



March 13, 2009

Mr. Leo Francendese
On-Scene Coordinator
U.S. Environmental Protection Agency
61 Forsyth Street, SW 11th Floor
Atlanta, Georgia 30303

**Subject: Surface Water Sampling Letter Report
Barite Hills Nevada Goldfields Site
McCormick, McCormick County, South Carolina
Contract No. EP-W-05-053
Technical Direction Document (TDD) No.: TNA-05-003-0049**

Dear Mr. Francendese:

T N & Associates, Inc. (TN&A), Superfund Technical Assessment and Response Team (START), prepared this Letter Report detailing activities performed in support of the Barite Hills Nevada Goldfields site (the site) investigation under Contract Number (No.) EP-W-05-053, Technical Direction Document (TDD) No. TNA-05-003-0049. All activities and procedures were performed in accordance with the EPA Science and Ecosystems Support Division (SESD) Region 4 Field Branches Quality System and Technical Procedures dated November 2007, and the EPA-approved site-specific Quality Assurance Project Plan (QAPP).

Under this work assignment, START was tasked with conducting water sampling of the Main Pit lake (the lake) and Hawes Creek tributary (the creek). Two samples were collected from the lake and five samples were collected near seep locations along the creek. Water quality parameters were measured simultaneously to water sampling. The site location map with sample locations and a map of the creek pH changes are provided in Attachment A. Water quality parameters from February 2009 and a comparative table of potentially applicable standards can be found in Attachment B with corresponding graphs. Laboratory analytical data is in Attachment C. The HASP can be found in Attachment D.

Site Background

The site is an abandoned pit mine located approximately 3 miles south of McCormick, McCormick County, South Carolina between US Highway (Hwy) 378 and US Hwy 221

on the northern side of Road 30. The site is located in a relatively remote area; there are no buildings, homes, or commercial buildings within 0.5 mile of the site boundary. The site is located along a topographic high ridge area forming the headwaters of the creek. The topography of the area consists of rolling hills with ridgelines at an elevation of about 500 feet above mean sea level (amsl). Within the site, the ridgeline comprising the site has a high point of about 510 feet amsl and an average elevation of approximately 480 feet amsl.

The Main Pit from the mining operations remains. When the mine was abandoned, the Main Pit flooded. The waste rock stockpiles previously surrounding the eastern and southeastern portions of the Main Pit were a source of acid rock drainage. The pit contains approximately 60 million gallons of water with an historical pH of 2 and a high dissolved metal content.

Field Investigation Activities

On 02/26/09, START conducted surface water sampling. The investigation consisted of measuring water quality and collecting water samples from the lake. A Health and Safety Plan (HASP) was developed for the site prior to fieldwork activities.

START collected two samples from the lake and five samples from the creek (Figure 1). Water quality parameters were measured at each sample location (Table 1). The lake water column was measured every meter from the surface to the bottom. BHR-MPS-010 was collected one meter below the lake water surface and BHR-MPB-010 was collected one meter from the bottom of the lake using a Bacon Bomb. BHR-S1-010, BHR-S2-010, and BHR-S3-010 were collected from pooled water along the creek at Seep 1, Seep 2, and Seep 3, respectively. BHR-S0-010 was collected adjacent the spillway along the creek. BHR-MC-010 was collected from a tributary of McCormick Creek that drains into the creek. Lake samples were analyzed by Analytical Environmental Services, Inc. (AES) for dissolved target analyte list (TAL) metals, total TAL metals, total organic carbon, pH, sulfate, and ferric/ferrous speciation. Creek samples were analyzed for pH, sulfate, and dissolved TAL metals. Aliquots sampled for dissolved TAL metals were filtered on-site using a 0.45 micron filter. Laboratory analytical reports are provided in Attachment C.

Conclusions

Table 2 and 3 are analytical comparisons of the lake surface and lake bottom, respectively, from June 2008 through February 2009 of potentially applicable standards including priority and non-priority pollutants. Dissolved lead analytical results may be cross contaminated due to high winds and high amounts of dust at time of sampling. Graph 1 illustrates the lake surface dissolved metal concentrations overtime. Graph 2 is a close up of Graph 1 detailing lower concentrations. Table 4 is an analytical comparison of Seep 1, Seep 2, and Seep 3 overtime. Graphs 3, 4, and 5 illustrate Seep 1, Seep 2, and Seep 3, respectively, concentrations overtime. Graph 6 compares seep concentrations for

Surface Water Sampling Letter Report

Barite Hills site

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February 2009. Graph 7 is a close up of Graph 6 detailing lower concentrations. Tables and graphs can be found in Attachment B.

If you have any questions or comments regarding this Letter Report or require any additional information, please contact me at (678) 355-5550 ext. 5710 or contact Russell Henderson, Project Manager, at ext. 5707.

Sincerely,

A handwritten signature in black ink, appearing to read "Dannena Bowman". The signature is fluid and cursive, with a large loop at the end of the last name.

Dannena Bowman

Junior Geologist

T N & Associates, Inc.

Superfund Technical Assessment and Response Team (START)

Enclosures

Attachment A – Figures

Attachment B – Tables & Graphs

Attachment C – Analytical Data

Attachment D – HASP

ATTACHEMENT A
FIGURES



Legend

- Sample Locations
- Hawes Creek



**BARITE HILLS
MCCORMICK, MCCORMICK
COUNTY, SOUTH CAROLINA**
TDD No. TNA-05-003-0049

**FIGURE 1
SAMPLE LOCATIONS**



**ATTACHMENT B
TABLES & GRAPHS**

Table 1
Water Quality Parameters

Nov. 19/21, 2008 YSI 5200

Main Pit Lake

Depth (m)	pH	ORP (mV)	DO (mg/L)	Temp (°C)	Conductivity (mS/cm)
1	4.38	43.8	4.74	13.41	3.327
2	4.6	-74.5	0.9	14.83	3.607
3	4.73	-88.3	0.63	14.88	3.575
4	4.81	-94.2	0.6	14.87	3.559
5	4.76	-96.5	0.47	14.87	3.537
6	4.81	-99.4	0.43	14.87	3.534
7	4.82	-100.1	0.4	14.87	3.529
8	4.82	-102.8	0.38	14.81	3.527
9	4.72	-136.9	0.39	16.12	3.818
10	4.65	-154.9	0.3	16.71	4.009
11	4.8	-197	0.43	16.69	3.774
12	5.26	-196.8	0.4	16.66	3.684

Creeks

Location	pH	ORP (mV)	DO (mg/L)	Temp (°C)	Conductivity (mS/cm)
1					
2	3.05	452	3.1	7.91	3.568
3 SE	6.54	232	4.17	9.24	0.429
3 SW					

Dec. 16, 2008 YSI 5200

Main Pit Lake

Depth (m)	pH	ORP (mV)	DO (mg/L)	Temp (°C)	Conductivity (mS/cm)
1	4.9	-42	1.5	11.59	3.258
2	4.95	-60	1.86	11.67	3.277
3	4.98	-64	2.39	11.66	3.278
4	5.02	-66	0.86	11.63	3.276
5	5.04	-70	0.71	11.62	3.276
6	5.07	-71	0.67	11.63	3.279
7	5.07	-71	0.63	11.64	3.28
8	5.08	-72	0.61	11.64	3.28
9	5.08	-72	0.6	11.63	3.28
10	5.1	-73	0.58	11.63	3.28
11	5.1	-73	0.57	11.63	3.28
12	5.1	-73	0.56	11.63	3.28
13	5.08	-94	0.54	11.66	3.285
14	5.8	-102	0.39	11.86	2.732
15	5.82	-113	0.41	11.85	2.721

Table 1
Water Quality Parameters

Feb. 7, 2009

Horbia U-22XD
Main Pit Lake

Depth (m)	pH	ORP (mV)	DO (g/L)	Temp (°C)	Conductivity (mS/cm)
1	5.27	-6	1.79	9.7	6.44
2	5.27	-8	1.27	9.3	7.12
3	5.26	-9	0.79	9	6.02
4	5.27	-8	0.76	9	5.82
5	5.27	-10	0.7	8.9	6.09
6	5.27	-8	0.67	8.9	8.09
7	5.27	-35	0.58	8.9	9.3
8	5.27	-40	0.54	8.9	6.64
9	5.27	-40	0.55	9	8.12
10	5.27	-40	0.54	9	9.49
11	5.27	-10	0.74	8.9	6.9
12	5.98	-146	0	10	3.88
13	6.08	-160	0	10	2.56
14	6.09	-165	0	10	2.26
15	6.1	-185	0	10.4	1.7

Jan. 30, 2009

Creeks

Location	pH	ORP (mV)	DO (mg/L)	Temp (°C)	Conductivity (mS/cm)
1	2.6			8.2	
2	2.68			8.4	
3 SE	5.17			9.3	
3 SW	3.65			10.2	

Feb. 26, 2009

Horbia U-22XD
Main Pit Lake

Depth (m)	pH	ORP (mV)	DO (g/L)	Temp (°C)	Conductivity (S/cm)
1	4.76	106	6.97	11.5	0.828
2	4.85	101	5.39	9.5	0.825
3	5.31	29	1.48	9.6	0.982
4	5.38	16	0.15	9.3	0.888
5	5.39	15	0	9.3	0.864
6	5.4	13	0	9.3	0.888
7	5.4	14	0	9.3	0.989
8	5.41	12	0	9.3	0.987
9	5.41	11	0	9.3	1.45
10	5.83	-59	0	9.5	1.24
11	5.93	-79	0	9.7	1.16
12	5.96	-91	0	9.7	1.08
13	5.98	-98	0	9.8	1.04
14	5.99	-105	0	9.8	1
15	6	-107	0	9.8	0.96
15.5	6.17	-192	0	10.1	0.555

Table 1
Water Quality Parameters

SE Corner of Lake

Depth (m)	pH	ORP (mV)	DO (g/L)	Temp (°C)	Conductivity (S/cm)
1	4.9	97	6.63	10.5	0.452
2	4.9	106	5.79	9.5	0.436
3	5.38	32	2.52	9.6	0.595
4	5.45	24	0.29	9.3	0.712
5	5.45	22	0	9.3	0.698
6	5.45	19	0	9.3	0.725
7	5.46	16	0	9.3	0.73
8	5.45	15	0	9.3	0.728
9	5.45	16	0	9.3	0.717
10	5.8	-35	0	9.5	0.709
11	5.97	-69	0	9.7	0.69

SW Corner of Lake

Depth (m)	pH	ORP (mV)	DO (g/L)	Temp (°C)	Conductivity (S/cm)
1	4.88	105	6.92	10.4	0.425
2	4.9	108	5.86	9.5	0.424
3	5.43	35	2.14	9.4	0.518
4	5.45	31	0.71	9.3	0.6
5	5.46	29	0.26	9.3	0.616
6	5.46	27	0	9.3	0.628
7	5.47	26	0	9.3	0.655
8	5.46	26	0	9.2	0.652
9	5.85	-24	0	9.5	0.69
10	5.9	-43	0	9.6	0.693

Creeks

Location	pH	ORP (mV)	DO (mg/L)	Temp (°C)	Conductivity (S/cm)
0	3.96	305	10.82	12.2	83.3
MC	6.32	45	9.74	12.9	18.5
1	2.93	386	6.98	12.4	0.287
2	3.09	383	7.91	14.5	0.23
3	3.77	368	7.15	14	64.9

Table 2
Pit Lake Surface Potentially Applicable Standards Comparison

	Human Health	SCDHEC WQC under R61-68		Oct. 2007	May 2, 3008	Jun. 10, 2008	Jul. 30, 2008	Aug. 22, 2008	Nov. 6, 2008	Nov. 19, 2008	Dec. 16, 2008	Jan. 30, 2009	Feb. 26, 2009
	MCL	CMC	CCC	BHB-005	BHT-001	BHR-5-001	BRR-JR-LAKE		BHR-MP05-110608	BHR-MPS-001	BHR-MPS-006	BHR-MPS-006	BHR-MPS-010
Potentially Applicable Standards (priority pollutants)				Pit Water Untreated (mg/L)	Pit water treated (Total, mg/L)	Pit water treated (Dissolved, mg/L)							
Antimony	0.006	NSA	NSA	0.02	NA	0.006	0.2	0.2	BRL*	0.257	BRL*	BRL*	BRL*
Arsenic	0.01	0.34	0.15	0.968	NA	BRL†	BRL†	BRL†	BRL†	BRL‡	BRL‡	BRL‡	BRL‡
Cadmium	0.005	0.008	0.0026	1.57	NA	BRL#							
Chromium	0.1	0.57	0.074	0.141	NA	BRL†							
Copper	1	0.057	0.039	287	NA	BRL†	BRL†	BRL†	BRL†	BRL†	0.0278	0.0293	BRL†
Lead	0.015	0.32	0.005	0.161	NA	BRL†	BRL†	BRL†	0.0381	0.0353	BRL†	BRL†	0.0427
Nickel	0.61	1.071	0.167	0.404	NA	0.163	BRL*						
Selenium	0.05	NSA	0.005	0.23	NA	0.022	0.028	0.01	BRL*	BRL*	BRL*	BRL*	BRL*
Zinc	5	0.339	0.339	40.2	NA	1.44	BRL*	BRL*	0.132	0.118	0.061	0.0628	0.0685
Potentially Applicable Standards (non-priority pollutants)													
Aluminum	0.2	0.75	0.087	224	NA	0.347	BRL§	BRL§	0.342	0.257	0.314	BRL§	BRL§
Iron	0.3		1	1150	121	309	322	287	148	169	212	165	186
Manganese	0.05-0.1			13.6	NA	10.6	11	11.7	8.96	9.33	11.2	10.2	10.7
Ferrous Iron (mg/L)													
Iron, Ferric (+3)	0.3	NSA	1	NA	BRL°	NA	NA	NA	BRL°	37.2	BRL°	BRL°	28.5
Iron, Ferrous (+2)	0.3	NSA	1	NA	145	NA	NA	NA	217	191	305	209	194

- Notes:
- SCDHEC - South Carolina Department of Health and Environmental Control
 - a - South Carolina Regulation 61-68, Water Classifications and Standards, adopted June 2004 and adjusted for water hardness of 400 mg/L.
 - MCL - Maximum contaminant level
 - CMC - Criterion maximum concentration
 - CCC - Criterion continuous concentration
 - mg/L - Milligrams per liter
 - NSA - Standard not available
 - BRL - Below reporting limit
 - * - Reporting limit 0.02
 - † - Reporting limit 0.01
 - ‡ - Reporting limit 0.05
 - # - Reporting limit 0.005
 - § - Reporting limit 0.2
 - ° - Reporting limit 0.1
 - Yellow - Exceeds one criteria (Human Health Standard or SCDHEC WQC)
 - Red - Exceeds all criteria (both Human Health Standard and SCDHEC WQC)

**Table 3
Pit Lake Bottom Potentially Applicable Standards Comparison**

	Human Health	SCDHEC WQC under R61-68		Oct. 2007	Dec. 16, 2008	Feb. 26, 2009
	MCL	CMC	CCC	BHB-005 Pit Water Untreated (mg/L)	BHR-MPSB-008 Pit water treated (Dissolved, mg/L)	BHR-MPB-010 Pit water treated (Dissolved, mg/L)
Potentially Applicable Standards (priority pollutants)						
Antimony	0.006	NSA	NSA	0.02	BRL*	BRL*
Arsenic	0.01	0.34	0.15	0.968	BRL‡	BRL‡
Cadmium	0.005	0.008	0.0026	1.57	BRL#	BRL#
Chromium	0.1	0.57	0.074	0.141	BRL†	BRL†
Copper	1	0.057	0.039	287	0.0189	0.0284
Lead	0.015	0.32	0.005	0.161	BRL†	0.036
Nickel	0.61	1.071	0.167	0.404	BRL*	BRL*
Selenium	0.05	NSA	0.005	0.23	BRL*	BRL*
Zinc	5	0.339	0.339	40.2	0.0676	0.0601
Potentially Applicable Standards (non-priority pollutants)						
Aluminum	0.2	0.75	0.087	224	0.38	BRL§
Iron	0.3		1	1150	217	178
Manganese	0.05-0.1			13.6	11.4	10.6
Ferrous Iron (mg/L)						
Iron, Ferric	0.3	NSA	1		BRL°	0.52
Iron, Ferrous	0.3	NSA	1		285	186

Notes:

SCDHEC - South Carolina Department of Health and Environmental Control
a - South Carolina Regulation 61-68, Water Classifications and Standards, adopted June 2004 and adjusted for water hardness of 400 mg/L.

- MCL - Maximum contaminant level
- CMC - Criterion maximum concentration
- CCC - Criterion continuous concentration
- mg/L - Milligrams per liter
- NSA - Standard not available
- BRL - Below reporting limit
 - * - Reporting limit 0.02
 - † - Reporting limit 0.01
 - ‡ - Reporting limit 0.05
 - # - Reporting limit 0.005
 - § - Reporting limit 0.2
 - ° - Reporting limit 0.1

Yellow - Exceeds one criteria (Human Health Standard or SCDHEC WQC)
Red - Exceeds all criteria (both Human Health Standard and SCDHEC WQC)

Table 4
Creek Potentially Applicable Standards Comparison

Seep 1	Human Health			SCDHEC WQC under R61-68			Bucket #2	Bucket #2	Nov. 19, 2008	Dec. 16, 2008	Jan. 30, 2009	Feb. 26, 2009
	MCL	CMC	CCC	Jul. 30, 2008	Aug. 22, 2008	BHR-P1-005	BHR-S1-006	BHR-S1-006	BHR-S1-006	BHR-S1-010		
	Potentially Applicable Standards (priority pollutants)											
Antimony	0.006	NSA	NSA	NA	NA	BRL*		BRL*		BRL*		BRL*
Arsenic	0.01	0.34	0.15	NA	NA	BRL†		BRL†		BRL†		BRL†
Cadmium	0.005	0.008	0.0026	5.05	0.005	0.353		0.456		0.611		0.582
Chromium	0.1	0.57	0.074	NA	NA	0.0136		BRL†		0.0104		0.0103
Copper	1	0.057	0.039	84.3	0.138	13.7		14.7		19.3		19.6
Lead	0.015	0.32	0.005	NA	NA	0.0432		0.0322		0.0473		0.0899
Nickel	0.61	1.071	0.167	NA	NA	0.0851		0.102		0.138		0.135
Selenium	0.05	NSA	0.005	NA	NA	0.0286		BRL*		0.0238		0.044
Zinc	5	0.339	0.339	45.6	0.157	10.3		13.9		19.1		17.8
Potentially Applicable Standards (non-priority pollutants)												
Aluminum	0.2	0.75	0.087	NA	NA	36.4		35.4		41.7		45.2
Iron	0.3		1	1070	493	58.9		159		200		217
Manganese	0.05-0.1			23.6	6.93	13.4		15.7		19.6		20.1

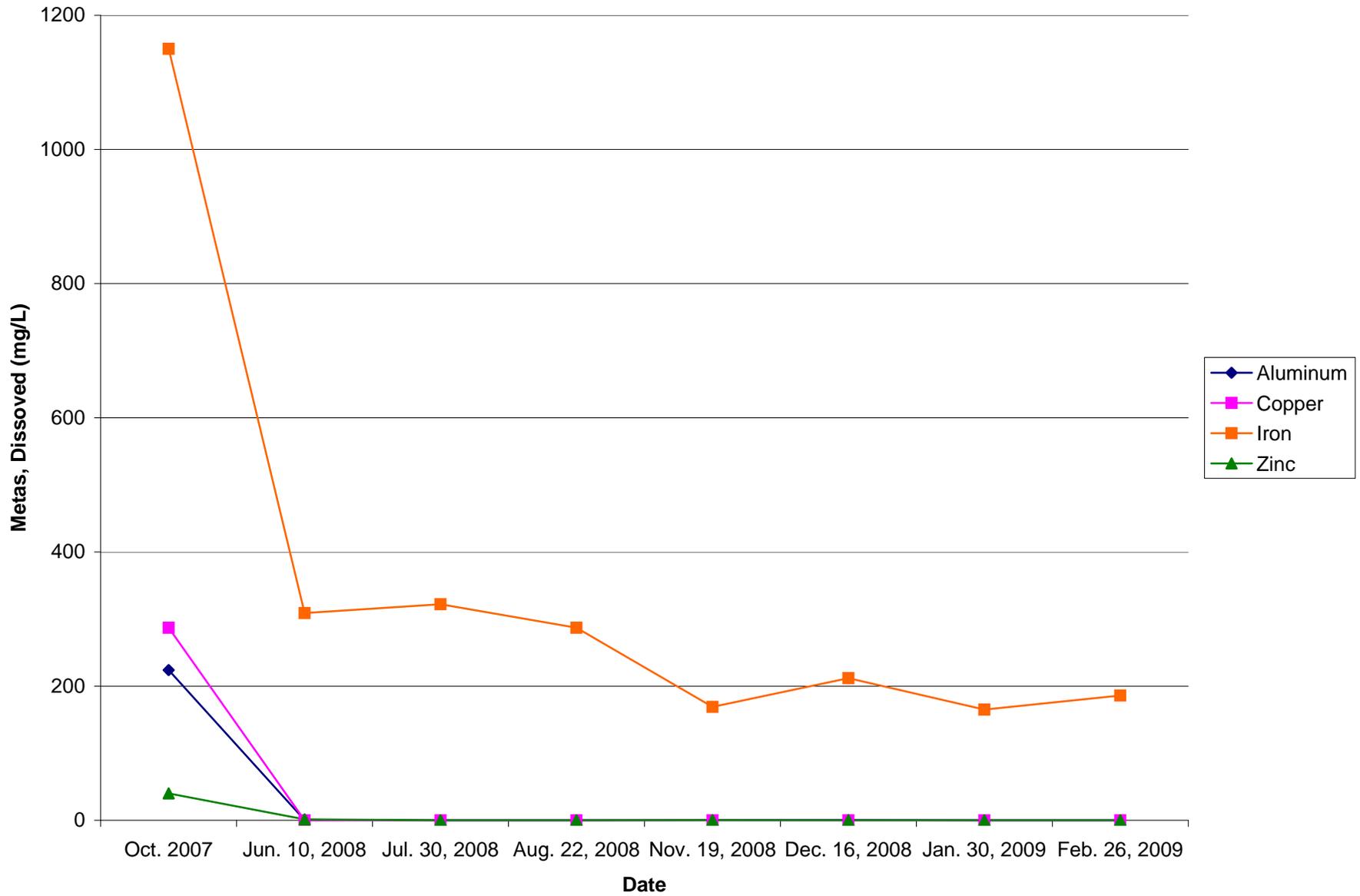
Seep 2	Human Health			SCDHEC WQC under R61-68			Bucket #2	Bucket #2	Nov. 19, 2008	Dec. 16, 2008	Jan. 30, 2009	Feb. 26, 2009
	MCL	CMC	CCC	Jul. 30, 2008	Aug. 22, 2008	BHR-P2-005	BHR-S2-006	BHR-S2-006	BHR-S2-010			
	Potentially Applicable Standards (priority pollutants)											
Antimony	0.006	NSA	NSA	NA	NA	BRL*		BRL*		BRL*		BRL*
Arsenic	0.01	0.34	0.15	NA	NA	BRL†		BRL†		BRL†		BRL†
Cadmium	0.005	0.008	0.0026	5.05	0.005	0.894		0.271		0.385		0.394
Chromium	0.1	0.57	0.074	NA	NA	0.013		BRL†		BRL†		BRL†
Copper	1	0.057	0.039	84.3	0.138	27.7		9.27		12.4		13.1
Lead	0.015	0.32	0.005	NA	NA	0.0323		0.0109		0.0193		0.0534
Nickel	0.61	1.071	0.167	NA	NA	0.215		0.0704		0.102		0.105
Selenium	0.05	NSA	0.005	NA	NA	0.0562		BRL*		BRL*		0.0338
Zinc	5	0.339	0.339	45.6	0.157	31.2		9.62		14.1		13.3
Potentially Applicable Standards (non-priority pollutants)												
Aluminum	0.2	0.75	0.087	NA	NA	48.6		18.1		22.3		25.5
Iron	0.3		1	1070	493	171		87.5		115		122
Manganese	0.05-0.1			23.6	6.93	53.3		15.3		26.6		20.9

Seep 3	Human Health			SCDHEC WQC under R61-68			Bucket #2	Bucket #2	Nov. 19, 2008	Dec. 16, 2008	Jan. 30, 2009	Feb. 26, 2009
	MCL	CMC	CCC	Jul. 30, 2008	Aug. 22, 2008	BHR-P3-005	BHR-S3-006	BHR-S3-006	BHR-S3-010			
	Potentially Applicable Standards (priority pollutants)											
Antimony	0.006	NSA	NSA	NA	NA	BRL*		BRL*		BRL*		BRL*
Arsenic	0.01	0.34	0.15	NA	NA	BRL†		BRL†		BRL†		BRL†
Cadmium	0.005	0.008	0.0026	5.05	0.005	BRL#		BRL#		0.0224		0.0499
Chromium	0.1	0.57	0.074	NA	NA	BRL†		BRL†		BRL†		BRL†
Copper	1	0.057	0.039	84.3	0.138	0.0192		0.011		0.0973		0.0935
Lead	0.015	0.32	0.005	NA	NA	BRL†		BRL†		BRL†		BRL†
Nickel	0.61	1.071	0.167	NA	NA	BRL*		BRL*		BRL*		0.0216
Selenium	0.05	NSA	0.005	NA	NA	BRL*		BRL*		BRL*		BRL*
Zinc	5	0.339	0.339	45.6	0.157	0.349		0.0987		0.808		1.17
Potentially Applicable Standards (non-priority pollutants)												
Aluminum	0.2	0.75	0.087	NA	NA	BRL§		BRL§		0.948		0.961
Iron	0.3		1	1070	493	0.172		0.153		0.473		8.55
Manganese	0.05-0.1			23.6	6.93	0.414		0.0826		2.27		2.8

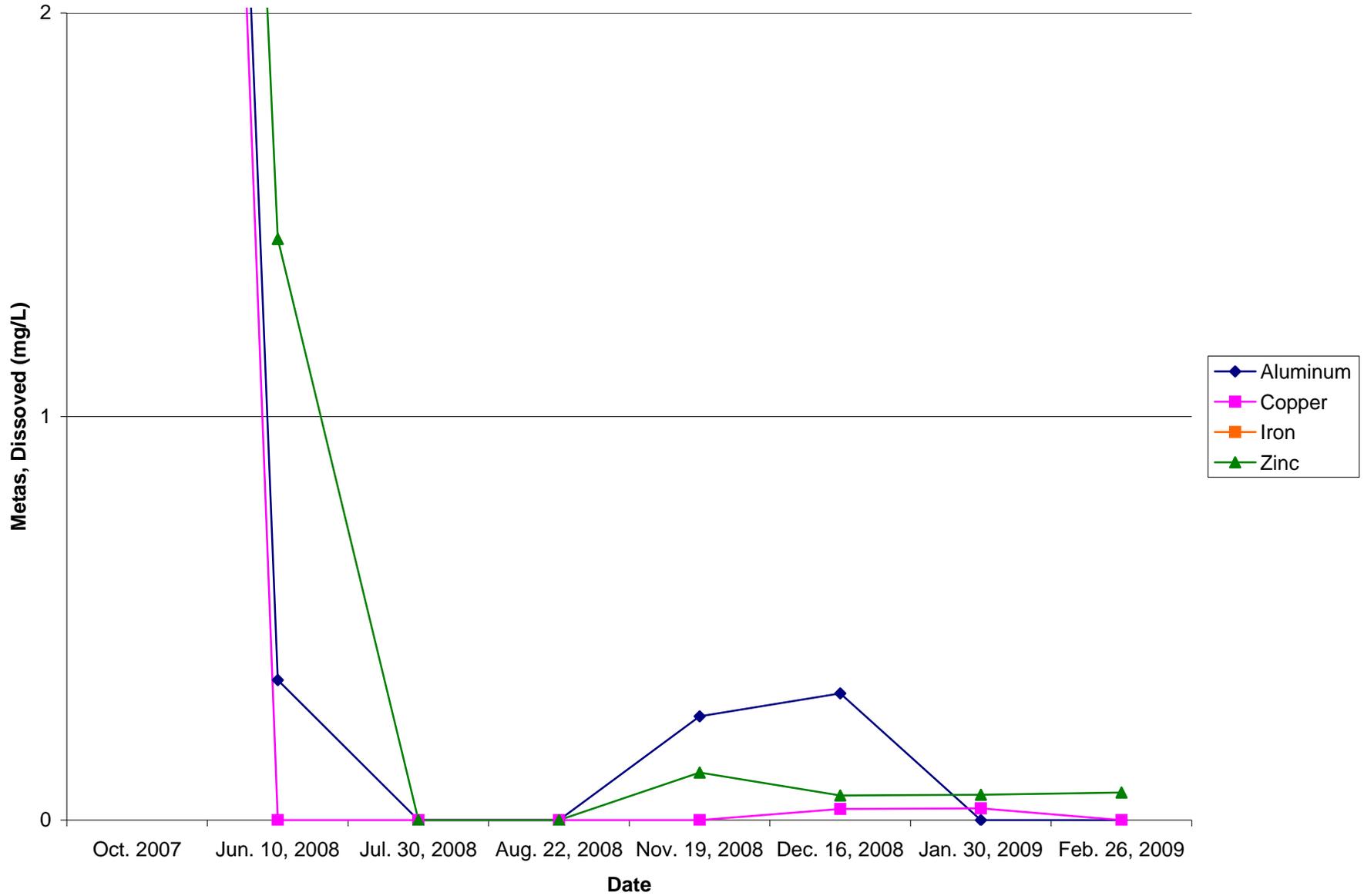
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- MCL - Maximum contaminant level
- CMC - Criterion maximum concentration
- CCC - Criterion continuous concentration
- mg/L - Milligrams per liter
- NSA - Standard not available
- NA - Not analyzed
- BRL - Below reporting limit
 - * - Reporting limit 0.02
 - † - Reporting limit 0.01
 - ‡ - Reporting limit 0.05
 - # - Reporting limit 0.005
 - § - Reporting limit 0.2
- Yellow** - Exceeds one criteria (Human Health Standard or SCDHEC WQC)
- Red** - Exceeds all criteria (both Human Health Standard and SCDHEC WQC)

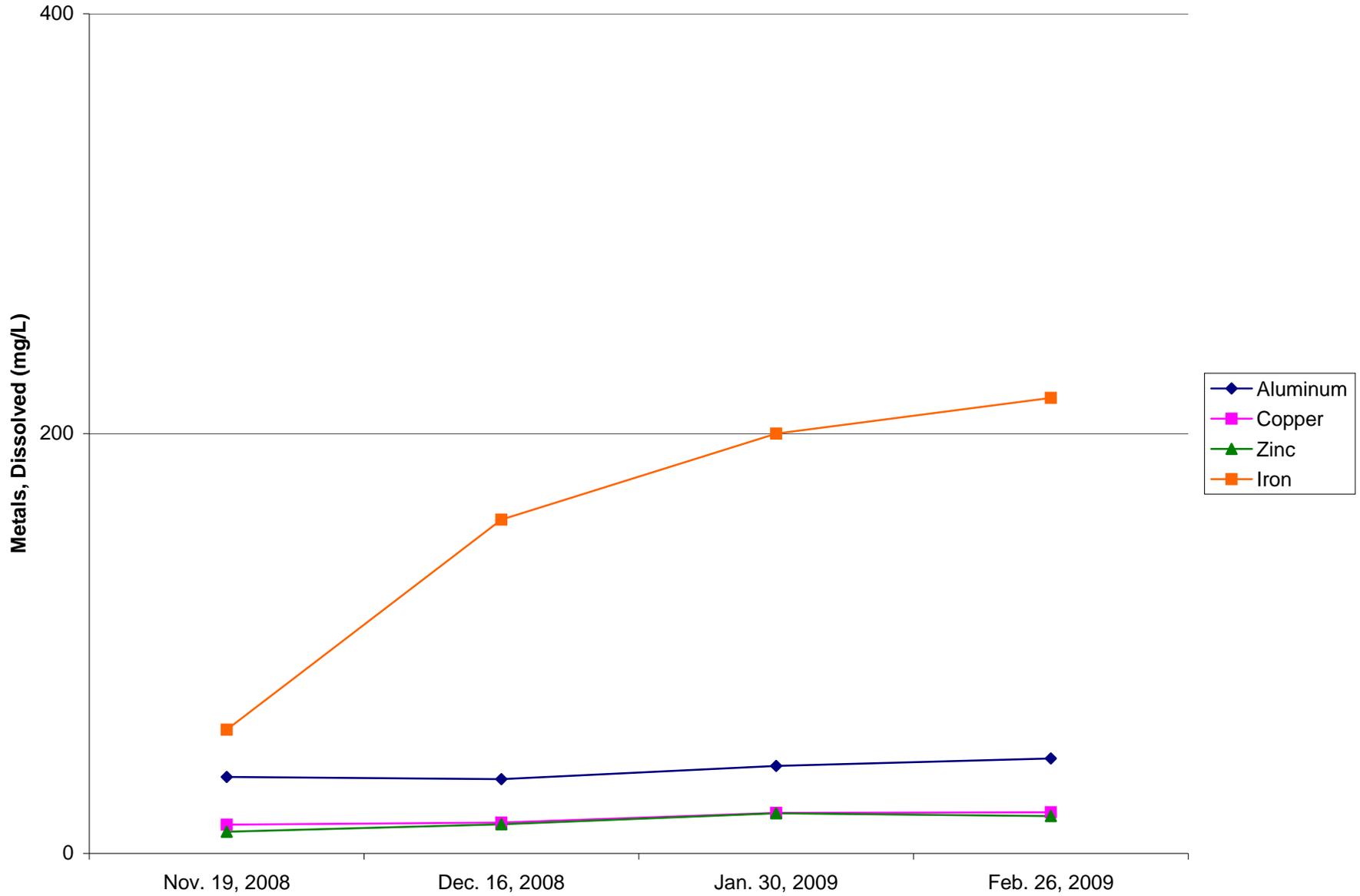
Graph 1
Pit Lake Comparison



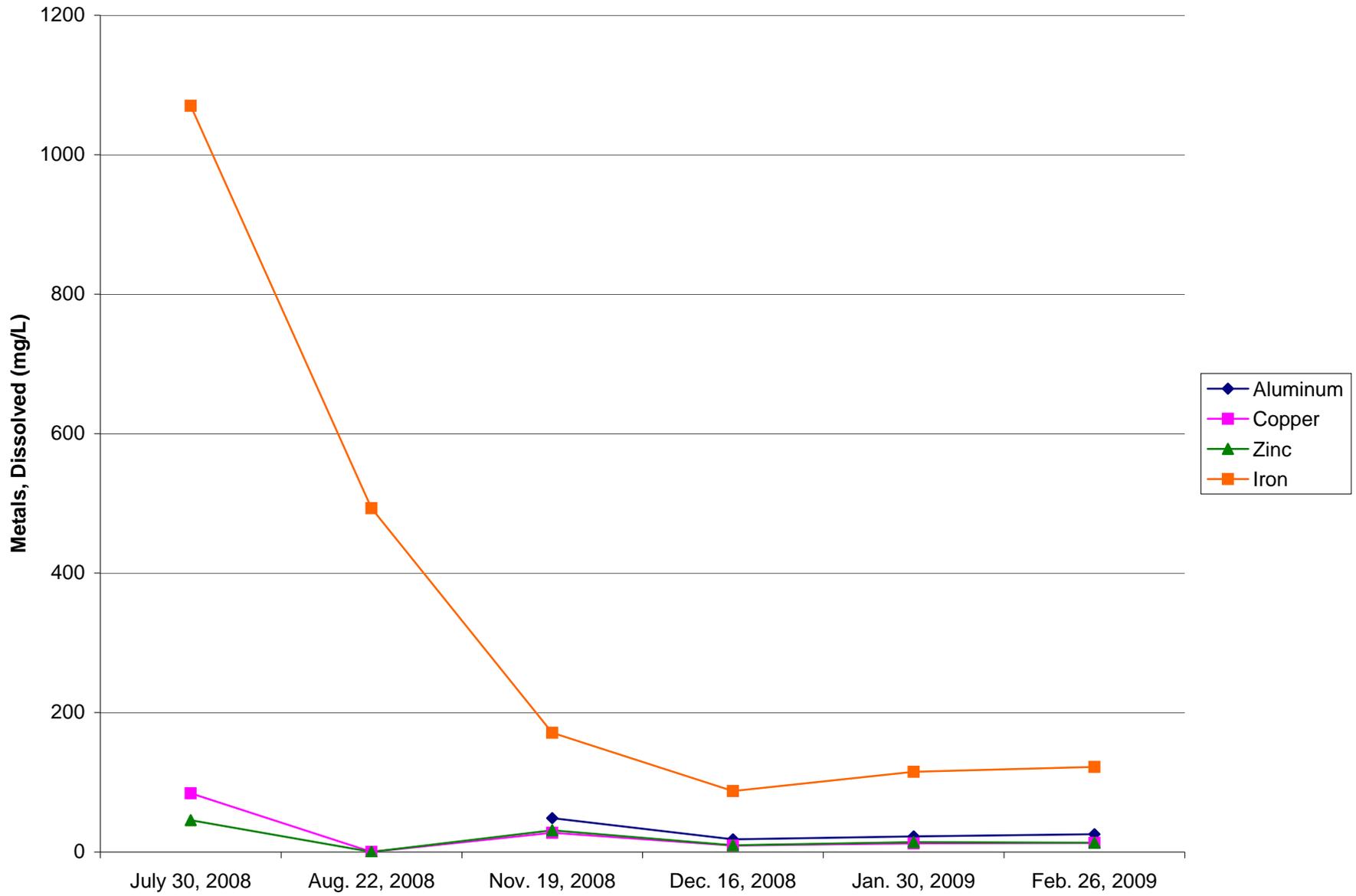
Graph 2
Pit Lake Comparison Detailed



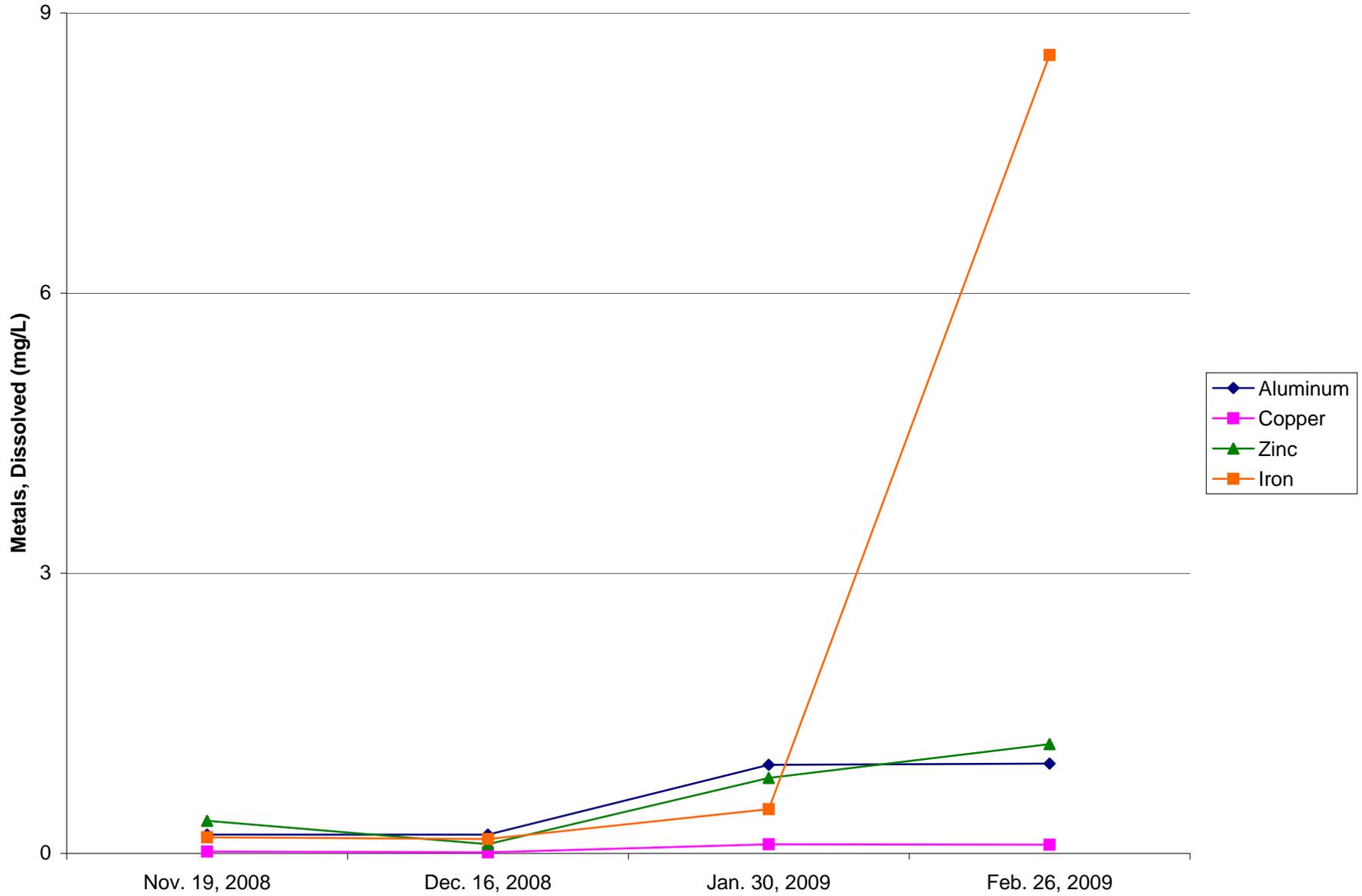
Graph 3
Seep 1 Comparison



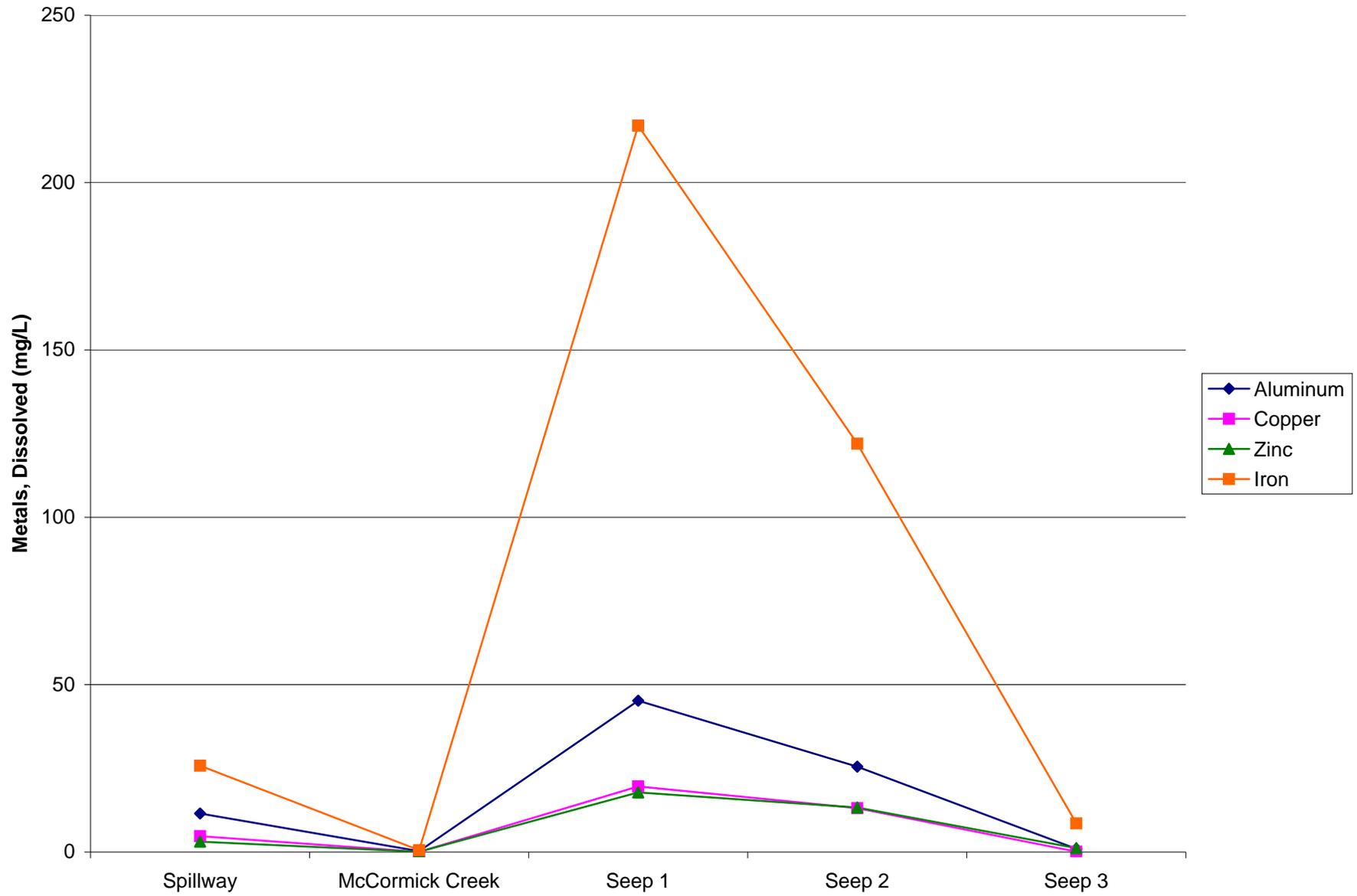
Graph 4
Seep 2 Comparison



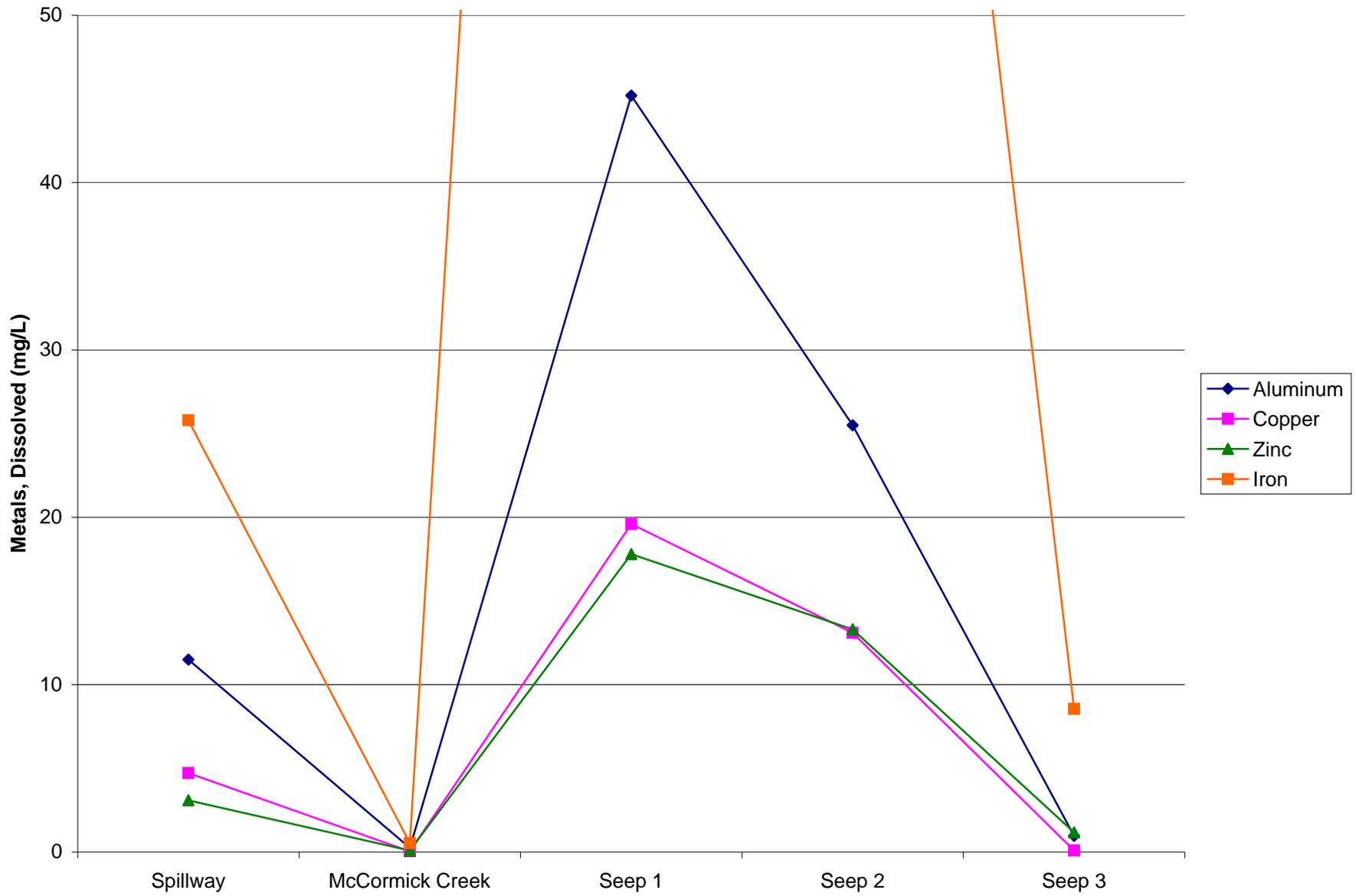
Graph 5
Seep 3 Comparison



Graph 6
Seep Comparison for 02/26/2009



Graph 7
Seep Comparison Detailed for 02/26/2009



**ATTACHMENT C
ANALYTICAL DATA**

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-001A

Client Sample ID: BHR-MPS-010
Tag Number:
Collection Date: 2/26/2009 11:30:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	85.4	1.00	mg/L		1	3/2/2009 6:02:31 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-001B

Client Sample ID: BHR-MPS-010
Tag Number:
Collection Date: 2/26/2009 11:30:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, TOTAL		SW6010B			(SW3010A)		Analyst: TAA
Aluminum	0.937	0.200		mg/L	110489	1	3/4/2009 1:39:39 PM
Antimony	BRL	0.0200		mg/L	110489	1	3/4/2009 1:39:39 PM
Arsenic	BRL	0.0500		mg/L	110489	1	3/4/2009 1:39:39 PM
Barium	0.126	0.0200		mg/L	110489	1	3/4/2009 1:39:39 PM
Beryllium	BRL	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Cadmium	BRL	0.0050		mg/L	110489	1	3/4/2009 1:39:39 PM
Calcium	669	0.500		mg/L	110489	5	3/4/2009 2:16:58 PM
Chromium	BRL	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Cobalt	0.0265	0.0200		mg/L	110489	1	3/4/2009 1:39:39 PM
Copper	0.0863	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Iron	222	0.500		mg/L	110489	5	3/4/2009 2:16:58 PM
Lead	0.0559	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Magnesium	98.1	0.100		mg/L	110489	1	3/4/2009 1:39:39 PM
Manganese	11.6	0.0150		mg/L	110489	1	3/4/2009 1:39:39 PM
Nickel	BRL	0.0200		mg/L	110489	1	3/4/2009 1:39:39 PM
Potassium	49.7	0.500		mg/L	110489	1	3/4/2009 1:39:39 PM
Selenium	BRL	0.0200		mg/L	110489	1	3/6/2009 4:14:51 PM
Silver	BRL	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Sodium	143	1.00		mg/L	110489	1	3/4/2009 1:39:39 PM
Thallium	BRL	0.100		mg/L	110489	5	3/4/2009 2:16:58 PM
Vanadium	BRL	0.0100		mg/L	110489	1	3/4/2009 1:39:39 PM
Zinc	0.129	0.0200		mg/L	110489	1	3/4/2009 1:39:39 PM
MERCURY, TOTAL		SW7470A			(SW7470)		Analyst: JY
Mercury	BRL	0.00020		mg/L	110466	1	3/2/2009 5:21:20 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-001C

Client Sample ID: BHR-MPS-010
Tag Number:
Collection Date: 2/26/2009 11:30:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300		Analyst: GAR		
Sulfate	2450	100	mg/L	100		3/3/2009 11:05:00 AM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1		Analyst: CG		
pH	5.65	0.01	H pH Units	1		2/27/2009 4:45:00 PM
FERROUS IRON		SM3500-FE-D		Analyst: CG		
Iron, as Ferric (Fe+3)	28.5	0.100	H mg/L	1		2/27/2009 5:30:00 PM
Iron, as Ferrous (Fe+2)	194	20.0	H mg/L	200		2/27/2009 5:30:00 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-001D

Client Sample ID: BHR-MPS-010
Tag Number:
Collection Date: 2/26/2009 11:30:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	BRL	0.200		mg/L	110321	1	3/4/2009 4:13:08 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:13:08 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:13:08 PM
Barium	0.0759	0.0200		mg/L	110321	1	3/4/2009 4:13:08 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Cadmium	BRL	0.0050		mg/L	110321	1	3/4/2009 4:13:08 PM
Calcium	648	0.500		mg/L	110321	5	3/6/2009 10:06:09 AM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Cobalt	0.0217	0.0200		mg/L	110321	1	3/4/2009 4:13:08 PM
Copper	BRL	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Iron	186	0.500		mg/L	110321	5	3/6/2009 10:06:09 AM
Lead	0.0427	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Magnesium	90.8	0.100		mg/L	110321	1	3/4/2009 4:13:08 PM
Manganese	10.7	0.0150		mg/L	110321	1	3/4/2009 4:13:08 PM
Nickel	BRL	0.0200		mg/L	110321	1	3/4/2009 4:13:08 PM
Potassium	45.0	0.500		mg/L	110321	1	3/4/2009 4:13:08 PM
Selenium	BRL	0.0200		mg/L	110321	1	3/6/2009 10:43:15 AM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Sodium	131	1.00		mg/L	110321	1	3/4/2009 4:13:08 PM
Thallium	BRL	0.100		mg/L	110321	5	3/6/2009 10:06:09 AM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:13:08 PM
Zinc	0.0685	0.0200		mg/L	110321	1	3/4/2009 4:13:08 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:15:05 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-002A

Client Sample ID: BHR-MPB-010
Tag Number:
Collection Date: 2/26/2009 11:40:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	83.0	1.00	mg/L		1	3/2/2009 7:00:24 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-002B

Client Sample ID: BHR-MPB-010
Tag Number:
Collection Date: 2/26/2009 11:40:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
METALS, TOTAL		SW6010B		(SW3010A)		Analyst: TAA
Aluminum	BRL	0.200	mg/L	110489	1	3/4/2009 1:43:48 PM
Antimony	BRL	0.0200	mg/L	110489	1	3/4/2009 1:43:48 PM
Arsenic	BRL	0.0500	mg/L	110489	1	3/4/2009 1:43:48 PM
Barium	0.0832	0.0200	mg/L	110489	1	3/4/2009 1:43:48 PM
Beryllium	BRL	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Cadmium	BRL	0.0050	mg/L	110489	1	3/4/2009 1:43:48 PM
Calcium	654	0.500	mg/L	110489	5	3/4/2009 2:21:04 PM
Chromium	BRL	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Cobalt	0.0227	0.0200	mg/L	110489	1	3/4/2009 1:43:48 PM
Copper	0.0340	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Iron	187	0.500	mg/L	110489	5	3/4/2009 2:21:04 PM
Lead	0.0459	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Magnesium	98.3	0.100	mg/L	110489	1	3/4/2009 1:43:48 PM
Manganese	11.5	0.0150	mg/L	110489	1	3/4/2009 1:43:48 PM
Nickel	BRL	0.0200	mg/L	110489	1	3/4/2009 1:43:48 PM
Potassium	48.3	0.500	mg/L	110489	1	3/4/2009 1:43:48 PM
Selenium	BRL	0.0200	mg/L	110489	1	3/6/2009 4:19:07 PM
Silver	BRL	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Sodium	138	1.00	mg/L	110489	1	3/4/2009 1:43:48 PM
Thallium	BRL	0.100	mg/L	110489	5	3/4/2009 2:21:04 PM
Vanadium	BRL	0.0100	mg/L	110489	1	3/4/2009 1:43:48 PM
Zinc	0.0673	0.0200	mg/L	110489	1	3/4/2009 1:43:48 PM
MERCURY, TOTAL		SW7470A		(SW7470)		Analyst: JY
Mercury	BRL	0.00020	mg/L	110466	1	3/2/2009 5:23:16 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-002C

Client Sample ID: BHR-MPB-010
Tag Number:
Collection Date: 2/26/2009 11:40:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300		Analyst: GAR		
Sulfate	2140	100	mg/L	100		3/3/2009 11:19:42 AM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1		Analyst: CG		
pH	5.04	0.01	H pH Units	1		2/27/2009 4:51:00 PM
FERROUS IRON		SM3500-FE-D		Analyst: CG		
Iron, as Ferric (Fe+3)	0.520	0.100	H mg/L	1		2/27/2009 5:30:00 PM
Iron, as Ferrous (Fe+2)	186	20.0	H mg/L	200		2/27/2009 5:30:00 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-002D

Client Sample ID: BHR-MPB-010
Tag Number:
Collection Date: 2/26/2009 11:40:00 AM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	BRL	0.200		mg/L	110321	1	3/4/2009 4:17:19 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:17:19 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:17:19 PM
Barium	0.0713	0.0200		mg/L	110321	1	3/4/2009 4:17:19 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Cadmium	BRL	0.0050		mg/L	110321	1	3/4/2009 4:17:19 PM
Calcium	666	0.500		mg/L	110321	5	3/6/2009 10:10:18 AM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Cobalt	0.0201	0.0200		mg/L	110321	1	3/4/2009 4:17:19 PM
Copper	0.0284	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Iron	178	0.500		mg/L	110321	5	3/6/2009 10:10:18 AM
Lead	0.0360	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Magnesium	86.5	0.100		mg/L	110321	1	3/4/2009 4:17:19 PM
Manganese	10.6	0.0150		mg/L	110321	1	3/4/2009 4:17:19 PM
Nickel	BRL	0.0200		mg/L	110321	1	3/4/2009 4:17:19 PM
Potassium	45.0	0.500		mg/L	110321	1	3/4/2009 4:17:19 PM
Selenium	BRL	0.0200		mg/L	110321	1	3/6/2009 10:47:24 AM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Sodium	116	1.00		mg/L	110321	1	3/4/2009 4:17:19 PM
Thallium	BRL	0.100		mg/L	110321	5	3/6/2009 10:10:18 AM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:17:19 PM
Zinc	0.0601	0.0200		mg/L	110321	1	3/4/2009 4:17:19 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:17:01 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-003A

Client Sample ID: BHR-S0-010
Tag Number:
Collection Date: 2/26/2009 1:15:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	3.99	1.00	mg/L		1	3/2/2009 7:18:25 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-003B

Client Sample ID: BHR-S0-010
Tag Number:
Collection Date: 2/26/2009 1:15:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300				Analyst: GAR
Sulfate	331	10.0	mg/L		10	3/3/2009 10:50:17 AM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1				Analyst: CG
pH	4.25	0.01	H pH Units		1	2/27/2009 4:53:00 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-003C

Client Sample ID: BHR-S0-010
Tag Number:
Collection Date: 2/26/2009 1:15:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	11.5	0.200		mg/L	110321	1	3/4/2009 4:21:27 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:21:27 PM
Barium	0.0420	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Cadmium	0.0974	0.0050		mg/L	110321	1	3/4/2009 4:21:27 PM
Calcium	44.3	0.100		mg/L	110321	1	3/4/2009 4:21:27 PM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Cobalt	0.146	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Copper	4.72	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Iron	25.8	0.100		mg/L	110321	1	3/4/2009 4:21:27 PM
Lead	0.0133	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Magnesium	15.6	0.100		mg/L	110321	1	3/4/2009 4:21:27 PM
Manganese	3.94	0.0150		mg/L	110321	1	3/4/2009 4:21:27 PM
Nickel	0.0278	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Potassium	1.78	0.500		mg/L	110321	1	3/4/2009 4:21:27 PM
Selenium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Sodium	15.7	1.00		mg/L	110321	1	3/4/2009 4:21:27 PM
Thallium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:21:27 PM
Zinc	3.09	0.0200		mg/L	110321	1	3/4/2009 4:21:27 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:18:57 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-004A

Client Sample ID: BHR-S1-010
Tag Number:
Collection Date: 2/26/2009 1:40:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	4.87	1.00	mg/L		1	3/2/2009 7:36:58 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-004B

Client Sample ID: BHR-S1-010
Tag Number:
Collection Date: 2/26/2009 1:40:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300				Analyst: GAR
Sulfate	1390	100	mg/L		100	3/3/2009 11:34:24 AM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1				Analyst: CG
pH	3.27	0.01	H pH Units		1	2/27/2009 4:56:00 PM

Qualifiers:			
*	Value exceeds Maximum Contaminant Level	<	Less than Result value
>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL	Below Reporting Limit	E	Estimated value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit
S	Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-004C

Client Sample ID: BHR-S1-010
Tag Number:
Collection Date: 2/26/2009 1:40:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	45.2	0.200		mg/L	110321	1	3/4/2009 4:25:36 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:25:36 PM
Barium	0.0409	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Cadmium	0.582	0.0050		mg/L	110321	1	3/4/2009 4:25:36 PM
Calcium	207	0.100		mg/L	110321	1	3/4/2009 4:25:36 PM
Chromium	0.0103	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Cobalt	0.872	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
Copper	19.6	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Iron	217	0.500		mg/L	110321	5	3/6/2009 10:14:25 AM
Lead	0.0899	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Magnesium	55.6	0.100		mg/L	110321	1	3/4/2009 4:25:36 PM
Manganese	20.1	0.0150		mg/L	110321	1	3/4/2009 4:25:36 PM
Nickel	0.135	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
Potassium	5.97	0.500		mg/L	110321	1	3/4/2009 4:25:36 PM
Selenium	0.0440	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Sodium	42.0	1.00		mg/L	110321	1	3/4/2009 4:25:36 PM
Thallium	BRL	0.100		mg/L	110321	5	3/6/2009 10:14:25 AM
Vanadium	0.0117	0.0100		mg/L	110321	1	3/4/2009 4:25:36 PM
Zinc	17.8	0.0200		mg/L	110321	1	3/4/2009 4:25:36 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:20:53 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-005A

Client Sample ID: BHR-S2-010
Tag Number:
Collection Date: 2/26/2009 1:47:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)			SW9060				Analyst: GAR
Organic Carbon, Total	3.97	1.00		mg/L		1	3/2/2009 7:55:31 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-005B

Client Sample ID: BHR-S2-010
Tag Number:
Collection Date: 2/26/2009 1:47:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300				Analyst: GAR
Sulfate	943	100	mg/L		100	3/3/2009 11:49:07 AM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1				Analyst: CG
pH	3.33	0.01 H	pH Units		1	2/27/2009 4:59:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-005C

Client Sample ID: BHR-S2-010
Tag Number:
Collection Date: 2/26/2009 1:47:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)		Analyst: TAA	
Aluminum	25.5	0.200		mg/L	110321	1	3/4/2009 4:29:47 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:29:47 PM
Barium	0.0577	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Cadmium	0.394	0.0050		mg/L	110321	1	3/4/2009 4:29:47 PM
Calcium	141	0.100		mg/L	110321	1	3/4/2009 4:29:47 PM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Cobalt	0.878	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
Copper	13.1	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Iron	122	0.500		mg/L	110321	5	3/6/2009 10:18:30 AM
Lead	0.0534	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Magnesium	40.7	0.100		mg/L	110321	1	3/4/2009 4:29:47 PM
Manganese	20.9	0.0150		mg/L	110321	1	3/4/2009 4:29:47 PM
Nickel	0.105	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
Potassium	2.80	0.500		mg/L	110321	1	3/4/2009 4:29:47 PM
Selenium	0.0338	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Sodium	30.4	1.00		mg/L	110321	1	3/4/2009 4:29:47 PM
Thallium	BRL	0.100		mg/L	110321	5	3/6/2009 10:18:30 AM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:29:47 PM
Zinc	13.3	0.0200		mg/L	110321	1	3/4/2009 4:29:47 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)		Analyst: JY	
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:22:49 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
	BRL	Below Reporting Limit	E	Estimated value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
	N	Analyte not NELAC certified	Rpt Lim	Reporting Limit
	S	Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-006A

Client Sample ID: BHR-S3-010
Tag Number:
Collection Date: 2/26/2009 1:54:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	2.05	1.00	mg/L		1	3/2/2009 8:13:54 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-006B

Client Sample ID: BHR-S3-010
Tag Number:
Collection Date: 2/26/2009 1:54:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300				Analyst: GAR
Sulfate	272	10.0	mg/L		10	3/2/2009 8:51:46 PM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1				Analyst: CG
pH	3.74	0.01	H pH Units		1	2/27/2009 5:02:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-006C

Client Sample ID: BHR-S3-010
Tag Number:
Collection Date: 2/26/2009 1:54:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	0.961	0.200		mg/L	110321	1	3/4/2009 4:50:27 PM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:50:27 PM
Barium	0.110	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Cadmium	0.0499	0.0050		mg/L	110321	1	3/4/2009 4:50:27 PM
Calcium	49.5	0.100		mg/L	110321	1	3/4/2009 4:50:27 PM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Cobalt	0.0624	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Copper	0.0935	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Iron	8.55	0.100		mg/L	110321	1	3/6/2009 1:23:11 PM
Lead	BRL	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Magnesium	19.8	0.100		mg/L	110321	1	3/4/2009 4:50:27 PM
Manganese	2.80	0.0150		mg/L	110321	1	3/4/2009 4:50:27 PM
Nickel	0.0216	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Potassium	1.19	0.500		mg/L	110321	1	3/4/2009 4:50:27 PM
Selenium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Sodium	17.7	1.00		mg/L	110321	1	3/4/2009 4:50:27 PM
Thallium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:50:27 PM
Zinc	1.17	0.0200		mg/L	110321	1	3/4/2009 4:50:27 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:24:45 PM

Qualifiers:				
*	Value exceeds Maximum Contaminant Level	<	Less than Result value	
>	Greater than Result value	B	Analyte detected in the associated Method Blank	
BRL	Below Reporting Limit	E	Estimated value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit	
N	Analyte not NELAC certified	Rpt Lim	Reporting Limit	
S	Spike Recovery outside limits due to matrix			

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-007A

Client Sample ID: BHR-MC-010
Tag Number:
Collection Date: 2/26/2009 1:31:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
TOTAL ORGANIC CARBON (TOC)		SW9060				Analyst: GAR
Organic Carbon, Total	8.19	1.00	mg/L		1	3/2/2009 8:32:21 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-007B

Client Sample ID: BHR-MC-010
Tag Number:
Collection Date: 2/26/2009 1:31:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit Qual	Units	BatchID	DF	Date Analyzed
INORGANIC ANIONS BY IC		E300				Analyst: GAR
Sulfate	19.6	1.00	mg/L		1	3/2/2009 9:06:29 PM
HYDROGEN ION (PH)(150.1/SM4500 H+ B)		E150.1				Analyst: CG
pH	6.93	0.01 H	pH Units		1	2/27/2009 5:15:00 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

Analytical Environmental Services, Inc.

Date: 09-Mar-09

CLIENT: TN and Associates
Lab Order: 0902H36
Project: Barite Hills
Lab ID: 0902H36-007C

Client Sample ID: BHR-MC-010
Tag Number:
Collection Date: 2/26/2009 1:31:00 PM
Matrix: SURFACE WATER

Analyses	Result	Limit	Qual	Units	BatchID	DF	Date Analyzed
METALS, DISSOLVED		SW6010B		(SAMP_FILT)	Analyst: TAA		
Aluminum	0.246	0.200		mg/L	110321	1	3/6/2009 10:30:52 AM
Antimony	BRL	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Arsenic	BRL	0.0500		mg/L	110321	1	3/4/2009 4:54:42 PM
Barium	0.0463	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Beryllium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Cadmium	BRL	0.0050		mg/L	110321	1	3/4/2009 4:54:42 PM
Calcium	12.2	0.100		mg/L	110321	1	3/4/2009 4:54:42 PM
Chromium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Cobalt	BRL	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Copper	0.0386	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Iron	0.533	0.100		mg/L	110321	1	3/6/2009 10:30:52 AM
Lead	BRL	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Magnesium	6.34	0.100		mg/L	110321	1	3/4/2009 4:54:42 PM
Manganese	0.166	0.0150		mg/L	110321	1	3/4/2009 4:54:42 PM
Nickel	BRL	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Potassium	0.707	0.500		mg/L	110321	1	3/6/2009 10:30:52 AM
Selenium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Silver	BRL	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Sodium	7.56	1.00		mg/L	110321	1	3/4/2009 4:54:42 PM
Thallium	BRL	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
Vanadium	BRL	0.0100		mg/L	110321	1	3/4/2009 4:54:42 PM
Zinc	0.0858	0.0200		mg/L	110321	1	3/4/2009 4:54:42 PM
MERCURY, DISSOLVED		SW7470A		(SW7470)	Analyst: JY		
Mercury	BRL	0.00020		mg/L	110465	1	3/2/2009 4:30:38 PM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	<	Less than Result value
	>	Greater than Result value	B	Analyte detected in the associated Method Blank
BRL		Below Reporting Limit	E	Estimated value above quantitation range
H		Holding times for preparation or analysis exceeded	J	Estimated value detected below Reporting Limit
N		Analyte not NELAC certified	Rpt Lim	Reporting Limit
S		Spike Recovery outside limits due to matrix		

ATTACHMENT D
HASP

HEALTH AND SAFETY PLAN FORM		<i>This document is for the exclusive use of TN&Associates its subcontractors, and EPA.</i>		TN & ASSOCIATES	
TN&Associates Health and Safety Program				Site Name: Barite Hill Nevada Goldfields	
PROJECT NAME: <u>Barite Hill Nevada Goldfields</u>		DATE: <u>6/10/2008</u>			
PROJECT#: <u>2005148</u>					
LOCATION: <u>McCormick, South Carolina</u>		CLIENT: <u>EPA</u>			
		EPA CONTACT/PHONE #: <u>Leo Francendese, 404-562-8772</u>			
		LOCAL/SITE CONTACT PHONE #: _____			
INCIDENT DESCRIPTION: The OSC tasked START with conducting water sampling of the main pit lake and the creek to monitor metal concentrations and water quality parameters.		SOURCE OF PRELIMINARY INFORMATION: ER Action Memo/ initial POLREP from epaosc.net website			
ANTICIPATED TASKS: (e.g. collect surface soil samples): Take water quality measurements and samples of the liquid in the main pit and creek.		TYPE: <i>Check as many as applicable</i>			
		Active	<input type="checkbox"/>	Landfill	<input type="checkbox"/>
		Inactive	<input checked="" type="checkbox"/>	Uncontrolled	<input type="checkbox"/>
		Secure	<input checked="" type="checkbox"/>	Industrial	<input type="checkbox"/>
		Unsecure	<input type="checkbox"/>	Recovery	<input checked="" type="checkbox"/>
		Enclosed space	<input type="checkbox"/>	Well Field	<input type="checkbox"/>
				Other (specify)	<input type="checkbox"/>
DESCRIPTION AND FEATURES: <i>Include principal operations and unusual features (containers, buildings, dikes, power lines, hillslopes, rivers, etc.)</i>					
The Barite Hill Nevada Goldfields site is located approximately 3 miles south of McCormick, SC between US 378 and US 221 on the northern side of Road 30 in McCormick County, SC. The mine site is relatively remote; there are no buildings, homes, or commercial buildings within 0.5 miles of the boundary. The site actively mined gold from 1991 to 1995. The site is located along a topographic high ridge area forming the headwaters of an unnamed tributary to Hawes Creek. The topography of the area consists of rolling hills with ridgelines at an elevation of about 500 feet. Within the site, the ridgeline comprising the site has a high point of about 510 feet and an average elevation of approximately 480 feet. Storm water run on and runoff are not controlled at the site. The Main Pit from the mining operations remains. The pit contains approximately 60 million gallons of water with an historic low pH of 2 and high dissolved metal content. <input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
SURROUNDING POPULATION: <input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Rural <input type="checkbox"/> Urban <input type="checkbox"/> Other:					

HEALTH AND SAFETY PLAN FORM*This document is for the exclusive***TN & ASSOCIATES****TN & Associates Health and Safety Program***use of TN&Associates its subcontractors, and EPA.***Site Name: Barite Hill Nevada Goldfields****HISTORY:***Summarize conditions that relate to hazard. Include citizen complaints, spills, previous investigations or agency actions, known injuries, etc.*

The site actively mined gold from 1991 to 1995. From 1995 until Nevada Goldfields filed for Chapter 7 Bankruptcy in 1999, the reclamation of the site was being addressed by Nevada Goldfields. On July 7, 1999 Nevada Goldfields handed the facility's keys to SCDHEC and abandoned the site. The facility used a cyanide solution in a heap leach process to extract gold from ore. There are 7 processing ponds onsite containing an unknown amount of free-liquids. Three large, multi-acre, waste rock piles contaminated with cyanide are left onsite. Each waste rock pile has the potential for producing acid. Storm water run on and runoff are not controlled at the site. The Main Pit from the mining operations remains. The pit contains approximately 60 million gallons of water with a pH of 2 ~ 2.2 and a high dissolved metal content. Seeps from the main pit containing acidic water with high dissolved metal content are being released to the northern unnamed tributaries of Hawes Creek which borders the pit. □

WASTE TYPES: (X) Liquid (X) Solid () Sludge () Gas () Unknown () Other:

WASTE CHARACTERISTICS: *Check as many as applicable.*

(X) Corrosive () Flammable () Radioactive

(X) Toxic () Volatile (X) Reactive

() Inert Gas () Unknown () Other, Specify: _____

WORK ZONES:

Describe the Exclusion, Contamination Reduction, and Support Zones in terms on-site personnel will recognize

HAZARDS OF CONCERN:

(X) Heat Stress *attach guidelines* () Noise
 (X) Cold Stress *attach guidelines* (X) Inorganic Chemicals
 () Explosive/Flammable () Organic Chemicals
 () Oxygen Deficient () Motorized Traffic
 () Radiological () Heavy Machinery
 () Biological (X) Slips, Trips, & Falls
 () Other, Specify: _____

FACILITY'S PAST AND PRESENT DISPOSAL METHODS AND PRACTICES:

None found

HEALTH AND SAFETY PLAN FORM		<i>This document is for the exclusive</i>		TN & ASSOCIATES	
TN&Associates Health and Safety Program		<i>use of TN&Associates its subcontractors, and EPA.</i>		Site Name: Barite Hill Nevada Goldfields	
HAZARDOUS MATERIAL SUMMARY: <i>Circle waste type and estimate amounts by category.</i>					
CHEMICALS: <i>Amount/Units:</i>	SOLIDS: <i>Amount/Units:</i> Metals unknown	SLUDGES: <i>Amount/Units:</i> Inorganic unknown	SOLVENTS: <i>Amount/Units:</i>	OILS: <i>Amount/Units:</i>	OTHER: <i>Amount/Units:</i>
OVERALL HAZARD EVALUATION: <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low <input type="checkbox"/> Unknown					
JUSTIFICATION: Stabilization of Main Pit lake for pyrite contact with liquid.					
FIRE/EXPLOSION POTENTIAL: <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low <input checked="" type="checkbox"/> Unknown					
INFORMATION COMPLETE: <input type="checkbox"/> Complete <input type="checkbox"/> Incomplete <input checked="" type="checkbox"/> Best Available at Current Time					

HEALTH AND SAFETY PLAN FORM
TN & Associates Health and Safety Program

This document is for the exclusive use of TN&Associates its subcontractors, and EPA.

TN & ASSOCIATES
Site Name: Barite Hill Nevada Goldfields

KNOWN CONTAMINANTS	NIOSH REL (ST if Available) ppm or mg/m ³ (specify)	OSHA PEL (ST if Available) ppm or mg/m ³ (specify)	IDLH ppm or mg/m ³ (specify)	SYMPTOMS & EFFECTS OF ACUTE EXPOSURE	PHOTO IONIZATION POTENTIAL

NA = Not Available

NE = None Established

U = Unknown

Attach, to this plan, an MSDS for each chemical you will use at the site.

S = Soil

SW = Surface Water

T = Tailings

W = Waste

SD = Sediment

A = Air

GW = Ground Water

SL = Sludge

D = Drums

OFF = Off-Site

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TN & Associates Health and Safety Program		<i>TN&Associates its subcontractors, and EPA.</i>		Site Name: Barite Hill Nevada Goldfields	
Task Description / PPE / Personnel & Responsibilities				(attach additional sheets as necessary)	
Task 1 Description	Site liquid sampling/In-situ monitoring			Type	Hazard Schedule
				Intrusive	High
Primary Level	Respiratory: APR combo	Contingency Level	Respiratory: APR combo		
	Eyewear: Safety Glasses Hard Hat		Eyewear: Safety Glasses Hard Hat		
Modified D	Boots: Steel-Toe Latex Bootie		Boots: Steel-Toe Latex Bootie		
	Gloves: Inner: Nitrile Outer:		Gloves: Inner: Nitrile Outer:		
PPE:	Clothing: Tyvek Coverall	PPE:	Clothing: Tyvek Coverall		
Task 2 Description				Type	Hazard Schedule
Primary Level	Respiratory: _____	Contingency Level	Respiratory: _____		
	Eyewear: _____		Eyewear: _____		
	Boots: _____		Boots: _____		
	Gloves: _____		Gloves: _____		
PPE:	Clothing: _____	PPE:	Clothing: _____		
Task 3 Description				Type	Hazard Schedule
Primary Level	Respiratory: _____	Contingency Level	Respiratory: _____		
	Eyewear: _____		Eyewear: _____		
	Boots: _____		Boots: _____		
	Gloves: _____		Gloves: _____		
PPE:	Clothing: _____	PPE:	Clothing: _____		
Task 4 Description				Type	Hazard Schedule
Primary Level	Respiratory: _____	Contingency Level	Respiratory: _____		
	Eyewear: _____		Eyewear: _____		
	Boots: _____		Boots: _____		
	Gloves: _____		Gloves: _____		
PPE:	Clothing: _____	PPE:	Clothing: _____		
PERSONNEL AND RESPONSIBILITIES					
Name	Company/Agency	Training	Responsibilities		
Jorge Sanchez	TN&A	OSHA	Safety and Health		
Russell Henderson	TN&A	OSHA	Safety and Health		
Dannena Bowman	TN&A	OSHA	Safety and Health		

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TN & Associates Health and Safety Program				Site Name: Barite Hill Nevada Goldfields
Monitoring Equipment:		Specify by task. Indicate type as necessary. Attach additional sheets if needed.		
Tasks: 1	Instrument: pH Meter	Level:	Action Guidelines:	Comments:
Tasks:	Instrument:	Level:	Action Guidelines:	Comments:
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EMERGENCY CONTACTS Site Telephone _____ EPA Release Report # _____ TN&Assoc 24-Hr Emergency # 678-255-5538 Facility Management _____ Other (specify) _____ CHEMTREC Emergency #: 1-800-424-9300	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">EMERGENCY CONTACTS</th> <th style="text-align: left; border-bottom: 1px solid black;">NAME</th> <th style="text-align: left; border-bottom: 1px solid black;">PHONE</th> </tr> </thead> <tbody> <tr> <td>Health and Safety Manager</td> <td>Bill Fink</td> <td>414-234-7845</td> </tr> <tr> <td>Project Manager</td> <td>Russell Henderson</td> <td>678-255-6156</td> </tr> <tr> <td>Site Safety Coordinator</td> <td>Jorge Sanchez</td> <td>678-255-5538</td> </tr> <tr> <td>Client Contact (EPA RPM)</td> <td></td> <td></td> </tr> <tr> <td>Other (EPA HRS coordinator)</td> <td></td> <td></td> </tr> <tr> <td>State Agency</td> <td></td> <td></td> </tr> <tr> <td>State Spill Number</td> <td></td> <td></td> </tr> <tr> <td>Fire Department</td> <td></td> <td style="text-align: right;">911</td> </tr> <tr> <td>Police Department</td> <td></td> <td style="text-align: right;">911</td> </tr> <tr> <td>State Police</td> <td></td> <td style="text-align: right;">911</td> </tr> <tr> <td>Health Department</td> <td></td> <td></td> </tr> <tr> <td>Poison Control Center</td> <td></td> <td style="text-align: right;">800-848-6946</td> </tr> <tr> <td>Occupational Physician</td> <td>Dr. Jerry Berke, Health Resources</td> <td style="text-align: right;">800-350-4511</td> </tr> </tbody> </table>			EMERGENCY CONTACTS	NAME	PHONE	Health and Safety Manager	Bill Fink	414-234-7845	Project Manager	Russell Henderson	678-255-6156	Site Safety Coordinator	Jorge Sanchez	678-255-5538	Client Contact (EPA RPM)			Other (EPA HRS coordinator)			State Agency			State Spill Number			Fire Department		911	Police Department		911	State Police		911	Health Department			Poison Control Center		800-848-6946	Occupational Physician	Dr. Jerry Berke, Health Resources	800-350-4511
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