

**Northeast  
Utilities System**

Public Service of New Hampshire  
Northeast Utilities System  
Merrimack Station  
97 River Road  
Bow, New Hampshire 03304

Phone (603) 224-4081  
Fax (603) 634-2334

January 30, 2014

Mr. Mike Butler  
Staff Engineer  
Lowell Regional Wastewater Utility  
451 First Street Boulevard (Route 110)  
Lowell, Massachusetts 01850

Re: Quarter 4 Monthly Self-Monitoring Report  
October through December 2013  
Merrimack Station  
Public Service Company of New Hampshire  
Bow, New Hampshire

Dear Mr. Butler:

Public Service Company of New Hampshire (PSNH) is pleased to submit the attached **Self-Monitoring Report (SMR)** for the period October 1, 2013 through December 31, 2013. This SMR is intended to satisfy Condition 6 of Industrial Hauled Waste Permit (HWP) No. HW002 issued on July 1, 2013 to PSNH by the Lowell Regional Wastewater Utility (LRWU). The discharged volume of Softened Stream B Wastewater was approximately 64,000 for the monitoring period. The discharged volume of Combination WW was approximately 16,000 for the monitoring period. Softened Stream B Wastewater and Combination WW were the only approved waste streams discharged to LRWU during the fourth quarter of 2013. Wastewater flow was estimated based on the actual number of tanker trucks sent to LRWU during the third quarter of 2013 and tanker capacity.

The attached **SMR Summary Sheet** summarizes the analytical results contained in the attached **Analytical Data Reports** for all required parameters as outlined in Condition 6 of the HWP. In addition to the required analysis, the Combination WW sample was analyzed for the metals which have an associated Local Sewer Discharge Limit. The attached **Table 1** compares the analytical results from samples collected on November 27, 2014, December 19, 2014, and December 31, 2013 to the LRWU's Local Sewer Discharge Limits. The results indicate that pollutant concentrations were within the limits on the days of sampling. The attached **Table 2** summarizes wastewater shipments to LRWU in the fourth quarter of 2013. The analyses of the Softened Stream B sample and the Combination WW samples collected on November 27, 2013 and December 19, 2013, respectively were performed in accordance with the United States Environmental Protection Agency (EPA) draft Standard Operating Procedure (SOP) for trace metals analysis of flue gas desulfurization (FGD) wastewater. The December 31, 2014 sample was not analyzed for metals. The SOP is described below.

#### **ANALYTICAL DISCUSSION**

FGD wastewater requires specialized analytical techniques to overcome matrix interferences for analysis of certain trace metals. To assist you in evaluating this issue further, we offer an excerpt below from the EPA web site and a link to their draft SOP for trace metals analysis of FGD wastewater that contains further guidance.

## LABORATORY ANALYSIS OF FGD WASTEWATER

Wastewater from FGD systems can contain constituents known to cause matrix interferences. EPA has observed that, during inductively coupled plasma-mass spectrometry (ICP-MS) analysis of FGD wastewater, certain elements commonly present in the wastewater may cause polyatomic interferences that bias the detection and/or quantization of certain elements of interest. These potential interferences may become significant when measuring trace elements at concentrations in the low parts-per-billion range.

As part of a recent sampling effort for the steam electric power generating effluent guidelines rulemaking, EPA developed a draft SOP that was used in conjunction with EPA Method 200.8 to conduct ICP-MS analyses of FGD wastewater. The draft SOP describes critical technical and quality assurance procedures that were implemented to mitigate anticipated interferences and generate reliable data for FGD wastewater. EPA regulations at 40 CFR 136.6 already allow the analytical community flexibility to modify approved methods to lower the costs of measurements, overcome matrix interferences, or otherwise improve the analysis. The draft SOP developed for FGD wastewater takes a proactive approach toward looking for and taking steps to mitigate matrix interferences, including using specialized interference check solutions (i.e., a synthetic FGD wastewater matrix). EPA's draft SOP is being made available to laboratories contemplating ICP-MS analysis of FGD wastewater, either for adoption as currently written or to serve as a framework for developing their own laboratory-specific SOPs. For further information, see:

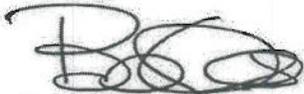
- Standard Operating Procedure for Trace Element Analysis of Flue Gas Desulfurization Wastewaters using Inductively Coupled Plasma/Mass Spectrometry (ICP-MS) Collision/Reaction Cell Procedure. [http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/ICPMS\\_FGD\\_Collision-Reaction-Cell-Procedure\\_draft\\_03-11-2013.pdf](http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/ICPMS_FGD_Collision-Reaction-Cell-Procedure_draft_03-11-2013.pdf)

Considering that specialized analytical techniques are necessary to overcome matrix interference for certain analysis of trace metals in FGD wastewater, we recommend any analysis on FGD wastewater be conducted in accordance with the EPA draft SOP for trace metals analysis of FGD wastewater.

Should you have any questions, please contact me at 224-4081 or Allan Palmer at 634-2439.

Sincerely,

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE



Brad Owens, Station Manager

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Attachments

LOWELL REGIONAL WASTEWATER UTILITY  
Industrial Sewer User Self-Monitoring Report Summary Sheet

Facility Information: Company Name Public Service Company of New Hampshire

Facility Address 97 River Road, Bow, New Hampshire Permit No. HW002

Facility Contact Brad Owens Telephone (603) 224-4081

-----Use A Separate Summary Sheet For Each Monitoring Point-----

Monitoring Report: Monitoring Point Treated Wastewater Effluent Holding Tanks Submittal Date 01/30/2014

Reporting Period (circle applicable): Baseline Annually Semi-Annually Quarterly Monthly Re-Sample

Reporting Period Start Date 10/01/2013 Reporting Period End Date 12/31/2013

Sample Analysis: Certified Analytical Lab Eastern Analytical, Inc. (EAI)

Authorized Rep. Lorraine Olashaw Certification No. 1012

Analytical Sub-Contractor Eurofins Frontier Global Sciences Certification No. E87575

Sample Collection: Sampler (Lab/Self/Other) Other: Sam Despins and Paul Pepler, GZA GeoEnvironmental, Inc.  
Sample Type(s) (circle all that apply):

Grab Time Composite Flow Composite

Grab Sampling: Sample Date 11/27/2013 (Softened Stream B WW)  
12/19/13, 12/31/13 (Combination WW) Sample Time 13:24 (Softened Stream B WW)  
15:10, 17:00 (Combination WW)

pH (Standard Units) 9.28 Stream B,  
8.63 Combination WW Instantaneous Flow Rate (GPM) N/A

Composite Sampling: Start Date/Time N/A Stop Date/Time N/A

No. Aliquots N/A Aliquot Volume N/A Sample Volume N/A

Flow Data: Sample Event Interval Volume (Gal) 8,000 (Stream B)\* Sample Event Daily Flow Rate (GPD) 8,000 (Stream B)\*

Flow Monitoring Period Average Daily Flow (GPD) 8,889 [ ] Meter [ X ] Estimate

Flow Monitoring Period Start Date October 1, 2013 Flow Monitoring Period End Date December 31, 2013

**Refer to Self-Monitoring Report Instructions for details on completing this SMR Summary Sheet**  
\*Wastewater was not discharged to the LRWU on 12/19/13 or 12/31/13 (the sample days for Combination WW)

**LOWELL REGIONAL WASTEWATER UTILITY  
Industrial Sewer User Self-Monitoring Report Summary Sheet**

**Submit All Chains of Custody and Laboratory Result Sheets With SMR Summary Sheet**

**Analytical Results:**

Parameter	Analysis Date	Result (mg/L)	Parameter	Analysis Date	Result (mg/L)
BOD			Copper	12/19/13	0.0105
COD	11/27/2013 12/31/13	840 3,700	Cyanide (Total)		
O & G 413.1/1664	11/27/2013 12/31/13	< 5 11	Fluoride		
TSS	11/27/2013 12/31/13	50 82	Lead	12/19/13 11/27/13	<0.00202 0.0000501
TOC *			Mercury	12/19/13	<0.0000252
TTO ** 624 / 82608 - 625 / 8270			Molybdenum		
Aluminum	12/19/13	0.308	Nickel	12/19/13 11/27/13	0.173 30
Antimony			Nitrogen (Kjeldahl)	12/31/13	160
Arsenic	11/27/13 12/19/13	0.0132 0.0299	Phenols (Total)		
Barium			Selenium		
Beryllium			Silver	11/27/13 12/19/13	0.000289 0.000209
Cadmium	12/19/13	0.00214	Thallium		
Chromium (Hexavalent)			Zinc	12/19/13	<0.0252
Chromium (Total)	12/19/13	0.0243	Other	See attached Table 1	

**BOD = Biochemical Oxygen Demand    COD = Chemical Oxygen Demand    O & G = Oil & Grease    TSS = Total Suspended Solids    TTO = Total Toxic Organics**  
**\*TOC (Total Organic Carbon) = is the amount of carbon bound in an organic compound and is often used as a non-specific indicator of water quality. TOC measures both the total carbon present as well as the inorganic carbon (IC). Subtracting the inorganic carbon from the total carbon yields TOC.**  
**\*\*TTO's = Summation of all quantifiable values greater than 0.01 mg/L for toxic organics listed in 40 CFR 413.02(i). TTO's include PCB's (Poly-Chlorinated Biphenyls), VOC's (Volatile Organic Compounds), SVOC's (Semi-Volatile Organic Compounds). PCB's, VOC's and SVOC's shall be analyzed using EPA Methods 608, 624, and 625, respectively.**

**Zero Discharge / Self-Monitoring (initial if applicable):**

\_\_\_\_\_ No industrial wastewater from permitted processes has been discharged to sewer during the monitoring period

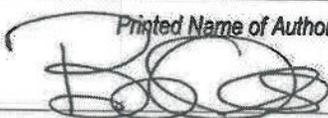
\_\_\_\_\_ No sampling has been conducted on permitted sewer discharges during the monitoring period

**Certification Statement:**

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Brad Owens**

*Printed Name of Authorized Representative*



*Signature of Authorized Representative*

**Station Manager**

*Title*

1/30/2014

*Date*

**TABLE 1  
SUMMARY OF SOFTENED STREAM B CONCENTRATIONS  
COMPARED TO LOWELL SEWER DISCHARGE LIMITS  
Q4: OCTOBER - DECEMBER 2013**

Public Service Company of New Hampshire  
Merrimack Station  
Bow, New Hampshire

PARAMETER	LOWELL SEWER DISCHARGE LIMITS (mg/L)	SOFTENED STREAM B RESULTS 11/27/2013 (mg/L)	COMBINATION WW RESULTS (mg/L) 12/19/13	COMBINATION WW RESULTS (mg/L) 12/31/13
Aluminum	24.69	-	0.308	-
Ammonia	-	1.4	-	4.6
Arsenic	0.556	0.0132	0.0299	-
Cadmium	0.056	-	0.00214	-
Chloride	-	72,000	-	140,000
Chromium (T)	8.108	-	0.0243	-
COD	-	840	-	3,700
Copper	3.124	-	0.0105	-
Lead	0.857	-	<0.00202	-
Mercury	0.004	0.0000501	<0.0000252	-
Nitrate	-	510	-	3,473
Nitrate+Nitrite	-	529	-	3,507
Nitrogen(T)	-	559	-	3,667
Nickel	1.541	-	0.173	-
O&G (HEM)	250	<5	-	11
pH	5.0-9.5	9.28	8.63	-
Silver	0.053	0.000289	0.000209	-
TSS	-	50	-	82
Zinc	4.959	-	<0.0252	-
TKN	-	30	-	160
Total Phosphorous	-	<1	-	<1
CBOD	-	<6	-	<6
Total Solids	-	240,000	-	580,000

**ANALYTICAL DISCUSSION**

FGD wastewater requires specialized analytical techniques to overcome matrix interferences for analysis of certain trace metals. To assist you in evaluating this issue further, we offer an excerpt below from the EPA web site and a link to their draft SOP for trace metals analysis of FGD wastewater that contains further guidance.

**LABORATORY ANALYSIS OF FGD WASTEWATER**

Wastewater from FGD systems can contain constituents known to cause matrix interferences. EPA has observed that, during inductively coupled plasma-mass spectrometry (ICP-MS) analysis of FGD wastewater, certain elements commonly present in the wastewater may cause polyatomic interferences that bias the detection and/or quantization of certain elements of interest. These potential interferences may become significant when measuring trace elements at concentrations in the low parts-per-billion range.

As part of a recent sampling effort for the steam electric power generating effluent guidelines rulemaking, EPA developed an SOP that was used in conjunction with EPA Method 200.8 to conduct ICP-MS analyses of FGD wastewater. The SOP describes critical technical and quality assurance procedures that were implemented to mitigate anticipated interferences and generate reliable data for FGD wastewater. EPA regulations at 40 CFR 136.6 already allow the analytical community flexibility to modify approved methods to lower the costs of measurements, overcome matrix interferences, or otherwise improve the analysis. The draft SOP developed for FGD wastewater takes a proactive approach toward looking for and taking steps to mitigate matrix interferences, including using specialized interference check solutions (i.e., a synthetic FGD wastewater matrix). EPA's draft SOP is being made available to laboratories contemplating ICP-MS analysis of FGD wastewater, either for adoption as currently written or to serve as a framework for developing their own laboratory-specific SOPs. For further information, see:

Standard Operating Procedure for Trace Element Analysis of Flue Gas Desulfurization Wastewaters using Inductively Coupled Plasma/Mass Spectrometry (ICP-MS) Collision/Reaction Cell Procedure, [http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/ICPMS\\_FGD\\_Collision-Reaction-Cell-Procedure\\_draft\\_03-11-2013.pdf](http://water.epa.gov/scitech/wastetech/guide/steam-electric/upload/ICPMS_FGD_Collision-Reaction-Cell-Procedure_draft_03-11-2013.pdf)

Considering that specialized analytical techniques are necessary to overcome matrix interference for certain analysis of trace metals in FGD wastewater, we recommend any analysis on FGD wastewater be conducted in accordance with the EPA draft SOP for trace metals analysis of FGD wastewater. Accordingly, the analytical methods used to produce the metals data presented above, were performed in accordance with the draft EPA procedure for the analysis of FGD wastewater.

**TABLE 2**  
**SUMMARY OF WASTEWATER SHIPMENTS TO LOWELL REGIONAL WASTEWATER UTILITY**  
**QUARTER 4-2013**  
 Public Service Company of New Hampshire  
 Merrimack Station  
 Bow, New Hampshire

DATE	DAY	TICKET	TRUCKING COMPANY	pH	SOFTENED STREAM A VOLUME (gallons)	SOFTENED STREAM B VOLUME (gallons)	COMBINATION WW VOLUME (gallons)	TOTAL DAILY VOLUME (gallons)
11/27/2013	Wednesday	1050	O'Brien	9.28	-	8,000		8,000
11/29/2013	Friday	1151	O'Brien	8.88	-	8,000		8,000
12/2/2013	Monday	1152	O'Brien	8.94	-	8,000		8,000
12/4/2013	Wednesday	1153	O'Brien	8.74	-	8,000		8,000
12/6/2013	Friday	1154	O'Brien	8.19	-	8,000		8,000
12/9/2013	Monday	1155	O'Brien	8.27	-	8,000		16,000
		1156	O'Brien	8.58	-	8,000		
12/12/2013	Thursday	1157	O'Brien	8.59	-	8,000		8,000
12/25/2013	Wednesday	1158	O'Brien	7.54	-	-	8,000	8,000
12/27/2013	Friday	1159	O'Brien	8.98	-	-	8,000	8,000

Shipments (Number of Trucks)	10
Truck Volume (Gallons)	8,000
Total Stream A Volume Discharged (Gallons)	-
Total Stream B Volume Discharged (Gallons)	64,000
Total Combination WW Volume Discharged (Gallons)	16,000
Total Volume Discharged (Gallons)	80,000
Maximum Daily Flow (gallons per day)	16,000
Flow Monitoring Period Average Daily Flow	8,889
<b>PERMITTED FLOW (GPD):</b>	<b>70,000</b>

**NOTE:**

1. Wastewater was not shipped to the Lowell Regional Wastewater Utility during the month of October 2013.



Paul Pepler  
GZA GeoEnvironmental, Inc. (NH)  
380 Harvey Road  
Manchester, NH 03103



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 127052  
Client Identification: PSNH-MK | 3902  
Date Received: 11/27/2013

Dear Mr. Pepler:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at [www.eailabs.com](http://www.eailabs.com) for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

- Solid samples are reported on a dry weight basis, unless otherwise noted
- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw  
Lorraine Olashaw, Lab Director

1.7.14  
Date

21  
# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 127052

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Temperature upon receipt (°C): 12

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
127052.01	Softened Stream B WW	11/27/13	11/27/13	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis. Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



# LABORATORY REPORT

EAI ID#: 127052

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

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Sample ID: Softened Stream  
BWW

Lab Sample ID: 127052.01  
Matrix: aqueous  
Date Sampled: 11/27/13  
Date Received: 11/27/13  
Units: mg/L  
Date of Extraction/Prep: 12/3/13  
Date of Analysis: 12/3/13  
Analyst: SH  
Method: 1664A  
Dilution Factor: 1

Oil & Grease (HEM) < 5



# QC REPORT

Client: GZA GeoEnvironmental, Inc. (NH)  
Client Designation: PSNH-MK | 3902

EAI ID#: 127052  
Batch ID: 635216-61016/A120313OG1661

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Oil & Grease (HEM)	< 5	37 (93 %R)	35 (87 %R) (7 RPD)	12/3/2013	mg/L	78 - 114	18	1664A

Samples were extracted and analyzed within holding time limits.  
Instrumentation was calibrated in accordance with the method requirements.  
The method blanks were free of contamination at the reporting limits.  
Sample surrogate recoveries met the above stated criteria.  
The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.  
There were no exceptions in the analyses, unless noted.  
\*! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



# LABORATORY REPORT

EAI ID#: 127052

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Sample ID: Softened Stream B  
WW

Lab Sample ID: 127052.01

Matrix: aqueous

Date Sampled: 11/27/13

Date Received: 11/27/13

Solids Total	240000
Solids Suspended	50
Chloride	72000
Nitrite-N	19
Nitrate-N	510
Ammonia-N	1.4
TKN	30
Total Nitrogen	559
Total Phosphorus-P	< 1
CBOD	< 6
COD	840

Units	Analysis		Method	Analyst
	Date	Time		
mg/L	12/03/13	12:30	2540B-97	SCW
mg/L	12/02/13	14:20	2540D-97	SCW
mg/L	12/04/13	9:55	4500CIE-90	KD
mg/L	11/27/13	16:21	353.2	KD
mg/L	11/27/13	17:17	353.2	KD
mg/L	12/05/13	11:20	TM NH3-001	SEL
mg/L	12/06/13	16:15	4500N <sub>om</sub> C/N	SEL
mg/L	12/07/13	15:10	4500N <sub>om</sub> C/N	SEL
mg/L	12/03/13	12:50	365.1	SEL
mg/L	11/27/13	19:00	5210B-97	KL
mg/L	12/02/13	12:40	H8000	SCW

TKN: The TKN result may be biased low due to the high nitrate concentration which can cause a negative interference for TKN.

Total Phosphorus-P: Due to the sample matrix, a dilution was required resulting in an elevated reporting limit.



# QC REPORT

EAI ID#: 127052

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Solids Total	< 10	1100 (100 %R)		mg/L	12/3/13	85 - 115		2540B-97
Solids Suspended	< 5	94 (100 %R)	90 (96 %R) (4 RPD)	mg/L	12/2/13	90 - 110	20	2540D-97
Chloride	< 1	26 (104 %R)	26 (103 %R) (1 RPD)	mg/L	12/4/13	90 - 110	20	4500CIE-90
Nitrite-N	< 0.5	5.1 (102 %R)	5.1 (103 %R) (1 RPD)	mg/L	11/27/13	90 - 110	20	353.2
Nitrate-N	< 0.5	5.4 (108 %R)	5.3 (106 %R) (2 RPD)	mg/L	11/27/13	90 - 110	20	353.2
Ammonia-N	< 0.05	2.0 (100 %R)	2.0 (99 %R) (1 RPD)	mg/L	12/5/13	90 - 110	20	TM NH3-001
TKN	< 0.5	10 (103 %R)	11 (108 %R) (5 RPD)	mg/L	12/6/13	90 - 110	20	4500N <sub>org</sub> C/N
Total Phosphorus-P	< 0.01	0.29 (97 %R)	0.29 (97 %R) (0 RPD)	mg/L	12/3/13	90 - 110	20	365.1
CBOD	< 6	340 (84 %R)	370 (92 %R) (9 RPD)	mg/L	11/27/13	60 - 120	20	5210B-97
COD	< 10	100 (101 %R)	100 (102 %R) (1 RPD)	mg/L	12/2/13	85 - 115	20	H8000

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

\*! Flagged analyte recoveries deviated from the QA/QC limits.



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

20 December 2013

Jeff Gagne  
Eastern Analytical, Inc  
25 Chenell Drive  
Concord, NH 03301  
RE: Merrimack Station 200.8

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Liz Siska".

Liz Siska  
Project Manager



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

Eastern Analytical, Inc  
25 Chenell Drive  
Concord NH, 03301

Project: Merrimack Station 200.8  
Project Number: 41033  
Project Manager: Jeff Gagne

Reported:  
20-Dec-13 09:37

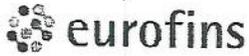
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Softened Stream B WW	1312046-01	Water	27-Nov-13 13:24	03-Dec-13 09:55
Field Blank Hg	1312046-02	Water	27-Nov-13 13:24	03-Dec-13 09:55

Eurofins Frontier Global Sciences, Inc.

Liz Siska, Project Manager

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

Eastern Analytical, Inc  
25 Chenell Drive  
Concord NH, 03301

Project: Merrimack Station 200.8  
Project Number: 41033  
Project Manager: Jeff Gagne

Reported:  
20-Dec-13 09:37

SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 12/3/2013 9:55:00 AM. The samples were received intact, on-ice within a sealed cooler at 2.1 degrees Celsius.

SAMPLE PREPARATION AND ANALYSIS

Samples were prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

Samples were prepared and analyzed for total recoverable metals by inductively coupled plasma mass spectrometry (ICP-MS) by DRC in accordance with EPA 200.8 (EFGS-054).

ANALYTICAL AND QUALITY CONTROL ISSUES

Sodium analysis for "Softened Stream B WW" (1312046-01) was canceled by the client on 12/19/2013.

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

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Liz Siska, Project Manager

EFGS Work Order: 1312046

### Sample Receipt Checklist

Eurofins Frontier Global Sciences

Client: Eastern Analy Date & Time Received: 12/3/13 0955 Date Logged In: 12/3/13 Date Labeled: 12/3/13  
 Project: \_\_\_\_\_ Received By: AMB Logged By: AMB Labeled By: RBT  
 # of Coolers Received: 1 Samples Arrived By:  Shipping Service \_\_\_\_\_ Courier \_\_\_\_\_ Hand \_\_\_\_\_ Other (Specify: \_\_\_\_\_)  
 Tracking/Airbill #: 17 X46 599 01 9832 7058 Coolant:  None/Ambient  Loose Ice  Gel Ice  Dry Ice  
 Coolant Required: Y/N Temp Blank Used: Y/N for Cooler(s): \_\_\_\_\_

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	<u>Y</u>	
Custody Seals are present and intact:	<u>N/A</u>	
Custody seals signed by:	<u>N/A</u>	

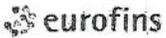
TID:	CF:	Date/time:	By:
<u>5225</u>	<u>0-6 °C</u>	<u>12/3/13 10:10</u>	<u>AMB</u>
Cooler 1: <u>2.7 °C</u>	w/ CF: <u>2.1 °C</u>	Cooler 4: <u>°C</u>	w/ CF: <u>°C</u>
Cooler 2: <u>°C</u>	w/ CF: <u>°C</u>	Cooler 5: <u>°C</u>	w/ CF: <u>°C</u>
Cooler 3: <u>°C</u>	w/ CF: <u>°C</u>	Cooler 6: <u>°C</u>	w/ CF: <u>°C</u>

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	<u>Y</u>	
Date and time of collection:	<u>Y</u>	
Sampled by:	<u>Y</u>	
Preservation type:	<u>N/A</u>	
Requested analyses:	<u>Y</u>	
Required signatures:	<u>Y</u>	
Internal COC required:	<u>N</u>	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	<u>Y</u>	
Sample labels are present and legible:	<u>Y</u>	
Sample ID on container/bag matches COC:	<u>Y</u>	
Correct sample containers used:	<u>Y</u>	
Samples received within holding times:	<u>Y</u>	
Sample volume sufficient for requested analyses:	<u>Y</u>	
Correct preservative used for requested analyses:	<u>NA</u>	
pH of preserved samples verified and recorded:	<u>to be done in lab</u>	

Anomalies/Non-conformances (attach additional pages if needed):

Discussion/Resolution: \_\_\_\_\_ Client Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Method: \_\_\_\_\_



Frontier Global Sciences

1312046

Chain of Custody Record & Laboratory Analysis Request:  
Air, Water, Sediments, Plant and Animal Tissue,  
Hydrocarbon & Other Samples

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
Phone: 425-686-1996  
Fax: 425-686-3096  
info@FrontierGS.com  
http://www.FrontierGS.com

Page 1 of 1

Client: Eastern Analytical, Inc.		Contact: Jeff Bagne		Analyses Requested		EFGS PM: <u>U2S5KA</u>													
Address: 25 Chenell Drive Concord, NH 03301		Phone: 603/228-0525 Fax: 603/228-4591				Date: 12/2/13													
Project Name: PSNH-MK/3902		E-mail: jeff.bagne@frontiers.com				TAT (business days): 20 (std) 15 (10) 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM, Surcharges apply for expedited TAT)													
Report To: Same as above		Contract/PO: 41033				Saturday delivery? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, please contact PM)													
Address: 603/ 603		Invoice To: Same				EDD <input type="checkbox"/> Y <input type="checkbox"/> N													
Phone: 228-0525 Fax: 228-4591		Address:				QA <input type="checkbox"/> Standard <input type="checkbox"/> High													
E-mail: customerservice@eais.com		Phone: Fax:				Comments													
E-mail:		E-mail:																	
No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO <sub>3</sub> , HCl, BrCl, Other (%)	Total Metals										
1	C-4595, B-867	Softened Stream & WW	2	Ag	11/22/13 1324		N	-	✓									Metals include As, Ag, Hg, Na 200.8 via Collision Cell	
2	C-5488	Field Blank Hg	1	Ag	11/27/13 1324		N	-	Hg										
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
For Laboratory Use Only		Matrix Codes:		Relinquished By:		Received By:		Received By:											
COC Seal: N/A		Comments:		FW: Fresh Water WW: Waste Water SB: Sea and Brackish Water SS: Soil and Sediment TS: Plant and Animal Tissue HC: Hydrocarbons TR: Trap OT: Other		Chris Johnson		UPS		A. BAHM									
Cooler Temp: 2.1°C						Name: Chris Johnson		Name:		Organization: EFGS									
Carrier: UPS						Organization: EAT		Organization:		Date & Time: 12/3/13 0955									
VTSR: 0955						Date & Time: 12/2/13 1530		Date & Time:		Tracking number: 1Z X46 599 01 9832 7058									
# of Coolers: 1																			
Sample Disposal: <input type="checkbox"/> Return (shipping fees may apply) <input type="checkbox"/> Standard Disposal - 30 Days after report <input type="checkbox"/> Retain for _____ weeks after report (storage fees may apply)						By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.						Customer Approval: _____ Date: _____							

WORK ORDER

1312046

Printed: 12/3/2013 5:01:34PM

Eurofins Frontier Global Sciences, Inc.

Client: Eastern Analytical, Inc  
Project: Merrimack Station 200.8

Project Manager: Liz Siska

Preservation Label Confirmation

Sample Bottle	Bottle Type	Preservative	Label Color	Labeled By
1312046-01 A	500 mL PETG 1631	BrCl	YELLOW	KGT
1312046-01 B	250 mL PETG 1638/200.8	HNO3	RED	
1312046-02 A	500 mL PETG 1631	BrCl	YELLOW	



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Eastern Analytical, Inc 25 Chenell Drive Concord NH, 03301	Project: Merrimack Station 200.8 Project Number: 41033 Project Manager: Jeff Gagne	Reported: 20-Dec-13 09:37
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Softened Stream B WW  
1312046-01

Analyte	Detection		Reporting	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
	Result	Limit	Limit								
<b>Sample Preparation: EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
Silver	0.289	-	1.01	µg/L	50	F312140	06-Dec-13	3L16003	14-Dec-13	EPA 200.8	R-05, U
Arsenic	13.2	-	15.1	µg/L	50	F312140	06-Dec-13	3L16003	14-Dec-13	EPA 200.8	R-05, U
<b>Sample Preparation: EPA 1631E BrCl Oxidation</b>											
Mercury	50.1	-	10.4	ng/L	20	F312143	13-Dec-13	3L17010	17-Dec-13	EPA 1631E	

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Liz Siska, Project Manager

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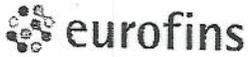
**Field Blank Hg**  
**1312046-02**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EPA 1631E BrCl Oxidation</b>											
Mercury	ND	-	0.50	ng/L	1	F312132	13-Dec-13	3L13009	13-Dec-13	EPA 1631E	U

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Quality Control Data

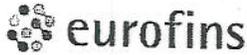
Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312132 - EPA 1631E BrCl Oxidation</b>											
<b>Blank (F312132-BLK1)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312132-BLK2)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312132-BLK3)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312132-BLK4)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>LCS (F312132-BS1)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	15.90	-	0.50	ng/L	15.679		101	80-120			
<b>LCS Dup (F312132-BSD1)</b>											
Prepared & Analyzed: 13-Dec-13											
Mercury	16.03	-	0.50	ng/L	15.679		102	80-120	0.806	24	
<b>Duplicate (F312132-DUP1)</b>											
Source: 1311455-01RE1 Prepared & Analyzed: 13-Dec-13											
Mercury	1.15	-	0.50	ng/L		1.13			1.32	24	
<b>Matrix Spike (F312132-MS1)</b>											
Source: 1312081-11RE1 Prepared & Analyzed: 13-Dec-13											
Mercury	33.37	-	0.50	ng/L	20.400	13.57	97.1	71-125			
<b>Matrix Spike Dup (F312132-MSD1)</b>											
Source: 1312081-11RE1 Prepared & Analyzed: 13-Dec-13											
Mercury	33.26	-	0.50	ng/L	20.400	13.57	96.5	71-125	0.336	24	
<b>Batch F312143 - EPA 1631E BrCl Oxidation</b>											
<b>Blank (F312143-BLK1)</b>											
Prepared & Analyzed: 17-Dec-13											
Mercury	ND	-	0.50	ng/L							U

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*Liz Siska*

Liz Siska, Project Manager

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312143 - EPA 1631E BrCl Oxidation</b>											
<b>Blank (F312143-BLK2)</b> Prepared & Analyzed: 17-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312143-BLK3)</b> Prepared & Analyzed: 17-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312143-BLK4)</b> Prepared & Analyzed: 17-Dec-13											
Mercury	ND	-	0.50	ng/L							QB-04, U
<b>Blank (F312143-BLK5)</b> Prepared: 16-Dec-13 Analyzed: 17-Dec-13											
Mercury	ND	-	0.52	ng/L							QB-06, U
<b>LCS (F312143-BS1)</b> Prepared & Analyzed: 17-Dec-13											
Mercury	15.16	-	0.50	ng/L	15.679		96.7	80-120			
<b>LCS Dup (F312143-BSD1)</b> Prepared & Analyzed: 17-Dec-13											
Mercury	15.83	-	0.50	ng/L	15.679		101	80-120	4.34	24	
<b>Duplicate (F312143-DUP1)</b> Source: 1312324-03 Prepared & Analyzed: 17-Dec-13											
Mercury	5.90	-	0.50	ng/L		6.11			3.45	24	
<b>Matrix Spike (F312143-MS1)</b> Source: 1312324-03 Prepared & Analyzed: 17-Dec-13											
Mercury	15.50	-	0.50	ng/L	10.200	6.11	92.1	71-125			
<b>Matrix Spike (F312143-MS2)</b> Source: 1312141-01 Prepared & Analyzed: 17-Dec-13											
Mercury	6.71	-	0.50	ng/L	5.1000	1.99	92.5	71-125			
<b>Matrix Spike Dup (F312143-MSD1)</b> Source: 1312324-03 Prepared & Analyzed: 17-Dec-13											
Mercury	15.30	-	0.50	ng/L	10.200	6.11	90.1	71-125	1.33	24	

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Liz Siska, Project Manager



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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch F312143 - EPA 1631E BrCl Oxidation

Matrix Spike Dup (F312143-MSD2)		Source: 1312141-01			Prepared & Analyzed: 17-Dec-13						
Mercury	6.60	-	0.50	ng/L	5.1000	1.99	90.4	71-125	1.61	24	

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Header information box containing Eastern Analytical, Inc details, Project: Merrimack Station 200.8, Project Number: 41033, Project Manager: Jeff Gagne, and Reported: 20-Dec-13 09:37.

Quality Control Data

Main data table with columns: Analyte, Result, Detection Limit, Reporting Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes. Includes sections for Batch F312131 and Batch F312140.

Eurofins Frontier Global Sciences, Inc.

Signature of Liz Siska

Liz Siska, Project Manager

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Eastern Analytical, Inc  
25 Chenell Drive  
Concord NH, 03301

Project: Merrimack Station 200.8  
Project Number: 41033  
Project Manager: Jeff Gagne

Reported:  
20-Dec-13 09:37

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312140 - EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
<b>LCS (F312140-BS1)</b>											
						Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	51.03	-	0.60	µg/L	50.040		102	85-115			
Silver	1.077	-	0.040	µg/L	0.99980		108	85-115			
<b>LCS Dup (F312140-BSD1)</b>											
						Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	53.83	-	0.60	µg/L	50.040		108	85-115	5.34	20	
Silver	1.139	-	0.040	µg/L	0.99980		114	85-115	5.67	20	
<b>Matrix Spike (F312140-MS1)</b>											
						Source: 1311583-01RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	60.86	-	1.46	µg/L	48.630	3.94	117	70-130			
Silver	1.013	-	0.097	µg/L	0.97162	0.019	102	70-130			
<b>Matrix Spike (F312140-MS2)</b>											
						Source: 1311586-01RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	52.46	-	1.46	µg/L	48.630	0.68	106	70-130			
Silver	1.085	-	0.097	µg/L	0.97162	0.007	111	70-130			
<b>Matrix Spike (F312140-MS3)</b>											
						Source: 1311583-01RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	104.7	-	1.51	µg/L	102.50	3.94	98.3	70-130			AS
Silver	4.342	-	0.101	µg/L	5.1250	0.019	84.3	70-130			AS
<b>Matrix Spike (F312140-MS4)</b>											
						Source: 1312081-04RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	111.5	-	1.51	µg/L	102.50	4.91	104	70-130			AS
Silver	5.029	-	0.101	µg/L	5.1250	ND	98.1	70-130			AS
<b>Matrix Spike Dup (F312140-MSD1)</b>											
						Source: 1311583-01RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	57.87	-	1.46	µg/L	48.630	3.94	111	70-130	5.03	20	
Silver	0.986	-	0.097	µg/L	0.97162	0.019	99.5	70-130	2.69	20	
<b>Matrix Spike Dup (F312140-MSD2)</b>											
						Source: 1311586-01RE3 Prepared: 06-Dec-13 Analyzed: 14-Dec-13					
Arsenic	60.24	-	1.46	µg/L	48.630	0.68	122	70-130	13.8	20	
Silver	1.187	-	0.097	µg/L	0.97162	0.007	121	70-130	8.99	20	

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Liz Siska, Project Manager

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Eastern Analytical, Inc 25 Chenell Drive Concord NH, 03301	Project: Merrimack Station 200.8 Project Number: 41033 Project Manager: Jeff Gagne	Reported: 20-Dec-13 09:37
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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch F312140 - EFGS-052 Closed Vessel Nitric Oven Digestion

Matrix Spike Dup (F312140-MSD3)		Source: 1311583-01RE3		Prepared: 06-Dec-13 Analyzed: 14-Dec-13							
Arsenic	102.9	-	1.51	µg/L	102.50	3.94	96.6	70-130	1.74	20	AS
Silver	4.255	-	0.101	µg/L	5.1250	0.019	82.6	70-130	2.02	20	AS
Matrix Spike Dup (F312140-MSD4)		Source: 1312081-04RE3		Prepared: 06-Dec-13 Analyzed: 14-Dec-13							
Arsenic	105.6	-	1.51	µg/L	102.50	4.91	98.2	70-130	5.41	20	AS
Silver	4.865	-	0.101	µg/L	5.1250	ND	94.9	70-130	3.32	20	AS

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Liz Siska, Project Manager

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Eastern Analytical, Inc 25 Chenell Drive Concord NH, 03301	Project: Merrimack Station 200.8 Project Number: 41033 Project Manager: Jeff Gagne	Reported: 20-Dec-13 09:37
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Notes and Definitions

- U Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
- R-05 The sample was diluted due to the presence of high levels of non-target analytes or particulates resulting in elevated reporting limits.
- QB-06 The blank was preserved to 5% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
- QB-04 The blank was preserved to 2% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
- AS This MS and/or MSD is an analytical spike and/or an analytical spike duplicate.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

CHAIN-OF-CUSTODY RECORD

127052

BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE/TIME	MATRIX (SEE BELOW) GHAIR/* COMPOSITE	VOC										SVOC										TCMP METALS										INORGANICS										MICRO										OTHER										NOTES MeOH Vial #																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
			5413	5414	5415	5416	5417	5418	5419	5420	5421	5422	5423	5424	5425	5426	5427	5428	5429	5430	5431	5432	5433	5434	5435	5436	5437	5438	5439	5440	5441	5442	5443	5444	5445	5446	5447	5448	5449	5450	5451	5452	5453	5454	5455	5456	5457	5458	5459	5460	5461	5462	5463	5464	5465	5466	5467	5468	5469	5470	5471	5472		5473	5474	5475	5476	5477	5478	5479	5480	5481	5482	5483	5484	5485	5486	5487	5488	5489	5490	5491	5492	5493	5494	5495	5496	5497	5498	5499	5500	5501	5502	5503	5504	5505	5506	5507	5508	5509	5510	5511	5512	5513	5514	5515	5516	5517	5518	5519	5520	5521	5522	5523	5524	5525	5526	5527	5528	5529	5530	5531	5532	5533	5534	5535	5536	5537	5538	5539	5540	5541	5542	5543	5544	5545	5546	5547	5548	5549	5550	5551	5552	5553	5554	5555	5556	5557	5558	5559	5560	5561	5562	5563	5564	5565	5566	5567	5568	5569	5570	5571	5572	5573	5574	5575	5576	5577	5578	5579	5580	5581	5582	5583	5584	5585	5586	5587	5588	5589	5590	5591	5592	5593	5594	5595	5596	5597	5598	5599	5600	5601	5602	5603	5604	5605	5606	5607	5608	5609	5610	5611	5612	5613	5614	5615	5616	5617	5618	5619	5620	5621	5622	5623	5624	5625	5626	5627	5628	5629	5630	5631	5632	5633	5634	5635	5636	5637	5638	5639	5640	5641	5642	5643	5644	5645	5646	5647	5648	5649	5650	5651	5652	5653	5654	5655	5656	5657	5658	5659	5660	5661	5662	5663	5664	5665	5666	5667	5668	5669	5670	5671	5672	5673	5674	5675	5676	5677	5678	5679	5680	5681	5682	5683	5684	5685	5686	5687	5688	5689	5690	5691	5692	5693	5694	5695	5696	5697	5698	5699	5700	5701	5702	5703	5704	5705	5706	5707	5708	5709	5710	5711	5712	5713	5714	5715	5716	5717	5718	5719	5720	5721	5722	5723	5724	5725	5726	5727	5728	5729	5730	5731	5732	5733	5734	5735	5736	5737	5738	5739	5740	5741	5742	5743	5744	5745	5746	5747	5748	5749	5750	5751	5752	5753	5754	5755	5756	5757	5758	5759	5760	5761	5762	5763	5764	5765	5766	5767	5768	5769	5770	5771	5772	5773	5774	5775	5776	5777	5778	5779	5780	5781	5782	5783	5784	5785	5786	5787	5788	5789	5790	5791	5792	5793	5794	5795	5796	5797	5798	5799	5800	5801	5802	5803	5804	5805	5806	5807	5808	5809	5810	5811	5812	5813	5814	5815	5816	5817	5818	5819	5820	5821	5822	5823	5824	5825	5826	5827	5828	5829	5830	5831	5832	5833	5834	5835	5836	5837	5838	5839	5840	5841	5842	5843	5844	5845	5846	5847	5848	5849	5850	5851	5852	5853	5854	5855	5856	5857	5858	5859	5860	5861	5862	5863	5864	5865	5866	5867	5868	5869	5870	5871	5872	5873	5874	5875	5876	5877	5878	5879	5880	5881	5882	5883	5884	5885	5886	5887	5888	5889	5890	5891	5892	5893	5894	5895	5896	5897	5898	5899	5900	5901	5902	5903	5904	5905	5906	5907	5908	5909	5910	5911	5912	5913	5914	5915	5916	5917	5918	5919	5920	5921	5922	5923	5924	5925	5926	5927	5928	5929	5930	5931	5932	5933	5934	5935	5936	5937	5938	5939	5940	5941	5942	5943	5944	5945	5946	5947	5948	5949	5950	5951	5952	5953	5954	5955	5956	5957	5958	5959	5960	5961	5962	5963	5964	5965	5966	5967	5968	5969	5970	5971	5972	5973	5974	5975	5976	5977	5978	5979	5980	5981	5982	5983	5984	5985	5986	5987	5988	5989	5990	5991	5992	5993	5994	5995	5996	5997	5998	5999	6000	6001	6002	6003	6004	6005	6006	6007	6008	6009	6010	6011	6012	6013	6014	6015	6016	6017	6018	6019	6020	6021	6022	6023	6024	6025	6026	6027	6028	6029	6030	6031	6032	6033	6034	6035	6036	6037	6038	6039	6040	6041	6042	6043	6044	6045	6046	6047	6048	6049	6050	6051	6052	6053	6054	6055	6056	6057	6058	6059	6060	6061	6062	6063	6064	6065	6066	6067	6068	6069	6070	6071	6072	6073	6074	6075	6076	6077	6078	6079	6080	6081	6082	6083	6084	6085	6086	6087	6088	6089	6090	6091	6092	6093	6094	6095	6096	6097	6098	6099	6100	6101	6102	6103	6104	6105	6106	6107	6108	6109	6110	6111	6112	6113	6114	6115	6116	6117	6118	6119	6120	6121	6122	6123	6124	6125	6126	6127	6128	6129	6130	6131	6132	6133	6134	6135	6136	6137	6138	6139	6140	6141	6142	6143	6144	6145	6146	6147	6148	6149	6150	6151	6152	6153	6154	6155	6156	6157	6158	6159	6160	6161	6162	6163	6164	6165	6166	6167	6168	6169	6170	6171	6172	6173	6174	6175	6176	6177	6178	6179	6180	6181	6182	6183	6184	6185	6186	6187	6188	6189	6190	6191	6192	6193	6194	6195	6196	6197	6198	6199	6200	6201	6202	6203	6204	6205	6206	6207	6208	6209	6210	6211	6212	6213	6214	6215	6216	6217	6218	6219	6220	6221	6222	6223	6224	6225	6226	6227	6228	6229	6230	6231	6232	6233	6234	6235	6236	6237	6238	6239	6240	6241	6242	6243	6244	6245	6246	6247	6248	6249	6250	6251	6252	6253	6254	6255	6256	6257	6258	6259	6260	6261	6262	6263	6264	6265	6266	6267	6268	6269	6270	6271	6272	6273	6274	6275	6276	6277	6278	6279	6280	6281	6282	6283	6284	6285	6286	6287	6288	6289	6290	6291	6292	6293	6294	6295	6296	6297	6298	6299	6300	6301	6302	6303	6304	6305	6306	6307	6308	6309	6310	6311	6312	6313	6314	6315	6316	6317	6318	6319	6320	6321	6322	6323	6324	6325	6326	6327	6328	6329	6330	6331	6332	6333	6334	6335	6336	6337	6338	6339	6340	6341	6342	6343	6344	6345	6346	6347	6348	6349	6350	6351	6352	6353	6354	6355	6356	6357	6358	6359	6360	6361	6362	6363	6364	6365	6366	6367	6368	6369	6370	6371	6372	6373	6374	6375	6376	6377	6378	6379	6380	6381	6382	6383	6384	6385	6386	6387	6388	6389	6390	6391	6392	6393	6394	6395	6396	6397	6398	6399	6400	6401	6402	6403	6404	6405	6406	6407	6408	6409	6410	6411	6412	6413	6414	6415	6416	6417	6418	6419	6420	6421	6422	6423	6424	6425	6426	6427	6428	6429	6430	6431	6432	6433	6434	6435	6436	6437	6438	6439	6440	6441	6442	6443	6444	6445	6446	6447	6448	6449	6450	6451	6452	6453	6454	6455	6456	6457	6458	6459	6460	6461	6462	6463	6464	6465	6466	6467	6468	6469	6470	6471	6472	6473	6474	6475	6476	6477	6478	6479	6480	6481	6482	6483	6484	6485	6486	6487	6488	6489	6490	6491	6492	6493	6494	6495	6496	6497	6498	6499	6500	6501	6502	6503	6504	6505	6506	6507	6508	6509	6510	6511	6512	6513	6514	6515	6516	6517	6518	6519	6520	6521	6522	6523	6524	6525	6526	6527	6528	6529	6530	6531	6532	6533	6534	6535	6536	6537	6538	6539	6540	6541	6542	6543	6544	6545	6546	6547	6548	6549	6550	6551	6552	6553	6554	6555	6556	6557	6558	6559	6560	6561	6562	6563	6564	6565	6566	6567	6568	6569	6570	6571	6572	6573	6574	6575	6576	6577	6578	6579	6580	6581	6582	6583	6584	6585	6586	6587	6588	6589	6590	6591	6592	6593	6594	6595	6596	6597	6598	6599	6600	6601	6602	6603	6604	6605	6606	6607	6608	6609	6610	6611	6612	6613	6614	6615	6616	6617	6618	6619	6620	6621	6622	6623	6624	6625	6626	6627	6628	6629	6630	6631	6632	6633	6634	6635	6636	6637	6638	6639	6640	6641	6642	6643	6644	6645	6646	6647	6648	6649	6650	6651	6652	6653	6654	6655	6656	6657	6658	6659	6660	6661	6662	6663	6664	6665	6666	6667	6668	6669	6670	6671	6672	6673	6674	6675	6676	6677	6678	6679	6680	6681	6682	6683	6684	6685	6686	6687	6688	6689	6690	6691	6692	6693	6694	6695	6696	6697	6698	6699	6700	6701	6702	6703	6704	6705	6706	6707	6708	6709	6710	6711	6712	6713	6714	6715	6716	6717	6718	6719	6720	6721	6722	6723	6724	6725	6726	6727	6728	6729	6730	6731	6732	6733	6734	6735	6736	6737	6738	6739	6740	6741

Paul Pepler  
GZA GeoEnvironmental, Inc. (NH)  
380 Harvey Road  
Manchester , NH 03103



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 127682  
Client Identification: PSNH-MK | 3902  
Date Received: 12/19/2013

Dear Mr. Pepler :

Enclosed please find the report of analysis for the above identified project.  
As discussed, analyses were subcontracted and are listed as follows:

Analysis: Subcontract - 10 Metals (As,Al,Ag,Cd,Cr,Cu,Ni,Pb,Se,Zn)  
Subcontract - Mercury  
Subcontractor Lab: Eurofins / Frontier Global Sciences, Inc

A complete copy of the report is attached. This report may not be reproduced except in full,  
without the written approval of the laboratory.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,



Lorraine Olashaw, Lab Director

1-8-14

Date

19

# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 127682

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Temperature upon receipt (°C): 6.5

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
127682.01	Combination WW	12/19/13	12/19/13	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

07 January 2014

Jeff Gagne  
Eastern Analytical, Inc  
25 Chenell Drive  
Concord, NH 03301  
RE: Merrimack Station 200.8

Enclosed are the analytical results for samples received by Eurofins Frontier Global Sciences. All quality control measurements are within established control limits and there were no analytical difficulties encountered with the exception of those listed in the case narrative section of this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Liz Siska".

Liz Siska  
Project Manager



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

Eastern Analytical, Inc 25 Chenell Drive Concord NH, 03301	Project: Merrimack Station 200.8 Project Number: 41096 Project Manager: Jeff Gagne	Reported: 07-Jan-14 14:01
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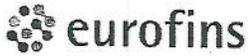
**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Combination WW	1312480-01	Water	19-Dec-13 15:10	20-Dec-13 10:45
Field blank	1312480-02	Water	19-Dec-13 15:10	20-Dec-13 10:45

Eurofins Frontier Global Sciences, Inc.

Liz Siska, Project Manager

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Frontier Global Sciences

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Bothell, WA 98011  
425.686.1996 Phone  
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Eastern Analytical, Inc  
25 Chenell Drive  
Concord NH, 03301

Project: Merrimack Station 200.8  
Project Number: 41096  
Project Manager: Jeff Gagne

Reported:  
07-Jan-14 14:01

#### SAMPLE RECEIPT

Samples were received at Eurofins Frontier Global Sciences (EFGS) on 12/20/2013 10:45:00 AM. The samples were received intact, on-ice within a sealed cooler at 2.1 degrees Celsius.

#### SAMPLE PREPARATION AND ANALYSIS

Samples were prepared and analyzed for total mercury by flow injection atomic fluorescence spectrometry (FI-AFS) in accordance with EPA 1631E.

Samples were prepared and analyzed for total recoverable metals by inductively coupled plasma mass spectrometry (ICP-MS) in KED mode in accordance with EPA 200.8 (EFGS-054).

#### ANALYTICAL AND QUALITY CONTROL ISSUES

Selenium analysis was canceled by the client on 12/13/13.

Method blanks were prepared for every preparation to assess possible blank contribution from the sample preparation procedure. The method blanks were carried through the entire analytical procedure. All blanks fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

Liquid spikes, certified reference material (CRM) or a quality control samples (QCS) were prepared for every preparation as a measure of accuracy. All liquid spikes, CRMs and/or QCS samples fell within the established acceptance criteria with the exception of any items narrated above or flagged and described in the notes and definitions section of the report.

As an additional measure of the accuracy of the methods used and to check for matrix interference, matrix spikes (MS) and matrix spike duplicates (MSD) were digested and analyzed. All of the matrix spike recoveries fell within the established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

A reasonable measure of the precision of the analytical methods is the relative percent difference (RPD) between a matrix spike recovery and a matrix spike duplicate recovery and between laboratory control sample recovery and laboratory control sample duplicate recoveries. All of the relative percent differences established acceptance criteria with the exception of any items flagged and described in the notes and definitions section of the report.

Eurofins Frontier Global Sciences, Inc.

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Liz Siska, Project Manager



Frontier Global Sciences

### Sample Receipt Checklist

EFGS Work Order: 1312480

Client: Eastern Analytical

Date & Time Received: 12-20-13 1045

Date Labeled: 12-20-13

Project: \_\_\_\_\_

Received By: AMB

Labeled By: AMB

# of Coolers Received: 1 Samples Arrived By:  Shipping Service \_\_\_\_\_ Courier \_\_\_\_\_ Hand \_\_\_\_\_ Other (Specify: \_\_\_\_\_)

Coolant:  None/Ambient  Loose Ice  Gel Ice  Dry Ice Coolant Required: Y  Temp Blank Used: Y  for Cooler(s): —

Cooler Information:	Y/N/NA	Comments
The coolers do not appear to be tampered with:	<u>Y</u>	
Custody Seals are present and intact:	<u>N/A</u>	
Custody seals signed:	<u>N/A</u>	

TID: <u>3150</u>	CF:	°C	Date/time: <u>12-20-13 11:32</u>	By: <u>AMB</u>
Cooler 1:	<u>2.2</u> °C	w/ CF: <u>2</u>	°C	Cooler 4: °C w/ CF: °C
Cooler 2:	°C	w/ CF: °C	Cooler 5:	°C w/ CF: °C
Cooler 3:	°C	w/ CF: °C	Cooler 6:	°C w/ CF: °C

Chain of Custody:	Y/N/NA	Comments
Sample ID/Description:	<u>US</u>	
Date and time of collection:	<u>12-20-13</u>	
Sampled by:	<u>AMB</u>	
Preservation type:	<u>N/A</u>	
Requested analyses:	<u>US</u>	
Required signatures:	<u>AMB</u>	
Internal CDC required:	<u>N/A</u>	

Sample Condition/Integrity:	Y/N/NA	Comments
Sample containers intact/present:	<u>Y</u>	
Sample labels are present and legible:	<u>Y</u>	
Sample ID on container/bag matches COC:	<u>Y</u>	
Correct sample containers used:	<u>Y</u>	
Samples received within holding times:	<u>Y</u>	
Sample volume sufficient for requested analyses:	<u>Y</u>	
Correct preservative used for requested analyses:	<u>N/A</u>	

Anomalies/Non-conformances (attach additional pages if needed):

AMB  
12-20-13

1312480

Chain of Custody Record & Laboratory Analysis Request:  
Air, Water, Sediments, Plant and Animal Tissue,  
Hydrocarbon & Other Samples

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Bothell, WA 98011  
Phone: 425-686-1996  
Fax: 425-686-3096  
info@FrontierGS.com  
http://www.FrontierGS.com



Frontier Global Sciences

Client: Eastern Analytical Address: 25 Chenell Dr Concord NH 03301		Contact: ON FILE Phone: ON FILE E-mail:		Project Name: PSNH-MK Contract/PO: 410910		Report To: Same Invoice To:		Address: SAME Address:		Phone: ON FILE E-mail: ON FILE		Phone: SAME E-mail:		Analyses Requested		FGS PM: Date: TAT (business days): 20 (std) 15 10 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT) Saturday delivery? <input type="checkbox"/> Y <input type="checkbox"/> N (If yes, please contact PM) EDD <input type="checkbox"/> Y <input type="checkbox"/> N QA <input type="checkbox"/> Standard <input type="checkbox"/> High					
No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO <sub>3</sub> HCl BrCl Other (%)	ICP-MS w/ Collision Cell	METHOD 2008 WOOD	As, Al, Ag, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn	Comments									
1		Combination WW	2	WW	12/19/13 1510	PP			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ASAP per communication 12/19/13									
2		Field Blank	1	1	1	1			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
For Laboratory Use Only		Matrix Codes:		Relinquished By:		Received By:		Received By:													
COC Seal: N/A		Comments:		FW: Fresh Water WW: Waste Water SB: Sea and Brackish Water SS: Soil and Sediment TS: Plant and Animal Tissue HC: Hydrocarbons TR: Trap OT: Other		Name: Jennifer Lunc		Name: UPS-NDA		Name: A. BAHM											
Cooler Temp: 2.1°C				Organization: EPA		Organization: UPS		Organization: EFGS													
Carrier: UPS				Date & Time: 12/19/16 1630		Date & Time: 12/19/16		Date & Time: 12-20-13 1045													
VTSR: 10:45				Tracking number: 1Z X46 599 01 9986 1200																	
# of Coolers: 1				Sample Disposal: <input type="checkbox"/> Return (shipping fees may apply) <input type="checkbox"/> Standard Disposal - 30 Days after report <input type="checkbox"/> Retain for ___ weeks after report (storage fees may apply)		By signing, you declare that you agree with EFGS' terms and conditions, and that you authorize EFGS to perform the specified analyses.		Customer Approval: [Signature]		Date: 12/19/2013											

WORK ORDER

Printed: 12/20/2013 4:31:50PM

1312480

Eurofins Frontier Global Sciences, Inc.

Client: Eastern Analytical, Inc  
Project: Merrimack Station 200.8

Project Manager: Liz Siska

Preservation Label Confirmation

Sample Bottle	Bottle Type	Preservative	Label Color	Labeled By
1312480-01 A	250 mL PETG 1638/200.8	HNO3	RED	AMBS
1312480-01 B	250 mL PETG 1631	BrCl	YELLOW	
1312480-02 A	250 mL PETG 1638/200.8	HNO3	RED	
1312480-02 B	250 mL PETG 1631 Split	BrCl - Split	YELLOW	



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Eastern Analytical, Inc 25 Chenell Drive Concord NH, 03301	Project: Merrimack Station 200.8 Project Number: 41096 Project Manager: Jeff Gagne	Reported: 07-Jan-14 14:01
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Combination WW  
1312480-01

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
Silver	0.209	-	1.01	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	R-05, U
Aluminium	308	-	1260	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	QM-12, R-05, U
Arsenic	29.9	-	15.1	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	
Cadmium	2.14	-	1.01	µg/L	50	F312218	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	R-05
Chromium	24.3	-	10.1	µg/L	100	F312246	23-Dec-13	4A03003	02-Jan-14	EPA 200.8	
Copper	10.5	-	5.05	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	
Nickel	173	-	5.05	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	
Lead	ND	-	2.02	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	R-05, U
Zinc	ND	-	25.2	µg/L	50	F312246	23-Dec-13	3L26005	25-Dec-13	EPA 200.8	R-05, U
<b>Sample Preparation: EPA 1631E BrCl Oxidation</b>											
Mercury	ND	-	25.2	ng/L	50	F312270	20-Dec-13	3L30009	30-Dec-13	EPA 1631E	U

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Field blank  
1312480-02

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Sequence	Analyzed	Method	Notes
<b>Sample Preparation: EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
Silver	ND	-	0.020	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Aluminum	ND	-	25.2	µg/L	1	F312246	23-Dec-13	3L31005	30-Dec-13	EPA 200.8	U
Arsenic	0.15	-	0.30	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Cadmium	0.014	-	0.020	µg/L	1	F312218	23-Dec-13	3L24005	23-Dec-13	EPA 200.8	U
Chromium	0.02	-	0.10	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Copper	ND	-	0.10	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Nickel	ND	-	0.10	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Lead	ND	-	0.040	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
Zinc	0.52	-	0.50	µg/L	1	F312246	23-Dec-13	3L26005	24-Dec-13	EPA 200.8	U
<b>Sample Preparation: EPA 1631E BrCl Oxidation</b>											
Mercury	ND	-	0.50	ng/L	1	F312270	20-Dec-13	3L30009	30-Dec-13	EPA 1631E	U

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312270 - EPA 1631E BrCl Oxidation</b>											
<b>Blank (F312270-BLK1)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312270-BLK2)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312270-BLK3)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	ND	-	0.50	ng/L							U
<b>Blank (F312270-BLK4)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	ND	-	0.50	ng/L							QB-04, U
<b>Blank (F312270-BLK5)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	ND	-	9.90	ng/L							QB-08, U
<b>LCS (F312270-BS1)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	15.93	-	0.50	ng/L	15.679		102	80-120			
<b>LCS Dup (F312270-BSD1)</b> Prepared & Analyzed: 30-Dec-13											
Mercury	16.16	-	0.50	ng/L	15.679		103	80-120	1.43	24	
<b>Duplicate (F312270-DUP1)</b> Source: 1312592-03 Prepared & Analyzed: 30-Dec-13											
Mercury	5.25	-	0.50	ng/L		5.30			1.04	24	
<b>Matrix Spike (F312270-MS1)</b> Source: 1312592-03 Prepared & Analyzed: 30-Dec-13											
Mercury	22.76	-	0.50	ng/L	20.400	5.30	85.6	71-125			
<b>Matrix Spike (F312270-MS2)</b> Source: 1312479-07 Prepared & Analyzed: 30-Dec-13											
Mercury	7.65	-	0.50	ng/L	5.1000	3.21	87.1	71-125			

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch F312270 - EPA 1631E BrCl Oxidation

Matrix Spike Dup (F312270-MSD1)		Source: 1312592-03			Prepared & Analyzed: 30-Dec-13						
Mercury	23.85	-	0.50	ng/L	20.400	5.30	90.9	71-125	4.70	24	
Matrix Spike Dup (F312270-MSD2)		Source: 1312479-07			Prepared & Analyzed: 30-Dec-13						
Mercury	7.94	-	0.50	ng/L	5.1000	3.21	92.7	71-125	3.71	24	

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Project: Merrimack Station 200.8  
Project Number: 41096  
Project Manager: Jeff Gagne

Reported:  
07-Jan-14 14:01

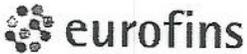
Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312218 - EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
<b>Blank (F312218-BLK1)</b> Prepared & Analyzed: 23-Dec-13											
Cadmium	ND	-	0.020	µg/L							U
<b>Blank (F312218-BLK2)</b> Prepared & Analyzed: 23-Dec-13											
Cadmium	ND	-	0.020	µg/L							U
<b>LCS (F312218-BS1)</b> Prepared & Analyzed: 23-Dec-13											
Cadmium	5.475	-	0.040	µg/L	5.0000		109	85-115			
<b>LCS Dup (F312218-BSD1)</b> Prepared & Analyzed: 23-Dec-13											
Cadmium	5.568	-	0.040	µg/L	5.0000		111	85-115	1.70	20	
<b>Matrix Spike (F312218-MS1)</b> Source: 1312448-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	5.934	-	0.101	µg/L	5.0000	0.290	113	70-130			
<b>Matrix Spike (F312218-MS2)</b> Source: 1312449-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	5.904	-	0.101	µg/L	5.0000	0.078	117	70-130			
<b>Matrix Spike (F312218-MS3)</b> Source: 1312448-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	9.998	-	0.101	µg/L	10.250	0.290	94.7	70-130			AS
<b>Matrix Spike (F312218-MS4)</b> Source: 1312449-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	9.481	-	0.101	µg/L	10.250	0.078	91.7	70-130			AS
<b>Matrix Spike Dup (F312218-MSD1)</b> Source: 1312448-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	6.027	-	0.101	µg/L	5.0000	0.290	115	70-130	1.56	20	
<b>Matrix Spike Dup (F312218-MSD2)</b> Source: 1312449-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	6.660	-	0.101	µg/L	5.0000	0.078	132	70-130	12.0	20	QM-07

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312218 - EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
<b>Matrix Spike Dup (F312218-MSD3)</b> Source: 1312448-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	10.41	-	0.101	µg/L	10.250	0.290	98.7	70-130	4.00	20	AS
<b>Matrix Spike Dup (F312218-MSD4)</b> Source: 1312449-01 Prepared & Analyzed: 23-Dec-13											
Cadmium	9.810	-	0.101	µg/L	10.250	0.078	94.9	70-130	3.41	20	AS
<b>Batch F312246 - EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
<b>Blank (F312246-BLK1)</b> Prepared: 23-Dec-13 Analyzed: 24-Dec-13											
Chromium	ND	-	0.10	µg/L							U
Nickel	ND	-	0.10	µg/L							U
Copper	ND	-	0.10	µg/L							U
Zinc	ND	-	0.50	µg/L							U
Arsenic	ND	-	0.30	µg/L							U
Silver	ND	-	0.020	µg/L							U
Lead	ND	-	0.040	µg/L							U
<b>Blank (F312246-BLK2)</b> Prepared: 23-Dec-13 Analyzed: 24-Dec-13											
Chromium	ND	-	0.10	µg/L							U
Nickel	ND	-	0.10	µg/L							U
Copper	ND	-	0.10	µg/L							U
Zinc	ND	-	0.50	µg/L							U
Arsenic	ND	-	0.30	µg/L							U
Silver	ND	-	0.020	µg/L							U
Lead	ND	-	0.040	µg/L							U
<b>Blank (F312246-BLK5)</b> Prepared: 23-Dec-13 Analyzed: 27-Dec-13											
Aluminum	ND	-	25.0	µg/L							U

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch F312246 - EFGS-052 Closed Vessel Nitric Oven Digestion</b>											
<b>Blank (F312246-BLK6)</b> Prepared: 23-Dec-13 Analyzed: 27-Dec-13											
Aluminum	ND	-	25.0	µg/L							U
<b>Blank (F312246-BLK7)</b> Prepared: 23-Dec-13 Analyzed: 30-Dec-13											
Aluminum	ND	-	25.0	µg/L							U
Chromium	ND	-	0.10	µg/L							U
<b>Blank (F312246-BLK8)</b> Prepared: 23-Dec-13 Analyzed: 30-Dec-13											
Aluminum	ND	-	25.0	µg/L							U
Chromium	ND	-	0.10	µg/L							U
<b>LCS (F312246-BS1)</b> Prepared: 23-Dec-13 Analyzed: 24-Dec-13											
Aluminum	293.7	-	50.2	µg/L	300.00		97.9	85-115			
Chromium	49.81	-	0.20	µg/L	50.040		99.5	85-115			
Nickel	50.70	-	0.20	µg/L	50.020		101	85-115			
Copper	52.53	-	0.20	µg/L	50.020		105	85-115			
Zinc	53.02	-	1.00	µg/L	50.000		106	85-115			
Arsenic	50.95	-	0.60	µg/L	49.960		102	85-115			
Silver	0.986	-	0.040	µg/L	1.0000		98.6	85-115			
Lead	9.089	-	0.080	µg/L	10.000		90.9	85-115			
<b>LCS Dup (F312246-BSD1)</b> Prepared: 23-Dec-13 Analyzed: 24-Dec-13											
Aluminum	290.3	-	50.2	µg/L	300.00		96.8	85-115	1.16	20	
Chromium	51.43	-	0.20	µg/L	50.040		103	85-115	3.20	20	
Nickel	50.97	-	0.20	µg/L	50.020		102	85-115	0.520	20	
Copper	52.47	-	0.20	µg/L	50.020		105	85-115	0.114	20	
Zinc	53.97	-	1.00	µg/L	50.000		108	85-115	1.77	20	
Arsenic	51.54	-	0.60	µg/L	49.960		103	85-115	1.14	20	
Silver	1.020	-	0.040	µg/L	1.0000		102	85-115	3.33	20	
Lead	9.322	-	0.080	µg/L	10.000		93.2	85-115	2.54	20	

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Header information table containing Eastern Analytical, Inc. contact info, Project: Merrimack Station 200.8, Project Number: 41096, Project Manager: Jeff Gagne, and Reported: 07-Jan-14 14:01.

Quality Control Data

Table header with columns: Analyte, Result, Detection Limit, Reporting Limit, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Notes.

Batch F312246 - EFGS-052 Closed Vessel Nitric Oven Digestion

Table for Matrix Spike (F312246-MS1) with columns for analyte, result, and limits. Source: 1312448-01RE1. Prepared: 23-Dec-13 Analyzed: 24-Dec-13.

Table for Matrix Spike (F312246-MS2) with columns for analyte, result, and limits. Source: 1312449-01RE1. Prepared: 23-Dec-13 Analyzed: 24-Dec-13.

Table for Matrix Spike (F312246-MS3) with columns for analyte, result, and limits. Source: 1312448-01RE1. Prepared: 23-Dec-13 Analyzed: 24-Dec-13.

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Project: Merrimack Station 200.8  
Project Number: 41096  
Project Manager: Jeff Gagne

Reported:  
07-Jan-14 14:01

Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch F312246 - EFGS-052 Closed Vessel Nitric Oven Digestion

Matrix Spike (F312246-MS4)		Source: 1312449-01RE1		Prepared: 23-Dec-13		Analyzed: 24-Dec-13				
Aluminum	10290	-	1260	µg/L	10250	ND	100	70-130		AS
Chromium	1022	-	5.05	µg/L	1025.0	ND	99.7	70-130		AS
Nickel	1248	-	5.05	µg/L	1281.2	3.59	97.1	70-130		AS
Copper	1291	-	5.05	µg/L	1281.2	2.60	101	70-130		AS
Zinc	2644	-	25.2	µg/L	2562.5	25.27	102	70-130		AS
Arsenic	1025	-	15.1	µg/L	1025.0	ND	100	70-130		AS
Silver	50.70	-	1.01	µg/L	51.250	ND	98.9	70-130		AS
Lead	245.1	-	2.02	µg/L	256.25	0.894	95.3	70-130		AS

Matrix Spike (F312246-MS5)		Source: 1312480-01RE5		Prepared: 23-Dec-13		Analyzed: 02-Jan-14				
Chromium	2501	-	10.1	µg/L	2050.0	24.26	121	70-130		AS

Matrix Spike Dup (F312246-MSD1)		Source: 1312448-01RE1		Prepared: 23-Dec-13		Analyzed: 24-Dec-13					
Aluminum	627.7	-	127	µg/L	300.00	294.0	111	70-130	8.17	20	
Chromium	64.61	-	0.51	µg/L	50.040	1.37	126	70-130	5.55	20	
Nickel	67.50	-	0.51	µg/L	50.020	5.02	125	70-130	4.09	20	
Copper	102.8	-	0.51	µg/L	50.020	42.85	120	70-130	4.38	20	
Zinc	187.2	-	2.53	µg/L	50.000	122.2	130	70-130	4.29	20	
Arsenic	67.09	-	1.52	µg/L	49.960	3.52	127	70-130	0.355	20	
Silver	1.728	-	0.101	µg/L	1.0000	0.541	119	70-130	5.31	20	
Lead	14.15	-	0.203	µg/L	10.000	3.102	111	70-130	4.60	20	

Matrix Spike Dup (F312246-MSD2)		Source: 1312449-01RE1		Prepared: 23-Dec-13		Analyzed: 24-Dec-13					
Aluminum	538.2	-	1270	µg/L	300.00	ND	179	70-130	5.10	20	U, QM-07
Chromium	59.33	-	5.07	µg/L	50.040	ND	119	70-130	4.37	20	
Nickel	71.34	-	5.07	µg/L	50.020	3.59	135	70-130	13.8	20	QM-07
Copper	65.74	-	5.07	µg/L	50.020	2.60	126	70-130	10.0	20	
Zinc	87.98	-	25.3	µg/L	50.000	25.27	125	70-130	5.51	20	
Arsenic	62.52	-	15.2	µg/L	49.960	ND	125	70-130	14.4	20	
Silver	1.189	-	1.01	µg/L	1.0000	ND	119	70-130	7.45	20	
Lead	12.45	-	2.03	µg/L	10.000	0.894	116	70-130	4.66	20	

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Quality Control Data

Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch F312246 - EFGS-052 Closed Vessel Nitric Oven Digestion

Matrix Spike Dup (F312246-MSD3)		Source: 1312448-01RE1		Prepared: 23-Dec-13 Analyzed: 24-Dec-13							
Aluminum	1286	-	126	µg/L	1025.0	294.0	96.7	70-130	0.644	20	AS
Chromium	110.5	-	0.50	µg/L	102.50	1.37	106	70-130	0.00407	20	AS
Nickel	139.5	-	0.50	µg/L	128.12	5.02	105	70-130	0.356	20	AS
Copper	179.9	-	0.50	µg/L	128.12	42.85	107	70-130	1.70	20	AS
Zinc	403.2	-	2.52	µg/L	256.25	122.2	110	70-130	0.552	20	AS
Arsenic	116.7	-	1.51	µg/L	102.50	3.52	110	70-130	3.13	20	AS
Silver	5.750	-	0.101	µg/L	5.1250	0.541	102	70-130	1.93	20	AS
Lead	27.06	-	0.202	µg/L	25.625	3.102	93.5	70-130	0.738	20	AS

Matrix Spike Dup (F312246-MSD4)		Source: 1312449-01RE1		Prepared: 23-Dec-13 Analyzed: 24-Dec-13							
Aluminum	10490	-	1260	µg/L	10250	ND	102	70-130	1.89	20	AS
Chromium	1022	-	5.05	µg/L	1025.0	ND	99.7	70-130	0.00714	20	AS
Nickel	1287	-	5.05	µg/L	1281.2	3.59	100	70-130	3.13	20	AS
Copper	1316	-	5.05	µg/L	1281.2	2.60	103	70-130	1.91	20	AS
Zinc	2620	-	25.2	µg/L	2562.5	25.27	101	70-130	0.911	20	AS
Arsenic	1060	-	15.1	µg/L	1025.0	ND	103	70-130	3.35	20	AS
Silver	52.18	-	1.01	µg/L	51.250	ND	102	70-130	2.87	20	AS
Lead	245.9	-	2.02	µg/L	256.25	0.894	95.6	70-130	0.332	20	AS

Matrix Spike Dup (F312246-MSD5)		Source: 1312480-01RE5		Prepared: 23-Dec-13 Analyzed: 02-Jan-14							
Chromium	2498	-	10.1	µg/L	2050.0	24.26	121	70-130	0.109	20	AS

Eurofins Frontier Global Sciences, Inc.

The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Liz Siska, Project Manager



Frontier Global Sciences

11720 Northcreek Pkwy N, Suite 400  
Bothell, WA 98011  
425.686.1996 Phone  
425.686.3096 Fax

Eastern Analytical, Inc  
25 Chenell Drive  
Concord NH, 03301

Project: Merrimack Station 200.8  
Project Number: 41096  
Project Manager: Jeff Gagne

Reported:  
07-Jan-14 14:01

#### Notes and Definitions

- U Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
- R-05 The sample was diluted due to the presence of high levels of non-target analytes or particulates resulting in elevated reporting limits.
- QM-12 Continuing calibration verification (CCV) and/or blank spike/blank spike duplicate (BS/BSD) recoveries above upper control limits. All reported sample concentrations were below the reporting limit.
- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on LCS and LCSD recoveries within control limits and, when analysis permits, acceptable AS/ASD.
- QB-08 The blank was preserved to 50% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
- QB-04 The blank was preserved to 2% BrCl rather than 1%. The control limit for blanks preserved to greater than 1% BrCl is the preservation percentage multiplied by the MRL.
- AS This MS and/or MSD is an analytical spike and/or an analytical spike duplicate.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Eurofins Frontier Global Sciences, Inc.

Liz Siska, Project Manager

*The results in this report only apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





Paul Pepler  
GZA GeoEnvironmental, Inc. (NH)  
380 Harvey Road  
Manchester, NH 03103



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 127849  
Client Identification: PSNH-MK | 3902  
Date Received: 1/2/2014

Dear Mr. Pepler:

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at [www.eailabs.com](http://www.eailabs.com) for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

- Solid samples are reported on a dry weight basis, unless otherwise noted
- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
Lorraine Olashaw, Lab Director

1.10.14  
Date

6  
# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 127849

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Temperature upon receipt (°C): 1

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
127849.01	Combination WW	1/2/14	12/31/13	aqueous		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis. Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater, 20th Edition, 1998 and 22nd Edition, 2012
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992





# QC REPORT

EAI ID#: 127849

Client: GZA GeoEnvironmental, Inc. (NH)

Batch ID: 635248-53811/A010914OG1661

Client Designation: PSNH-MK | 3902

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Oil & Grease (HEM)	< 5	37 (92 %R)	35 (88 %R) (4 RPD)	1/9/2014	mg/L	78 - 114	18	1664A

Samples were extracted and analyzed within holding time limits.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

Sample surrogate recoveries met the above stated criteria.

The associated matrix spikes and/or Laboratory Control Samples met acceptance criteria.

There were no exceptions in the analyses, unless noted.

\*! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted below, flagged analytes that exceed acceptance limits in the Quality Control sample were not detected in the field samples.



# LABORATORY REPORT

EAI ID#: 127849

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Sample ID: Combination WW

Lab Sample ID: 127849.01

Matrix: aqueous

Date Sampled: 12/31/13

Date Received: 1/2/14

		Analysis			
		Units	Date	Time	Method Analyst
Solids Total	580000	mg/L	1/02/14	14:00	2540B-97 SCW
Solids Suspended	82	mg/L	1/06/14	14:30	2540D-97 SCW
Chloride	140000	mg/L	1/03/14	14:36	4500CIE-90 KD
Nitrite-N	34	mg/L	1/02/14	14:31	353.2 KD
Nitrate-N	3473	mg/L	1/02/14	14:46	353.2 KD
Nitrate/Nitrite-N	3507	mg/L	1/02/14	14:46	353.2 KD
Ammonia-N	4.6	mg/L	1/08/14	15:45	4500NH3D KJP
TKN	160	mg/L	1/09/14	12:00	4500N <sub>on</sub> C/N SEL
Total Nitrogen	3667	mg/L	1/09/14	14:50	4500N <sub>on</sub> C/N SEL
Total Phosphorus-P	< 1	mg/L	1/07/14	12:07	365.1 SEL
CBOD	< 6	mg/L	1/02/14	16:02	5210B-97 SCW
COD	3700	mg/L	1/08/14	10:10	H8000 SCW

Total Nitrogen is determined by the addition of Nitrate-N, Nitrite-N and TKN (TKN = Ammonia plus TON) concentrations.

The values for Total Nitrogen and TKN may be biased low due to the presence of high nitrate/nitrite in the sample matrix which can cause a negative interference on the TKN value. A matrix spike performed on the TKN sample had a recovery of 23% confirming the matrix interference.

The reporting limit for Total Phosphate-P was elevated due to the sample matrix.



# QC REPORT

EAI ID#: 127849

Client: GZA GeoEnvironmental, Inc. (NH)

Client Designation: PSNH-MK | 3902

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Solids Total	< 10	1100 (103 %R)	1100 (101 %R) (2 RPD)	mg/L	1/2/14	85 - 115	20	2540B-97
Solids Suspended	< 5	93 (99 %R)	96 (102 %R) (3 RPD)	mg/L	1/6/14	90 - 110	20	2540D-97
Chloride	< 1	26 (104 %R)	26 (104 %R) (0 RPD)	mg/L	1/3/14	90 - 110	20	4500CIE-90
Nitrite-N	< 0.5	5.4 (107 %R)	5.3 (106 %R) (1 RPD)	mg/L	1/2/14	90 - 110	20	353.2
Nitrate-N	< 0.5	5.4 (107 %R)	5.3 (107 %R) (0 RPD)	mg/L	1/2/14	90 - 110	20	353.2
Nitrate/Nitrite-N	< 0.5	5.4 (107 %R)	5.3 (107 %R) (0 RPD)	mg/L	1/2/14	90 - 110	20	353.2
Ammonia-N	< 0.05	2.0 (100 %R)	2.0 (102 %R) (2 RPD)	mg/L	1/8/14	90 - 110	20	4500NH3D
TKN	< 0.5	10 (100 %R)	10 (104 %R) (4 RPD)	mg/L	1/9/14	90 - 110	20	4500N <sub>org</sub> C/N
Total Phosphorus-P	< 0.01	0.28 (94 %R)	0.28 (94 %R) (0 RPD)	mg/L	1/7/14	90 - 110	20	365.1
CBOD	< 6	370 (94 %R)	370 (94 %R) (0 RPD)	mg/L	1/2/14	60 - 120	20	5210B-97
COD	< 10	100 (104 %R)	100 (103 %R) (1 RPD)	mg/L	1/8/14	85 - 115	20	H8000

Samples were analyzed within holding times unless noted on the sample results page.

Instrumentation was calibrated in accordance with the method requirements.

The method blanks were free of contamination at the reporting limits.

The associated matrix spikes and/or Laboratory Control Samples met the above stated criteria.

Exceptions to the above statements are flagged or noted above or on the QC Narrative page.

\*! Flagged analyte recoveries deviated from the QA/QC limits.

### CHAIN-OF-CUSTODY RECORD

127849

**BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.**

SAMPLE I.D.	SAMPLING DATE/TIME <small>*IF COMPOSITE, INDICATE BOTH START &amp; FINISH DATE/TIME</small>	MATRIX (SEE BELOW) GRAB/COMPOSITE	VOC		SVOC		TCMP METALS		INORGANICS				MICRO		OTHER		NOTES MeOH Vial #
			5242 5242 BTEX 5242 BTEX 1, 4 DIBENZO	5242 5242 BTEX 5242 BTEX 1, 4 DIBENZO	8021B 8021B BTEX 8021B BTEX 1, 4 DIBENZO												
Combination WW	12/31/13 5:00 pm	WW	6														8

MATRIX: A-Air; S-Soil; GW-Ground Water; SW-Surface Water; DW-Drinking Water; WW-Waste Water  
PRESERVATIVE: H-HCL; N-HNO<sub>3</sub>; S-H<sub>2</sub>SO<sub>4</sub>; Na-NaOH; M-MEOH

PROJECT MANAGER: Paul Reper  
 COMPANY: GZA Geoscientific, Inc.  
 ADDRESS: 380 Harvey Road  
 CITY: Manchester STATE: NH ZIP: 03103  
 PHONE: 603-232-8717 EXT.:       
 FAX:       
 E-MAIL: Paul.Reper@gza.com  
 SITE NAME: PSNH-MK  
 PROJECT #: 3902  
 STATE:  NH  MA  ME  VT OTHER:       
 REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR  
 GWP, OIL FUND, BROWNFIELD OR OTHER:       
 QUOTE #:      PO #:     

DATE NEEDED: Standard 5 day TAT

QA/QC REPORTING LEVEL: A B C  
 OR  
 PRESUMPTIVE CERTAINTY

REPORTING OPTIONS  
 PRELIMS:  YES OR NO  
 If YES: FAX OR PDF

ELECTRONIC OPTIONS  
 No FAX E-MAIL  PDF EQUIS

TEMP: 1 °C  
 ICE?  YES No

SAMPLER(S): Paul Reper  
12/31/13 6:04 pm Fridge w/ custody seal  
 RELINQUISHED BY: Paul Reper DATE: 12/31/13 TIME: 6:04 pm RECEIVED BY: Paul Reper  
1/2/14 8:21 am Fridge w/ custody seal  
 RELINQUISHED BY: Paul Reper DATE: 1/2/14 TIME: 8:21 am RECEIVED BY: Paul Reper  
1/2/14 9:17 am Fridge w/ custody seal  
 RELINQUISHED BY: Paul Reper DATE: 1/2/14 TIME: 9:17 am RECEIVED BY: Paul Reper

METALS: 8 RCRA 13 PP Fe, Mn Pb, Cu  
 OTHER METALS:       
 SAMPLES FIELD FILTERED?  Yes  No  
 NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)

SITE HISTORY:       
 SUSPECTED CONTAMINATION:       
 FIELD READINGS:     

