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





**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



**Project Name:** 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, 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 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, 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, 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, 4500CI-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 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 Commission 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 S<sup>2-</sup>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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab

ALPHA Job #

## Project Information

Project Name: SHL

Project Location: Byer, MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 8/16/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EDR  
☐ ADEX ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State /Fed Program

Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Serial No 08161016-21

**Client Information**  
Client: Severign Consulting Inc  
Address: 905B S Main St  
Mansfield, MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: pmbain@severign.com  
☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.

(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG#1 = Closed

\* Done as noted F = Field Filtered

Metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Co, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES	
		Date	Time			Cl, S	NO <sub>2</sub> -N	Alk	NH <sub>4</sub> -N	Sulfide	TSS	DOC + DIC	Tot Metals #1	Diss Metals #1	Tot Metals #2			Diss Metals #2
12/68	SHP-05-046B-F	8/9/10	955	GW	CMH													1
01	SHP-05-046B-U	8/9/10	955	GW	CMH													3
	SHP-05-045A-F	8/9/10	1115	GW	CMH													1
02	SHP-05-045A-U	8/9/10	1115	GW	CMH													3
	SHM-05-041B-F	8/9/10	1305	GW	CMH													2
03	SHM-05-041B-U	8/9/10	1305	GW	CMH													4
04	GP-10-12-065-F	8/9/10	0815	GW	JJC	✓	✓	✓	✓	✓		✓			✓			9
05	GP-10-13-039-F	8/9/10	1405	GW	JJC	✓	✓	✓	✓	✓		✓			✓			9
	GP-10-13-039-U	8/9/10	1405	GW	JJC										✓			11
	RB-080910-U	8/9/10	1130	GW	JJC										✓			1

## SAMPLE HANDLING

Filtration \_\_\_\_\_  
☒ Done \*  
☐ Not needed  
☐ Lab to do  
Preservation  
☐ Lab to do  
(Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

Container Type P P P P P P A P P P P  
Preservative A A A D RE A A C C C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

[Signature] 8/9/10 1615  
8/9/10 1700 [Signature] 8/9/10 1700

Please print clearly, legibly and complete. Samples can only be tested in and out of the laboratory will not start without an evaluation and approval. All samples analyzed under the guidance of the laboratory and its procedures. See reverse side.





## 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](http://www.alphalab.com)



**Project Name:** 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



**Project Name:** 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.

**Project Name:** SHL TASK 0002  
**Project Number:** 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.

**Project Name:** 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**

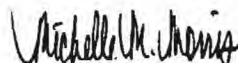
L1012243-15 was analyzed with the method required holding time exceeded due to instrument failure.

**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

Project Number: AC001

Lab Number: L1012243

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-01

Client ID: GP-10-24-025-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/09/10 16:01

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 - Westborough Lab											
Arsenic, Dissolved	0.39	J	ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 05:11	EPA 3005A	1,6020A	BM
Iron, Dissolved	1180		ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 05:11	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-02  
 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: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	1.61		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 07:31	EPA 3005A	1,6020A	BM
Iron, Total	2260		ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 07:31	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: L1012243-03

Client ID: GP-10-24-035-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/09/10 16:33

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 - Westborough Lab											
Arsenic, Dissolved	0.89	J	ug/l	2.00	0.452	4	08/11/10 16:10	08/17/10 05:17	EPA 3005A	1,6020A	BM
Iron, Dissolved	2630		ug/l	200	33.6	4	08/11/10 16:10	08/17/10 05:17	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

**SAMPLE RESULTS**

Lab ID: L1012243-04

Date Collected: 08/09/10 16:33

Client ID: GP-10-24-035-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	5.03		ug/l	2.00	0.452	4	08/11/10 18:50	08/17/10 07:37	EPA 3005A	1,6020A	BM
Iron, Total	5550		ug/l	200	33.6	4	08/11/10 18:50	08/17/10 07:37	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: L1012243-05  
 Client ID: 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 - Westborough Lab											
Arsenic, Dissolved	310		ug/l	5.00	1.13	10	08/11/10 16:10	08/17/10 05:24	EPA 3005A	1,6020A	BM
Iron, Dissolved	100000		ug/l	500	84.1	10	08/11/10 16:10	08/17/10 05:24	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-06

Date Collected: 08/09/10 17:12

Client ID: GP-10-24-045-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	303		ug/l	5.00	1.13	10	08/11/10 18:50	08/17/10 07:43	EPA 3005A	1,6020A	BM
Iron, Total	99000		ug/l	500	84.1	10	08/11/10 18:50	08/17/10 07:43	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

**SAMPLE RESULTS**

Lab ID: L1012243-07

Date Collected: 08/09/10 17:58

Client ID: GP-10-24-055-F

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Dissolved Metals - Westborough Lab</b>											
Arsenic, Dissolved	615		ug/l	5.00	1.13	10	08/11/10 16:10	08/17/10 05:30	EPA 3005A	1,6020A	BM
Iron, Dissolved	81500		ug/l	500	84.1	10	08/11/10 16:10	08/17/10 05:30	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:** L1012243-08  
**Client ID:** GP-10-24-055-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/09/10 17:58  
**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 - Westborough Lab											
Arsenic, Total	629		ug/l	5.00	1.13	10	08/11/10 18:50	08/17/10 07:49	EPA 3005A	1,6020A	BM
Iron, Total	91100		ug/l	500	84.1	10	08/11/10 18:50	08/17/10 07:49	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: L1012243-09

Client ID: GP-10-25-025-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/10/10 09:32

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 - Westborough Lab											
Arsenic, Dissolved	0.4	J	ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 05:54	EPA 3005A	1,6020A	BM
Iron, Dissolved	1770	J	ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 05:54	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

**SAMPLE RESULTS**

Lab ID: L1012243-10

Date Collected: 08/10/10 09:32

Client ID: GP-10-25-025-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	44.0		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 08:14	EPA 3005A	1,6020A	BM
Iron, Total	35700		ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 08:14	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-11  
 Client ID: GP-10-25-035-F  
 Sample Location: 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 - Westborough Lab											
Aluminum, Dissolved	18.7	J	ug/l	20.0	3.82	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.58	J	ug/l	1.00	0.226	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Calcium, Dissolved	18600		ug/l	200	25.3	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Chromium, Dissolved	1.08		ug/l	1.00	0.372	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Iron, Dissolved	2250		ug/l	100	16.8	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.15	J	ug/l	1.00	0.100	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2200		ug/l	200	8.20	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Manganese, Dissolved	618		ug/l	2.00	0.272	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Nickel, Dissolved	6.42		ug/l	1.00	0.360	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5240		ug/l	200	36.3	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM
Sodium, Dissolved	186000		ug/l	200	36.4	2	08/11/10 16:10	08/17/10 06:18	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-12

Date Collected: 08/10/10 10:19

Client ID: GP-10-25-035-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	4660		ug/l	20.0	3.82	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
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	BM
Calcium, Total	20100		ug/l	200	25.3	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
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	BM
Iron, Total	15600		ug/l	100	16.8	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Lead, Total	25.5		ug/l	1.00	0.100	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Magnesium, Total	3420		ug/l	200	8.20	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Manganese, Total	801		ug/l	2.00	0.272	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Nickel, Total	28.2		ug/l	1.00	0.360	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Potassium, Total	6650		ug/l	200	36.3	2	08/11/10 18:50	08/17/10 08:38	EPA 3005A	1,6020A	BM
Sodium, Total	198000		ug/l	200	36.4	2	08/11/10 18:50	08/17/10 08:38	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: L1012243-13  
 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 - Westborough 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	BM
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	BM
Calcium, Dissolved	43600		ug/l	400	50.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
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	BM
Iron, Dissolved	71000		ug/l	200	33.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	5170		ug/l	400	16.4	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
Manganese, Dissolved	4550		ug/l	4.00	0.544	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
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	BM
Potassium, Dissolved	7120		ug/l	400	72.6	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM
Sodium, Dissolved	51900		ug/l	400	72.8	4	08/11/10 16:10	08/17/10 06:24	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-14  
 Client ID: 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: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	2060		ug/l	40.0	7.64	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
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	BM
Calcium, Total	42800		ug/l	400	50.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
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	BM
Iron, Total	76700		ug/l	200	33.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
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	BM
Magnesium, Total	5530		ug/l	400	16.4	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
Manganese, Total	4540		ug/l	4.00	0.544	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
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	BM
Potassium, Total	7680		ug/l	400	72.6	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM
Sodium, Total	52500		ug/l	400	72.8	4	08/11/10 18:50	08/17/10 08:44	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-15  
 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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	12.5	J	ug/l	50.0	9.56	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.81	J	ug/l	2.50	0.600	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	12.2		ug/l	2.50	0.565	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Barium, Dissolved	98.6		ug/l	2.50	0.475	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.50	0.295	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.50	0.295	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Calcium, Dissolved	103000		ug/l	500	63.3	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Chromium, Dissolved	2.66		ug/l	2.50	0.930	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	6.98		ug/l	2.50	0.265	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Copper, Dissolved	2.62		ug/l	2.50	0.590	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Iron, Dissolved	7840		ug/l	250	42.0	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.54	J	ug/l	2.50	0.250	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	19200		ug/l	500	20.5	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Manganese, Dissolved	6700		ug/l	5.00	0.680	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 11:11	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	6.88		ug/l	2.50	0.900	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Potassium, Dissolved	19200		ug/l	500	90.8	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	5.00	2.03	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.50	0.425	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Sodium, Dissolved	51600		ug/l	500	91.0	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.50	0.155	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.50	0.385	5	08/11/10 16:10	08/17/10 06:30	EPA 3005A	1,6020A	BM
Zinc, Dissolved	12.9	J	ug/l	25.0	8.12	5	08/11/10 16:10	08/17/10 06:30	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:** L1012243-16  
**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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	8.44	J	ug/l	10.0	1.91	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.19	J	ug/l	0.500	0.120	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	102		ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Barium, Dissolved	244		ug/l	0.500	0.095	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Calcium, Dissolved	84000		ug/l	100	12.6	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Chromium, Dissolved	1.55		ug/l	0.500	0.186	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.790		ug/l	0.500	0.053	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.38	J	ug/l	0.500	0.118	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Iron, Dissolved	74500		ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	14100		ug/l	100	4.10	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Manganese, Dissolved	592		ug/l	1.00	0.136	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 11:16	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	4.75		ug/l	0.500	0.180	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Potassium, Dissolved	17400		ug/l	100	18.2	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.57	J	ug/l	1.00	0.406	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Sodium, Dissolved	24600		ug/l	100	18.2	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.34	J	ug/l	0.500	0.077	1	08/11/10 16:10	08/17/10 06:36	EPA 3005A	1,6020A	BM
Zinc, Dissolved	1.98	J	ug/l	5.00	1.62	1	08/11/10 16:10	08/17/10 06:36	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: L1012243-17  
 Client ID: GP-10-13-059-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/10/10 08:30  
 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 - Westborough Lab											
Aluminum, Total	16000		ug/l	10.0	1.91	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Arsenic, Total	120		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Calcium, Total	80700		ug/l	100	12.6	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
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	BM
Iron, Total	87100		ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Lead, Total	17.0		ug/l	0.500	0.050	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Magnesium, Total	16400		ug/l	100	4.10	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Manganese, Total	682		ug/l	1.00	0.136	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Nickel, Total	35.4		ug/l	0.500	0.180	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Potassium, Total	18400		ug/l	100	18.2	1	08/11/10 18:50	08/17/10 08:50	EPA 3005A	1,6020A	BM
Sodium, Total	26900		ug/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:** 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	Prep Method	Analytical Method	Analyst
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Arsenic, Dissolved	1060		ug/l	5.00	1.13	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Barium, Dissolved	68.3		ug/l	5.00	0.950	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Calcium, Dissolved	56700		ug/l	1000	126	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Cobalt, Dissolved	10.5		ug/l	5.00	0.530	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Iron, Dissolved	79800		ug/l	500	84.1	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Magnesium, Dissolved	7960		ug/l	1000	41.0	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Manganese, Dissolved	3630		ug/l	10.0	1.36	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	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	BM
Potassium, Dissolved	9000		ug/l	1000	182	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Sodium, Dissolved	13900		ug/l	1000	182	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM
Zinc, Dissolved	26.6	J	ug/l	50.0	16.2	10	08/11/10 16:10	08/17/10 06:42	EPA 3005A	1.6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-19  
 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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough 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	BM
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	BM
Arsenic, Dissolved	123		ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
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	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Calcium, Dissolved	32300		ug/l	100	12.6	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
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	BM
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	BM
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	BM
Iron, Dissolved	5580		ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
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	BM
Magnesium, Dissolved	3850		ug/l	100	4.10	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Manganese, Dissolved	218		ug/l	1.00	0.136	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	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	BM
Potassium, Dissolved	4700		ug/l	100	18.2	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Sodium, Dissolved	35900		ug/l	100	18.2	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.14	J	ug/l	0.500	0.077	1	08/11/10 16:10	08/17/10 07:01	EPA 3005A	1,6020A	BM
Zinc, Dissolved	7.59		ug/l	5.00	1.62	1	08/11/10 16:10	08/17/10 07:01	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:** L1012243-20  
**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
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	2.52	J	ug/l	10.0	1.91	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Calcium, Total	ND		ug/l	100	12.6	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Chromium, Total	0.24	J	ug/l	0.500	0.186	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Iron, Total	12.3	J	ug/l	50.0	8.41	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	08/11/10 18:50	08/27/10 23:59	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-21

Date Collected: 08/10/10 10:15

Client ID: RB-081010-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	3.04	J	ug/l	10.0	1.91	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Calcium, Total	25.5	J	ug/l	100	12.6	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Chromium, Total	0.33	J	ug/l	0.500	0.186	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Iron, Total	19.1	J	ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Manganese, Total	0.15	J	ug/l	1.00	0.136	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	08/11/10 18:50	08/17/10 09:02	EPA 3005A	1,6020A	BM
Sodium, Total	34.2	J	ug/l	100	18.2	1	08/11/10 18:50	08/17/10 09:02	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:** L1012243-22  
**Client ID:** DUP-081010-F  
**Sample Location:** 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 - Westborough Lab											
Aluminum, Dissolved	6.72	J	ug/l	20.0	3.82	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	1.00	0.240	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1.18		ug/l	1.00	0.226	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Barium, Dissolved	38.8		ug/l	1.00	0.190	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	1.00	0.118	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	1.00	0.118	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Calcium, Dissolved	19400		ug/l	200	25.3	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.94	J	ug/l	1.00	0.372	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	1.15		ug/l	1.00	0.106	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.72	J	ug/l	1.00	0.236	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Iron, Dissolved	2320		ug/l	100	16.8	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	1.00	0.100	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2280		ug/l	200	8.20	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Manganese, Dissolved	658		ug/l	2.00	0.272	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 11:21	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	6.51		ug/l	1.00	0.360	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5590		ug/l	200	36.3	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	2.00	0.812	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	1.00	0.170	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Sodium, Dissolved	202000		ug/l	200	36.4	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.11	J	ug/l	1.00	0.062	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	1.00	0.154	2	08/11/10 16:10	08/17/10 07:07	EPA 3005A	1,6020A	BM
Zinc, Dissolved	15.7		ug/l	10.0	3.25	2	08/11/10 16:10	08/17/10 07:07	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: L1012243-23

Client ID: DUP-081010-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/10/10 10:19

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 - Westborough Lab											
Aluminum, Total	4580		ug/l	20.0	3.82	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Arsenic, Total	10.9		ug/l	1.00	0.226	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Calcium, Total	19500		ug/l	200	25.3	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Chromium, Total	74.1		ug/l	1.00	0.372	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Iron, Total	15300		ug/l	100	16.8	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Lead, Total	25.7		ug/l	1.00	0.100	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Magnesium, Total	3350		ug/l	200	8.20	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Manganese, Total	772		ug/l	2.00	0.272	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Nickel, Total	27.4		ug/l	1.00	0.360	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Potassium, Total	6500		ug/l	200	36.3	2	08/11/10 18:50	08/17/10 09:08	EPA 3005A	1,6020A	BM
Sodium, Total	196000		ug/l	200	36.4	2	08/11/10 18:50	08/17/10 09:08	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: L1012243-24  
 Client ID: 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 - Westborough Lab											
Aluminum, Dissolved	9.92	J	ug/l	40.0	7.64	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	34.9		ug/l	2.00	0.452	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Barium, Dissolved	51.9		ug/l	2.00	0.380	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Calcium, Dissolved	42800		ug/l	400	50.6	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	45.2		ug/l	2.00	0.212	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Iron, Dissolved	69000		ug/l	200	33.6	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	5070		ug/l	400	16.4	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Manganese, Dissolved	4430		ug/l	4.00	0.544	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 11:23	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	9.69		ug/l	2.00	0.720	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Potassium, Dissolved	7040		ug/l	400	72.6	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Sodium, Dissolved	52600		ug/l	400	72.8	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.21	J	ug/l	2.00	0.124	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	08/11/10 16:10	08/17/10 07:13	EPA 3005A	1,6020A	BM
Zinc, Dissolved	35.9		ug/l	20.0	6.50	4	08/11/10 16:10	08/17/10 07:13	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: L1012243-25  
 Client ID: DUP2-081010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/10/10 11:06  
 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 - Westborough Lab											
Aluminum, Total	2300		ug/l	40.0	7.64	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Arsenic, Total	38.0		ug/l	2.00	0.452	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Calcium, Total	41800		ug/l	400	50.6	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Chromium, Total	57.4		ug/l	2.00	0.744	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Iron, Total	76700		ug/l	200	33.6	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Lead, Total	12.5		ug/l	2.00	0.200	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Magnesium, Total	5510		ug/l	400	16.4	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Manganese, Total	4460		ug/l	4.00	0.544	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Nickel, Total	24.5		ug/l	2.00	0.720	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Potassium, Total	7790		ug/l	400	72.6	4	08/11/10 18:50	08/17/10 09:26	EPA 3005A	1,6020A	BM
Sodium, Total	50700		ug/l	400	72.8	4	08/11/10 18:50	08/17/10 09:26	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:** L1012243-26  
**Client ID:** GP-10-22-011-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/10/10 13:43  
**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
<b>Dissolved Metals - Westborough Lab</b>											
Arsenic, Dissolved	0.37	J	ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 07:19	EPA 3005A	1,6020A	BM
Iron, Dissolved	753		ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 07:19	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-27

Date Collected: 08/10/10 13:43

Client ID: GP-10-22-011-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	0.510		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 09:33	EPA 3005A	1,6020A	BM
Iron, Total	844		ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 09:33	EPA 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**Date Collected:** 08/10/10 14:28**Client ID:** GP-10-22-021-F**Date Received:** 08/10/10**Sample Location:** DEVENS, MA**Field Prep:** See Narrative**Matrix:** Water

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



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-29  
 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: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	1.71		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 09:39	EPA 3005A	1,6020A	BM
Iron, Total	2310		ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 09:39	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012243

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
Total Metals - Westborough Lab for sample(s): 02,04,06,08,10,12,14,17,20-21,23,25,27,2 Batch: WG427203-1										
Aluminum, Total	3.54	J	ug/l	10.0	1.91	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Calcium, Total	ND		ug/l	100	12.6	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Iron, Total	17	J	ug/l	50.0	8.41	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Potassium, Total	21.4	J	ug/l	100	18.2	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM
Sodium, Total	36.5	J	ug/l	100	18.2	1	08/11/10 18:50	08/17/10 03:28	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05,07,09,11,13,15-16,18-19,22,24,2 Batch: WG427204-1										
Aluminum, Dissolved	2.47	J	ug/l	10.0	1.91	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Calcium, Dissolved	14.2	J	ug/l	100	12.6	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Iron, Dissolved	15.5	J	ug/l	50.0	8.41	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

### 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	BM
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	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	08/11/10 16:10	08/17/10 03:22	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 15-16,18-19,22,24 Batch: WG429637-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 11:07	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: 09/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,17,20-21,23,25,27,2 Batch: WG427203-2								
Aluminum, Total	100		-		80-120	-		
Arsenic, Total	105		-		80-120	-		
Calcium, Total	112		-		80-120	-		
Chromium, Total	100		-		80-120	-		
Iron, Total	116		-		80-120	-		
Lead, Total	105		-		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	-		



# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012243

Report Date: 09/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07,09,11,13,15-16,18-19,22,24,2 Batch: WG427204-2					
Aluminum, Dissolved	97	-	80-120	-	
Antimony, Dissolved	97	-	80-120	-	
Arsenic, Dissolved	102	-	80-120	-	
Barium, Dissolved	101	-	80-120	-	
Beryllium, Dissolved	108	-	80-120	-	
Cadmium, Dissolved	110	-	80-120	-	
Calcium, Dissolved	106	-	80-120	-	
Chromium, Dissolved	98	-	80-120	-	
Cobalt, Dissolved	105	-	80-120	-	
Copper, Dissolved	104	-	80-120	-	
Iron, Dissolved	111	-	80-120	-	
Lead, Dissolved	101	-	80-120	-	
Magnesium, Dissolved	105	-	80-120	-	
Manganese, Dissolved	103	-	80-120	-	
Nickel, Dissolved	104	-	80-120	-	
Potassium, Dissolved	104	-	80-120	-	
Selenium, Dissolved	108	-	80-120	-	
Silver, Dissolved	98	-	80-120	-	
Sodium, Dissolved	106	-	80-120	-	
Thallium, Dissolved	97	-	80-120	-	
Vanadium, Dissolved	102	-	80-120	-	

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012243

Report Date: 09/03/10

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

# **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	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,17,20-21,23,25,27,2 QC Batch ID: WG427203-4 WG427203-5 QC Sample: L1012243-10 Client ID: GP-10-25-025-U												
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: 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %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 QC Batch ID: WG427204-4 WG427204-5 QC Sample: L1012243-09 Client ID: GP-10-25-025-F									
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: 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %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 QC Batch ID: WG427204-4 WG427204-5 QC Sample: L1012243-09 Client ID: GP-10-25-025-F									
Zinc, Dissolved	17.5	500	534	103	538	104	80-120	1	20
Dissolved Metals - Westborough Lab Associated sample(s): 15-16,18-19,22,24 QC Batch ID: WG429637-3 WG429637-4 QC Sample: L1012243-15 Client ID: GP-10-13-049-F									
Mercury, Dissolved	ND	1	0.7657	76	Q 0.8035	80	80-120	29	Q 20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-02

Date Collected: 08/09/10 16:01

Client ID: GP-10-24-025-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	36		mg/l	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: L1012243-04

Date Collected: 08/09/10 16:33

Client ID: GP-10-24-035-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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:** None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	96		mg/l	5.0	NA	1	-	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

Date Collected: 08/09/10 17:58

Client ID: GP-10-24-055-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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**Lab Number:** L1012243**Project Number:** AC001**Report Date:** 09/03/10**SAMPLE RESULTS****Lab ID:** L1012243-10**Date Collected:** 08/10/10 09:32**Client ID:** GP-10-25-025-U**Date Received:** 08/10/10**Sample Location:** DEVENS, MA**Field Prep:** None**Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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  
**Project Number:** AC001

**Lab Number:** L1012243  
**Report Date:** 09/03/10

**SAMPLE RESULTS**

**Lab ID:** L1012243-12  
**Client ID:** GP-10-25-035-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/10/10 10:19  
**Date Received:** 08/10/10  
**Field Prep:** None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
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:** L1012243-14  
**Client ID:** 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:** None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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

Date Collected: 08/09/10 16:05

Client ID: GP-10-13-049-F

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	490		mg CaCO <sub>3</sub> /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	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/11/10 01:07	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/11/10 17:00	08/11/10 18:00	30,4500S <sub>2</sub> -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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-16

Date Collected: 08/10/10 08:30

Client ID: GP-10-13-059-F

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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	-	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	17		mg/l	0.50	0.07	1	-	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

Lab Number: L1012243

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012243-17

Date Collected: 08/10/10 08:30

Client ID: GP-10-13-059-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	890		mg/l	5.0	NA	1	-	08/13/10 17:45	30,2540D	DW



Project Name: SHL TASK 0002

Lab Number: L1012243

Project Number: AC001

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
<b>General Chemistry - Westborough Lab</b>										
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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	20		mg/l	0.50	0.07	1	-	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  
Project Number: AC001

Lab Number: L1012243  
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
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	77		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	66		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	-	08/14/10 04:10	44,300.0	AU



**Project Name:** SHL TASK 0002**Lab Number:** L1012243**Project Number:** AC001**Report Date:** 09/03/10**SAMPLE RESULTS****Lab ID:** L1012243-27**Date Collected:** 08/10/10 13:43**Client ID:** GP-10-22-011-U**Date Received:** 08/10/10**Sample Location:** DEVENS, MA**Field Prep:** None**Matrix:** Water

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

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012243  
**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:** None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	48		mg/l	5.0	NA	1	-	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



Project Name: SHL TASK 0002

Lab Number: L1012243

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 - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427002-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	08/11/10 01:04	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427129-2									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	08/11/10 13:05	30,2320B	JO
General Chemistry - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427160-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	08/11/10 15:30	08/12/10 00:05	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427447-1									
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 - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427493-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	08/13/10 13:40	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,10,12,14,17,27,29 Batch: WG427580-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/13/10 17:45	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,10,12,14-16,18-19,27,29 Batch: WG427583-1									
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 Chromatography - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427647-1									
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	08/11/10 18:51	44,300.0	AU
Anions by Ion Chromatography - Westborough Lab for sample(s): 15-16,18-19 Batch: WG427841-1									
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	-	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: L1012243

Report Date: 09/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	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	-		20
General Chemistry - Westborough Lab Associated sample(s):	15-16,18-19	Batch:	WG427129-1					
Alkalinity, Total	105				80-115	-		4
General Chemistry - Westborough Lab Associated sample(s):	15-16,18-19	Batch:	WG427160-2					
Nitrogen, Ammonia	98				80-120	-		20
General Chemistry - Westborough Lab Associated sample(s):	15-16,18-19	Batch:	WG427447-2					
Sulfide	98				75-125	-		
General Chemistry - Westborough Lab Associated sample(s):	15-16,18-19	Batch:	WG427493-2					
Chemical Oxygen Demand	99				95-105	-		
General Chemistry - Westborough Lab Associated sample(s):	02,04,06,08,10,12,14-16,18-19,27,29	Batch:	WG427583-2					
Dissolved Organic Carbon	98				90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s):	15-16,18-19	Batch:	WG427647-2					
Nitrogen, Nitrate	92				90-110	-		

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012243**Report Date:** 09/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 15-16,18-19 Batch: WG427841-2					
Chloride	95	-	90-110	-	
Sulfate	100	-	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	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427002-3 QC Sample: L1012243-15 Client ID: GP-10-13-049-F												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427129-3 QC Sample: L1012243-19 Client ID: GP-10-13-079-F												
Alkalinity, Total	77	100	180	99	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427160-3 QC Sample: L1012243-15 Client ID: GP-10-13-049-F												
Nitrogen, Ammonia	17.3	4	21.5	105	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427447-3 QC Sample: L1012243-19 Client ID: GP-10-13-079-F												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427493-3 QC Sample: L1012243-15 Client ID: GP-10-13-049-F												
Chemical Oxygen Demand	36	238	280	103	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14-16,18-19,27,29 QC Batch ID: WG427583-3 QC Sample: L1012243-10 Client ID: GP-10-25-025-U												
Dissolved Organic Carbon	1.4	4	5.8	111	-	-	-	-	79-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427647-3 WG427647-4 QC Sample: L1012243-15 Client ID: GP-10-13-049-F												
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	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 15-16,18-19 QC Batch ID: WG427841-3 WG427841-4 QC Sample: L1012243-15 Client ID: GP-10-13-049-F									
Chloride	46	4	50	87	48	53	40-151	4	18
Sulfate	ND	8	7.3	91	7.1	89	60-140	3	20

Project Name: SHL TASK 0002

Project Number: AC001

# Lab Duplicate Analysis Batch Quality Control

Lab Number: L1012243

Report Date: 09/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19	QC Batch ID: WG427002-4	QC Sample: L1012165-07	Client ID: DUP Sample			
Nitrogen, Nitrite	0.01J	0.01J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19	QC Batch ID: WG427129-4	QC Sample: L1012243-15	Client ID: GP-10-13-049-F			
Alkalinity, Total	490	500	mg CaCO3/L	2		4
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19	QC Batch ID: WG427160-4	QC Sample: L1012243-15	Client ID: GP-10-13-049-F			
Nitrogen, Ammonia	17.3	17.3	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19	QC Batch ID: WG427447-4	QC Sample: L1012243-18	Client ID: GP-10-13-069-F			
Sulfide	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 15-16,18-19	QC Batch ID: WG427493-4	QC Sample: L1012243-15	Client ID: GP-10-13-049-F			
Chemical Oxygen Demand	36	34	mg/l	6		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,17,27,29	QC Batch ID: WG427580-2	QC Sample: L1012243-10	Client ID: GP-10-25-025-U			
Solids, Total Suspended	730	660	mg/l	10		32
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14-16,18-19,27,29	QC Batch ID: WG427583-4	QC Sample: L1012243-04	Client ID: GP-10-24-035-U			
Dissolved Organic Carbon	1.5	2.3	mg/l	42	Q	20

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

**Lab Number:** L1012243  
**Report Date:** 09/03/10

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

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

B	Present/Intact
C	Present/Intact
A	Present/Intact
D	Present/Intact

## Container Information

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

\*Values in parentheses indicate holding time in days

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012243-08B	Plastic 250ml HNO3 preserved	A	<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	C	<2	3.2	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012243-09B	Plastic 250ml HNO3 preserved	C	<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	C	<2	3.2	NA	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012243-10C	Vial H2SO4 preserved split	C	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	C	<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	B	<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-PB-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-6020T(180),DOD-PB-6020T(180)
L1012243-12C	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-12D	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-12X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

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## Container Information

Container ID	Container Type	Cooler	pH	Temp 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-CA-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)
L1012243-14A	Plastic 1000ml unpreserved	D	6	4.0	Y	Present/Intact	TSS-2540(7)
L1012243-14B	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-6020T(180),DOD-PB-6020T(180)
L1012243-14C	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-14D	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-14X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-15A	Plastic 250ml unpreserved	B	6	3.0	Y	Present/Intact	ALK-T-2320(14)
L1012243-15B	Plastic 250ml HNO3 preserved	B	<2	3.0	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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012243-15C	Vial H2SO4 preserved split	B	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-15D	Vial H2SO4 preserved split	B	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1012243-15E	Plastic 250ml unpreserved	B	6	3.0	Y	Present/Intact	NO2-4500NO2(2)
L1012243-15F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1012243-15G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)

\*Values in parentheses indicate holding time in days

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012243-15H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1012243-15I	Plastic 500ml H2SO4 preserved	B	<2	3.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012243-15J	Plastic 500ml unpreserved	B	6	3.0	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012243-15X	Amber 250ml unpreserved	B	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	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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012243-16C	Vial H2SO4 preserved split	C	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)
L1012243-16I	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	C	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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-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	A	6	3.1	Y	Present/Intact	ALK-T-2320(14)

\*Values in parentheses indicate holding time in days



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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012243-18B	Plastic 250ml HNO3 preserved	A	<2	3.1	NA	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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012243-18C	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-18D	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	DOC-5310(28)
L1012243-18E	Plastic 250ml unpreserved	A	6	3.1	NA	Present/Intact	NO2-4500NO2(2)
L1012243-18F	Plastic 250ml Zn Acetate/NaOH pr	A	>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	A	6	3.1	NA	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012243-18X	Amber 250ml unpreserved	A	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-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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days



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## Container Information

Container ID	Container Type	Cooler	pH	Temp 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)
L1012243-19I	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-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
L1012243-21A	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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-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-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days

(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, 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 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 Commission 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 S<sub>2</sub><sup>-</sup>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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

## CHAIN OF CUSTODY

PAGE 1 OF 3

4 Coolers

## Project Information

Project Name: SHL Task 0002

Project Location: A. Dwyer's MA

Project #: ACCU/

Project Manager: *Phil McBain*

ALPHA Quote #:

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if p.m.-approved)

Date Due: 9/17/14 Time:

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SP#26 = closed

\* Done as noted  $F \rightarrow$  Field Filtered

metals #1 =  $A, Fe$       Metals #2 =  $A, Fe, Mn, Al, Co, Pb, Ni, K, Ca, K, Mg$

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
12243	01 GP-10-24-025-F	8/9/10	1601	GW	JAR
	02 GP-10-24-025-U	8/9/10	1601	GW	JAR
	03 GP-10-24-035-F	8/9/10	1633	GW	JAR
	04 GP-10-24-035-U	8/9/10	1633	GW	JAR
	05 GP-10-24-045-F	8/9/10	1712	GW	JAR
	06 GP-10-24-045-U	8/9/10	1712	GW	JAR
	07 GP-10-24-055-F	8/9/10	1758	GW	JAR
	08 GP-10-24-055-U	8/9/10	1758	GW	JAR
	09 GR-10-25-025-F	8/10/10	0832	GW	JAR
	10 GR-10-25-025-U	8/10/10	0932	GW	JAR

**PLEASE ANSWER QUESTIONS ABOVE!**

IS YOUR PROJECT  
MA MCP *or* CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Container Type

Preservative

Relinquished By:

Date/Time

8/10/10	1600
---------	------

Received By:

Date/Time


8/19/10 163

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

TOTAL # BOTTLES



<b>CHAIN OF CUSTODY</b>					PAGE <u>2</u> OF <u>3</u>																																																																																																																																																																																																																																							
<b>Client Information</b> Client: <u>Sovereign Consulting, Inc</u> Address: <u>905B S Main St</u> <u>Mansfield MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3248</u> Email: <u>pmc@sovereign.com</u> <input type="checkbox"/> These samples have been previously analyzed by Alpha					<b>Project Information</b> Project Name: <u>SHL Tash 0002</u> Project Location: <u>Deven's Ayrer, MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/17/10</u> Time:																																																																																																																																																																																																																																							
<b>Report Information - Data Deliverables</b> <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL EDR <input type="checkbox"/> ADEX <input type="checkbox"/> Add'l Deliverables					<b>Billing Information</b> <input type="checkbox"/> Same as Client Info    PO #:																																																																																																																																																																																																																																							
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">ALPHA Lab ID (Lab Use Only)</th> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th colspan="10">ANALYSIS</th> <th rowspan="2">TOTAL # BOTTLES</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Cl, Fe, NO<sub>3</sub></th> <th>NO<sub>2</sub></th> <th>Alk</th> <th>NH<sub>4</sub>, COD</th> <th>SUBS</th> <th>TSS</th> <th>DOC/DIC</th> <th>Tot Metals #1</th> <th>Diss Metals #1</th> <th>Tot Metals #2</th> <th>Diss Metals #2</th> </tr> </thead> <tbody> <tr> <td>2203</td> <td>GP-10-25-035-F</td> <td>8/10/10</td> <td>1019</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-25-035-U</td> <td>8/10/10</td> <td>1019</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-25-045-F</td> <td>8/10/10</td> <td>1106</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-25-045-U</td> <td>8/10/10</td> <td>1106</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-13-049-F</td> <td>8/9/10</td> <td>1605</td> <td>GW</td> <td>JJC</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>9</td> </tr> <tr> <td></td> <td>GP-10-13-059-F</td> <td>8/10/10</td> <td>0830</td> <td>GW</td> <td>JJC</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>9</td> </tr> <tr> <td></td> <td>GP-10-13-059-U</td> <td>8/10/10</td> <td>0830</td> <td>GW</td> <td>JJC</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2</td> </tr> <tr> <td></td> <td>GP-10-13-069-F</td> <td>8/10/10</td> <td>1050</td> <td>GW</td> <td>JJC</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>9</td> </tr> <tr> <td></td> <td>GP-10-13-079-F</td> <td>8/10/10</td> <td>1215</td> <td>GW</td> <td>JJC</td> <td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>✓</td><td>9</td> </tr> <tr> <td>26</td> <td>RB2-08010-U</td> <td>8/10/10</td> <td>1330</td> <td>GW</td> <td>JJC</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> </tbody> </table>					ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										TOTAL # BOTTLES	Date	Time	Cl, Fe, NO <sub>3</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub> , COD	SUBS	TSS	DOC/DIC	Tot Metals #1	Diss Metals #1	Tot Metals #2	Diss Metals #2	2203	GP-10-25-035-F	8/10/10	1019	GW	JAR														1		GP-10-25-035-U	8/10/10	1019	GW	JAR														3		GP-10-25-045-F	8/10/10	1106	GW	JAR														1		GP-10-25-045-U	8/10/10	1106	GW	JAR														3		GP-10-13-049-F	8/9/10	1605	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9		GP-10-13-059-F	8/10/10	0830	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9		GP-10-13-059-U	8/10/10	0830	GW	JJC														2		GP-10-13-069-F	8/10/10	1050	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9		GP-10-13-079-F	8/10/10	1215	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	26	RB2-08010-U	8/10/10	1330	GW	JJC														1	<b>PLEASE ANSWER QUESTIONS ABOVE!</b> <b>IS YOUR PROJECT MA MCP or CT RCP?</b>	
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<b>Relinquished By:</b> <u>[Signature]</u> <b>Date/Time:</b> <u>8/10/10 1600</u> <u>[Signature]</u> <u>8/10/10 1715</u>					<b>Received By:</b> <u>[Signature]</u> <b>Date/Time:</b> <u>8/10/10 14</u> <u>[Signature]</u> <u>8/10/10 1715</u>																																																																																																																																																																																																																																							
FORM NO: 01-01 (rev 14-OCT-07)					Please print clearly, legibly, and completely. Samples can not be logged in and turned into time clock will not start until all ambiguities are resolved. All samples submitted are subject to Alpha's terms and conditions. See reverse side.																																																																																																																																																																																																																																							

CHAIN OF CUSTODY						PAGE 3 OF 3		Date Rec'd in Lab: 8/10/10		ALPHA Job #: 1012243	
 <b>WESTBORO, MA</b> TEL: 508-858-8220 FAX: 508-858-9193		<b>MANSFIELD, MA</b> TEL: 508-822-9300 FAX: 508-822-3288		<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Devon's MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: _____ <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/17/10</u> Time: _____		<b>Report Information - Data Deliverables</b> <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <u>EDR</u> <input type="checkbox"/> ADEX <input type="checkbox"/> Add'l Deliverables		<b>Billing Information</b> <input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #: _____			
<b>Client Information</b> Client: <u>Sovereign Consulting Inc</u> Address: <u>905 B S. Main St</u> <u>Mansfield, MA 02048</u> Phone: <u>508-339-3206</u> Fax: <u>508-339-3248</u> Email: <u>pmbain@svcon.com</u> <input type="checkbox"/> These samples have been previously analyzed by Alpha				<b>Regulatory Requirements/Report Limits</b> State/Fed Program: _____ Criteria: <u>SEE QAPP</u>				<b>MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO-</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are MCP Analytical Methods Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are CT RCP (Reasonable Confidence Protocols) Required?			
Other Project Specific Requirements/Comments/Detection Limits: <u>SDG#26 = closed</u> * Done as noted F = Field Fil/Read <u>metals #1 = As, Fe</u> <u>metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Ca, K, Mg</u>				<b>ANALYSIS</b> CT, SO <sub>4</sub> , NO <sub>3</sub> NH <sub>4</sub> , COP Sulfide TSS DOC-DIC Tot Metals #1 Diss Metals #1 Tot Metals #2 Diss Metals #2				<b>SAMPLE HANDLING</b> Filtration _____ <input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below) Sample Specific Comments			
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection		Sample Matrix		Sampler's Initials		TOTAL # BOTTLES	
				Date Time							
2243-71		RB-081010-U		8/10/10 1015		GW		CMH		1	
22		DUP-081010-F		8/10/10 1019		GW		JAR		1	
23		DUP-081010-U		8/10/10 1019		GW		JAR		1	
24		DUP2-081010-F		8/10/10 1106		GW		JAR		1	
25		DUP2-081010-U		8/10/10 1106		GW		JAR		1	
26		GP-10-22-011-F		8/10/10 1343		GW		JAR		1	
27		GP-10-22-011-U		8/10/10 1343		GW		JAR		3	
28		GP-10-22-021-F		8/10/10 1428		GW		JAR		1	
29		GP-10-22-021-U		8/10/10 1428		GW		JAR		3	
<b>PLEASE ANSWER QUESTIONS ABOVE!</b> <b>IS YOUR PROJECT MA MCP or CT RCP?</b>				Container Type: P P P P P P A P P P P Preservative: A A A D E K A A C C C C		Relinquished By: <u>[Signature]</u> Date/Time: <u>8/10/10 1600</u> <u>[Signature]</u> Date/Time: <u>8/10/10 1700</u>		Received By: <u>[Signature]</u> Date/Time: <u>8/10/10 1630</u> <u>[Signature]</u> Date/Time: <u>8/10/10 1700</u>		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any and all queries are resolved. All samples submitted are subject to Alpha's terms and conditions. See reverse side.	

FORM NO: 01-01 (rev. 14-OCT-07)



CHAIN OF CUSTODY						Date Rec'd in Lab: 8/10/10		ALPHA Job #: 1012243											
Project Information						Report Information - Data Deliverables													
Client Information						Billing Information													
<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Deven's MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBan</u> ALPHA Quote #: _____ <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/17/10</u> Time: _____						<b>Report Information - Data Deliverables</b> <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <u>EPR</u> <input type="checkbox"/> ADEx <input type="checkbox"/> Add'l Deliverables				<b>Billing Information</b> <input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #: _____									
<b>Client Information</b> Client: <u>Sovereign Consulting Inc</u> Address: <u>905 B S. Main St</u> <u>Mansfield, MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3248</u> Email: <u>pmcban@sccon.com</u>						<b>Regulatory Requirements/Report Limits</b> State/Fed Program: _____ Criteria: <u>SEE QAPP</u> <b>MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are MCP Analytical Methods Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are CT RCP (Reasonable Confidence Protocols) Required?													
<input type="checkbox"/> These samples have been previously analyzed by Alpha <b>Other Project Specific Requirements/Comments/Detection Limits:</b> If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed. (Note: All CAM methods for inorganic analyses require MS every 20 soil samples) <u>SDG#262 closed</u> <u>metals #1 = As, Fe</u> <u>Metals #2 = As, Fe, Mn, Al, Cu, Pb, Ni, Hg, Cd, K, Mg</u> <u>* Done as noted F= Field Filtered</u>						<b>SAMPLE HANDLING</b> Filtration: _____ <input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)				<b>TOTAL # BOTTLES</b>									
ALPHA Lab ID (Lab Use Only)		Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	CL 504, MS	NO <sub>2</sub>	Alk	Alk, COD	Sulfide	TSS	DOC, DIC	Tot Metals #1	Diss Metals #1	Tot Metals #2	Diss Metals #2	Sample Specific Comments	TOTAL # BOTTLES
12243	01	GP-10-24-025-F	8/9/10	1601	GW	JAR													1
	02	GP-10-24-025-L1	8/9/10	1601	GW	JAR													3
	03	GP-10-24-035-F	8/9/10	1633	GW	JAR													1
	04	GP-10-24-035-L1	8/9/10	1633	GW	JAR													3
	05	GP-10-24-045-F	8/9/10	1712	GW	JAR													1
	06	GP-10-24-045-L1	8/9/10	1712	GW	JAR													3
	07	GP-10-24-055-F	8/9/10	1758	GW	JAR													1
	08	GP-10-24-055-L1	8/9/10	1758	GW	JAR													3
	09	GP-10-25-025-F	8/10/10	0932	GW	JAR												MS/MSD metals only	2
	10	GP-10-25-025-L1	8/10/10	0932	GW	JAR												MS/MSD metals only	4
PLEASE ANSWER QUESTIONS ABOVE!						Container Type: P P P P P P A P P P P P Preservative: A A A D WE A A C C C C				Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.									
<b>IS YOUR PROJECT MA MCP or CT RCP?</b> Relinquished By: <u>Phil McBan</u> Date/Time: <u>8/10/10 1600</u> <u>Phil McBan</u> <u>8/10/10 1715</u>						Received By: <u>Phil McBan</u> Date/Time: <u>8/10/10 1630</u> <u>Phil McBan</u> <u>8/10/10 1715</u>													



4 Coolers

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-322-3208

## CHAIN OF CUSTODY

PAGE 2 OF 3

## Client Information

Client: Sovereign Consulting Inc

Address: 905B S Main St  
Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmcbrum@sovereign.com

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

SPGH 26 = Closed

\* Done as noted F = Field Filtered

Metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Co, K, Mg

## Project Information

Project Name: SHL Task 0002

Project Location: Devens, MA

Project #: ACC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 8/17/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EOR  
☐ ADEX ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program Criteria: SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY -- CT REASONABLE CONFIDENCE PROTO.

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS	SAMPLE HANDLING										TOTAL # BOTTLES
	Filtration _____ <input checked="" type="checkbox"/> Done # _____ <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation _____ <input type="checkbox"/> Lab to do (Please specify below)										
Cl, SO <sub>4</sub> , NO <sub>3</sub>	Alk	NH <sub>4</sub> , COD	SHRide	TSS	DOC+DIC	Tot Metals #1	Diss Metals #1	Tot Metals #2	Diss Metals #2	Sample Specific Comments	
			✓	✓		✓		✓			1
											3
											1
			✓	✓		✓		✓			3
✓	✓	✓	✓		✓		✓				9
✓	✓	✓	✓		✓						9
			✓	✓		✓					2
✓	✓	✓	✓		✓		✓				9
✓	✓	✓	✓		✓		✓				9
											1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

FORM NO: 01-01 (Rev. 14-OCT-07)

Container Type

Preservative

Relinquished By:


Date/Time

Received By:

Date/Time

Please print clearly and legibly and complete all fields. Samples are not released until all required information is provided. If any information is missing, the samples will not be released. All samples are labeled with the name of the project and the date of collection. All samples are labeled with the name of the project and the date of collection.



CHAIN OF CUSTODY						PAGE 3 OF 3		Date Rec'd in Lab: 8/10/10		ALPHA Job #: 017203																																																																																																																																																																																																																						
 <b>WESTBORO, MA</b> TEL: 508-898-9220 FAX: 508-898-9193		<b>MANSFIELD, MA</b> TEL: 508-822-9300 FAX: 508-822-3288		<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Dover, MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: _____		<b>Report Information - Data Deliverables</b> <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <u>EDR</u> <input type="checkbox"/> ADEX <input type="checkbox"/> Add'l Deliverables		<b>Billing Information</b> <input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #: _____																																																																																																																																																																																																																								
<b>Client Information</b> Client: <u>Sovereign Consulting Inc</u> Address: <u>905 B S Main St</u> <u>Mansfield, MA 02648</u> Phone: <u>508-339-3206</u> Fax: <u>508-339-3248</u> Email: <u>pmbain@sovercon.com</u>				<b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/17/10</u> Time: _____				<b>Regulatory Requirements/Report Limits</b> State/Fed Program: _____ Criteria: <u>SEE QA PP</u>																																																																																																																																																																																																																								
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<table border="1"> <thead> <tr> <th rowspan="2">ALPHA LAB ID (Lab Use Only)</th> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th colspan="12">ANALYSIS</th> <th rowspan="2">SAMPLE HANDLING</th> <th rowspan="2">TOTAL # BOTTLES</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>Cl, Sm, NO<sub>3</sub></th> <th>NO<sub>2</sub></th> <th>Alk</th> <th>NH<sub>4</sub>, CO<sub>2</sub></th> <th>Sulfide</th> <th>TSS</th> <th>DOC+DIC</th> <th>Tot Metals #1</th> <th>Diss Metals #1</th> <th>Tot Metals #2</th> <th>Diss Metals #2</th> </tr> </thead> <tbody> <tr> <td>12243</td> <td>RB-081010-U</td> <td>8/10/10</td> <td>1015</td> <td>GW</td> <td>CMH</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>22</td> <td>DUP-081010-F</td> <td>8/10/10</td> <td>1019</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>23</td> <td>DUP-081010-U</td> <td>8/10/10</td> <td>1019</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>24</td> <td>DUP2-081010-F</td> <td>8/10/10</td> <td>1106</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>25</td> <td>DUP2-081010-U</td> <td>8/10/10</td> <td>1106</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>26</td> <td>GP-10-22-011-F</td> <td>8/10/10</td> <td>1343</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>27</td> <td>GP-10-22-011-U</td> <td>8/10/10</td> <td>1343</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>3</td> </tr> <tr> <td>28</td> <td>GP-10-22-021-F</td> <td>8/10/10</td> <td>1428</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>1</td> </tr> <tr> <td>29</td> <td>GP-10-22-021-U</td> <td>8/10/10</td> <td>1428</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td> <input checked="" type="checkbox"/> Done  <input type="checkbox"/> Not needed  <input type="checkbox"/> Lab to do  <input type="checkbox"/> Preservation  <input type="checkbox"/> Lab to do            (Please specify below)         </td> <td>3</td> </tr> </tbody> </table>												ALPHA LAB ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS												SAMPLE HANDLING	TOTAL # BOTTLES	Date	Time	Cl, Sm, NO <sub>3</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub> , CO <sub>2</sub>	Sulfide	TSS	DOC+DIC	Tot Metals #1	Diss Metals #1	Tot Metals #2	Diss Metals #2	12243	RB-081010-U	8/10/10	1015	GW	CMH													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	22	DUP-081010-F	8/10/10	1019	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	23	DUP-081010-U	8/10/10	1019	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	24	DUP2-081010-F	8/10/10	1106	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	25	DUP2-081010-U	8/10/10	1106	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	26	GP-10-22-011-F	8/10/10	1343	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	27	GP-10-22-011-U	8/10/10	1343	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	3	28	GP-10-22-021-F	8/10/10	1428	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	1	29	GP-10-22-021-U	8/10/10	1428	GW	JAR													<input checked="" type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please specify below)	3
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PLEASE ANSWER QUESTIONS ABOVE! <b>IS YOUR PROJECT</b> <b>MA MCP or CT RCP?</b>						Container Type: <u>P P P P P P A P P P P</u> Preservative: <u>A A A D E K A A C C C C</u>						Relinquished By: <u>[Signature]</u> Date/Time: <u>8/10/10 1600</u> Received By: <u>[Signature]</u> Date/Time: <u>8/10/10 1715</u>																																																																																																																																																																																																																				

FORM NO: 01-01 (rev. 14-OCT-07)



## 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](http://www.alphalab.com)

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

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

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1012251-01	GP-10-24-025-U	DEVENS, MA	08/09/10 16:01
L1012251-02	GP-10-24-035-U	DEVENS, MA	08/09/10 16:33
L1012251-03	GP-10-24-045-U	DEVENS, MA	08/09/10 17:12
L1012251-04	GP-10-24-055-U	DEVENS, MA	08/09/10 17:58
L1012251-05	GP-10-25-025-U	DEVENS, MA	08/10/10 09:32
L1012251-06	GP-10-25-035-U	DEVENS, MA	08/10/10 10:19
L1012251-07	GP-10-25-045-U	DEVENS, MA	08/10/10 11:06
L1012251-08	GP-10-13-049-F	DEVENS, MA	08/09/10 16:05
L1012251-09	GP-10-13-059-F	DEVENS, MA	08/10/10 08:30
L1012251-10	GP-10-13-069-F	DEVENS, MA	08/10/10 10:50
L1012251-11	GP-10-13-079-F	DEVENS, MA	08/10/10 12:15
L1012251-12	GP-10-22-011-U	DEVENS, MA	08/10/10 13:43
L1012251-13	GP-10-22-021-U	DEVENS, MA	08/10/10 14:28

**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.

**Project Name:** SHL TASK 0002

**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.

Authorized Signature:

 Kelly Stenstrom

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

Date Collected: 08/09/10 16:33

Client ID: GP-10-24-035-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Date Collected: 08/09/10 17:12

Client ID: GP-10-24-045-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

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	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

Project Number: AC001

Lab Number: L1012251

Report Date: 08/17/10

## SAMPLE RESULTS

Lab ID: L1012251-04

Client ID: GP-10-24-055-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/09/10 17:58

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	96		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:** L1012251-05  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	13		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: L1012251-06

Client ID: GP-10-25-035-U

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
<b>General Chemistry</b>										
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:** L1012251-07  
**Client ID:** 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
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	61		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:** L1012251-08  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	170		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:** L1012251-09**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

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

Date Collected: 08/10/10 10:50

Client ID: GP-10-13-069-F

Date Received: 08/10/10

Sample Location: DEVENS, MA

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	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

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/10/10 12:15

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	20		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: L1012251-12

Date Collected: 08/10/10 13:43

Client ID: GP-10-22-011-U

Date Received: 08/10/10

Sample Location: DEVENS, MA

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	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**Project Number:** AC001**Lab Number:** L1012251**Report Date:** 08/17/10**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
<b>General Chemistry</b>										
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 sample(s): 01-13 Batch: WG427832-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	08/10/10 21:45	08/16/10 07:30	30,5310C(M)	DW

**Lab Control Sample Analysis**

Batch Quality Control

**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012251**Report Date:** 08/17/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-13 Batch: WG427832-2								
Dissolved Inorganic Carbon	97							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012251

Report Date: 08/17/10

Parameter	Native Sample	Duplicate Sample	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: SHL TASK 0002

Lab Number: L1012251

Project Number: AC001

Report Date: 08/17/10

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

B	Present/Intact
C	Present/Intact
A	Present/Intact
D	Present/Intact

## Container Information

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

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012251

Report Date: 08/17/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012251-08X	Amber 250ml unpreserved	B	6	3.0	Y	Present/Intact	SPECWC()
L1012251-09A	Vial H2SO4 preserved split	C	N/A	3.2	Y	Present/Intact	SPECWC()
L1012251-09B	Vial H2SO4 preserved split	C	N/A	3.2	Y	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	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-12B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-12X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	SPECWC()
L1012251-13A	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-13B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012251-13X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days



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.
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

<b>A</b>	- Spectra identified as "Aldol Condensation Product".
<b>B</b>	- 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.
<b>D</b>	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
<b>E</b>	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
<b>H</b>	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
<b>I</b>	- 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.
<b>P</b>	- The RPD between the results for the two columns exceeds the method-specified criteria.
<b>Q</b>	- 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.)
<b>R</b>	- Analytical results are from sample re-analysis.

Report Format: Data Usability Report



**Project Name:** 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



**Project Name:** SHL TASK 0002

**Lab Number:** L1012251

**Project Number:** AC001

**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.



**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 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, 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, 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, 4500CI-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 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 Commission 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 S<sup>2-</sup>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.



WESTBORD, MA  
TEL: 508-898-8220  
FAX: 508-898-9193

## CHAIN OF CUSTODY

PAGE 2 OF 3

4 Coolers

WESTBORO, MA	MANSFIELD, MA
TEL: 508-898-8220	TEL: 508-822-9300
FAX: 508-898-9193	FAX: 508-822-3288

### Client Information

Client: Sovereign Consulting Inc

Address: 905B S Main St

Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: amebain@server.com

☐ Those samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

SPG# 26 = Closed

\* Done as noted F = Field F: Filtered

Metals #1 = As Fe

metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Ca, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl <sup>-</sup>	NO <sub>2</sub> <sup>-</sup>	Alk	NH <sub>4</sub> <sup>+</sup>	Sulf	TSS	DOC	Tot P	Dis P	Tot W	Dis W	(Please specify below)	LES
		Date	Time														Sample Specific Comments	
125	GP-10-25-035-F	8/10/10	1019	GW	JAR											✓		1
125	GP-10-25-035-U	8/10/10	1019	GW	JAR						✓	✓			✓			3
125	GP-10-25-045-F	8/10/10	1106	GW	JAR											✓		1
125	GP-10-25-045-U	8/10/10	1106	GW	JAR						✓	✓			✓			3
125	GP-10-13-049-F	8/9/10	1605	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
125	GP-10-13-059-F	8/10/10	0830	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
125	GP-10-13-059-U	8/10/10	0830	GW	JJC						✓				✓			2
125	GP-10-13-069-F	8/10/10	1050	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
125	GP-10-13-079-F	8/10/10	1215	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
125	RB2-08B10-U	8/10/10	1330	GW	JJC										✓			1

**PLEASE ANSWER QUESTIONS ABOVE!**

IS YOUR PROJECT  
MA MCP *or* CT RCP?

Container Type

Preservative

Reinquished By:

Date/Time

Received By:

Date/Time





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

4 coolers

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

## CHAIN OF CUSTODY

PAGE 3 OF 3

## Project Information

Project Name: SHL Task 0002

Project Location: Deven's MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 8/17/10 Time:

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

SDG#26 = closed

\* Done as noted  $F = F_{\text{idd}} F_{\text{iltad}}$

metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Cu, K, Mg

[illegible]

**PLEASE ANSWER QUESTIONS ABOVE!**

## IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01 (rev 14-OCT-07)

Container Type

Preservative

Relinquished By:

Date/Time

Received By:

Date/Time

8/11/16 16:00

8	10	10	17.5
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Le. Laper

Don't know

5	10	10	10
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$$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$$
[illegible]



## 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](http://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 15:00
L1012323-31	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**Lab Number:** L1012323**Project Number:** AC001**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.

Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

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.

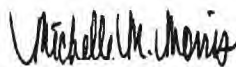
The WG427579-2 Laboratory Duplicate RPD (36%), performed on L1012323-20, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

**Chloride**

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

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



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-01

Date Collected: 08/10/10 15:16

Client ID: GP-10-22-031-F

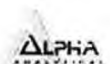
Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.75	J	ug/l	2.50	0.565	5	08/12/10 13:50	08/17/10 09:45	EPA 3005A	1,6020A	BM
Iron, Dissolved	1780		ug/l	250	42.0	5	08/12/10 13:50	08/17/10 09:45	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:** L1012323-02  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	2.65		ug/l	2.50	0.565	5	08/12/10 20:40	08/17/10 12:17	EPA 3005A	1,6020A	BM
Iron, Total	3240		ug/l	250	42.0	5	08/12/10 20:40	08/17/10 12:17	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: L1012323-03

Date Collected: 08/10/10 16:00

Client ID: GP-10-22-041-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	14.5		ug/l	2.00	0.452	4	08/12/10 13:50	08/17/10 09:51	EPA 3005A	1,6020A	BM
Iron, Dissolved	36100		ug/l	200	33.6	4	08/12/10 13:50	08/17/10 09:51	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: L1012323-04

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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	15.8		ug/l	2.00	0.452	4	08/12/10 20:40	08/17/10 12:23	EPA 3005A	1,6020A	BM
Iron, Total	35300		ug/l	200	33.6	4	08/12/10 20:40	08/17/10 12:23	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: L1012323-05  
 Client ID: GP-10-22-051-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/10/10 16:45  
 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 - Westborough Lab											
Arsenic, Dissolved	ND		ug/l	5.00	1.13	10	08/12/10 13:50	08/17/10 09:57	EPA 3005A	1,6020A	BM
Iron, Dissolved	5010		ug/l	500	84.1	10	08/12/10 13:50	08/17/10 09:57	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:** L1012323-06**Client ID:** GP-10-22-051-U**Sample Location:** DEVENS, MA**Matrix:** Water**Date Collected:** 08/10/10 16:45**Date Received:** 08/11/10**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	5.02		ug/l	5.00	1.13	10	08/12/10 20:40	08/17/10 12:30	EPA 3005A	1,6020A	BM
Iron, Total	7580		ug/l	500	84.1	10	08/12/10 20:40	08/17/10 12:30	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: L1012323-07  
 Client ID: GP-10-22-061-F  
 Sample Location: DEVENS, MA  
 Matrix: 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 - Westborough Lab											
Arsenic, Dissolved	3.53		ug/l	2.00	0.452	4	08/12/10 13:50	08/17/10 10:03	EPA 3005A	1,6020A	BM
Iron, Dissolved	4490		ug/l	200	33.6	4	08/12/10 13:50	08/17/10 10:03	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: L1012323-08

Client ID: GP-10-22-061-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/10/10 17:45

Date Received: 08/11/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	6.56		ug/l	2.00	0.452	4	08/12/10 20:40	08/17/10 12:36	EPA 3005A	1,6020A	BM
Iron, Total	6750		ug/l	200	33.6	4	08/12/10 20:40	08/17/10 12:36	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:** L1012323-09  
**Client ID:** GP-10-26-011-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 08:34  
**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 - Westborough 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	BM
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	BM
Calcium, Dissolved	6570		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	BM
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	BM
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	BM
Magnesium, Dissolved	1190		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	BM
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	BM
Nickel, Dissolved	2.99		ug/l	0.500	0.180	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3390		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 10:15	EPA 3005A	1,6020A	BM
Sodium, Dissolved	14300		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 10:15	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: L1012323-10  
 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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
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	BM
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	BM
Calcium, Total	6190		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	BM
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	BM
Iron, Total	854		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	BM
Lead, Total	0.14	J	ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	BM
Magnesium, Total	1240		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	BM
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	BM
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	BM
Potassium, Total	3570		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 12:48	EPA 3005A	1,6020A	BM
Sodium, Total	13100		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 12:48	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: L1012323-11

Date Collected: 08/11/10 09:12

Client ID: GP-10-26-021-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

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

Matrix: Water

Date Collected: 08/11/10 09:12

Date Received: 08/11/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	777		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Arsenic, Total	2.07		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Calcium, Total	15100		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Chromium, Total	4.66		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Iron, Total	2090		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Lead, Total	0.630		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Magnesium, Total	1960		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Manganese, Total	129		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Nickel, Total	5.68		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Potassium, Total	3160		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 13:24	EPA 3005A	1,6020A	BM
Sodium, Total	33100		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 13:24	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: L1012323-13

Date Collected: 08/11/10 09:56

Client ID: GP-10-26-031-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.540		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 10:58	EPA 3005A	1,6020A	BM
Iron, Dissolved	1350		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 10:58	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:** L1012323-14  
**Client ID:** 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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	2.86		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 13:30	EPA 3005A	1,6020A	BM
Iron, Total	4180		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 13:30	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: L1012323-15  
 Client ID: GP-10-26-041-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/11/10 10:40  
 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 - Westborough Lab											
Arsenic, Dissolved	0.45	J	ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 11:04	EPA 3005A	1,6020A	BM
Iron, Dissolved	1940		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 11:04	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: L1012323-16

Date Collected: 08/11/10 10:40

Client ID: GP-10-26-041-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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 - Westborough Lab											
Arsenic, Total	4.00		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 13:37	EPA 3005A	1,6020A	BM
Iron, Total	6290		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 13:37	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: L1012323-17  
 Client ID: GP-10-26-051-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/11/10 11:15  
 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 - Westborough Lab											
Arsenic, Dissolved	ND		ug/l	5.00	1.13	10	08/12/10 13:50	08/17/10 11:10	EPA 3005A	1,6020A	BM
Iron, Dissolved	3140		ug/l	500	84.1	10	08/12/10 13:50	08/17/10 11:10	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: L1012323-18

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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	4.86	J	ug/l	5.00	1.13	10	08/12/10 20:40	08/17/10 13:43	EPA 3005A	1,6020A	BM
Iron, Total	7180		ug/l	500	84.1	10	08/12/10 20:40	08/17/10 13:43	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: L1012323-19

Date Collected: 08/11/10 12:06

Client ID: GP-10-26-061-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		ug/l	5.00	1.13	10	08/12/10 13:50	08/17/10 11:16	EPA 3005A	1,6020A	BM
Iron, Dissolved	3840		ug/l	500	84.1	10	08/12/10 13:50	08/17/10 11:16	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: L1012323-20  
 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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	6.48		ug/l	5.00	1.13	10	08/12/10 20:40	08/17/10 13:49	EPA 3005A	1,6020A	BM
Iron, Total	11900		ug/l	500	84.1	10	08/12/10 20:40	08/17/10 13:49	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: L1012323-21

Date Collected: 08/11/10 13:15

Client ID: GP-10-26-071-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	1.96	J	ug/l	5.00	1.13	10	08/12/10 13:50	08/17/10 11:22	EPA 3005A	1,6020A	BM
Iron, Dissolved	3310		ug/l	500	84.1	10	08/12/10 13:50	08/17/10 11:22	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:** L1012323-22  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Arsenic, Total	3.58	J	ug/l	5.00	1.13	10	08/12/10 20:40	08/17/10 13:55	EPA 3005A	1,6020A	BM
Iron, Total	6430		ug/l	500	84.1	10	08/12/10 20:40	08/17/10 13:55	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:** L1012323-23  
**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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	18.5	J	ug/l	40.0	7.64	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1740		ug/l	2.00	0.452	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Barium, Dissolved	124		ug/l	2.00	0.380	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Calcium, Dissolved	45600		ug/l	400	50.6	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Chromium, Dissolved	1.52	J	ug/l	2.00	0.744	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	8.62		ug/l	2.00	0.212	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Iron, Dissolved	101000		ug/l	200	33.6	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	4500		ug/l	400	16.4	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Manganese, Dissolved	3410		ug/l	4.00	0.544	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.04278	J	ug/l	0.2000	0.0120	1	08/30/10 12:20	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	08/17/10 11:28	EPA 3005A	1,6020A	BM
Potassium, Dissolved	8240		ug/l	400	72.6	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Sodium, Dissolved	7280		ug/l	400	72.8	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	08/12/10 13:50	08/17/10 11:28	EPA 3005A	1,6020A	BM
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	BM

Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-24  
 Client ID: GP-10-15-049-F  
 Sample Location: 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 - Westborough Lab											
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	16600		ug/l	5.00	1.13	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Barium, Dissolved	17.3		ug/l	5.00	0.950	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Calcium, Dissolved	49400		ug/l	1000	126.	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	41.2		ug/l	5.00	0.530	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Iron, Dissolved	119000		ug/l	500	84.1	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	6920		ug/l	1000	41.0	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Manganese, Dissolved	10500		ug/l	10.0	1.36	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.03205	J	ug/l	0.2000	0.0120	1	08/30/10 12:20	08/30/10 16:25	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	19.5		ug/l	5.00	1.80	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Potassium, Dissolved	7520		ug/l	1000	182.	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Sodium, Dissolved	12000		ug/l	1000	182.	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/12/10 13:50	08/17/10 11:35	EPA 3005A	1,6020A	BM
Zinc, Dissolved	18.7	J	ug/l	50.0	16.2	10	08/12/10 13:50	08/17/10 11:35	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:** L1012323-25  
**Client ID:** 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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	2080		ug/l	200	38.2	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Arsenic, Total	17200		ug/l	10.0	2.26	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Calcium, Total	47700		ug/l	2000	253.	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Chromium, Total	5.05	J	ug/l	10.0	3.72	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Iron, Total	126000		ug/l	1000	168.	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Lead, Total	2.98	J	ug/l	10.0	1.00	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Magnesium, Total	7360		ug/l	2000	82.0	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Manganese, Total	10500		ug/l	20.0	2.72	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Nickel, Total	23.5		ug/l	10.0	3.60	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Potassium, Total	8130		ug/l	2000	363.	20	08/12/10 20:40	08/17/10 14:01	EPA 3005A	1,6020A	BM
Sodium, Total	12200		ug/l	2000	364.	20	08/12/10 20:40	08/17/10 14:01	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:** L1012323-26  
**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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	34.5		ug/l	10.0	1.91	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.49	J	ug/l	0.500	0.120	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	278		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Barium, Dissolved	7.87		ug/l	0.500	0.095	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Calcium, Dissolved	32100		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.510		ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.640		ug/l	0.500	0.053	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Copper, Dissolved	2.22		ug/l	0.500	0.118	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Iron, Dissolved	300		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3950		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Manganese, Dissolved	466		ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 12:20	08/30/10 16:27	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.49		ug/l	0.500	0.180	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6410		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Sodium, Dissolved	32300		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.04	J	ug/l	0.500	0.031	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	2.23		ug/l	0.500	0.077	1	08/12/10 13:50	08/17/10 11:53	EPA 3005A	1,6020A	BM
Zinc, Dissolved	3.05	J	ug/l	5.00	1.62	1	08/12/10 13:50	08/17/10 11:53	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: L1012323-27  
 Client ID: GP-10-27-025-F  
 Sample Location: DEVENS, MA  
 Matrix: 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 - Westborough Lab											
Aluminum, Dissolved	16.2		ug/l	10.0	1.91	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1.03		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Calcium, Dissolved	5210		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.34	J	ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Iron, Dissolved	773		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	960		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Manganese, Dissolved	44.9		ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Nickel, Dissolved	2.37		ug/l	0.500	0.180	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3260		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 11:59	EPA 3005A	1,6020A	BM
Sodium, Dissolved	52600		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 11:59	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: L1012323-28

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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	891		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Arsenic, Total	2.77		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Calcium, Total	5570		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Chromium, Total	3.71		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Iron, Total	1640		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Lead, Total	2.03		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Magnesium, Total	1140		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Manganese, Total	56.2		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Nickel, Total	3.71		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Potassium, Total	3180		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:19	EPA 3005A	1,6020A	BM
Sodium, Total	55200		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:19	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:** L1012323-29  
**Client ID:** RB-081110-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 10:15  
**Date Received:** 08/11/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Calcium, Total	44.2	J	ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Chromium, Total	0.29	J	ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Iron, Total	18.6	J	ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Potassium, Total	24.6	J	ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:25	EPA 3005A	1,6020A	BM
Sodium, Total	58.5	J	ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:25	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: L1012323-30

Date Collected: 08/11/10 15:00

Client ID: RB2-081110-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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 - Westborough Lab											
Aluminum, Total	2.26	J	ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
Arsenic, Total	0.12	J	ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
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	BM
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	BM
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	BM
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	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
Potassium, Total	19.4	J	ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:32	EPA 3005A	1,6020A	BM
Sodium, Total	43	J	ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:32	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:** L1012323-31  
**Client ID:** DUP-081110-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 09:12  
**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
<b>Dissolved Metals - Westborough Lab</b>											
Aluminum, Dissolved	9.64	J	ug/l	10.0	1.91	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.650		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Barium, Dissolved	15.3		ug/l	0.500	0.095	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Calcium, Dissolved	15700		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.22	J	ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	1.31		ug/l	0.500	0.053	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.630		ug/l	0.500	0.118	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Iron, Dissolved	1140		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	1900		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Manganese, Dissolved	103		ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 12:20	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	08/17/10 12:05	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3210		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.79	J	ug/l	1.00	0.406	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Sodium, Dissolved	34200		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 12:05	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/12/10 13:50	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	08/17/10 12:05	EPA 3005A	1,6020A	BM
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	BM



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-32

Date Collected: 08/11/10 09:12

Client ID: DUP-081110-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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 - Westborough Lab											
Aluminum, Total	584		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
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	BM
Calcium, Total	16100		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Chromium, Total	3.99		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Iron, Total	1800		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Lead, Total	0.540		ug/l	0.500	0.050	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Magnesium, Total	1820		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Manganese, Total	120		ug/l	1.00	0.136	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Nickel, Total	4.99		ug/l	0.500	0.180	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Potassium, Total	3020		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:38	EPA 3005A	1,6020A	BM
Sodium, Total	37300		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:38	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: L1012323-33  
 Client ID: DUP2-081110-F  
 Sample Location: DEVENS, MA  
 Matrix: 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 - Westborough Lab											
Aluminum, Dissolved	17.1		ug/l	10.0	1.91	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.38	J	ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Barium, Dissolved	14.8		ug/l	0.500	0.095	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Calcium, Dissolved	5380		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.33	J	ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.560		ug/l	0.500	0.053	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.44	J	ug/l	0.500	0.118	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Iron, Dissolved	804		ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.06	J	ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	984		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Manganese, Dissolved	45.5		ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 12:20	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	08/17/10 12:11	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3210		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
Sodium, Dissolved	53000		ug/l	100	18.2	1	08/12/10 13:50	08/17/10 12:11	EPA 3005A	1,6020A	BM
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	08/17/10 12:11	EPA 3005A	1,6020A	BM
Zinc, Dissolved	3.27	J	ug/l	5.00	1.62	1	08/12/10 13:50	08/17/10 12:11	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: L1012323-34  
 Client ID: DUP2-081110-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/11/10 15:38  
 Date Received: 08/11/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	789		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM
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	BM
Calcium, Total	5550		ug/l	100	12.6	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM
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	BM
Iron, Total	1510		ug/l	50.0	8.41	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM
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	BM
Magnesium, Total	1120		ug/l	100	4.10	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM
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	BM
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	BM
Potassium, Total	3160		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM
Sodium, Total	57400		ug/l	100	18.2	1	08/12/10 20:40	08/17/10 14:44	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

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
Dissolved Metals - Westborough Lab for sample(s): 01,03,05,07,09,11,13,15,17,19,21,23-24,2							Batch: WG427366-1			
Aluminum, Dissolved	2.62	J	ug/l	10.0	1.91	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Calcium, Dissolved	ND		ug/l	100	12.6	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Iron, Dissolved	19.6	J	ug/l	50.0	8.41	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Manganese, Dissolved	0.15	J	ug/l	1.00	0.136	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
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	21.8	J	ug/l	100	18.2	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Sodium, Dissolved	31.3	J	ug/l	100	18.2	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	08/12/10 13:50	08/17/10 03:34	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 02,04,06,08,10,12,14,16,18,20,22,25,28-3							Batch: WG427445-1			
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/12/10 20:40	08/17/10 03:40	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/12/10 20:40	08/17/10 03:40	1,6020A	BM
Calcium, Total	14.9	J	ug/l	100	12.6	1	08/12/10 20:40	08/17/10 03:40	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	08/12/10 20:40	08/17/10 03:40	1,6020A	BM

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

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 23-24,26,31,33 Batch: WG430111-1										
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	%Recovery Limits	RPD	Qual	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								
Aluminum, Dissolved	99		-		80-120	-		
Antimony, Dissolved	100		-		80-120	-		
Arsenic, Dissolved	102		-		80-120	-		
Barium, Dissolved	101		-		80-120	-		
Beryllium, Dissolved	108		-		80-120	-		
Cadmium, Dissolved	113		-		80-120	-		
Calcium, Dissolved	105		-		80-120	-		
Chromium, Dissolved	98		-		80-120	-		
Cobalt, Dissolved	106		-		80-120	-		
Copper, Dissolved	105		-		80-120	-		
Iron, Dissolved	113		-		80-120	-		
Lead, Dissolved	102		-		80-120	-		
Magnesium, Dissolved	105		-		80-120	-		
Manganese, Dissolved	106		-		80-120	-		
Nickel, Dissolved	104		-		80-120	-		
Potassium, Dissolved	107		-		80-120	-		
Selenium, Dissolved	104		-		80-120	-		
Silver, Dissolved	101		-		80-120	-		
Sodium, Dissolved	106		-		80-120	-		
Thallium, Dissolved	98		-		80-120	-		
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	-	
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22,25,28-3 Batch: WG427445-2					
Aluminum, Total	92	-	80-120	-	
Arsenic, Total	96	-	80-120	-	
Calcium, Total	99	-	80-120	-	
Chromium, Total	91	-	80-120	-	
Iron, Total	103	-	80-120	-	
Lead, Total	97	-	80-120	-	
Magnesium, Total	99	-	80-120	-	
Manganese, Total	96	-	80-120	-	
Nickel, Total	97	-	80-120	-	
Potassium, Total	100	-	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	-	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 - Westborough Lab Associated sample(s): 01,03,05,07,09,11,13,15,17,19,21,23-24,2 QC Batch ID: WG427366-4 WG427366-5 QC												
Sample: L1012323-09 Client ID: GP-10-26-011-F												
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 - Westborough Lab Associated sample(s): 01,03,05,07,09,11,13,15,17,19,21,23-24,2 QC Batch ID: WG427366-4 WG427366-5 QC Sample: L1012323-09 Client ID: GP-10-26-011-F									
Zinc, Dissolved	8.07	500	528	104	548	108	80-120	4	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22,25,28-3 QC Batch ID: WG427445-3 WG427445-4 QC Sample: L1012323-10 Client ID: GP-10-26-011-U									
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 - Westborough Lab Associated sample(s): 23-24,26,31,33 QC Batch ID: WG430111-3 WG430111-4 QC Sample: L1012323-23 Client ID: GP-10-15-039-F									
Mercury, Dissolved	ND	1	1.124	112	1.073	107	80-120	5	20

# **INORGANICS & MISCELLANEOUS**



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-02

Date Collected: 08/10/10 15:16

Client ID: GP-10-22-031-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Date Collected: 08/10/10 16:00

Client ID: GP-10-22-041-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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: 08/11/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-08

Date Collected: 08/10/10 17:45

Client ID: GP-10-22-061-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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: Not Specified

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

Date Collected: 08/11/10 09:12

Client ID: GP-10-26-021-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	22		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: L1012323-14

Date Collected: 08/11/10 09:56

Client ID: GP-10-26-031-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Date Collected: 08/11/10 10:40

Client ID: GP-10-26-041-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	120		mg/l	5.0	NA	1	-	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

Date Collected: 08/11/10 12:06

Client ID: GP-10-26-061-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	160		mg/l	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

Date Collected: 08/11/10 09:10

Client ID: GP-10-15-039-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	340		mg CaCO3/L	2.0	NA	1	-	08/12/10 10:12	30,2320B	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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
Sulfate	0.58	J	mg/l	1.0	0.12	1	-	08/16/10 19:49	44,300.0	ED



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-24

Date Collected: 08/11/10 10:45

Client ID: GP-10-15-049-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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	-	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	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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: L1012323-25

Date Collected: 08/11/10 10:45

Client ID: GP-10-15-049-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012323-26

Date Collected: 08/11/10 14:10

Client ID: GP-10-15-059-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	89		mg CaCO <sub>3</sub> /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	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	08/12/10 20:15	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/17/10 17:00	08/17/10 18:00	30,4500S <sub>2</sub> -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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	59		mg/l	1.0	0.13	2	-	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  
**Project Number:** AC001

**Lab Number:** L1012323  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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 Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

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
General Chemistry - Westborough Lab for sample(s): 23-24,26 Batch: WG427279-2										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	08/12/10 10:12	30,2320B	JO
General Chemistry - Westborough Lab for 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	AT
General Chemistry - Westborough Lab for sample(s): 23-24,26 Batch: WG427402-2										
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 20:13	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 23-24,26 Batch: WG427493-1										
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:40	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,10,12,14,16,18,20,22,25,28 Batch: WG427579-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Anions by Ion Chromatography - Westborough 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
Anions by Ion Chromatography - Westborough Lab for sample(s): 23-24,26 Batch: WG428007-1										
Chloride	ND		mg/l	0.50	0.07	1	-	08/16/10 18:01	44,300.0	ED
Sulfate	ND		mg/l	1.0	0.12	1	-	08/16/10 18:01	44,300.0	ED
General Chemistry - Westborough Lab for 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-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,10,12,14,16,18,20,22-24,26,2 Batch: WG428227-1										
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	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 Batch: WG427279-1								
Alkalinity, Total	110				80-115	-		4
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 Batch: WG427397-2								
Nitrogen, Ammonia	98				80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 Batch: WG427402-1								
Nitrogen, Nitrite	100				90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 Batch: WG427493-2								
Chemical Oxygen Demand	99				95-105	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 Batch: WG427650-2								
Nitrogen, Nitrate	92				90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 Batch: WG428007-2								
Chloride	98				90-110	-		
Sulfate	90				90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 Batch: WG428140-2								
Sulfide	98				75-125	-		

**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
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	92	-	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	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG427279-3 QC Sample: L1012323-26 Client ID: GP-10-15-059-F												
Alkalinity, Total	89	100	190	101	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG427397-3 QC Sample: L1012323-26 Client ID: GP-10-15-059-F												
Nitrogen, Ammonia	0.508	4	4.27	94	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG427402-3 QC Sample: L1012323-23 Client ID: GP-10-15-039-F												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG427493-3 QC Sample: L1012243-15 Client ID: MS Sample												
Chemical Oxygen Demand	36	238	280	103	-	-	-	-	80-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG427650-3 WG427650-4 QC Sample: L1012323-26 Client ID: GP-10-15-059-F												
Nitrogen, Nitrate	0.48	0.4	0.84	90	-	0.85	93	-	80-122	1	-	15
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG428007-3 WG428007-4 QC Sample: L1012323-23 Client ID: GP-10-15-039-F												
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 - Westborough Lab Associated sample(s): 23-24,26 QC Batch ID: WG428140-3 QC Sample: L1012323-26 Client ID: GP-10-15-059-F												
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:** 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 - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22-24,26,2 QC Batch ID: WG428227-3 QC Sample: L1012323-04 Client ID: GP-10-22-041-U									
Dissolved Organic Carbon	2.8	4	7.1	107	-	-	79-120	-	20

Project Name: SHL TASK 0002

Project Number: AC001

### Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1012323

Report Date: 09/07/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 F	QC Batch ID: WG427279-4	QC Sample: L1012323-23	Client ID: GP-10-15-039-			
Alkalinity, Total	340	330	mg CaCO3/L	3		4
General Chemistry - Westborough Lab Associated sample(s): 23-24,26 F	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 Associated sample(s): 23-24,26 F	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 Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22,25,28 20 Client ID: GP-10-26-061-U	QC Batch ID: WG427579-2	QC Sample: L1012323-				
Solids, Total Suspended	2300	1600	mg/l	36	Q	32
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 10-15-059-F	QC Batch ID: WG427650-5	QC Sample: L1012323-26	Client ID: GP-			
Nitrogen, Nitrate	0.48	0.47	mg/l	2		15
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 23-24,26 10-15-039-F	QC Batch ID: WG428007-5	QC Sample: L1012323-23	Client ID: GP-			
Chloride	5.0	4.9	mg/l	2		18
Sulfate	0.58J	0.6J	mg/l	NC		20

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

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

Parameter	Native Sample	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-F					
Sulfide	ND	ND	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,10,12,14,16,18,20,22-24,26,2 QC Batch ID: WG428227-4 QC Sample: L1012323-12 Client ID: GP-10-26-021-U					
Dissolved Organic Carbon	ND	1.0	mg/l	NC	20

Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

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

B	Present/Intact
C	Present/Intact
A	Present/Intact
D	Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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	A	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	A	7	2.9	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	A	7	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-04D	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-04E	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-05A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012323-06A	Plastic 1000ml unpreserved	A	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	A	7	2.9	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012323-08B	Plastic 250ml HNO3 preserved	A	<2	2.9	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012323-08C	Amber 250ml unpreserved	A	7	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-08D	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-08E	Vial H2SO4 preserved split	A	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-CA-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	A	<2	2.9	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-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-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
L1012323-10C	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-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
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)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012323

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012323-11A	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-CA-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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-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	B	<2	2.6	Y	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	B	<2	2.6	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012323-14C	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-14D	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-14E	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-15A	Plastic 250ml HNO3 preserved	B	<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	B	<2	2.6	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012323-16C	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-16D	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-16E	Vial H2SO4 preserved split	B	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)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012323

Project Number: AC001

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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	C	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	B	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-20D	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-20E	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-21A	Plastic 250ml HNO3 preserved	B	<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	B	<2	2.6	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012323-22C	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-22D	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-22E	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-23A	Plastic 500ml unpreserved	C	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-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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-23D	Plastic 250ml unpreserved	A	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)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012323

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012323-23J	Vial H2SO4 preserved split	C	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	B	7	2.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012323-24B	Plastic 500ml H2SO4 preserved	B	<2	2.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012323-24C	Plastic 250ml HNO3 preserved	B	<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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-24D	Plastic 250ml unpreserved	B	7	2.6	Y	Present/Intact	NO2-4500NO2(2)
L1012323-24E	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-24F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-24G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-24H	Amber 250ml unpreserved	A	7	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-24I	Plastic 250ml unpreserved	B	N/A	2.6	Y	Present/Intact	ALK-T-2320(14)
L1012323-24J	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-24K	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-25A	Plastic 1000ml unpreserved	A	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-25B	Plastic 250ml HNO3 preserved	B	<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-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
L1012323-26A	Plastic 500ml unpreserved	B	7	2.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012323-26B	Plastic 500ml H2SO4 preserved	B	<2	2.6	Y	Present/Intact	COD-410(28),NH3-4500(28)

\*Values in parentheses indicate holding time in days

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012323-26C	Plastic 250ml HNO3 preserved	B	<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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-26D	Plastic 250ml unpreserved	B	7	2.6	Y	Present/Intact	NO2-4500NO2(2)
L1012323-26E	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.6	Y	Present/Intact	SULFIDE-4500(7)
L1012323-26H	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-26I	Plastic 250ml unpreserved	B	N/A	2.6	Y	Present/Intact	ALK-T-2320(14)
L1012323-26J	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	DOC-5310(28)
L1012323-26K	Vial H2SO4 preserved split	B	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-CA-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)
L1012323-28A	Plastic 1000ml unpreserved	A	7	2.9	Y	Present/Intact	TSS-2540(7)
L1012323-28B	Plastic 250ml HNO3 preserved	A	<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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
L1012323-28C	Amber 250ml unpreserved	A	7	2.9	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012323-28D	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-28E	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	DOC-5310(28)
L1012323-29A	Plastic 250ml HNO3 preserved	C	<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)
L1012323-30A	Plastic 250ml HNO3 preserved	A	<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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)
L1012323-31A	Plastic 250ml HNO3 preserved	D	<2	4	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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-32A	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-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp 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-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(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-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012323-34A	Plastic 250ml HNO3 preserved	A	<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-CR-6020T(180),DOD-K-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

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.
- 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*

- A - Spectra identified as "Aldol Condensation Product".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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:** L1012323

**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



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012323  
**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-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 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, 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, 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 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 Commission 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, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>B, 4500P-E, 4500 S<sub>2</sub><sup>-</sup>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, 4500SO<sub>4</sub>-E, 426C, 4500NH<sub>3</sub>-B, 4500NH<sub>3</sub>-H, 4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S<sub>2</sub>-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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 1 OF 4

4 Culers

## Client Information

Client: Sovereign Consulting Inc

Address: 905B S Main St

Mansfield, MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@sovercon.com

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # 27 = closed \* Done as noted F = Field Filtered

Metals #1 = As, Fe Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Ca, K, Mg

## Project Information

Project Name: SHL Task 0002

Project Location: Dover MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 8/18/10 Time:

Date Rec'd in Lab: 8/11/10

ALPHA Job #: 41012623

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EDR  
☐ ADEx ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY -- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS	SAMPLE HANDLING										TOTAL # BOTTLES
	Cl, Se, Mg	NH <sub>4</sub>	Alk	NH <sub>4</sub> , CO <sub>3</sub>	SAFide	TSS	DOC + DIC	Test Metals #1	Test Metals #2	Test Metals #3	
1											1
2											3
3											1
4											3
5											1
6											3
7											1
8											3
9											2
10											4

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
12323	GP-10-22-031-F	8/10/10	1516	GW	JAR
	GP-10-22-031-U	8/10/10	1516	GW	JAR
	GP-10-22-041-F	8/10/10	1600	GW	JAR
	GP-10-22-041-U	8/10/10	1600	GW	JAR
	GP-10-22-051-F	8/10/10	1645	GW	JAR
	GP-10-22-051-U	8/10/10	1645	GW	JAR
	GP-10-22-061-F	8/10/10	1745	GW	JAR
	GP-10-22-061-U	8/10/10	1745	GW	JAR
	GP-10-26-011-F	8/11/10	0834	GW	JAR
	GP-10-26-011-U	8/11/10	0834	GW	JAR

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type

Preservative

P P P P P P A P P P P

A A A D/E A A C C C C

Relinquished By:

Date/Time

Received By:

Date/Time

Phil McBain

8/11/10 1600

Phil McBain

8/11/10 1600

Please print clearly, legibly and completely. Samples cannot be logged in and turn around time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

4 Coolers

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

## CHAIN OF CUSTODY

PAGE 2 OF 4

## Client Information

Client: Sovereign Consulting IncAddress: 905B S Main StMansfield, MA 02048Phone: 508-339-3200Fax: 508-339-3248Email: p.mcbain@Sovereign.com☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.

(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # 27 = closed

\* Done as noted F = Field Filtered

Metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Hg, Cu, K, Mg

## Project Information

Project Name: SHL Task 0002Project Location: Dever's, MAProject #: AC001Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)Date Due: 8/18/10

Time:

Date Rec'd in Lab: 8/11/10ALPHA Job #: 11012373

## Report Information - Data Deliverables

☐ FAX☒ EMAIL EDR☐ ADEX☐ Add'l Deliverables

## Billing Information

☐ Same as Client info

PO #:

## Regulatory Requirements/Report Limits

State / Fed Program

Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No

Are MCP Analytical Methods Required?

☒ Yes ☐ No

Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☒ No

Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS	SAMPLE HANDLING										Sample Specific Comments	TOTAL # BOTTLES
	Filtration _____ <input checked="" type="checkbox"/> Done * <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)											
Cl, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub> , COD	S/C, Cd	TSS	DOC + DIC	Test Metals #1	Diss Metals #1	Test Metals #2	Diss Metals #2		
					✓							1
					✓							3
												1
				✓								3
				✓								1
				✓								3
				✓								1
				✓								3
				✓								1
				✓								3
				✓								1
				✓								3

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type

Preservative

Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-8193

4 Coolers

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

## CHAIN OF CUSTODY

PAGE 3 OF 4

Date Rec'd In Lab

8/11/10

ALPHA Job #

17012323

## Client Information

Client: Sovereign Consulting Inc

Address: 905 B S. Main St

Mansfield, MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmcbrin@sovercon.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: SHL Task 0002

Project Location: Deven's MA

Project #: ACO01

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard☐ RUSH (only confirmed if pre-approved)

Date Due:

8/18/10

Time:

## Report Information - Data Deliverables

☐ FAX☒ EMAIL EDR☐ ADEX☐ Add'l Deliverables

## Billing Information

☐ Same as Client info

PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No

Are MCP Analytical Methods Required?

☒ Yes ☐ No

Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☒ No

Are CT RCP (Reasonable Confidence Protocols) Required?

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.

(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # 27 = closed

\* Done as noted F = Field Filtered

Metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Co, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										SAMPLE HANDLING	Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			Cl. SDG #1	NO3	Alk	NH4-COD	Sulfide	TSS	DIC + DIC	Test Metals #1	DSS Metals #1	Test Metals #2	DSS Metals #2		
17323-20	GP-10-26-071-F	8/10/10	1315	GW	JAR													1
22	GP-10-26-071-U	8/11/10	1315	GW	JAR													3
23	GP-10-15-039-F	8/11/10	0910	GW	JJC	✓	✓	✓	✓	✓	✓	✓			✓			9
24	GP-10-15-049-F	8/11/10	1045	GW	JJC	✓	✓	✓	✓	✓	✓	✓			✓			9
25	GP-10-15-049-U	8/11/10	1045	GW	JJC						✓				✓			2
26	GP-10-15-059-F	8/11/10	1410	GW	JJC	✓	✓	✓	✓	✓	✓	✓			✓			9
27	GP-10-27-025-F	8/11/10	1538	GW	JAR										✓			1
28	GP-10-27-025-U	8/11/10	1538	GW	JAR						✓	✓			✓			3

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type

P P P P P P P A P P P P

Preservative

A A A D E A A C C C C

Relinquished By:

Date/Time

8/11/10 1600

Received By:


Date/Time

8/11/10 1600

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.







CHAIN OF CUSTODY				PAGE 1 OF 4		Date Rec'd in Lab: 8/10/10		ALPHA Job #: L1012323																																																																																																																																																																																																									
 <b>WESTBORO, MA</b> TEL: 508-898-8220 FAX: 508-898-9193		<b>MANSFIELD, MA</b> TEL: 508-822-9300 FAX: 508-822-3288		<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Deven's MA</u> Project #: <u>ACG01</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: _____ <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/10/10</u> Time: _____		<b>Report Information - Data Deliverables</b> <input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <u>EDR</u> <input type="checkbox"/> ADEX <input type="checkbox"/> Add'l Deliverables _____		<b>Billing Information</b> <input type="checkbox"/> Same as Client info <input type="checkbox"/> PO #: _____																																																																																																																																																																																																									
<b>Client Information</b> Client: <u>Sovereign Consulting Inc</u> Address: <u>905B S. Main St</u> <u>Mansfield, MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3248</u> Email: <u>pmbain@sovercon.com</u> <input type="checkbox"/> These samples have been previously analyzed by Alpha				<b>Regulatory Requirements/Report Limits</b> State/Fed Program: _____ Criteria: <u>SEE QAPP</u> <b>MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are MCP Analytical Methods Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are CT RCP (Reasonable Confidence Protocols) Required?																																																																																																																																																																																																													
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<table border="1"> <thead> <tr> <th>ALPHA Lab ID (Lab Use Only)</th> <th>Sample ID</th> <th>Collection Date</th> <th>Time</th> <th>Sample Matrix</th> <th>Sampler's Initials</th> <th colspan="10">Sample Specific Comments</th> <th></th> </tr> </thead> <tbody> <tr> <td>12323</td> <td>GP-10-22-031-F</td> <td>8/10/10</td> <td>1516</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-22-031-U</td> <td>8/10/10</td> <td>1516</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-22-041-F</td> <td>8/10/10</td> <td>1600</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-22-041-U</td> <td>8/10/10</td> <td>1600</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-22-051-F</td> <td>8/10/10</td> <td>1645</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-22-051-U</td> <td>8/10/10</td> <td>1645</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-22-061-F</td> <td>8/10/10</td> <td>1745</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> </tr> <tr> <td></td> <td>GP-10-22-061-U</td> <td>8/10/10</td> <td>1745</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td> </tr> <tr> <td></td> <td>GP-10-26-011-F</td> <td>8/11/10</td> <td>0834</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>MS/MSD Metals only</td><td>2</td> </tr> <tr> <td></td> <td>GP-10-26-011-U</td> <td>8/11/10</td> <td>0834</td> <td>GW</td> <td>JAR</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>MS/MSD Metals only</td><td>4</td> </tr> </tbody> </table>				ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time		Sample Matrix	Sampler's Initials	Sample Specific Comments											12323	GP-10-22-031-F	8/10/10	1516	GW	JAR												1		GP-10-22-031-U	8/10/10	1516	GW	JAR												3		GP-10-22-041-F	8/10/10	1600	GW	JAR												1		GP-10-22-041-U	8/10/10	1600	GW	JAR												3		GP-10-22-051-F	8/10/10	1645	GW	JAR												1		GP-10-22-051-U	8/10/10	1645	GW	JAR												3		GP-10-22-061-F	8/10/10	1745	GW	JAR												1		GP-10-22-061-U	8/10/10	1745	GW	JAR												3		GP-10-26-011-F	8/11/10	0834	GW	JAR											MS/MSD Metals only	2		GP-10-26-011-U	8/11/10	0834	GW	JAR											MS/MSD Metals only	4	<b>PLEASE ANSWER QUESTIONS ABOVE!</b> <b>IS YOUR PROJECT MA MCP or CT RCP?</b>		Container Type: P P P P P P P A P P P P Preservative: A A A D/E A A C C C C		Relinquished By: <u>[Signature]</u> Date/Time: <u>8/11/10 1600</u> Received By: <u>[Signature]</u> Date/Time: <u>8/11/10 1715</u>		Please print clearly, legibly and completely. Sample cannot be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.	
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CHAIN OF CUSTODY						PAGE 2 OF 4		Date Rec'd in Lab: 8/10/10		ALPHA Job #: L1012323																																																																																																																																																																																																																																	
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<b>Client Information</b> Client: Sovereign Consulting Inc Address: 905 B S. Main St Mansfield MA 02048 Phone: 508-339-3200 Fax: 508-339-3248 Email: pmcboin@svcon.com <input type="checkbox"/> These samples have been previously analyzed by Alpha			<b>Project Information</b> Project Name: SHL Task 0002 Project Location: Daven's MA Project #: AC001 Project Manager: Phil McBain ALPHA Quote #: <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: 8/18/10 Time:			
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<b>APPENDIX 10 (Lab Use Only)</b>			<b>TOTAL # BOTTLES</b>			
Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials		
RB-081110-U	8/11/10	1615	GW	CAH	1	
RB2-081110-U	8/11/10	1500	GW	JJC	1	
DUP-081110-F	8/11/10	0912	GW	JAR	1	
DUP-081110-U	8/11/10	0912	GW	JAR	1	
DUP2-081110-F	8/11/10	1537	GW	JAR	1	
DUP2-081110-U	8/11/10	1538	GW	JAR	1	
<b>PLEASE ANSWER QUESTIONS ABOVE!</b>					Container Type P P P P P P A P P P P Preservative A A A A A A A C C C C	
<b>IS YOUR PROJECT MA MCP or CT RCP?</b>			Relinquished By: [Signature] Date/Time: 8/11/10 1600 Received By: [Signature] Date/Time: 8/11/10 1600			
FORM NO: 01-01 (rev. 14-OCT-07)			Please pre-label bottles and containers. Samples should not be opened in and/or removed from the cooler until after the samples are analyzed. See reverse side for details.			





## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

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

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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:** SHL TASK 0002  
**Project Number:** 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

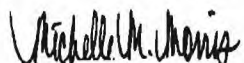
**Case Narrative (continued)**

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

Date: 08/20/10

# **INORGANICS & MISCELLANEOUS**

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

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

**SAMPLE RESULTS**

**Lab ID:** L1012332-01  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
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: L1012332-02

Date Collected: 08/10/10 16:00

Client ID: GP-10-22-041-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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	36		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: L1012332-03

Date Collected: 08/10/10 16:45

Client ID: GP-10-22-051-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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	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

Date Collected: 08/10/10 17:45

Client ID: GP-10-22-061-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
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  
**Project Number:** AC001

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

**SAMPLE RESULTS**

**Lab ID:** L1012332-05  
**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:** Not Specified

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

Date Collected: 08/11/10 09:12

Client ID: GP-10-26-021-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
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: L1012332-07

Date Collected: 08/11/10 09:56

Client ID: GP-10-26-031-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
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: L1012332-08

Date Collected: 08/11/10 10:40

Client ID: GP-10-26-041-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

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	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

Date Collected: 08/11/10 11:15

Client ID: GP-10-26-051-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Date Collected: 08/11/10 12:06

Client ID: GP-10-26-061-U

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
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  
**Project Number:** AC001

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

**SAMPLE RESULTS**

**Lab ID:** L1012332-11  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	110		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: L1012332-12

Date Collected: 08/11/10 09:10

Client ID: GP-10-15-039-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	150		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: L1012332-13

Date Collected: 08/11/10 10:45

Client ID: GP-10-15-049-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	64		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: L1012332-14

Date Collected: 08/11/10 14:10

Client ID: GP-10-15-059-F

Date Received: 08/11/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

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  
**Project Number:** AC001

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

**SAMPLE RESULTS**

**Lab ID:** L1012332-15  
**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:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	12		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

**Method Blank Analysis**  
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-15 Batch: WG428392-1									
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**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012332**Report Date:** 08/20/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Associated sample(s): 01-15 Batch: WG428392-2

Dissolved Inorganic Carbon

99

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

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

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-15 QC Batch ID: WG428392-3 QC Sample: L1012332-01 Client ID: GP-10-22-031-U						
Dissolved Inorganic Carbon	26	25	mg/l	4		

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

B	Present/Intact
C	Present/Intact
A	Present/Intact
D	Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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	A	7	2.9	Y	Present/Intact	SPECWC()
L1012332-02B	Vial H2SO4 preserved split	A	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	Y	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	A	7	2.9	Y	Present/Intact	SPECWC()
L1012332-04B	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-04C	Vial H2SO4 preserved split	A	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()
L1012332-05C	Vial H2SO4 preserved split	D	N/A	4	Y	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	B	7	2.6	Y	Present/Intact	SPECWC()
L1012332-07B	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-07C	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-08A	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	SPECWC()
L1012332-08B	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012332

Report Date: 08/20/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012332-08C	Vial H2SO4 preserved split	B	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	B	7	2.6	Y	Present/Intact	SPECWC()
L1012332-10B	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-10C	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-11A	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	SPECWC()
L1012332-11B	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-11C	Vial H2SO4 preserved split	B	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	A	7	2.9	Y	Present/Intact	SPECWC()
L1012332-13B	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-13C	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-14A	Amber 250ml unpreserved	B	7	2.6	Y	Present/Intact	SPECWC()
L1012332-14B	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-14C	Vial H2SO4 preserved split	B	N/A	2.6	Y	Present/Intact	SPECWC()
L1012332-15A	Amber 250ml unpreserved	A	7	2.9	Y	Present/Intact	SPECWC()
L1012332-15B	Vial H2SO4 preserved split	A	N/A	2.9	Y	Present/Intact	SPECWC()
L1012332-15C	Vial H2SO4 preserved split	A	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

\*Values in parentheses indicate holding time in days



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

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
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**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

\*Values in parentheses indicate holding time in days

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.
- 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

- A** - Spectra identified as "Aldol Condensation Product".
- B** - 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.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - 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.
- Q** - 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



**Project Name:** SHL TASK 0002

**Lab Number:** L1012332

**Project Number:** AC001

**Report Date:** 08/20/10

***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:** SHL TASK 0002

**Lab Number:** L1012332

**Project Number:** AC001

**Report Date:** 08/20/10

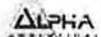
## REFERENCES

- 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.



**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 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, 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,Ti,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, 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, 4500CI-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 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 Commission 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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

4 Coolers  
MANSFIELD, MA  
TEL: 508-822-8300  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 1 OF 4

Date Rec'd in Lab

ALPHA Job #

## Client Information

Client: Sovereign Consulting Inc  
Address: 905B S Main St  
Mansfield, MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: pmc@scen.com

## Project Information

Project Name: SHL Task 0002  
Project Location: Dover's MA  
Project #: AC001  
Project Manager: Phil McBain  
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)  
Date Due: 8/18/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EDR  
☐ ADEX ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.

(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # 27 = closed

\* Done as noted F = Field Filtered

Metals #1 = As, Fe

Metals #2 = As, Fe, Mn, Al, Co, Pb, Ni, Na, Ca, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl <sub>2</sub> S	NH <sub>3</sub>	Alk	NH <sub>4</sub>	Sulf	TSS	DIC	Test #	Diss	Test #	Diss	(Please specify below) Sample Specific Comments	LES
		Date	Time															
	GP-10-22-031-F	8/10/10	1516	GW	JAR									✓				1
12332.1	GP-10-22-031-U	8/10/10	1516	GW	JAR						✓	✓	✓					3
	GP-10-22-041-F	8/10/10	1600	GW	JAR									✓				1
2	GP-10-22-041-U	8/10/10	1600	GW	JAR						✓	✓	✓					3
	GP-10-22-051-F	8/10/10	1645	GW	JAR									✓				1
3	GP-10-22-051-U	8/10/10	1645	GW	JAR						✓	✓	✓					3
3	GP-10-22-061-F	8/10/10	1745	GW	JAR									✓				1
4	GP-10-22-061-U	8/10/10	1745	GW	JAR						✓	✓	✓					3
	GP-10-26-011-F	8/11/10	0834	GW	JAR										✓		MS/MSD Metals only	2
5	GP-10-26-011-U	8/11/10	0834	GW	JAR						✓	✓		✓			MS/MSD Metals only	4

## SAMPLE HANDLING

Filtration  
☒ Done ☒ Not needed  
☐ Lab to do  
☐ Preservation  
☐ Lab to do  
(Please specify below)

## Sample Specific Comments

MS/MSD Metals only  
MS/MSD Metals only

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type P P P P P P P A P P P P  
Preservative A A A D F/E A A C C C C

Relinquished By:

Date/Time

Received By:

Date/Time





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

4 Coolers

MANFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 2 OF 4

## Client Information

Client: Sovereign Consulting Inc  
Address: 905B S Main St  
Manfield, MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: prochain@sovereign.com

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # 27 = closed  
Metals #1 = As, Fe  
Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Ca, K, Mg  
\* Done as noted F = Field Filtered

## Project Information

Project Name: SHL Task 0002  
Project Location: Dever's, MA  
Project #: AC001  
Project Manager: Phil McBain  
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 8/18/10 Time:

Date Rec'd in Lab

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EDR  
☐ ADEx ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State / Fed Program Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl	NO <sub>3</sub>	Alk	NH <sub>4</sub>	SO <sub>4</sub>	TSS	DOC	Test 1	Diss	Test 1	Diss	(Please specify below)	LES	
		Date	Time														Sample Specific Comments		
	GP-10-26-021-F	8/11/10	0912	GW	JAR												✓		1
12332	GP-10-26-021-U	8/11/10	0912	GW	JAR							✓	✓			✓			3
	GP-10-26-031-F	8/11/10	0956	GW	JAR										✓				1
7	GP-10-26-031-U	8/11/10	0956	GW	JAR							✓	✓	✓					3
	GP-10-26-041-F	8/11/10	1040	GW	JAR										✓				1
8	GP-10-26-041-U	8/11/10	1040	GW	JAR							✓	✓	✓					3
	GP-10-26-051-F	8/11/10	1115	GW	JAR										✓				1
9	GP-10-26-051-U	8/11/10	1115	GW	JAR							✓	✓	✓					3
	GP-10-26-061-F	8/11/10	1206	GW	JAR										✓				1
10	GP-10-26-061-U	8/11/10	1206	GW	JAR							✓	✓	✓					3

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type P P P P P P A P P P P  
Preservative A A A D F/E A A C C C C

Relinquished By:

Date/Time

Received By:

Date/Time





## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

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

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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



**Project Name:** SHL TASK 0002**Lab Number:** L1012632**Project Number:** AC001**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

**Project Name:** 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.

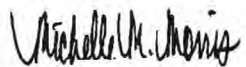
**Total Metals**

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

Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

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  
 Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	4.84	J	ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.14	JB	ug/l	0.500	0.120	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	14.4		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Barium, Dissolved	49.8		ug/l	0.500	0.095	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Calcium, Dissolved	62700		ug/l	100	12.6	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.610		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.31	J	ug/l	0.500	0.053	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.27	J	ug/l	0.500	0.118	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Iron, Dissolved	18700		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	7010		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Manganese, Dissolved	670	J	ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.01239	J	ug/l	0.2000	0.0120	1	08/30/10 18:32	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	08/19/10 14:17	EPA 3005A	1,6020A	BM
Potassium, Dissolved	4160		ug/l	100	18.2	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.54	J	ug/l	1.00	0.406	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Sodium, Dissolved	17800		ug/l	100	18.2	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.36	J	ug/l	0.500	0.077	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM
Zinc, Dissolved	4.59	J	ug/l	5.00	1.62	1	08/17/10 20:00	08/19/10 14:17	EPA 3005A	1,6020A	BM



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: 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 - Westborough Lab											
Aluminum, Total	1980		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Arsenic, Total	39.1		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Calcium, Total	63300		ug/l	100	12.6	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Chromium, Total	15.2		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Iron, Total	22800		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Lead, Total	4.17		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Magnesium, Total	7610		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Manganese, Total	783		ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Nickel, Total	11.2		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Potassium, Total	4860		ug/l	100	18.2	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM
Sodium, Total	16800		ug/l	100	18.2	1	08/17/10 20:00	08/19/10 15:24	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	35.8	J	ug/l	40.0	7.64	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.8	JB	ug/l	2.00	0.480	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	772		ug/l	2.00	0.452	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Barium, Dissolved	88.0		ug/l	2.00	0.380	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Calcium, Dissolved	50600		ug/l	400	50.6	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	1.51	J	ug/l	2.00	0.212	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Iron, Dissolved	66900		ug/l	200	33.6	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3880		ug/l	400	16.4	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2540		ug/l	4.00	0.544	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	08/31/10 12:31	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	3.05		ug/l	2.00	0.720	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Potassium, Dissolved	7140		ug/l	400	72.6	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Sodium, Dissolved	7780		ug/l	400	72.8	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	1.81	J	ug/l	2.00	0.308	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM
Zinc, Dissolved	ND		ug/l	20.0	6.50	4	08/17/10 20:00	08/19/10 14:41	EPA 3005A	1,6020A	BM

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: 08/16/10 11:20  
 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 - Westborough Lab											
Aluminum, Total	2400		ug/l	40.0	7.64	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Arsenic, Total	774		ug/l	2.00	0.452	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Calcium, Total	49100		ug/l	400	50.6	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Chromium, Total	7.80		ug/l	2.00	0.744	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Iron, Total	66000		ug/l	200	33.6	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Lead, Total	3.61		ug/l	2.00	0.200	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Magnesium, Total	4370		ug/l	400	16.4	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Manganese, Total	2420		ug/l	4.00	0.544	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Nickel, Total	9.25		ug/l	2.00	0.720	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Potassium, Total	7640		ug/l	400	72.6	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM
Sodium, Total	7280		ug/l	400	72.8	4	08/17/10 20:00	08/19/10 15:48	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012632-05  
 Client ID: GP-10-14-059-F  
 Sample Location: DEVENS, MA  
 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 - Westborough Lab											
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Antimony, Dissolved	1.21	JB	ug/l	5.00	1.20	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	2400		ug/l	5.00	1.13	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Barium, Dissolved	15.6		ug/l	5.00	0.950	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Calcium, Dissolved	52900		ug/l	1000	126.	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	13.0		ug/l	5.00	0.530	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Iron, Dissolved	88200		ug/l	500	84.1	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	4730		ug/l	1000	41.0	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Manganese, Dissolved	6800		ug/l	10.0	1.36	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	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	08/19/10 14:47	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6940		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Sodium, Dissolved	14000		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM
Zinc, Dissolved	23.6	J	ug/l	50.0	16.2	10	08/17/10 20:00	08/19/10 14:47	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

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: 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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	ND		ug/l	100	19.1	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	5110		ug/l	5.00	1.13	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Barium, Dissolved	19.6		ug/l	5.00	0.950	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Calcium, Dissolved	36200		ug/l	1000	126.	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	21.5		ug/l	5.00	0.530	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Iron, Dissolved	85400		ug/l	500	84.1	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3020		ug/l	1000	41.0	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Manganese, Dissolved	3540		ug/l	10.0	1.36	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	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	08/19/10 14:53	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6680		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Sodium, Dissolved	5180		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM
Zinc, Dissolved	ND		ug/l	50.0	16.2	10	08/17/10 20:00	08/19/10 14:53	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012632-07

Date Collected: 08/16/10 14:35

Client ID: GP-10-14-069-U

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	5160		ug/l	100	19.1	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Arsenic, Total	5260		ug/l	5.00	1.13	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Calcium, Total	38500		ug/l	1000	126.	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Chromium, Total	22.1		ug/l	5.00	1.86	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Iron, Total	95400		ug/l	500	84.1	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Lead, Total	5.56		ug/l	5.00	0.500	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Magnesium, Total	4250		ug/l	1000	41.0	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Manganese, Total	3700		ug/l	10.0	1.36	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Nickel, Total	21.2		ug/l	5.00	1.80	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Potassium, Total	7860		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM
Sodium, Total	5580		ug/l	1000	182.	10	08/17/10 20:00	08/19/10 15:54	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

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 - Westborough Lab											
Aluminum, Dissolved	36.7	J	ug/l	40.0	7.64	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	762		ug/l	2.00	0.452	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Barium, Dissolved	85.4		ug/l	2.00	0.380	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Calcium, Dissolved	48500		ug/l	400	50.6	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	1.4	J	ug/l	2.00	0.212	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Iron, Dissolved	64200		ug/l	200	33.6	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3750		ug/l	400	16.4	4	08/17/10 20:00	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	08/19/10 14:59	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	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	08/19/10 14:59	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6940		ug/l	400	72.6	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Sodium, Dissolved	7390		ug/l	400	72.8	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/17/10 20:00	08/19/10 14:59	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	1.62	J	ug/l	2.00	0.308	4	08/17/10 20:00	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	BM



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: DEVENS, MA  
 Matrix: Water

Date Collected: 08/16/10 11:20  
 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 - Westborough Lab											
Aluminum, Total	6020		ug/l	40.0	7.64	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Arsenic, Total	792		ug/l	2.00	0.452	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Calcium, Total	49600		ug/l	400	50.6	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Chromium, Total	14.2		ug/l	2.00	0.744	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Iron, Total	69800		ug/l	200	33.6	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Lead, Total	9.02		ug/l	2.00	0.200	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Magnesium, Total	5130		ug/l	400	16.4	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Manganese, Total	2510		ug/l	4.00	0.544	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Nickel, Total	18.1		ug/l	2.00	0.720	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Potassium, Total	8080		ug/l	400	72.6	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM
Sodium, Total	7600		ug/l	400	72.8	4	08/17/10 20:00	08/19/10 16:00	EPA 3005A	1,6020A	BM



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

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

**SAMPLE RESULTS**

**Lab ID:** L1012632-10  
**Client ID:** RB-081610-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/16/10 15:30  
**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
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Arsenic, Total	0.22	J	ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Calcium, Total	14.2	J	ug/l	100	12.6	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Manganese, Total	0.2	J	ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Potassium, Total	25.6	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM
Sodium, Total	40.6	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 16:06	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

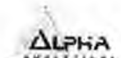
### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 02,04,07,09-10 Batch: WG428116-1										
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Calcium, Total	14.3	J	ug/l	100	12.6	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Potassium, Total	21.3	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Sodium, Total	34.4	J	ug/l	100	18.2	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05-06,08 Batch: WG428117-1										
Aluminum, Dissolved	ND		ug/l	10.0	1.91	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Antimony, Dissolved	0.3	J	ug/l	0.500	0.120	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Calcium, Dissolved	14.3	J	ug/l	100	12.6	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Iron, Dissolved	ND		ug/l	50.0	8.41	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/17/10 20:00	08/19/10 13:47	1,6020A	BM



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

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
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Dissolved Metals - Westborough Lab for sample(s): 01,03,05-06,08 Batch: WG430167-1

Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/30/10 18:32	08/31/10 12:22	1,7470A	EZ
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#### 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: 09/07/10

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: WG428116-2								
Aluminum, Total	96		-		80-120	-		
Arsenic, Total	100		-		80-120	-		
Calcium, Total	106		-		80-120	-		
Chromium, Total	97		-		80-120	-		
Iron, Total	108		-		80-120	-		
Lead, Total	103		-		80-120	-		
Magnesium, Total	105		-		80-120	-		
Manganese, Total	103		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	104		-		80-120	-		
Sodium, Total	114		-		80-120	-		

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

Report Date: 09/07/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06,08 Batch: WG428117-2					
Aluminum, Dissolved	96	-	80-120	-	
Antimony, Dissolved	99	-	80-120	-	
Arsenic, Dissolved	100	-	80-120	-	
Barium, Dissolved	100	-	80-120	-	
Beryllium, Dissolved	109	-	80-120	-	
Cadmium, Dissolved	110	-	80-120	-	
Calcium, Dissolved	106	-	80-120	-	
Chromium, Dissolved	97	-	80-120	-	
Cobalt, Dissolved	105	-	80-120	-	
Copper, Dissolved	103	-	80-120	-	
Iron, Dissolved	108	-	80-120	-	
Lead, Dissolved	103	-	80-120	-	
Magnesium, Dissolved	105	-	80-120	-	
Manganese, Dissolved	103	-	80-120	-	
Nickel, Dissolved	103	-	80-120	-	
Potassium, Dissolved	104	-	80-120	-	
Selenium, Dissolved	106	-	80-120	-	
Silver, Dissolved	98	-	80-120	-	
Sodium, Dissolved	114	-	80-120	-	
Thallium, Dissolved	95	-	80-120	-	
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: 09/07/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06,08 Batch: WG428117-2					
Zinc, Dissolved	103		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

Lab Number: L1012632

Project Number: AC001

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
Total Metals - Westborough Lab Associated sample(s): 02,04,07,09-10 QC Batch ID: WG428116-3 WG428116-4 QC Sample: L1012632-02 Client ID: GP-10-14-039-U												
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: 09/07/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06,08 QC Batch ID: WG428117-3 WG428117-4 QC Sample: L1012632-01 Client ID: GP-10-14-039-F									
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: 09/07/10

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

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012632-01

Date Collected: 08/16/10 09:50

Client ID: GP-10-14-039-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	300		mg CaCO3/L	2.0	NA	1	-	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/l	0.02	0.002	1	-	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	-	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	11		mg/l	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	-	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 - Westborough Lab										
Solids, Total Suspended	270		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

## SAMPLE RESULTS

Lab ID: L1012632-03

Date Collected: 08/16/10 11:20

Client ID: GP-10-14-049-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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	-	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
<b>Anions by Ion Chromatography - Westborough Lab</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	-	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

Project Number: AC001

Lab Number: L1012632

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: 08/16/10 11:20

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 - Westborough Lab										
Solids, Total Suspended	320		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

## SAMPLE RESULTS

Lab ID: L1012632-05

Date Collected: 08/16/10 13:00

Client ID: GP-10-14-059-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	340		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	6.46		mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:35	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	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	43		mg/l	20	7.0	1	-	08/19/10 14:58	44,410.4	DW
Dissolved Organic Carbon	4.7		mg/l	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	9.6		mg/l	0.50	0.07	1	-	08/17/10 21:10	44,300.0	AU
Nitrogen, Nitrate	0.03	J	mg/l	0.05	0.01	1	-	08/17/10 21:10	44,300.0	AU
Sulfate	2.0		mg/l	1.0	0.12	1	-	08/17/10 05:13	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012632-06

Date Collected: 08/16/10 14:35

Client ID: GP-10-14-069-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	3.3		mg/l	0.50	0.07	1	-	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

Lab Number: L1012632

Project Number: AC001

Report Date: 09/07/10

## SAMPLE RESULTS

Lab ID: L1012632-07

Date Collected: 08/16/10 14:35

Client ID: GP-10-14-069-U

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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 Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01,03,05-06 Batch: WG427901-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	08/16/10 22:25	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG427998-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/18/10 08:20	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428043-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	08/17/10 16:30	08/17/10 23:24	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428068-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428296-1									
Sulfate	ND	mg/l	1.0	0.12	1	-	08/17/10 00:49	44,300.0	AU
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428300-1									
Chloride	ND	mg/l	0.50	0.07	1	-	08/17/10 20:09	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	08/17/10 20:09	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428381-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	08/19/10 14:56	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428681-1									
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 - Westborough Lab for sample(s): 01,03,05-06 Batch: WG429914-2									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	08/16/10 21:30	08/27/10 19:55	30,5310C	DD



# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

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): 01,03,05-06 Batch: WG427901-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428043-2								
Nitrogen, Ammonia	98		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428068-2								
Alkalinity, Total	104		-		80-115	-		4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428296-2								
Sulfate	110		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428300-2								
Chloride	95		-		90-110	-		
Nitrogen, Nitrate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428381-2								
Chemical Oxygen Demand	103		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428681-2								
Sulfide	91		-		75-125	-		

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012632**Report Date:** 09/07/10

Parameter	LCS %Recovery	LCSD %Recovery	%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	-	



# **Matrix Spike Analysis** **Batch Quality Control**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

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
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG427901-3 QC Sample: L1012632-01 Client ID: GP-10-14-039-F												
Nitrogen, Nitrite	ND	0.1	0.10	100		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428043-3 QC Sample: L1012632-01 Client ID: GP-10-14-039-F												
Nitrogen, Ammonia	11.5	4	15.6	102		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428068-3 QC Sample: L1012444-14 Client ID: MS Sample												
Alkalinity, Total	18	100	120	105		-	-		86-116	-		4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428296-3 WG428296-4 QC Sample: L1012632-06 Client ID: GP-10-14-069-F												
Sulfate	1.4	8	8.8	92		9.2	98		60-140	4		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428300-3 WG428300-4 QC Sample: L1012632-06 Client ID: GP-10-14-069-F												
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 - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428381-3 QC Sample: L1012632-01 Client ID: GP-10-14-039-F												
Chemical Oxygen Demand	26	238	300	115		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428681-3 QC Sample: L1012632-05 Client ID: GP-10-14-059-F												
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:** 09/07/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429914-3 QC Sample: L1012632-06 Client ID: GP-10-14-069-F									
Dissolved Organic Carbon	3.9	4	8.3	109	-	-	79-120	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012632

Report Date: 09/07/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG427901-4 QC Sample: L1012632-01 Client ID: GP-10-14-039-F						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG427998-2 QC Sample: L1012532-01 Client ID: DUP Sample						
Solids, Total Suspended	4600	4500	mg/l	2		32
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428043-4 QC Sample: L1012632-03 Client ID: GP-10-14-049-F						
Nitrogen, Ammonia	7.44	7.45	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428068-4 QC Sample: L1012444-14 Client ID: DUP Sample						
Alkalinity, Total	18.	21	mg CaCO3/L	15	Q	4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428296-5 QC Sample: L1012632-06 Client ID: GP-10-14-069-F						
Sulfate	1.4	1.5	mg/l	7		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428300-5 QC Sample: L1012632-06 Client ID: GP-10-14-069-F						
Chloride	3.3	3.3	mg/l	0		18
Nitrogen, Nitrate	0.014J	0.013J	mg/l	NC		15
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428381-4 QC Sample: L1012632-01 Client ID: GP-10-14-039-F						
Chemical Oxygen Demand	26.	24	mg/l	8		20

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

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

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

Project Name: SHL TASK 0002

Lab Number: L1012632

Project Number: AC001

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

B Present/Intact

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-01A	Plastic 500ml unpreserved	B	7	6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012632-01B	Plastic 500ml H2SO4 preserved	B	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012632-01C	Plastic 250ml HNO3 preserved	B	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-01D	Plastic 250ml unpreserved	B	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-01E	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-01F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-01G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-01H	Plastic 250ml unpreserved	B	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-01I	Amber 250ml unpreserved	B	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-01J	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-01K	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-01L	Plastic 250ml HNO3 preserved	B	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-02A	Plastic 1000ml unpreserved	B	7	6	Y	Present/Intact	TSS-2540(7)
L1012632-02B	Plastic 500ml HNO3 preserved	B	<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)
L1012632-02C	Plastic 500ml HNO3 preserved	B	<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)
L1012632-03A	Plastic 500ml unpreserved	B	7	6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012632-03B	Plastic 500ml H2SO4 preserved	B	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

Report Date: 09/07/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-03C	Plastic 250ml HNO3 preserved	B	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-03D	Plastic 250ml unpreserved	B	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-03E	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-03H	Plastic 250ml unpreserved	B	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-03I	Amber 250ml unpreserved	B	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-03J	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-03K	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-04A	Plastic 1000ml unpreserved	B	7	6	Y	Present/Intact	TSS-2540(7)
L1012632-04B	Plastic 500ml HNO3 preserved	B	<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)
L1012632-05A	Plastic 500ml unpreserved	B	7	6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012632-05B	Plastic 500ml H2SO4 preserved	B	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012632

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-05C	Plastic 250ml HNO3 preserved	B	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-05D	Plastic 250ml unpreserved	B	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-05E	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-05H	Plastic 250ml unpreserved	B	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-05I	Amber 250ml unpreserved	B	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-05J	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-05K	Vial H2SO4 preserved split	B	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-06A	Plastic 500ml unpreserved	A	7	6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012632-06B	Plastic 500ml H2SO4 preserved	A	<2	6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012632-06C	Plastic 250ml HNO3 preserved	A	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1012632

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-06D	Plastic 250ml unpreserved	A	7	6	Y	Present/Intact	NO2-4500NO2(2)
L1012632-06E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-06F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-06G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	6	Y	Present/Intact	SULFIDE-4500(7)
L1012632-06H	Plastic 250ml unpreserved	A	N/A	6	Y	Present/Intact	ALK-T-2320(14)
L1012632-06I	Amber 250ml unpreserved	A	7	6	Y	Present/Intact	DOC-5310(28)
L1012632-06J	Vial H2SO4 preserved split	A	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-06K	Vial H2SO4 preserved split	A	N/A	6	Y	Present/Intact	DOC-5310(28)
L1012632-07A	Plastic 1000ml unpreserved	A	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)
L1012632-08A	Plastic 500ml HNO3 preserved	B	<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-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012632-09A	Plastic 500ml HNO3 preserved	B	<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)

\*Values in parentheses indicate holding time in days



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

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012632-10A	Plastic 500ml HNO3 preserved	B	<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)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012632

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.
- 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*

- A - Spectra identified as "Aldol Condensation Product".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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



**Project Name:** SHL TASK 0002**Lab Number:** L1012632**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-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 (EPH), 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 (EPH), 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,Ti,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, 4500NO<sub>3</sub>-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, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-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, 8082, 8081A.)

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-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, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-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, 4500NH<sub>3</sub>-H, 4500-S<sub>2</sub>-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, 4500NO<sub>3</sub>-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, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-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 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 Commission 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 S<sub>2</sub><sup>-</sup>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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.

CHAIN OF CUSTODY					PAGE 1 OF 1		Date Rec'd in Lab: 8/16/10		ALPHA Job #: 2102432						
 <b>WESTBORO, MA</b> TEL: 508-899-9220 FAX: 508-899-9193					<b>MANSFIELD, MA</b> TEL: 508-822-9300 FAX: 508-822-3288										
<b>Project Information</b>					<b>Report Information - Data Deliverables</b>				<b>Billing Information</b>						
Project Name: <u>SHL Task 0002</u>					<input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL <u>EOR</u>				<input type="checkbox"/> Same as Client Info PO #:						
Project Location: <u>Dartmouth MA</u>					<input type="checkbox"/> ADEx <input type="checkbox"/> Add'l Deliverables										
<b>Client Information</b>					<b>Regulatory Requirements/Report Limits</b>										
Client: <u>Sovereign Consulting Inc.</u>					State/Fed Program: Criteria: <u>SEE QAPP</u>										
Address: <u>905 B S. Main St</u>					<b>MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO</b>										
<u>Mansfield, MA 02048</u>					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are MCP Analytical Methods Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Are CT RCP (Reasonable Confidence Protocols) Required?										
Phone: <u>508-339-3200</u>															
Fax: <u>508-339-3248</u>															
Email: <u>pmbair@sacm.com</u>															
<input type="checkbox"/> These samples have been previously analyzed by Alpha					<b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u>8/28/10</u> Time:										
<b>Other Project Specific Requirements/Comments/Detection Limits:</b> If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed. (Note: All CAM methods for inorganic analyses require MS every 20 soil samples) SDG# = <u>Closed</u> * Done as noted F = Field Filtered Metals #1 = <u>As, Fe</u> Metals #2 = <u>As, Fe, Mn, Al, Cr, Pb, Ni, Na, Co, K, Mg</u>															
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection		Sample Matrix		Sampler's Initials		ANALYSIS		SAMPLE HANDLING		TOTAL # BOTTLES	
				Date Time						Filtration <input checked="" type="checkbox"/> Done # <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please specify below)		Sample Specific Comments			
12632		GP-10-14-039-F		8/12/10 0950		GW		JJC		Cl, SO <sub>4</sub> , NO <sub>3</sub> NH <sub>4</sub> , CO <sub>3</sub> SULF-W TSS DIL+DIC Tot Metals #1 BSS Metals #1 Tot Metals #2 Dis Metals #2		MS/MSD Metals Only		10	
2		GP-10-14-039-L1		8/12/10 0950		GW		JJC				MS/MSD Metals Only		3	
3		GP-10-14-049-F		8/12/10 1120		GW		JJC						9	
4		GP-10-14-049-L1		8/12/10 1120		GW		JJC						2	
5		GP-10-14-059-F		8/12/10 1300		GW		JJC						9	
6		GP-10-14-069-F		8/12/10 1435		GW		JJC						9	
7		GP-10-14-069-L1		8/12/10 1435		GW		JJC						2	
8		DUP-081610-F		8/12/10 1120		GW		JJC						1	
9		DUP-081610-L1		8/12/10 1120		GW		JJC						1	
10		RB-081610-L1		8/12/10 1530		GW		JJC						1	
PLEASE ANSWER QUESTIONS ABOVE!					Container Type: P P P P P P A P P P P Preservative: A A A D 1/2 A A C C C C					Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.					
<b>IS YOUR PROJECT MA MCP or CT RCP?</b>					Relinquished By: <u>[Signature]</u> Date/Time: <u>8/16/10 1600</u> Received By: <u>[Signature]</u> Date/Time: <u>8/16/10 1600</u>										
FORM NO: 01-01 (rev. 18-Jan-2010)															



WESTBORD, MA  
TEL: 508-898-9220  
FAX: 508-858-9193

MANSFIELD, MA  
 TEL: 508-822-9300  
 FAX: 508-822-3226

### CHAIN OF CUSTODY

PAGE 1 OF 1

### Project Information

Project Name: SHL Tary Doc 2

Project Location: Devens MA

Project #: AC001

Project Manager: *Phil McBain*

ALPHA Quote #:

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 6-1-2-17 Time:

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG ~~not~~ = closed \* Done as noted F = Fold F. Filtered

metals #1 = As, Fe metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Co, K, Mg

Date Rec'd in Lab: \_\_\_\_\_

ALPHA Job #: 210 2632

### Report Information - Data Deliverables

☐ FAX ☒ EMAIL *EDR*  
☐ ADEx ☐ Add'l Deliverables

### Billing Information

☐ Same as Client Info      PO #:

## Regulatory Requirements/Report Limits

State/Fed Program	Criteria	SEE QAPP
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## MA MCP PRESUMPTIVE CERTAINTY -- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl	S	Al	Fe	Mn	Cu	Zn	Pb	Cd	Cr	Ni	Co	Mg	Ca	K	Na	Total	Diss	Sample Specific Comments	Lab #
		Date	Time																						
12632	GP-10-14-039-F	8/16/10	11:50	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	MS/MSD Metals Only	10
2	GP-10-14-039-U	8/16/10	11:50	GW	JJC							✓										✓		MS/MSD Metals Only	3
3	GP-10-14-049-F	8/16/10	11:20	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		9
4	GP-10-14-049-U	8/16/10	11:20	GW	JJC							✓										✓			2
5	GP-10-14-059-F	8/16/10	11:20	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		9
6	GP-10-14-069-F	8/16/10	11:35	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		9
7	GP-10-14-069-U	8/16/10	11:35	GW	JJC							✓										✓			2
8	DUP-081610-F	8/16/10	11:20	GW	JJC																	✓			1
9	DUP-081610-U	8/16/10	11:20	GW	JJC																	✓			1
10	RB-081610-U	8/16/10	11:30	GW	JJC																	✓			1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

FORM NO: 01-01 (rev. 18-Jan-2010)

Container Type

Preservative

Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.







## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012636  
**Report Date:** 08/23/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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.

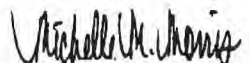
### Dissolved Inorganic Carbon

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**Sample Location:** DEVENS, MA**Matrix:** Water**Date Collected:** 08/16/10 09:50**Date Received:** 08/16/10**Field Prep:** Not Specified

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

Date Collected: 08/16/10 11:20

Client ID: GP-10-14-049-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

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	77		mg/l	40	--	40	08/16/10 21:30	08/19/10 17:34	30,5310C(M)	DW



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012636

Report Date: 08/23/10

## SAMPLE RESULTS

Lab ID: L1012636-03

Client ID: GP-10-14-059-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/16/10 13:00

Date Received: 08/16/10

Field Prep: Not Specified

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

Date Collected: 08/16/10 14:35

Client ID: GP-10-14-069-F

Date Received: 08/16/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>										
Dissolved Inorganic Carbon	76		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

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-04 Batch: WG428637-1										
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**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012636**Report Date:** 08/23/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-04 Batch: WG428637-2								
Dissolved Inorganic Carbon	110							



Project Name: SHL TASK 0002  
Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1012636  
Report Date: 08/23/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04 QC Batch ID: WG428637-3 QC Sample: L1012636-04 Client ID: GP-10-14-069-F						
Dissolved Inorganic Carbon	76	90	mg/l	17		

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

B Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012636-01A	Amber 250ml unpreserved	A	N/A	6	Y	Absent	SPECWC()
L1012636-01B	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-01C	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-02A	Amber 250ml unpreserved	A	N/A	6	Y	Absent	SPECWC()
L1012636-02B	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-02C	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-03A	Amber 250ml unpreserved	A	N/A	6	Y	Absent	SPECWC()
L1012636-03B	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-03C	Vial H2SO4 preserved split	A	N/A	6	Y	Absent	SPECWC()
L1012636-04A	Amber 250ml unpreserved	B	N/A	6	Y	Absent	SPECWC()
L1012636-04B	Vial H2SO4 preserved split	B	N/A	6	Y	Absent	SPECWC()
L1012636-04C	Vial H2SO4 preserved split	B	N/A	6	Y	Absent	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: 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.
- 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

- A - Spectra identified as "Aldol Condensation Product".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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



**Project Name:** SHL TASK 0002

**Lab Number:** L1012636

**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:** 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, 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 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, 4500NO<sub>3</sub>-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, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-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, 8082, 8081A.)

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-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, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-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, 4500NH<sub>3</sub>-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, 4500NO<sub>3</sub>-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, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-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 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 Commission 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 S<sub>2</sub><sup>-</sup>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.

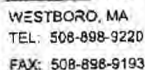
*Drinking Water* (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

*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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



PAGE 1 OF 1

Date Rec'd in Lab \_\_\_\_\_

## ALPHA Job

WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

### Client Information

Client: Sovereign Consulting Inc

Address: 905 B S. Main St

Mansfield, MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmcbaning@sale.com.cn

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG# = closed \* Done as noted F = Field Filtered  
Metals #1 = As, Fe Metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Na, Ca, K, Mg

## Project Information

Project Name: SHL Tasy 0002

Project Location: Dorchester MA

Project #: AC001

Project Manager: *Phil McBain*

ALPHA Quote #:

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 8/23/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL *EDR*  
☐ ADEx ☐ Add'l Deliverable

### Billing Information

<input type="checkbox"/> Same as Client info	PO #:
--	-------

## Regulatory Requirements/Report Limits

State /Fed Program	Criteria	SEE QAPP
--------------------	----------	----------

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## SAMPLE HANDLING

**Filtration** \_\_\_\_\_  
☒ Done \*  
☐ Not needed  
☐ Lab to do  
**Preservation**  
☐ Lab to do  
 (Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl <sub>2</sub> S	NO <sub>2</sub>	Alk	NH <sub>4</sub>	SUL	TSS	DIN	DON	BOD <sub>5</sub>	TOC	Diss	(Please specify below) Sample Specific Comments	LMS
		Date	Time															
12636	GP-10-14-039-F	8/12/10	0850	GW	JJC	✓	✓	✓	✓	✓		✓				✓	MS/MSD Metals Only	10
	GP-10-14-039-U	8/12/10	0950	GW	JJC						✓				✓		MS/MSD Metals Only	3
2	GP-10-14-049-F	8/14/10	1120	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
	GP-10-14-049-U	8/12/10	1120	GW	JJC						✓				✓			2
3	GP-10-14-059-F	8/12/10	1300	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
4	GP-10-14-069-F	8/12/10	1435	GW	JJC	✓	✓	✓	✓	✓		✓				✓		9
	GP-10-14-069-U	8/14/10	1435	GW	JJC						✓				✓			2
	DUP-081610-F	8/12/10	1120	GW	JJC											✓		1
	DUP-081610-U	8/12/10	1120	GW	JJC										✓			1
	RB-081610-U	8/12/10	1530	GW	JJC										✓			1

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	P	P	P	P	P	P	A	P	P	P
Preservative	A	A	A	D	<del>K</del> E	A	A	C	C	C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

CRM NO: 01-01 (rev. 18-Jan-2010)

Reassemblies nearly totally uncom-  
pletely. Samples can not be placed  
in and upward and in does will not  
for until any ambiguity is resolved.  
All samples identified are a direct  
Applicable to all conditions.  
Scale and side.



## 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](http://www.alphalab.com)

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012682  
**Report Date:** 08/24/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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:** SHL TASK 0002  
**Project Number:** 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.

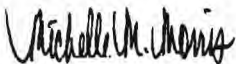
### Dissolved Inorganic Carbon

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

Lab Number: L1012682

Project Number: AC001

Report Date: 08/24/10

## SAMPLE RESULTS

Lab ID: L1012682-01

Date Collected: 08/17/10 07:45

Client ID: GP-10-14-079-F

Date Received: 08/17/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

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

Date Collected: 08/17/10 16:15

Client ID: GP-10-16-024-F

Date Received: 08/17/10

Sample Location: DEVENS, MA

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	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

Project Number: AC001

Report Date: 08/24/10

**Method Blank Analysis**  
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-02 Batch: WG428638-1										
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

Project Name: SHL TASK 0002

Project Number: AC001

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: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1012682

Report Date: 08/24/10

Parameter	Native Sample	Duplicate Sample	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: SHL TASK 0002

Lab Number: L1012682

Project Number: AC001

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

B Present/Intact

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012682-01A	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	SPECWC()
L1012682-01B	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	SPECWC()
L1012682-01X	Amber 250ml unpreserved	B	6	4	Y	Present/Intact	SPECWC()
L1012682-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1012682-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1012682-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012682

Project Number: AC001

Report Date: 08/24/10

## 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 8260B is shown as I,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".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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



**Project Name:** SHL TASK 0002

**Lab Number:** L1012682

**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





**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012682  
**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.



**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, 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,Ti,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, 4500NO<sub>3</sub>-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, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-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, 8082, 8081A.)

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-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, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-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, 4500NH<sub>3</sub>-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, 4500NO<sub>3</sub>-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, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-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 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 Commission 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 S<sup>2-</sup>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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.





WESTBORO, MA  
TEL: 508-890-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3285

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab

ALPHA 10672

## Client Information

Client: Sovereign Consulting Inc  
Address: 905 B South Main St  
Mansfield, MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: pmc@scn.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: SHL Twp 0002  
Project Location: Dover's MA  
Project #: AC001  
Project Manager: Phil McBain  
ALPHA Quote #:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 8/24/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EDR  
☐ ADEX ☐ Add'l Deliverables

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program Criteria SEE QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No Are MCP Analytical Methods Required?  
☒ Yes ☐ No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)  
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)  
SDG#34 - closed \*Done as noted F=Field Filtered

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES	
		Date	Time			Cl, SO <sub>4</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub>	S, P, Hg	TSS	DIC, DOC	Total TAL Metals	Diss TAL Metals				
12682	GP-10-14-079-F	8/17/10	0745	GW	JJC	✓	✓	✓	✓	✓		✓		✓			MS/MSD Metals Only	10
	GP-10-14-079-U	8/17/10	0745	GW	JJC							✓		✓			MS/MSD Metals Only	3
2	GP-10-16-024-F	8/17/10	1615	GW	JJC	✓	✓	✓	✓	✓		✓		✓				9
	GP-10-16-024-U	8/17/10	1615	GW	JJC							✓		✓				2
	DUP-081710-F	8/17/10	1615	GW	JJC										✓			1
	DUP-081710-U	8/17/10	1615	GW	JJC									✓				1
	RB-081710-U	8/17/10	1145	GW	RVM									✓				1

PLEASE ANSWER QUESTIONS ABOVE!

Container Type P P P P P P A P P

Preservative A A A D E A A C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Requisitioned By:

Date/Time

Received By:

Date/Time



## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012735  
**Report Date:** 09/02/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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



**Project Name:** SHL TASK 0002**Lab Number:** L1012735**Project Number:** AC001**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

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012735  
**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 qualified 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.

Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

**Case Narrative (continued)**

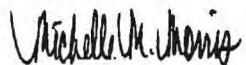
Alkalinity, Total

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



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-01  
 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: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough 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	BM
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	BM
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	BM
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	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Calcium, Dissolved	15000		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
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	BM
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	BM
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	BM
Iron, Dissolved	138		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
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	BM
Magnesium, Dissolved	2030		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Manganese, Dissolved	580		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
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	BM
Potassium, Dissolved	6630		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
Sodium, Dissolved	9100		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM
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	BM
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	BM
Zinc, Dissolved	3.37	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 05:19	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-02  
 Client ID: 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	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	79600		ug/l	50.0	9.56	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Antimony, Total	3.20	J	ug/l	2.50	0.600	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Arsenic, Total	333	J	ug/l	2.50	0.565	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Barium, Total	558		ug/l	2.50	0.475	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Beryllium, Total	6.35		ug/l	2.50	0.295	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Cadmium, Total	1.36	J	ug/l	2.50	0.295	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Calcium, Total	57800		ug/l	500	63.3	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Chromium, Total	289		ug/l	2.50	0.930	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Cobalt, Total	122		ug/l	2.50	0.265	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Copper, Total	272		ug/l	2.50	0.590	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Iron, Total	145000		ug/l	250	42.0	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Lead, Total	245		ug/l	2.50	0.250	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Magnesium, Total	24700	J	ug/l	500	20.5	5	08/20/10 18:45	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	08/24/10 06:07	EPA 3005A	1,6020A	BM
Mercury, Total	0.2714	J	ug/l	0.2000	0.0120	1	08/24/10 17:10	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	08/24/10 06:07	EPA 3005A	1,6020A	BM
Potassium, Total	17100		ug/l	500	90.8	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Selenium, Total	6.39	J	ug/l	5.00	2.03	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Silver, Total	0.58	J	ug/l	2.50	0.425	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Sodium, Total	17600		ug/l	500	91.0	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM
Thallium, Total	1.91	J	ug/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	08/24/10 06:07	EPA 3005A	1,6020A	BM
Zinc, Total	298		ug/l	25.0	8.12	5	08/20/10 18:45	08/24/10 06:07	EPA 3005A	1,6020A	BM



Project Name: 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 - Westborough Lab											
Aluminum, Dissolved	16.9		ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.800		ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1.89		ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Barium, Dissolved	8.15		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Calcium, Dissolved	34700		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.43	J	ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.740		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Copper, Dissolved	1.45		ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Iron, Dissolved	277		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.07	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3500		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Manganese, Dissolved	84.0		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 12:59	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.21		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Potassium, Dissolved	4810		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.43	J	ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Sodium, Dissolved	36000		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.04	J	ug/l	0.500	0.031	1	08/22/10 12:00	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 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM
Zinc, Dissolved	6.01		ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 05:43	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

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	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	4030		ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Antimony, Total	2.82		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Arsenic, Total	19.9		ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Barium, Total	25.9		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Beryllium, Total	0.34	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Cadmium, Total	0.19	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Calcium, Total	35200		ug/l	100	12.6	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Chromium, Total	25.0		ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Cobalt, Total	3.84		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Copper, Total	23.6		ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Iron, Total	8900		ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Lead, Total	22.0		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Magnesium, Total	4860		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Manganese, Total	180		ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 13:38	EPA 7470A	1,7470A	EZ
Nickel, Total	14.4		ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Potassium, Total	5840		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Selenium, Total	0.82	J	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Silver, Total	0.29	J	ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Sodium, Total	35600		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Thallium, Total	0.1	J	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Vanadium, Total	7.83		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM
Zinc, Total	40.2		ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 06:43	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-05  
 Client ID: GP-10-16-064-F  
 Sample Location: DEVENS, MA  
 Matrix: 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 - Westborough Lab											
Aluminum, Dissolved	4.17	J	ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.28	J	ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	445		ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Barium, Dissolved	39.2		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Calcium, Dissolved	31300		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.36	J	ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	26.0		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.47	J	ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Iron, Dissolved	44700		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.13	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	6080		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Manganese, Dissolved	777		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 13:00	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	12.8		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Potassium, Dissolved	12000		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Sodium, Dissolved	16600		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.21	J	ug/l	0.500	0.077	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM
Zinc, Dissolved	3.97	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 05:49	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-06  
 Client ID: DUP-081810-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 - Westborough Lab											
Aluminum, Dissolved	18.9		ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.640		ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	2.05		ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Barium, Dissolved	8.34		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Calcium, Dissolved	35000		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.38	J	ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.750		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Copper, Dissolved	1.21		ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Iron, Dissolved	300		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3610		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Manganese, Dissolved	86.0		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 13:02	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.27		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5040		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Sodium, Dissolved	36700		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.42	J	ug/l	0.500	0.077	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM
Zinc, Dissolved	4.15	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 05:55	EPA 3005A	1,6020A	BM

Project Name: 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  
 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 - Westborough Lab											
Aluminum, Total	5710		ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Antimony, Total	3.60		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Arsenic, Total	26.0		ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Barium, Total	32.5		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Beryllium, Total	0.45	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Cadmium, Total	0.23	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Calcium, Total	33600		ug/l	100	12.6	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Chromium, Total	30.0		ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Cobalt, Total	4.57		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Copper, Total	27.4		ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Iron, Total	11400		ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Lead, Total	25.6		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Magnesium, Total	5310		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Manganese, Total	200		ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Mercury, Total	0.03683	J	ug/l	0.2000	0.0120	1	08/24/10 17:10	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	08/24/10 06:49	EPA 3005A	1,6020A	BM
Potassium, Total	6060		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Selenium, Total	0.93	J	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Sodium, Total	35800		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Thallium, Total	0.1	J	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Vanadium, Total	10.4		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM
Zinc, Total	47.5		ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 06:49	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-08

Client ID: RB-081810-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/18/10 14:20

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 - Westborough Lab											
Aluminum, Total	3.04	J	ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Arsenic, Total	0.15	J	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Calcium, Total	25.1	J	ug/l	100	12.6	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Chromium, Total	0.21	J	ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Copper, Total	0.14	J	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Iron, Total	9.64	J	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Manganese, Total	0.16	J	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 13:42	EPA 7470A	1,7470A	EZ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Sodium, Total	28.3	J	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM
Zinc, Total	1.84	J	ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 06:55	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 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 - Westborough Lab for sample(s): 02,04,07-08 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	BM
Antimony, Total	ND	ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Arsenic, Total	ND	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Barium, Total	ND	ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Beryllium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Cadmium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Calcium, Total	ND	ug/l	100	12.6	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Chromium, Total	ND	ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Cobalt, Total	ND	ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Copper, Total	ND	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Iron, Total	ND	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Lead, Total	ND	ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Magnesium, Total	ND	ug/l	100	4.10	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Manganese, Total	ND	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Nickel, Total	ND	ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Potassium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Selenium, Total	ND	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Silver, Total	ND	ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Sodium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Thallium, Total	ND	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Vanadium, Total	ND	ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Zinc, Total	ND	ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05-06 Batch: WG428837-1									
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Antimony, Dissolved	ND	ug/l	0.500	0.120	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Barium, Dissolved	ND	ug/l	0.500	0.095	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

### 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	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Calcium, Dissolved	25.7	J	ug/l	100	12.6	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Iron, Dissolved	10.3	J	ug/l	50.0	8.41	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Manganese, Dissolved	0.24	J	ug/l	1.00	0.136	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Zinc, Dissolved	2.12	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05-06 Batch: WG429219-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/24/10 17:10	08/25/10 12:50	1,7470A	EZ

#### Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 02,04,07-08 Batch: 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

**Lab Number:** L1012735

**Project Number:** AC001

**Report Date:** 09/02/10

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

Digestion Method: EPA 7470A



# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	LCS %Recovery	Qual	LCSD %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	-		
Antimony, Total	101		-		80-120	-		
Arsenic, Total	100		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	104		-		80-120	-		
Cadmium, Total	111		-		80-120	-		
Calcium, Total	109		-		80-120	-		
Chromium, Total	97		-		80-120	-		
Cobalt, Total	105		-		80-120	-		
Copper, Total	103		-		80-120	-		
Iron, Total	106		-		80-120	-		
Lead, Total	103		-		80-120	-		
Magnesium, Total	100		-		80-120	-		
Manganese, Total	100		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	102		-		80-120	-		
Selenium, Total	103		-		80-120	-		
Silver, Total	99		-		80-120	-		
Sodium, Total	110		-		80-120	-		
Thallium, Total	96		-		80-120	-		
Vanadium, Total	103		-		80-120	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

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	-	

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06 Batch: WG428837-2					
Aluminum, Dissolved	93	-	80-120	-	
Antimony, Dissolved	101	-	80-120	-	
Arsenic, Dissolved	105	-	80-120	-	
Barium, Dissolved	105	-	80-120	-	
Beryllium, Dissolved	104	-	80-120	-	
Cadmium, Dissolved	111	-	80-120	-	
Calcium, Dissolved	108	-	80-120	-	
Chromium, Dissolved	96	-	80-120	-	
Cobalt, Dissolved	104	-	80-120	-	
Copper, Dissolved	102	-	80-120	-	
Iron, Dissolved	104	-	80-120	-	
Lead, Dissolved	102	-	80-120	-	
Magnesium, Dissolved	101	-	80-120	-	
Manganese, Dissolved	101	-	80-120	-	
Nickel, Dissolved	102	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Selenium, Dissolved	107	-	80-120	-	
Silver, Dissolved	101	-	80-120	-	
Sodium, Dissolved	113	-	80-120	-	
Thallium, Dissolved	98	-	80-120	-	
Vanadium, Dissolved	101	-	80-120	-	

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	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 Associated sample(s): 02,04,07-08 Batch: WG429220-2					
Mercury, Total	109	-	80-120	-	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

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 Associated sample(s): 02,04,07-08 QC Batch ID: WG428722-4 WG428722-5 QC Sample: L1012735-02 Client ID: GP-10-16-034-U												
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

**Matrix Spike Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012735**Report Date:** 09/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,07-08 QC Batch ID: WG428722-4 WG428722-5 QC Sample: L1012735-02 Client ID: GP-10-16-034-U									
Zinc, Total	298	500	795	99	764	93	80-120	4	20



# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012735  
**Report Date:** 09/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 WG428837-4 QC Sample: L1012735-01 Client ID: GP-10-16-034-F									
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

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG428837-3 WG428837-4 QC Sample: L1012735-01 Client ID: GP-10-16-034-F									
Zinc, Dissolved	ND	500	531	106	530	106	80-120	0	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05-06 QC Batch ID: WG429219-3 WG429219-4 QC Sample: L1012735-01 Client ID: GP-10-16-034-F									
Mercury, Dissolved	ND	1	1.410	141	Q 1.379	138	Q 80-120	2	20
Total Metals - Westborough Lab Associated sample(s): 02,04,07-08 QC Batch ID: WG429220-3 WG429220-4 QC Sample: L1012735-02 Client ID: GP-10-16-034-U									
Mercury, Total	0.2714	1	1.465	119	1.483	121	Q 80-120	1	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-01

Date Collected: 08/18/10 07:55

Client ID: GP-10-16-034-F

Date Received: 08/18/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S2-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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	15		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	-	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: L1012735-02

Date Collected: 08/18/10 07:55

Client ID: GP-10-16-034-U

Date Received: 08/18/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	3000		mg/l	50	NA	10	-	08/20/10 09:55	30,2540D	DW



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-03

Date Collected: 08/18/10 11:20

Client ID: GP-10-16-054-F

Date Received: 08/18/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	74		mg CaCO <sub>3</sub> /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	1	-	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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	-	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

Date Collected: 08/18/10 11:20

Client ID: GP-10-16-054-U

Date Received: 08/18/10

Sample Location: DEVENS, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	160		mg/l	5.0	NA	1	-	08/20/10 09:55	30,2540D	DW



Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## SAMPLE RESULTS

Lab ID: L1012735-05  
 Client ID: GP-10-16-064-F  
 Sample Location: DEVENS, MA  
 Matrix: 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	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	210		mg CaCO <sub>3</sub> /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	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/18/10 23:07	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/19/10 17:45	08/19/10 18:45	30,4500S <sub>2</sub> -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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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	-	08/19/10 20:07	44,300.0	AU
Sulfate	7.3		mg/l	1.0	0.12	1	-	08/19/10 20:07	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

### Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough 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 - Westborough Lab for sample(s): 01,03,05 Batch: WG428381-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	08/19/10 14:56	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG428535-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	08/19/10 12:30	08/20/10 21:31	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,03,05 Batch: WG428558-1									
Chloride	ND	mg/l	0.50	0.07	1	-	08/19/10 18:31	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	08/19/10 18:31	44,300.0	AU
Sulfate	ND	mg/l	1.0	0.12	1	-	08/19/10 18:31	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG428579-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/20/10 09:55	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG428684-1									
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 - Westborough Lab for sample(s): 01,03,05 Batch: WG428685-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	08/20/10 11:17	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG429018-2									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	08/17/10 21:30	08/23/10 18:29	30,5310C	DD

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428324-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428381-2								
Chemical Oxygen Demand	103		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428535-2								
Nitrogen, Ammonia	96		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428558-2								
Chloride	98		-		90-110	-		
Nitrogen, Nitrate	100		-		90-110	-		
Sulfate	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428684-2								
Sulfide	91		-		75-125	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428685-2								
Alkalinity, Total	106		-		80-115	-		4

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG429018-1

Dissolved Organic Carbon

106

90-110

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012735  
**Report Date:** 09/02/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428324-3 QC Sample: L1012735-01 Client ID: GP-10-16-034-F												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428381-3 QC Sample: L1012632-01 Client ID: MS Sample												
Chemical Oxygen Demand	26	238	300	115	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428535-3 QC Sample: L1012735-05 Client ID: GP-10-16-064-F												
Nitrogen, Ammonia	6.98	4	10.4	86	-	-	-	-	80-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428558-3 WG428558-4 QC Sample: L1012735-05 Client ID: GP-10-16-064-F												
Chloride	7.1	4	11	98	-	11	98	-	40-151	0	-	18
Nitrogen, Nitrate	ND	0.4	0.36	90	-	0.35	88	-	80-122	3	-	15
Sulfate	7.3	8	15	96	-	15	96	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428684-3 QC Sample: L1012735-01 Client ID: GP-10-16-034-F												
Sulfide	ND	0.24	0.18	75	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428685-3 QC Sample: L1012735-05 Client ID: GP-10-16-064-F												
Alkalinity, Total	210	100	290	80	Q	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG429018-3 QC Sample: L1012735-05 Client ID: GP-10-16-064-F												
Dissolved Organic Carbon	3.7	4	8.1	109	-	-	-	-	79-120	-	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012735

Report Date: 09/02/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 F	QC Batch ID: WG428324-4	QC Sample: L1012735-01	Client ID: GP-10-16-034-			
Nitrogen, Nitrite	ND	ND	mg/l	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 F	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 - Westborough Lab Associated sample(s): 01,03,05 10-16-064-F	QC Batch ID: WG428558-5	QC Sample: L1012735-05	Client ID: GP-			
Chloride	7.1	7.1	mg/l	0		18
Nitrogen, Nitrate	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: WG428579-2	QC Sample: L1012735-02	Client ID: GP-10-16-034-U			
Solids, Total Suspended	3000	2800	mg/l	7		32
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 F	QC Batch ID: WG428684-4	QC Sample: L1012735-05	Client ID: GP-10-16-064-			
Sulfide	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 F	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

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**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: SHL TASK 0002

Lab Number: L1012735

Project Number: AC001

Report Date: 09/02/10

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

## Cooler

B Present/Intact

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012735-01A	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-01B	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-01C	Plastic 250ml unpreserved	B	N/A	3.9	Y	Present/Intact	ALK-T-2320(14)
L1012735-01D	Plastic 250ml HNO3 preserved	B	<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-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012735-01E	Plastic 250ml HNO3 preserved	B	<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-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012735-01F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-01G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-01H	Plastic 250ml Zn Acetate/NaOH pr	A	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-01I	Plastic 500ml H2SO4 preserved	A	<2	5.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-01J	Plastic 250ml unpreserved	B	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1012735-01K	Plastic 500ml unpreserved	A	6	5.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012735-01X	Amber 250ml unpreserved	A	6	5.1	Y	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-6020T(180),DOD-HG-7470T(28),DOD-SB-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012735

Report Date: 09/02/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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-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-SB-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)
L1012735-02C	Plastic 1000ml unpreserved	A	6	5.1	Y	Present/Intact	TSS-2540(7)
L1012735-03A	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-03B	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	DOC-5310(28)
L1012735-03C	Plastic 250ml unpreserved	A	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-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012735-03E	Plastic 250ml Zn Acetate/NaOH pr	A	>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	A	>12	5.1	Y	Present/Intact	SULFIDE-4500(7)
L1012735-03H	Plastic 500ml H2SO4 preserved	A	<2	5.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-03I	Plastic 250ml unpreserved	A	6	5.1	Y	Present/Intact	NO2-4500NO2(2)

\*Values in parentheses indicate holding time in days

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012735-03J	Plastic 500ml unpreserved	A	6	5.1	Y	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-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-SB-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)
L1012735-04B	Plastic 1000ml unpreserved	A	6	5.1	Y	Present/Intact	TSS-2540(7)
L1012735-05A	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1012735-05B	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1012735-05C	Plastic 250ml unpreserved	B	N/A	3.9	Y	Present/Intact	ALK-T-2320(14)
L1012735-05D	Plastic 250ml HNO3 preserved	B	<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-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-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	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1012735-05F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1012735-05G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)

\*Values in parentheses indicate holding time in days

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012735-05H	Plastic 500ml H2SO4 preserved	B	<2	3.9	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012735-05I	Plastic 250ml unpreserved	B	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1012735-05J	Plastic 500ml unpreserved	B	6	3.9	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012735-05X	Amber 250ml unpreserved	B	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-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp 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-SB-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

**Container Comments**

L1012735-01A

L1012735-01B

L1012735-03A

L1012735-03B

L1012735-05A

L1012735-05B

\*Values in parentheses indicate holding time in days

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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.
LCS D	- 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.
MS D	- 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

A	- Spectra identified as "Aldol Condensation Product".
B	- 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.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- 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.
Q	- 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:** L1012735

**Project Number:** AC001

**Report Date:** 09/02/10

**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



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012735  
**Report Date:** 09/02/10

## 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-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 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, 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, 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, 4500CI-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 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 Commission 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 S<sup>2-</sup>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.





# CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-698-9193

MANFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3289

2 Cadders

## Client Information

Client: Sovereign Consulting Inc

Address: 905 B S Main St

Manfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmcain@sovereign.com

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.  
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG# - closed

\* Done as noted F = Field Filtered

## Project Information

Project Name: SHL Task 0002

Project Location: Dover's MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard

☐ RUSH (only confirmed if pre-approved)

Date Due: 8/25/10 Time:

Date Rec'd in Lab: 8/18/10

ALPHA Job #: 11010435

## Report Information - Data Deliverables

☐ FAX

☒ EMAIL EDR

☐ ADEX

☐ Add'l Deliverables

## Billing Information

☐ Same as Client info

PO #:

## Regulatory Requirements/Report Limits

State / Fed Program

Criteria SEECAP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No

Are MCP Analytical Methods Required?

☒ Yes ☐ No

Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☒ No

Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS										SAMPLE HANDLING	TOTAL # BOTTLES
	Cl, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	Alk	MH <sub>4</sub> CO <sub>3</sub>	Sulfide	TSS	DIC + DOC	Total TAL Metals	Diss TAL Metals		
12735	✓	✓	✓	✓	✓	✓	✓	✓	✓	MS/MSD Metals Only	10
2						✓	✓			MS/MSD Metals Only	3
3	✓	✓	✓	✓	✓	✓	✓	✓			9
4					✓		✓				2
5	✓	✓	✓	✓	✓		✓	✓			9
6								✓			1
7								✓			1
8								✓			1

## SAMPLE HANDLING

Filtration

☒ Done \*

☐ Not needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

Sample Specific Comments

ALPHA Lab ID  
(Lab Use Only)

Sample ID

Collection

Date

Time

Sample Matrix

Sampler's Initials

12735 1 GP-10-16-034-F

8/18/10

0755

GW

JJC

2 GP-10-16-034-U

8/18/10

0755

GW

JJC

3 GP-10-16-054-F

8/18/10

1120

GW

JJC

4 GP-10-16-054-U

8/18/10

1120

GW

JJC

5 GP-10-16-064-F

8/18/10

1340

GW

JJC

~~GP-10-16-064-U PJV~~

~~PJV~~

6 DUP-081810-F

8/18/10

1120

BW

JJC

7 DUP-081810-U

8/18/10

1120

GW

JJC

8 RB-081810-U

8/18/10

1420

GW

RNM

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type

P P P P P P A P P

Preservative

A A A D K/E A A C C

Relinquished By:

Date/Time

Received By:

Date/Time

Phil McBain  
8-18-10 170

8/18/10 1600

Lee Fung  
8/18/10 170

8/18/10 170

Please print clearly, legibly, and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. 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](http://www.alphalab.com)





**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012737  
**Report Date:** 08/25/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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 LCS 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: 08/25/10

# **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
<b>General Chemistry</b>										
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

Date Collected: 08/18/10 11:20

Client ID: GP-10-16-054-F

Date Received: 08/18/10

Sample Location: DEVENS, MA

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	08/19/10 01:00	08/19/10 17:34	30,5310C(M)	DW



**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012737**Report Date:** 08/25/10**SAMPLE RESULTS****Lab ID:** L1012737-03**Client ID:** GP-10-16-064-F**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
<b>General Chemistry</b>										
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

Project Number: AC001

Report Date: 08/25/10

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-03 Batch: WG428639-1										
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

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**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							

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

**Lab Number:** L1012737  
**Report Date:** 08/25/10

Parameter	Native Sample	Duplicate Sample	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	46	45	mg/l	2		

Project Name: SHL TASK 0002

Lab Number: L1012737

Project Number: AC001

Report Date: 08/25/10

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

**Cooler Information Custody Seal****Cooler**

B Present/Intact

A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012737-01A	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	SPECWC()
L1012737-01B	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	SPECWC()
L1012737-01X	Amber 250ml unpreserved	A	6	5.1	Y	Present/Intact	SPECWC()
L1012737-02A	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	SPECWC()
L1012737-02B	Vial H2SO4 preserved split	A	N/A	5.1	Y	Present/Intact	SPECWC()
L1012737-02X	Amber 250ml unpreserved	A	6	5.1	Y	Present/Intact	SPECWC()
L1012737-03A	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	SPECWC()
L1012737-03B	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	SPECWC()
L1012737-03X	Amber 250ml unpreserved	B	6	3.9	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: 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.
- 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 L8260B.) 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".
- B** - 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.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - 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.
- Q** - 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



**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.

**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:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012737  
**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.



## 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, 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-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, 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, 4500CI-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 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 Commission 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, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>B, 4500P-E, 4500 S<sub>2</sub><sup>-</sup>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, 4500SO<sub>4</sub>-E, 426C, 4500NH<sub>3</sub>-B, 4500NH<sub>3</sub>-H, 4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S<sub>2</sub>-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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.





## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012830  
**Report Date:** 09/03/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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



**Project Name:** SHL TASK 0002**Lab Number:** L1012830**Project Number:** AC001**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

**Project Name:** SHL TASK 0002**Lab Number:** L1012830**Project Number:** AC001**Report Date:** 09/03/10**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.



**Project Name:** SHL TASK 0002

**Lab Number:** L1012830

**Project Number:** AC001

**Report Date:** 09/03/10

**Case Narrative (continued)**

**Chloride**

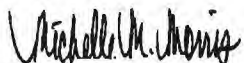
L1012830-01 and -05 have elevated detection limits due to the dilutions required to quantitate the results within the calibration range.

**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.

Authorized Signature:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 09/03/10

## METALS



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-01  
 Client ID: GP-10-16-074-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/19/10 07:25  
 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 - Westborough Lab											
Aluminum, Dissolved	7.02	J	ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.42	J	ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	216	J	ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Barium, Dissolved	36.3		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Calcium, Dissolved	50900		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.750		ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	4.66		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.860		ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Iron, Dissolved	64200		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.07	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	11800		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1330	J	ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:45	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	16.6		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Potassium, Dissolved	20400	J	ug/l	100	18.2	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.47	J	ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Sodium, Dissolved	31700	J	ug/l	100	18.2	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.1	J	ug/l	0.500	0.077	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM
Zinc, Dissolved	6.87		ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 07:07	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-02

Client ID: GP-10-16-074-U

Sample Location: 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	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	3540		ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Antimony, Total	1.00		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Arsenic, Total	248	J	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Barium, Total	59.0		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Beryllium, Total	0.17	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Calcium, Total	52200		ug/l	100	12.6	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Chromium, Total	44.2		ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Cobalt, Total	6.41		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Copper, Total	14.5		ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Iron, Total	75900		ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Lead, Total	4.79		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Magnesium, Total	12800		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Manganese, Total	1420	J	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:06	EPA 7470A	1,7470A	EZ
Nickel, Total	24.6		ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Potassium, Total	21500	J	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Selenium, Total	0.64	J	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Sodium, Total	33000	J	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Thallium, Total	0.06	J	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Vanadium, Total	3.08		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM
Zinc, Total	24.0		ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 08:07	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

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	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	ND		ug/l	40.0	7.64	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	248		ug/l	2.00	0.452	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Barium, Dissolved	56.6		ug/l	2.00	0.380	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Calcium, Dissolved	122000		ug/l	400	50.6	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	5.45		ug/l	2.00	0.212	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.61	J	ug/l	2.00	0.472	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Iron, Dissolved	17200		ug/l	200	33.6	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	18200		ug/l	400	16.4	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2920		ug/l	4.00	0.544	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:50	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	7.80		ug/l	2.00	0.720	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5370		ug/l	400	72.6	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Sodium, Dissolved	42200		ug/l	400	72.8	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM
Zinc, Dissolved	14.2	J	ug/l	20.0	6.50	4	08/22/10 12:00	08/24/10 07:43	EPA 3005A	1,6020A	BM

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	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	906		ug/l	40.0	7.64	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Antimony, Total	1.39	J	ug/l	2.00	0.480	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Arsenic, Total	256		ug/l	2.00	0.452	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Barium, Total	64.3		ug/l	2.00	0.380	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Calcium, Total	125000		ug/l	400	50.6	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Chromium, Total	10.5		ug/l	2.00	0.744	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Cobalt, Total	7.11		ug/l	2.00	0.212	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Copper, Total	9.33		ug/l	2.00	0.472	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Iron, Total	20600		ug/l	200	33.6	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Lead, Total	1.73	J	ug/l	2.00	0.200	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Magnesium, Total	18900		ug/l	400	16.4	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Manganese, Total	3120		ug/l	4.00	0.544	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:22	EPA 7470A	1,7470A	EZ
Nickel, Total	12.2		ug/l	2.00	0.720	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Potassium, Total	6240		ug/l	400	72.6	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	4.00	1.62	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.00	0.340	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Sodium, Total	45200		ug/l	400	72.8	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.00	0.124	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Vanadium, Total	1.71	J	ug/l	2.00	0.308	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM
Zinc, Total	13.9	J	ug/l	20.0	6.50	4	08/20/10 18:45	08/24/10 08:31	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-05  
 Client ID: GP-10-16-094-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/19/10 12:35  
 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 - Westborough Lab											
Aluminum, Dissolved	5.34	J	ug/l	10.0	1.91	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.23	J	ug/l	0.500	0.120	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	3.44		ug/l	0.500	0.113	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Barium, Dissolved	10.1		ug/l	0.500	0.095	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Calcium, Dissolved	34700		ug/l	100	12.6	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	1.54		ug/l	0.500	0.053	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Copper, Dissolved	4.32		ug/l	0.500	0.118	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Iron, Dissolved	625		ug/l	50.0	8.41	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.1	J	ug/l	0.500	0.050	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	4100		ug/l	100	4.10	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Manganese, Dissolved	368		ug/l	1.00	0.136	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:52	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	8.07		ug/l	0.500	0.180	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5210		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Sodium, Dissolved	34200		ug/l	100	18.2	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.22	J	ug/l	0.500	0.077	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM
Zinc, Dissolved	4.84	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/24/10 07:49	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-06

Date Collected: 08/19/10 12:35

Client ID: GP-10-16-094-U

Date Received: 08/19/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	2880		ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Antimony, Total	1.01		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Arsenic, Total	19.3		ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Barium, Total	35.8		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Beryllium, Total	0.3	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Cadmium, Total	0.07	J	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Calcium, Total	39200		ug/l	100	12.6	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Chromium, Total	48.8		ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Cobalt, Total	5.08		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Copper, Total	192		ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Iron, Total	17500		ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Lead, Total	8.58		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Magnesium, Total	5320		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Manganese, Total	620		ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:24	EPA 7470A	1,7470A	EZ
Nickel, Total	23.3		ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Potassium, Total	6660		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Selenium, Total	0.58	J	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Sodium, Total	36600		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Thallium, Total	0.07	J	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Vanadium, Total	3.78		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM
Zinc, Total	24.7		ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 08:37	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-07

Date Collected: 08/19/10 09:40

Client ID: DUP-081910-F

Date Received: 08/19/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	14.1	J	ug/l	40.0	7.64	4	08/22/10 12:00	08/24/10 07:55	EPA 3005A	1,6020A	BM
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	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
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	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
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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-08  
 Client ID: 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	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	1460		ug/l	40.0	7.64	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Antimony, Total	0.81	J	ug/l	2.00	0.480	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Arsenic, Total	260		ug/l	2.00	0.452	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Barium, Total	67.4		ug/l	2.00	0.380	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.00	0.236	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Calcium, Total	128000		ug/l	400	50.6	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Chromium, Total	12.7		ug/l	2.00	0.744	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Cobalt, Total	7.30		ug/l	2.00	0.212	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Copper, Total	9.19		ug/l	2.00	0.472	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Iron, Total	21500		ug/l	200	33.6	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Lead, Total	2.23		ug/l	2.00	0.200	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Magnesium, Total	19700		ug/l	400	16.4	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Manganese, Total	3130		ug/l	4.00	0.544	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:26	EPA 7470A	1,7470A	EZ
Nickel, Total	13.7		ug/l	2.00	0.720	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Potassium, Total	6570		ug/l	400	72.6	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	4.00	1.62	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.00	0.340	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Sodium, Total	45200		ug/l	400	72.8	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.00	0.124	4	08/20/10 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM
Vanadium, Total	2.54		ug/l	2.00	0.308	4	08/20/10 18:45	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 18:45	08/24/10 08:55	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-09

Date Collected: 08/19/10 14:00

Client ID: RB2-081910-U

Date Received: 08/19/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	ND		ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Calcium, Total	14.4	J	ug/l	100	12.6	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Chromium, Total	0.35	J	ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Copper, Total	0.13	J	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Iron, Total	17.6	J	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Manganese, Total	0.23	J	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:31	EPA 7470A	1,7470A	EZ
Nickel, Total	ND		ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 09:01	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012830

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
Total Metals - Westborough Lab for sample(s): 02,04,06,08-09 Batch: WG428723-1									
Aluminum, Total	ND	ug/l	10.0	1.91	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Antimony, Total	ND	ug/l	0.500	0.120	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Arsenic, Total	ND	ug/l	0.500	0.113	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Barium, Total	ND	ug/l	0.500	0.095	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Beryllium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Cadmium, Total	ND	ug/l	0.500	0.059	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Calcium, Total	ND	ug/l	100	12.6	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Chromium, Total	ND	ug/l	0.500	0.186	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Cobalt, Total	ND	ug/l	0.500	0.053	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Copper, Total	ND	ug/l	0.500	0.118	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Iron, Total	ND	ug/l	50.0	8.41	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Lead, Total	ND	ug/l	0.500	0.050	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Magnesium, Total	ND	ug/l	100	4.10	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Manganese, Total	ND	ug/l	1.00	0.136	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Nickel, Total	ND	ug/l	0.500	0.180	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Potassium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Selenium, Total	ND	ug/l	1.00	0.406	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Silver, Total	ND	ug/l	0.500	0.085	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Sodium, Total	ND	ug/l	100	18.2	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Thallium, Total	ND	ug/l	0.500	0.031	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Vanadium, Total	ND	ug/l	0.500	0.077	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM
Zinc, Total	ND	ug/l	5.00	1.62	1	08/20/10 18:45	08/24/10 00:09	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05,07 Batch: WG428838-1									
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Antimony, Dissolved	ND	ug/l	0.500	0.120	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Barium, Dissolved	ND	ug/l	0.500	0.095	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

### 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	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Calcium, Dissolved	25.7	J	ug/l	100	12.6	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Iron, Dissolved	10.3	J	ug/l	50.0	8.41	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Manganese, Dissolved	0.24	J	ug/l	1.00	0.136	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM
Zinc, Dissolved	2.12	J	ug/l	5.00	1.62	1	08/22/10 12:00	08/23/10 23:57	1,6020A	BM

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 02,04,06,08-09 Batch: WG429638-1										
Mercury, Total	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:19	1,7470A	EZ

#### Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01,03,05,07 Batch: WG429785-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	08/26/10 14:20	08/27/10 12:42	1,7470A	EZ



**Project Name:** SHL TASK 0002

**Lab Number:** L1012830

**Project Number:** AC001

**Report Date:** 09/03/10

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

Digestion Method: EPA 7470A



# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG428723-2								
Aluminum, Total	93		-		80-120	-		
Antimony, Total	101		-		80-120	-		
Arsenic, Total	100		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	104		-		80-120	-		
Cadmium, Total	111		-		80-120	-		
Calcium, Total	109		-		80-120	-		
Chromium, Total	97		-		80-120	-		
Cobalt, Total	105		-		80-120	-		
Copper, Total	103		-		80-120	-		
Iron, Total	106		-		80-120	-		
Lead, Total	103		-		80-120	-		
Magnesium, Total	100		-		80-120	-		
Manganese, Total	100		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	102		-		80-120	-		
Selenium, Total	103		-		80-120	-		
Silver, Total	99		-		80-120	-		
Sodium, Total	110		-		80-120	-		
Thallium, Total	96		-		80-120	-		
Vanadium, Total	103		-		80-120	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG428723-2					
Zinc, Total	103		80-120	-	

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

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	-	
Antimony, Dissolved	101	-	80-120	-	
Arsenic, Dissolved	105	-	80-120	-	
Barium, Dissolved	105	-	80-120	-	
Beryllium, Dissolved	104	-	80-120	-	
Cadmium, Dissolved	111	-	80-120	-	
Calcium, Dissolved	108	-	80-120	-	
Chromium, Dissolved	96	-	80-120	-	
Cobalt, Dissolved	104	-	80-120	-	
Copper, Dissolved	102	-	80-120	-	
Iron, Dissolved	104	-	80-120	-	
Lead, Dissolved	102	-	80-120	-	
Magnesium, Dissolved	101	-	80-120	-	
Manganese, Dissolved	101	-	80-120	-	
Nickel, Dissolved	102	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Selenium, Dissolved	107	-	80-120	-	
Silver, Dissolved	101	-	80-120	-	
Sodium, Dissolved	113	-	80-120	-	
Thallium, Dissolved	98	-	80-120	-	
Vanadium, Dissolved	101	-	80-120	-	

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG428838-2					
Zinc, Dissolved	105	-	80-120	-	
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG429638-2					
Mercury, Total	112	-	80-120	-	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG429785-2					
Mercury, Dissolved	111	-	80-120	-	20

# **Matrix Spike Analysis** **Batch Quality Control**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

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 Associated sample(s): 02,04,06,08-09 QC Batch ID: WG428723-4 WG428723-5 QC Sample: L1012830-02 Client ID: GP-10-16-074-U												
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	1		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

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012830  
**Report Date:** 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 QC Batch ID: WG428723-4 WG428723-5 QC Sample: L1012830-02 Client ID: GP-10-16-074-U									
Zinc, Total	24.0	500	547	105	528	101	80-120	4	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 QC Batch ID: WG428838-3 WG428838-4 QC Sample: L1012830-01 Client ID: GP-10-16-074-F									
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	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	1940	122	80-120	3	20
Nickel, Dissolved	16.6	500	550	107	543	105	80-120	1	20
Potassium, Dissolved	20400	10000	32900	125	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	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



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 QC Batch ID: WG428838-3 WG428838-4 QC Sample: L1012830-01 Client ID: GP-10-16-074-F									
Zinc, Dissolved	6.87	500	538	106	543	107	80-120	1	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 QC Batch ID: WG429638-3 WG429638-4 QC Sample: L1012830-02 Client ID: GP-10-16-074-U									
Mercury, Total	ND	1	1.198	120	1.160	116	80-120	10	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 QC Batch ID: WG429785-3 WG429785-4 QC Sample: L1012830-01 Client ID: GP-10-16-074-F									
Mercury, Dissolved	ND	1	1.071	107	1.150	115	80-120	7	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-01

Client ID: GP-10-16-074-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/19/10 07:25

Date Received: 08/19/10

Field Prep: See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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	-	08/20/10 23:00	44,300.0	AU
Sulfate	9.7		mg/l	1.0	0.12	1	-	08/20/10 23:00	44,300.0	AU

**Project Name:** SHL TASK 0002**Lab Number:** L1012830**Project Number:** AC001**Report Date:** 09/03/10**SAMPLE RESULTS****Lab ID:** L1012830-02**Date Collected:** 08/19/10 07:25**Client ID:** GP-10-16-074-U**Date Received:** 08/19/10**Sample Location:** DEVENS, MA**Field Prep:** None**Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	390		mg/l	10	NA	2	-	08/20/10 09:55	30,2540D	DW

Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-03

Date Collected: 08/19/10 09:40

Client ID: GP-10-16-084-F

Date Received: 08/19/10

Sample Location: DEVENS, MA

Field Prep: See Narrative

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	420		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	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	-	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
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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	-	08/21/10 00:24	44,300.0	AU



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

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 - Westborough 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

**Lab Number:** L1012830  
**Report Date:** 09/03/10

**SAMPLE RESULTS**

**Lab ID:** L1012830-05  
**Client ID:** GP-10-16-094-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/19/10 12:35  
**Date Received:** 08/19/10  
**Field Prep:** See Narrative

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	110		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	08/20/10 11:17	30,2320B	SD
Nitrogen, Ammonia	0.159		mg/l	0.075	0.017	1	08/20/10 18:15	08/25/10 20:36	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.02		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	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	08/23/10 18:29	30,5310C	DD
<b>Anions by Ion Chromatography - Westborough Lab</b>										
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



Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## SAMPLE RESULTS

Lab ID: L1012830-06

Date Collected: 08/19/10 12:35

Client ID: GP-10-16-094-U

Date Received: 08/19/10

Sample Location: DEVENS, MA

Field Prep: None

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	170		mg/l	10	NA	2	-	08/20/10 09:55	30,2540D	DW



Project Name: SHL TASK 0002

Lab Number: L1012830

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 - Westborough Lab for sample(s): 02,04,06 Batch: WG428579-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/20/10 09:55	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG428685-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	08/20/10 11:17	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG428700-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	08/20/10 18:15	08/25/10 20:18	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG428725-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	08/20/10 21:03	30,4500NO2-B	DD
Anions by Ion Chromatography - Westborough Lab for sample(s): 01,03,05 Batch: WG428768-1									
Chloride	ND	mg/l	0.50	0.07	1	-	08/20/10 18:00	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	08/20/10 18:00	44,300.0	AU
Sulfate	ND	mg/l	1.0	0.12	1	-	08/20/10 18:00	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG429018-2									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	08/17/10 21:30	08/23/10 18:29	30,5310C	DD
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG429175-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	08/24/10 15:20	44,410.4	SD
General Chemistry - Westborough Lab for sample(s): 01,03,05 Batch: WG429287-1									
Sulfide	ND	mg/l	0.10	0.10	1	08/24/10 18:15	08/24/10 19:15	30,4500S2-AD	AT

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428685-2								
Alkalinity, Total	106		-		80-115	-		4
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428700-2								
Nitrogen, Ammonia	102		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428725-1								
Nitrogen, Nitrite	100		-		90-110	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05 Batch: WG428768-2								
Chloride	98		-		90-110	-		
Nitrogen, Nitrate	100		-		90-110	-		
Sulfate	95		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG429018-1								
Dissolved Organic Carbon	106		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG429175-2								
Chemical Oxygen Demand	103		-		95-105	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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General Chemistry - Westborough Lab Associated sample(s): 01,03,05 Batch: WG429287-2

Sulfide

91

75-125

# **Matrix Spike Analysis** **Batch Quality Control**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428685-3 QC Sample: L1012735-05 Client ID: MS Sample												
Alkalinity, Total	210	100	290	80	Q	-	-		86-116	-		4
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428700-3 QC Sample: L1012830-01 Client ID: GP-10-16-074-F												
Nitrogen, Ammonia	1.71	4	5.46	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428725-3 QC Sample: L1012830-05 Client ID: GP-10-16-094-F												
Nitrogen, Nitrite	0.02	0.1	0.11	90		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG428768-3 WG428768-4 QC Sample: L1012830-03 Client ID: GP-10-16-084-F												
Chloride	43	4	46	75		45	50		40-151	2		18
Nitrogen, Nitrate	ND	0.4	0.39	98		0.39	98		80-122	0		15
Sulfate	ND	8	8.3	104		8.2	102		60-140	1		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG429018-3 QC Sample: L1012735-05 Client ID: MS Sample												
Dissolved Organic Carbon	3.7	4	8.1	109		-	-		79-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG429175-3 QC Sample: L1012830-05 Client ID: GP-10-16-094-F												
Chemical Oxygen Demand	48	238	290	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG429287-3 QC Sample: L1012830-05 Client ID: GP-10-16-094-F												
Sulfide	ND	0.24	0.18	75		-	-		75-125	-		20

Project Name: SHL TASK 0002  
Project Number: AC001

### Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1012830  
Report Date: 09/03/10

Parameter	Native Sample	Duplicate 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-F			
Nitrogen, Ammonia	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-F			
Nitrogen, Nitrite	0.02	0.02	mg/l	0		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01,03,05	QC Batch ID: WG428768-5	QC Sample: L1012830-03	Client ID: GP-10-16-084-F			
Chloride	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-F			
Chemical Oxygen Demand	48.	50	mg/l	4		20

Project Name: SHL TASK 0002  
Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1012830  
Report Date: 09/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG429287-4 QC Sample: L1012830-05 Client ID: GP-10-16-094-F					
Sulfide	ND	ND	mg/l	NC	20



Project Name: SHL TASK 0002

Lab Number: L1012830

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

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012830-01A	Plastic 500ml unpreserved	A	6	3.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012830-01B	Plastic 250ml unpreserved	A	6	3.6	Y	Present/Intact	NO2-4500NO2(2)
L1012830-01C	Plastic 250ml unpreserved	A	N/A	3.6	Y	Present/Intact	ALK-T-2320(14)
L1012830-01D	Plastic 500ml H2SO4 preserved	A	<2	3.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012830-01E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-01F	Plastic 250ml Zn Acetate/NaOH pr	A	>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	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-01I	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-01M	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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012830

Project Number: AC001

Report Date: 09/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012830-01X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-02A	Plastic 1000ml unpreserved	A	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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)
L1012830-03A	Plastic 500ml unpreserved	A	6	3.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012830-03B	Plastic 250ml unpreserved	A	6	3.6	Y	Present/Intact	NO2-4500NO2(2)
L1012830-03C	Plastic 250ml unpreserved	A	N/A	3.6	Y	Present/Intact	ALK-T-2320(14)
L1012830-03D	Plastic 500ml H2SO4 preserved	A	<2	3.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012830-03E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-03H	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-03I	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-03M	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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012830-03X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-04A	Plastic 1000ml unpreserved	A	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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)
L1012830-05A	Plastic 500ml unpreserved	A	6	3.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012830-05B	Plastic 250ml unpreserved	A	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	A	<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	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-05G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.6	Y	Present/Intact	SULFIDE-4500(7)
L1012830-05H	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-05I	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012830

Report Date: 09/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp 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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-6020S(180),DOD-SE-6020S(180),DOD-HG-7470S(28)
L1012830-05X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	DOC-5310(28)
L1012830-06A	Plastic 1000ml unpreserved	A	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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp 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-MN-6020S(180),DOD-TL-6020S(180),DOD-CO-6020S(180),DOD-AG-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-CU-6020S(180),DOD-ZN-6020S(180),DOD-AL-6020S(180),DOD-K-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-TL-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-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp 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-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-SB-6020T(180),DOD-AG-6020T(180),DOD-AL-6020T(180),DOD-AS-6020T(180),DOD-BA-6020T(180),DOD-CR-6020T(180),DOD-K-6020T(180),DOD-BE-6020T(180),DOD-MG-6020T(180),DOD-FE-6020T(180),DOD-CU-6020T(180),DOD-PB-6020T(180)

**Container Comments**

L1012830-01H

L1012830-01I

L1012830-03H

L1012830-03I

L1012830-05H

L1012830-05I

\*Values in parentheses indicate holding time in days



**Project Name:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012830  
**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 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"
- B** - 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.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - 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.
- Q** - 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:** L1012830

**Project Number:** AC001

**Report Date:** 09/03/10

**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



**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 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, 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 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, 4500NO<sub>3</sub>-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, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-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, 8082, 8081A.)

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-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, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-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, 4500NH<sub>3</sub>-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, 4500NO<sub>3</sub>-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, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-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 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 Commission 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 Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625:** 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.







## 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](http://www.alphalab.com)



**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012831**Report Date:** 09/06/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
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  
**Project Number:** AC001

**Lab Number:** L1012831  
**Report Date:** 09/06/10


**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

Date: 09/06/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1012831

Project Number: AC001

Report Date: 09/06/10

## SAMPLE RESULTS

Lab ID: L1012831-01

Date Collected: 08/19/10 07:25

Client ID: GP-10-16-074-F

Date Received: 08/19/10

Sample Location: DEVENS, MA

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	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

Lab Number: L1012831

Project Number: AC001

Report Date: 09/06/10

## SAMPLE RESULTS

Lab ID: L1012831-02

Date Collected: 08/19/10 09:40

Client ID: GP-10-16-084-F

Date Received: 08/19/10

Sample Location: DEVENS, MA

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	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: GP-10-16-094-F

Date Received: 08/19/10

Sample Location: DEVENS, MA

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	32		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

**Method Blank Analysis**  
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-03 Batch: WG430836-1										
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**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1012831**Report Date:** 09/06/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-03 Batch: WG430836-2								
Dissolved Inorganic Carbon	110							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012831

Report Date: 09/06/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-03 QC Batch ID: WG430836-3 QC Sample: L1012831-02 Client ID: GP-10-16-084-F						
Dissolved Inorganic Carbon	86	67	mg/l	25		

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: NA

**Cooler Information Custody Seal**

Cooler

A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012831-01A	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-01B	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-01X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	SPECWC()
L1012831-02A	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-02B	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-02X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	SPECWC()
L1012831-03A	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-03B	Vial H2SO4 preserved split	A	N/A	3.6	Y	Present/Intact	SPECWC()
L1012831-03X	Amber 250ml unpreserved	A	6	3.6	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012831

Project Number: AC001

Report Date: 09/06/10

## 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 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".
- B - 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.
- H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I - 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.
- Q - 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

**Project Name:** SHL TASK 0002

**Lab Number:** L1012831

**Project Number:** AC001

**Report Date:** 09/06/10

***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:** SHL TASK 0002  
**Project Number:** AC001

**Lab Number:** L1012831  
**Report Date:** 09/06/10

## 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, 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, 4500NO<sub>3</sub>-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, 4500NH<sub>3</sub>-H, 4500NH<sub>3</sub>-E, 4500NO<sub>2</sub>-B, 4500P-E, 4500-S<sub>2</sub>-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, 8082, 8081A.)

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

*Drinking Water (Inorganic Parameters:* SM9222B, 9221E, 9223B, 9215B, 4500NO<sub>3</sub>-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, SM4500NO<sub>3</sub>-F, 4500NO<sub>2</sub>-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, 4500NH<sub>3</sub>-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, 4500NO<sub>3</sub>-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, SM4500NH<sub>3</sub>-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO<sub>3</sub>-F, 4500-NO<sub>2</sub>-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 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 Commission 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 S<sub>2</sub><sup>-</sup>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.





WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/19/10

ALPHA Job #

## Project Information

Project Name: SHK Task 0002

Project Location: Devens, MA

Project #: ACOOL

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

☒ Standard

☐ RUSH (only confirmed if pre-approved!)

Date Due:

Time:

## Report Information - Data Deliverables

☐ FAX

☒ EMAIL EDR

☐ ADEX

☐ Add'l Deliverables

## Billing Information

☐ Same as Client info

PO #:

## Regulatory Requirements/Report Limits

State / Fed Program

Criteria See QAPP

## MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

☒ Yes ☐ No

Are MCP Analytical Methods Required?

☒ Yes ☐ No

Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)

☐ Yes ☒ No

Are CT RCP (Reasonable Confidence Protocols) Required?

Serial No: 0906101733

## Client Information

Client: Sovereign Consulting Inc

Address: 905B South Main St

Mansfield, MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmcbain@sovercon.com

☐ These samples have been previously analyzed by Alpha

## Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.

(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

SDG # = 37 - closed

\* Done as noted F = Field Filtered

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										SAMPLE HANDLING	TOTAL # BOTTLES
		Date	Time			Cl, SO4, NO3	NO2	Alk	NH4, COD	Sulfide	TSS	DIC + DOC	Total TAL Metals	Diss TAL Metals			
12831-01	GP-10-16-074-F	8/19/10	0725	GW	SSC	✓	✓	✓	✓	✓	✓	✓	✓	✓		MS/MSD Metals Only	10
	GP-10-16-074-U	8/19/10	0725	GW	SSC						✓	✓				MS/MSD Metals Only	3
02	GP-10-16-084-F	8/19/10	0940	GW	SSC	✓	✓	✓	✓	✓	✓	✓	✓	✓			9
	GP-10-16-084-U	8/19/10	0940	GW	SSC						✓	✓					2
03	GP-10-16-094-F	8/19/10	1235	GW	SSC	✓	✓	✓	✓	✓	✓	✓	✓	✓			9
	GP-10-16-094-U	8/19/10	1235	GW	SSC						✓	✓					2
	DUP-081910-F	8/19/10	0940	GW	SSC								✓				1
	DUP-081910-U	8/19/10	0940	GW	SSC							✓					1
	PB2-081910-U	8/19/10	1400	GW	R/M							✓					1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type

P P P P P P A P D

Preservative

A A A D 1/2 E A A C C

Relinquished By:

Date/Time

Received By:

Date/Time



**Attachment G**

**Attachment G**





**Memo**

To **Sovereign Environmental**

From **Barbara Pugh** cc **Marc Grant**  
**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 ( $\mu\text{g/L}$ ) to 7,410  $\mu\text{g/L}$  or 7.4 milligrams per liter ( $\text{mg/L}$ ). The concentration of methane dissolved in the groundwater entering the groundwater treatment plant to the north of the landfill has ranged between 4,100  $\mu\text{g/L}$  (4.1  $\text{mg/L}$ ) and 12,000  $\mu\text{g/L}$  (12  $\text{mg/L}$ ). 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](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  $3.2 \times 10^{-7} \mu\text{g}/\text{m}^3$ ). 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.

**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<sup>1</sup> 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 sample 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

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<sup>1</sup> 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 ( $K_{oc}$ ) = 753 (Hazard Substances Data Bank as listed in <http://www.dep.state.pa.us/physicalproperties>)
- Diffusivity in air =  $0.16 \text{ cm}^2/\text{s}$  (<http://wps.com/LPG/WWU-review.html>)
- Diffusivity in water =  $0.0000149 \text{ cm}^2/\text{s}$  (<http://www.dep.state.pa.us/physicalproperties>)
- Pure component water solubility at  $25^\circ \text{C}$  =  $22.7 \text{ mg/L}$  (CRC Handbook of Chemistry and Physics as listed on <http://www.dep.state.pa.us/physicalproperties>)
- Henry's Law Constant at  $25^\circ \text{C}$  =  $0.665 \text{ atm}\cdot\text{m}^3/\text{mol}$  or 27.198 unitless (CRC Handbook of Chemistry and Physics as listed on <http://www.dep.state.pa.us/physicalproperties>)
- Normal boiling point =  $111.6^\circ \text{K}$  (CRC Handbook of Chemistry and Physics as listed on <http://www.dep.state.pa.us/physicalproperties>)
- Critical temperature =  $190.5^\circ \text{K}$  (<http://encyclopedia.airliquide.com>)
- Enthalpy of vaporization at the normal boiling point =  $1,950 \text{ cal/mol}$  (<http://encyclopedia.airliquide.com>)

**Results:** 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 ( $1,950 \text{ cal/mol}$ ). 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.,  $12^\circ \text{C}$  versus  $25^\circ \text{C}$ ) 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  $3.19 \times 10^{-5} \mu\text{g}/\text{m}^3$  (or 477 ppmv). This conservative "worse-case" estimate of methane in indoor air is less than the LEL concentration of  $3.34 \times 10^{-7} \mu\text{g}/\text{m}^3$  (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  $0.665 \text{ atm}\cdot\text{m}^3/\text{mol}$  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  $\mu\text{g}/\text{L}$ ) was estimated to exist in gas phase at a concentration of  $2.7 \times 10^{-8} \mu\text{g}/\text{m}^3$ .
  - $[\text{Methane}]_{\text{gw}} \times \text{Henry's Law constant (unitless)} \times \text{volume conversion factor (L/m}^3\text{)}$
  - $10,000 \mu\text{g}/\text{L} \times 27.198 \times 1000 \text{ L/m}^3 = 2.7 \times 10^{-8} \mu\text{g}/\text{m}^3$  (or  $4.07 \times 10^{-5} \text{ ppmv}$ )
- 2) Using USEPA's default indoor air attenuation factor ( $\alpha = 0.001$ ) (USEPA, 2002) to predict the indoor air concentration of methane from groundwater to indoor air as follows:
  - $[\text{Methane}]_{\text{soil gas}} \times \alpha = [\text{Methane}]_{\text{indoor air}}$
  - $4.07 \times 10^{-5} \text{ ppmv} \times 0.001 = 407 \text{ ppmv}$

This is consistent with the estimate provided by the model.

*Second*, even when assuming a 10-fold reduction in USEPA's default attenuation factor ( $\alpha = 0.01$ ), 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.

**Summary:** 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).

## References

ECC. 2009. *2008 Annual Report, Shepley's Hill Landfill, Devens, Massachusetts*, September.

Eltschlager, K.K., J.W. Hawkins, W.C. Ehler, F. Baldassare. 2001. *Technical Measure for the Investigation and Mitigation of Fugitive Methane Hazards in Areas of Coal Mining*. U.S. Department of the Interior. Office of Surface Mining Reclamation and Enforcement. Pittsburgh, PA.

Massachusetts Department of Environmental Protection (MassDEP). 2010. Appendix A Basics of Landfill Gas. Accessed via <http://www.mass.gov/dep/recycle/laws/lfgasapp.pdf>, May 2010.

United States Environmental Protection Agency (USEPA). 2002. *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway*. OSWER EPA530-D-02-00. November

United States Environmental Protection Agency (USEPA). 2004. *User's Guide for Evaluating Subsurface Vapor Intrusion Into Buildings*. Prepared by Environmental Quality Management, Inc. for EPA. Available at [http://www.epa.gov/oswer/riskassessment/airmodel/johnson\\_ettinger.htm](http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm). February

United States Environmental Protection Agency (USEPA). 2004. Indoor Air Models. Version 3.1. Available at [http://www.epa.gov/oswer/riskassessment/airmodel/johnson\\_ettinger.htm](http://www.epa.gov/oswer/riskassessment/airmodel/johnson_ettinger.htm). February

United States Environmental Protection Agency (USEPA). 2005. *Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities*. Office of Research and Development. Air Pollution Prevention and Control Division. EPA-600/R-05/123a. September.

United States Geological Survey (USGS). 2006. *Fact Sheet 2006-3011: Methane in West Virginia Ground Water*. In cooperation with West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Environmental Health Services, Environmental Engineering Division, and the West Virginia Department of Environmental Protection, Division of Water and Waste Management. February.





## ATTACHMENTS

### Vapor Intrusion Model Output

# DATA ENTRY SHEET

GW-SCREEN  
Version 3.1; 02/04

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION  
(enter "X" in "YES" box and initial groundwater conc. below)

YES

X

Reset to  
Defaults

ENTER

Chemical  
CAS No.  
(numbers only,  
no dashes)

ENTER

Initial  
groundwater  
conc.,  
 $C_w$   
( $\mu\text{g/L}$ )

Chemical

74828

1.00E+04

Methane

MORE  
↓

ENTER

Depth  
below grade  
to bottom  
of enclosed  
space floor,  
 $L_f$   
(cm)

ENTER

Depth  
below grade  
to water table,  
 $L_{WT}$   
(cm)

ENTER

SCS  
soil type  
directly above  
water table

ENTER

Average  
soil/  
groundwater  
temperature,  
 $T_s$   
( $^{\circ}\text{C}$ )

200

609.6

S

10

model default value  
for Basement

20 feet below  
ground surface

Sand

10 degrees C is  
approximately 50  
degrees F, average  
shallow groundwater  
temp for Massachusetts,  
from MCP Worksheets,  
December 2009  
(<http://www.mass.gov/depl/service/compliance/riska>)

ENTER

Average vapor  
flow rate into bldg.  
(Leave blank to calculate)  
 $Q_{sol}$   
(L/m)

5

Model default for  
residential home

MORE  
↓

ENTER

Vadose zone  
SCS  
soil type  
(used to estimate  
soil vapor  
permeability)

OR

ENTER

User-defined  
vadose zone  
soil vapor  
permeability,  
 $k_v$   
( $\text{cm}^2$ )

ENTER

Vadose zone  
SCS  
soil type  
Lookup Soil  
Parameters

ENTER

Vadose zone  
soil dry  
bulk density,  
 $\rho_b^v$   
( $\text{g/cm}^3$ )

ENTER

Vadose zone  
soil total  
porosity,  
 $n^v$   
(unitless)

ENTER

Vadose zone  
soil water-filled  
porosity,  
 $\theta_w^v$   
( $\text{cm}^3/\text{cm}^3$ )

S

Sand

S

Sand

1.66

Default for  
Sand

0.375

Default for Sand

0.054

Default for  
Sand

MORE  
↓

ENTER

Target  
risk for  
carcinogens,  
 $TR$   
(unitless)

ENTER

Target hazard  
quotient for  
noncarcinogens,  
 $THQ$   
(unitless)

ENTER

Averaging  
time for  
carcinogens,  
 $AT_C$   
(yrs)

ENTER

Averaging  
time for  
noncarcinogens,  
 $AT_{NC}$   
(yrs)

ENTER

Exposure  
duration,  
 $ED$   
(yrs)

ENTER

Exposure  
frequency,  
 $EF$   
(days/yr)

1.0E-06

1

70

30

30

350

Used to calculate risk-based  
groundwater concentration.

Default for  
residential  
exposures

Default for residential  
exposures

Default for  
residential  
exposures

Default for  
residential  
exposures

# CHEMICAL PROPERTIES SHEET

ABC

Diffusivity in air, $D_a$ (cm <sup>2</sup> /s)	Diffusivity in water, $D_w$ (cm <sup>2</sup> /s)	Henry's law constant at reference temperature, $H$ (atm-m <sup>3</sup> /mol)	Henry's law constant reference temperature, $T_R$ (°C)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, $T_B$ (°K)	Critical temperature, $T_C$ (°K)	Organic carbon partition coefficient, $K_{oc}$ (cm <sup>3</sup> /g)	Pure component water solubility, $S$ (mg/L)	Unit risk factor, URF (µg/m <sup>3</sup> ) <sup>-1</sup>	Reference conc., RfC (mg/m <sup>3</sup> )
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, $\theta_a^v$ (cm <sup>3</sup> /cm <sup>3</sup> )	Vadose zone effective total fluid saturation, $S_{te}$ (cm <sup>3</sup> /cm <sup>3</sup> )	Vadose zone soil intrinsic permeability, $k_i$ (cm <sup>2</sup> )	Vadose zone soil relative air permeability, $k_{rg}$ (cm <sup>2</sup> )	Vadose zone soil effective vapor permeability, $k_v$ (cm <sup>2</sup> )	Thickness of capillary zone, $L_{cz}$ (cm)	Total porosity in capillary zone, $n_{cz}$ (cm <sup>3</sup> /cm <sup>3</sup> )	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm <sup>3</sup> /cm <sup>3</sup> )	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm <sup>3</sup> /cm <sup>3</sup> )	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

Bldg. ventilation rate, $Q_{building}$ (cm <sup>3</sup> /s)	Area of enclosed space below grade, $A_g$ (cm <sup>2</sup> )	Crack-to-total area ratio, $\eta$ (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-m <sup>3</sup> /mol)	Henry's law constant at ave. groundwater temperature, $H'_{TS}$ (unitless)	Vapor viscosity at ave. soil temperature, $\mu_{TS}$ (g/cm-s)	Vadose zone effective diffusion coefficient, $D_v^{eff}$ (cm <sup>2</sup> /s)	Capillary zone effective diffusion coefficient, $D_{cz}^{eff}$ (cm <sup>2</sup> /s)	Total overall effective diffusion coefficient, $D_T^{eff}$ (cm <sup>2</sup> /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., $C_{source}$ (ug/m <sup>3</sup> )	Crack radius, $r_{crack}$ (cm)	Average vapor flow rate into bldg., $Q_{soil}$ (cm <sup>3</sup> /s)	Crack effective diffusion coefficient, $D^{crack}$ (cm <sup>2</sup> /s)	Area of crack, $A_{crack}$ (cm <sup>2</sup> )	Exponent of equivalent foundation Peclet number, $exp(Pe')$ (unitless)	Infinite source indoor attenuation coefficient, $\alpha$ (unitless)	Infinite source bldg. conc., $C_{building}$ (ug/m <sup>3</sup> )	Unit risk factor, URF (ug/m <sup>3</sup> ) <sup>-1</sup>	Reference conc., RfC (mg/m <sup>3</sup> )
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/m<sup>3</sup>  
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.