

**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 2 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**



# **INORGANICS & MISCELLANEOUS**



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-02

Date Collected: 08/11/10 16:22

Client ID: GP-10-27-035-U

Date Received: 08/12/10

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	470		mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	1.3		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW

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

**Lab Number:** L1012444  
**Report Date:** 11/03/10

**SAMPLE RESULTS**

**Lab ID:** L1012444-04  
**Client ID:** GP-10-27-045-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 16:52  
**Date Received:** 08/12/10  
**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	620		mg/l	10	NA	2	-	08/13/10 16:35	30,2540D	DW
Dissolved Organic Carbon	4.4		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW

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

**Lab Number:** L1012444  
**Report Date:** 11/03/10

**SAMPLE RESULTS**

**Lab ID:** L1012444-06  
**Client ID:** GP-10-27-055-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 17:30  
**Date Received:** 08/12/10  
**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	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 23:00	08/20/10 10:55	30,5310C	DW



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-07

Date Collected: 08/12/10 09:15

Client ID: SHL-23-F

Date Received: 08/12/10

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	4.3		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	0.0496	J	mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:43	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:42	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	MW
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:49	44,410.4	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	1.3		mg/l	0.50	0.07	1	-	08/13/10 17:46	44,300.0	AU
Nitrogen, Nitrate	0.07		mg/l	0.05	0.01	1	-	08/13/10 17:46	44,300.0	AU
Sulfate	4.9		mg/l	1.0	0.12	1	-	08/13/10 17:46	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-08

Date Collected: 08/12/10 09:20

Client ID: SHM-05-39A-F

Date Received: 08/12/10

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	100		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	4.01		mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:46	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:42	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	MW
Chemical Oxygen Demand	11	J	mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	2.9		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	7.1		mg/l	0.50	0.07	1	-	08/13/10 17:58	44,300.0	AU
Nitrogen, Nitrate	0.009	J	mg/l	0.05	0.01	1	-	08/13/10 17:58	44,300.0	AU
Sulfate	6.0		mg/l	1.0	0.12	1	-	08/13/10 17:58	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-09

Date Collected: 08/12/10 10:00

Client ID: SHM-07-05-F

Date Received: 08/12/10

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 - Westborough Lab										
Alkalinity, Total	94		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	2.42		mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:47	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	08/12/10 22:43	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	MW
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	2.0		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	8.9		mg/l	0.50	0.07	1	-	08/13/10 18:10	44,300.0	AU
Nitrogen, Nitrate	0.06		mg/l	0.05	0.01	1	-	08/13/10 18:10	44,300.0	AU
Sulfate	8.1		mg/l	1.0	0.12	1	-	08/13/10 18:10	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-10

Date Collected: 08/12/10 11:10

Client ID: SHM-99-31B-F

Date Received: 08/12/10

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	86		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	4.10		mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:48	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:43	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	MW
Chemical Oxygen Demand	11	J	mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	6.5		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	4.0		mg/l	0.50	0.07	1	-	08/13/10 18:22	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	08/13/10 18:22	44,300.0	AU
Sulfate	3.0		mg/l	1.0	0.12	1	-	08/13/10 18:22	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-11

Date Collected: 08/12/10 11:38

Client ID: SHM-10-10-F

Date Received: 08/12/10

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 - Westborough Lab										
Alkalinity, Total	320		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	0.201		mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:49	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:44	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	MW
Chemical Oxygen Demand	25		mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	3.9		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	23		mg/l	0.50	0.07	1	-	08/13/10 18:34	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	08/13/10 18:34	44,300.0	AU
Sulfate	0.79	J	mg/l	1.0	0.12	1	-	08/13/10 18:34	44,300.0	AU

Project Name: SHL TASK 0002  
Project Number: AC001

Lab Number: L1012444  
Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-12  
Client ID: SHM-07-03-F  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 08/12/10 12:20  
Date Received: 08/12/10  
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	18		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	0.0239	J	mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:52	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:45	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	MW
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	8.2		mg/l	0.50	0.07	1	-	08/13/10 18:46	44,300.0	AU
Nitrogen, Nitrate	0.59		mg/l	0.10	0.01	2	-	08/13/10 18:58	44,300.0	AU
Sulfate	10		mg/l	1.0	0.12	1	-	08/13/10 18:46	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-13

Date Collected: 08/12/10 12:40

Client ID: SHM-10-01-F

Date Received: 08/12/10

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	130		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	0.241		mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:53	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:45	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	MW
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:50	44,410.4	DW
Dissolved Organic Carbon	1.5		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	14		mg/l	0.50	0.07	1	-	08/13/10 19:10	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	08/13/10 19:10	44,300.0	AU
Sulfate	7.0		mg/l	1.0	0.12	1	-	08/13/10 19:10	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-14

Date Collected: 08/12/10 13:35

Client ID: SHM-05-42A-F

Date Received: 08/12/10

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	18		mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
Nitrogen, Ammonia	0.0189	J	mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:54	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/12/10 22:45	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	MW
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	08/13/10 13:51	44,410.4	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	1.6		mg/l	0.50	0.07	1	-	08/13/10 20:22	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	08/13/10 20:22	44,300.0	AU
Sulfate	5.6		mg/l	1.0	0.12	1	-	08/13/10 20:22	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1012444-18

Date Collected: 08/11/10 16:00

Client ID: GP-10-27-065-U

Date Received: 08/12/10

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	980		mg/l	15	NA	3	-	08/23/10 12:00	30,2540D	SD
Dissolved Organic Carbon	5.7		mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

### 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): 07-14 Batch: WG427431-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	08/12/10 22:41	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 07-14 Batch: WG427495-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	08/13/10 13:48	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06 Batch: WG427579-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/13/10 16:35	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 07-14 Batch: WG427618-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	08/13/10 14:00	08/17/10 22:30	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 07-14 Batch: WG427652-1									
Chloride	ND	mg/l	0.50	0.07	1	-	08/13/10 17:22	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	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
General Chemistry - Westborough Lab for sample(s): 07-14 Batch: WG428068-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	08/17/10 10:27	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 07-14 Batch: WG428284-1									
Sulfide	ND	mg/l	0.10	0.10	1	08/17/10 17:00	08/17/10 18:00	30,4500S2-AD	MW
General Chemistry - Westborough Lab for sample(s): 02,04,06-14,18 Batch: WG428767-2									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	08/12/10 23:00	08/20/10 10:55	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 18 Batch: WG429144-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	08/23/10 12:00	30,2540D	SD

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012444

Report Date: 11/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 07-14 Batch: WG427431-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 07-14 Batch: WG427495-2								
Chemical Oxygen Demand	100		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 07-14 Batch: WG427618-2								
Nitrogen, Ammonia	96		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07-14 Batch: WG427652-2								
Chloride	95		-		90-110	-		
Nitrogen, Nitrate	105		-		90-110	-		
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 07-14 Batch: WG428068-2								
Alkalinity, Total	104		-		80-115	-		4
General Chemistry - Westborough Lab Associated sample(s): 07-14 Batch: WG428284-2								
Sulfide	96		-		75-125	-		

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012444

Report Date: 11/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06-14,18 Batch: WG428767-1					
Dissolved Organic Carbon	104	-	90-110	-	



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1012444

Report Date: 11/03/10

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): 07-14 QC Batch ID: WG427431-3 QC Sample: L1012444-07 Client ID: SHL-23-F												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427495-3 QC Sample: L1012444-07 Client ID: SHL-23-F												
Chemical Oxygen Demand	ND	238	270	115	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427618-3 QC Sample: L1012444-07 Client ID: SHL-23-F												
Nitrogen, Ammonia	0.0496J	4	3.95	99	-	-	-	-	80-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427652-3 WG427652-4 QC Sample: L1012444-14 Client ID: SHM-05-42A-F												
Chloride	1.6	4	5.5	98	-	5.5	98	-	40-151	0	-	18
Nitrogen, Nitrate	ND	0.4	0.44	110	-	0.42	105	-	80-122	5	-	15
Sulfate	5.6	8	14	105	-	14	105	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG428068-3 QC Sample: L1012444-14 Client ID: SHM-05-42A-F												
Alkalinity, Total	18.	100	120	105	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG428284-3 QC Sample: L1012444-07 Client ID: SHL-23-F												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06-14,18 QC Batch ID: WG428767-3 QC Sample: L1012444-08 Client ID: SHM-05-39A-F												
Dissolved Organic Carbon	2.9	4	7.6	118	-	-	-	-	79-120	-	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012444

Report Date: 11/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427431-4 QC Sample: L1012444-14 Client ID: SHM-05-42A-F						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427495-4 QC Sample: L1012444-07 Client ID: SHL-23-F						
Chemical Oxygen Demand	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06 QC Batch ID: WG427579-2 QC Sample: L1012323-20 Client ID: DUP Sample						
Solids, Total Suspended	2300	1600	mg/l	36	Q	32
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427618-4 QC Sample: L1012444-07 Client ID: SHL-23-F						
Nitrogen, Ammonia	0.0496J	0.0371J	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG427652-5 QC Sample: L1012444-14 Client ID: SHM-05-42A-F						
Chloride	1.6	1.6	mg/l	0		18
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	5.6	5.6	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG428068-4 QC Sample: L1012444-14 Client ID: SHM-05-42A-F						
Alkalinity, Total	18.	21	mg CaCO3/L	15	Q	4
General Chemistry - Westborough Lab Associated sample(s): 07-14 QC Batch ID: WG428284-4 QC Sample: L1012444-11 Client ID: SHM-10-10-F						
Sulfide	ND	ND	mg/l	NC		20

Project Name: SHL TASK 0002  
Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1012444  
Report Date: 11/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06-14,18 QC Batch ID: WG428767-4 QC Sample: L1012444-09 Client ID: SHM-07-05-F					
Dissolved Organic Carbon	2.0	2.8	mg/l	33	Q 20
General Chemistry - Westborough Lab Associated sample(s): 18 QC Batch ID: WG429144-2 QC Sample: L1012444-18 Client ID: GP-10-27-065-U					
Solids, Total Suspended	980	1200	mg/l	20	32

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## 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(*)
L1012444-01A	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012444-02A	Plastic 1000ml unpreserved	A	6	3.1	Y	Present/Intact	TSS-2540(7)
L1012444-02B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-02C	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-02D	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012444-02X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-03A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012444-04A	Plastic 1000ml unpreserved	A	6	3.1	Y	Present/Intact	TSS-2540(7)
L1012444-04B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-04C	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-04D	Plastic 250ml HNO3 preserved	A	<2	3.1	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012444-04X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-05A	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-FE-6020S(180),DOD-AS-6020S(180)
L1012444-06A	Plastic 1000ml unpreserved	A	6	3.1	Y	Present/Intact	TSS-2540(7)
L1012444-06B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-06C	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-06D	Plastic 250ml HNO3 preserved	D	<2	4	Y	Present/Intact	DOD-AS-6020T(180),DOD-FE-6020T(180)
L1012444-06X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-07A	Plastic 500ml unpreserved	A	6	3.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-07B	Plastic 250ml unpreserved	A	6	3.1	Y	Present/Intact	NO2-4500NO2(2)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012444-07C	Plastic 250ml unpreserved	A	N/A	3.1	Y	Present/Intact	ALK-T-2320(14)
L1012444-07D	Plastic 500ml H2SO4 preserved	A	<2	3.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-07E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-07F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-07G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-07H	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-07I	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-07M	Plastic 500ml 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)
L1012444-07X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-08A	Plastic 500ml unpreserved	A	6	3.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-08B	Plastic 250ml unpreserved	C	6	2.1	Y	Present/Intact	NO2-4500NO2(2)
L1012444-08C	Plastic 250ml unpreserved	A	N/A	3.1	Y	Present/Intact	ALK-T-2320(14)
L1012444-08D	Plastic 500ml H2SO4 preserved	A	<2	3.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-08E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-08F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-08G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-08H	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-08I	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-08M	Plastic 500ml 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)
L1012444-08N	Plastic 500ml 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)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012444-08X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	DOC-5310(28)
L1012444-09A	Plastic 500ml unpreserved	C	6	2.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-09B	Plastic 250ml unpreserved	C	6	2.1	Y	Present/Intact	NO2-4500NO2(2)
L1012444-09C	Plastic 250ml unpreserved	D	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1012444-09D	Plastic 500ml H2SO4 preserved	C	<2	2.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-09E	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-09F	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-09G	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-09H	Vial H2SO4 preserved split	C	N/A	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-09I	Vial H2SO4 preserved split	C	N/A	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-09M	Plastic 500ml HNO3 preserved	C	<2	2.1	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)
L1012444-09X	Amber 250ml unpreserved	C	6	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-10A	Plastic 500ml unpreserved	C	6	2.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-10B	Plastic 250ml unpreserved	C	6	2.1	Y	Present/Intact	NO2-4500NO2(2)
L1012444-10C	Plastic 250ml unpreserved	C	N/A	2.1	Y	Present/Intact	ALK-T-2320(14)
L1012444-10D	Plastic 500ml H2SO4 preserved	C	<2	2.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-10E	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-10F	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-10G	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)
L1012444-10H	Vial H2SO4 preserved split	C	N/A	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-10I	Vial H2SO4 preserved split	C	N/A	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-10M	Plastic 500ml HNO3 preserved	C	<2	2.1	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)
L1012444-10X	Amber 250ml unpreserved	C	6	2.1	Y	Present/Intact	DOC-5310(28)
L1012444-11A	Plastic 500ml unpreserved	B	6	2.0	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-11B	Plastic 250ml unpreserved	D	6	4	Y	Present/Intact	NO2-4500NO2(2)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1012444

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012444-11C	Plastic 250ml unpreserved	D	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1012444-11D	Plastic 500ml H2SO4 preserved	B	<2	2.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-11E	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1012444-11F	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1012444-11G	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1012444-11H	Vial H2SO4 preserved split	B	N/A	2.0	Y	Present/Intact	DOC-5310(28)
L1012444-11I	Vial H2SO4 preserved split	B	N/A	2.0	Y	Present/Intact	DOC-5310(28)
L1012444-11M	Plastic 500ml HNO3 preserved	B	<2	2.0	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)
L1012444-11X	Amber 250ml unpreserved	B	6	2.0	Y	Present/Intact	DOC-5310(28)
L1012444-12A	Plastic 500ml unpreserved	D	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-12B	Plastic 250ml unpreserved	B	6	2.0	Y	Present/Intact	NO2-4500NO2(2)
L1012444-12C	Plastic 250ml unpreserved	D	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1012444-12D	Plastic 500ml H2SO4 preserved	B	<2	2.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-12E	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1012444-12F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.0	Y	Present/Intact	SULFIDE-4500(7)
L1012444-12G	Plastic 250ml Zn Acetate/NaOH pr	D	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1012444-12H	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012444-12I	Vial H2SO4 preserved split	D	N/A	4	Y	Present/Intact	DOC-5310(28)
L1012444-12M	Plastic 500ml HNO3 preserved	B	<2	2.0	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)
L1012444-12X	Amber 250ml unpreserved	D	6	4	Y	Present/Intact	DOC-5310(28)
L1012444-13A	Plastic 500ml unpreserved	C	6	2.1	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1012444-13B	Plastic 250ml unpreserved	D	6	4	Y	Present/Intact	NO2-4500NO2(2)
L1012444-13C	Plastic 250ml unpreserved	C	N/A	2.1	Y	Present/Intact	ALK-T-2320(14)
L1012444-13D	Plastic 500ml H2SO4 preserved	C	<2	2.1	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1012444-13E	Plastic 250ml Zn Acetate/NaOH pr	C	>12	2.1	Y	Present/Intact	SULFIDE-4500(7)

\*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, 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<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: 508-858-9220  
FAX: 508-858-9153

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3258

# CHAIN OF CUSTODY

PAGE 2 OF 2

## Project Information

Project Name: SHL Task 002

Project Location: Devens, MA

Project #: ACC01

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?

## Client Information

Client: Sovereign Consulting Inc

Address: 905B S. Main St

Mansfield, MA 02046

Phone: 508-339-3200

Fax: 508-339-3246

Email: pmc@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 # = 20 closed

\*Dune as noted Field filtered

K, mg/g

metals #1 = As, Fe

metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Cu, Cd

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	(Please specify below)												Sample Specific Comments	r m s
		Date	Time			Cl, E	NO <sub>3</sub>	Alk	NO <sub>2</sub>	Sulf	TSS	DOC	Total	Diss	Total	Diss			
12446-11	SHM-10-10-F	8/12/10	1138	GW	MYC	✓	✓	✓	✓	✓	✓				✓			9	
12446-12	SHM-07-03-F	8/12/10	1220	GW	JJC	✓	✓	✓	✓	✓	✓				✓			9	
12446-13	SHM-10-01-F	8/12/10	1240	GW	JAR	✓	✓	✓	✓	✓	✓				✓			9	
12446-14	SHM-05-42A-F	8/12/10	1335	GW	JAR	✓	✓	✓	✓	✓	✓				✓			9	
12446-15	RB-081210-U	8/12/10	1420	GW	JJC									✓				1	
12446-16	DUP-081210-F	8/12/10	1000	GW	JAR										✓			1	
12446-17	DUP2-081210-F	8/12/10	1220	GW	JJC										✓			1	

## SAMPLE HANDLING

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

Sample Specific Comments

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 5% A A A L C C

Refrigerated By:

Date/Time

Received By:

Date/Time

Phil McBain  
8/12/10 1000


8/12/10 1700


Phil McBain  
8/12/10 1700

8/12/10 1700

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 2	
 <p>WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193</p> <p>MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3258</p>		<b>Project Information</b> Project Name: <u>SHL TASK 0002</u> Project Location: <u>Devens, 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>Severeign Consulting Inc</u> Address: <u>905B S Main St</u> <u>Mansfield, MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3244</u> Email: <u>pmbain@severein.com</u>		<b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: _____ Time: _____		<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 type="checkbox"/> Yes <input type="checkbox"/> No Are MCP Analytical Methods Required? <input 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 analysis require MS every 20 soil samples) <u>SDG# = 25 Closed</u> <u>*Done MS noted</u> <u>F = Field Filtered</u> <u>metals #1 = As, Fe</u> <u>metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Cu, Cd, Hg, Mo</u>					
<b>ANALYSIS</b> CL, SO <sub>4</sub> , NO <sub>3</sub> NO <sub>2</sub> ALK NH <sub>4</sub> , COD Sulfide TSS DOC + DIC Total Metals #1 Diss Metals #1 Total 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)		<b>TOTAL # BOTTLES</b>			
<b>Sample ID</b> GP-10-27-035-F GP-10-27-035-U GP-10-27-045-F GP-10-27-045-U GP-10-27-055-F GP-10-27-055-U SHL-23-F SHM-05-39A-F SHM-07-05-F SHM-99-31B-F		<b>Collection</b> Date Time 8/11/10 1622 8/11/10 1622 8/11/10 1652 8/11/10 1652 8/11/10 1730 8/11/10 1730 8/12/10 0915 8/12/10 0920 8/12/10 1000 8/12/10 1110		<b>Sample Matrix</b> GW GW GW GW GW GW GW GW GW GW		<b>Sampler's Initials</b> JAR JAR JAR JAR JAR JAR JJC JAR JAR JJC	
12440 02 08 04 05 06 07 08 09 10		1 3 1 3 1 3 9 9 9 9		MS/MSD metals only			
<b>PLEASE ANSWER QUESTIONS ABOVE!</b> <b>IS YOUR PROJECT MA MCP or CT RCP?</b>		<b>Container Type</b> P P P P P P A P P P P <b>Preservative</b> A A A D F/A A A C C C		Relinquished By: <u>[Signature]</u> Date/Time: <u>8/12/10 1600</u> Received By: <u>[Signature]</u> Date/Time: <u>8/12/10 1615</u>			
FORM NO: 01-01 (rev. 18-Jan-2010)		Please print clearly, legibly, and completely. Samples can only 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 2 OF 2		Date Rec'd in Lab: 8/12/10		ALPHA Job #: B012414																																																																																																																																																																																																										
 <p>WESTBORO, MA TEL: 508-898-9220 FAX: 508-998-9193</p> <p>MANSFIELD, MA TEL: 508-822-8300 FAX: 508-822-3288</p>		<b>Project Information</b> Project Name: <u>SHL TASK 002</u> Project Location: <u>Devens, MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: <u>        </u>			<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      PO #: <u>        </u>																																																																																																																																																																																																											
<b>Client Information</b> Client: <u>Sovereign Consulting, Inc</u> Address: <u>905B Main St</u> <u>Mansfield MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3248</u> Email: <u>pmcain@sovereign.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>        </u> Time: <u>        </u>			<b>Regulatory Requirements/Report Limits</b> State/Fed Program: <u>        </u> 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?																																																																																																																																																																																																														
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) <u>SDG # = 2 &amp; closed</u> <u>*Done as noted</u> <u>F=field filtered</u> <u>K, may</u> <u>metals #1 = As, Fe</u> <u>metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Cu, Zn</u>					<b>ANALYSIS</b> CI, SO <sub>4</sub> , NO <sub>3</sub> NO <sub>2</sub> AIK NH <sub>4</sub> , CO <sub>2</sub> Soluble TSS DOC + DIC Total Metals #1 Diss Metals #1 Total Metals #2 Diss Metals #2		<b>SAMPLE HANDLING</b> Filtration: <u>        </u> <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)		<b>TOTAL # BOTTLES</b> 9 9 9 9 1 1 1																																																																																																																																																																																																										
<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="10">ANALYSIS</th> <th rowspan="2">Sample Specific Comments</th> </tr> <tr> <th>Date</th> <th>Time</th> <th>CI, SO<sub>4</sub>, NO<sub>3</sub></th> <th>NO<sub>2</sub></th> <th>AIK</th> <th>NH<sub>4</sub>, CO<sub>2</sub></th> <th>Soluble</th> <th>TSS</th> <th>DOC + DIC</th> <th>Total Metals #1</th> <th>Diss Metals #1</th> <th>Total Metals #2</th> <th>Diss Metals #2</th> </tr> </thead> <tbody> <tr> <td>12498-1</td> <td>SHM-10-10-F</td> <td>8/10/10</td> <td>1138</td> <td>GW</td> <td>MYC</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>12498-2</td> <td>SHM-07-03-F</td> <td>8/12/10</td> <td>1220</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>9</td> </tr> <tr> <td>12498-3</td> <td>SHM-10-01-F</td> <td>8/12/10</td> <td>1240</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>9</td> </tr> <tr> <td>12498-4</td> <td>SHM-05-42A-F</td> <td>8/12/10</td> <td>1335</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>9</td> </tr> <tr> <td>12498-5</td> <td>RB-081210-U</td> <td>8/12/10</td> <td>1420</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>1</td> </tr> <tr> <td>12498-6</td> <td>DUP-081210-F</td> <td>8/12/10</td> <td>1000</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>1</td> </tr> <tr> <td>12498-7</td> <td>DUP-081210-F</td> <td>8/12/10</td> <td>1220</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>1</td> </tr> <tr> <td>12498-8</td> <td>GP-10-27-065 U</td> <td>8/11/10</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>✓</td><td></td> </tr> <tr> <td>12498-9</td> <td>GP-10-27-065 F</td> <td>8/11/10</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>✓</td><td></td> </tr> </tbody> </table>		ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										Sample Specific Comments	Date	Time	CI, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	AIK	NH <sub>4</sub> , CO <sub>2</sub>	Soluble	TSS	DOC + DIC	Total Metals #1	Diss Metals #1	Total Metals #2	Diss Metals #2	12498-1	SHM-10-10-F	8/10/10	1138	GW	MYC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	12498-2	SHM-07-03-F	8/12/10	1220	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	12498-3	SHM-10-01-F	8/12/10	1240	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	12498-4	SHM-05-42A-F	8/12/10	1335	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	12498-5	RB-081210-U	8/12/10	1420	GW	JJC											✓		1	12498-6	DUP-081210-F	8/12/10	1000	GW	JAR											✓		1	12498-7	DUP-081210-F	8/12/10	1220	GW	JJC											✓		1	12498-8	GP-10-27-065 U	8/11/10	1600	GW	JAR							✓	✓	✓	✓	✓	✓		12498-9	GP-10-27-065 F	8/11/10	1600	GW	JAR							✓	✓	✓	✓	✓	✓		<b>PLEASE ANSWER QUESTIONS ABOVE!</b> 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 H E A A B L C C		Relinquished By: <u>Phil McBain</u> Date/Time: <u>8/12/10 1600</u> Received By: <u>John Lee</u> Date/Time: <u>8/12/10 1615</u> <u>John Lee</u> <u>8/12/10 1715</u>		Please print clearly, legibly and completely. Samples cannot be shipped in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subjected to Alpha Terms and Conditions. See reverse side.		
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12498-1	SHM-10-10-F	8/10/10	1138	GW	MYC	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	9																																																																																																																																																																																																
12498-2	SHM-07-03-F	8/12/10	1220	GW	JJC	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	9																																																																																																																																																																																																
12498-3	SHM-10-01-F	8/12/10	1240	GW	JAR	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	9																																																																																																																																																																																																
12498-4	SHM-05-42A-F	8/12/10	1335	GW	JAR	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	9																																																																																																																																																																																																
12498-5	RB-081210-U	8/12/10	1420	GW	JJC												✓		1																																																																																																																																																																																																
12498-6	DUP-081210-F	8/12/10	1000	GW	JAR												✓		1																																																																																																																																																																																																
12498-7	DUP-081210-F	8/12/10	1220	GW	JJC											✓		1																																																																																																																																																																																																	
12498-8	GP-10-27-065 U	8/11/10	1600	GW	JAR							✓	✓	✓	✓	✓	✓																																																																																																																																																																																																		
12498-9	GP-10-27-065 F	8/11/10	1600	GW	JAR							✓	✓	✓	✓	✓	✓																																																																																																																																																																																																		

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





## ANALYTICAL REPORT

Lab Number: L1012464

Client: Sovereign Consulting  
905B South Main Street  
Mansfield, MA 02048

ATTN: Phil McBain

Phone: (508) 339-3200

Project Name: SHL TASK 002

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 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1012464-01	GP-10-27-035-U	DEVENS, MA	08/11/10 16:22
L1012464-02	GP-10-27-045-U	DEVENS, MA	08/11/10 16:52
L1012464-03	GP-10-27-055-U	DEVENS, MA	08/11/10 17:30
L1012464-04	SHL-23-F	DEVENS, MA	08/12/10 09:15
L1012464-05	SHM-05-39A-F	DEVENS, MA	08/12/10 09:20
L1012464-06	SHM-07-05-F	DEVENS, MA	08/12/10 10:00
L1012464-07	SHM-99-31B-F	DEVENS, MA	08/12/10 11:10
L1012464-08	SHM-10-10-F	DEVENS, MA	08/12/10 11:38
L1012464-09	SHM-07-03-F	DEVENS, MA	08/12/10 12:20
L1012464-10	SHM-10-01-F	DEVENS, MA	08/12/10 12:40
L1012464-11	SHM-05-42A-F	DEVENS, MA	08/12/10 13:35
L1012464-12	GP-10-27-065-U	DEVENS, MA	08/11/10 16:00

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**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

L1012464-01 through -03 and -12: 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

L1012464-01 through -03, -05 through -10 and -12 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10


**Case Narrative (continued)**

L1012464-04 and -11 have elevated detection limits due to the dilutions required by the sample matrix.

WG428636: A matrix spike could not be performed due to insufficient 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: 08/20/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 002

Lab Number: L1012464

Project Number: AC001

Report Date: 08/20/10

## SAMPLE RESULTS

Lab ID: L1012464-01

Date Collected: 08/11/10 16:22

Client ID: GP-10-27-035-U

Date Received: 08/12/10

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	25		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-02  
**Client ID:** GP-10-27-045-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 16:52  
**Date Received:** 08/12/10  
**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	64		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-03  
**Client ID:** GP-10-27-055-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/11/10 17:30  
**Date Received:** 08/12/10  
**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	60		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW



**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-04  
**Client ID:** SHL-23-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/12/10 09:15  
**Date Received:** 08/12/10  
**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	ND		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW



**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-05  
**Client ID:** SHM-05-39A-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/12/10 09:20  
**Date Received:** 08/12/10  
**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	27		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW



**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-06  
**Client ID:** SHM-07-05-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/12/10 10:00  
**Date Received:** 08/12/10  
**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	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

Project Name: SHL TASK 002

Project Number: AC001

Lab Number: L1012464

Report Date: 08/20/10

## SAMPLE RESULTS

Lab ID: L1012464-07

Client ID: SHM-99-31B-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/12/10 11:10

Date Received: 08/12/10

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	28		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-08  
**Client ID:** SHM-10-10-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/12/10 11:38  
**Date Received:** 08/12/10  
**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	70		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

Project Name: SHL TASK 002

Project Number: AC001

Lab Number: L1012464

Report Date: 08/20/10

## SAMPLE RESULTS

Lab ID: L1012464-09

Client ID: SHM-07-03-F

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/12/10 12:20

Date Received: 08/12/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	12		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1012464  
**Report Date:** 08/20/10

**SAMPLE RESULTS**

**Lab ID:** L1012464-10  
**Client ID:** SHM-10-01-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 08/12/10 12:40  
**Date Received:** 08/12/10  
**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	31		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

Project Name: SHL TASK 002

Lab Number: L1012464

Project Number: AC001

Report Date: 08/20/10

## SAMPLE RESULTS

Lab ID: L1012464-11

Date Collected: 08/12/10 13:35

Client ID: SHM-05-42A-F

Date Received: 08/12/10

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	9.4		mg/l	8.0	--	8	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW



**Project Name:** SHL TASK 002**Project Number:** AC001**Lab Number:** L1012464**Report Date:** 08/20/10**SAMPLE RESULTS****Lab ID:** L1012464-12**Client ID:** GP-10-27-065-U**Sample Location:** DEVENS, MA**Matrix:** Water**Date Collected:** 08/11/10 16:00**Date Received:** 08/12/10**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	71		mg/l	20	--	20	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

Project Name: SHL TASK 002

Lab Number: L1012464

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): 01-12 Batch: WG428636-1									
Dissolved Inorganic Carbon	ND	mg/l	1.0	--	1	08/12/10 23:00	08/19/10 14:31	30,5310C(M)	DW

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 002

Project Number: AC001

Lab Number: L1012464

Report Date: 08/20/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-12 Batch: WG428636-2								
Dissolved Inorganic Carbon	97							

Project Name: SHL TASK 002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1012464

Report Date: 08/20/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-12 QC Batch ID: WG428636-3 QC Sample: L1012464-01 Client ID: GP-10-27-035-U						
Dissolved Inorganic Carbon	25	26	mg/l	4		

Project Name: SHL TASK 002

Lab Number: L1012464

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(*)
L1012464-01A	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012464-01B	Vial H2SO4 preserved split	A	N/A	3.1	Y	Present/Intact	SPECWC()
L1012464-01X	Amber 250ml unpreserved	A	6	3.1	Y	Present/Intact	SPECWC()
L1012464-02A	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-02B	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-02X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	SPECWC()
L1012464-03A	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-03B	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-03X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	SPECWC()
L1012464-04A	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-04B	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-04X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	SPECWC()
L1012464-05A	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-05B	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-05X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	SPECWC()
L1012464-06A	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-06B	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-06X	Amber 250ml unpreserved	C	6	2.1	NA	Present/Intact	SPECWC()
L1012464-07A	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-07B	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-07X	Amber 250ml unpreserved	C	6	2.1	NA	Present/Intact	SPECWC()
L1012464-08A	Vial H2SO4 preserved split	B	N/A	2.0	NA	Present/Intact	SPECWC()
L1012464-08B	Vial H2SO4 preserved split	B	N/A	2.0	NA	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 002

Lab Number: L1012464

Project Number: AC001

Report Date: 08/20/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1012464-08X	Amber 250ml unpreserved	B	6	2.0	NA	Present/Intact	SPECWC()
L1012464-09A	Vial H2SO4 preserved split	D	N/A	4	NA	Present/Intact	SPECWC()
L1012464-09B	Vial H2SO4 preserved split	D	N/A	4	NA	Present/Intact	SPECWC()
L1012464-09X	Amber 250ml unpreserved	D	6	4	NA	Present/Intact	SPECWC()
L1012464-10A	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-10B	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-10X	Amber 250ml unpreserved	C	6	2.1	NA	Present/Intact	SPECWC()
L1012464-11A	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-11B	Vial H2SO4 preserved split	C	N/A	2.1	NA	Present/Intact	SPECWC()
L1012464-11X	Amber 250ml unpreserved	C	6	2.1	NA	Present/Intact	SPECWC()
L1012464-12A	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-12B	Vial H2SO4 preserved split	A	N/A	3.1	NA	Present/Intact	SPECWC()
L1012464-12X	Amber 250ml unpreserved	A	6	3.1	NA	Present/Intact	SPECWC()

**Container Comments**

L1012464-01A

L1012464-01B

L1012464-02A

L1012464-02B

L1012464-03A

L1012464-03B

L1012464-04A

L1012464-04B

L1012464-05A

L1012464-05B

L1012464-06A

L1012464-06B

L1012464-07A

L1012464-07B

L1012464-08A

L1012464-08B

L1012464-09A

\*Values in parentheses indicate holding time in days

**Project Name:** SHL TASK 002**Lab Number:** L1012464**Project Number:** AC001**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**

L1012464-09B

L1012464-10A

L1012464-10B


L1012464-11A

L1012464-11B

L1012464-12A


L1012464-12B

\*Values in parentheses indicate holding time in days

CHAIN OF CUSTODY						PAGE 1 OF 2		Date Rec'd in Lab: 8/12/10		ALPHA Job #: 1031245					
 <p>WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9183</p> <p>MANSFIELD, MA TEL: 508-822-5300 FAX: 508-822-3268</p>		<b>Project Information</b> Project Name: SHL Task 0002 Project Location: Devens, MA Project #: Accel Project Manager: Phil McBean ALPHA Quote #: Turn-Around Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: Time: <input type="checkbox"/> These samples have been previously analyzed by Alpha		<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>Regulatory Requirements/Report Limits</b> State / Fed Program: Criteria: See QAPP <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?		<b>Billing Information</b> <input type="checkbox"/> Same as Client Info PO #: 									
<b>Client Information</b> Client: Sovereign Consulting Inc. Address: 705B S. Main St Mansfield, MA 02048 Phone: 508-339-3200 Fax: 508-339-3244 Email: p.mcbain@sovereign.com		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# = 28 Closed *Done as noted F = Field Filtered metals #1 = As, Fe metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, V, Cd, Cu, Mo													
ALPHA ASID (Lab Use Only)		Sample ID		Collection		Sample Matrix		Sampler's Initials		ANALYSIS		SAMPLE HANDLING		TOTAL # BOTTLES	
				Date Time						CI, SO4, DO3 CO2 AIB NH4, COD Sulfide TSS DOC + DIC Total metals #1 Diss metals #1 Total metals #2 Diss metals #2		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)			
		GP-10-27-035-F		8/11/10 1622		GW JAR				✓				1	
2464-01		GP-10-27-035-U		8/11/10 1622		GW JAR				✓ ✓ ✓				3	
		GP-10-27-045-F		8/11/10 1652		GW JAR				✓				1	
02		GP-10-27-045-U		8/11/10 1652		GW JAR				✓ ✓ ✓				3	
		GP-10-27-055-F		8/11/10 1730		GW JAR				✓				1	
03		GP-10-27-055-U		8/11/10 1730		GW JAR				✓ ✓ ✓				3	
04		SHL-23-F		8/12/10 0915		GW JJC		✓ ✓ ✓ ✓ ✓		✓		✓		9	
05		SHM-05-39A-F		8/12/10 0920		GW JAR		✓ ✓ ✓ ✓ ✓		✓		✓		9 MS/MSD metals only	
06		SHM-07-05-F		8/12/10 1000		GW JAR		✓ ✓ ✓ ✓ ✓		✓		✓		9	
07		SHM-99-31B-F		8/12/10 1110		GW JJC		✓ ✓ ✓ ✓ ✓		✓		✓		9	
PLEASE ANSWER QUESTIONS ABOVE!				Container Type		P P P P P P A P P P P									
				Preservative		A A A A D 1/2 A A C C C C									
IS YOUR PROJECT MA MCP or CT RCP?				Relinquished By:		Date/Time		Received By:		Date/Time					
				[Signature]		8/12/10 1600		[Signature]		8/12/10 1615					
				[Signature]		8/12/10 1715		[Signature]		8/12/10 1715					
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CHAIN OF CUSTODY					PAGE <u>1</u> OF <u>2</u>		Date Rec'd in Lab: <u>8/12/10</u>		ALPHA Job #: <u>L1612414</u>						
 <p>WESTBORO, MA TEL: 508-896-9220 FAX: 508-896-9193</p> <p>MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288</p>		<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Devers, MA</u> Project #: <u>AL001</u> Project Manager: <u>Phil McCain</u> ALPHA Quote #: _____ <b>Turn-Around Time</b> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: _____ 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 #: _____								
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10440		GP-10-27-035-F		8/11/10 1622		GW JAR				✓				1	
-02		GP-10-27-035-U		8/11/10 1622		GW JAR				✓ ✓ ✓				3	
-03		GP-10-27-045-F		8/11/10 1652		GW JAR				✓				1	
-04		GP-10-27-045-U		8/11/10 1652		GW JAR				✓ ✓ ✓				3	
-05		GP-10-27-055-F		8/11/10 1730		GW JAR				✓				1	
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PLEASE ANSWER QUESTIONS ABOVE! <b>IS YOUR PROJECT MA MCP or CT RCP?</b>				Container Type Preservative		Relinquished By: _____ Date/Time: <u>8/12/10 1600</u>		Received By: _____ Date/Time: <u>8/12/10 1600</u>		Case 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.					

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 <p>WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193</p> <p>MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3268</p>		<b>Project Information</b> Project Name: <u>SHL Task 0002</u> Project Location: <u>Devens, MA</u> Project #: <u>AC001</u> Project Manager: <u>Phil McBain</u> ALPHA Quote #: <u></u>		<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: <u></u>		<b>Billing Information</b> <input type="checkbox"/> Same as Client Info <input type="checkbox"/> PO #: <u></u>																																																																																																																																																																																																																															
<b>Client Information</b> Client: <u>Sovereign Consulting Inc</u> Address: <u>90 SR 3 main st</u> <u>Mansfield MA 02048</u> Phone: <u>508-339-3200</u> Fax: <u>508-339-3244</u> Email: <u>pmcain@sovecon.com</u>		<b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved) Date Due: <u></u> Time: <u></u>		<b>Regulatory Requirements/Report Limits</b> State / Fed Program: <u></u> 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?																																																																																																																																																																																																																																	
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) <u>SDG # = 25 closed</u> <u>+Dune as noted Field Filtered</u> <u>K, mg/g</u> <u>metals #1 = As, Fe</u> <u>metals #2 = As, Fe, Mn, Al, Cr, Pb, Ni, Cu, Cd</u>		<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>CI, SO<sub>4</sub>, NO<sub>3</sub></th> <th>NO<sub>2</sub></th> <th>Alk</th> <th>NO<sub>3</sub>, CO<sub>2</sub></th> <th>Sulfide</th> <th>TSS</th> <th>DOL + DIC</th> <th>Total Metals #1</th> <th>Diss Metals #1</th> <th>Total Metals #2</th> <th>Diss Metals #2</th> </tr> </thead> <tbody> <tr> <td>12140</td> <td>SHM-10-10-F</td> <td>8/12/10</td> <td>1138</td> <td>GW</td> <td>MYC</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>✓</td><td>9</td> </tr> <tr> <td>12</td> <td>SHM-07-03-F</td> <td>8/12/10</td> <td>1220</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>✓</td><td>9</td> </tr> <tr> <td>13</td> <td>SHM-10-01-F</td> <td>8/12/10</td> <td>1240</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>✓</td><td>9</td> </tr> <tr> <td>14</td> <td>SHM-05-42A-F</td> <td>8/12/10</td> <td>1335</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>✓</td><td>9</td> </tr> <tr> <td>15</td> <td>RB-081210-U</td> <td>8/12/10</td> <td>1420</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></td><td>1</td> </tr> <tr> <td>16</td> <td>DUP-081210-F</td> <td>8/12/10</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></td><td></td><td></td><td>1</td> </tr> <tr> <td>17</td> <td>DUP-081210-F</td> <td>8/12/10</td> <td>1220</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></td><td>1</td> </tr> <tr> <td>18</td> <td>GP-10-27-065 U</td> <td>8/11/10</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></td><td></td><td></td><td></td> </tr> <tr> <td>19</td> <td>GP-10-27-065 F</td> <td>8/11/10</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></td><td></td><td></td><td></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	CI, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	Alk	NO <sub>3</sub> , CO <sub>2</sub>	Sulfide	TSS	DOL + DIC	Total Metals #1	Diss Metals #1	Total Metals #2	Diss Metals #2	12140	SHM-10-10-F	8/12/10	1138	GW	MYC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	12	SHM-07-03-F	8/12/10	1220	GW	JJC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	13	SHM-10-01-F	8/12/10	1240	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	14	SHM-05-42A-F	8/12/10	1335	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	15	RB-081210-U	8/12/10	1420	GW	JJC															1	16	DUP-081210-F	8/12/10	1600	GW	JAR															1	17	DUP-081210-F	8/12/10	1220	GW	JJC															1	18	GP-10-27-065 U	8/11/10	1600	GW	JAR																19	GP-10-27-065 F	8/11/10	1600	GW	JAR															
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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 A A A C C C</u>																																																																																																																																																																																																																															
Relinquished By: <u>[Signature]</u> Date/Time: <u>8/12/10 1600</u>		Received By: <u>[Signature]</u> Date/Time: <u>8/12/10 1615</u>		Please print clearly, legibly and completely. Samples cannot be logged in and time around the clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.																																																																																																																																																																																																																																	

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



## ANALYTICAL REPORT

Lab Number: L1013407

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: 09/09/10

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:** L1013407  
**Report Date:** 09/09/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013407-01	SHM-10-11-F	DEVENS, MA	08/30/10 11:20
L1013407-02	SHM-10-11-U	DEVENS, MA	08/30/10 11:20
L1013407-03	SHM-10-12-F	DEVENS, MA	08/30/10 15:00
L1013407-04	SHM-10-12-U	DEVENS, MA	08/30/10 15:00
L1013407-05	DUP-083010-F	DEVENS, MA	08/30/10 15:00
L1013407-06	DUP-083010-U	DEVENS, MA	08/30/10 15:00
L1013407-07	RB-083010-U	DEVENS, MA	08/30/10 14:30

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

**Lab Number:** L1013407  
**Report Date:** 09/09/10

### 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

L1013407-01, -03 and -05 have elevated detection limits for all analytes, except Mercury, due to the dilutions

**Project Name:** SHL TASK 0002**Lab Number:** L1013407**Project Number:** AC001**Report Date:** 09/09/10**Case Narrative (continued)**

required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG430413-3/-4 MS/MSD recoveries for Iron (670%/330%) and Manganese (MS at 140%), performed on L1013407-01, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG430413-3 MS recoveries, performed on L1013407-01, are above the acceptance criteria for Arsenic (122%) and Calcium (125%). A post digestion spike was performed with unacceptable recoveries of Arsenic (128%) and Calcium (127%). This has been attributed to sample matrix. The parent sample (L1013407-01) is qualified as "J" for Arsenic and Calcium.

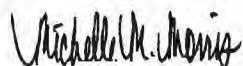
**Total Metals**

L1013407-02, -04 and -06 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 WG430412-4 MSD recoveries for Iron (0%) and Manganese (74%), performed on L1013407-02, are invalid because the sample concentrations are greater than four times the spike amount added.

**Alkalinity**

The WG430540-3 MS recovery, performed on L1013407-04, is below the acceptance criteria for Alkalinity (57%). This has been attributed to matrix interference.

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:** 09/09/10

## METALS



Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-01

Date Collected: 08/30/10 11:20

Client ID: SHM-10-11-F

Date Received: 08/30/10

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	10.2	J	ug/l	20.0	3.82	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.53	J	ug/l	1.00	0.240	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	342	J	ug/l	1.00	0.226	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Barium, Dissolved	36.5		ug/l	1.00	0.190	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	1.00	0.118	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	1.00	0.118	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Calcium, Dissolved	21200	J	ug/l	200	25.3	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.52	J	ug/l	1.00	0.372	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	5.94		ug/l	1.00	0.106	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.45	J	ug/l	1.00	0.236	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Iron, Dissolved	55700		ug/l	100	16.8	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.15	J	ug/l	1.00	0.100	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2530		ug/l	200	8.20	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2320		ug/l	2.00	0.272	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.01443	J	ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:09	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	5.43		ug/l	1.00	0.360	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5150		ug/l	200	36.3	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	2.00	0.812	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	1.00	0.170	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Sodium, Dissolved	11800		ug/l	200	36.4	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	1.00	0.062	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	1.00	0.154	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM
Zinc, Dissolved	13.8		ug/l	10.0	3.25	2	08/31/10 19:20	09/01/10 19:14	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-02

Client ID: SHM-10-11-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/30/10 11:20

Date Received: 08/30/10

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	113		ug/l	20.0	3.82	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Antimony, Total	0.26	J	ug/l	1.00	0.240	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Arsenic, Total	356		ug/l	1.00	0.226	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Barium, Total	40.3		ug/l	1.00	0.190	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	1.00	0.118	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	1.00	0.118	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Calcium, Total	23900		ug/l	200	25.3	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Chromium, Total	1.44		ug/l	1.00	0.372	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Cobalt, Total	6.28		ug/l	1.00	0.106	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Copper, Total	0.75	J	ug/l	1.00	0.236	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Iron, Total	60600		ug/l	100	16.8	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Lead, Total	0.34	J	ug/l	1.00	0.100	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Magnesium, Total	2770		ug/l	200	8.20	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Manganese, Total	2490		ug/l	2.00	0.272	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:25	EPA 7470A	1,7470A	EZ
Nickel, Total	5.92		ug/l	1.00	0.360	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Potassium, Total	5410		ug/l	200	36.3	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	2.00	0.812	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	1.00	0.170	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Sodium, Total	12400		ug/l	200	36.4	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	1.00	0.062	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Vanadium, Total	0.31	J	ug/l	1.00	0.154	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM
Zinc, Total	10.9		ug/l	10.0	3.25	2	08/31/10 19:20	09/01/10 19:56	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-03

Date Collected: 08/30/10 15:00

Client ID: SHM-10-12-F

Date Received: 08/30/10

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	27.6	J	ug/l	100	19.1	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Antimony, Dissolved	2.99	J	ug/l	5.00	1.20	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	3560		ug/l	5.00	1.13	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Barium, Dissolved	55.7		ug/l	5.00	0.950	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Calcium, Dissolved	33000		ug/l	1000	126.	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	8.34		ug/l	5.00	0.530	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Iron, Dissolved	104000		ug/l	500	84.1	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2500		ug/l	1000	41.0	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Manganese, Dissolved	7000		ug/l	10.0	1.36	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:18	EPA 7470A	1.7470A	EZ
Nickel, Dissolved	13.9		ug/l	5.00	1.80	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Potassium, Dissolved	7040		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Sodium, Dissolved	8780		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM
Zinc, Dissolved	37.7	J	ug/l	50.0	16.2	10	08/31/10 19:20	09/01/10 19:38	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-04

Client ID: SHM-10-12-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/30/10 15:00

Date Received: 08/30/10

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	50.2	J	ug/l	100	19.1	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Antimony, Total	1.38	J	ug/l	5.00	1.20	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Arsenic, Total	2880		ug/l	5.00	1.13	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Barium, Total	44.1		ug/l	5.00	0.950	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Calcium, Total	25000		ug/l	1000	126.	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Cobalt, Total	6.36		ug/l	5.00	0.530	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Copper, Total	ND		ug/l	5.00	1.18	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Iron, Total	78600		ug/l	500	84.1	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	5.00	0.500	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Magnesium, Total	1940		ug/l	1000	41.0	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Manganese, Total	5400		ug/l	10.0	1.36	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:34	EPA 7470A	1,7470A	EZ
Nickel, Total	11.0		ug/l	5.00	1.80	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Potassium, Total	5480		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Sodium, Total	7090		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM
Zinc, Total	35.2	J	ug/l	50.0	16.2	10	08/31/10 19:20	09/01/10 20:39	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-05

Date Collected: 08/30/10 15:00

Client ID: DUP-083010-F

Date Received: 08/30/10

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	27.5	J	ug/l	100	19.1	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Antimony, Dissolved	1.56	J	ug/l	5.00	1.20	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	3410		ug/l	5.00	1.13	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Barium, Dissolved	53.7		ug/l	5.00	0.950	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Calcium, Dissolved	30600		ug/l	1000	126	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	7.64		ug/l	5.00	0.530	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Iron, Dissolved	96000		ug/l	500	84.1	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2360		ug/l	1000	41.0	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Manganese, Dissolved	6520		ug/l	10.0	1.36	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.01933	J	ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:20	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	12.4		ug/l	5.00	1.80	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6480		ug/l	1000	182	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Sodium, Dissolved	8610		ug/l	1000	182	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM
Zinc, Dissolved	36.5	J	ug/l	50.0	16.2	10	08/31/10 19:20	09/01/10 19:44	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-06  
 Client ID: DUP-083010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 08/30/10 15:00  
 Date Received: 08/30/10  
 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	112		ug/l	100	19.1	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	5.00	1.20	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Arsenic, Total	3210		ug/l	5.00	1.13	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Barium, Total	50.6		ug/l	5.00	0.950	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Calcium, Total	27900		ug/l	1000	126.	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Cobalt, Total	6.88		ug/l	5.00	0.530	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Copper, Total	ND		ug/l	5.00	1.18	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Iron, Total	89700		ug/l	500	84.1	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Lead, Total	0.59	J	ug/l	5.00	0.500	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Magnesium, Total	2190		ug/l	1000	41.0	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Manganese, Total	6120		ug/l	10.0	1.36	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Mercury, Total	0.03627	J	ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:36	EPA 7470A	1,7470A	EZ
Nickel, Total	12.3		ug/l	5.00	1.80	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Potassium, Total	6190		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Sodium, Total	7880		ug/l	1000	182.	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM
Zinc, Total	46.8	J	ug/l	50.0	16.2	10	08/31/10 19:20	09/01/10 20:45	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-07

Date Collected: 08/30/10 14:30

Client ID: RB-083010-U

Date Received: 08/30/10

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	2.38	J	ug/l	10.0	1.91	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Antimony, Total	0.28	J	ug/l	0.500	0.120	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Arsenic, Total	0.29	J	ug/l	0.500	0.113	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Barium, Total	0.1	J	ug/l	0.500	0.095	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Calcium, Total	34.8	J	ug/l	100	12.6	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Chromium, Total	0.38	J	ug/l	0.500	0.186	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Copper, Total	0.520		ug/l	0.500	0.118	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Iron, Total	18.5	J	ug/l	50.0	8.41	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Lead, Total	0.05	J	ug/l	0.500	0.050	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Manganese, Total	0.83	J	ug/l	1.00	0.136	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Mercury, Total	0.03853	J	ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:38	EPA 7470A	1,7470A	EZ
Nickel, Total	0.38	J	ug/l	0.500	0.180	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Potassium, Total	33	J	ug/l	100	18.2	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Sodium, Total	56	J	ug/l	100	18.2	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM
Zinc, Total	2.25	J	ug/l	5.00	1.62	1	08/31/10 19:20	09/01/10 20:33	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

### 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): 02,04,06-07 Batch: WG430412-1										
Aluminum, Total	3.13	J	ug/l	10.0	1.91	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Calcium, Total	19.4	J	ug/l	100	12.6	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Copper, Total	ND		ug/l	0.500	0.118	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Iron, Total	15.8	J	ug/l	50.0	8.41	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Potassium, Total	23	J	ug/l	100	18.2	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Silver, Total	0.13	J	ug/l	0.500	0.085	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	08/31/10 19:20	09/01/10 18:32	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 Batch: WG430413-1										
Aluminum, Dissolved	3.13	J	ug/l	10.0	1.91	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM



Project Name: SHL TASK 0002  
Project Number: AC001

Lab Number: L1013407  
Report Date: 09/09/10

### Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Calcium, Dissolved	19.4	J	ug/l	100	12.6	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Iron, Dissolved	15.8	J	ug/l	50.0	8.41	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Potassium, Dissolved	23	J	ug/l	100	18.2	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Silver, Dissolved	0.13	J	ug/l	0.500	0.085	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	08/31/10 19:20	09/01/10 18:32	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	08/31/10 19:20	09/01/10 18:32	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 Batch: WG430591-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:15	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): 02,04,06-07 Batch: WG430592-1										
Mercury, Total	0.01808	J	ug/l	0.2000	0.0120	1	09/01/10 18:16	09/02/10 12:22	1,7470A	EZ



**Project Name:** SHL TASK 0002

**Lab Number:** L1013407

**Project Number:** AC001

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

## **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: L1013407

Report Date: 09/09/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG430412-2								
Aluminum, Total	97		-		80-120	-		
Antimony, Total	97		-		80-120	-		
Arsenic, Total	98		-		80-120	-		
Barium, Total	99		-		80-120	-		
Beryllium, Total	97		-		80-120	-		
Cadmium, Total	110		-		80-120	-		
Calcium, Total	102		-		80-120	-		
Chromium, Total	97		-		80-120	-		
Cobalt, Total	105		-		80-120	-		
Copper, Total	105		-		80-120	-		
Iron, Total	108		-		80-120	-		
Lead, Total	102		-		80-120	-		
Magnesium, Total	103		-		80-120	-		
Manganese, Total	102		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	102		-		80-120	-		
Selenium, Total	105		-		80-120	-		
Silver, Total	97		-		80-120	-		
Sodium, Total	96		-		80-120	-		
Thallium, Total	94		-		80-120	-		
Vanadium, Total	102		-		80-120	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG430412-2					
Zinc, Total	101	-	80-120	-	

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG430413-2					
Aluminum, Dissolved	97	-	80-120	-	
Antimony, Dissolved	97	-	80-120	-	
Arsenic, Dissolved	98	-	80-120	-	
Barium, Dissolved	99	-	80-120	-	
Beryllium, Dissolved	97	-	80-120	-	
Cadmium, Dissolved	110	-	80-120	-	
Calcium, Dissolved	102	-	80-120	-	
Chromium, Dissolved	97	-	80-120	-	
Cobalt, Dissolved	105	-	80-120	-	
Copper, Dissolved	105	-	80-120	-	
Iron, Dissolved	108	-	80-120	-	
Lead, Dissolved	102	-	80-120	-	
Magnesium, Dissolved	103	-	80-120	-	
Manganese, Dissolved	102	-	80-120	-	
Nickel, Dissolved	103	-	80-120	-	
Potassium, Dissolved	102	-	80-120	-	
Selenium, Dissolved	105	-	80-120	-	
Silver, Dissolved	97	-	80-120	-	
Sodium, Dissolved	96	-	80-120	-	
Thallium, Dissolved	94	-	80-120	-	
Vanadium, Dissolved	102	-	80-120	-	

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1013407

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

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG430413-2					
Zinc, Dissolved	101	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG430591-2					
Mercury, Dissolved	106	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG430592-2					
Mercury, Total	106	-	80-120	-	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

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): 02,04,06-07 QC Batch ID: WG430412-3 WG430412-4 QC Sample: L1013407-02 Client ID: SHM-10-11-U												
Aluminum, Total	113	2000	2010	95		2010	95		80-120	0		20
Antimony, Total	ND	500	506	101		488	98		80-120	4		20
Arsenic, Total	356	120	484	107		471	96		80-120	3		20
Barium, Total	40.3	2000	2110	103		2010	98		80-120	5		20
Beryllium, Total	ND	50	48.5	97		47.1	94		80-120	3		20
Cadmium, Total	ND	51	58.6	115		56.2	110		80-120	4		20
Calcium, Total	23900	10000	34400	105		33600	97		80-120	2		20
Chromium, Total	1.44	200	196	97		190	94		80-120	3		20
Cobalt, Total	6.28	500	532	105		525	104		80-120	1		20
Copper, Total	ND	250	262	105		255	102		80-120	3		20
Iron, Total	60600	1000	61500	90		59000	0		80-120	4		20
Lead, Total	ND	510	520	102		509	100		80-120	2		20
Magnesium, Total	2770	10000	12800	100		12800	100		80-120	0		20
Manganese, Total	2490	500	2960	94		2860	74		80-120	3		20
Nickel, Total	5.92	500	521	103		511	101		80-120	2		20
Potassium, Total	5410	10000	15400	100		15100	97		80-120	2		20
Selenium, Total	ND	120	124	103		124	103		80-120	0		20
Silver, Total	ND	50	49.3	99		47.4	95		80-120	4		20
Sodium, Total	12400	10000	21900	95		21000	86		80-120	4		20
Thallium, Total	ND	120	112	93		111	92		80-120	1		20
Vanadium, Total	ND	500	513	103		504	101		80-120	2		20

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

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

**Lab Number:** L1013407  
**Report Date:** 09/09/10

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): 02,04,06-07 QC Batch ID: WG430412-3 WG430412-4 QC Sample: L1013407-02 Client ID: SHM-10-11-U									
Zinc, Total	10.9	500	522	102	509	100	80-120	3	20



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

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 QC Batch ID: WG430413-3 WG430413-4 QC Sample: L1013407-01 Client ID: SHM-10-11-F									
Aluminum, Dissolved	ND	2000	1990	100	1920	96	80-120	4	20
Antimony, Dissolved	ND	500	512	102	501	100	80-120	2	20
Arsenic, Dissolved	342	120	488	122	466	103	80-120	5	20
Barium, Dissolved	36.5	2000	2110	104	2060	101	80-120	2	20
Beryllium, Dissolved	ND	50	48.7	97	47.4	95	80-120	3	20
Cadmium, Dissolved	ND	51	59.2	116	57.2	112	80-120	3	20
Calcium, Dissolved	21200	10000	33700	125	32400	112	80-120	4	20
Chromium, Dissolved	ND	200	201	100	195	98	80-120	3	20
Cobalt, Dissolved	5.94	500	544	108	528	104	80-120	3	20
Copper, Dissolved	ND	250	271	108	263	105	80-120	3	20
Iron, Dissolved	55700	1000	62400	670	59000	330	80-120	6	20
Lead, Dissolved	ND	510	530	104	512	100	80-120	3	20
Magnesium, Dissolved	2530	10000	13200	107	12800	103	80-120	3	20
Manganese, Dissolved	2320	500	3020	140	2850	106	80-120	6	20
Nickel, Dissolved	5.43	500	538	106	526	104	80-120	2	20
Potassium, Dissolved	5150	10000	15900	108	15200	100	80-120	5	20
Selenium, Dissolved	ND	120	127	106	121	101	80-120	5	20
Silver, Dissolved	ND	50	50.0	100	48.5	97	80-120	3	20
Sodium, Dissolved	11800	10000	22200	104	20800	90	80-120	7	20
Thallium, Dissolved	ND	120	115	96	111	92	80-120	4	20
Vanadium, Dissolved	ND	500	528	106	513	103	80-120	3	20

### Matrix Spike Analysis Batch Quality Control

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

**Lab Number:** L1013407  
**Report Date:** 09/09/10

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 QC Batch ID: WG430413-3 WG430413-4 QC Sample: L1013407-01 Client ID: SHM-10-11-F									
Zinc, Dissolved	13.8	500	524	102	521	101	80-120	1	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG430591-3 WG430591-4 QC Sample: L1013407-01 Client ID: SHM-10-11-F									
Mercury, Dissolved	ND	1	1.185	118	1.174	117	80-120	1	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 QC Batch ID: WG430592-3 WG430592-4 QC Sample: L1013407-02 Client ID: SHM-10-11-U									
Mercury, Total	ND	1	1.070	107	1.132	113	80-120	6	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-02

Date Collected: 08/30/10 11:20

Client ID: SHM-10-11-U

Date Received: 08/30/10

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										
Alkalinity, Total	160		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/01/10 08:23	30,2320B	SD
Solids, Total Suspended	15		mg/l	5.0	NA	1	-	09/02/10 10:20	30,2540D	DW
Nitrogen, Ammonia	2.79		mg/l	0.075	0.017	1	08/31/10 13:30	09/01/10 20:07	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/30/10 20:02	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/31/10 18:15	08/31/10 19:15	30,4500S2-AD	AT
Chemical Oxygen Demand	22		mg/l	20	7.0	1	-	09/02/10 12:39	44,410.4	DW
Dissolved Organic Carbon	3.3		mg/l	1.0	1.0	1	08/30/10 19:30	09/03/10 07:16	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	24		mg/l	0.50	0.07	1	-	08/31/10 13:41	44,300.0	AU
Nitrogen, Nitrate	0.019	J	mg/l	0.05	0.01	1	-	08/31/10 13:41	44,300.0	AU
Sulfate	19		mg/l	1.0	0.12	1	-	08/31/10 13:41	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013407-04

Date Collected: 08/30/10 15:00

Client ID: SHM-10-12-U

Date Received: 08/30/10

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 - Westborough Lab</b>										
Alkalinity, Total	240		mg CaCO3/L	2.0	NA	1	-	09/01/10 08:23	30,2320B	SD
Solids, Total Suspended	12		mg/l	5.0	NA	1	-	09/02/10 10:20	30,2540D	DW
Nitrogen, Ammonia	3.70		mg/l	0.075	0.017	1	08/31/10 13:30	09/01/10 20:08	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/30/10 20:03	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	08/31/10 18:15	08/31/10 19:15	30,4500S2-AD	AT
Chemical Oxygen Demand	31		mg/l	20	7.0	1	-	09/02/10 12:39	44,410.4	DW
Dissolved Organic Carbon	4.1		mg/l	1.0	1.0	1	08/30/10 19:30	09/03/10 07:16	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	3.7		mg/l	0.50	0.07	1	-	08/31/10 13:53	44,300.0	AU
Nitrogen, Nitrate	0.035	J	mg/l	0.05	0.01	1	-	08/31/10 13:53	44,300.0	AU
Sulfate	1.7		mg/l	1.0	0.12	1	-	08/31/10 13:53	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

### 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 Batch: WG430178-2										
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	08/30/10 20:01	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430360-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.017	1	08/31/10 13:30	09/01/10 20:04	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04 Batch: WG430376-1										
Chloride	ND		mg/l	0.50	0.07	1	-	08/31/10 13:05	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	08/31/10 13:05	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	-	08/31/10 13:05	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430495-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/02/10 10:20	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430540-1										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	09/01/10 08:23	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430659-1										
Chemical Oxygen Demand	9.7	J	mg/l	20	7.0	1	-	09/02/10 12:37	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430849-1										
Sulfide	ND		mg/l	0.10	0.10	1	08/31/10 18:15	08/31/10 19:15	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431003-1										
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	08/30/10 19:30	09/03/10 07:16	30,5310C	DW

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430178-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430360-2								
Nitrogen, Ammonia	100		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 Batch: WG430376-2								
Chloride	100		-		90-110	-		
Nitrogen, Nitrate	100		-		90-110	-		
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430540-2								
Alkalinity, Total	110		-		80-115	-		4
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430659-2								
Chemical Oxygen Demand	104		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430849-2								
Sulfide	87		-		75-125	-		

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013407**Report Date:** 09/09/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431003-2

Dissolved Organic Carbon

102

90-110



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013407

Report Date: 09/09/10

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): 02,04 QC Batch ID: WG430178-3 QC Sample: L1013407-02 Client ID: SHM-10-11-U												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430360-3 QC Sample: L1013407-04 Client ID: SHM-10-12-U												
Nitrogen, Ammonia	3.70	4	7.60	98	-	-	-	-	80-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430376-3 WG430376-4 QC Sample: L1013407-02 Client ID: SHM-10-11-U												
Chloride	24	4	27	75	-	27	75	-	40-151	0	-	18
Nitrogen, Nitrate	ND	0.4	0.42	105	-	0.43	108	-	80-122	2	-	15
Sulfate	19	8	27	100	-	27	100	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430540-3 QC Sample: L1013407-04 Client ID: SHM-10-12-U												
Alkalinity, Total	240	100	300	57	Q	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430659-3 QC Sample: L1013407-04 Client ID: SHM-10-12-U												
Chemical Oxygen Demand	31	238	290	110	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430849-3 QC Sample: L1013407-04 Client ID: SHM-10-12-U												
Sulfide	ND	0.24	0.18	75	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431003-3 QC Sample: L1013407-02 Client ID: SHM-10-11-U												
Dissolved Organic Carbon	3.3	4	7.6	108	-	-	-	-	79-120	-	-	20

Project Name: SHL TASK 0002

Project Number: AC001

### Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1013407

Report Date: 09/09/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430178-4 QC Sample: L1013407-02 Client ID: SHM-10-11-U						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430360-4 QC Sample: L1013407-04 Client ID: SHM-10-12-U						
Nitrogen, Ammonia	3.70	3.67	mg/l	1		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430376-5 QC Sample: L1013407-02 Client ID: SHM-10-11-U						
Chloride	24	24	mg/l	0		18
Nitrogen, Nitrate	0.019J	0.02J	mg/l	NC		15
Sulfate	19	19	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430495-2 QC Sample: L1013315-01 Client ID: DUP Sample						
Solids, Total Suspended	4000	4400	mg/l	10		32
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430540-4 QC Sample: L1013407-04 Client ID: SHM-10-12-U						
Alkalinity, Total	240	250	mg CaCO3/L	4		4
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430659-4 QC Sample: L1013407-04 Client ID: SHM-10-12-U						
Chemical Oxygen Demand	31	36	mg/l	15		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430849-4 QC Sample: L1013407-04 Client ID: SHM-10-12-U						
Sulfide	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431003-4 QC Sample: L1013407-04 Client ID: SHM-10-12-U						
Dissolved Organic Carbon	4.1	4.3	mg/l	5		20

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## 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(*)
L1013407-01A	Plastic 250ml HNO3 preserved	A	<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)
L1013407-01B	Plastic 250ml HNO3 preserved	A	<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)
L1013407-02A	Vial H2SO4 preserved split	A	N/A	3.0	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013407-02B	Vial H2SO4 preserved split	A	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1013407-02C	Plastic 250ml unpreserved	A	N/A	3.0	Y	Present/Intact	ALK-T-2320(14)
L1013407-02D	Plastic 250ml unpreserved	A	6	3.0	Y	Present/Intact	NO2-4500NO2(2)
L1013407-02E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-02F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-02G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-02H	Plastic 500ml HNO3 preserved	A	<2	3.0	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)
L1013407-02I	Plastic 500ml HNO3 preserved	A	<2	3.0	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)
L1013407-02J	Plastic 500ml unpreserved	A	6	3.0	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1013407-02K	Plastic 500ml H2SO4 preserved	A	<2	3.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013407-02L	Plastic 1000ml unpreserved	A	6	3.0	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013407-02X	Amber 250ml unpreserved	A	6	3.0	Y	Present/Intact	DOC-5310(28)
L1013407-03A	Plastic 250ml HNO3 preserved	A	<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)
L1013407-04A	Vial H2SO4 preserved split	A	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1013407-04B	Vial H2SO4 preserved split	A	N/A	3.0	Y	Present/Intact	DOC-5310(28)
L1013407-04C	Plastic 250ml unpreserved	A	N/A	3.0	Y	Present/Intact	ALK-T-2320(14)
L1013407-04D	Plastic 250ml unpreserved	A	6	3.0	Y	Present/Intact	NO2-4500NO2(2)
L1013407-04E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-04F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3.0	Y	Present/Intact	SULFIDE-4500(7)
L1013407-04H	Plastic 500ml HNO3 preserved	A	<2	3.0	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)
L1013407-04I	Plastic 500ml unpreserved	A	6	3.0	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013407-04J	Plastic 500ml H2SO4 preserved	A	<2	3.0	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013407-04K	Plastic 1000ml unpreserved	A	6	3.0	Y	Present/Intact	TSS-2540(7)
L1013407-04X	Amber 250ml unpreserved	A	6	3.0	Y	Present/Intact	DOC-5310(28)
L1013407-05A	Plastic 250ml HNO3 preserved	A	<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)
L1013407-06A	Plastic 500ml HNO3 preserved	A	<2	3.0	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: L1013407

Report Date: 09/09/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013407-07A	Plastic 500ml HNO3 preserved	A	<2	3.0	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**

L1013407-02A

L1013407-02B

L1013407-04A

L1013407-04B

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013407

Project Number: AC001

Report Date: 09/09/10

## 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.
- 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.
- 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:** L1013407

**Project Number:** AC001

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

***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:** L1013407  
**Report Date:** 09/09/10

## 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, 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, 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: 508-822-9303  
FAX: 508-822-3288

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/30/10

ALPHA Job #: 11013407

## Client Information

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

## Project Information

Project Name: SHL Tash 0002  
Project Location: Devens Ma  
Project #: AC001  
Project Manager: Phil McBain  
ALPHA Quote #:

## Turn-Around Time

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

Date Due: 9/7/10 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 #39-Closed

\* Done as noted - F= Filtered

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										SAMPLE HANDLING		TOTAL # BOTTLES
		Date	Time			C1, Seque, NO3	NO2	Alk	HA, COD	Substa	TSS	Duc + DIC	Total Metals	Diss TAL Metals		Filtration		
13407	1 SHM-10-11-F	8/30/10	1120	GW	PSV											<input checked="" type="checkbox"/> Done <input checked="" type="checkbox"/> X		2
	2 SHM-10-11-U	8/30/10	1120	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓			<input type="checkbox"/> Not needed		11
	3 SHM-10-12-F	8/30/10	1500	GW	PSV											<input type="checkbox"/> Lab to do		1
	4 SHM-10-12-U	8/30/10	1500	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓			<input type="checkbox"/> Preservation		10
	5 DUP-083010-F	8/30/10	1500	GW	PSV											<input type="checkbox"/> Lab to do		1
	6 DUP-083010-U	8/30/10	1500	GW	PSV								✓			(Please specify below)		1
	7 RB-083010-U	8/30/10	1430	GW	PSV								✓					1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Container Type P P P P P P P A P P  
Preservative A A A D 1/2 E A A C C

Relinquished By:

Date/Time

Received By:

Date/Time

*[Signature]*  
8/30/10 1630

8/30/10 1725

*[Signature]*  
8/30/10 1725

8/30/10 1725

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: L1013411

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: 09/08/10

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:** L1013411  
**Report Date:** 09/08/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013411-01	SHM-10-11-U	DEVENS, MA	08/30/10 11:20
L1013411-02	SHM-10-12-U	DEVENS, MA	08/30/10 15:00

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

**Lab Number:** L1013411  
**Report Date:** 09/08/10

### 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.

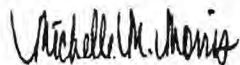
### Dissolved Inorganic Carbon

L1013411-01 and -02 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

A matrix spike could not be performed due to insufficient 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: 09/08/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013411

Project Number: AC001

Report Date: 09/08/10

## SAMPLE RESULTS

Lab ID: L1013411-01

Date Collected: 08/30/10 11:20

Client ID: SHM-10-11-U

Date Received: 08/30/10

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	62		mg/l	20	--	20	08/30/10 19:30	09/08/10 09:51	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013411

Report Date: 09/08/10

## SAMPLE RESULTS

Lab ID: L1013411-02

Client ID: SHM-10-12-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 08/30/10 15:00

Date Received: 08/30/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	110		mg/l	20	---	20	08/30/10 19:30	09/08/10 09:51	30,5310C(M)	DW



Project Name: SHL TASK 0002

Lab Number: L1013411

Project Number: AC001

Report Date: 09/08/10

**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: WG431416-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	08/30/10 19:30	09/08/10 09:51	30,5310C(M)	DW



**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013411**Report Date:** 09/08/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-02 Batch: WG431416-2								
Dissolved Inorganic Carbon	110							

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

**Lab Duplicate Analysis**  
**Batch Quality Control**

**Lab Number:** L1013411  
**Report Date:** 09/08/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-02 QC Batch ID: WG431416-3 QC Sample: L1013411-01 Client ID: SHM-10-11-U						
Dissolved Inorganic Carbon	62	68	mg/l	9		

**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,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<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 1

Date Rec'd in Lab 8/30/10

ALPHA Job # 11013411

11013411

## Client Information

Client: Sovereign Consulting Inc  
Address: 9053 S Main St  
Mansfield MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: pmcain@sacem.com

## 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: 9/7/10 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 #39 - closed \* Done as noted - F = Filtrate

## 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	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			Cl, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	ALK	AM, CO <sub>2</sub>	SURF	TSS	DUCT/DIC	TOTAL Metals	DISS TAL Metals			
2411	SHM-10-11-F	8/30/10	1120	GW	PSV											MS/MSD	2
	SHM-10-11-U	8/30/10	1120	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓			MS/MSD	11
	SHM-10-12-F	8/30/10	1500	GW	PSV									✓			1
2	SHM-10-12-U	8/30/10	1500	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓				10
	DUP-083010-F	8/30/10	1500	GW	PSV									✓			1
	DUP-083010-U	8/30/10	1500	GW	PSV								✓				1
	RB-083010-U	8/30/10	1430	GW	PSV								✓				1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Container Type P P P P P P A P P

Preservative A A A D 1/E A A C C

Date/Time 8/30/10 1030

Received By:

Date/Time 8/30/10 1030



## ANALYTICAL REPORT

Lab Number: L1013534

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: 09/10/10

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:** L1013534  
**Report Date:** 09/10/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013534-01	SHM-10-13-090110-F	DEVENS, MA	09/01/10 11:15
L1013534-02	SHM-10-13-090110-U	DEVENS, MA	09/01/10 11:15
L1013534-03	SHM-10-15-090110-F	DEVENS, MA	09/01/10 14:55
L1013534-04	SHM-10-15-090110-U	DEVENS, MA	09/01/10 14:55
L1013534-05	DUP-090110-F	DEVENS, MA	09/01/10 14:55
L1013534-06	DUP-090110-U	DEVENS, MA	09/01/10 14:55
L1013534-07	RB-090110-U	DEVENS, MA	09/01/10 15:45

**Project Name:** SHL TASK 0002**Lab Number:** L1013534**Project Number:** AC001**Report Date:** 09/10/10

### 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

L1013534-03 and -05 have elevated detection limits for all analytes, except Mercury, due to the dilution

Project Name: SHL TASK 0002  
Project Number: AC001

Lab Number: L1013534  
Report Date: 09/10/10

### Case Narrative (continued)

required by the high concentrations of target analytes.

The WG430807-3/-4 MS/MSD recoveries for Calcium (MS at 143%) and Iron (610%/170), performed on L1013534-01, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG430807-3 MS recovery, performed on L1013534-01, is above the acceptance criteria for Manganese (122%). A post digestion spike was performed with an acceptable recovery of 100%. The parent sample (L1013534-01) is qualified as "J" for Manganese.

### Total Metals

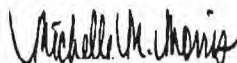
L1013534-04 and -06 have elevated detection limits for all analytes, except Mercury, due to the dilution required by the high concentrations of target analytes.

The WG430806-3/-4 MS/MSD recoveries for Iron (340%/190%), performed on L1013534-02, are invalid because the sample concentration is greater than four times the spike amount added.

The WG430806-5 Post Digestion Spike recovery for Arsenic was outside the DoD acceptance criteria of 75-125%; therefore, the parent sample (L1013534-02) is qualified with a "J" for this element.

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: 09/10/10

## METALS

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-01  
 Client ID: SHM-10-13-090110-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/01/10 11:15  
 Date Received: 09/01/10  
 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	6.02	J	ug/l	10.0	1.91	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.17	J	ug/l	0.500	0.120	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	575		ug/l	0.500	0.113	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Barium, Dissolved	153		ug/l	0.500	0.095	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Calcium, Dissolved	61400		ug/l	100	12.6	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.730		ug/l	0.500	0.186	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.730		ug/l	0.500	0.053	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.34	J	ug/l	0.500	0.118	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Iron, Dissolved	84100		ug/l	50.0	8.41	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	9900		ug/l	100	4.10	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1850	J	ug/l	1.00	0.136	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 12:56	EPA 7470A	1,7470A	TD
Nickel, Dissolved	2.60		ug/l	0.500	0.180	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Potassium, Dissolved	12200		ug/l	100	18.2	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Sodium, Dissolved	14500		ug/l	100	18.2	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.22	J	ug/l	0.500	0.077	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM
Zinc, Dissolved	4.66	J	ug/l	5.00	1.62	1	09/02/10 15:45	09/08/10 00:19	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-02

Date Collected: 09/01/10 11:15

Client ID: SHM-10-13-090110-U

Date Received: 09/01/10

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	233		ug/l	10.0	1.91	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Antimony, Total	0.19	J	ug/l	0.500	0.120	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Arsenic, Total	619	J	ug/l	0.500	0.113	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Barium, Total	160		ug/l	0.500	0.095	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Calcium, Total	68000		ug/l	100	12.6	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Chromium, Total	2.66		ug/l	0.500	0.186	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Cobalt, Total	0.840		ug/l	0.500	0.053	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Copper, Total	0.740		ug/l	0.500	0.118	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Iron, Total	88600		ug/l	50.0	8.41	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Lead, Total	0.13	J	ug/l	0.500	0.050	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Magnesium, Total	10500		ug/l	100	4.10	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Manganese, Total	1900		ug/l	1.00	0.136	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:12	EPA 7470A	1,7470A	TD
Nickel, Total	3.00		ug/l	0.500	0.180	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Potassium, Total	12500		ug/l	100	18.2	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Selenium, Total	0.54	J	ug/l	1.00	0.406	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Sodium, Total	15300		ug/l	100	18.2	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Vanadium, Total	0.620		ug/l	0.500	0.077	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM
Zinc, Total	3.49	J	ug/l	5.00	1.62	1	09/02/10 15:45	09/08/10 01:02	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-03  
 Client ID: SHM-10-15-090110-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/01/10 14:55  
 Date Received: 09/01/10  
 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	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Antimony, Dissolved	1.87	J	ug/l	5.00	1.20	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	8110		ug/l	5.00	1.13	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Barium, Dissolved	52.4		ug/l	5.00	0.950	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Calcium, Dissolved	61500		ug/l	1000	126.	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	29.3		ug/l	5.00	0.530	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Iron, Dissolved	63300		ug/l	500	84.1	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	7880		ug/l	1000	41.0	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Manganese, Dissolved	10700		ug/l	10.0	1.36	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:02	EPA 7470A	1,7470A	TD
Nickel, Dissolved	20.3		ug/l	5.00	1.80	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6880		ug/l	1000	182.	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Sodium, Dissolved	13900		ug/l	1000	182.	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM
Zinc, Dissolved	26.4	J	ug/l	50.0	16.2	10	09/02/10 15:45	09/08/10 00:43	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-04

Date Collected: 09/01/10 14:55

Client ID: SHM-10-15-090110-U

Date Received: 09/01/10

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	125		ug/l	100	19.1	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Antimony, Total	1.93	J	ug/l	5.00	1.20	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Arsenic, Total	7930		ug/l	5.00	1.13	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Barium, Total	55.0		ug/l	5.00	0.950	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Calcium, Total	61300		ug/l	1000	126	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Cobalt, Total	28.6		ug/l	5.00	0.530	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Copper, Total	ND		ug/l	5.00	1.18	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Iron, Total	62500		ug/l	500	84.1	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Lead, Total	0.79	J	ug/l	5.00	0.500	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Magnesium, Total	7700		ug/l	1000	41.0	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Manganese, Total	10400		ug/l	10.0	1.36	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:18	EPA 7470A	1,7470A	TD
Nickel, Total	20.0		ug/l	5.00	1.80	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Potassium, Total	6910		ug/l	1000	182	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Sodium, Total	13700		ug/l	1000	182	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM
Zinc, Total	29.7	J	ug/l	50.0	16.2	10	09/02/10 15:45	09/08/10 01:38	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-05

Date Collected: 09/01/10 14:55

Client ID: DUP-090110-F

Date Received: 09/01/10

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	ND		ug/l	100	19.1	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Antimony, Dissolved	1.25	J	ug/l	5.00	1.20	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	6460		ug/l	5.00	1.13	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Barium, Dissolved	39.1		ug/l	5.00	0.950	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Calcium, Dissolved	46800		ug/l	1000	126	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	22.4		ug/l	5.00	0.530	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Iron, Dissolved	48900		ug/l	500	84.1	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	6050		ug/l	1000	41.0	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Manganese, Dissolved	8240		ug/l	10.0	1.36	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:03	EPA 7470A	1,7470A	TD
Nickel, Dissolved	15.3		ug/l	5.00	1.80	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5200		ug/l	1000	182	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Sodium, Dissolved	11200		ug/l	1000	182	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM
Zinc, Dissolved	20.1	J	ug/l	50.0	16.2	10	09/02/10 15:45	09/08/10 00:49	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-06  
 Client ID: DUP-090110-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/01/10 14:55  
 Date Received: 09/01/10  
 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	284		ug/l	100	19.1	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	5.00	1.20	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Arsenic, Total	7610		ug/l	5.00	1.13	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Barium, Total	50.7		ug/l	5.00	0.950	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Calcium, Total	58500		ug/l	1000	126.	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Cobalt, Total	27.0		ug/l	5.00	0.530	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Copper, Total	1.37	J	ug/l	5.00	1.18	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Iron, Total	58700		ug/l	500	84.1	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Lead, Total	1.09	J	ug/l	5.00	0.500	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Magnesium, Total	7470		ug/l	1000	41.0	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Manganese, Total	9900		ug/l	10.0	1.36	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:19	EPA 7470A	1,7470A	TD
Nickel, Total	18.5		ug/l	5.00	1.80	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Potassium, Total	6390		ug/l	1000	182.	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Sodium, Total	13100		ug/l	1000	182.	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM
Zinc, Total	22.7	J	ug/l	50.0	16.2	10	09/02/10 15:45	09/08/10 01:44	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-07

Date Collected: 09/01/10 15:45

Client ID: RB-090110-U

Date Received: 09/01/10

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	ND		ug/l	10.0	1.91	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Antimony, Total	0.670		ug/l	0.500	0.120	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Arsenic, Total	0.25	J	ug/l	0.500	0.113	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Calcium, Total	14.1	J	ug/l	100	12.6	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Chromium, Total	0.25	J	ug/l	0.500	0.186	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Copper, Total	ND		ug/l	0.500	0.118	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Iron, Total	16.2	J	ug/l	50.0	8.41	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Lead, Total	0.08	J	ug/l	0.500	0.050	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Manganese, Total	0.16	J	ug/l	1.00	0.136	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:21	EPA 7470A	1,7470A	TD
Nickel, Total	ND		ug/l	0.500	0.180	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	09/02/10 15:45	09/07/10 23:49	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

### 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): 02,04,06-07 Batch: WG430806-1										
Aluminum, Total	2.41	J	ug/l	10.0	1.91	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Calcium, Total	16.9	J	ug/l	100	12.6	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Copper, Total	0.16	J	ug/l	0.500	0.118	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Iron, Total	13	J	ug/l	50.0	8.41	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Manganese, Total	0.14	J	ug/l	1.00	0.136	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Silver, Total	0.13	J	ug/l	0.500	0.085	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	09/02/10 15:45	09/07/10 22:15	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 Batch: WG430807-1										
Aluminum, Dissolved	2.41	J	ug/l	10.0	1.91	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

### Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Calcium, Dissolved	16.9	J	ug/l	100	12.6	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Copper, Dissolved	0.16	J	ug/l	0.500	0.118	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Iron, Dissolved	13	J	ug/l	50.0	8.41	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Manganese, Dissolved	0.14	J	ug/l	1.00	0.136	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Silver, Dissolved	0.13	J	ug/l	0.500	0.085	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	09/02/10 15:45	09/07/10 22:15	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	09/02/10 15:45	09/07/10 22:15	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 Batch: WG431284-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 12:53	1,7470A	TD

#### 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): 02,04,06-07 Batch: WG431285-1										
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/07/10 17:00	09/08/10 13:05	1,7470A	TD



**Project Name:** SHL TASK 0002

**Lab Number:** L1013534

**Project Number:** AC001

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

## **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: L1013534

Report Date: 09/10/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG430806-2								
Aluminum, Total	98	-	-	-	80-120	-	-	-
Antimony, Total	96	-	-	-	80-120	-	-	-
Arsenic, Total	99	-	-	-	80-120	-	-	-
Barium, Total	98	-	-	-	80-120	-	-	-
Beryllium, Total	96	-	-	-	80-120	-	-	-
Cadmium, Total	107	-	-	-	80-120	-	-	-
Calcium, Total	103	-	-	-	80-120	-	-	-
Chromium, Total	96	-	-	-	80-120	-	-	-
Cobalt, Total	102	-	-	-	80-120	-	-	-
Copper, Total	101	-	-	-	80-120	-	-	-
Iron, Total	107	-	-	-	80-120	-	-	-
Lead, Total	100	-	-	-	80-120	-	-	-
Magnesium, Total	104	-	-	-	80-120	-	-	-
Manganese, Total	103	-	-	-	80-120	-	-	-
Nickel, Total	102	-	-	-	80-120	-	-	-
Potassium, Total	102	-	-	-	80-120	-	-	-
Selenium, Total	104	-	-	-	80-120	-	-	-
Silver, Total	97	-	-	-	80-120	-	-	-
Sodium, Total	96	-	-	-	80-120	-	-	-
Thallium, Total	94	-	-	-	80-120	-	-	-
Vanadium, Total	100	-	-	-	80-120	-	-	-

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013534**Report Date:** 09/10/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG430806-2					
Zinc, Total	100	-	80-120	-	

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG430807-2					
Aluminum, Dissolved	98	-	80-120	-	
Antimony, Dissolved	96	-	80-120	-	
Arsenic, Dissolved	99	-	80-120	-	
Barium, Dissolved	98	-	80-120	-	
Beryllium, Dissolved	96	-	80-120	-	
Cadmium, Dissolved	107	-	80-120	-	
Calcium, Dissolved	103	-	80-120	-	
Chromium, Dissolved	96	-	80-120	-	
Cobalt, Dissolved	102	-	80-120	-	
Copper, Dissolved	101	-	80-120	-	
Iron, Dissolved	107	-	80-120	-	
Lead, Dissolved	100	-	80-120	-	
Magnesium, Dissolved	104	-	80-120	-	
Manganese, Dissolved	103	-	80-120	-	
Nickel, Dissolved	102	-	80-120	-	
Potassium, Dissolved	102	-	80-120	-	
Selenium, Dissolved	104	-	80-120	-	
Silver, Dissolved	97	-	80-120	-	
Sodium, Dissolved	96	-	80-120	-	
Thallium, Dissolved	94	-	80-120	-	
Vanadium, Dissolved	100	-	80-120	-	

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1013534

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

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG430807-2					
Zinc, Dissolved	100	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG431284-2					
Mercury, Dissolved	105	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG431285-2					
Mercury, Total	104	-	80-120	-	20

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

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): 02,04,06-07 QC Batch ID: WG430806-3 WG430806-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U												
Aluminum, Total	233	2000	2150	96		2170	97		80-120	1		20
Antimony, Total	ND	500	479	96		480	96		80-120	0		20
Arsenic, Total	619	120	750	109		742	102		80-120	1		20
Barium, Total	160	2000	2100	97		2110	98		80-120	0		20
Beryllium, Total	ND	50	46.7	93		47.5	95		80-120	2		20
Cadmium, Total	ND	51	54.3	106		54.3	106		80-120	0		20
Calcium, Total	68000	10000	78700	107		77700	97		80-120	1		20
Chromium, Total	2.66	200	189	93		192	95		80-120	2		20
Cobalt, Total	0.840	500	502	100		507	101		80-120	1		20
Copper, Total	0.740	250	245	98		248	99		80-120	1		20
Iron, Total	88600	1000	92000	340		90500	190		80-120	2		20
Lead, Total	ND	510	518	102		527	103		80-120	2		20
Magnesium, Total	10500	10000	20600	101		20600	101		80-120	0		20
Manganese, Total	1900	500	2440	108		2410	102		80-120	1		20
Nickel, Total	3.00	500	491	98		499	99		80-120	2		20
Potassium, Total	12500	10000	22200	97		22400	99		80-120	1		20
Selenium, Total	ND	120	124	103		127	106		80-120	2		20
Silver, Total	ND	50	47.2	94		47.3	95		80-120	0		20
Sodium, Total	15300	10000	24600	93		24500	92		80-120	0		20
Thallium, Total	ND	120	115	96		116	97		80-120	1		20
Vanadium, Total	0.620	500	497	99		500	100		80-120	1		20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

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) 02,04,06-07 QC Batch ID: WG430806-3 WG430806-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U									
Zinc, Total	ND	500	504	101	509	102	80-120	1	20

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

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 QC Batch ID: WG430807-3 WG430807-4 QC Sample: L1013534-01 Client ID: SHM-10-13-090110-F									
Aluminum, Dissolved	ND	2000	2030	102	1880	94	80-120	8	20
Antimony, Dissolved	ND	500	488	98	478	96	80-120	2	20
Arsenic, Dissolved	575	120	718	119	696	101	80-120	3	20
Barium, Dissolved	153	2000	2140	99	2080	96	80-120	3	20
Beryllium, Dissolved	ND	50	47.3	95	45.1	90	80-120	5	20
Cadmium, Dissolved	ND	51	55.9	110	54.4	107	80-120	3	20
Calcium, Dissolved	61400	10000	75700	143	71100	97	80-120	6	20
Chromium, Dissolved	0.730	200	195	97	187	93	80-120	4	20
Cobalt, Dissolved	0.730	500	515	103	491	98	80-120	5	20
Copper, Dissolved	ND	250	254	102	242	97	80-120	5	20
Iron, Dissolved	84100	1000	90200	610	85800	170	80-120	5	20
Lead, Dissolved	ND	510	520	102	511	100	80-120	2	20
Magnesium, Dissolved	9900	10000	21100	112	19900	100	80-120	6	20
Manganese, Dissolved	1850	500	2460	122	Q 2310	92	80-120	6	20
Nickel, Dissolved	2.60	500	511	102	489	97	80-120	4	20
Potassium, Dissolved	12200	10000	23300	111	22000	98	80-120	6	20
Selenium, Dissolved	ND	120	126	105	122	102	80-120	3	20
Silver, Dissolved	ND	50	48.0	96	46.6	93	80-120	3	20
Sodium, Dissolved	14500	10000	24400	99	23000	85	80-120	6	20
Thallium, Dissolved	ND	120	114	95	113	94	80-120	1	20
Vanadium, Dissolved	ND	500	510	102	487	97	80-120	5	20



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

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 QC Batch ID: WG430807-3 WG430807-4 QC Sample: L1013534-01 Client ID: SHM-10-13-090110-F									
Zinc, Dissolved	ND	500	510	102	500	100	80-120	2	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG431284-3 WG431284-4 QC Sample: L1013534-01 Client ID: SHM-10-13-090110-F									
Mercury, Dissolved	ND	1	1.005	100	1.024	102	80-120	2	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 QC Batch ID: WG431285-3 WG431285-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U									
Mercury, Total	ND	1	1.030	103	1.066	107	80-120	3	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-02  
 Client ID: SHM-10-13-090110-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/01/10 11:15  
 Date Received: 09/01/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	380		mg CaCO3/L	2.0	NA	1	-	09/02/10 13:47	30,2320B	JO
Solids, Total Suspended	43		mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
Nitrogen, Ammonia	9.70		mg/l	0.075	0.017	1	09/02/10 12:30	09/02/10 22:17	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/03/10 10:40	30,4500NO2-B	JO
Sulfide	ND		mg/l	0.10	0.10	1	09/02/10 18:15	09/02/10 19:15	30,4500S2-AD	AT
Chemical Oxygen Demand	33		mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
Dissolved Organic Carbon	5.6		mg/l	1.0	1.0	1	09/01/10 23:30	09/09/10 07:43	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	18		mg/l	0.50	0.07	1	-	09/01/10 20:55	44,300.0	AU
Nitrogen, Nitrate	0.01	J	mg/l	0.05	0.01	1	-	09/01/10 20:55	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	-	09/01/10 20:55	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013534-04  
 Client ID: SHM-10-15-090110-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/01/10 14:55  
 Date Received: 09/01/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	240		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/02/10 13:47	30,2320B	JO
Solids, Total Suspended	36		mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
Nitrogen, Ammonia	2.26		mg/l	0.075	0.017	1	09/02/10 12:30	09/02/10 22:19	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/03/10 10:41	30,4500NO <sub>2</sub> -B	JO
Sulfide	ND		mg/l	0.10	0.10	1	09/02/10 18:15	09/02/10 19:15	30,4500S <sub>2</sub> -AD	AT
Chemical Oxygen Demand	22		mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
Dissolved Organic Carbon	3.2		mg/l	1.0	1.0	1	09/01/10 23:30	09/09/10 07:43	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	11		mg/l	0.50	0.07	1	-	09/01/10 21:07	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/01/10 21:07	44,300.0	AU
Sulfate	8.4		mg/l	1.0	0.12	1	-	09/01/10 21:07	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

### 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 Batch: WG430705-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	09/02/10 12:30	09/02/10 21:51	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430720-2									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	09/02/10 13:47	30,2320B	JO
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04 Batch: WG430845-1									
Chloride	ND	mg/l	0.50	0.07	1	-	09/01/10 20:31	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	09/01/10 20:31	44,300.0	AU
Sulfate	ND	mg/l	1.0	0.12	1	-	09/01/10 20:31	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430848-1									
Sulfide	ND	mg/l	0.10	0.10	1	09/02/10 18:15	09/02/10 19:15	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430895-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430933-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	09/03/10 10:40	30,4500NO2-B	JO
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431147-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431588-1									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	09/01/10 23:30	09/09/10 07:43	30,5310C	DW

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013534

Report Date: 09/10/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430705-2								
Nitrogen, Ammonia	100		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430720-1								
Alkalinity, Total	107		-		80-115	-		4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 Batch: WG430845-2								
Chloride	102		-		90-110	-		
Nitrogen, Nitrate	102		-		90-110	-		
Sulfate	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430848-2								
Sulfide	87		-		75-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430933-1								
Nitrogen, Nitrite	95		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431147-2								
Chemical Oxygen Demand	101		-		95-105	-		

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013534**Report Date:** 09/10/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431588-2					
Dissolved Organic Carbon	101	-	90-110	-	



# **Matrix Spike Analysis** Batch Quality Control

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

**Lab Number:** L1013534  
**Report Date:** 09/10/10

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): 02,04 QC Batch ID: WG430705-3 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U												
Nitrogen, Ammonia	9.70	4	13.6	98	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430720-3 QC Sample: L1013142-01 Client ID: MS Sample												
Alkalinity, Total	290	100	380	87	-	-	-	-	86-116	-	-	4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430845-3 WG430845-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U												
Chloride	18	4	21	75	-	22	100	-	40-151	5	-	18
Nitrogen, Nitrate	ND	0.4	0.41	102	-	0.41	102	-	80-122	0	-	15
Sulfate	ND	8	7.4	92	-	7.6	95	-	60-140	3	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430848-3 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430933-3 QC Sample: L1013534-04 Client ID: SHM-10-15-090110-U												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431147-3 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U												
Chemical Oxygen Demand	33	238	290	108	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431588-3 QC Sample: L1013534-04 Client ID: SHM-10-15-090110-U												
Dissolved Organic Carbon	3.2	4	7.4	106	-	-	-	-	79-120	-	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013534

Report Date: 09/10/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430705-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U						
Nitrogen, Ammonia	9.70	9.89	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430720-4 QC Sample: L1013142-02 Client ID: DUP Sample						
Alkalinity, Total	330	320	mg CaCO3/L	3		4
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430845-5 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U						
Chloride	18.	18	mg/l	0		18
Nitrogen, Nitrate	0.01J	0.011J	mg/l	NC		15
Sulfate	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430848-4 QC Sample: L1013534-04 Client ID: SHM-10-15-090110-U						
Sulfide	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430895-2 QC Sample: L1013636-11 Client ID: DUP Sample						
Solids, Total Suspended	2000	2000	mg/l	0		32
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430933-4 QC Sample: L1013534-04 Client ID: SHM-10-15-090110-U						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431147-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U						
Chemical Oxygen Demand	33	29	mg/l	13		20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013534

Report Date: 09/10/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431588-4 QC Sample: L1013534-02 Client ID: SHM-10-13-090110-U					
Dissolved Organic Carbon	5.6	5.8	mg/l	4	20

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## 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(*)
L1013534-01A	Plastic 250ml HNO3 preserved	A	<2	4.6	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)
L1013534-01B	Plastic 250ml HNO3 preserved	A	<2	4.6	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)
L1013534-02A	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013534-02B	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	DOC-5310(28)
L1013534-02C	Plastic 250ml unpreserved	A	N/A	4.6	Y	Present/Intact	ALK-T-2320(14)
L1013534-02D	Plastic 250ml unpreserved	A	6	4.6	Y	Present/Intact	NO2-4500NO2(2)
L1013534-02E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-02F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-02G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-02H	Plastic 500ml HNO3 preserved	A	<2	4.6	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-6020T(180),DOD-SB-7470T(28),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)
L1013534-02I	Plastic 500ml HNO3 preserved	A	<2	4.6	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-6020T(180),DOD-SB-7470T(28),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)
L1013534-02J	Plastic 500ml unpreserved	A	6	4.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1013534-02K	Plastic 500ml H2SO4 preserved	A	<2	4.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013534-02L	Plastic 1000ml unpreserved	A	6	4.6	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013534-02X	Amber 250ml unpreserved	A	6	4.6	Y	Present/Intact	DOC-5310(28)
L1013534-03A	Plastic 250ml HNO3 preserved	A	<2	4.6	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)
L1013534-04A	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	DOC-5310(28)
L1013534-04B	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	DOC-5310(28)
L1013534-04C	Plastic 250ml unpreserved	A	N/A	4.6	Y	Present/Intact	ALK-T-2320(14)
L1013534-04D	Plastic 250ml unpreserved	A	6	4.6	Y	Present/Intact	NO2-4500NO2(2)
L1013534-04E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-04F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4.6	Y	Present/Intact	SULFIDE-4500(7)
L1013534-04H	Plastic 500ml HNO3 preserved	A	<2	4.6	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)
L1013534-04I	Plastic 500ml unpreserved	A	6	4.6	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013534-04J	Plastic 500ml H2SO4 preserved	A	<2	4.6	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013534-04K	Plastic 1000ml unpreserved	A	6	4.6	Y	Present/Intact	TSS-2540(7)
L1013534-04X	Amber 250ml unpreserved	A	6	4.6	Y	Present/Intact	DOC-5310(28)
L1013534-05A	Plastic 250ml HNO3 preserved	A	<2	4.6	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)
L1013534-06A	Plastic 500ml HNO3 preserved	A	<2	4.6	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: L1013534

Report Date: 09/10/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013534-07A	Plastic 500ml HNO3 preserved	A	<2	4.6	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**

L1013534-02J

L1013534-02X

L1013534-04X

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013534

Project Number: AC001

Report Date: 09/10/10

## 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:** L1013534

**Project Number:** AC001

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

***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:** L1013534

**Project Number:** AC001

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

## 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<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: 508-896-9220  
FAX: 508-896-9193

MANSFIELD, MA  
TEL: 508-822-9300  
FAX: 508-822-3268

# CHAIN OF CUSTODY

PAGE 1 OF 1

## 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: *9/9/10* Time:

Date Rec'd in Lab: *9/1/10*

ALPHA Job #: *11013534*

## Report Information - Data Deliverables

☐ FAX ☒ EMAILED ☐ 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?

## Client Information

Client: *Sovereign Consulting Inc*

Address: *905 B S Main St*

*Mansfield MA 02048*

Phone: *508-339-3200*

Fax: *508-339-3248*

Email: *pmcain@saxon.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#40 - closed*

*\*Done as noted - F = Field Filtered*

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		

13534	1	SHM-10-13-090110-F	9/1/10	1115	GW	PSV
	2	SHM-10-13-090110-U	9/1/10	1115	GW	PSV
	3	SHM-10-15-090110-F	9/1/10	1455	GW	PSV
	4	SHM-10-15-090110-U	9/1/10	1455	GW	PSV
	5	DUP-090110-F	9/1/10	1455	GW	PSV
	6	DUP-090110-U	9/1/10	1455	GW	PSV
	7	RB-090110-U	9/1/10	1545	GW	PSV

ANALYSIS										TOTAL # BOTTLES
Cl. Sol. NO <sub>3</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub> CO <sub>3</sub>	SLRide	TSS	DOL + DIC	Total Metals	Diss. TAL Metals		
									MS/MSD metals only	2
									MS/MSD metals only	11
										1
										10
										1
										1
										1

## SAMPLE HANDLING

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

Sample Specific Comments

PLEASE ANSWER QUESTIONS ABOVE!

Container Type *P P P P P P A P P*  
Preservative *A A A D TE A A C C*

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

*Phil McBain*  
*9/1/10 1630*

*9/1/10 1740*

*Carl H. Hurd*  
*9/1/10 1630*

*9/1/10 1740*

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: L1013535

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: 09/09/10

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:** L1013535  
**Report Date:** 09/09/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013535-01	SHM-10-13-090110-U	DEVENS, MA	09/01/10 11:15
L1013535-02	SHM-10-15-090110-U	DEVENS, MA	09/01/10 14:55

Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

### 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

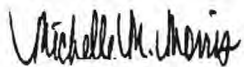
This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses will be issued under separate cover.

### Dissolved Inorganic Carbon

L1013535-01 and -02 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

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: 09/09/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013535-01  
Client ID: SHM-10-13-090110-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/01/10 11:15  
Date Received: 09/01/10  
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	140		mg/l	20	--	20	09/01/10 23:30	09/08/10 09:51	30,5310C(M)	DW

Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

## SAMPLE RESULTS

Lab ID: L1013535-02  
Client ID: SHM-10-15-090110-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/01/10 14:55  
Date Received: 09/01/10  
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	20	--	20	09/01/10 23:30	09/08/10 09:51	30,5310C(M)	DW



Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

**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: WG431417-1									
Dissolved Inorganic Carbon	ND	mg/l	1.0	--	1	09/01/10 23:30	09/08/10 09:51	30,5310C(M)	DW

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013535**Report Date:** 09/09/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-02 Batch: WG431417-2								
Dissolved Inorganic Carbon	110%							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013535

Report Date: 09/09/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-02 QC Batch ID: WG431417-3 QC Sample: L1013535-01 Client ID: SHM-10-13-090110-U						
Dissolved Inorganic Carbon	140	150	mg/l	7		

Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

**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(*)
L1013535-01A	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	SPECWC()
L1013535-01B	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	SPECWC()
L1013535-01X	Amber 250ml unpreserved	A	6	4.6	Y	Present/Intact	SPECWC()
L1013535-02A	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	SPECWC()
L1013535-02B	Vial H2SO4 preserved split	A	N/A	4.6	Y	Present/Intact	SPECWC()
L1013535-02X	Amber 250ml unpreserved	A	6	4.6	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013535

Project Number: AC001

Report Date: 09/09/10

## 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:** L1013535

**Project Number:** AC001

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

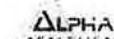
*Data Qualifiers*

**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:** L1013535  
**Report Date:** 09/09/10

## 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, 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<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 1

Date Rec'd in Lab: 9/1/10

ALPHA Job #: 1103535

## 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: 9/1/10 Time:

## Report Information - Data Deliverables

☐ FAX ☒ EMAIL EPR  
☐ 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 0909101256

## Client Information

Client: Sovereign Consulting Inc

Address: 905 B S. Main St

Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@sover.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#40 - 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, Se, H, NO <sub>3</sub>	NO <sub>2</sub>	Alk	NH <sub>4</sub> CO <sub>3</sub>	SiO <sub>2</sub>	TSS	DOL + DIC	Te + TAL Metals	Dic TAL Metals		Filtration	Preservation	
13535	SHM-10-13-090110-F	9/1/10	1115	GW	PSV											<input checked="" type="checkbox"/> Done *		2
	SHM-10-13-090110-U	9/1/10	1115	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓			<input type="checkbox"/> Not needed		116
	SHM-10-15-090110-F	9/1/10	1455	GW	PSV											<input type="checkbox"/> Lab to do		1
	SHM-10-15-090110-U	9/1/10	1455	GW	PSV	✓	✓	✓	✓	✓	✓	✓	✓			<input type="checkbox"/> Lab to do		10
	DUP-090110-F	9/1/10	1455	GW	PSV											<input type="checkbox"/> Lab to do		1
	DUP-090110-U	9/1/10	1455	GW	PSV											<input type="checkbox"/> Lab to do		1
	RB-090110-U	9/1/10	1545	GW	PSV											<input type="checkbox"/> Lab to do		1

PLEASE ANSWER QUESTIONS ABOVE!

Container Type P P P P P P A P P

Preservative A A A D TE A A C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

Phil McBain  
9/1/10 1630

9/1/10 1740

Sam Hwang  
9/1/10 1740

9/1/10 1740

Please print clearly legible and complete. Sample cannot be released until all required information is provided. All samples submitted are subject to analysis and are not eligible for return. See reverse side.



## ANALYTICAL REPORT

Lab Number: L1013628

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: 09/13/10

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:** L1013628  
**Report Date:** 09/13/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013628-01	SHM-10-14-090210-F	DEVENS, MA	09/02/10 11:47
L1013628-02	SHM-10-14-090210-U	DEVENS, MA	09/02/10 11:47
L1013628-03	SHM-10-16-090210-F	DEVENS, MA	09/02/10 14:45
L1013628-04	SHM-10-16-090210-U	DEVENS, MA	09/02/10 14:45
L1013628-05	DUP-090210-F	DEVENS, MA	09/02/10 14:45
L1013628-06	DUP-090210-U	DEVENS, MA	09/02/10 14:45
L1013628-07	RB-090210-U	DEVENS, MA	09/02/10 14:50

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

**Lab Number:** L1013628  
**Report Date:** 09/13/10

### 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

L1013628-01 has an elevated detection limit for all analytes, except Mercury, due to the dilution required by



Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

**Case Narrative (continued)**

the high concentrations of target analytes.

The WG431091-3/-4 MS/MSD recoveries for Arsenic (333%/467%), Calcium (142%/191%), Iron (500%/1100%) and Manganese (160%/238%), performed on L1013628-01, are invalid because the sample concentrations are greater than four times the spike amount added.

The WG431091-4 MSD recovery, performed on L1013628-01, is above the acceptance criteria for Potassium (132%). A post digestion spike was performed with an acceptable recovery of 118%. The parent sample (L1013628-01) is qualified as "J" for Potassium.

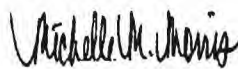
**Total Metals**

L1013628-02 has an elevated detection limit for all analytes, except Mercury, due to the dilution required by the high concentrations of target analytes.

The WG431090-3/-4 MS/MSD recoveries for Arsenic (133%/300%), Calcium (129%/154%), Iron (520%/750%) and Manganese (158%/176%), performed on L1013628-02, 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: 09/13/10

## METALS

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-01

Date Collected: 09/02/10 11:47

Client ID: SHM-10-14-090210-F

Date Received: 09/02/10

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	ND		ug/l	100	19.1	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	4100		ug/l	5.00	1.13	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Barium, Dissolved	53.8		ug/l	5.00	0.950	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Calcium, Dissolved	55300		ug/l	1000	126.	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	15.6		ug/l	5.00	0.530	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Copper, Dissolved	1.3	J	ug/l	5.00	1.18	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Iron, Dissolved	73000		ug/l	500	84.1	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	4150		ug/l	1000	41.0	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Manganese, Dissolved	4720		ug/l	10.0	1.36	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:08	EPA 7470A	1,7470A	TD
Nickel, Dissolved	9.16		ug/l	5.00	1.80	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Potassium, Dissolved	17600	J	ug/l	1000	182.	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Sodium, Dissolved	15200		ug/l	1000	182.	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM
Zinc, Dissolved	30.6	J	ug/l	50.0	16.2	10	09/04/10 14:10	09/08/10 01:56	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-02  
 Client ID: SHM-10-14-090210-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 11:47  
 Date Received: 09/02/10  
 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	262		ug/l	100	19.1	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	5.00	1.20	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Arsenic, Total	4280		ug/l	5.00	1.13	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Barium, Total	80.5		ug/l	5.00	0.950	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Calcium, Total	69300		ug/l	1000	126.	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Cobalt, Total	16.0		ug/l	5.00	0.530	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Copper, Total	1.53	J	ug/l	5.00	1.18	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Iron, Total	75200		ug/l	500	84.1	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Lead, Total	0.76	J	ug/l	5.00	0.500	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Magnesium, Total	4310		ug/l	1000	41.0	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Manganese, Total	4700		ug/l	10.0	1.36	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:24	EPA 7470A	1,7470A	TD
Nickel, Total	8.07		ug/l	5.00	1.80	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Potassium, Total	18800		ug/l	1000	182	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Sodium, Total	15500		ug/l	1000	182	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM
Zinc, Total	54.6		ug/l	50.0	16.2	10	09/04/10 14:10	09/08/10 02:50	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-03  
 Client ID: SHM-10-16-090210-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 14:45  
 Date Received: 09/02/10  
 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	3.59	J	ug/l	10.0	1.91	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.24	J	ug/l	0.500	0.120	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	495		ug/l	0.500	0.113	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Barium, Dissolved	73.4		ug/l	0.500	0.095	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Calcium, Dissolved	73900		ug/l	100	12.6	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.32	J	ug/l	0.500	0.186	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	4.97		ug/l	0.500	0.053	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.36	J	ug/l	0.500	0.118	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Iron, Dissolved	53100		ug/l	50.0	8.41	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	14100		ug/l	100	4.10	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1790		ug/l	1.00	0.136	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:17	EPA 7470A	1,7470A	TD
Nickel, Dissolved	3.54		ug/l	0.500	0.180	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Potassium, Dissolved	15500		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.7	J	ug/l	1.00	0.406	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Sodium, Dissolved	31400		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.05	J	ug/l	0.500	0.031	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.08	J	ug/l	0.500	0.077	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM
Zinc, Dissolved	5.39		ug/l	5.00	1.62	1	09/04/10 14:10	09/08/10 02:32	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-04  
 Client ID: SHM-10-16-090210-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 14:45  
 Date Received: 09/02/10  
 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	1180		ug/l	10.0	1.91	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Antimony, Total	0.37	J	ug/l	0.500	0.120	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Arsenic, Total	487		ug/l	0.500	0.113	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Barium, Total	72.8		ug/l	0.500	0.095	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Beryllium, Total	0.07	J	ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Calcium, Total	69700		ug/l	100	12.6	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Chromium, Total	7.12		ug/l	0.500	0.186	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Cobalt, Total	5.27		ug/l	0.500	0.053	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Copper, Total	5.87		ug/l	0.500	0.118	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Iron, Total	50200		ug/l	50.0	8.41	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Lead, Total	1.65		ug/l	0.500	0.050	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Magnesium, Total	13800		ug/l	100	4.10	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Manganese, Total	1710		ug/l	1.00	0.136	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Mercury, Total	0.02776	J	ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:30	EPA 7470A	1,7470A	TD
Nickel, Total	6.39		ug/l	0.500	0.180	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Potassium, Total	14600		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Selenium, Total	0.59	J	ug/l	1.00	0.406	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Sodium, Total	30800		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Thallium, Total	0.05	J	ug/l	0.500	0.031	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Vanadium, Total	1.65		ug/l	0.500	0.077	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM
Zinc, Total	7.99		ug/l	5.00	1.62	1	09/04/10 14:10	09/08/10 03:14	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-05  
 Client ID: DUP-090210-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 14:45  
 Date Received: 09/02/10  
 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	3.27	J	ug/l	10.0	1.91	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.17	J	ug/l	0.500	0.120	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	489		ug/l	0.500	0.113	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Barium, Dissolved	69.4		ug/l	0.500	0.095	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Calcium, Dissolved	70700		ug/l	100	12.6	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.3	J	ug/l	0.500	0.186	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	4.85		ug/l	0.500	0.053	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.34	J	ug/l	0.500	0.118	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Iron, Dissolved	51100		ug/l	50.0	8.41	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	13500		ug/l	100	4.10	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1680		ug/l	1.00	0.136	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:19	EPA 7470A	1,7470A	TD
Nickel, Dissolved	3.37		ug/l	0.500	0.180	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Potassium, Dissolved	14700		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.61	J	ug/l	1.00	0.406	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Sodium, Dissolved	31100		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.08	J	ug/l	0.500	0.077	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM
Zinc, Dissolved	3.91	J	ug/l	5.00	1.62	1	09/04/10 14:10	09/08/10 02:38	EPA 3005A	1,6020A	BM



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

**Lab Number:** L1013628  
**Report Date:** 09/13/10

**SAMPLE RESULTS**

**Lab ID:** L1013628-06  
**Client ID:** DUP-090210-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 09/02/10 14:45  
**Date Received:** 09/02/10  
**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	1360		ug/l	10.0	1.91	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Antimony, Total	0.32	J	ug/l	0.500	0.120	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Arsenic, Total	542		ug/l	0.500	0.113	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Barium, Total	82.1		ug/l	0.500	0.095	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Beryllium, Total	0.07	J	ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Calcium, Total	76800		ug/l	100	12.6	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Chromium, Total	8.28		ug/l	0.500	0.186	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Cobalt, Total	5.81		ug/l	0.500	0.053	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Copper, Total	6.88		ug/l	0.500	0.118	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Iron, Total	55100		ug/l	50.0	8.41	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Lead, Total	1.97		ug/l	0.500	0.050	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Magnesium, Total	15000		ug/l	100	4.10	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Manganese, Total	1860		ug/l	1.00	0.136	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Mercury, Total	0.01466	J	ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:31	EPA 7470A	1.7470A	TD
Nickel, Total	7.06		ug/l	0.500	0.180	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Potassium, Total	15800		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Selenium, Total	0.74	J	ug/l	1.00	0.406	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Sodium, Total	33400		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Thallium, Total	0.05	J	ug/l	0.500	0.031	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Vanadium, Total	1.85		ug/l	0.500	0.077	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM
Zinc, Total	9.34		ug/l	5.00	1.62	1	09/04/10 14:10	09/08/10 03:20	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-07

Client ID: RB-090210-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 09/02/10 14:50

Date Received: 09/02/10

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	3.24	J	ug/l	10.0	1.91	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Antimony, Total	0.18	J	ug/l	0.500	0.120	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Calcium, Total	87.9	J	ug/l	100	12.6	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Chromium, Total	0.27	J	ug/l	0.500	0.186	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Copper, Total	0.12	J	ug/l	0.500	0.118	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Iron, Total	16.2	J	ug/l	50.0	8.41	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Lead, Total	0.11	J	ug/l	0.500	0.050	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Manganese, Total	0.26	J	ug/l	1.00	0.136	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:33	EPA 7470A	1,7470A	TD
Nickel, Total	0.4	J	ug/l	0.500	0.180	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM
Zinc, Total	3.93	J	ug/l	5.00	1.62	1	09/04/10 14:10	09/08/10 00:07	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

### 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): 02,04,06-07 Batch: WG431090-1										
Aluminum, Total	ND		ug/l	10.0	1.91	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Barium, Total	ND		ug/l	0.500	0.095	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Calcium, Total	18.8	J	ug/l	100	12.6	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Copper, Total	ND		ug/l	0.500	0.118	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Iron, Total	15.5	J	ug/l	50.0	8.41	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	09/04/10 14:10	09/07/10 22:27	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 Batch: WG431091-1										
Aluminum, Dissolved	ND		ug/l	10.0	1.91	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Barium, Dissolved	ND		ug/l	0.500	0.095	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

### Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Calcium, Dissolved	18.8	J	ug/l	100	12.6	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Iron, Dissolved	15.5	J	ug/l	50.0	8.41	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	09/04/10 14:10	09/07/10 22:27	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	09/04/10 14:10	09/07/10 22:27	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 Batch: WG431509-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:05	1,7470A	TD

#### 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): 02,04,06-07 Batch: WG431512-1										
Mercury, Total	ND		ug/l	0.2000	0.0120	1	09/08/10 15:50	09/09/10 11:21	1,7470A	TD

**Project Name:** SHL TASK 0002

**Lab Number:** L1013628

**Project Number:** AC001

**Report Date:** 09/13/10

## **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: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG431090-2								
Aluminum, Total	102		-		80-120	-		
Antimony, Total	97		-		80-120	-		
Arsenic, Total	99		-		80-120	-		
Barium, Total	99		-		80-120	-		
Beryllium, Total	96		-		80-120	-		
Cadmium, Total	109		-		80-120	-		
Calcium, Total	108		-		80-120	-		
Chromium, Total	99		-		80-120	-		
Cobalt, Total	105		-		80-120	-		
Copper, Total	104		-		80-120	-		
Iron, Total	110		-		80-120	-		
Lead, Total	100		-		80-120	-		
Magnesium, Total	108		-		80-120	-		
Manganese, Total	106		-		80-120	-		
Nickel, Total	105		-		80-120	-		
Potassium, Total	105		-		80-120	-		
Selenium, Total	102		-		80-120	-		
Silver, Total	97		-		80-120	-		
Sodium, Total	96		-		80-120	-		
Thallium, Total	93		-		80-120	-		
Vanadium, Total	103		-		80-120	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG431090-2					
Zinc, Total	104	-	80-120	-	



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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG431091-2					
Aluminum, Dissolved	102	-	80-120	-	
Antimony, Dissolved	97	-	80-120	-	
Arsenic, Dissolved	99	-	80-120	-	
Barium, Dissolved	99	-	80-120	-	
Beryllium, Dissolved	96	-	80-120	-	
Cadmium, Dissolved	109	-	80-120	-	
Calcium, Dissolved	108	-	80-120	-	
Chromium, Dissolved	99	-	80-120	-	
Cobalt, Dissolved	105	-	80-120	-	
Copper, Dissolved	104	-	80-120	-	
Iron, Dissolved	110	-	80-120	-	
Lead, Dissolved	100	-	80-120	-	
Magnesium, Dissolved	108	-	80-120	-	
Manganese, Dissolved	106	-	80-120	-	
Nickel, Dissolved	105	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Selenium, Dissolved	102	-	80-120	-	
Silver, Dissolved	97	-	80-120	-	
Sodium, Dissolved	96	-	80-120	-	
Thallium, Dissolved	93	-	80-120	-	
Vanadium, Dissolved	103	-	80-120	-	

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG431091-2					
Zinc, Dissolved	104	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 Batch: WG431509-2					
Mercury, Dissolved	112	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 Batch: WG431512-2					
Mercury, Total	112	-	80-120	-	20

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

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

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): 02,04,06-07 QC Batch ID: WG431090-3 WG431090-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U												
Aluminum, Total	262	2000	2290	101		2340	104		80-120	2		20
Antimony, Total	ND	500	466	93		472	94		80-120	1		20
Arsenic, Total	4280	120	4440	133		4640	300		80-120	4		20
Barium, Total	80.5	2000	2000	96		2020	97		80-120	1		20
Beryllium, Total	ND	50	46.5	93		47.3	95		80-120	2		20
Cadmium, Total	ND	51	54.3	106		54.5	107		80-120	0		20
Calcium, Total	69300	10000	82200	129		84700	154		80-120	3		20
Chromium, Total	ND	200	191	96		193	96		80-120	1		20
Cobalt, Total	16.0	500	498	96		507	98		80-120	2		20
Copper, Total	ND	250	248	99		254	102		80-120	2		20
Iron, Total	75200	1000	80400	520		82700	750		80-120	3		20
Lead, Total	ND	510	496	97		499	98		80-120	1		20
Magnesium, Total	4310	10000	14800	105		15200	109		80-120	3		20
Manganese, Total	4700	500	5490	158		5580	176		80-120	2		20
Nickel, Total	8.07	500	505	99		510	100		80-120	1		20
Potassium, Total	18800	10000	29300	105		30300	115		80-120	3		20
Selenium, Total	ND	120	123	102		122	102		80-120	1		20
Silver, Total	ND	50	46.8	94		48.1	96		80-120	3		20
Sodium, Total	15500	10000	25200	97		25500	100		80-120	1		20
Thallium, Total	ND	120	109	91		110	92		80-120	1		20
Vanadium, Total	ND	500	467	93		476	95		80-120	2		20

**Matrix Spike Analysis**  
**Batch Quality Control****Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013628**Report Date:** 09/13/10

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): 02,04,06-07 QC Batch ID: WG431090-3 WG431090-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U									
Zinc, Total	54.6	500	519	93	533	96	80-120	3	20

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

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

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 QC Batch ID: WG431091-3 WG431091-4 QC Sample: L1013628-01 Client ID: SHM-10-14-090210-F									
Aluminum, Dissolved	ND	2000	1980	99	2150	108	80-120	8	20
Antimony, Dissolved	ND	500	460	92	509	102	80-120	10	20
Arsenic, Dissolved	4100	120	4500	333	4660	467	80-120	3	20
Barium, Dissolved	53.8	2000	1950	95	2160	105	80-120	10	20
Beryllium, Dissolved	ND	50	47.2	94	49.1	98	80-120	4	20
Cadmium, Dissolved	ND	51	53.0	104	59.3	116	80-120	11	20
Calcium, Dissolved	55300	10000	69500	142	74400	191	80-120	7	20
Chromium, Dissolved	ND	200	186	93	204	102	80-120	9	20
Cobalt, Dissolved	15.6	500	497	96	540	105	80-120	8	20
Copper, Dissolved	ND	250	248	99	271	108	80-120	9	20
Iron, Dissolved	73000	1000	78000	500	84000	1100	80-120	7	20
Lead, Dissolved	ND	510	486	95	530	104	80-120	9	20
Magnesium, Dissolved	4150	10000	14700	106	15800	116	80-120	7	20
Manganese, Dissolved	4720	500	5520	160	5910	238	80-120	7	20
Nickel, Dissolved	9.16	500	501	98	549	108	80-120	9	20
Potassium, Dissolved	17600	10000	28500	109	30800	132	Q 80-120	8	20
Selenium, Dissolved	ND	120	123	102	130	108	80-120	6	20
Silver, Dissolved	ND	50	46.3	93	51.0	102	80-120	10	20
Sodium, Dissolved	15200	10000	25600	104	25800	106	80-120	1	20
Thallium, Dissolved	ND	120	107	89	117	98	80-120	9	20
Vanadium, Dissolved	ND	500	462	92	506	101	80-120	9	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

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 QC Batch ID: WG431091-3 WG431091-4 QC Sample: L1013628-01 Client ID: SHM-10-14-090210-F									
Zinc, Dissolved	ND	500	539	108	556	111	80-120	3	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05 QC Batch ID: WG431509-3 WG431509-4 QC Sample: L1013628-01 Client ID: SHM-10-14-090210-F									
Mercury, Dissolved	ND	1	1.142	114	1.142	114	80-120	0	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06-07 QC Batch ID: WG431512-3 WG431512-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U									
Mercury, Total	ND	1	1.150	115	1.096	110	80-120	5	20

# **INORGANICS & MISCELLANEOUS**



Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-02  
 Client ID: SHM-10-14-090210-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 11:47  
 Date Received: 09/02/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	360		mg CaCO3/L	2.0	NA	1	-	09/07/10 11:44	30,2320B	JO
Solids, Total Suspended	72		mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
Nitrogen, Ammonia	3.96		mg/l	0.075	0.017	1	09/04/10 12:45	09/07/10 19:42	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/03/10 10:41	30,4500NO2-B	JO
Sulfide	ND		mg/l	0.10	0.10	1	09/08/10 17:15	09/08/10 18:15	30,4500S2-AD	AT
Chemical Oxygen Demand	43		mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
Dissolved Organic Carbon	8.7		mg/l	1.0	1.0	1	09/02/10 21:30	09/09/10 07:43	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	6.3		mg/l	0.50	0.07	1	-	09/02/10 22:50	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/02/10 22:50	44,300.0	AU
Sulfate	3.7		mg/l	1.0	0.12	1	-	09/02/10 22:50	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## SAMPLE RESULTS

Lab ID: L1013628-04  
 Client ID: SHM-10-16-090210-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/02/10 14:45  
 Date Received: 09/02/10  
 Field Prep: Not Specified

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 CaCO <sub>3</sub> /L	2.0	NA	1	-	09/07/10 11:44	30,2320B	JO
Solids, Total Suspended	150		mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
Nitrogen, Ammonia	3.31		mg/l	0.075	0.017	1	09/04/10 12:45	09/07/10 19:47	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/03/10 10:41	30,4500NO <sub>2</sub> -B	JO
Sulfide	ND		mg/l	0.10	0.10	1	09/08/10 17:15	09/08/10 18:15	30,4500S <sub>2</sub> -AD	AT
Chemical Oxygen Demand	36		mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
Dissolved Organic Carbon	5.3		mg/l	1.0	1.0	1	09/02/10 21:30	09/09/10 07:43	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	31		mg/l	0.50	0.07	1	-	09/02/10 23:02	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/02/10 23:02	44,300.0	AU
Sulfate	2.9		mg/l	1.0	0.12	1	-	09/02/10 23:02	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

### 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 Batch: WG430895-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/03/10 08:35	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG430933-2										
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/03/10 10:40	30,4500NO2-B	JO
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04 Batch: WG431008-1										
Chloride	ND		mg/l	0.50	0.07	1	-	09/02/10 16:49	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/02/10 16:49	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	-	09/02/10 16:49	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431064-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.017	1	09/04/10 12:45	09/07/10 19:38	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431147-1										
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	09/07/10 15:00	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431206-2										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	09/07/10 11:44	30,2320B	JO
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431546-1										
Sulfide	ND		mg/l	0.10	0.10	1	09/08/10 17:15	09/08/10 18:15	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG431589-1										
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	09/02/10 21:30	09/09/10 07:43	30,5310C	DW

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG430933-1								
Nitrogen, Nitrite	95		-		90-110	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 Batch: WG431008-2								
Chloride	100		-		90-110	-		
Nitrogen, Nitrate	102		-		90-110	-		
Sulfate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431064-2								
Nitrogen, Ammonia	98		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431147-2								
Chemical Oxygen Demand	101		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431206-1								
Alkalinity, Total	106		-		80-115	-		4
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431546-2								
Sulfide	87		-		75-125	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG431589-2					
Dissolved Organic Carbon	101	-	90-110	-	

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

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): 02,04 QC Batch ID: WG430933-3 QC Sample: L1013534-04 Client ID: MS Sample												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431008-3 WG431008-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U												
Chloride	6.3	4	10	92	-	10	92	-	40-151	0	-	18
Nitrogen, Nitrate	ND	0.4	0.40	100	-	0.40	100	-	80-122	0	-	15
Sulfate	3.7	8	12	104	-	12	104	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431064-3 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U												
Nitrogen, Ammonia	3.96	4	7.79	96	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431147-3 QC Sample: L1013534-02 Client ID: MS Sample												
Chemical Oxygen Demand	33	238	290	108	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431206-3 QC Sample: L1013721-13 Client ID: MS Sample												
Alkalinity, Total	13	100	120	109	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431546-3 QC Sample: L1013628-04 Client ID: SHM-10-16-090210-U												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431589-3 QC Sample: L1013628-04 Client ID: SHM-10-16-090210-U												
Dissolved Organic Carbon	5.3	4	9.6	108	-	-	-	-	79-120	-	-	20

Project Name: SHL TASK 0002

Project Number: AC001

### Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1013628

Report Date: 09/13/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430895-2 QC Sample: L1013636-11 Client ID: DUP Sample						
Solids, Total Suspended	2000	2000	mg/l	0		32
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG430933-4 QC Sample: L1013534-04 Client ID: DUP Sample						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431008-5 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U						
Chloride	6.3	6.2	mg/l	2		18
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	3.7	3.6	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431064-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U						
Nitrogen, Ammonia	3.96	3.99	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431147-4 QC Sample: L1013534-02 Client ID: DUP Sample						
Chemical Oxygen Demand	33.	29	mg/l	13		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431206-4 QC Sample: L1013721-13 Client ID: DUP Sample						
Alkalinity, Total	13.	14	mg CaCO3/L	3		4
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431546-4 QC Sample: L1013628-04 Client ID: SHM-10-16-090210-U						
Sulfide	ND	ND	mg/l	NC		20



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

**Lab Duplicate Analysis**  
Batch Quality Control

**Lab Number:** L1013628  
**Report Date:** 09/13/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG431589-4 QC Sample: L1013628-02 Client ID: SHM-10-14-090210-U					
Dissolved Organic Carbon	8.7	8.7	mg/l	0	20

Project Name: SHL TASK 0002

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## 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(*)
L1013628-01A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013628-01B	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013628-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013628

Report Date: 09/13/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013628-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013628-02C	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013628-02D	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013628-02E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-02F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-02G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-02H	Plastic 500ml HNO3 preserved	A	<2	3	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)
L1013628-02I	Plastic 500ml HNO3 preserved	A	<2	3	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)
L1013628-02J	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1013628-02K	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013628-02L	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013628

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013628-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013628-03A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013628-04A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013628-04B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013628-04C	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013628-04D	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013628-04E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-04F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013628-04H	Plastic 500ml HNO3 preserved	A	<2	3	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)
L1013628-04J	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)

\*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(*)
L1013628-04K	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013628-04L	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013628-04X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013628-05A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013628-06A	Plastic 500ml HNO3 preserved	A	<2	3	Y	Present/Intact	DOD-CD-6020I(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

Lab Number: L1013628

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013628-07A	Plastic 500ml HNO3 preserved	A	<2	3	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-6020T(180),DOD-SB-7470T(28),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

Lab Number: L1013628

Project Number: AC001

Report Date: 09/13/10

## 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.
- 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:** L1013628

**Project Number:** AC001

**Report Date:** 09/13/10

**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:** L1013628

**Project Number:** AC001

**Report Date:** 09/13/10

## 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, 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, 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<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 1

Date Rec'd in Lab: 9/2/10

ALPHA Job #: 11013628

## Client Information

Client: Sovereign Consulting Inc  
Address: 905B S. Main St  
Mansfield, MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@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)

506 #41 = Closed \*Done as noted - F = Field Filtered

## Project Information

Project Name: SHL Tark 0002

Project Location: DEVENT MA

Project #: ACOO1

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

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

Date Due: 9/10/10 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?

ANALYSIS											TOTAL # BOTTLES
	Cl, SO <sub>4</sub> , NO <sub>3</sub>	NO <sub>2</sub>	ALU	NAH CO <sub>3</sub>	SLFIDE	TSS	DIC+DOC	Tot TAL METALS	Diss TAL METALS	SAMPLE HANDLING	
										Filtration _____ <input checked="" type="checkbox"/> Done <input checked="" type="checkbox"/> * <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	
13628	1	SHM-10-14-090210-F	9/2/10	1147	GW	PJV				MS/MSD Metals only	2
	2	SHM-10-14-090210-LI	9/2/10	1147	GW	PJV	✓	✓	✓	MS/MSD Metals only	11
	3	SHM-10-16-090210-F	9/2/10	1445	GW	PJV					1
	4	SHM-10-16-090210-LI	9/2/10	1445	GW	PJV	✓	✓	✓		10
	5	DUP-090210-F	9/2/10	1445	GW	PJV					1
	6	DUP-090210-LI	9/2/10	1445	GW	PJV					1
	7	RB-090210-LI	9/2/10	1450	GW	CMH					1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Container Type

Preservative

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: L1013630

Client: Sovereign Consulting  
905B South Main Street  
Mansfield, MA 02048

ATTN: Phil McBain

Phone: (508) 339-3200

Project Name: SHL TASK 002

Project Number: AC001

Report Date: 09/10/10

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 002  
**Project Number:** AC001

**Lab Number:** L1013630  
**Report Date:** 09/10/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013630-01	SHM-10-14-090210-U	DEVENS, MA	09/02/10 11:47
L1013630-02	SHM-10-16-090210-U	DEVENS, MA	09/02/10 14:45

**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Number:** L1013630  
**Report Date:** 09/10/10

### 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 have been issued under separate cover.

### Dissolved Inorganic Carbon

L1013630-01 and -02 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

A matrix spike could not be performed due to insufficient 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: 09/10/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 002

Lab Number: L1013630

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013630-01  
Client ID: SHM-10-14-090210-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/02/10 11:47  
Date Received: 09/02/10  
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	120		mg/l	20	--	20	09/02/10 21:30	09/08/10 09:51	30,5310C(M)	DW

Project Name: SHL TASK 002

Lab Number: L1013630

Project Number: AC001

Report Date: 09/10/10

## SAMPLE RESULTS

Lab ID: L1013630-02  
Client ID: SHM-10-16-090210-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/02/10 14:45  
Date Received: 09/02/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	91		mg/l	20	--	20	09/02/10 21:30	09/08/10 09:51	30.5310C(M)	DW

Project Name: SHL TASK 002

Lab Number: L1013630

Project Number: AC001

Report Date: 09/10/10

**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: WG431467-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	09/02/10 21:30	09/08/10 09:51	30,5310C(M)	DW

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 002

Project Number: AC001

Lab Number: L1013630

Report Date: 09/10/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-02 Batch: WG431467-2								
Dissolved Inorganic Carbon	110							



**Project Name:** SHL TASK 002  
**Project Number:** AC001

**Lab Duplicate Analysis**  
Batch Quality Control

**Lab Number:** L1013630  
**Report Date:** 09/10/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-02 QC Batch ID: WG431467-3 QC Sample: L1013630-01 Client ID: SHM-10-14-090210-U						
Dissolved Inorganic Carbon	120	130	mg/l	8		

Project Name: SHL TASK 002

Project Number: AC001

Lab Number: L1013630

Report Date: 09/10/10

**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(*)
L1013630-01A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013630-01B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013630-01X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1013630-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013630-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013630-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 002

Lab Number: L1013630

Project Number: AC001

Report Date: 09/10/10

## 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 002

**Lab Number:** L1013630

**Project Number:** AC001

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

*Data Qualifiers*

**RE** - Analytical results are from sample re-extraction.

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

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

*Report Format:* Data Usability Report

**ALPHA**  
ANALYTICAL

**Project Name:** SHL TASK 002

**Lab Number:** L1013630

**Project Number:** AC001

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

## 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, 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, 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: 508-898-9153

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

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab 9/2/10

ALPHA Job # 101

## Project Information

Project Name: *SHL Tark 0002*  
Project Location: *Devent MA*  
Project #: *AC001*  
Project Manager: *Phil McBain*  
ALPHA Quote #:

## Turn-Around Time

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

Date Due: *9/10/10* 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?

## Client Information

Client: *Sovereign Consulting Inc*  
Address: *905B S. Main St*  
*Mansfield MA 02048*  
Phone: *508-339-3200*  
Fax: *508-339-3248*  
Email: *p.mcain@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 #41 = closed* *\*Done as noted - F = Field Filtered*

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Cl	NO <sub>3</sub>	ALK	NH <sub>4</sub>	Self	TSS	DOC	Tot	Dis	(Please specify below)		T
		Date	Time												Sample Specific Comments		
13630	SHM-10-14-090210-F	9/2/10	1147	GW	PJV									✓		MS/MSD Metals only	2
01	SHM-10-14-090210-U	9/2/10	1147	GW	PJV	✓	✓	✓	✓	✓	✓	✓	✓			MS/MSD Metals only	11
	SHM-10-16-090210-F	9/2/10	1445	GW	PJV									✓			1
02	SHM-10-16-090210-U	9/2/10	1445	GW	PJV	✓	✓	✓	✓	✓	✓	✓	✓				10
	DUP-090210-F	9/2/10	1445	GW	PJV									✓			1
	DUP-090210-U	9/2/10	1445	GW	PJV									✓			1
	RB-090210-U	9/2/10	1450	GW	CMH									✓			1

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 FE A A C C*

Relinquished By:

Date/Time

Received By:

Date/Time

Please print clearly, legibly and completely. Samples can only be traced if and when the time, date and location are noted. All samples submitted are subject to Alpha's terms and conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number: L1013810

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: 09/16/10

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:** L1013810  
**Report Date:** 09/16/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013810-01	SHM-10-08-090710-F	DEVENS, MA	09/07/10 11:53
L1013810-02	SHM-10-08-090710-U	DEVENS, MA	09/07/10 11:53
L1013810-03	SHM-10-03-090710-F	DEVENS, MA	09/07/10 10:45
L1013810-04	SHM-10-03-090710-U	DEVENS, MA	09/07/10 10:45
L1013810-05	SHM-10-02-090710-F	DEVENS, MA	09/07/10 14:30
L1013810-06	SHM-10-02-090710-U	DEVENS, MA	09/07/10 14:30
L1013810-07	SHM-10-04-090710-F	DEVENS, MA	09/07/10 14:30
L1013810-08	SHM-10-04-090710-U	DEVENS, MA	09/07/10 14:30
L1013810-09	RB-090710-U	DEVENS, MA	09/07/10 15:30
L1013810-10	DUP-090710-F	DEVENS, MA	09/07/10 10:45
L1013810-11	DUP-090710-U	DEVENS, MA	09/07/10 10:45

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

**Lab Number:** L1013810  
**Report Date:** 09/16/10

### 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

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

L1013810-01, -03, -05, -07 and -10 have elevated detection limits for all analytes due to the dilutions

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

**Lab Number:** L1013810  
**Report Date:** 09/16/10

### Case Narrative (continued)

required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG431430-3 MS recovery for Sodium (69%), performed on L1013810-05, is invalid because the sample concentration is greater than four times the spike amount added. The WG431430-5 Post Digestion Spike recovery for Calcium was outside the DoD acceptance criteria of 75-125%; therefore, the parent sample (L1013810-05) is qualified as "J" for Calcium.

#### Total Metals

L1013810-02, -04, -06, -08 and -11 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 WG431429-5 Post Digestion Spike recovery for Calcium was outside the DoD acceptance criteria of 75-125%; therefore, the parent sample (L1013810-06) is qualified as "J" for Calcium.

#### Chloride

L1013810-02, -04, -06, -08 and -11 have elevated detection limits due to the dilutions required to quantitate the results within the calibration range.

#### Total Organic Carbon

L1013810-04 and -11: The samples were re-analyzed on dilution for confirmation. The results of the undiluted analyses are reported (matrix interference was noted).

#### Dissolved Organic Carbon

L1013810-04: The sample was re-analyzed on dilution for confirmation. The results of the undiluted analysis are reported (matrix interference was noted).

WG432106: A Matrix Spike could not be performed due to insufficient sample volume available for analysis.

WG432106: A Laboratory Duplicate was performed on sample L1013810-08, instead of L1013810-06 as requested, due to insufficient sample volume available for analysis.



**Project Name:** SHL TASK 0002**Lab Number:** L1013810**Project Number:** AC001**Report Date:** 09/16/10**Case Narrative (continued)****Nitrogen, Nitrite**

L1013810-08 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.

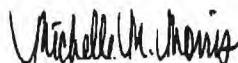
**Nitrogen, Nitrate**

L1013810-08 has an elevated detection limit due to the dilution required to quantitate the result within the calibration range.

**Solids, Total Suspended**

WG431564: A Laboratory Duplicate was performed on sample L1013862-01, instead of L1013810-06 as requested, due to insufficient 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:** 09/16/10



## METALS

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-01

Date Collected: 09/07/10 11:53

Client ID: SHM-10-08-090710-F

Date Received: 09/07/10

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	ND		ug/l	20.0	3.82	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1.55		ug/l	1.00	0.226	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Calcium, Dissolved	195000		ug/l	200	25.3	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	1.00	0.372	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Iron, Dissolved	1260		ug/l	100	16.8	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	1.00	0.100	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	25000		ug/l	200	8.20	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Manganese, Dissolved	376		ug/l	2.00	0.272	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Nickel, Dissolved	8.57		ug/l	1.00	0.360	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5470		ug/l	200	36.3	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM
Sodium, Dissolved	50100		ug/l	200	36.4	2	09/08/10 11:45	09/10/10 20:00	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-02

Date Collected: 09/07/10 11:53

Client ID: SHM-10-08-090710-U

Date Received: 09/07/10

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	33.2		ug/l	20.0	3.82	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Arsenic, Total	1.40		ug/l	1.00	0.226	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Calcium, Total	182000		ug/l	200	25.3	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Chromium, Total	0.43	J	ug/l	1.00	0.372	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Iron, Total	1270		ug/l	100	16.8	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	1.00	0.100	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Magnesium, Total	23600		ug/l	200	8.20	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Manganese, Total	359		ug/l	2.00	0.272	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Nickel, Total	8.27		ug/l	1.00	0.360	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Potassium, Total	5240		ug/l	200	36.3	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Sodium, Total	46400		ug/l	200	36.4	2	09/08/10 11:45	09/10/10 21:12	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	490		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 09:57	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-03

Date Collected: 09/07/10 10:45

Client ID: SHM-10-03-090710-F

Date Received: 09/07/10

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	ND		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.51	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Calcium, Dissolved	157000		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Iron, Dissolved	1030		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	18500		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Manganese, Dissolved	44.0		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Nickel, Dissolved	5.67		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6880		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM
Sodium, Dissolved	536000		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 20:06	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-04

Date Collected: 09/07/10 10:45

Client ID: SHM-10-03-090710-U

Date Received: 09/07/10

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	168		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Arsenic, Total	1.47	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Calcium, Total	153000		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Chromium, Total	2.01		ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Iron, Total	1420		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Lead, Total	0.49	J	ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Magnesium, Total	18200		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Manganese, Total	72.8		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Nickel, Total	6.60		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Potassium, Total	6920		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Sodium, Total	536000		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 21:18	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	420		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 10:01	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-05  
 Client ID: SHM-10-02-090710-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 14:30  
 Date Received: 09/07/10  
 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	4.15	J	ug/l	20.0	3.82	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1.07		ug/l	1.00	0.226	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Calcium, Dissolved	114000	J	ug/l	200	25.3	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	1.00	0.372	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Iron, Dissolved	843		ug/l	100	16.8	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	1.00	0.100	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	16000		ug/l	200	8.20	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2190		ug/l	2.00	0.272	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Nickel, Dissolved	9.30		ug/l	1.00	0.360	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Potassium, Dissolved	4040		ug/l	200	36.3	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM
Sodium, Dissolved	50700		ug/l	200	36.4	2	09/08/10 11:45	09/10/10 20:18	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-06

Date Collected: 09/07/10 14:30

Client ID: SHM-10-02-090710-U

Date Received: 09/07/10

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	85.3		ug/l	20.0	3.82	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Arsenic, Total	1.11		ug/l	1.00	0.226	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Calcium, Total	115000	J	ug/l	200	25.3	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Chromium, Total	0.68	J	ug/l	1.00	0.372	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Iron, Total	973		ug/l	100	16.8	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Lead, Total	0.18	J	ug/l	1.00	0.100	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Magnesium, Total	16000		ug/l	200	8.20	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Manganese, Total	2190		ug/l	2.00	0.272	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Nickel, Total	9.58		ug/l	1.00	0.360	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Potassium, Total	4020		ug/l	200	36.3	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Sodium, Total	48100		ug/l	200	36.4	2	09/08/10 11:45	09/10/10 21:31	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	330		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 09:38	EPA 3005A	1,6010B	AI



Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-07

Date Collected: 09/07/10 14:30

Client ID: SHM-10-04-090710-F

Date Received: 09/07/10

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	ND		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.79	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Calcium, Dissolved	72800		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Iron, Dissolved	1650		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	14600		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Manganese, Dissolved	3100		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Nickel, Dissolved	7.66		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3990		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM
Sodium, Dissolved	35200		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 20:42	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-08

Date Collected: 09/07/10 14:30

Client ID: SHM-10-04-090710-U

Date Received: 09/07/10

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	87.2		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Arsenic, Total	1	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Calcium, Total	72100		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Chromium, Total	0.95	J	ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Iron, Total	1880		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Lead, Total	0.2	J	ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Magnesium, Total	14500		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Manganese, Total	3210		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Nickel, Total	8.10		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Potassium, Total	4050		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Sodium, Total	35800		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 21:55	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	220		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 09:51	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-09

Date Collected: 09/07/10 15:30

Client ID: RB-090710-U

Date Received: 09/07/10

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
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	ND		ug/l	10.0	1.91	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Calcium, Dissolved	34	J	ug/l	100	12.6	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Iron, Dissolved	13.3	J	ug/l	50.0	8.41	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Manganese, Dissolved	0.3	J	ug/l	1.00	0.136	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM
Sodium, Dissolved	26.3	J	ug/l	100	18.2	1	09/08/10 11:45	09/10/10 20:48	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-10

Date Collected: 09/07/10 10:45

Client ID: DUP-090710-F

Date Received: 09/07/10

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	ND		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	0.71	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Calcium, Dissolved	154000		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Iron, Dissolved	1040		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	18000		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Manganese, Dissolved	51.7		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Nickel, Dissolved	5.68		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Potassium, Dissolved	6840		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM
Sodium, Dissolved	526000		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 20:54	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-11  
 Client ID: DUP-090710-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 10:45  
 Date Received: 09/07/10  
 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	208		ug/l	40.0	7.64	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Arsenic, Total	1.51	J	ug/l	2.00	0.452	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Calcium, Total	149000		ug/l	400	50.6	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Chromium, Total	1.99	J	ug/l	2.00	0.744	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Iron, Total	1480		ug/l	200	33.6	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Lead, Total	0.58	J	ug/l	2.00	0.200	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Magnesium, Total	17700		ug/l	400	16.4	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Manganese, Total	70.2		ug/l	4.00	0.544	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Nickel, Total	6.35		ug/l	2.00	0.720	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Potassium, Total	6670		ug/l	400	72.6	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Sodium, Total	510000		ug/l	400	72.8	4	09/08/10 11:45	09/10/10 22:01	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	410		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 09:54	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431428-1										
Hardness	ND		mg/l	0.66	0.62	1	09/08/10 11:45	09/13/10 09:15	1,6010B	AI

### 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): 02,04,06,08,11 Batch: WG431429-1										
Aluminum, Total	2.59	J	ug/l	10.0	1.91	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Calcium, Total	28.7	J	ug/l	100	12.6	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Iron, Total	12.3	J	ug/l	50.0	8.41	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Potassium, Total	26.3	J	ug/l	100	18.2	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/08/10 11:45	09/10/10 18:16	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): 01,03,05,07,09-10 Batch: WG431430-1										
Aluminum, Dissolved	2.59	J	ug/l	10.0	1.91	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Calcium, Dissolved	28.7	J	ug/l	100	12.6	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Iron, Dissolved	12.3	J	ug/l	50.0	8.41	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

### Method Blank Analysis Batch Quality Control

Magnesium, Dissolved	ND		ug/l	100	4.10	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Potassium, Dissolved	26.3	J	ug/l	100	18.2	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	09/08/10 11:45	09/10/10 18:16	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A



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

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

**Lab Number:** L1013810  
**Report Date:** 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431428-2								
Hardness	92		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431429-2								
Aluminum, Total	98		-		80-120	-		
Arsenic, Total	100		-		80-120	-		
Calcium, Total	103		-		80-120	-		
Chromium, Total	98		-		80-120	-		
Iron, Total	106		-		80-120	-		
Lead, Total	99		-		80-120	-		
Magnesium, Total	106		-		80-120	-		
Manganese, Total	103		-		80-120	-		
Nickel, Total	104		-		80-120	-		
Potassium, Total	105		-		80-120	-		
Sodium, Total	102		-		80-120	-		

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07,09-10 Batch: WG431430-2					
Aluminum, Dissolved	98	-	80-120	-	
Arsenic, Dissolved	100	-	80-120	-	
Calcium, Dissolved	103	-	80-120	-	
Chromium, Dissolved	98	-	80-120	-	
Iron, Dissolved	106	-	80-120	-	
Lead, Dissolved	99	-	80-120	-	
Magnesium, Dissolved	106	-	80-120	-	
Manganese, Dissolved	103	-	80-120	-	
Nickel, Dissolved	104	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Sodium, Dissolved	102	-	80-120	-	

### Matrix Spike Analysis

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431428-3 WG431428-4 QC Sample: L1013810-06  
Client ID: SHM-10-02-090710-U

Hardness	330	66.2	380	76		380	76		75-125	0		20
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Total Metals - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431429-3 WG431429-4 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U

Aluminum, Total	85.3	2000	2070	99		2050	98		80-120	1		20
Arsenic, Total	1.11	120	133	110		132	109		80-120	1		20
Calcium, Total	115000	10000	126000	110		125000	100		80-120	1		20
Chromium, Total	ND	200	198	99		198	99		80-120	0		20
Iron, Total	973	1000	2060	109		2060	109		80-120	0		20
Lead, Total	ND	510	524	103		518	102		80-120	1		20
Magnesium, Total	16000	10000	26600	106		26700	107		80-120	0		20
Manganese, Total	2190	500	2670	96		2690	100		80-120	1		20
Nickel, Total	9.58	500	525	103		522	102		80-120	1		20
Potassium, Total	4020	10000	14600	106		14400	104		80-120	1		20
Sodium, Total	48100	10000	56300	82		57600	95		80-120	2		20

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

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): 01,03,05,07,09-10 QC Batch ID: WG431430-3 WG431430-4 QC Sample: L1013810-05 Client ID: SHM-10-02-090710-F									
Aluminum, Dissolved	ND	2000	1930	96	1970	98	80-120	2	20
Arsenic, Dissolved	1.07	120	130	107	133	110	80-120	2	20
Calcium, Dissolved	114000	10000	123000	90	126000	120	80-120	2	20
Chromium, Dissolved	ND	200	192	96	198	99	80-120	3	20
Iron, Dissolved	843	1000	1860	102	1930	109	80-120	4	20
Lead, Dissolved	ND	510	512	100	521	102	80-120	2	20
Magnesium, Dissolved	16000	10000	25800	98	26600	106	80-120	3	20
Manganese, Dissolved	2190	500	2610	84	2710	104	80-120	4	20
Nickel, Dissolved	9.30	500	514	101	525	103	80-120	2	20
Potassium, Dissolved	4040	10000	14300	103	14500	105	80-120	1	20
Sodium, Dissolved	50700	10000	57600	69	59800	91	80-120	4	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-02  
 Client ID: SHM-10-08-090710-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 11:53  
 Date Received: 09/07/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	500		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/14/10 06:29	30,2320B	SD
Solids, Total Dissolved	630		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.084		mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 22:27	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 17:31	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	17	J	mg/l	20	7.0	1	-	09/14/10 11:55	44,410.4	DW
Total Organic Carbon	4.1		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW
Dissolved Organic Carbon	3.8		mg/l	1.0	1.0	1	09/07/10 21:00	09/14/10 07:34	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	79		mg/l	2.5	0.33	5	-	09/08/10 21:54	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/08/10 18:30	44,300.0	AU
Sulfate	15		mg/l	1.0	0.12	1	-	09/08/10 18:30	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-04  
 Client ID: SHM-10-03-090710-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 10:45  
 Date Received: 09/07/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	78		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	1900		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
Solids, Total Suspended	28		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.0392	J	mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 22:21	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 17:31	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	43		mg/l	20	7.0	1	-	09/14/10 11:55	44,410.4	DW
Total Organic Carbon	0.66		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	09/07/10 21:00	09/14/10 07:34	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	1100		mg/l	25	3.3	50	-	09/08/10 21:30	44,300.0	AU
Nitrogen, Nitrate	0.55		mg/l	0.05	0.01	1	-	09/08/10 18:42	44,300.0	AU
Sulfate	39		mg/l	1.0	0.12	1	-	09/08/10 18:42	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-06  
 Client ID: SHM-10-02-090710-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 14:30  
 Date Received: 09/07/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	260		mg CaCO3/L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	480		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.238		mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 22:22	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 17:31	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	09/14/10 11:55	44,410.4	DW
Total Organic Carbon	2.6		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW
Dissolved Organic Carbon	2.5		mg/l	1.0	1.0	1	09/07/10 21:00	09/14/10 07:34	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	120		mg/l	2.5	0.33	5	-	09/08/10 19:42	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/08/10 18:18	44,300.0	AU
Sulfate	19		mg/l	1.0	0.12	1	-	09/08/10 18:18	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-08  
 Client ID: SHM-10-04-090710-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/07/10 14:30  
 Date Received: 09/07/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	100		mg CaCO3/L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	390		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
Solids, Total Suspended	5.2		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.0585	J	mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 22:25	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.50		mg/l	0.10	0.01	5	-	09/08/10 17:32	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	09/14/10 11:55	44,410.4	DW
Total Organic Carbon	2.6		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW
Dissolved Organic Carbon	2.7		mg/l	1.0	1.0	1	09/07/10 21:00	09/14/10 07:34	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	92		mg/l	2.5	0.33	5	-	09/08/10 21:18	44,300.0	AU
Nitrogen, Nitrate	3.7		mg/l	0.25	0.04	5	-	09/08/10 21:18	44,300.0	AU
Sulfate	87		mg/l	1.0	0.12	1	-	09/08/10 18:54	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013810-11

Date Collected: 09/07/10 10:45

Client ID: DUP-090710-U

Date Received: 09/07/10

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										
Alkalinity, Total	75		mg CaCO3/L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	1900		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
Solids, Total Suspended	7.8		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.0204	J	mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 22:26	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 17:32	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	31		mg/l	20	7.0	1	-	09/14/10 11:55	44,410.4	DW
Total Organic Carbon	0.66		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	1100		mg/l	25	3.3	50	-	09/08/10 21:42	44,300.0	AU
Nitrogen, Nitrate	0.60		mg/l	0.05	0.01	1	-	09/08/10 19:06	44,300.0	AU
Sulfate	39		mg/l	1.0	0.12	1	-	09/08/10 19:06	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431328-1										
Solids, Total Dissolved	ND		mg/l	10	4.4	1	-	09/08/10 09:55	30,2540C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431398-1										
Nitrogen, Ammonia	0.0183	J	mg/l	0.075	0.017	1	09/08/10 11:35	09/09/10 21:44	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431486-2										
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 17:30	30,4500NO2-B	DD
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431545-1										
Chloride	ND		mg/l	0.50	0.07	1	-	09/08/10 17:54	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/08/10 17:54	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	-	09/08/10 17:54	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431564-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432096-1										
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG432106-1										
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	09/07/10 21:00	09/14/10 07:34	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 04,06,08,11 Batch: WG432214-1										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432218-1										
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	09/14/10 11:47	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG432251-2										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	09/14/10 06:29	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432291-1										
Total Organic Carbon	ND		mg/l	0.50	0.03	1	-	09/14/10 07:34	30,5310C	DW

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013810**Report Date:** 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431328-2								
Solids, Total Dissolved	92				72-121	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431398-2								
Nitrogen, Ammonia	99				80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431486-1								
Nitrogen, Nitrite	100				90-110	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431545-2								
Chloride	100				90-110	-		
Nitrogen, Nitrate	92				90-110	-		
Sulfate	100				90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432096-2								
Sulfide	91				75-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG432106-2								
Dissolved Organic Carbon	100				90-110	-		

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013810**Report Date:** 09/16/10

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>LCSD %Recovery</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>RPD Limits</b>
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11 Batch: WG432214-2					
Alkalinity, Total	102	-	80-115	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432218-2					
Chemical Oxygen Demand	101	-	95-105	-	
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG432251-1					
Alkalinity, Total	105	-	80-115	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432291-2					
Total Organic Carbon	100	-	90-110	-	

### Matrix Spike Analysis Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

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): 02,04,06,08,11 QC Batch ID: WG431398-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Nitrogen, Ammonia	0.238	4	4.16	98	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431486-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431545-3 WG431545-4 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Chloride	120	20	140	107	-	142	103	-	40-151	1	-	18
Nitrogen, Nitrate	ND	0.4	0.35	88	-	0.35	88	-	80-122	0	-	15
Sulfate	19	8	27	100	-	27	100	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432096-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11 QC Batch ID: WG432214-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Alkalinity, Total	260	100	360	100	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432218-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U												
Chemical Oxygen Demand	ND	238	270	114	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG432251-3 QC Sample: L1013810-02 Client ID: SHM-10-08-090710-U												
Alkalinity, Total	500	100	590	92	-	-	-	-	86-116	-	-	4



**Matrix Spike Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013810**Report Date:** 09/16/10

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): 02,04,06,08,11 QC Batch ID: WG432291-3 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U									
Total Organic Carbon	2.6	4	6.6	99	-	-	80-120	-	20

# **Lab Duplicate Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 02-090710-U	QC Batch ID: WG431328-3	QC Sample: L1013810-06	Client ID: SHM-10-			
Solids, Total Dissolved	480	470	mg/l	2		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 02-090710-U	QC Batch ID: WG431398-4	QC Sample: L1013810-06	Client ID: SHM-10-			
Nitrogen, Ammonia	0.238	0.256	mg/l	7		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 02-090710-U	QC Batch ID: WG431486-4	QC Sample: L1013810-06	Client ID: SHM-10-			
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 SHM-10-02-090710-U	QC Batch ID: WG431545-5	QC Sample: L1013810-06	Client ID:			
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	19	19	mg/l	5		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 SHM-10-02-090710-U	QC Batch ID: WG431545-5	QC Sample: L1013810-06	Client ID:			
Chloride	120	130	mg/l	8		18
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Sample	QC Batch ID: WG431564-2	QC Sample: L1013862-01	Client ID: DUP			
Solids, Total Suspended	140	150	mg/l	7		32
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 02-090710-U	QC Batch ID: WG432096-4	QC Sample: L1013810-06	Client ID: SHM-10-			
Sulfide	ND	ND	mg/l	NC		20

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

### Lab Duplicate Analysis

Batch Quality Control

**Lab Number:** L1013810  
**Report Date:** 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG432106-4 QC Sample: L1013810-08 Client ID: SHM-10-04-090710-U					
Dissolved Organic Carbon	2.7	2.6	mg/l	4	20
General Chemistry - Westborough Lab Associated sample(s): 04,06,08,11 QC Batch ID: WG432214-4 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U					
Alkalinity, Total	260	270	mg CaCO3/L	4	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432218-4 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U					
Chemical Oxygen Demand	ND	7.3J	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG432251-4 QC Sample: L1013810-02 Client ID: SHM-10-08-090710-U					
Alkalinity, Total	500	490	mg CaCO3/L	2	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432291-4 QC Sample: L1013810-06 Client ID: SHM-10-02-090710-U					
Total Organic Carbon	2.6	2.6	mg/l	0	20

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## 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(*)
L1013810-01A	Plastic 250ml HNO3 preserved	B	<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)
L1013810-02A	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	DOC-5310(28)
L1013810-02B	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	DOC-5310(28)
L1013810-02C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-02D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-02E	Plastic 250ml unpreserved	B	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1013810-02F	Plastic 250ml unpreserved	B	6	4	Y	Present/Intact	NO2-4500NO2(2)
L1013810-02G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-02H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-02I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-02J	Plastic 500ml HNO3 preserved	B	<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),HARDT(180)
L1013810-02K	Plastic 500ml H2SO4 preserved	B	<2	4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-02L	Plastic 500ml unpreserved	B	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013810-02M	Plastic 1000ml unpreserved	B	6	4	Y	Present/Intact	TSS-2540(7)
L1013810-02X	Amber 250ml unpreserved	B	6	4	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013810-03A	Plastic 250ml HNO3 preserved	B	<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)
L1013810-04A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-04B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-04C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-04D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-04E	Plastic 250ml unpreserved	B	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1013810-04F	Plastic 250ml unpreserved	B	6	4	Y	Present/Intact	NO2-4500NO2(2)
L1013810-04G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-04H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-04I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-04J	Plastic 500ml HNO3 preserved	B	<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),HARDT(180)
L1013810-04K	Plastic 500ml H2SO4 preserved	B	<2	4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-04L	Plastic 500ml unpreserved	B	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013810-04M	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013810-04X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013810-05A	Plastic 250ml HNO3 preserved	A	<2	3	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)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013810-05B	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013810-06A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-06B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-06C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-06D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-06E	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-06F	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-06G	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013810-06H	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013810-06I	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013810-06J	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013810-06K	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013810-06L	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013810-06M	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013810-06N	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013810-06O	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013810-06P	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-06Q	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-06R	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013810

Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013810-06S	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013810-06T	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013810-06X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013810-07A	Plastic 250ml HNO3 preserved	B	<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)
L1013810-08A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-08B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013810-08C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-08D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-08E	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013810-08F	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013810-08G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013810-08H	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013810-08I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-08J	Plastic 500ml HNO3 preserved	B	<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),HARDT(180)
L1013810-08K	Plastic 500ml H2SO4 preserved	B	<2	4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-08L	Plastic 500ml unpreserved	B	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013810-08M	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013810-08X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013810-09A	Plastic 500ml HNO3 preserved	B	<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)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013810-10A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013810-11C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-11D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013810-11E	Plastic 250ml unpreserved	B	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1013810-11F	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013810-11G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-11H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-11I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013810-11J	Plastic 500ml HNO3 preserved	A	<2	3	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) HARDT(180)
L1013810-11K	Plastic 500ml H2SO4 preserved	B	<2	4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013810-11L	Plastic 500ml unpreserved	B	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013810-11M	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013810

Project Number: AC001

Report Date: 09/16/10

## 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: DU Report with "J" Qualifiers

**Project Name:** SHL TASK 0002

**Lab Number:** L1013810

**Project Number:** AC001

**Report Date:** 09/16/10

**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:** L1013810

**Project Number:** AC001

**Report Date:** 09/16/10

## REFERENCES

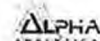
- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental 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 its 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<sub>2</sub>-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 1

Date Rec'd in Lab: 9/7/10

ALPHA Job #: 11013810

## Project Information

Project Name: S/H Task 0002

Project Location: Deer's MA

Project #: ACC01

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

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

Date Due: 9/14/10 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?

Client: Sovereign Consulting Inc  
Address: 905 B S Main St  
Mansfield, MA 02048  
Phone: 508-339-3200  
Fax: 508-339-3248  
Email: p.mcban@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#42 = closed

\* Done as noted F = Field Filtered  
Metals = As, Fe, Mn, Al, G, Pb, Ni, Na, Co, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	ANALYSIS	Sample Specific Comments	TOTAL # BOTTLES
13810	1 SAM-10-08-090710-F	09/07/10	1153	GW	CMH	Cl, S, Ag, Cu, TDS		1
	2 SAM-10-08-090710-U	9/07/10	1153	GW	CMH	NO <sub>2</sub> , Alk, NH <sub>4</sub> , COD, S, B, de, TSS, DOC, DIC, TOL, Tot Metals + Hardness, Diss Metals		13
	3 SHM-10-03-090710-F	9/7/10	1045	GW	EEF			1
	4 SHM-10-03-090710-U	9/7/10	1045	GW	EEF			13
	5 SHM-10-02-090710-F	9/7/10	1430	GW	JAR		MS/MSD	2
	6 SHM-10-02-090710-U	9/7/10	1430	GW	JAR		MS/MSD	20
	7 SHM-10-04-090710-F	9/7/10	1430	GW	EEF			1
	8 SHM-10-04-090710-U	9/7/10	1430	GW	EEF			13
	9 RB-090710-U	9/7/10	1530	GW	RNM			1
	10 DUP-090710-F	9/7/10	1045	GW	EEF			1
	11 DUP-090710-U	9/7/10	1045	GW	EEF			10

## PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT  
MA MCP or CT RCP?

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: L1013812

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: 09/20/10

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:** L1013812  
**Report Date:** 09/20/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013812-01	SHM-10-08-090710-U	DEVENS, MA	09/07/10 11:53
L1013812-02	SHM-10-03-090710-U	DEVENS, MA	09/07/10 10:45
L1013812-03	SHM-10-02-090710-U	DEVENS, MA	09/07/10 14:30
L1013812-04	SHM-10-04-090710-U	DEVENS, MA	09/07/10 14:30

Project Name: SHL TASK 0002

Lab Number: L1013812

Project Number: AC001

Report Date: 09/20/10

### 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

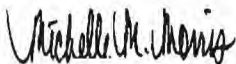
This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses have been issued under separate cover.

### Dissolved Inorganic Carbon

L1013812-01 through -04 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

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: 09/20/10

# **INORGANICS & MISCELLANEOUS**

INORGANICS & MISCELLANEOUS

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

**Lab Number:** L1013812  
**Report Date:** 09/20/10

**SAMPLE RESULTS**

**Lab ID:** L1013812-01  
**Client ID:** SHM-10-08-090710-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 09/07/10 11:53  
**Date Received:** 09/07/10  
**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	09/07/10 21:00	09/20/10 10:56	30,5310C(m)	DW

Project Name: SHL TASK 0002

Lab Number: L1013812

Project Number: AC001

Report Date: 09/20/10

## SAMPLE RESULTS

Lab ID: L1013812-02

Date Collected: 09/07/10 10:45

Client ID: SHM-10-03-090710-U

Date Received: 09/07/10

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	26		mg/l	20	--	20	09/07/10 21:00	09/20/10 10:56	30,5310C(m)	DW





Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013812

Report Date: 09/20/10

## SAMPLE RESULTS

Lab ID: L1013812-03  
Client ID: SHM-10-02-090710-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/07/10 14:30  
Date Received: 09/07/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	62		mg/l	20	--	20	09/07/10 21:00	09/20/10 10:56	30,5310C(m)	DW

**Project Name:** SHL TASK 0002**Lab Number:** L1013812**Project Number:** AC001**Report Date:** 09/20/10**SAMPLE RESULTS**

Lab ID: L1013812-04  
Client ID: SHM-10-04-090710-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/07/10 14:30  
Date Received: 09/07/10  
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	20	--	20	09/07/10 21:00	09/20/10 10:56	30,5310C(m)	DW

Project Name: SHL TASK 0002

Lab Number: L1013812

Project Number: AC001

Report Date: 09/20/10

**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): 01-04 Batch: WG433232-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	09/07/10 21:00	09/20/10 10:56	30,5310C(m)	DW

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013812

Report Date: 09/20/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-04 Batch: WG433232-2								
Dissolved Inorganic Carbon	120							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013812

Report Date: 09/20/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04 QC Batch ID: WG433232-3 QC Sample: L1013812-03 Client ID: SHM-10-02-090710-U						
Dissolved Inorganic Carbon	62	64	mg/l	3		

Project Name: SHL TASK 0002

Lab Number: L1013812

Project Number: AC001

Report Date: 09/20/10

## 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

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013812-01A	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	SPECWC()
L1013812-01B	Vial H2SO4 preserved split	B	N/A	4	Y	Present/Intact	SPECWC()
L1013812-01X	Amber 250ml unpreserved	B	6	4	Y	Present/Intact	SPECWC()
L1013812-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1013812-03A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-03B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-03X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1013812-04A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-04B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013812-04X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()

## Container Comments

L1013812-03A

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013812

Project Number: AC001

Report Date: 09/20/10

## 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.
- 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: Data Usability Report





**Project Name:** SHL TASK 0002

**Lab Number:** L1013812

**Project Number:** AC001

**Report Date:** 09/20/10

***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  
**Project Number:** AC001

**Lab Number:** L1013812  
**Report Date:** 09/20/10

## 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, 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, 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.







## ANALYTICAL REPORT

Lab Number: L1013865

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: 09/16/10

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:** L1013865  
**Report Date:** 09/16/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013865-01	SHM-10-01-090810-F	DEVENS, MA	09/08/10 10:30
L1013865-02	SHM-10-01-090810-U	DEVENS, MA	09/08/10 10:30
L1013865-03	SHM-10-10-090810-F	DEVENS, MA	09/08/10 12:30
L1013865-04	SHM-10-10-090810-U	DEVENS, MA	09/08/10 12:30
L1013865-05	SHM-10-05A-090810-F	DEVENS, MA	09/08/10 11:00
L1013865-06	SHM-10-05A-090810-U	DEVENS, MA	09/08/10 11:00
L1013865-07	SHM-10-06-090810-F	DEVENS, MA	09/08/10 13:30
L1013865-08	SHM-10-06-090810-U	DEVENS, MA	09/08/10 13:30
L1013865-09	RB-090810-U	DEVENS, MA	09/08/10 14:00
L1013865-10	DUP-090810-F	DEVENS, MA	09/08/10 12:30
L1013865-11	DUP-090810-U	DEVENS, MA	09/08/10 12:30

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

### 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 (o.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

L1013865-01, -03, -07 and -10 have elevated detection limits for all analytes due to the dilutions required by

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

**Case Narrative (continued)**

the high concentrations of target analytes. The requested reporting limits were not achieved. The WG431697-3 MS recovery for Manganese (40%), performed on L1013865-01, is invalid because the sample concentration is greater than four times the spike amount added.

**Total Metals**

L1013865-02, -04, -08 and -11 have elevated detection limit for all analytes due to the dilutions required by the high concentrations of target analytes. The requested reporting limits were not achieved. The WG431695-3/-4 MS/MSD recoveries for Calcium (MSD at 127%) and Manganese (20%/220%), performed on L1013865-02, are invalid because the sample concentrations are greater than four times the spike amount added.

**Solids, Total Suspended**

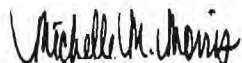
WG431564: A Laboratory Duplicate was performed on sample L1013862-01, instead of L1013865-02 as requested, due to insufficient sample volume available for analysis.

**Dissolved Organic Carbon**

WG432438: A Laboratory Duplicate was performed on sample L1013865-04, instead of L1013865-02 as requested, due to insufficient 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: 09/16/10

## METALS

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-01  
 Client ID: SHM-10-01-090810-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 10:30  
 Date Received: 09/08/10  
 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	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	7.87		ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Calcium, Dissolved	43500		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Iron, Dissolved	1680		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3780		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Manganese, Dissolved	10300		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Nickel, Dissolved	4.31	J	ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Potassium, Dissolved	2280		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM
Sodium, Dissolved	8770		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 18:20	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-02

Date Collected: 09/08/10 10:30

Client ID: SHM-10-01-090810-U

Date Received: 09/08/10

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	33.3	J	ug/l	100	19.1	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Arsenic, Total	8.15		ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Calcium, Total	43100		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Iron, Total	1740		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Magnesium, Total	3680		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Manganese, Total	10200		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Nickel, Total	4.09	J	ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Potassium, Total	2220		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Sodium, Total	8880		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:27	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	120		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 12:34	EPA 3005A	1,6010B	AI



Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-03

Date Collected: 09/08/10 12:30

Client ID: SHM-10-10-090810-F

Date Received: 09/08/10

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	ND		ug/l	100	19.1	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	2.4	J	ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Calcium, Dissolved	96800		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Iron, Dissolved	700		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	12000		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Manganese, Dissolved	25200		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Nickel, Dissolved	21.5		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3410		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM
Sodium, Dissolved	27100		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 18:44	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-04

Date Collected: 09/08/10 12:30

Client ID: SHM-10-10-090810-U

Date Received: 09/08/10

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
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	27.6	J	ug/l	100	19.1	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Arsenic, Total	2.57	J	ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Calcium, Total	107000		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Iron, Total	833		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Lead, Total	1.6	J	ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Magnesium, Total	13200		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Manganese, Total	27400		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Nickel, Total	23.5		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Potassium, Total	3750		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
Sodium, Total	29600		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:51	EPA 3005A	1,6020A	BM
<b>Total Hardness by SM 2340B - Westborough Lab</b>											
Hardness	260		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 12:47	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-05

Date Collected: 09/08/10 11:00

Client ID: SHM-10-05A-090810-F

Date Received: 09/08/10

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	3.8	J	ug/l	10.0	1.91	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	5.21		ug/l	0.500	0.113	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Calcium, Dissolved	14200		ug/l	100	12.6	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Iron, Dissolved	677		ug/l	50.0	8.41	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.09	J	ug/l	0.500	0.050	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	1600		ug/l	100	4.10	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Manganese, Dissolved	122		ug/l	1.00	0.136	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Nickel, Dissolved	1.72		ug/l	0.500	0.180	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Potassium, Dissolved	1830		ug/l	100	18.2	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM
Sodium, Dissolved	19700		ug/l	100	18.2	1	09/09/10 16:45	09/13/10 19:03	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-06  
 Client ID: SHM-10-05A-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 11:00  
 Date Received: 09/08/10  
 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	43.2		ug/l	10.0	1.91	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Arsenic, Total	5.68		ug/l	0.500	0.113	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Calcium, Total	14100		ug/l	100	12.6	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Chromium, Total	0.590		ug/l	0.500	0.186	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Iron, Total	790		ug/l	50.0	8.41	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Lead, Total	0.14	J	ug/l	0.500	0.050	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Magnesium, Total	1600		ug/l	100	4.10	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Manganese, Total	105		ug/l	1.00	0.136	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Nickel, Total	1.68		ug/l	0.500	0.180	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Potassium, Total	1770		ug/l	100	18.2	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Sodium, Total	19600		ug/l	100	18.2	1	09/09/10 16:45	09/13/10 19:57	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	41		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 12:50	EPA 3005A	1,6010B	AI



Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-07

Date Collected: 09/08/10 13:30

Client ID: SHM-10-06-090810-F

Date Received: 09/08/10

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	ND		ug/l	100	19.1	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	2710		ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Calcium, Dissolved	50300		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Iron, Dissolved	145000		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.57	J	ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	8800		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Manganese, Dissolved	983		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Nickel, Dissolved	9.40		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Potassium, Dissolved	13800		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM
Sodium, Dissolved	23700		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:09	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-08

Date Collected: 09/08/10 13:30

Client ID: SHM-10-06-090810-U

Date Received: 09/08/10

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
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	ND		ug/l	100	19.1	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Arsenic, Total	2580		ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Calcium, Total	48200		ug/l	1000	126	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Iron, Total	144000		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Magnesium, Total	8270		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Manganese, Total	954		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Nickel, Total	9.11		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Potassium, Total	13500		ug/l	1000	182	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
Sodium, Total	22800		ug/l	1000	182	10	09/09/10 16:45	09/13/10 20:15	EPA 3005A	1,6020A	BM
<b>Total Hardness by SM 2340B - Westborough Lab</b>											
Hardness	130		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 12:53	EPA 3005A	1,6010B	AI

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

**SAMPLE RESULTS**

**Lab ID:** L1013865-09  
**Client ID:** RB-090810-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 09/08/10 14:00  
**Date Received:** 09/08/10  
**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	2.18	J	ug/l	10.0	1.91	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Calcium, Total	13.1	J	ug/l	100	12.6	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Lead, Total	0.06	J	ug/l	0.500	0.050	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Manganese, Total	0.15	J	ug/l	1.00	0.136	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
Sodium, Total	37.6	J	ug/l	100	18.2	1	09/09/10 16:45	09/13/10 20:21	EPA 3005A	1,6020A	BM
<b>Total Hardness by SM 2340B - Westborough Lab</b>											
Hardness	ND		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 13:10	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-10  
 Client ID: DUP-090810-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 12:30  
 Date Received: 09/08/10  
 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	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	6.66		ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Calcium, Dissolved	101000		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Iron, Dissolved	929		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	12600		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Manganese, Dissolved	25800		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Nickel, Dissolved	22.2		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Potassium, Dissolved	3560		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM
Sodium, Dissolved	28500		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 19:15	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-11  
 Client ID: DUP-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 12:30  
 Date Received: 09/08/10  
 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	86.6	J	ug/l	100	19.1	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Arsenic, Total	2.58	J	ug/l	5.00	1.13	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Calcium, Total	96300		ug/l	1000	126.	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Iron, Total	825		ug/l	500	84.1	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	5.00	0.500	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Magnesium, Total	11900		ug/l	1000	41.0	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Manganese, Total	24700		ug/l	10.0	1.36	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Nickel, Total	21.4		ug/l	5.00	1.80	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Potassium, Total	3380		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Sodium, Total	26600		ug/l	1000	182.	10	09/09/10 16:45	09/13/10 20:27	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	260		mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 13:13	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

### Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 02,04,06,08-09,11 Batch: WG431693-1									
Hardness	ND	mg/l	0.66	0.62	1	09/09/10 16:45	09/14/10 12:27	1,6010B	AI

#### Prep Information

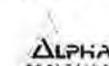
Digestion Method: EPA 3005A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 02,04,06,08-09,11 Batch: WG431695-1									
Aluminum, Total	ND	ug/l	10.0	1.91	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Arsenic, Total	ND	ug/l	0.500	0.113	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Calcium, Total	ND	ug/l	100	12.6	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Chromium, Total	ND	ug/l	0.500	0.186	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Iron, Total	ND	ug/l	50.0	8.41	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Lead, Total	ND	ug/l	0.500	0.050	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Magnesium, Total	ND	ug/l	100	4.10	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Manganese, Total	ND	ug/l	1.00	0.136	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Nickel, Total	ND	ug/l	0.500	0.180	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Potassium, Total	ND	ug/l	100	18.2	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Sodium, Total	ND	ug/l	100	18.2	1	09/09/10 16:45	09/13/10 17:50	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): 01,03,05,07,10 Batch: WG431697-1									
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Calcium, Dissolved	ND	ug/l	100	12.6	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Chromium, Dissolved	ND	ug/l	0.500	0.186	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Iron, Dissolved	ND	ug/l	50.0	8.41	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Lead, Dissolved	ND	ug/l	0.500	0.050	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

**Method Blank Analysis  
Batch Quality Control**

Magnesium, Dissolved	ND	ug/l	100	4.10	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Manganese, Dissolved	ND	ug/l	1.00	0.136	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Nickel, Dissolved	ND	ug/l	0.500	0.180	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Potassium, Dissolved	ND	ug/l	100	18.2	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM
Sodium, Dissolved	ND	ug/l	100	18.2	1	09/09/10 16:45	09/13/10 17:50	1,6020A	BM

**Prep Information**

Digestion Method: EPA 3005A

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1013865

**Report Date:** 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04,06,08-09,11 Batch: WG431693-2								
Hardness	97		-		80-120	-		
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09,11 Batch: WG431695-2								
Aluminum, Total	97		-		80-120	-		
Arsenic, Total	98		-		80-120	-		
Calcium, Total	107		-		80-120	-		
Chromium, Total	95		-		80-120	-		
Iron, Total	104		-		80-120	-		
Lead, Total	99		-		80-120	-		
Magnesium, Total	103		-		80-120	-		
Manganese, Total	100		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	104		-		80-120	-		
Sodium, Total	102		-		80-120	-		

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1013865

**Report Date:** 09/16/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07,10 Batch: WG431697-2					
Aluminum, Dissolved	97	-	80-120	-	
Arsenic, Dissolved	98	-	80-120	-	
Calcium, Dissolved	107	-	80-120	-	
Chromium, Dissolved	95	-	80-120	-	
Iron, Dissolved	104	-	80-120	-	
Lead, Dissolved	99	-	80-120	-	
Magnesium, Dissolved	103	-	80-120	-	
Manganese, Dissolved	100	-	80-120	-	
Nickel, Dissolved	103	-	80-120	-	
Potassium, Dissolved	104	-	80-120	-	
Sodium, Dissolved	102	-	80-120	-	

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013865

Report Date: 09/16/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04,06,08-09,11 QC Batch ID: WG431693-3 WG431693-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Hardness	120	66.2	170	76		180	91		75-125	6		20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09,11 QC Batch ID: WG431695-3 WG431695-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Aluminum, Total	ND	2000	1850	92		2030	102		80-120	9		20
Arsenic, Total	8.15	120	127	99		136	106		80-120	7		20
Calcium, Total	43100	10000	52200	91		55800	127		80-120	7		20
Chromium, Total	ND	200	178	89		195	98		80-120	9		20
Iron, Total	1740	1000	2630	89		2910	117		80-120	10		20
Lead, Total	ND	510	480	94		510	100		80-120	6		20
Magnesium, Total	3680	10000	13500	98		14400	107		80-120	6		20
Manganese, Total	10200	500	10300	20		11300	220		80-120	9		20
Nickel, Total	ND	500	484	97		529	106		80-120	9		20
Potassium, Total	2220	10000	12000	98		13000	108		80-120	8		20
Sodium, Total	8880	10000	18600	97		19400	105		80-120	4		20

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

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

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): 01,03,05,07,10 QC Batch ID: WG431697-3 WG431697-4 QC Sample: L1013865-01 Client ID: SHM-10-01-090810-F									
Aluminum, Dissolved	ND	2000	1860	93	1940	97	80-120	4	20
Arsenic, Dissolved	7.87	120	128	100	134	105	80-120	5	20
Calcium, Dissolved	43500	10000	51800	83	53800	103	80-120	4	20
Chromium, Dissolved	ND	200	181	90	189	94	80-120	4	20
Iron, Dissolved	1680	1000	2620	94	2720	104	80-120	4	20
Lead, Dissolved	ND	510	482	94	492	96	80-120	2	20
Magnesium, Dissolved	3780	10000	13400	96	13900	101	80-120	4	20
Manganese, Dissolved	10300	500	10500	40	10700	80	80-120	2	20
Nickel, Dissolved	ND	500	493	99	513	103	80-120	4	20
Potassium, Dissolved	2280	10000	12200	99	12600	103	80-120	3	20
Sodium, Dissolved	8770	10000	18600	98	19100	103	80-120	3	20



# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-02  
 Client ID: SHM-10-01-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 10:30  
 Date Received: 09/08/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	140		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	210		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.344		mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:47	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 23:03	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	12	J	mg/l	20	7.0	1	-	09/14/10 11:52	44,410.4	DW
Total Organic Carbon	1.6		mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW
Dissolved Organic Carbon	1.6		mg/l	1.0	1.0	1	09/08/10 22:00	09/15/10 07:37	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	11		mg/l	0.50	0.07	1	-	09/09/10 00:06	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/09/10 00:06	44,300.0	AU
Sulfate	8.7		mg/l	1.0	0.12	1	-	09/09/10 00:06	44,300.0	AU

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

**SAMPLE RESULTS**

**Lab ID:** L1013865-04  
**Client ID:** SHM-10-10-090810-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 09/08/10 12:30  
**Date Received:** 09/08/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	320		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	380		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.148		mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:50	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 23:04	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S <sub>2</sub> -AD	AT
Chemical Oxygen Demand	55		mg/l	20	7.0	1	-	09/14/10 11:52	44,410.4	DW
Total Organic Carbon	3.7		mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW
Dissolved Organic Carbon	3.8		mg/l	1.0	1.0	1	09/08/10 22:00	09/15/10 07:37	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	17		mg/l	0.50	0.07	1	-	09/09/10 00:18	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/09/10 00:18	44,300.0	AU
Sulfate	0.34	J	mg/l	1.0	0.12	1	-	09/09/10 00:18	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-06  
 Client ID: SHM-10-05A-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 11:00  
 Date Received: 09/08/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	36		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	110		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.0335	J	mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:51	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 23:04	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	55		mg/l	20	7.0	1	-	09/14/10 11:52	44,410.4	DW
Total Organic Carbon	0.96		mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	09/08/10 22:00	09/15/10 07:37	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	29		mg/l	0.50	0.07	1	-	09/09/10 00:30	44,300.0	AU
Nitrogen, Nitrate	0.46		mg/l	0.05	0.01	1	-	09/09/10 00:30	44,300.0	AU
Sulfate	11		mg/l	1.0	0.12	1	-	09/09/10 00:30	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-08  
 Client ID: SHM-10-06-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 13:30  
 Date Received: 09/08/10  
 Field Prep: Not Specified

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	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	330		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	62		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	5.13		mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:54	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 23:04	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	33		mg/l	20	7.0	1	-	09/14/10 11:52	44,410.4	DW
Total Organic Carbon	4.2		mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW
Dissolved Organic Carbon	5.0		mg/l	1.0	1.0	1	09/08/10 22:00	09/15/10 07:37	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	15		mg/l	0.50	0.07	1	-	09/09/10 00:42	44,300.0	AU
Nitrogen, Nitrate	0.13		mg/l	0.05	0.01	1	-	09/09/10 00:42	44,300.0	AU
Sulfate	0.49	J	mg/l	1.0	0.12	1	-	09/09/10 00:42	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## SAMPLE RESULTS

Lab ID: L1013865-11  
 Client ID: DUP-090810-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/08/10 12:30  
 Date Received: 09/08/10  
 Field Prep: Not Specified

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	-	09/13/10 15:01	30,2320B	SD
Solids, Total Dissolved	350		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
Nitrogen, Ammonia	0.168		mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:55	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/08/10 23:05	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
Chemical Oxygen Demand	45		mg/l	20	7.0	1	-	09/14/10 11:52	44,410.4	DW
Total Organic Carbon	3.9		mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	17		mg/l	0.50	0.07	1	-	09/09/10 00:54	44,300.0	AU
Nitrogen, Nitrate	0.019	J	mg/l	0.05	0.01	1	-	09/09/10 00:54	44,300.0	AU
Sulfate	0.26	J	mg/l	1.0	0.12	1	-	09/09/10 00:54	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

### Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431542-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	09/08/10 23:01	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431564-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	09/09/10 08:30	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431578-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	09/09/10 09:45	09/09/10 22:33	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG431716-1									
Chloride	ND	mg/l	0.50	0.07	1	-	09/08/10 17:54	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	09/08/10 17:54	44,300.0	AU
Sulfate	ND	mg/l	1.0	0.12	1	-	09/08/10 17:54	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432033-1									
Solids, Total Dissolved	ND	mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432097-1									
Sulfide	ND	mg/l	0.10	0.10	1	09/09/10 19:45	09/09/10 20:45	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432215-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	09/13/10 15:01	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432220-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	09/14/10 11:47	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG432438-1									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	09/08/10 22:00	09/15/10 07:37	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08,11 Batch: WG432439-1									
Total Organic Carbon	ND	mg/l	0.50	0.03	1	-	09/15/10 07:37	30,5310C	DW



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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013865

Report Date: 09/16/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431542-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431578-2								
Nitrogen, Ammonia	102		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG431716-2								
Chloride	100		-		90-110	-		
Nitrogen, Nitrate	92		-		90-110	-		
Sulfate	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432033-2								
Solids, Total Dissolved	93		-		72-121	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432097-2								
Sulfide	91		-		75-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432215-2								
Alkalinity, Total	102		-		80-115	-		4

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013865

Report Date: 09/16/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432220-2					
Chemical Oxygen Demand	101	-	95-105	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG432438-2					
Dissolved Organic Carbon	96	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 Batch: WG432439-2					
Total Organic Carbon	96	-	90-110	-	

### Matrix Spike Analysis Batch Quality Control

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

**Lab Number:** L1013865  
**Report Date:** 09/16/10

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): 02,04,06,08,11 QC Batch ID: WG431542-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Nitrogen, Nitrite	ND	0.1	0.10	100	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431578-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Nitrogen, Ammonia	0.344	4	4.10	94	-	-	-	-	80-120	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431716-3 WG431716-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Chloride	11	4	15	100	-	15	100	-	40-151	0	-	18
Nitrogen, Nitrate	ND	0.4	0.37	92	-	0.38	95	-	80-122	3	-	15
Sulfate	8.7	8	17	104	-	17	104	-	60-140	0	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432097-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Sulfide	ND	0.24	0.19	79	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432215-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Alkalinity, Total	140	100	240	95	-	-	-	-	86-116	-	-	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432220-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Chemical Oxygen Demand	ND	238	270	114	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG432438-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U												
Dissolved Organic Carbon	1.6	4	6.4	120	-	-	-	-	79-120	-	-	20

**Matrix Spike Analysis**  
**Batch Quality Control****Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1013865**Report Date:** 09/16/10

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): 02,04,06,08,11 QC Batch ID: WG432439-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U									
Total Organic Carbon	1.6	4	5.8	106	-	-	80-120	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013865

Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431542-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431564-2 QC Sample: L1013862-01 Client ID: DUP Sample						
Solids, Total Suspended	140	150	mg/l	7		32
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431578-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U						
Nitrogen, Ammonia	0.344	0.339	mg/l	1		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG431716-5 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U						
Chloride	11.	12	mg/l	9		18
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	8.7	8.9	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432033-3 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U						
Solids, Total Dissolved	210	200	mg/l	5		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432097-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U						
Sulfide	ND	ND	mg/l	NC		20

Project Name: SHL TASK 0002

Project Number: AC001

# **Lab Duplicate Analysis** **Batch Quality Control**

Lab Number: L1013865

Report Date: 09/16/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432215-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U					
Alkalinity, Total	140	140	mg CaCO3/L	0	4
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432220-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U					
Chemical Oxygen Demand	12J	7.3J	mg/l	NC	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG432438-4 QC Sample: L1013865-04 Client ID: SHM-10-10-090810-U					
Dissolved Organic Carbon	3.8	4.5	mg/l	17	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08,11 QC Batch ID: WG432439-4 QC Sample: L1013865-02 Client ID: SHM-10-01-090810-U					
Total Organic Carbon	1.6	1.5	mg/l	6	20

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## 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  
C Present/Intact  
A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013865-01A	Plastic 250ml HNO3 preserved	C	<2	4.4	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)
L1013865-01B	Plastic 250ml HNO3 preserved	C	<2	4.4	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)
L1013865-02A	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-02B	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-02C	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-02D	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-02E	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-02F	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-02G	Plastic 250ml unpreserved	C	N/A	4.4	Y	Present/Intact	ALK-T-2320(14)
L1013865-02H	Plastic 250ml unpreserved	C	N/A	4.4	Y	Present/Intact	ALK-T-2320(14)
L1013865-02I	Plastic 250ml unpreserved	C	6	4.4	Y	Present/Intact	NO2-4500NO2(2)
L1013865-02J	Plastic 250ml unpreserved	C	6	4.4	Y	Present/Intact	NO2-4500NO2(2)
L1013865-02K	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-02L	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)

\*Values in parentheses indicate holding time in days





Project Name: SHL TASK 0002

Lab Number: L1013865

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Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013865-02M	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-02N	Plastic 500ml HNO3 preserved	A	<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),HARDT(180)
L1013865-02O	Plastic 500ml HNO3 preserved	A	<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),HARDT(180)
L1013865-02P	Plastic 500ml H2SO4 preserved	C	<2	4.4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-02Q	Plastic 500ml H2SO4 preserved	C	<2	4.4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-02R	Plastic 500ml unpreserved	C	6	4.4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-02S	Plastic 500ml unpreserved	A	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-02T	Plastic 1000ml unpreserved	C	6	4.4	Y	Present/Intact	TSS-2540(7)
L1013865-02X	Amber 250ml unpreserved	C	6	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-03A	Plastic 250ml HNO3 preserved	A	<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)
L1013865-04A	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-04B	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-04C	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-04D	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-04E	Plastic 250ml unpreserved	A	N/A	4	Y	Present/Intact	ALK-T-2320(14)
L1013865-04F	Plastic 250ml unpreserved	A	6	4	Y	Present/Intact	NO2-4500NO2(2)
L1013865-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-04H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-04I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013865-04J	Plastic 500ml HNO3 preserved	B	<2	3.9	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),HARDT(180)
L1013865-04K	Plastic 500ml H2SO4 preserved	B	<2	3.9	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-04L	Plastic 500ml unpreserved	A	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-04M	Plastic 1000ml unpreserved	C	6	4.4	Y	Present/Intact	TSS-2540(7)
L1013865-04X	Amber 250ml unpreserved	C	6	4.4	Y	Present/Intact	DOC-5310(28)
L1013865-05A	Plastic 250ml HNO3 preserved	B	<2	3.9	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)
L1013865-06A	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1013865-06B	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	DOC-5310(28)
L1013865-06C	Vial H2SO4 preserved	B	N/A	3.9	Y	Present/Intact	TOC-5310(28)
L1013865-06D	Vial H2SO4 preserved	B	N/A	3.9	Y	Present/Intact	TOC-5310(28)
L1013865-06E	Plastic 250ml unpreserved	B	N/A	3.9	Y	Present/Intact	ALK-T-2320(14)
L1013865-06F	Plastic 250ml unpreserved	B	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1013865-06G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-06H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-06I	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-06J	Plastic 500ml HNO3 preserved	B	<2	3.9	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),HARDT(180)
L1013865-06K	Plastic 500ml H2SO4 preserved	B	<2	3.9	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-06L	Plastic 500ml unpreserved	B	6	3.9	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-06M	Plastic 1000ml unpreserved	B	6	3.9	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(*)
L1013865-06X	Amber 250ml unpreserved	B	6	3.9	Y	Present/Intact	DOC-5310(28)
L1013865-07A	Plastic 250ml HNO3 preserved	B	<2	3.9	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)
L1013865-08A	Vial H2SO4 preserved split	A	N/A	4	Y	Present/Intact	DOC-5310(28)
L1013865-08B	Vial H2SO4 preserved split	A	N/A	4	Y	Present/Intact	DOC-5310(28)
L1013865-08C	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-08D	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-08E	Plastic 250ml unpreserved	B	N/A	3.9	Y	Present/Intact	ALK-T-2320(14)
L1013865-08F	Plastic 250ml unpreserved	B	6	3.9	Y	Present/Intact	NO2-4500NO2(2)
L1013865-08G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	3.9	Y	Present/Intact	SULFIDE-4500(7)
L1013865-08H	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-08I	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-08J	Plastic 500ml HNO3 preserved	B	<2	3.9	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),HARDT(180)
L1013865-08K	Plastic 500ml H2SO4 preserved	B	<2	3.9	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-08L	Plastic 500ml unpreserved	B	6	3.9	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-08M	Plastic 1000ml unpreserved	B	6	3.9	Y	Present/Intact	TSS-2540(7)
L1013865-08X	Amber 250ml unpreserved	A	6	4	Y	Present/Intact	DOC-5310(28)
L1013865-09A	Plastic 500ml HNO3 preserved	A	<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),HARDT(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(*)
L1013865-10A	Plastic 250ml HNO3 preserved	C	<2	4.4	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)
L1013865-11A	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-11B	Vial H2SO4 preserved	C	N/A	4.4	Y	Present/Intact	TOC-5310(28)
L1013865-11C	Plastic 250ml unpreserved	C	N/A	4.4	Y	Present/Intact	ALK-T-2320(14)
L1013865-11D	Plastic 250ml unpreserved	A	6	4	Y	Present/Intact	NO2-4500NO2(2)
L1013865-11E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-11F	Plastic 250ml Zn Acetate/NaOH pr	C	>12	4.4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-11G	Plastic 250ml Zn Acetate/NaOH pr	C	>12	4.4	Y	Present/Intact	SULFIDE-4500(7)
L1013865-11H	Plastic 500ml HNO3 preserved	A	<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),HARDT(180)
L1013865-11I	Plastic 500ml H2SO4 preserved	A	<2	4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013865-11J	Plastic 500ml unpreserved	A	6	4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013865-11K	Plastic 1000ml unpreserved	C	6	4.4	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013865

Project Number: AC001

Report Date: 09/16/10

## 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.
- 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:** L1013865

**Project Number:** AC001

**Report Date:** 09/16/10

**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:** L1013865  
**Report Date:** 09/16/10

## REFERENCES

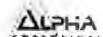
- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental 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 its 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<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.



ALPHA		CHAIN OF CUSTODY		PAGE 1 OF 1		Date Rec'd in Lab: 9/8/10		ALPHA Job #: C1013865	
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193		MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3266		Project Information		Report Information - Data Deliverables		Billing Information	
Client Information		Project Information		Report Information - Data Deliverables		Billing Information			
Client: Sovereign Consulting Inc		Project Name: SHL Tank 0002		<input type="checkbox"/> FAX <input checked="" type="checkbox"/> EMAIL EDR		<input type="checkbox"/> Same as Client info		PO #:	
Address: 905B S. Main St Mansfield MA 02048		Project Location: Duxbury MA		<input type="checkbox"/> ADEX <input type="checkbox"/> Add'l Deliverables					
Phone: 508-339-3200		Project #: ACOOL		Regulatory Requirements/Report Limits					
Fax: 508-339-3248		Project Manager: Phil McBain		State / Fed Program		Criteria		SEE QAPP	
Email: pmc@sovereign.com		ALPHA Quote #:		MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO-					
<input type="checkbox"/> These samples have been previously analyzed by Alpha		Turn-Around Time		<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: SDG#43 = closed		Date Due: 9/15/10 Time:		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approval)					
Methods = As, Fe, Mn, Al, Cr, Pb, Ni, Co, Na, Mg, K									
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
13865		SHM-10-09-090810-F		9/8/10 1030		GW		EEF	
2		SHM-10-09-090810-L		9/8/10 1030		GW		EEF	
3		SHM-10-10-090810-F		9/8/10 1230		GW		EEF	
4		SHM-10-10-090810-L		9/8/10 1230		GW		EEF	
5		SHM-10-05A-090810-F		9/8/10 1100		GW		JAR	
6		SHM-10-05A-090810-L		9/8/10 1100		GW		JAR	
7		SHM-10-06-090810-F		9/8/10 1330		GW		JAR	
8		SHM-10-06-090810-L		9/8/10 1330		GW		JAR	
9		RB-090810-L		9/8/10 1400		GW		RNM	
10		DUP-090810-F		9/8/10 1230		GW		EEF	
11		DUP-090810-L		9/8/10 1230		GW		EEF	
PLEASE ANSWER QUESTIONS ABOVE!		IS YOUR PROJECT MA MCP or CT RCP?		Container Type		Preservative		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Samples submitted are subject to Alpha's Terms and Conditions. See reverse side.	
				P P P P P P A P P V		A A A D E A A C C D			
				Relinquished By: [Signature]		Date/Time: 9/8/10 1500		Received By: [Signature]	
				Date/Time: 9/8/10 1800		Date/Time: 9/8/10 1800			



## ANALYTICAL REPORT

Lab Number: L1013874

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: 09/21/10

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:** L1013874  
**Report Date:** 09/21/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013874-01	SHM-10-01-090810-U	DEVENS, MA	09/08/10 10:30
L1013874-02	SHM-10-10-090810-U	DEVENS, MA	09/08/10 12:30
L1013874-03	SHM-10-05A-090810-U	DEVENS, MA	09/08/10 11:00
L1013874-04	SHM-10-06-090810-U	DEVENS, MA	09/08/10 13:30

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

**Lab Number:** L1013874  
**Report Date:** 09/21/10

### 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 have been issued under separate cover.

### Dissolved Inorganic Carbon

L1013874-01 through -04 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

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: 09/21/10



# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013874

Project Number: AC001

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013874-01  
Client ID: SHM-10-01-090810-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/08/10 10:30  
Date Received: 09/08/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	37		mg/l	20	--	20	09/08/10 22:00	09/20/10 13:34	30,5310C(m)	DW



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013874

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013874-02  
Client ID: SHM-10-10-090810-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/08/10 12:30  
Date Received: 09/08/10  
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	76		mg/l	20	--	20	09/08/10 22:00	09/20/10 13:34	30,5310C(m)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013874

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013874-03  
Client ID: SHM-10-05A-090810-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/08/10 11:00  
Date Received: 09/08/10  
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	20		mg/l	20	--	20	09/08/10 22:00	09/20/10 13:34	30,5310C(m)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013874

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013874-04  
Client ID: SHM-10-06-090810-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/08/10 13:30  
Date Received: 09/08/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	93		mg/l	20	--	20	09/08/10 22:00	09/20/10 13:34	30,5310C(m)	DW

Project Name: SHL TASK 0002

Lab Number: L1013874

Project Number: AC001

Report Date: 09/21/10

**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: WG433278-1									
Dissolved Inorganic Carbon	ND	mg/l	1.0	--	1	09/08/10 22:00	09/20/10 13:34	30,5310C(m)	DW

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013874

Report Date: 09/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-04 Batch: WG433278-2								
Dissolved Inorganic Carbon	.110							



Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013874

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04 QC Batch ID: WG433278-3 QC Sample: L1013874-01 Client ID: SHM-10-01-090810-U						
Dissolved Inorganic Carbon	37	41	mg/l	10		

Project Name: SHL TASK 0002

Lab Number: L1013874

Project Number: AC001

Report Date: 09/21/10

**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

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013874-01A	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	SPECWC()
L1013874-01B	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	SPECWC()
L1013874-01X	Amber 500ml unpreserved	C	6	4.4	Y	Present/Intact	SPECWC()
L1013874-02A	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	SPECWC()
L1013874-02B	Vial H2SO4 preserved split	C	N/A	4.4	Y	Present/Intact	SPECWC()
L1013874-02X	Amber 500ml unpreserved	C	6	4.4	Y	Present/Intact	SPECWC()
L1013874-03A	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	SPECWC()
L1013874-03B	Vial H2SO4 preserved split	B	N/A	3.9	Y	Present/Intact	SPECWC()
L1013874-03X	Amber 500ml unpreserved	B	6	3.9	Y	Present/Intact	SPECWC()
L1013874-04A	Vial H2SO4 preserved split	A	N/A	4	Y	Present/Intact	SPECWC()
L1013874-04B	Vial H2SO4 preserved split	A	N/A	4	Y	Present/Intact	SPECWC()
L1013874-04X	Amber 500ml unpreserved	A	6	4	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013874

Project Number: AC001

Report Date: 09/21/10

## 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.
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.
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:** L1013874

**Project Number:** AC001

**Report Date:** 09/21/10

***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:** L1013874  
**Report Date:** 09/21/10

## 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, 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<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

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MANSFIELD, MA  
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## Client Information

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Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@sacon.com

☐ These samples have been previously analyzed by Alpha

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

SDG# 43 = closed

\* Done as noted - F = Field Filtered

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

## Project Information

Project Name: SHL Tank 0002

Project Location: Devers MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

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

Date Due: 9/15/10 Time:

Date Rec'd in Lab: 9/8/10ALPHA JOB #: 7101009

## Report Information - Data Deliverables

☐ FAX

☐ ADEX

☒ EMAIL EDR

☐ 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?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	(Please specify below)												Sample Specific Comments	LES
		Date	Time			As	Fe	Mn	Al	Cr	Pb	Ni	Co	Na	Mg	K			
13874	SHM-10-09-090810-F	9/8/10	1030	GW	EEF												MS/MSD	2	
	SHM-10-09-090810-L	9/8/10	1030	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	MS/MSD	189	
	SHM-10-10-090810-F	9/8/10	1230	GW	EEF										✓			1	
2	SHM-10-10-090810-L	9/8/10	1230	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		12	
	SHM-10-05A-090810-F	9/8/10	1100	GW	DAR										✓			1	
3	SHM-10-05A-090810-L	9/8/10	1100	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		12	
	SHM-10-06-090810-F	9/8/10	1330	GW	JAR										✓			1	
4	SHM-10-06-090810-L	9/8/10	1330	GW	JAR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		12	
	RB-090810-L	9/8/10	1400	GW	RNM										✓			1	
	DUP-090810-F	9/8/10	1230	GW	EEF										✓			1	
	DUP-090810-L	9/8/10	1230	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10	

PLEASE ANSWER QUESTIONS ABOVE!

Container Type

P P P P P P A P P V

Preservative

A A A D K E A A C C D

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time



## ANALYTICAL REPORT

Lab Number: L1013958

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: 09/17/10

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:** L1013958  
**Report Date:** 09/17/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013958-01	SHM-10-06A-090910-F	DEVENS, MA	09/09/10 11:45
L1013958-02	SHM-10-06A-090910-U	DEVENS, MA	09/09/10 11:45
L1013958-03	SHM-10-07-090910-F	DEVENS, MA	09/09/10 11:00
L1013958-04	SHM-10-07-090910-U	DEVENS, MA	09/09/10 11:00
L1013958-05	RB-090910-U	DEVENS, MA	09/09/10 12:00
L1013958-06	DUP-090910-F	DEVENS, MA	09/09/10 11:45
L1013958-07	DUP-090910-U	DEVENS, MA	09/09/10 11:45

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

**Lab Number:** L1013958  
**Report Date:** 09/17/10

### 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

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

L1013958-01, -03 and -06 have elevated detection limits for all analytes due to the dilutions required by the

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

**Lab Number:** L1013958  
**Report Date:** 09/17/10

### Case Narrative (continued)

high concentrations of target analytes. The requested reporting limits were not achieved.

The WG431887-3/-4 MS/MSD recoveries for Arsenic (MS at 143%), Calcium (MS at 143%), Iron (730%/280%) and Manganese (MS at 132%), performed on L1013958-03, are invalid because the sample concentrations are greater than four times the spike amount added.

#### Total Metals

L1013958-02, -04 and -07 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 WG431886-3 MS recoveries for Arsenic (59%), Calcium (78%) and Iron (0%), performed on L1013958-04, are invalid because the sample concentrations are greater than four times the spike amount added.

#### Chloride

The WG431902-4 MSD recovery (5%), performed on L1013958-04, is invalid because the sample concentration is greater than four times the spike amount added.

#### Dissolved Organic Carbon

The WG432712-3 MS (121%), performed on L1013958-04, is above the acceptance criteria. The elevated % recovery has been attributed to the non-homogeneous nature of the sample utilized for the laboratory spike (different vials).

WG432712: The Lab Duplicate was performed on sample L1013958-02, instead of L1013958-04 as requested, due to insufficient sample volume available for analysis.

#### Alkalinity

The WG432727-3 MS recovery (42%), performed on L1013958-04, is below the acceptance criteria. This has been attributed to matrix interference.

#### Solids, Total Suspended

WG431763: The Lab Duplicate was performed on sample L1013923-01, instead of L1023958-04 as



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

**Lab Number:** L1013958  
**Report Date:** 09/17/10

**Case Narrative (continued)**

requested, due to insufficient sample volume available for analysis.

**Chemical Oxygen Demand**

The WG432221-4 Laboratory Duplicate RPD (22%), performed on L1013958-04, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

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: 09/17/10



## METALS



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-01  
 Client ID: SHM-10-06A-090910-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/09/10 11:45  
 Date Received: 09/09/10  
 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	11.6	J	ug/l	40.0	7.64	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	94.2		ug/l	2.00	0.452	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Calcium, Dissolved	33300		ug/l	400	50.6	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Iron, Dissolved	42900		ug/l	200	33.6	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	4640		ug/l	400	16.4	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Manganese, Dissolved	4080		ug/l	4.00	0.544	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Nickel, Dissolved	2.34		ug/l	2.00	0.720	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Potassium, Dissolved	7640		ug/l	400	72.6	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM
Sodium, Dissolved	13200		ug/l	400	72.8	4	09/10/10 16:50	09/13/10 20:34	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-02

Date Collected: 09/09/10 11:45

Client ID: SHM-10-06A-090910-U

Date Received: 09/09/10

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	1910		ug/l	40.0	7.64	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Arsenic, Total	102		ug/l	2.00	0.452	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Calcium, Total	33000		ug/l	400	50.6	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Chromium, Total	6.92		ug/l	2.00	0.744	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Iron, Total	44600		ug/l	200	33.6	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Lead, Total	2.70		ug/l	2.00	0.200	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Magnesium, Total	4940		ug/l	400	16.4	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Manganese, Total	3940		ug/l	4.00	0.544	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Nickel, Total	7.73		ug/l	2.00	0.720	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Potassium, Total	8130		ug/l	400	72.6	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Sodium, Total	13200		ug/l	400	72.8	4	09/10/10 16:50	09/13/10 21:28	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	97		mg/l	0.66	0.62	1	09/10/10 16:50	09/15/10 11:18	EPA 3005A	1,6010B	AI



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-03

Date Collected: 09/09/10 11:00

Client ID: SHM-10-07-090910-F

Date Received: 09/09/10

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	4.17	J	ug/l	20.0	3.82	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	918		ug/l	1.00	0.226	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Calcium, Dissolved	43200		ug/l	200	25.3	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	1.00	0.372	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Iron, Dissolved	56800		ug/l	100	16.8	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	1.00	0.100	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	5610		ug/l	200	8.20	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1940		ug/l	2.00	0.272	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Nickel, Dissolved	5.28		ug/l	1.00	0.360	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Potassium, Dissolved	11400		ug/l	200	36.3	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM
Sodium, Dissolved	24400		ug/l	200	36.4	2	09/10/10 16:50	09/13/10 20:46	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-04  
 Client ID: SHM-10-07-090910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/09/10 11:00  
 Date Received: 09/09/10  
 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	538		ug/l	20.0	3.82	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Arsenic, Total	979		ug/l	1.00	0.226	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Calcium, Total	47400		ug/l	200	25.3	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Chromium, Total	2.82		ug/l	1.00	0.372	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Iron, Total	62300		ug/l	100	16.8	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Lead, Total	0.95	J	ug/l	1.00	0.100	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Magnesium, Total	6360		ug/l	200	8.20	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Manganese, Total	2060		ug/l	2.00	0.272	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Nickel, Total	7.34		ug/l	1.00	0.360	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Potassium, Total	13200		ug/l	200	36.3	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Sodium, Total	26400		ug/l	200	36.4	2	09/10/10 16:50	09/13/10 21:40	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	130		mg/l	0.66	0.62	1	09/10/10 16:50	09/15/10 11:05	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-05

Date Collected: 09/09/10 12:00

Client ID: RB-090910-U

Date Received: 09/09/10

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	ND		ug/l	10.0	1.91	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Arsenic, Total	0.46	J	ug/l	0.500	0.113	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Calcium, Total	ND		ug/l	100	12.6	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Lead, Total	0.06	J	ug/l	0.500	0.050	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Manganese, Total	0.25	J	ug/l	1.00	0.136	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	09/10/10 16:50	09/13/10 22:04	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	ND		mg/l	0.66	0.62	1	09/10/10 16:50	09/15/10 11:21	EPA 3005A	1,6010B	AI



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-06  
 Client ID: DUP-090910-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/09/10 11:45  
 Date Received: 09/09/10  
 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	8.97	J	ug/l	40.0	7.64	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	83.0		ug/l	2.00	0.452	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Calcium, Dissolved	25300		ug/l	400	50.6	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Iron, Dissolved	32300		ug/l	200	33.6	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3280		ug/l	400	16.4	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Manganese, Dissolved	3130		ug/l	4.00	0.544	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Nickel, Dissolved	1.68	J	ug/l	2.00	0.720	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5990		ug/l	400	72.6	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM
Sodium, Dissolved	9240		ug/l	400	72.8	4	09/10/10 16:50	09/13/10 21:10	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-07

Date Collected: 09/09/10 11:45

Client ID: DUP-090910-U

Date Received: 09/09/10

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	1990		ug/l	40.0	7.64	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Arsenic, Total	102		ug/l	2.00	0.452	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Calcium, Total	31800		ug/l	400	50.6	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Chromium, Total	7.16		ug/l	2.00	0.744	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Iron, Total	42700		ug/l	200	33.6	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Lead, Total	2.69		ug/l	2.00	0.200	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Magnesium, Total	4810		ug/l	400	16.4	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Manganese, Total	3820		ug/l	4.00	0.544	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Nickel, Total	7.97		ug/l	2.00	0.720	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Potassium, Total	7970		ug/l	400	72.6	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Sodium, Total	12900		ug/l	400	72.8	4	09/10/10 16:50	09/13/10 22:10	EPA 3005A	1,6020A	BM
Total Hardness by SM 2340B - Westborough Lab											
Hardness	94		mg/l	0.66	0.62	1	09/10/10 16:50	09/15/10 11:25	EPA 3005A	1,6010B	AI

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

### 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): 02,04-05,07 Batch: WG431886-1									
Aluminum, Total	ND	ug/l	10.0	1.91	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Arsenic, Total	ND	ug/l	0.500	0.113	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Calcium, Total	ND	ug/l	100	12.6	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Chromium, Total	ND	ug/l	0.500	0.186	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Iron, Total	ND	ug/l	50.0	8.41	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Lead, Total	ND	ug/l	0.500	0.050	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Magnesium, Total	ND	ug/l	100	4.10	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Manganese, Total	ND	ug/l	1.00	0.136	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Nickel, Total	ND	ug/l	0.500	0.180	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Potassium, Total	ND	ug/l	100	18.2	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Sodium, Total	ND	ug/l	100	18.2	1	09/10/10 16:50	09/13/10 17:56	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): 01,03,06 Batch: WG431887-1									
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Calcium, Dissolved	ND	ug/l	100	12.6	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Chromium, Dissolved	ND	ug/l	0.500	0.186	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Iron, Dissolved	ND	ug/l	50.0	8.41	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Lead, Dissolved	ND	ug/l	0.500	0.050	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Magnesium, Dissolved	ND	ug/l	100	4.10	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Manganese, Dissolved	ND	ug/l	1.00	0.136	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Nickel, Dissolved	ND	ug/l	0.500	0.180	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Potassium, Dissolved	ND	ug/l	100	18.2	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM
Sodium, Dissolved	ND	ug/l	100	18.2	1	09/10/10 16:50	09/13/10 17:56	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

**Method Blank Analysis  
Batch Quality Control****Prep Information**

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 02,04-05,07 Batch: WG431992-1										
Hardness	ND		mg/l	0.66	0.62	1	09/10/10 16:50	09/15/10 10:59	1,6010B	AI

**Prep Information**

Digestion Method: EPA 3005A



**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04-05,07 Batch: WG431886-2								
Aluminum, Total	89	-	-	-	80-120	-	-	-
Arsenic, Total	92	-	-	-	80-120	-	-	-
Calcium, Total	96	-	-	-	80-120	-	-	-
Chromium, Total	88	-	-	-	80-120	-	-	-
Iron, Total	95	-	-	-	80-120	-	-	-
Lead, Total	92	-	-	-	80-120	-	-	-
Magnesium, Total	96	-	-	-	80-120	-	-	-
Manganese, Total	94	-	-	-	80-120	-	-	-
Nickel, Total	96	-	-	-	80-120	-	-	-
Potassium, Total	96	-	-	-	80-120	-	-	-
Sodium, Total	96	-	-	-	80-120	-	-	-

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,06 Batch: WG431887-2					
Aluminum, Dissolved	89	-	80-120	-	
Arsenic, Dissolved	92	-	80-120	-	
Calcium, Dissolved	96	-	80-120	-	
Chromium, Dissolved	88	-	80-120	-	
Iron, Dissolved	95	-	80-120	-	
Lead, Dissolved	92	-	80-120	-	
Magnesium, Dissolved	96	-	80-120	-	
Manganese, Dissolved	94	-	80-120	-	
Nickel, Dissolved	96	-	80-120	-	
Potassium, Dissolved	96	-	80-120	-	
Sodium, Dissolved	96	-	80-120	-	
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04-05,07 Batch: WG431992-2					
Hardness	97	-	80-120	-	

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

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): 02,04-05,07 QC Batch ID: WG431886-3 WG431886-4 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Aluminum, Total	538	2000	2330	90		2470	97		80-120	6		20
Arsenic, Total	979	120	1050	59		1090	92		80-120	4		20
Calcium, Total	47400	10000	55200	78		57100	97		80-120	3		20
Chromium, Total	2.82	200	186	92		193	95		80-120	4		20
Iron, Total	62300	1000	61200	0		63100	80		80-120	3		20
Lead, Total	ND	510	494	97		518	102		80-120	5		20
Magnesium, Total	6360	10000	15900	95		16700	103		80-120	5		20
Manganese, Total	2060	500	2480	84		2550	98		80-120	3		20
Nickel, Total	7.34	500	502	99		521	103		80-120	4		20
Potassium, Total	13200	10000	22600	94		23700	105		80-120	5		20
Sodium, Total	26400	10000	34800	84		37100	107		80-120	6		20

# **Matrix Spike Analysis** Batch Quality Control

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

**Lab Number:** L1013958  
**Report Date:** 09/17/10

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): 01,03,06 QC Batch ID: WG431887-3 WG431887-4 QC Sample: L1013958-03 Client ID: SHM-10-07-090910-F									
Aluminum, Dissolved	ND	2000	1940	97	1790	90	80-120	8	20
Arsenic, Dissolved	918	120	1090	143	1040	102	80-120	5	20
Calcium, Dissolved	43200	10000	57500	143	53900	107	80-120	6	20
Chromium, Dissolved	ND	200	191	96	180	90	80-120	6	20
Iron, Dissolved	56800	1000	64100	730	59600	280	80-120	7	20
Lead, Dissolved	ND	510	512	100	485	95	80-120	5	20
Magnesium, Dissolved	5610	10000	16500	109	15200	96	80-120	8	20
Manganese, Dissolved	1940	500	2600	132	2460	104	80-120	6	20
Nickel, Dissolved	5.28	500	526	104	488	96	80-120	7	20
Potassium, Dissolved	11400	10000	22700	113	21600	102	80-120	5	20
Sodium, Dissolved	24400	10000	35200	108	33700	93	80-120	4	20
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02,04-05,07 QC Batch ID: WG431992-3 WG431992-4 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U									
Hardness	130	66.2	190	91	200	106	75-125	5	20



# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-02  
 Client ID: SHM-10-06A-090910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/09/10 11:45  
 Date Received: 09/09/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	190		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	09/16/10 11:05	30,2320B	SD
Solids, Total Dissolved	200		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	330		mg/l	5.0	NA	1	-	09/10/10 20:55	30,2540D	DW
Nitrogen, Ammonia	3.90		mg/l	0.075	0.017	1	09/10/10 10:00	09/13/10 16:16	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/10/10 19:41	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/14/10 18:45	09/14/10 19:45	30,4500S2-AD	AT
Chemical Oxygen Demand	17	J	mg/l	20	7.0	1	-	09/14/10 11:49	44,410.4	DW
Total Organic Carbon	4.0		mg/l	0.50	0.03	1	-	09/16/10 07:24	30,5310C	DW
Dissolved Organic Carbon	3.3		mg/l	1.0	1.0	1	09/09/10 22:23	09/16/10 07:24	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	11		mg/l	0.50	0.07	1	-	09/10/10 17:56	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/10/10 17:56	44,300.0	AU
Sulfate	3.2		mg/l	1.0	0.12	1	-	09/10/10 17:56	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-04  
 Client ID: SHM-10-07-090910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 09/09/10 11:00  
 Date Received: 09/09/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	240		mg CaCO <sub>3</sub> /L	2.0	NA	1		09/16/10 11:05	30,2320B	SD
Solids, Total Dissolved	300		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	53		mg/l	5.0	NA	1	-	09/10/10 20:55	30,2540D	DW
Nitrogen, Ammonia	5.60		mg/l	0.075	0.017	1	09/10/10 10:00	09/13/10 16:20	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/10/10 19:41	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/14/10 18:45	09/14/10 19:45	30,4500S2-AD	AT
Chemical Oxygen Demand	29		mg/l	20	7.0	1	-	09/14/10 11:49	44,410.4	DW
Total Organic Carbon	3.8		mg/l	0.50	0.03	1	-	09/16/10 07:24	30,5310C	DW
Dissolved Organic Carbon	3.5		mg/l	1.0	1.0	1	09/09/10 22:23	09/16/10 07:24	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	41		mg/l	0.50	0.07	1	-	09/10/10 17:44	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/10/10 17:44	44,300.0	AU
Sulfate	2.3		mg/l	1.0	0.12	1	-	09/10/10 17:44	44,300.0	AU

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## SAMPLE RESULTS

Lab ID: L1013958-07

Date Collected: 09/09/10 11:45

Client ID: DUP-090910-U

Date Received: 09/09/10

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 - Westborough Lab										
Alkalinity, Total	150		mg CaCO3/L	2.0	NA	1	-	09/16/10 11:05	30,2320B	SD
Solids, Total Dissolved	180		mg/l	10	4.4	1	-	09/13/10 10:15	30,2540C	DW
Solids, Total Suspended	270		mg/l	5.0	NA	1	-	09/10/10 20:55	30,2540D	DW
Nitrogen, Ammonia	5.05		mg/l	0.075	0.017	1	09/10/10 10:00	09/13/10 16:22	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	09/10/10 19:42	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	09/14/10 18:45	09/14/10 19:45	30,4500S2-AD	AT
Chemical Oxygen Demand	19	J	mg/l	20	7.0	1	-	09/14/10 11:49	44,410.4	DW
Total Organic Carbon	4.4		mg/l	0.50	0.03	1	-	09/16/10 07:24	30,5310C	DW
Anions by Ion Chromatography - Westborough Lab										
Chloride	11		mg/l	0.50	0.07	1	-	09/10/10 18:08	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	09/10/10 18:08	44,300.0	AU
Sulfate	3.2		mg/l	1.0	0.12	1	-	09/10/10 18:08	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

### Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG431762-1								
Nitrogen, Ammonia	ND	mg/l	0.075	1	09/10/10 10:00	09/13/10 16:10	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG431763-1								
Solids, Total Suspended	ND	mg/l	5.0	1	-	09/10/10 20:55	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG431893-2								
Nitrogen, Nitrite	ND	mg/l	0.02	1	-	09/10/10 19:40	30,4500NO2-B	DD
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,07 Batch: WG431902-1								
Chloride	ND	mg/l	0.50	1	-	09/10/10 17:20	44,300.0	AU
Nitrogen, Nitrate	ND	mg/l	0.05	1	-	09/10/10 17:20	44,300.0	AU
Sulfate	ND	mg/l	1.0	1	-	09/10/10 17:20	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG432034-1								
Solids, Total Dissolved	ND	mg/l	10	1	-	09/13/10 10:15	30,2540C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG432221-1								
Chemical Oxygen Demand	ND	mg/l	20	1	-	09/14/10 11:47	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG432390-1								
Sulfide	ND	mg/l	0.10	1	09/14/10 18:45	09/14/10 19:45	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG432711-1								
Total Organic Carbon	ND	mg/l	0.50	1	-	09/16/10 07:24	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG432712-1								
Dissolved Organic Carbon	ND	mg/l	1.0	1	09/09/10 22:23	09/16/10 07:24	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,07 Batch: WG432727-1								
Alkalinity, Total	ND	mg CaCO3/L	2.0	1	-	09/16/10 11:05	30,2320B	SD

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG431762-2								
Nitrogen, Ammonia	100	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG431893-1								
Nitrogen, Nitrite	100	-	-	-	90-110	-	-	20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,07 Batch: WG431902-2								
Chloride	100	-	-	-	90-110	-	-	
Nitrogen, Nitrate	100	-	-	-	90-110	-	-	
Sulfate	100	-	-	-	90-110	-	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG432034-2								
Solids, Total Dissolved	93	-	-	-	72-121	-	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG432221-2								
Chemical Oxygen Demand	100	-	-	-	95-105	-	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG432390-2								
Sulfide	87	-	-	-	75-125	-	-	

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1013958

**Report Date:** 09/17/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG432711-2					
Total Organic Carbon	102	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG432712-2					
Dissolved Organic Carbon	102	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 Batch: WG432727-2					
Alkalinity, Total	109	-	80-115	-	4



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

Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

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): 02,04,07 QC Batch ID: WG431762-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Nitrogen, Ammonia	5.60	4	9.54	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG431893-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Nitrogen, Nitrite	ND	0.1	0.10	100		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG431902-3 WG431902-4 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Chloride	41	4	44	75		42	5		40-151	5		18
Nitrogen, Nitrate	ND	0.4	0.41	102		0.40	100		80-122	2		15
Sulfate	2.3	8	11	109		10	96		60-140	10		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG432221-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Chemical Oxygen Demand	29	238	270	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG432390-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Sulfide	ND	0.24	0.19	79		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG432711-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Total Organic Carbon	3.8	4	8.1	106		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG432712-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U												
Dissolved Organic Carbon	3.5	4	8.4	121	Q	-	-		79-120	-		20

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

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): 02,04,07 QC Batch ID: WG432727-3 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U									
Alkalinity, Total	240	100	280	42	Q	-	86-116	-	4

Project Name: SHL TASK 0002

Project Number: AC001

### Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1013958

Report Date: 09/17/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 090910-U	QC Batch ID: WG431762-4	QC Sample: L1013958-04	Client ID: SHM-10-07-			
Nitrogen, Ammonia	5.60	5.64	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07	QC Batch ID: WG431763-2	QC Sample: L1013923-01	Client ID: DUP Sample			
Solids, Total Suspended	35	82	mg/l	80	Q	32
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 090910-U	QC Batch ID: WG431893-4	QC Sample: L1013958-04	Client ID: SHM-10-07-			
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,07 SHM-10-07-090910-U	QC Batch ID: WG431902-5	QC Sample: L1013958-04	Client ID:			
Chloride	41	40	mg/l	2		18
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	2.3	2.3	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 090910-U	QC Batch ID: WG432034-3	QC Sample: L1013958-04	Client ID: SHM-10-07-			
Solids, Total Dissolved	300	290	mg/l	3		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 090910-U	QC Batch ID: WG432221-4	QC Sample: L1013958-04	Client ID: SHM-10-07-			
Chemical Oxygen Demand	29	36	mg/l	22	Q	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 090910-U	QC Batch ID: WG432390-4	QC Sample: L1013958-04	Client ID: SHM-10-07-			
Sulfide	ND	ND	mg/l	NC		20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013958

Report Date: 09/17/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG432711-4 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U					
Total Organic Carbon	3.8	3.7	mg/l	3	20
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG432712-4 QC Sample: L1013958-02 Client ID: SHM-10-06A-090910-U					
Dissolved Organic Carbon	3.3	3.8	mg/l	14	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,07 QC Batch ID: WG432727-4 QC Sample: L1013958-04 Client ID: SHM-10-07-090910-U					
Alkalinity, Total	240	240	mg CaCO3/L	0	4

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

## Cooler Information Custody Seal

Cooler

A Present/Intact

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013958-01A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013958-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013958-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013958-02C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-02D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-02E	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013958-02F	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013958-02G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-02H	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-02I	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-02J	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013958-02K	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013958-02L	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013958-02M	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013958-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013958-03A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013958-03B	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013958-04A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013958-04B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1013958-04C	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-04D	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-04E	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-04F	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-04G	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013958-04H	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013958-04I	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013958-04J	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013958-04K	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-04L	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-04M	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-04N	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013958

Report Date: 09/17/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013958-04O	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013958-04P	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013958-04Q	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013958-04R	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013958-04S	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013958-04T	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1013958-04X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1013958-05A	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013958-06A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1013958-07A	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-07B	Vial H2SO4 preserved	A	N/A	3	Y	Present/Intact	TOC-5310(28)
L1013958-07C	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1013958-07D	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1013958-07E	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-07F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1013958-07G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1013958-07H	Plastic 500ml HNO3 preserved	A	<2	3	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),HARDT(180)
L1013958-07I	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1013958-07J	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2),TDS-2540(7)
L1013958-07K	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)

**Container Comments**

L1013958-02A

L1013958-02B

L1013958-04A

L1013958-04B

\*Values in parentheses indicate holding time in days



Project Name: SHL TASK 0002

Lab Number: L1013958

Project Number: AC001

Report Date: 09/17/10

## 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*

- 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:** L1013958

**Project Number:** AC001

**Report Date:** 09/17/10

***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:** L1013958  
**Report Date:** 09/17/10

## REFERENCES

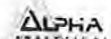
- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental 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, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. **Organic Parameters:** 504.1, 524.2.)

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

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

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

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

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

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

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

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

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

**Non-Potable Water**

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

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

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-

BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N,

SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B,

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

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



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

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

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

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

*Solid & Chemical Materials (Inorganic Parameters:* SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. *Organic Parameters:* SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 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<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: 508-822-3286

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 9/9/10

ALPHA Job #: 11013958

## Client Information

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

## Project Information

Project Name: SHL 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: 9/16/10 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?

## 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 # 43 - Closed

\* Done as noted F = Field F. Used

metals = As, Ar, Fe, Al, Cr, Pb, Ni, Na, Ca, K, Mg

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
13958	1 SHM-10-06A-090910-F	9/9/10	1145	GW	CMH
	2 SHM-10-06A-090910-U	9/9/10	1145	GW	CMH
	3 SHM-10-07-090910-F	9/9/10	1100	GW	EEF
	4 SHM-10-07-090910-U	9/9/10	1100	GW	EEF
	5 RB-090910-U	9/9/10	1200	GW	EEF
	6 DUP-090910-F	9/9/10	1145	GW	CMH
	7 DUP-090910-U	9/9/10	1145	GW	CMH

ANALYSIS										TOTAL # BOTTLES
Cl, SO <sub>4</sub> , NO <sub>3</sub> , TDS	NO <sub>2</sub>	PH	MA, CO <sub>2</sub>	SAR	TSS	DOC + DIC	TOC	Test Metals + Hardness	Diss Metals	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	19
								✓		1
								✓		1
✓	✓	✓	✓	✓	✓		✓	✓		11

## SAMPLE HANDLING

Filtration 0.45  
☒ Done ☒  
☐ Not needed  
☐ Lab to do Preservation  
☐ Lab to do  
(Please specify below)

Sample Specific Comments

PLEASE ANSWER QUESTIONS ABOVE!

Container Type P P P P P P A V P P  
Preservative A A A D E A A D C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By: [Signature] Date/Time: 9/9/10 1400  
Received By: [Signature] Date/Time: 9/9/10 1620

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: L1013961

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: 09/21/10

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:** L1013961  
**Report Date:** 09/21/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1013961-01	SHM-10-06A-090910-U	DEVENS, MA	09/09/10 11:45
L1013961-02	SHM-10-07-090910-U	DEVENS, MA	09/09/10 11:00

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

**Lab Number:** L1013961  
**Report Date:** 09/21/10

### 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

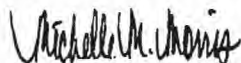
This report contains the results for the Dissolved Inorganic Carbon analysis. The results for all other analyses have been issued under separate cover.

### Dissolved Inorganic Carbon

L1013961-01 and -02 have elevated detection limits due to the dilutions required by the elevated concentrations present in the samples.

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: 09/21/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013961

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013961-01  
Client ID: SHM-10-06A-090910-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/09/10 11:45  
Date Received: 09/09/10  
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	58		mg/l	20	--	20	09/09/10 22:23	09/20/10 15:44	30,5310C(m)	DW



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013961

Report Date: 09/21/10

## SAMPLE RESULTS

Lab ID: L1013961-02  
Client ID: SHM-10-07-090910-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 09/09/10 11:00  
Date Received: 09/09/10  
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	52		mg/l	20	--	20	09/09/10 22:23	09/20/10 15:44	30,5310C(m)	DW



Project Name: SHL TASK 0002

Lab Number: L1013961

Project Number: AC001

Report Date: 09/21/10

**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: WG433279-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	—	1	09/09/10 22:23	09/20/10 15:44	30,5310C(m)	DW



**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1013961

Report Date: 09/21/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-02 Batch: WG433279-2								
Dissolved Inorganic Carbon	120							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1013961

Report Date: 09/21/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-02 QC Batch ID: WG433279-3 QC Sample: L1013961-02 Client ID: SHM-10-07-090910-U						
Dissolved Inorganic Carbon	52	50	mg/l	4		

Project Name: SHL TASK 0002

Lab Number: L1013961

Project Number: AC001

Report Date: 09/21/10

## 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(*)
L1013961-01A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013961-01B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013961-01X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1013961-02A	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013961-02B	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	SPECWC()
L1013961-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()

## Container Comments

L1013961-01A

L1013961-01B

L1013961-01X

L1013961-02A

L1013961-02B

L1013961-02X

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1013961

Project Number: AC001

Report Date: 09/21/10

## 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:** L1013961

**Project Number:** AC001

**Report Date:** 09/21/10

**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:** L1013961

**Project Number:** AC001

**Report Date:** 09/21/10

## REFERENCES

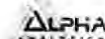
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

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, 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 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.







## ANALYTICAL REPORT

Lab Number: L1016405

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: 10/27/10

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:** L1016405  
**Report Date:** 10/27/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1016405-01	SHM-10-13-101910-F	DEVENS, MA	10/19/10 11:13
L1016405-02	SHM-10-13-101910-U	DEVENS, MA	10/19/10 11:13
L1016405-03	SHM-10-14-101910-F	DEVENS, MA	10/19/10 11:25
L1016405-04	SHM-10-14-101910-U	DEVENS, MA	10/19/10 11:25
L1016405-05	SHM-10-11-101910-F	DEVENS, MA	10/19/10 14:45
L1016405-06	SHM-10-11-101910-U	DEVENS, MA	10/19/10 14:45
L1016405-07	DUP-101910-F	DEVENS, MA	10/19/10 11:13
L1016405-08	DUP-101910-U	DEVENS, MA	10/19/10 11:13
L1016405-09	RB-101910-U	DEVENS, MA	10/19/10 14:35

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

**Lab Number:** L1016405  
**Report Date:** 10/27/10

### 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 results of the Dissolved Inorganic Carbon analysis will be issued under separate cover.

### Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

### Dissolved Metals

L1016405-01, -03, -05 and -07 have elevated detection limits for all analytes, except Mercury, due to the



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

**Lab Number:** L1016405  
**Report Date:** 10/27/10

### Case Narrative (continued)

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

The WG438414-3/-4 MS/MSD recoveries for Arsenic (267%/350%), Calcium (MSD at 135%), Iron (310%/550%) and Manganese (MSD at 130%), performed on L1016405-03, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG439294-4 MSD recovery, performed on L1016405-03, is above the acceptance criteria for Mercury (122%); however, the associated MS and LCS recoveries are within criteria. A post-digestion spike was performed with an acceptable recovery of 113%. No further action was required.

#### Total Metals

L1016405-02, -04, -06 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 WG438412-3/-4 MS/MSD recoveries for Arsenic (MS at 17%), Iron (0%/40%) and Manganese (66%/78%), performed on L1016405-04, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG439296-3/-4 MS/MSD recoveries, performed on L1016405-04, are above the acceptance criteria for Mercury (124%/134%); however, the associated LCS recovery is within criteria. A post-digestion spike was performed with an acceptable recovery of 112%. No further action was required.

#### Dissolved Organic Carbon

L1016405-02, -04, -06 and -08 have elevated detection limits due to the dilutions required by the sample matrices.

#### Nitrogen, Nitrate

The WG438484-4 MSD recovery (130%), performed on L1016405-04, is above the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was required. In addition, the associated MS/MSD RPD is above the acceptance criteria (16%).

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

**Lab Number:** L1016405  
**Report Date:** 10/27/10

**Case Narrative (continued)**

Alkalinity, Total

The WG439215-3 MS recovery (50%), performed on L1016405-04, is below the acceptance criteria. This has been attributed to matrix interference.

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: 10/27/10

## METALS

Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-01

Date Collected: 10/19/10 11:13

Client ID: SHM-10-13-101910-F

Date Received: 10/19/10

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	ND		ug/l	40.0	7.64	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	672		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Barium, Dissolved	154		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Calcium, Dissolved	65000		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.75	J	ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Iron, Dissolved	94600		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.32	J	ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	10100		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2060		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.07162	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:10	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.54		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Potassium, Dissolved	12500		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Sodium, Dissolved	15900		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM
Zinc, Dissolved	17.9	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 20:35	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-02  
 Client ID: SHM-10-13-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:13  
 Date Received: 10/19/10  
 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	305		ug/l	40.0	7.64	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Arsenic, Total	700		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Barium, Total	154		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Calcium, Total	67200		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Chromium, Total	4.17		ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Cobalt, Total	0.87	J	ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Copper, Total	1.17	J	ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Iron, Total	95500		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Lead, Total	0.42	J	ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Magnesium, Total	9840		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Manganese, Total	2100		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Mercury, Total	0.07162	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:25	EPA 7470A	1,7470A	EZ
Nickel, Total	2.95		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Potassium, Total	12300		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Sodium, Total	15600		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Vanadium, Total	0.75	J	ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM
Zinc, Total	14.9	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 21:35	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-03  
 Client ID: SHM-10-14-101910-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:25  
 Date Received: 10/19/10  
 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	50.0	9.56	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.50	0.600	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	5860		ug/l	2.50	0.565	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Barium, Dissolved	43.4		ug/l	2.50	0.475	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.50	0.295	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.50	0.295	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Calcium, Dissolved	57900		ug/l	500	63.3	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.50	0.930	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	20.0		ug/l	2.50	0.265	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.50	0.590	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Iron, Dissolved	92700		ug/l	250	42.0	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.50	0.250	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	3720		ug/l	500	20.5	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Manganese, Dissolved	4180		ug/l	5.00	0.680	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.1246	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:12	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	7.62		ug/l	2.50	0.900	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Potassium, Dissolved	10100		ug/l	500	90.8	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	5.00	2.03	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.50	0.425	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Sodium, Dissolved	8080		ug/l	500	91.0	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.50	0.155	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.50	0.385	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM
Zinc, Dissolved	26.9		ug/l	25.0	8.12	5	10/20/10 11:00	10/21/10 20:59	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-04  
 Client ID: SHM-10-14-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:25  
 Date Received: 10/19/10  
 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	811		ug/l	50.0	9.56	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Antimony, Total	0.67	J	ug/l	2.50	0.600	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Arsenic, Total	5990	J	ug/l	2.50	0.565	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Barium, Total	87.5		ug/l	2.50	0.475	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.50	0.295	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.50	0.295	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Calcium, Total	70800		ug/l	500	63.3	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Chromium, Total	3.25		ug/l	2.50	0.930	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Cobalt, Total	23.8		ug/l	2.50	0.265	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Copper, Total	4.67		ug/l	2.50	0.590	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Iron, Total	98300		ug/l	250	42.0	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Lead, Total	2.27	J	ug/l	2.50	0.250	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Magnesium, Total	3980		ug/l	500	20.5	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Manganese, Total	4350	J	ug/l	5.00	0.680	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Mercury, Total	0.0965	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:26	EPA 7470A	1,7470A	EZ
Nickel, Total	11.2		ug/l	2.50	0.900	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Potassium, Total	11400		ug/l	500	90.8	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	5.00	2.03	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.50	0.425	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Sodium, Total	8500		ug/l	500	91.0	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.50	0.155	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Vanadium, Total	0.81	J	ug/l	2.50	0.385	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM
Zinc, Total	41.0		ug/l	25.0	8.12	5	10/20/10 11:00	10/21/10 21:47	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-05  
 Client ID: SHM-10-11-101910-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 14:45  
 Date Received: 10/19/10  
 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	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.78	J	ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	463		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Barium, Dissolved	42.6		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Calcium, Dissolved	22200		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	10.9		ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Iron, Dissolved	61000		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.2	J	ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2900		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2260		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.1268	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:18	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	6.80		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5390		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Sodium, Dissolved	13000		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM
Zinc, Dissolved	17.9	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 21:23	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-06  
 Client ID: SHM-10-11-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 14:45  
 Date Received: 10/19/10  
 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	111		ug/l	40.0	7.64	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Antimony, Total	0.68	J	ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Arsenic, Total	470		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Barium, Total	43.2		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Calcium, Total	21900		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Chromium, Total	1.15	J	ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Cobalt, Total	11.0		ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Copper, Total	0.64	J	ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Iron, Total	60500		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Lead, Total	0.36	J	ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Magnesium, Total	2840		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Manganese, Total	2160		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Mercury, Total	0.09993	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:35	EPA 7470A	1,7470A	EZ
Nickel, Total	6.62		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Potassium, Total	5310		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Sodium, Total	12700		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM
Zinc, Total	17.6	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 22:23	EPA 3005A	1,6020A	BM

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

**Lab Number:** L1016405  
**Report Date:** 10/27/10

**SAMPLE RESULTS**

**Lab ID:** L1016405-07  
**Client ID:** DUP-101910-F  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 10/19/10 11:13  
**Date Received:** 10/19/10  
**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	40.0	7.64	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.48	J	ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	674		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Barium, Dissolved	154		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Calcium, Dissolved	64200		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	0.74	J	ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Copper, Dissolved	2.06		ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Iron, Dissolved	94700		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	9920		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Manganese, Dissolved	2090		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.1059	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:19	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	2.48		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Potassium, Dissolved	12200		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Sodium, Dissolved	16100		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM
Zinc, Dissolved	17.8	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 21:29	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-08  
 Client ID: DUP-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:13  
 Date Received: 10/19/10  
 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	343		ug/l	40.0	7.64	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	2.00	0.480	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Arsenic, Total	648		ug/l	2.00	0.452	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Barium, Total	138		ug/l	2.00	0.380	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.00	0.236	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Calcium, Total	60300		ug/l	400	50.6	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Chromium, Total	4.15		ug/l	2.00	0.744	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Cobalt, Total	0.89	J	ug/l	2.00	0.212	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Copper, Total	1.27	J	ug/l	2.00	0.472	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Iron, Total	87500		ug/l	200	33.6	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Lead, Total	0.44	J	ug/l	2.00	0.200	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Magnesium, Total	8720		ug/l	400	16.4	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Manganese, Total	1960		ug/l	4.00	0.544	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Mercury, Total	0.1218	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:37	EPA 7470A	1,7470A	EZ
Nickel, Total	2.87		ug/l	2.00	0.720	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Potassium, Total	11000		ug/l	400	72.6	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	4.00	1.62	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.00	0.340	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Sodium, Total	13900		ug/l	400	72.8	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.00	0.124	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Vanadium, Total	0.64	J	ug/l	2.00	0.308	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM
Zinc, Total	14.7	J	ug/l	20.0	6.50	4	10/20/10 11:00	10/21/10 22:29	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-09

Date Collected: 10/19/10 14:35

Client ID: RB-101910-U

Date Received: 10/19/10

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	2.53	J	ug/l	10.0	1.91	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Antimony, Total	0.23	J	ug/l	0.500	0.120	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Arsenic, Total	0.2	J	ug/l	0.500	0.113	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Barium, Total	0.11	J	ug/l	0.500	0.095	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Calcium, Total	30.1	J	ug/l	100	12.6	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Chromium, Total	0.23	J	ug/l	0.500	0.186	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Copper, Total	0.28	J	ug/l	0.500	0.118	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Manganese, Total	0.39	J	ug/l	1.00	0.136	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Mercury, Total	0.1177	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:39	EPA 7470A	1,7470A	EZ
Nickel, Total	0.21	J	ug/l	0.500	0.180	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Sodium, Total	41.2	J	ug/l	100	18.2	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM
Zinc, Total	2.52	J	ug/l	5.00	1.62	1	10/20/10 11:00	10/21/10 20:29	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

### 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: WG438412-1										
Aluminum, Total	ND		ug/l	10.0	1.91	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Arsenic, Total	ND		ug/l	0.500	0.113	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Barium, Total	0.1	J	ug/l	0.500	0.095	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Calcium, Total	ND		ug/l	100	12.6	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Copper, Total	ND		ug/l	0.500	0.118	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Iron, Total	ND		ug/l	50.0	8.41	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Magnesium, Total	ND		ug/l	100	4.10	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Manganese, Total	ND		ug/l	1.00	0.136	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Nickel, Total	ND		ug/l	0.500	0.180	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Silver, Total	0.14	J	ug/l	0.500	0.085	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Sodium, Total	ND		ug/l	100	18.2	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Zinc, Total	ND		ug/l	5.00	1.62	1	10/20/10 11:00	10/21/10 18:10	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: WG438414-1										
Aluminum, Dissolved	ND		ug/l	10.0	1.91	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Antimony, Dissolved	ND		ug/l	0.500	0.120	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Arsenic, Dissolved	ND		ug/l	0.500	0.113	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Barium, Dissolved	0.1	J	ug/l	0.500	0.095	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

### Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Calcium, Dissolved	ND		ug/l	100	12.6	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Iron, Dissolved	ND		ug/l	50.0	8.41	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Silver, Dissolved	0.14	J	ug/l	0.500	0.085	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	10/20/10 11:00	10/21/10 18:10	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	10/20/10 11:00	10/21/10 18:10	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: WG439294-1										
Mercury, Dissolved	ND		ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:07	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): 02,04,06,08-09 Batch: WG439296-1										
Mercury, Total	ND		ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:32	1,7470A	EZ





**Project Name:** SHL TASK 0002

**Lab Number:** L1016405

**Project Number:** AC001

**Report Date:** 10/27/10

## **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: L1016405

Report Date: 10/27/10

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: WG438412-2								
Aluminum, Total	89	-	-	-	80-120	-	-	-
Antimony, Total	92	-	-	-	80-120	-	-	-
Arsenic, Total	96	-	-	-	80-120	-	-	-
Barium, Total	97	-	-	-	80-120	-	-	-
Beryllium, Total	96	-	-	-	80-120	-	-	-
Cadmium, Total	102	-	-	-	80-120	-	-	-
Calcium, Total	98	-	-	-	80-120	-	-	-
Chromium, Total	92	-	-	-	80-120	-	-	-
Cobalt, Total	99	-	-	-	80-120	-	-	-
Copper, Total	99	-	-	-	80-120	-	-	-
Iron, Total	97	-	-	-	80-120	-	-	-
Lead, Total	98	-	-	-	80-120	-	-	-
Magnesium, Total	97	-	-	-	80-120	-	-	-
Manganese, Total	96	-	-	-	80-120	-	-	-
Nickel, Total	98	-	-	-	80-120	-	-	-
Potassium, Total	95	-	-	-	80-120	-	-	-
Selenium, Total	100	-	-	-	80-120	-	-	-
Silver, Total	92	-	-	-	80-120	-	-	-
Sodium, Total	98	-	-	-	80-120	-	-	-
Thallium, Total	84	-	-	-	80-120	-	-	-
Vanadium, Total	95	-	-	-	80-120	-	-	-

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1016405**Report Date:** 10/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG438412-2					
Zinc, Total	99		80-120	-	

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG438414-2					
Aluminum, Dissolved	89	-	80-120	-	
Antimony, Dissolved	92	-	80-120	-	
Arsenic, Dissolved	96	-	80-120	-	
Barium, Dissolved	97	-	80-120	-	
Beryllium, Dissolved	96	-	80-120	-	
Cadmium, Dissolved	102	-	80-120	-	
Calcium, Dissolved	98	-	80-120	-	
Chromium, Dissolved	92	-	80-120	-	
Cobalt, Dissolved	99	-	80-120	-	
Copper, Dissolved	99	-	80-120	-	
Iron, Dissolved	97	-	80-120	-	
Lead, Dissolved	98	-	80-120	-	
Magnesium, Dissolved	97	-	80-120	-	
Manganese, Dissolved	96	-	80-120	-	
Nickel, Dissolved	98	-	80-120	-	
Potassium, Dissolved	95	-	80-120	-	
Selenium, Dissolved	100	-	80-120	-	
Silver, Dissolved	92	-	80-120	-	
Sodium, Dissolved	98	-	80-120	-	
Thallium, Dissolved	84	-	80-120	-	
Vanadium, Dissolved	95	-	80-120	-	

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1016405

**Report Date:** 10/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG438414-2					
Zinc, Dissolved	99	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG439294-2					
Mercury, Dissolved	113	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG439296-2					
Mercury, Total	119	-	80-120	-	20

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

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: WG438412-3 WG438412-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Aluminum, Total	811	2000	2560	87		2590	89		80-120	1		20
Antimony, Total	0.67J	500	469	94		474	95		80-120	1		20
Arsenic, Total	5990	120	6010	17		6100	92		80-120	1		20
Barium, Total	87.5	2000	2020	97		2030	97		80-120	0		20
Beryllium, Total	ND	50	49.2	98		49.1	98		80-120	0		20
Cadmium, Total	ND	51	53.6	105		53.6	105		80-120	0		20
Calcium, Total	70800	10000	79200	84		79800	90		80-120	1		20
Chromium, Total	3.25	200	189	93		190	93		80-120	1		20
Cobalt, Total	23.8	500	534	102		536	102		80-120	0		20
Copper, Total	4.67	250	251	98		254	100		80-120	1		20
Iron, Total	98300	1000	97400	0		98700	40		80-120	1		20
Lead, Total	2.27J	510	504	99		520	102		80-120	3		20
Magnesium, Total	3980	10000	13600	96		13800	98		80-120	1		20
Manganese, Total	4350	500	4680	66		4740	78		80-120	1		20
Nickel, Total	11.2	500	502	98		508	99		80-120	1		20
Potassium, Total	11400	10000	20300	89		20600	92		80-120	1		20
Selenium, Total	ND	120	128	107		130	108		80-120	2		20
Silver, Total	ND	50	46.5	93		46.6	93		80-120	0		20
Sodium, Total	8500	10000	17800	93		18000	95		80-120	1		20
Thallium, Total	ND	120	104	87		107	89		80-120	3		20
Vanadium, Total	0.81J	500	488	98		493	99		80-120	1		20

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

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: WG438412-3 WG438412-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U									
Zinc, Total	41.0	500	535	99	548	101	80-120	2	20



# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

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: WG438414-3 WG438414-4 QC Sample: L1016405-03 Client ID: SHM-10-14-101910-F									
Aluminum, Dissolved	ND	2000	1870	94	1900	95	80-120	2	20
Antimony, Dissolved	ND	500	484	97	498	100	80-120	3	20
Arsenic, Dissolved	5860	120	6180	267	6280	350	80-120	2	20
Barium, Dissolved	43.4	2000	2000	98	2040	100	80-120	2	20
Beryllium, Dissolved	ND	50	50.4	101	52.0	104	80-120	3	20
Cadmium, Dissolved	ND	51	54.4	107	55.0	108	80-120	1	20
Calcium, Dissolved	57900	10000	69000	111	71400	135	80-120	3	20
Chromium, Dissolved	ND	200	189	94	194	97	80-120	3	20
Cobalt, Dissolved	20.0	500	542	104	548	106	80-120	1	20
Copper, Dissolved	ND	250	254	102	259	104	80-120	2	20
Iron, Dissolved	92700	1000	95800	310	98200	550	80-120	2	20
Lead, Dissolved	ND	510	530	104	535	105	80-120	1	20
Magnesium, Dissolved	3720	10000	13800	101	14100	104	80-120	2	20
Manganese, Dissolved	4180	500	4760	116	4830	130	80-120	1	20
Nickel, Dissolved	7.62	500	508	100	516	102	80-120	2	20
Potassium, Dissolved	10100	10000	20100	100	20800	107	80-120	3	20
Selenium, Dissolved	ND	120	129	108	135	112	80-120	5	20
Silver, Dissolved	ND	50	47.1	94	47.8	96	80-120	1	20
Sodium, Dissolved	8080	10000	18300	102	18600	105	80-120	2	20
Thallium, Dissolved	ND	120	108	90	110	92	80-120	2	20
Vanadium, Dissolved	ND	500	495	99	506	101	80-120	2	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

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: WG438414-3 WG438414-4 QC Sample: L1016405-03 Client ID: SHM-10-14-101910-F									
Zinc, Dissolved	26.9	500	551	105	556	106	80-120	1	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 QC Batch ID: WG439294-3 WG439294-4 QC Sample: L1016405-03 Client ID: SHM-10-14-101910-F									
Mercury, Dissolved	0.1246J	1	1.178	118	1.224	<b>122</b>	Q 80-120	4	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 QC Batch ID: WG439296-3 WG439296-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U									
Mercury, Total	0.0965J	1	1.240	<b>124</b>	Q 1.341	<b>134</b>	Q 80-120	8	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-02  
 Client ID: SHM-10-13-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:13  
 Date Received: 10/19/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	360		mg CaCO3/L	2.0	NA	1	-	10/22/10 11:56	30,2320B	SD
Solids, Total Suspended	62		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	9.36		mg/l	0.075	0.017	1	10/20/10 15:25	10/20/10 22:18	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	10/19/10 22:33	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	36		mg/l	20	7.0	1	-	10/21/10 17:45	44,410.4	SD
Dissolved Organic Carbon	8.7		mg/l	8.0	8.0	8	10/19/10 22:30	10/25/10 07:51	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	21		mg/l	0.50	0.07	1	-	10/20/10 20:00	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/20/10 00:18	44,300.0	AU
Sulfate	ND		mg/l	1.0	0.12	1	-	10/20/10 00:18	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-04  
 Client ID: SHM-10-14-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 11:25  
 Date Received: 10/19/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	320		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	10/22/10 11:56	30,2320B	SD
Solids, Total Suspended	130		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	5.28		mg/l	0.075	0.017	1	10/20/10 15:25	10/20/10 22:19	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	10/19/10 22:33	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	62		mg/l	20	7.0	1	-	10/21/10 17:45	44,410.4	SD
Dissolved Organic Carbon	10		mg/l	8.0	8.0	8	10/19/10 22:30	10/25/10 07:51	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	4.8		mg/l	0.50	0.07	1	-	10/20/10 21:12	44,300.0	AU
Nitrogen, Nitrate	0.08		mg/l	0.05	0.01	1	-	10/20/10 01:06	44,300.0	AU
Sulfate	0.67	J	mg/l	1.0	0.12	1	-	10/20/10 01:06	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-06  
 Client ID: SHM-10-11-101910-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/19/10 14:45  
 Date Received: 10/19/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	140		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	10/22/10 11:56	30,2320B	SD
Solids, Total Suspended	17		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	3.13		mg/l	0.075	0.017	1	10/20/10 15:25	10/20/10 22:26	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	10/19/10 22:34	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	19	J	mg/l	20	7.0	1	-	10/21/10 17:45	44,410.4	SD
Dissolved Organic Carbon	3.4		mg/l	2.0	2.0	2	10/19/10 22:30	10/25/10 07:51	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	23		mg/l	0.50	0.07	1	-	10/20/10 20:12	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/20/10 01:18	44,300.0	AU
Sulfate	19		mg/l	1.0	0.12	1	-	10/20/10 01:18	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

## SAMPLE RESULTS

Lab ID: L1016405-08

Client ID: DUP-101910-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 10/19/10 11:13

Date Received: 10/19/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	360		mg CaCO3/L	2.0	NA	1	-	10/22/10 11:56	30,2320B	SD
Solids, Total Suspended	56		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	9.13		mg/l	0.075	0.017	1	10/20/10 15:25	10/20/10 22:27	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	10/19/10 22:34	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	36		mg/l	20	7.0	1	-	10/21/10 17:45	44,410.4	SD
Dissolved Organic Carbon	6.8		mg/l	2.0	2.0	2	10/19/10 22:30	10/25/10 07:51	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	20		mg/l	0.50	0.07	1	-	10/20/10 20:24	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/20/10 01:30	44,300.0	AU
Sulfate	0.25	J	mg/l	1.0	0.12	1	-	10/20/10 01:30	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1016405

Project Number: AC001

Report Date: 10/27/10

### 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): 02,04,06,08 Batch: WG438289-2									
Nitrogen, Nitrite	ND	mg/l	0.02	0.002	1	-	10/19/10 22:31	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438428-1									
Nitrogen, Ammonia	ND	mg/l	0.075	0.017	1	10/20/10 15:25	10/20/10 21:54	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438484-1									
Nitrogen, Nitrate	ND	mg/l	0.05	0.01	1	-	10/19/10 21:54	44,300.0	AU
Sulfate	ND	mg/l	1.0	0.12	1	-	10/19/10 21:54	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438728-1									
Chemical Oxygen Demand	ND	mg/l	20	7.0	1	-	10/21/10 17:43	44,410.4	SD
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438732-1									
Chloride	ND	mg/l	0.50	0.07	1	-	10/20/10 18:36	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439135-1									
Solids, Total Suspended	ND	mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	f
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439215-1									
Alkalinity, Total	ND	mg CaCO3/L	2.0	NA	1	-	10/22/10 11:56	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439239-1									
Dissolved Organic Carbon	ND	mg/l	1.0	1.0	1	10/19/10 22:30	10/25/10 07:51	30,5310C	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439343-1									
Sulfide	ND	mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438289-1								
Nitrogen, Nitrite	94		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438428-2								
Nitrogen, Ammonia	100		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438484-2								
Nitrogen, Nitrate	110		-		90-110	-		
Sulfate	108		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438728-2								
Chemical Oxygen Demand	102		-		95-105	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438732-2								
Chloride	108		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439215-2								
Alkalinity, Total	102		-		80-115	-		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439239-2								
Dissolved Organic Carbon	106		-		90-110	-		

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439343-2					
Sulfide	100 %	-	75-125	-	

### Matrix Spike Analysis Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016405

Report Date: 10/27/10

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): 02,04,06,08 QC Batch ID: WG438289-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Nitrogen, Nitrite	0.01J	0.1	0.10	100		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438428-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Nitrogen, Ammonia	5.28	4	9.21	98		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438484-3 WG438484-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Nitrogen, Nitrate	0.08	0.4	0.51	108		0.60	130	Q	80-122	16	Q	15
Sulfate	0.67J	8	8.8	110		10	125		60-140	13		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438728-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Chemical Oxygen Demand	62	238	320	108		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438732-3 WG438732-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Chloride	4.8	4	9.0	105		8.9	102		40-151	1		18
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439215-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Alkalinity, Total	320	100	370	50	Q	-	-		86-116	-		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439239-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U												
Dissolved Organic Carbon	10	32	45	109		-	-		79-120	-		20

**Matrix Spike Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1016405**Report Date:** 10/27/10

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 QC Batch ID: WG439343-3 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U									
Sulfide	ND	0.26	0.25	96	-	-	75-125	-	20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1016405

Report Date: 10/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438289-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Nitrogen, Nitrite	0.01J	0.01J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438428-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Nitrogen, Ammonia	5.28	5.25	mg/l	1		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438484-5 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Nitrogen, Nitrate	0.08	0.08	mg/l	1		15
Sulfate	0.67J	0.85J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438728-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Chemical Oxygen Demand	62	62	mg/l	0		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438732-5 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Chloride	4.8	4.8	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439135-2 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Solids, Total Suspended	130	120	mg/l	8		32
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439215-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U						
Alkalinity, Total	320	330	mg CaCO <sub>3</sub> /L	3		11

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

### Lab Duplicate Analysis

Batch Quality Control

**Lab Number:** L1016405  
**Report Date:** 10/27/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439239-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U					
Dissolved Organic Carbon	10.	9.6	mg/l	4	20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439343-4 QC Sample: L1016405-04 Client ID: SHM-10-14-101910-U					
Sulfide	ND	ND	mg/l	NC	20



Project Name: SHL TASK 0002

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**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(*)
L1016405-01A	Plastic 250ml HNO3 preserved	A	<2	3	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

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016405-02A	Plastic 250ml HNO3 preserved	B	<2	2.4	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)
L1016405-02B	Plastic 500ml unpreserved	B	6	2.4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016405-02C	Plastic 250ml unpreserved	B	6	2.4	Y	Present/Intact	NO2-4500NO2(2)
L1016405-02D	Plastic 250ml unpreserved	B	N/A	2.4	Y	Present/Intact	ALK-T-2320(14)
L1016405-02E	Plastic 500ml H2SO4 preserved	B	<2	2.4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016405-02F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-02G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-02H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-02I	Plastic 1000ml unpreserved	B	6	2.4	Y	Present/Intact	TSS-2540(7)
L1016405-02J	Vial H2SO4 preserved split	B	N/A	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-02K	Vial H2SO4 preserved split	B	N/A	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-02X	Amber 250ml unpreserved	B	6	2.4	Y	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(*)
L1016405-03A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1016405-03B	Plastic 250ml HNO3 preserved	A	<2	3	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



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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016405-04A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1016405-04B	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016405-04C	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1016405-04D	Plastic 250ml unpreserved	A	N/A	3	Y	Present/Intact	ALK-T-2320(14)
L1016405-04E	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016405-04F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04H	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04I	Plastic 1000ml unpreserved	A	6	3	Y	Present/Intact	TSS-2540(7)
L1016405-04J	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1016405-04K	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1016405-04L	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	ALK-T-2320(14)
L1016405-04M	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1016405-04N	Plastic 500ml unpreserved	A	6	3	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016405-04O	Vial H2SO4 preserved split	A	N/A	3	Y	Present/Intact	DOC-5310(28)
L1016405-04P	Plastic 500ml H2SO4 preserved	A	<2	3	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016405-04R	Plastic 1000ml unpreserved	A	6	3	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(*)
L1016405-04S	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1016405-04T	Vial H2SO4 preserved split	A	<2	3	Y	Present/Intact	DOC-5310(28)
L1016405-04U	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04V	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04W	Plastic 250ml Zn Acetate/NaOH pr	A	>12	3	Y	Present/Intact	SULFIDE-4500(7)
L1016405-04X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	DOC-5310(28)
L1016405-04Y	Plastic 250ml unpreserved	A	6	3	Y	Present/Intact	NO2-4500NO2(2)
L1016405-05A	Plastic 250ml HNO3 preserved	A	<2	3	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



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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016405-06A	Plastic 250ml HNO3 preserved	B	<2	2.4	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)
L1016405-06B	Plastic 500ml unpreserved	B	6	2.4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016405-06C	Plastic 250ml unpreserved	B	6	2.4	Y	Present/Intact	NO2-4500NO2(2)
L1016405-06D	Plastic 250ml unpreserved	B	N/A	2.4	Y	Present/Intact	ALK-T-2320(14)
L1016405-06E	Plastic 500ml H2SO4 preserved	B	<2	2.4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016405-06F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-06G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-06H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-06I	Plastic 1000ml unpreserved	B	6	2.4	Y	Present/Intact	TSS-2540(7)
L1016405-06J	Vial H2SO4 preserved split	B	N/A	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-06K	Vial H2SO4 preserved split	B	N/A	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-06X	Amber 250ml unpreserved	B	6	2.4	Y	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(*)
L1016405-07A	Plastic 250ml HNO3 preserved	A	<2	3	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)
L1016405-08A	Plastic 250ml HNO3 preserved	B	<2	2.4	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)
L1016405-08B	Plastic 500ml unpreserved	B	6	2.4	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016405-08C	Plastic 250ml unpreserved	B	6	2.4	Y	Present/Intact	NO2-4500NO2(2)
L1016405-08D	Plastic 250ml unpreserved	B	N/A	2.4	Y	Present/Intact	ALK-T-2320(14)
L1016405-08E	Plastic 500ml H2SO4 preserved	B	<2	2.4	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016405-08F	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-08G	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-08H	Plastic 250ml Zn Acetate/NaOH pr	B	>12	2.4	Y	Present/Intact	SULFIDE-4500(7)
L1016405-08I	Plastic 1000ml unpreserved	B	6	2.4	Y	Present/Intact	TSS-2540(7)
L1016405-08J	Vial H2SO4 preserved split	B	N/A	2.4	Y	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(*)
L1016405-08K	Vial H2SO4 preserved split	B	N/A	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-08X	Amber 250ml unpreserved	B	6	2.4	Y	Present/Intact	DOC-5310(28)
L1016405-09A	Plastic 500ml HNO3 preserved	B	<2	2.4	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:** L1016405  
**Report Date:** 10/27/10

## 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  
**Project Number:** AC001

**Lab Number:** L1016405  
**Report Date:** 10/27/10

**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:** L1016405  
**Report Date:** 10/27/10

### 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, 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, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S<sub>2</sub> 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 1

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

ALPHA Job #: L1016405

## Client Information

Client: Sovereign Consulting Inc

Address: 905B South Main St

Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@sovereign.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: SHL Task 0002

Project Location: Devens MA

Project #: AC001

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?

## 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 #44 = Closed \* Done as noted F = Field Filtered

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	(Please specify below)										Sample Specific Comments	r m s
		Date	Time			Cl. 50	NO3	Am	NH4	SRP	TSS	DOC	Total	Diss			
6405-01	SHM-10-13-101910-F	10/19/10	1113	GW	CMH									✓		1	
-02	SHM-10-13-101910-U	10/19/10	1113	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓			10	
-03	SHM-10-14-101910-F	10/19/10	1125	GW	EEF									✓	MS/MSD	2	
-04	SHM-10-14-101910-U	10/19/10	1125	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓		MS/MSD	20	
-05	SHM-10-11-101910-F	10/19/10	1445	GW	EEF									✓		1	
-06	SHM-10-11-101910-U	10/19/10	1445	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓			10	
-07	DUP-101910-F	10/19/10	1113	GW	CMH									✓		1	
-08	DUP-101910-U	10/19/10	1113	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓			10	
-09	RB-101910-U	10/19/10	1435	GW	PJV									✓		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?

Relinquished By

Date/Time

Received By:

Date/Time

10/19/10 1530

10/19/10 1530

10/19/10 1635

10/19/10 1635

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: L1016416

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: 10/26/10

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:** L1016416  
**Report Date:** 10/26/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1016416-01	SHM-10-13-101910-U	DEVENS, MA	10/19/10 11:13
L1016416-02	SHM-10-14-101910-U	DEVENS, MA	10/19/10 11:25
L1016416-03	SHM-10-11-101910-U	DEVENS, MA	10/19/10 14:45
L1016416-04	DUP-101910-U	DEVENS, MA	10/19/10 11:13

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

**Lab Number:** L1016416  
**Report Date:** 10/26/10

### 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.

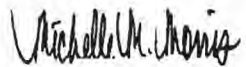
### Dissolved Inorganic Carbon

L1016416-01 through -04 have elevated detection limits due to the dilutions required by the elevated concentration present in the samples.

WG439468: A Matrix Spike could not be performed due to insufficient 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: 10/26/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016416

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016416-01  
Client ID: SHM-10-13-101910-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 10/19/10 11:13  
Date Received: 10/19/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	140		mg/l	20	--	20	10/19/10 22:30	10/26/10 08:11	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016416

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016416-02  
Client ID: SHM-10-14-101910-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 10/19/10 11:25  
Date Received: 10/19/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	140		mg/l	20	--	20	10/19/10 22:30	10/26/10 08:11	30,5310C(M)	DW





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

**Lab Number:** L1016416  
**Report Date:** 10/26/10

**SAMPLE RESULTS**

**Lab ID:** L1016416-03  
**Client ID:** SHM-10-11-101910-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 10/19/10 14:45  
**Date Received:** 10/19/10  
**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	71		mg/l	20	--	20	10/19/10 22:30	10/26/10 08:11	30,5310C(M)	DW



Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016416

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016416-04

Client ID: DUP-101910-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 10/19/10 11:13

Date Received: 10/19/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	150		mg/l	20	--	20	10/19/10 22:30	10/26/10 08:11	30,5310C(M)	DW



Project Name: SHL TASK 0002

Lab Number: L1016416

Project Number: AC001

Report Date: 10/26/10

**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: WG439468-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	10/19/10 22:30	10/26/10 08:11	30,5310C(M)	DW



**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** SHL TASK 0002**Project Number:** AC001**Lab Number:** L1016416**Report Date:** 10/26/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-04 Batch: WG439468-2								
Dissolved Inorganic Carbon	120							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1016416

Report Date: 10/26/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04 QC Batch ID: WG439468-3 QC Sample: L1016416-02 Client ID: SHM-10-14-101910-U						
Dissolved Inorganic Carbon	140	140	mg/l	0		

Project Name: SHL TASK 0002

Lab Number: L1016416

Project Number: AC001

Report Date: 10/26/10

## 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(*)
L1016416-01A	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-01B	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-01X	Amber 250ml unpreserved	B	6	2.4	Y	Present/Intact	SPECWC()
L1016416-02A	Vial H2SO4 preserved split	A	NA	3	Y	Present/Intact	SPECWC()
L1016416-02B	Vial H2SO4 preserved split	A	NA	3	Y	Present/Intact	SPECWC()
L1016416-02M	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1016416-02O	Vial H2SO4 preserved split	A	NA	3	Y	Present/Intact	SPECWC()
L1016416-02P	Vial H2SO4 preserved split	A	NA	3	Y	Present/Intact	SPECWC()
L1016416-02X	Amber 250ml unpreserved	A	6	3	Y	Present/Intact	SPECWC()
L1016416-03A	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-03B	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-03X	Amber 250ml unpreserved	B	6	2.4	Y	Present/Intact	SPECWC()
L1016416-04A	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-04B	Vial H2SO4 preserved split	B	NA	2.4	Y	Present/Intact	SPECWC()
L1016416-04X	Amber 250ml unpreserved	B	6	2.4	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1016416

Project Number: AC001

Report Date: 10/26/10

## 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:** L1016416

**Project Number:** AC001

**Report Date:** 10/26/10

***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:** L1016416  
**Report Date:** 10/26/10

### 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,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, 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<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 1

Date Rec'd in Lab

10/19/10

ALPHA Lab #

1016416

## Client Information

Client: Sovereign Consulting Inc

Address: 905B South Main St  
Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: pmc@sovereign.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: SHL Task 0002

Project Location: Devens MA

Project #: AC001

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?

## 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 #44 = 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	L E S
		Date	Time			Cl. Sol.	NO <sub>3</sub>	Am	Mn	SRP	TSS	DOC	Total	Diss			
	SHM-10-13-101910-F	10/19/10	1113	GW	CMH									✓		1	
6416-01	SHM-10-13-101910-U	10/19/10	1113	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓			10	
	SHM-10-14-101910-F	10/19/10	1125	GW	EEF									✓	MS/MSD	2	
-02	SHM-10-14-101910-U	10/19/10	1125	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓		MS/MSD	20	
	SHM-10-11-101910-F	10/19/10	1445	GW	EEF									✓		1	
-03	SHM-10-11-101910-U	10/19/10	1445	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓			10	
	DWP-101910-F	10/19/10	1113	GW	CMH									✓		1	
-04	DWP-101910-U	10/19/10	1113	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓			10	
	RB-101910-U	10/19/10	1435	GW	PSV									✓		1	

PLEASE ANSWER QUESTIONS ABOVE!

Container Type

P P P P P P A P P

Preservative

A A A D H E A A C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By

*[Signature]*  
Cris J. [Signature]

Date/Time

10/19/10 1530

Received By:

*[Signature]*  
Cris J. [Signature]

Date/Time

10/19/10 1530

Please print clearly, legibly and completely. Samples can only be lodged in a chain of custody lock will not scan. Analytical facilities are responsible for samples submitted are subject to Alpha's terms and conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number: L1016506

Client: Sovereign Consulting  
905B South Main Street  
Mansfield, MA 02048

ATTN: Neil Schofield

Phone: (508) 339-3200

Project Name: SHL TASK 0002

Project Number: AC001

Report Date: 11/03/10

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:** L1016506  
**Report Date:** 11/03/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1016506-01	SHM-10-12-102010-F	DEVENS, MA	10/20/10 10:35
L1016506-02	SHM-10-12-102010-U	DEVENS, MA	10/20/10 10:35
L1016506-03	SHM-10-15-102010-F	DEVENS, MA	10/20/10 10:50
L1016506-04	SHM-10-15-102010-U	DEVENS, MA	10/20/10 10:50
L1016506-05	SHM-10-16-102010-F	DEVENS, MA	10/20/10 14:35
L1016506-06	SHM-10-16-102010-U	DEVENS, MA	10/20/10 14:35
L1016506-07	DUP-102010-F	DEVENS, MA	10/20/10 10:35
L1016506-08	DUP-102010-U	DEVENS, MA	10/20/10 10:35
L1016506-09	RB-102010-U	DEVENS, MA	10/20/10 12:15

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

**Lab Number:** L1016506  
**Report Date:** 11/03/10

### 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

L1016506-01, -03 and -07 have elevated detection limits for all analytes, except Mercury, due to the dilutions

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

**Case Narrative (continued)**

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

The WG438691-3/-4 MS/MSD recoveries for Arsenic (0%/8%), Iron (0%/40%) and Manganese (MS at 76%), performed on L1016506-03, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG439295-3/-4 MS/MSD recoveries, performed on L1016506-03, are outside the acceptance criteria for Mercury (130%/125%); however, the associated LCS recovery is within criteria. A post-digestion spike was performed with an acceptable recovery of 91%. No further action was required.

**Total Metals**

L1016506-02, -04 and -08 have elevated detection limits for all analytes, except Mercury, due to the dilutions required by the high concentrations of target and non-target analytes. The requested reporting limits were not achieved.

L1016506-09: Positive hits were confirmed by re-analysis.

The WG438690-3/-4 MS/MSD recoveries for Arsenic (MS at 8%), Iron (0%/140%) and Manganese (MS at 38%), performed on L1016506-04, do not apply because the sample concentrations are greater than four times the spike amount added.

The WG439297-3/-4 MS/MSD recoveries, performed on L1016506-04, are outside the acceptance criteria for Mercury (127%/127%); however, the associated LCS recovery is within criteria. A post-digestion spike was performed with an acceptable recovery of 98%. No further action was required.

**Dissolved Organic Carbon**

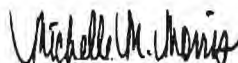
L1016506-02, -04, -06 and -08 have elevated detection limits due to the dilutions required by the sample matrix.

**Alkalinity**

The WG439450-3 MS recovery, performed on L1016506-04, is below the acceptance criteria for Alkalinity (46%). This has been attributed to matrix interference.

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: 11/03/10

## METALS

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-01

Date Collected: 10/20/10 10:35

Client ID: SHM-10-12-102010-F

Date Received: 10/20/10

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	10.8	J	ug/l	50.0	9.56	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.50	0.600	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	2980		ug/l	2.50	0.565	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Barium, Dissolved	42.4		ug/l	2.50	0.475	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Calcium, Dissolved	29000		ug/l	500	63.3	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.50	0.930	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	7.08		ug/l	2.50	0.265	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.50	0.590	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Iron, Dissolved	88700		ug/l	250	42.0	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Lead, Dissolved	ND		ug/l	2.50	0.250	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2180		ug/l	500	20.5	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Manganese, Dissolved	6070		ug/l	5.00	0.680	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.06209	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:09	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	11.7		ug/l	2.50	0.900	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Potassium, Dissolved	4820		ug/l	500	90.8	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	5.00	2.03	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.50	0.425	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Sodium, Dissolved	5220		ug/l	500	91.0	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.50	0.155	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.50	0.385	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM
Zinc, Dissolved	26.7		ug/l	25.0	8.12	5	10/21/10 13:30	10/26/10 02:54	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L 1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-02  
 Client ID: SHM-10-12-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:35  
 Date Received: 10/20/10  
 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	57.4		ug/l	50.0	9.56	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	2.50	0.600	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Arsenic, Total	3120		ug/l	2.50	0.565	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Barium, Total	42.6		ug/l	2.50	0.475	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Calcium, Total	29000		ug/l	500	63.3	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Chromium, Total	1.19	J	ug/l	2.50	0.930	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Cobalt, Total	7.38		ug/l	2.50	0.265	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Copper, Total	0.73	J	ug/l	2.50	0.590	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Iron, Total	90000		ug/l	250	42.0	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Lead, Total	0.79	J	ug/l	2.50	0.250	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Magnesium, Total	2200		ug/l	500	20.5	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Manganese, Total	6200		ug/l	5.00	0.680	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Mercury, Total	0.09511	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:27	EPA 7470A	1,7470A	EZ
Nickel, Total	12.3		ug/l	2.50	0.900	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Potassium, Total	4900		ug/l	500	90.8	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	5.00	2.03	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.50	0.425	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Sodium, Total	5060		ug/l	500	91.0	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.50	0.155	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	2.50	0.385	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM
Zinc, Total	29.2		ug/l	25.0	8.12	5	10/21/10 13:30	10/26/10 03:55	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-03

Date Collected: 10/20/10 10:50

Client ID: SHM-10-15-102010-F

Date Received: 10/20/10

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	ND		ug/l	100	19.1	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	5.00	1.20	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	6230		ug/l	5.00	1.13	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Barium, Dissolved	43.0		ug/l	5.00	0.950	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	5.00	0.590	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	5.00	0.590	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Calcium, Dissolved	51800		ug/l	1000	126.	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	5.00	1.86	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	23.3		ug/l	5.00	0.530	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	5.00	1.18	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Iron, Dissolved	52000		ug/l	500	84.1	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.7	J	ug/l	5.00	0.500	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	6530		ug/l	1000	41.0	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Manganese, Dissolved	8680		ug/l	10.0	1.36	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.0551	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:11	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	15.8		ug/l	5.00	1.80	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Potassium, Dissolved	5500		ug/l	1000	182.	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	10.0	4.06	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	5.00	0.850	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Sodium, Dissolved	12400		ug/l	1000	182.	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	5.00	0.310	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	5.00	0.770	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM
Zinc, Dissolved	42.8	J	ug/l	50.0	16.2	10	10/21/10 13:30	10/26/10 03:07	EPA 3005A	1,6020A	BM





Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-04  
 Client ID: SHM-10-15-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:50  
 Date Received: 10/20/10  
 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	312		ug/l	100	19.1	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	5.00	1.20	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Arsenic, Total	6090		ug/l	5.00	1.13	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Barium, Total	42.4		ug/l	5.00	0.950	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	5.00	0.590	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	5.00	0.590	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Calcium, Total	51200		ug/l	1000	126	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	5.00	1.86	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Cobalt, Total	22.3		ug/l	5.00	0.530	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Copper, Total	1.2	J	ug/l	5.00	1.18	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Iron, Total	50400		ug/l	500	84.1	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Lead, Total	1.48	J	ug/l	5.00	0.500	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Magnesium, Total	6440		ug/l	1000	41.0	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Manganese, Total	8440		ug/l	10.0	1.36	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Mercury, Total	0.07762	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:29	EPA 7470A	1,7470A	EZ
Nickel, Total	16.2		ug/l	5.00	1.80	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Potassium, Total	5350		ug/l	1000	182	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	10.0	4.06	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	5.00	0.850	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Sodium, Total	11600		ug/l	1000	182	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	5.00	0.310	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	5.00	0.770	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM
Zinc, Total	33.6	J	ug/l	50.0	16.2	10	10/21/10 13:30	10/26/10 04:07	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-05

Date Collected: 10/20/10 14:35

Client ID: SHM-10-16-102010-F

Date Received: 10/20/10

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	2.53	J	ug/l	10.0	1.91	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Antimony, Dissolved	0.16	J	ug/l	0.500	0.120	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	1090		ug/l	0.500	0.113	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Barium, Dissolved	51.6		ug/l	0.500	0.095	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	0.06	J	ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	0.06	J	ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Calcium, Dissolved	68100		ug/l	100	12.6	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Chromium, Dissolved	0.28	J	ug/l	0.500	0.186	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	5.51		ug/l	0.500	0.053	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Copper, Dissolved	0.540		ug/l	0.500	0.118	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Iron, Dissolved	46900		ug/l	50.0	8.41	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.08	J	ug/l	0.500	0.050	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	12000		ug/l	100	4.10	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Manganese, Dissolved	1150		ug/l	1.00	0.136	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.03837	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:20	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	3.06		ug/l	0.500	0.180	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Potassium, Dissolved	11800		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Selenium, Dissolved	0.44	J	ug/l	1.00	0.406	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	0.500	0.085	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Sodium, Dissolved	30700		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Thallium, Dissolved	0.06	J	ug/l	0.500	0.031	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	0.13	J	ug/l	0.500	0.077	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM
Zinc, Dissolved	13.0		ug/l	5.00	1.62	1	10/21/10 13:30	10/26/10 03:43	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-06  
 Client ID: SHM-10-16-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 14:35  
 Date Received: 10/20/10  
 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	487		ug/l	10.0	1.91	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Arsenic, Total	1180		ug/l	0.500	0.113	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Barium, Total	59.2		ug/l	0.500	0.095	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Calcium, Total	73200		ug/l	100	12.6	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Chromium, Total	3.50		ug/l	0.500	0.186	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Cobalt, Total	6.56		ug/l	0.500	0.053	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Copper, Total	2.73		ug/l	0.500	0.118	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Iron, Total	51800		ug/l	50.0	8.41	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Lead, Total	0.910		ug/l	0.500	0.050	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Magnesium, Total	13100		ug/l	100	4.10	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Manganese, Total	1250		ug/l	1.00	0.136	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Mercury, Total	0.09046	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 13:43	EPA 7470A	1,7470A	EZ
Nickel, Total	5.28		ug/l	0.500	0.180	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Potassium, Total	12500		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Selenium, Total	0.43	J	ug/l	1.00	0.406	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Sodium, Total	31500		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Vanadium, Total	0.810		ug/l	0.500	0.077	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM
Zinc, Total	36.7		ug/l	5.00	1.62	1	10/21/10 13:30	10/26/10 04:43	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-07  
 Client ID: DUP-102010-F  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:35  
 Date Received: 10/20/10  
 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	50.0	9.56	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Antimony, Dissolved	ND		ug/l	2.50	0.600	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Arsenic, Dissolved	3000		ug/l	2.50	0.565	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Barium, Dissolved	41.9		ug/l	2.50	0.475	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Beryllium, Dissolved	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Calcium, Dissolved	28300		ug/l	500	63.3	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Chromium, Dissolved	ND		ug/l	2.50	0.930	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Cobalt, Dissolved	6.98		ug/l	2.50	0.265	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Copper, Dissolved	ND		ug/l	2.50	0.590	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Iron, Dissolved	87400		ug/l	250	42.0	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Lead, Dissolved	0.27	J	ug/l	2.50	0.250	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Magnesium, Dissolved	2120		ug/l	500	20.5	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Manganese, Dissolved	6030		ug/l	5.00	0.680	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Mercury, Dissolved	0.0624	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:22	EPA 7470A	1,7470A	EZ
Nickel, Dissolved	11.4		ug/l	2.50	0.900	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Potassium, Dissolved	4670		ug/l	500	90.8	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Selenium, Dissolved	ND		ug/l	5.00	2.03	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Silver, Dissolved	ND		ug/l	2.50	0.425	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Sodium, Dissolved	4870		ug/l	500	91.0	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Thallium, Dissolved	ND		ug/l	2.50	0.155	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	2.50	0.385	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM
Zinc, Dissolved	27.8		ug/l	25.0	8.12	5	10/21/10 13:30	10/26/10 03:49	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-08  
 Client ID: DUP-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:35  
 Date Received: 10/20/10  
 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	50.2		ug/l	50.0	9.56	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	2.50	0.600	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Arsenic, Total	3160		ug/l	2.50	0.565	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Barium, Total	42.8		ug/l	2.50	0.475	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	2.50	0.295	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Calcium, Total	29200		ug/l	500	63.3	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Chromium, Total	0.97	J	ug/l	2.50	0.930	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Cobalt, Total	7.33		ug/l	2.50	0.265	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Copper, Total	0.62	J	ug/l	2.50	0.590	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Iron, Total	90900		ug/l	250	42.0	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Lead, Total	0.7	J	ug/l	2.50	0.250	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Magnesium, Total	2240		ug/l	500	20.5	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Manganese, Total	6320		ug/l	5.00	0.680	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Mercury, Total	0.1153	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 13:45	EPA 7470A	1,7470A	EZ
Nickel, Total	12.3		ug/l	2.50	0.900	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Potassium, Total	4940		ug/l	500	90.8	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	5.00	2.03	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	2.50	0.425	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Sodium, Total	5210		ug/l	500	91.0	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	2.50	0.155	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	2.50	0.385	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM
Zinc, Total	25.2		ug/l	25.0	8.12	5	10/21/10 13:30	10/26/10 04:49	EPA 3005A	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-09

Date Collected: 10/20/10 12:15

Client ID: RB-102010-U

Date Received: 10/20/10

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	ND		ug/l	10.0	1.91	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Antimony, Total	ND		ug/l	0.500	0.120	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Arsenic, Total	15.0		ug/l	0.500	0.113	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Barium, Total	0.23	J	ug/l	0.500	0.095	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Beryllium, Total	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Cadmium, Total	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Calcium, Total	335		ug/l	100	12.6	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Chromium, Total	ND		ug/l	0.500	0.186	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Cobalt, Total	ND		ug/l	0.500	0.053	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Copper, Total	0.14	J	ug/l	0.500	0.118	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Iron, Total	106		ug/l	50.0	8.41	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Lead, Total	ND		ug/l	0.500	0.050	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Magnesium, Total	62.6	J	ug/l	100	4.10	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Manganese, Total	18.4		ug/l	1.00	0.136	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Mercury, Total	0.1199	J	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 13:47	EPA 7470A	1,7470A	EZ
Nickel, Total	0.25	J	ug/l	0.500	0.180	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Potassium, Total	ND		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Selenium, Total	ND		ug/l	1.00	0.406	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Silver, Total	ND		ug/l	0.500	0.085	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Sodium, Total	714		ug/l	100	18.2	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Thallium, Total	ND		ug/l	0.500	0.031	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Vanadium, Total	ND		ug/l	0.500	0.077	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM
Zinc, Total	2.16	J	ug/l	5.00	1.62	1	10/21/10 13:30	10/26/10 04:55	EPA 3005A	1,6020A	BM

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

### 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: WG438690-1									
Aluminum, Total	ND	ug/l	10.0	1.91	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Antimony, Total	ND	ug/l	0.500	0.120	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Arsenic, Total	ND	ug/l	0.500	0.113	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Barium, Total	ND	ug/l	0.500	0.095	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Beryllium, Total	ND	ug/l	0.500	0.059	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Cadmium, Total	ND	ug/l	0.500	0.059	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Calcium, Total	ND	ug/l	100	12.6	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Chromium, Total	ND	ug/l	0.500	0.186	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Cobalt, Total	ND	ug/l	0.500	0.053	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Copper, Total	ND	ug/l	0.500	0.118	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Iron, Total	ND	ug/l	50.0	8.41	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Lead, Total	ND	ug/l	0.500	0.050	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Magnesium, Total	ND	ug/l	100	4.10	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Manganese, Total	ND	ug/l	1.00	0.136	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Nickel, Total	ND	ug/l	0.500	0.180	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Potassium, Total	ND	ug/l	100	18.2	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Selenium, Total	ND	ug/l	1.00	0.406	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Silver, Total	0.13	ug/l	0.500	0.085	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Sodium, Total	ND	ug/l	100	18.2	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Thallium, Total	ND	ug/l	0.500	0.031	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Vanadium, Total	ND	ug/l	0.500	0.077	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Zinc, Total	ND	ug/l	5.00	1.62	1	10/21/10 13:30	10/25/10 22:15	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: WG438691-1									
Aluminum, Dissolved	ND	ug/l	10.0	1.91	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Antimony, Dissolved	ND	ug/l	0.500	0.120	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Arsenic, Dissolved	ND	ug/l	0.500	0.113	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Barium, Dissolved	ND	ug/l	0.500	0.095	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM



Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

### Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Cadmium, Dissolved	ND		ug/l	0.500	0.059	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Calcium, Dissolved	ND		ug/l	100	12.6	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Chromium, Dissolved	ND		ug/l	0.500	0.186	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Cobalt, Dissolved	ND		ug/l	0.500	0.053	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Copper, Dissolved	ND		ug/l	0.500	0.118	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Iron, Dissolved	ND		ug/l	50.0	8.41	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Lead, Dissolved	ND		ug/l	0.500	0.050	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Magnesium, Dissolved	ND		ug/l	100	4.10	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Manganese, Dissolved	ND		ug/l	1.00	0.136	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Nickel, Dissolved	ND		ug/l	0.500	0.180	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Potassium, Dissolved	ND		ug/l	100	18.2	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Selenium, Dissolved	ND		ug/l	1.00	0.406	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Silver, Dissolved	0.13	J	ug/l	0.500	0.085	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Sodium, Dissolved	ND		ug/l	100	18.2	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Thallium, Dissolved	ND		ug/l	0.500	0.031	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Vanadium, Dissolved	ND		ug/l	0.500	0.077	1	10/21/10 13:30	10/25/10 22:15	1,6020A	BM
Zinc, Dissolved	ND		ug/l	5.00	1.62	1	10/21/10 13:30	10/25/10 22:15	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: WG439295-1									
Mercury, Dissolved	ND	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:06	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): 02,04,06,08-09 Batch: WG439297-1									
Mercury, Total	ND	ug/l	0.2000	0.0120	1	10/25/10 17:12	10/26/10 12:24	1,7470A	EZ



**Project Name:** SHL TASK 0002

**Lab Number:** L1016506

**Project Number:** AC001

**Report Date:** 11/03/10

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

### **Prep Information**

Digestion Method: EPA 7470A



**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

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: WG438690-2								
Aluminum, Total	96		-		80-120	-		
Antimony, Total	100		-		80-120	-		
Arsenic, Total	102		-		80-120	-		
Barium, Total	99		-		80-120	-		
Beryllium, Total	100		-		80-120	-		
Cadmium, Total	109		-		80-120	-		
Calcium, Total	103		-		80-120	-		
Chromium, Total	98		-		80-120	-		
Cobalt, Total	104		-		80-120	-		
Copper, Total	105		-		80-120	-		
Iron, Total	96		-		80-120	-		
Lead, Total	107		-		80-120	-		
Magnesium, Total	102		-		80-120	-		
Manganese, Total	107		-		80-120	-		
Nickel, Total	104		-		80-120	-		
Potassium, Total	101		-		80-120	-		
Selenium, Total	103		-		80-120	-		
Silver, Total	97		-		80-120	-		
Sodium, Total	101		-		80-120	-		
Thallium, Total	93		-		80-120	-		
Vanadium, Total	99		-		80-120	-		

**Lab Control Sample Analysis**

Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG438690-2					
Zinc, Total	105	-	80-120	-	

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG438691-2					
Aluminum, Dissolved	96	-	80-120	-	
Antimony, Dissolved	100	-	80-120	-	
Arsenic, Dissolved	102	-	80-120	-	
Barium, Dissolved	99	-	80-120	-	
Beryllium, Dissolved	100	-	80-120	-	
Cadmium, Dissolved	109	-	80-120	-	
Calcium, Dissolved	103	-	80-120	-	
Chromium, Dissolved	98	-	80-120	-	
Cobalt, Dissolved	104	-	80-120	-	
Copper, Dissolved	105	-	80-120	-	
Iron, Dissolved	96	-	80-120	-	
Lead, Dissolved	107	-	80-120	-	
Magnesium, Dissolved	102	-	80-120	-	
Manganese, Dissolved	107	-	80-120	-	
Nickel, Dissolved	104	-	80-120	-	
Potassium, Dissolved	101	-	80-120	-	
Selenium, Dissolved	103	-	80-120	-	
Silver, Dissolved	97	-	80-120	-	
Sodium, Dissolved	101	-	80-120	-	
Thallium, Dissolved	93	-	80-120	-	
Vanadium, Dissolved	99	-	80-120	-	

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

**Project Name:** SHL TASK 0002

**Project Number:** AC001

**Lab Number:** L1016506

**Report Date:** 11/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG438691-2					
Zinc, Dissolved	105	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 Batch: WG439295-2					
Mercury, Dissolved	111	-	80-120	-	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 Batch: WG439297-2					
Mercury, Total	111	-	80-120	-	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

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: WG438690-3 WG438690-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Aluminum, Total	312.	2000	2300	99		2360	102		80-120	3		20
Antimony, Total	ND	500	496	99		502	100		80-120	1		20
Arsenic, Total	6090	120	6100	8		6210	100		80-120	2		20
Barium, Total	42.4	2000	2040	100		2060	101		80-120	1		20
Beryllium, Total	ND	50	50.5	101		50.2	100		80-120	1		20
Cadmium, Total	ND	51	55.6	109		56.3	110		80-120	1		20
Calcium, Total	51200	10000	59800	86		60800	96		80-120	2		20
Chromium, Total	ND	200	192	96		196	98		80-120	2		20
Cobalt, Total	22.3	500	515	98		526	101		80-120	2		20
Copper, Total	1.2J	250	259	104		262	105		80-120	1		20
Iron, Total	50400	1000	50300	0		51800	140		80-120	3		20
Lead, Total	1.48J	510	527	103		530	104		80-120	1		20
Magnesium, Total	6440	10000	16400	100		16900	105		80-120	3		20
Manganese, Total	8440	500	8630	38		8890	90		80-120	3		20
Nickel, Total	16.2	500	530	103		538	104		80-120	1		20
Potassium, Total	5350	10000	15400	100		15700	104		80-120	2		20
Selenium, Total	ND	120	123	102		124	103		80-120	1		20
Silver, Total	ND	50	48.7	97		49.4	99		80-120	1		20
Sodium, Total	11600	10000	21500	99		21800	102		80-120	1		20
Thallium, Total	ND	120	111	92		112	93		80-120	1		20
Vanadium, Total	ND	500	475	95		482	96		80-120	1		20



# **Matrix Spike Analysis** Batch Quality Control

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

**Lab Number:** L1016506  
**Report Date:** 11/03/10

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: WG438690-3 WG438690-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U									
Zinc, Total	33.6J	500	530	106	532	106	80-120	0	20

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

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: WG438691-3 WG438691-4 QC Sample: L1016506-03 Client ID: SHM-10-15-102010-F									
Aluminum, Dissolved	ND	2000	2050	102	2070	104	80-120	1	20
Antimony, Dissolved	ND	500	519	104	521	104	80-120	0	20
Arsenic, Dissolved	6230	120	6200	0	6240	8	80-120	1	20
Barium, Dissolved	43.0	2000	2110	103	2120	104	80-120	0	20
Beryllium, Dissolved	ND	50	50.8	102	52.9	106	80-120	4	20
Cadmium, Dissolved	ND	51	58.1	114	58.8	115	80-120	1	20
Calcium, Dissolved	51800	10000	61700	99	62000	102	80-120	0	20
Chromium, Dissolved	ND	200	200	100	203	102	80-120	1	20
Cobalt, Dissolved	23.3	500	536	102	539	103	80-120	1	20
Copper, Dissolved	ND	250	268	107	270	108	80-120	1	20
Iron, Dissolved	52000	1000	51700	0	52400	40	80-120	1	20
Lead, Dissolved	0.7J	510	540	106	536	105	80-120	1	20
Magnesium, Dissolved	6530	10000	17100	106	17200	107	80-120	1	20
Manganese, Dissolved	8680	500	9060	76	9110	86	80-120	1	20
Nickel, Dissolved	15.8	500	553	107	553	107	80-120	0	20
Potassium, Dissolved	5500	10000	16100	106	16300	108	80-120	1	20
Selenium, Dissolved	ND	120	126	105	127	106	80-120	1	20
Silver, Dissolved	ND	50	50.5	101	50.6	101	80-120	0	20
Sodium, Dissolved	12400	10000	22200	98	22600	102	80-120	2	20
Thallium, Dissolved	ND	120	114	95	113	94	80-120	1	20
Vanadium, Dissolved	ND	500	495	99	499	100	80-120	1	20

# **Matrix Spike Analysis** Batch Quality Control

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

**Lab Number:** L1016506  
**Report Date:** 11/03/10

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: WG438691-3 WG438691-4 QC Sample: L1016506-03 Client ID: SHM-10-15-102010-F									
Zinc, Dissolved	42.8J	500	562	112	568	114	80-120	1	20
Dissolved Metals - Westborough Lab Associated sample(s): 01,03,05,07 QC Batch ID: WG439295-3 WG439295-4 QC Sample: L1016506-03 Client ID: SHM-10-15-102010-F									
Mercury, Dissolved	0.0551J	1	1.305	130	Q 1.248	125	Q 80-120	4	20
Total Metals - Westborough Lab Associated sample(s): 02,04,06,08-09 QC Batch ID: WG439297-3 WG439297-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U									
Mercury, Total	0.07762J	1	1.271	127	Q 1.273	127	Q 80-120	0	20

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-02  
 Client ID: SHM-10-12-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:35  
 Date Received: 10/20/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	240		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	10/25/10 11:38	30,2320B	SD
Solids, Total Suspended	16		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	3.80		mg/l	0.075	0.017	1	10/21/10 13:30	10/26/10 20:05	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	10/20/10 23:58	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	33		mg/l	20	7.0	1	-	10/26/10 13:09	44,410.4	DW
Dissolved Organic Carbon	4.3		mg/l	2.0	2.0	2	10/20/10 23:10	10/27/10 07:41	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	4.4		mg/l	0.50	0.07	1	-	10/22/10 00:26	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/22/10 00:26	44,300.0	AU
Sulfate	1.4		mg/l	1.0	0.12	1	-	10/22/10 00:26	44,300.0	AU

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-04  
 Client ID: SHM-10-15-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 10:50  
 Date Received: 10/20/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	230		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	10/25/10 11:38	30,2320B	SD
Solids, Total Suspended	140		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	2.15		mg/l	0.075	0.017	1	10/21/10 13:30	10/26/10 20:05	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	0.01	J	mg/l	0.02	0.002	1	-	10/20/10 23:58	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S <sub>2</sub> -AD	AT
Chemical Oxygen Demand	64		mg/l	20	7.0	1	-	10/26/10 13:09	44,410.4	DW
Dissolved Organic Carbon	4.0		mg/l	2.0	2.0	2	10/20/10 23:10	10/27/10 07:41	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	12		mg/l	0.50	0.07	1	-	10/22/10 00:14	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/22/10 00:14	44,300.0	AU
Sulfate	10		mg/l	1.0	0.12	1	-	10/22/10 00:14	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## SAMPLE RESULTS

Lab ID: L1016506-06  
 Client ID: SHM-10-16-102010-U  
 Sample Location: DEVENS, MA  
 Matrix: Water

Date Collected: 10/20/10 14:35  
 Date Received: 10/20/10  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	320		mg CaCO3/L	2.0	NA	1	-	10/25/10 11:38	30,2320B	SD
Solids, Total Suspended	170		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	3.34		mg/l	0.075	0.017	1	10/21/10 13:30	10/26/10 20:08	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	10/20/10 23:59	30,4500NO2-B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
Chemical Oxygen Demand	57		mg/l	20	7.0	1	-	10/26/10 13:09	44,410.4	DW
Dissolved Organic Carbon	10		mg/l	8.0	8.0	8	10/20/10 23:10	10/27/10 07:41	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	28		mg/l	0.50	0.07	1	-	10/21/10 23:26	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/21/10 23:26	44,300.0	AU
Sulfate	3.2		mg/l	1.0	0.12	1	-	10/21/10 23:26	44,300.0	AU





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

**Lab Number:** L1016506  
**Report Date:** 11/03/10

**SAMPLE RESULTS**

**Lab ID:** L1016506-08  
**Client ID:** DUP-102010-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 10/20/10 10:35  
**Date Received:** 10/20/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	230		mg CaCO <sub>3</sub> /L	2.0	NA	1	-	10/25/10 11:38	30,2320B	SD
Solids, Total Suspended	14		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
Nitrogen, Ammonia	3.61		mg/l	0.075	0.017	1	10/21/10 13:30	10/26/10 20:09	30,4500NH <sub>3</sub> -BH	AT
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	10/20/10 23:59	30,4500NO <sub>2</sub> -B	DD
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S <sub>2</sub> -AD	AT
Chemical Oxygen Demand	41		mg/l	20	7.0	1	-	10/26/10 13:09	44,410.4	DW
Dissolved Organic Carbon	4.5		mg/l	2.0	2.0	2	10/20/10 23:10	10/27/10 07:41	30,5310C	DW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	4.4		mg/l	0.50	0.07	1	-	10/22/10 00:38	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/22/10 00:38	44,300.0	AU
Sulfate	1.3		mg/l	1.0	0.12	1	-	10/22/10 00:38	44,300.0	AU



Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

### 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): 02,04,06,08 Batch: WG438561-2										
Nitrogen, Nitrite	ND		mg/l	0.02	0.002	1	-	10/20/10 23:57	30,4500NO2-B	DD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438639-1										
Nitrogen, Ammonia	0.0203	J	mg/l	0.075	0.017	1	10/21/10 13:30	10/26/10 19:54	30,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04,06,08 Batch: WG438802-1										
Chloride	ND		mg/l	0.50	0.07	1	-	10/21/10 19:38	44,300.0	AU
Nitrogen, Nitrate	ND		mg/l	0.05	0.01	1	-	10/21/10 19:38	44,300.0	AU
Sulfate	0.16	J	mg/l	1.0	0.12	1	-	10/21/10 19:38	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439136-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	10/25/10 13:40	30,2540D	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439344-1										
Sulfide	ND		mg/l	0.10	0.10	1	10/25/10 16:50	10/25/10 17:50	30,4500S2-AD	AT
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439362-1										
Chemical Oxygen Demand	ND		mg/l	20	7.0	1	-	10/26/10 12:57	44,410.4	DW
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439450-1										
Alkalinity, Total	ND		mg CaCO3/L	2.0	NA	1	-	10/25/10 11:38	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 02,04,06,08 Batch: WG439746-1										
Dissolved Organic Carbon	ND		mg/l	1.0	1.0	1	10/20/10 23:10	10/27/10 07:41	30,5310C	DW

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

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438561-1								
Nitrogen, Nitrite	100		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438639-2								
Nitrogen, Ammonia	100		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG438802-2								
Chloride	100		-		90-110	-		
Nitrogen, Nitrate	100		-		90-110	-		
Sulfate	105		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439344-2								
Sulfide	100		-		75-125	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439362-2								
Chemical Oxygen Demand	101		-		95-105	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439450-2								
Alkalinity, Total	101		-		80-115	-		11

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 Batch: WG439746-2					
Dissolved Organic Carbon	106	-	90-110	-	

# **Matrix Spike Analysis** Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016506

Report Date: 11/03/10

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): 02,04,06,08 QC Batch ID: WG438561-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Nitrogen, Nitrite	0.01J	0.1	0.10	100		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438639-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Nitrogen, Ammonia	2.15	4	6.04	97		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438802-3 WG438802-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Chloride	12	4	15	75		15	75		40-151	0		18
Nitrogen, Nitrate	ND	0.4	0.43	108		0.43	108		80-122	0		15
Sulfate	10	8	19	112		19	112		60-140	0		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439344-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Sulfide	ND	0.26	0.25	96		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439362-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Chemical Oxygen Demand	64	238	290	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439450-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Alkalinity, Total	230	100	280	46	Q	-	-		86-116	-		11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439746-3 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U												
Dissolved Organic Carbon	4.0	8	12	99		-	-		79-120	-		20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1016506

Report Date: 11/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438561-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Nitrogen, Nitrite	0.01J	0.01J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438639-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Nitrogen, Ammonia	2.15	2.22	mg/l	3		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG438802-5 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Chloride	12.	11	mg/l	9		18
Nitrogen, Nitrate	ND	ND	mg/l	NC		15
Sulfate	10.	10	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439136-2 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Solids, Total Suspended	140	180	mg/l	25		32
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439344-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Sulfide	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439362-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U						
Chemical Oxygen Demand	64.	62	mg/l	3		20

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**  
Batch Quality Control

Lab Number: L1016506

Report Date: 11/03/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439450-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U					
Alkalinity, Total	230	220	mg CaCO3/L	4	11
General Chemistry - Westborough Lab Associated sample(s): 02,04,06,08 QC Batch ID: WG439746-4 QC Sample: L1016506-04 Client ID: SHM-10-15-102010-U					
Dissolved Organic Carbon	4.0	3.5	mg/l	13	20



Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

**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

A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-01A	Plastic 250ml HNO3 preserved	A	<2	2	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: L1016506

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-02A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-02B	Plastic 500ml unpreserved	A	7	2	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016506-02C	Plastic 250ml unpreserved	A	7	2	Y	Present/Intact	NO2-4500NO2(2)
L1016506-02D	Plastic 250ml unpreserved	A	N/A	2	Y	Present/Intact	ALK-T-2320(14)
L1016506-02E	Plastic 500ml H2SO4 preserved	A	<2	2	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016506-02F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-02G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-02I	Plastic 1000ml unpreserved	A	7	2	Y	Present/Intact	TSS-2540(7)
L1016506-02J	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-02K	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-02X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-03A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-03B	Plastic 250ml HNO3 preserved	A	<2	2	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: L1016506

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-04A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-04B	Plastic 500ml unpreserved	A	7	2	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016506-04C	Plastic 250ml unpreserved	A	7	2	Y	Present/Intact	NO2-4500NO2(2)
L1016506-04D	Plastic 250ml unpreserved	A	N/A	2	Y	Present/Intact	ALK-T-2320(14)
L1016506-04E	Plastic 500ml H2SO4 preserved	A	<2	2	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016506-04F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-04G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-04I	Plastic 1000ml unpreserved	A	7	2	Y	Present/Intact	TSS-2540(7)
L1016506-04J	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-04K	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-04L	Plastic 250ml unpreserved	A	N/A	2	Y	Present/Intact	ALK-T-2320(14)
L1016506-04M	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	DOC-5310(28)
L1016506-04N	Plastic 500ml unpreserved	A	7	2	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016506-04O	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-04P	Plastic 500ml H2SO4 preserved	A	<2	2	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016506-04R	Plastic 1000ml unpreserved	A	7	2	Y	Present/Intact	TSS-2540(7)

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1016506

Project Number: AC001

Report Date: 11/03/10

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-04S	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-04T	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-04U	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-04V	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-04X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	DOC-5310(28)
L1016506-04Y	Plastic 250ml unpreserved	A	7	2	Y	Present/Intact	NO2-4500NO2(2)
L1016506-05A	Plastic 250ml HNO3 preserved	A	<2	2	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: L1016506

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-06A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-06B	Plastic 500ml unpreserved	A	7	2	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016506-06C	Plastic 250ml unpreserved	A	7	2	Y	Present/Intact	NO2-4500NO2(2)
L1016506-06D	Plastic 250ml unpreserved	A	N/A	2	Y	Present/Intact	ALK-T-2320(14)
L1016506-06E	Plastic 500ml H2SO4 preserved	A	<2	2	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016506-06F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-06G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-06I	Plastic 1000ml unpreserved	A	7	2	Y	Present/Intact	TSS-2540(7)
L1016506-06J	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-06K	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-06X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	DOC-5310(28)

\*Values in parentheses indicate holding time in days

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Lab Number: L1016506

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## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1016506-07A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-08A	Plastic 250ml HNO3 preserved	A	<2	2	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)
L1016506-08B	Plastic 500ml unpreserved	A	7	2	Y	Present/Intact	SO4-300(28),CL-300(28),NO3-300(2)
L1016506-08C	Plastic 250ml unpreserved	A	7	2	Y	Present/Intact	NO2-4500NO2(2)
L1016506-08D	Plastic 250ml unpreserved	A	N/A	2	Y	Present/Intact	ALK-T-2320(14)
L1016506-08E	Plastic 500ml H2SO4 preserved	A	<2	2	Y	Present/Intact	COD-410(28),NH3-4500(28)
L1016506-08F	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-08G	Plastic 250ml Zn Acetate/NaOH pr	A	>12	2	Y	Present/Intact	SULFIDE-4500(7)
L1016506-08I	Plastic 1000ml unpreserved	A	7	2	Y	Present/Intact	TSS-2540(7)
L1016506-08J	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	DOC-5310(28)
L1016506-08K	Vial H2SO4 preserved split	A	N/A	2	Y	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(*)
L1016506-08X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	DOC-5310(28)
L1016506-09A	Plastic 500ml HNO3 preserved	A	<2	2	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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## 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:** L1016506

**Project Number:** AC001

**Report Date:** 11/03/10

*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

**Lab Number:** L1016506

**Project Number:** AC001

**Report Date:** 11/03/10

## 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 its 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-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, 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, 4500NH<sub>3</sub>-H, 4500NO<sub>2</sub>B, 4500P-E, 4500 S<sub>2</sub> 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: L1016507

Client: Sovereign Consulting  
905B South Main Street  
Mansfield, MA 02048

ATTN: Neil Schofield  
Phone: (508) 339-3200

Project Name: SHL TASK 0002

Project Number: AC001

Report Date: 10/26/10

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:** L1016507  
**Report Date:** 10/26/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1016507-01	SHM-10-12-102010-U	DEVENS, MA	10/20/10 10:35
L1016507-02	SHM-10-15-102010-U	DEVENS, MA	10/20/10 10:50
L1016507-03	SHM-10-16-102010-U	DEVENS, MA	10/20/10 14:35
L1016507-04	DUP-102010-U	DEVENS, MA	10/20/10 10:35

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

**Lab Number:** L1016507  
**Report Date:** 10/26/10

### 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.

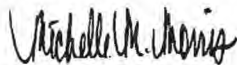
### Dissolved Inorganic Carbon

L1016507-01 through -04 have elevated detection limits due to the dilutions required by the elevated concentration present in the samples.

WG439469: A matrix spike could not be performed due to insufficient 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: 10/26/10

# **INORGANICS & MISCELLANEOUS**

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016507

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016507-01  
Client ID: SHM-10-12-102010-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 10/20/10 10:35  
Date Received: 10/20/10  
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	10/20/10 23:10	10/26/10 08:11	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: ACO01

Lab Number: L1016507

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016507-02  
Client ID: SHM-10-15-102010-U  
Sample Location: DEVENS, MA  
Matrix: Water

Date Collected: 10/20/10 10:50  
Date Received: 10/20/10  
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	95		mg/l	20	--	20	10/20/10 23:10	10/26/10 08:11	30,5310C(M)	DW



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

**Lab Number:** L1016507  
**Report Date:** 10/26/10

**SAMPLE RESULTS**

**Lab ID:** L1016507-03  
**Client ID:** SHM-10-16-102010-U  
**Sample Location:** DEVENS, MA  
**Matrix:** Water

**Date Collected:** 10/20/10 14:35  
**Date Received:** 10/20/10  
**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	100		mg/l	20	--	20	10/20/10 23:10	10/26/10 08:11	30,5310C(M)	DW

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016507

Report Date: 10/26/10

## SAMPLE RESULTS

Lab ID: L1016507-04

Client ID: DUP-102010-U

Sample Location: DEVENS, MA

Matrix: Water

Date Collected: 10/20/10 10:35

Date Received: 10/20/10

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry										
Dissolved Inorganic Carbon	140		mg/l	20	--	20	10/20/10 23:10	10/26/10 08:11	30,5310C(M)	DW



Project Name: SHL TASK 0002

Lab Number: L1016507

Project Number: AC001

Report Date: 10/26/10

**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: WG439469-1										
Dissolved Inorganic Carbon	ND		mg/l	1.0	--	1	10/20/10 23:10	10/26/10 08:11	30,5310C(M)	DW



**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: SHL TASK 0002

Project Number: AC001

Lab Number: L1016507

Report Date: 10/26/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Associated sample(s): 01-04 Batch: WG439469-2								
Dissolved Inorganic Carbon	120							

Project Name: SHL TASK 0002

Project Number: AC001

**Lab Duplicate Analysis**

Batch Quality Control

Lab Number: L1016507

Report Date: 10/26/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Associated sample(s): 01-04 QC Batch ID: WG439469-3 QC Sample: L1016507-02 Client ID: SHM-10-15-102010-U						
Dissolved Inorganic Carbon	95	98	mg/l	3		

Project Name: SHL TASK 0002

Lab Number: L1016507

Project Number: AC001

Report Date: 10/26/10

**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(*)
L1016507-01A	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-01B	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-01X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	SPECWC()
L1016507-02A	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-02B	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-02C	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-02D	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-02X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	SPECWC()
L1016507-02Y	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	SPECWC()
L1016507-03A	Vial H2SO4 preserved split	B	N/A	2	Y	Present/Intact	SPECWC()
L1016507-03B	Vial H2SO4 preserved split	B	N/A	2	Y	Present/Intact	SPECWC()
L1016507-03X	Amber 250ml unpreserved	B	7	2	Y	Present/Intact	SPECWC()
L1016507-04A	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-04B	Vial H2SO4 preserved split	A	N/A	2	Y	Present/Intact	SPECWC()
L1016507-04X	Amber 250ml unpreserved	A	7	2	Y	Present/Intact	SPECWC()

\*Values in parentheses indicate holding time in days

Project Name: SHL TASK 0002

Lab Number: L1016507

Project Number: AC001

Report Date: 10/26/10

## 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:** L1016507

**Project Number:** AC001

**Report Date:** 10/26/10

***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:** L1016507

**Project Number:** AC001

**Report Date:** 10/26/10

## 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,Ti)

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

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

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

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

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

**Non-Potable Water**

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

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

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

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

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

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

*Drinking Water (Inorganic Parameters:* SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 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.





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

## Project Information

Project Name: SHL Task 0002

Project Location: Devens MA

Project #: AC001

Project Manager: Phil McBain

ALPHA Quote #:

## Turn-Around Time

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

Date Due: 10/27/10 Time:

## Client Information

Client: Sovereign Consulting, Inc

Address: 905B South Main St

Mansfield MA 02048

Phone: 508-339-3200

Fax: 508-339-3248

Email: p.mcain@sover.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)

SPG# 45 - Closed

\* Done as noted F = Field Filtered

Date Rec'd in Lab:

ALPHA Job #

## 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	ANALYSIS										Sample Specific Comments	TOTAL # BOTTLES
		Date	Time			CL/500	NO <sub>2</sub>	Alk	Mn, CO <sub>2</sub>	TSS	DOC	Sulfide	Diss	Total			
	SHM-10-12-102010-F	10/20/10	1035	GW	CMH								✓				1
607	SHM-10-12-102010-U	10/20/10	1035	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓				10
	SHM-10-15-102010-F	10/20/10	1050	GW	BSJV								✓			MS/MSD	2
12	SHM-10-15-102010-U	10/20/10	1050	GW	SSV	✓	✓	✓	✓	✓	✓	✓	✓			MS/MSD	20
	SHM-10-16-102010-F	10/20/10	1435	GW	EEF								✓				1
13	SHM-10-16-102010-U	10/20/10	1435	GW	EEF	✓	✓	✓	✓	✓	✓	✓	✓				10
	DUP-102010-F	10/20/10	1035	GW	CMH								✓				1
14	DUP-102010-U	10/20/10	1035	GW	CMH	✓	✓	✓	✓	✓	✓	✓	✓				10
	RB-102010-U	10/20/10	1215	GW	PSV								✓				1

PLEASE ANSWER QUESTIONS ABOVE!

Container Type

P P P P P A P P P

Preservative

A A A D A A / E C C

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:

Date/Time

Received By:

Date/Time

[Signature]  
[Signature]

10/20/10 1600

10/20/10 1630

[Signature]  
[Signature]

10/20/10 1600

10/20/10 1630

Please print clearly, legibly and completely. Samples can only be loaded in and to Alpha containers. Will not accept any containers or samples that do not meet these requirements. All samples handled at Alpha. See reverse side.