

includes only page
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table 1, and chain
of custody form

VIA EMAIL

February 23, 2012
File No. 04.0029307.00



Ms. Nancy Lesieur
Industrial Pretreatment Coordinator
Winnepesaukee River Basin Program Wastewater Treatment Plant
Water Division
New Hampshire Department of Environmental Services
528 River Street
Franklin, New Hampshire 03235

Re: Wastewater Discharge Monitoring Report
Treated Wastewater
Merrimack Station
Public Service of New Hampshire
Bow, New Hampshire

380 Harvey Road
Manchester
New Hampshire
03103-3347
603-623-3600
FAX 603-624-9463
www.gza.com

Dear Ms. Lesieur:

On behalf of Public Service of New Hampshire (PSNH), GZA GeoEnvironmental, Inc. is pleased to submit the attached **Wastewater Discharge Monitoring Report** for sampling conducted on February 2, 2012, as requested to supplement the initial sampling requirements as outlined in *Special Agreement – PSNH and WRBP Wastewater Treatment Plant*.

Table 1 included in the Wastewater Discharge Monitoring Report summarizes the analytical results for all required parameters as outlined in the terms of the Special Agreement. The attached **Analytical Data Report**, however, contains a more comprehensive list of parameters.

ANALYTICAL DISCUSSION

Flue Gas Desulfurization (FGD) wastewater requires specialized analytical techniques to overcome matrix interference for certain analysis of trace metals. To assist you in evaluating this issue further, we offer an excerpt below from the United States Environmental Protection Agency (EPA) web site and a link to their draft Standard Operating Procedure (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.

TABLE 1 - SUMMARY ANALYTICAL DATA
Treated FGD Wastewater
Public Service Company of New Hampshire
Merrimack Station
Bow, New Hampshire

PARAMETER	RESULTS (mg/L) 2/2/2012 EAI/Frontier
Aluminum	0.218
Arsenic	0.0121
Cadmium	< 0.00100
Chloride	9,300
Chromium (T)	< 0.00500
Copper	0.00553
Cyanide (T)	< 0.01
Iron	< 0.500
Lead	< 0.00200
Manganese	0.631
Mercury	0.0000360
Molybdenum	0.195
Nickel	< 0.00500
Selenium	0.121
Silver	< 0.00100
Zinc	< 0.0100



414 Pontius Ave North
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CHAIN OF CUSTODY FORMS



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Info@FrontierGS.com
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Client: Eastern Analytical Inc.		Contact: Jeff Grogan		Analyses Requested		FGS PM: Liz Siska				
Address: 25 Cheneil Drive Concord NH 03301		Phone: 603 440 9880 Fax: 603 228 4551				Date: 2/2/2012				
Project Name: Merrimack station		E-mail: jeffg@eai-labs.com				TAT (business days): 20 (std) 15 (0 5 4 3 2 24 hrs. (For TAT < 10 days, contact PM. Surcharges apply for expedited TAT)				
Report To: same		Contract/PO:				Saturday delivery? ☐ Y ☐ N (If yes, please contact PM)				
Address: same		Invoice To: same				EDD ☐ Y ☐ N				
Phone: 603 228 0626 Fax: 603 228 4551		Address: same				QA ☐ Standard ☐ High				
E-mail: customer.service@eai-labs.com		Phone: Fax:				Comments				
E-mail: customer.service@eai-labs.com		E-mail: customer.service@eai-labs.com								
No.	Engraved Bottle ID	Sample ID	# of Bottles	Matrix	Date & Time	Sampled By	Field Filtered (Y/N)	Field Preserved: HNO ₃ HCl Other (%)	Total Metals	
1	C-3015	Effluent Field Blank	1	AQ	2/2/12 08:47	JB/GT	N	-	X	
2	C-3067 C-3023	Treat Tank Effluent	3	WW	2/2/12 09:15	JB/GT	N	-	X	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
For Laboratory Use Only		Matrix Codes:		Relinquished By:		Received By:		Received By:		
COC Seal: NO		Comments: TID: 0268		Name: Jim Blackwell		Name: Chris Kline		Name: ALEXA BAHM		
Cooler Temp: 10.6°C				Organization: Eastern Analytical		Organization: EAI		Organization: FGS		
Carrier: UPS				Date & Time: 2/2/12 13:00		Date & Time: 2/2/12 13:00		Date & Time: 2-2-12		
VTSR: 0930				Tracking number: 1Z X4G 599 01 9628 9755		14:31				
# of Coolers: 1 (one)										
Sample Disposal:										
☐ Return (shipping fees may apply)										
☐ Standard Disposal - 30 Days after report										
☐ Retain for _____ weeks after report (storage fees may apply)										
				By signing, you declare that you agree with FGS' terms and conditions, and that you authorize FGS to perform the specified analyses.						
				Customer Approval:						

Frontier Global Sciences, Inc.

Liz Siska

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.

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02/15/2012