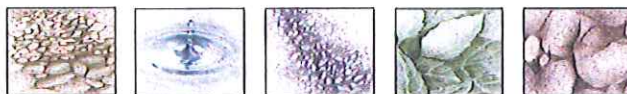


# Associated Earth Sciences, Inc.



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OCT 31 2013

DEPT OF ECOLOGY  
TCP - NWRO

## Technical Memorandum

Page 1 of 4

**Date:** October 24, 2013

Pacific Topsoils, Inc.

805 80<sup>th</sup> Street SW

**To:** Everett, Washington 98203

**Project Name:** Mill E Site

Attn: Mr. Januz Bajsarowicz

**From:** Jon N. Sondergaard, L.G., L.E.G. *M*

**Project No:** KV050654A

**Subject:** Mill E 2013 Ground Water Monitoring Summary

### GROUND WATER MONITORING

Associated Earth Sciences, Inc. (AESI) performed annual ground water monitoring at the Mill E site on September 24, 2013, consistent with the Mill E's Performance and Compliance Monitoring Plan (PCMP) dated October 1998. During the September 2013 monitoring event, depth to water measurements were made in all of the site's six piezometers (PZ-1A, PZ-1B, PZ-2A, PZ-2B, PZ-3A, and PZ-3B). The depth to water measurements are summarized in Table 1. A site plan showing the approximate well locations is presented on Figure 1.

**Table 1**  
**Depth to Ground Water<sup>(1)</sup>**

Piezometer	Date	Reference Elevation (feet) Top of PVC <sup>(1)</sup>	Depth to Water (feet) <sup>(2)</sup>	Ground Water Elevation (feet) <sup>(3)</sup>
PZ-1A	9/24/2013	9.90	5.8	4.10
PZ-1B	9/24/2013	7.93	2.4	5.53
PZ-2A	9/24/2013	9.40	5.77	3.63
PZ-2B	9/24/2013	8.38	2.94	5.44
PZ-3A	9/24/2013	10.31	7.75	2.56
PZ-3B	9/24/2013	7.54	4.87	2.67

<sup>(1)</sup> Top of casing elevations referenced to mean sea level (Shaw, 2003).

<sup>(2)</sup> Measurements collected at outgoing tide.

<sup>(3)</sup> "A" wells are located inside the containment; "B" wells are located outside the containment.

Ground water samples were collected from piezometer PZ-3A only. Piezometer PZ-3A was purged and sampled using a disposable bailer, consistent with the facility's PCMP. Field measurements (depth to water, pH, conductivity, and temperature) were recorded at the time of sampling. The field measurements are summarized in Table 2. After purging and recording of field measurements, ground water samples were obtained for off-site analytical testing. The ground water samples were collected in laboratory-prepared bottles. The samples were placed in a cooler packed with ice and delivered under chain-of-custody (COC) procedures to Test America in Tacoma, Washington. The COC form outlining the requested analyses is attached.

**Table 2**  
**Field Monitoring Parameters**  
**September 2010**

Sample Location	Sample Date	Depth to Water (ft-BTOC)	Gallons Removed	pH (S.U.)	Specific Conductance ( $\mu$ S/cm)	Temperature ( $^{\circ}$ C)
PZ-3A	9/24/13	7.75	2	6.46	732	19.70

ft-BTOC = feet below top of polyvinyl chloride (PVC) casing.

S.U. = standard pH units.

$\mu$ S/cm = microSiemens per centimeter.

$^{\circ}$ C = degrees Celsius.

## **ASPHALT CAP AND SOIL COVER**

An asphalt cap and soil cover inspection was performed on September 26, 2013 by a professional engineer from AESI. A copy of the field report from that visit is attached. All of the cap was visible at the time of our visit as no operations were occurring at the site. Where observed, the asphalt cap exhibited little evidence of deterioration and no signs of excessive settlement. Small shallow depressions in the cover were observed in some places. Photos taken at the time of our visit are attached to this memorandum.

The areas to the south of the asphalt cap are covered with a 1-foot-thick soil cover with grass and some scattered brush. AESI did not observe pumping, but we did observe minor rutting consisting of vehicle tracks less than 4 inches deep. The soil cap appeared intact and was performing as intended, in our opinion.

## **QUALITY ASSURANCE/QUALITY CONTROL**

Laboratory quality assurance/quality control (QA/QC) analyses were performed in conjunction with the September 2013 ground water quality monitoring event. Routine laboratory QA procedures included analyzing surrogate spikes, matrix spikes, matrix duplicates, laboratory control samples, and method blanks. The Lab Control Spike percent recovery for both the neutral blank and the samples analyzed are within the quality control limits. All other QA/QC results were judged to be acceptable for their intended use. The test results are presented in Table 3 below and the Test America laboratory certificates are attached to this memorandum.



**WATER BALANCE**

Elevations for the top of the well casings and historic ground water elevations were obtained by reviewing the “2003 Annual Ground Water Compliance Monitoring and Five Year Data Review Report,” prepared by Shaw Environmental, Inc. (Shaw) and obtained from the Washington State Department of Ecology (Ecology). Ground water elevations for the year 2005 could not be found. All “A” series wells (PZ-1A, PZ-2A, and PZ-3A) are located inside of the barrier wall and all “B” series wells (PZ-1B, PZ-2B, and PZ-3B) are located outside of the barrier wall. Figure 2, 2A, and 2B shows a comparison of historical ground water elevation data obtained for the site. Review of the data indicates that generally after 2001, ground water elevations outside of the barrier wall are higher than inside the barrier, with the exception of the 2007 measurement for well PZ-1A. The higher than expected water level in PZ-1A in 2007 was examined, and was determined to be a result of surface water collecting in the well monument. This problem has been corrected by raising the elevation of the top of the well monument to prevent surface water from seeping into the monument (Technical Memorandum dated December 17, 2009).

The data for wells PZ-1A/1B, PZ-2A/2B, and PZ-3A/3B suggests the barrier wall is generally performing as intended and isolating ground water inside the barrier from that outside the barrier.

**RESULTS AND CONCLUSIONS**

The September 2013 ground water analytical results for the Mill E site were compared to the Model Toxics Control Act (MTCA) cleanup levels established in the 1998 Consent Decree. The results are presented in Table 3. Concentrations of all analytical parameters detected in the PZ-3A ground water sample were below the established MTCA cleanup standards, except for arsenic. The September 2012 PZ-3A result of 740 micrograms per liter ( $\mu\text{g/L}$ ) for arsenic is above the MTCA cleanup standard of 5  $\mu\text{g/L}$ . Review of historic ground water quality data for the site indicates the 2013 results, although slightly higher than 2012, are within the range of past measurements (Figures 3 through 5), and are lower than the 2010 concentrations.

**Table 3**  
**Comparison of Ground Water Analytical Results**  
**and MTCA Cleanup Standard for Ground Water**  
**September 2012**

Sample Location	Sample Date	TPH-D ( $\mu\text{g/L}$ )	TPH-G ( $\mu\text{g/L}$ )	TPH-M ( $\mu\text{g/L}$ )	PCP ( $\mu\text{g/L}$ )	Arsenic ( $\mu\text{g/L}$ )
PZ-3A	9/24/13	1,000	660	<240	<0.95	<b>740</b>
<i>MTCA<sup>(1)</sup></i>		<i>10,000</i>	<i>10,000</i>	<i>10,000</i>	<i>7.29</i>	<i>5</i>

TPH-D = total petroleum hydrocarbons-diesel.  
 TPH-G = total petroleum hydrocarbons-gasoline.  
 TPH-M = total petroleum hydrocarbons-motor oil.  
 PCP = pentachlorophenol.  
 $\mu\text{g/L}$  = micrograms per liter.

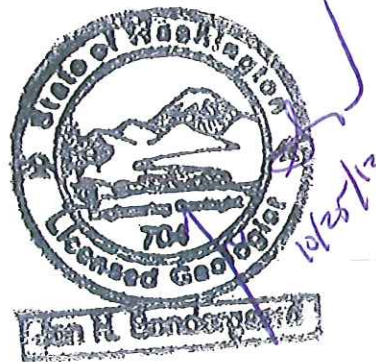
**Bold** denotes an exceedance of the MTCA cleanup standard for ground water.

<sup>(1)</sup> MTCA = Model Toxics Control Act cleanup standards for ground water per the 1998 Consent Decree.

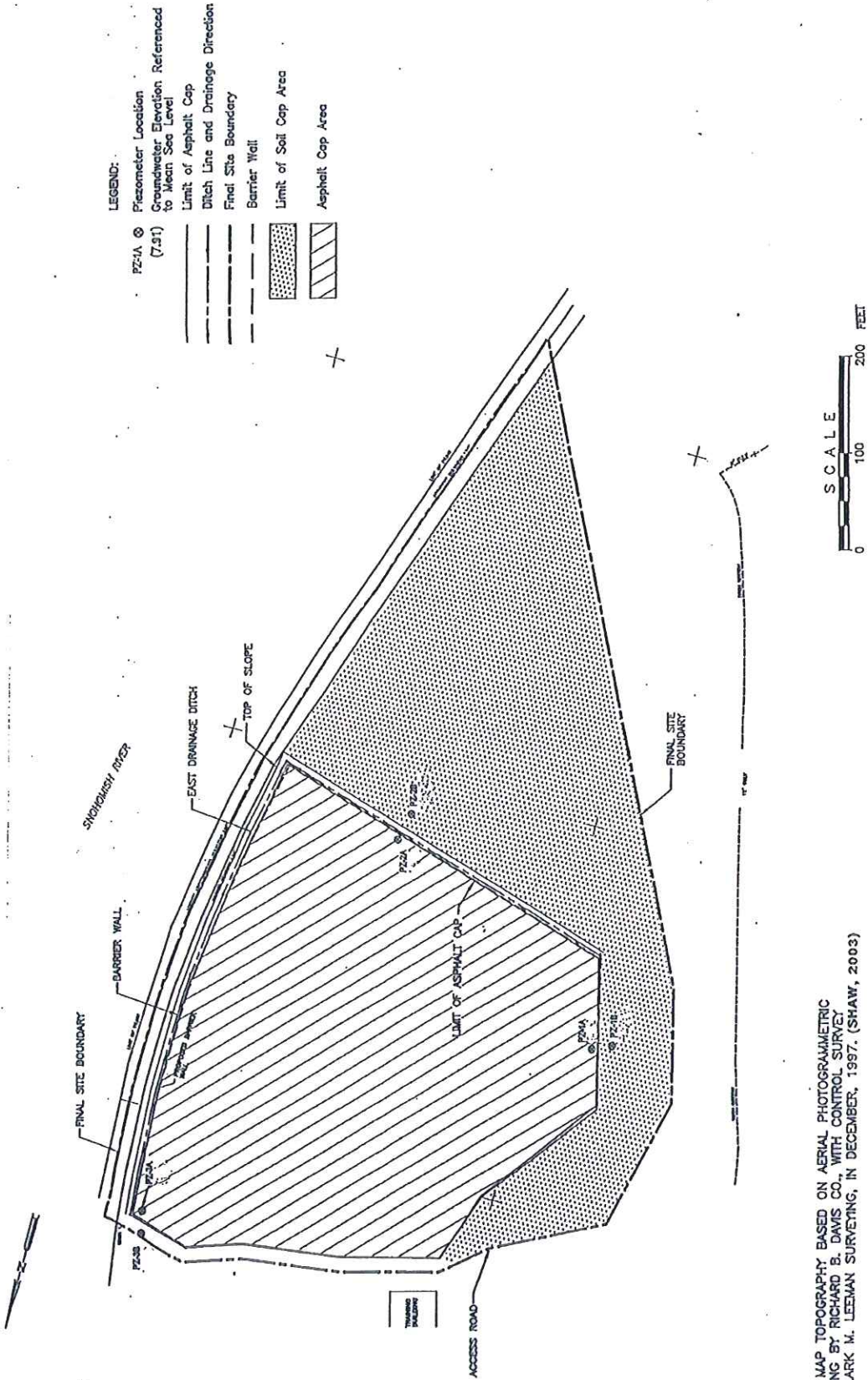
We trust the information presented meets your current needs. Please do not hesitate to contact us if you have any questions or require additional information.

- Attachments: Figure 1: Site Plan  
Figure 2: Ground Water Elevations Wells PZ-1A and PZ-1B  
Figure 2A: Ground Water Elevations Wells PZ-2A and PZ-2B  
Figure 2B: Ground Water Elevations Wells PZ-3A and PZ-3B  
Figure 3: TPH Concentrations in Well PZ-3A  
Figure 4: PCP Concentrations in Well PZ-3A  
Figure 5: Arsenic Concentrations in Well PZ-3A

Field Report of Cap Inspection  
Laboratory Test Certificates and Chain of Custody







Associated Earth Sciences, Inc.



**FORMER MILL E/KOPPERS SITE PLAN**

FIGURE 1

DATE 9/2007

PROJ. NO. KE050654A

Figure 2 Mill E Groundwater Elevations Wells PZ-1A and PZ-1B  
 "A" Wells Inside Containment  
 "B" Wells Outside Containment

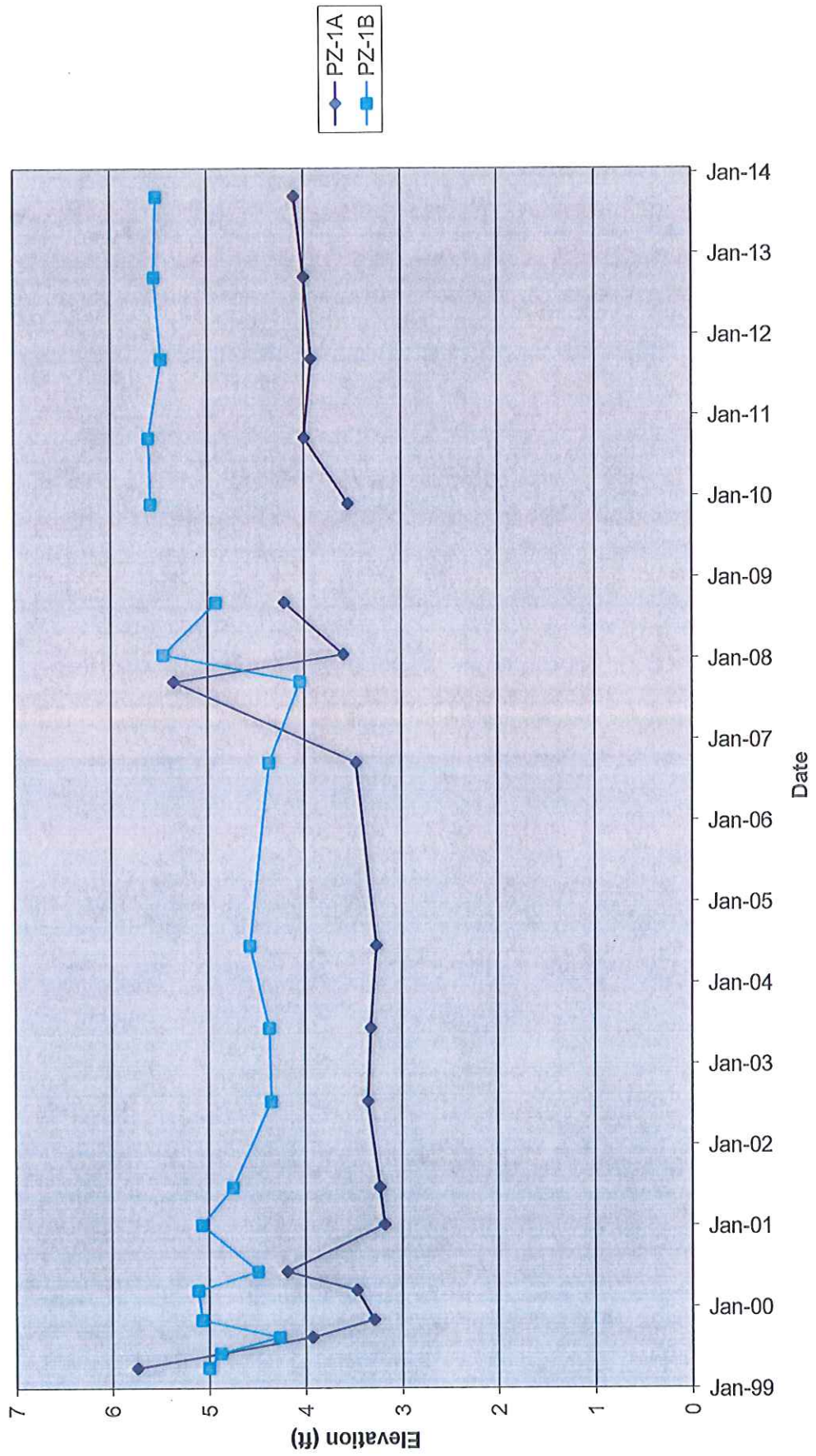




Figure 2A Mill E Ground Water Elevations Wells PZ-2A and PZ-2B  
 "A" Wells inside containment  
 "B" Wells outside containment

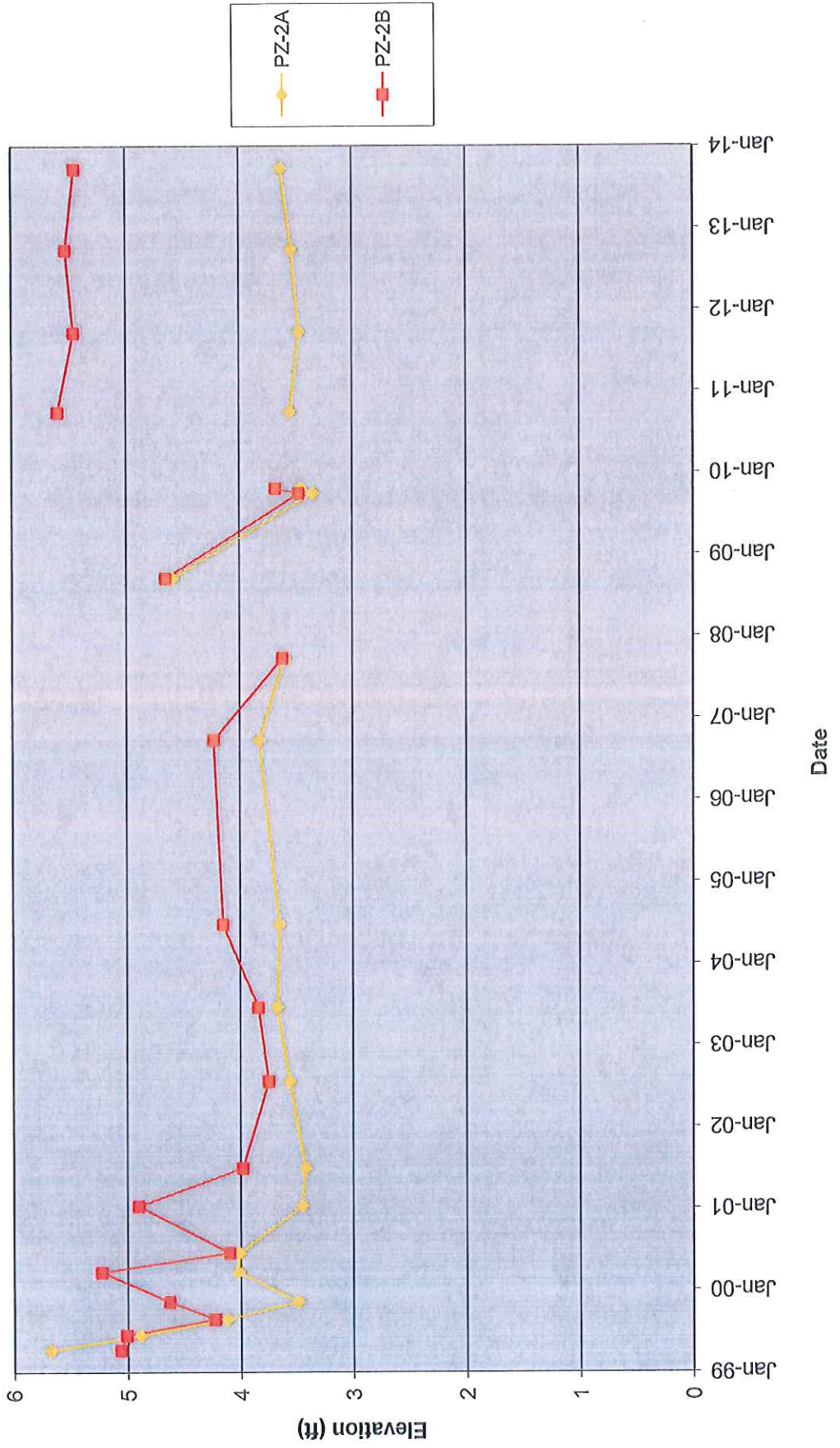


Figure 2B Groundwater Elevations Well PZ-3A and PZ-3B  
 "A" Wells Inside Containment  
 "B" Wells Outside Containment

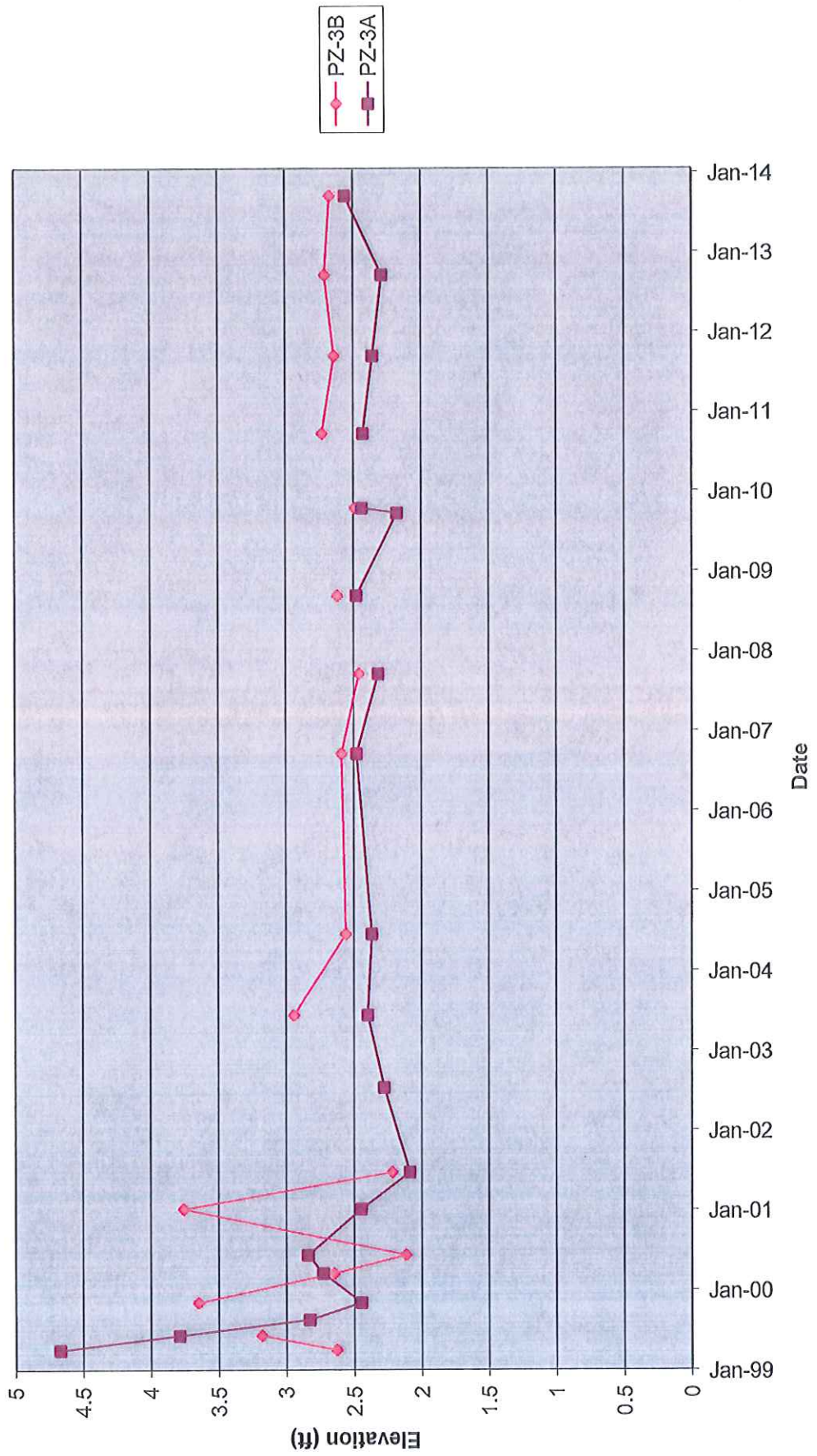




Figure 3 Mill E TPH Concentrations  
in Groundwater Well PZ-3A

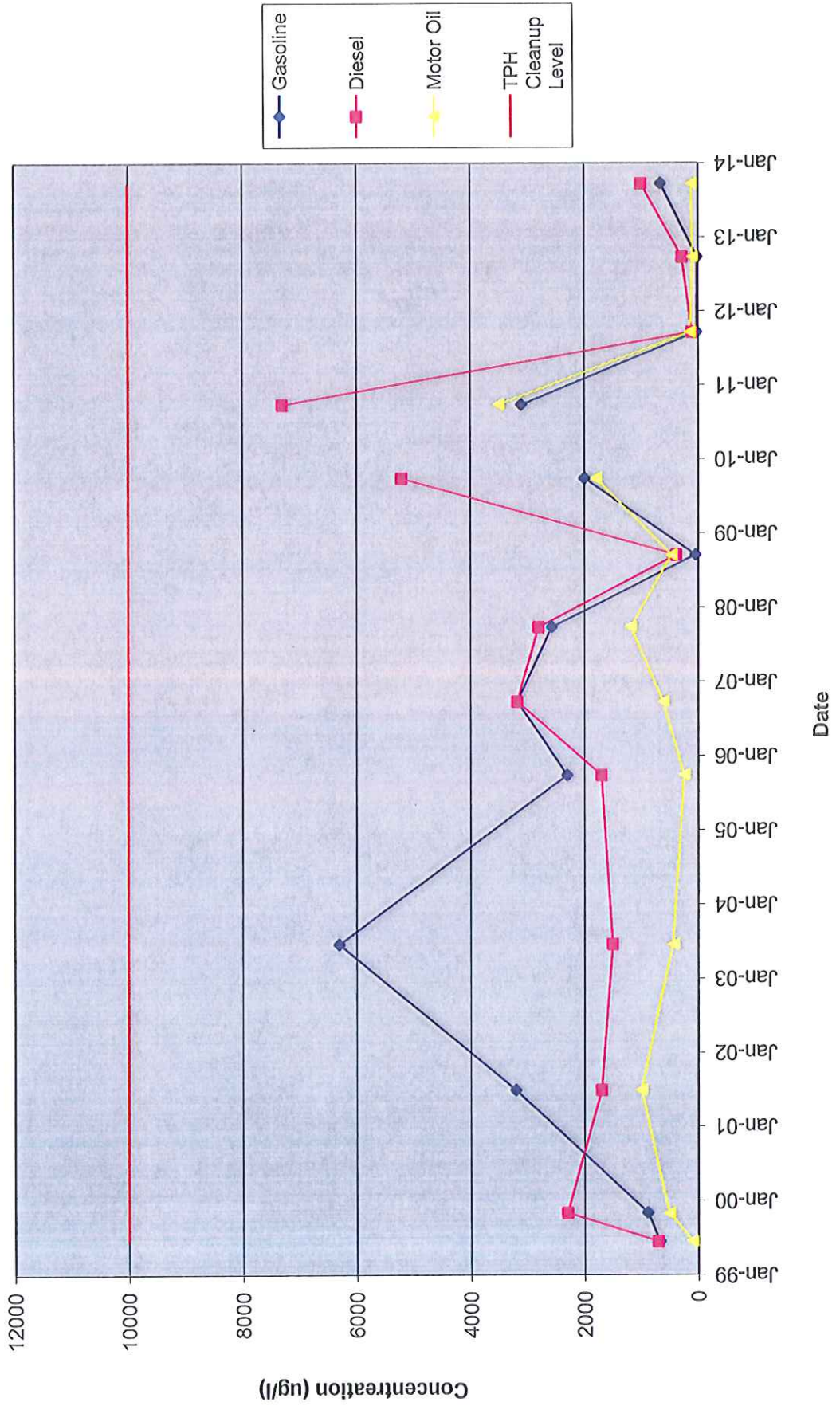


Figure 4 Mill E PCP Concentrations  
in Groundwater Well PZ-3A  
Non-detects plotted as 1/2 the reporting limit.

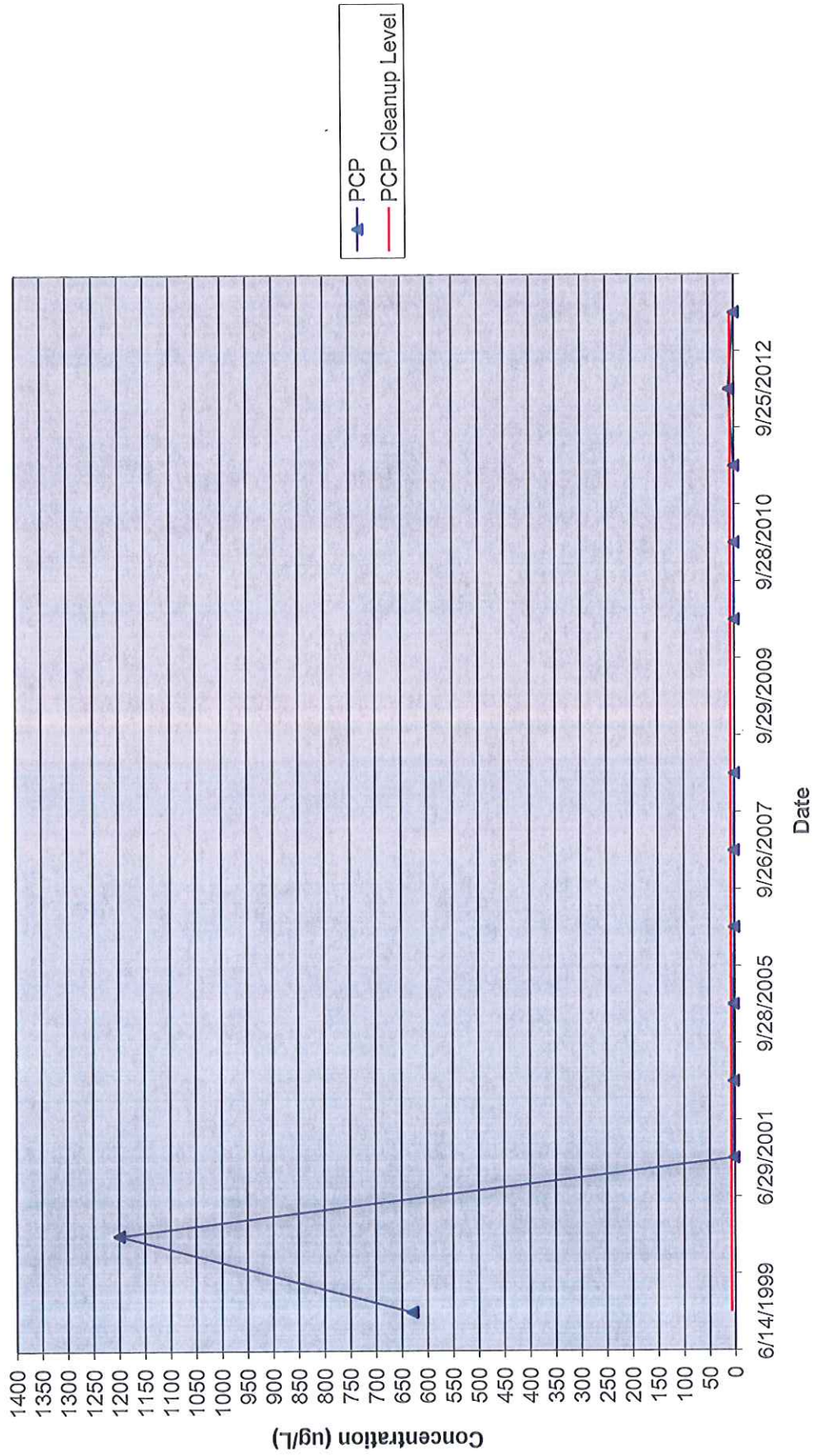
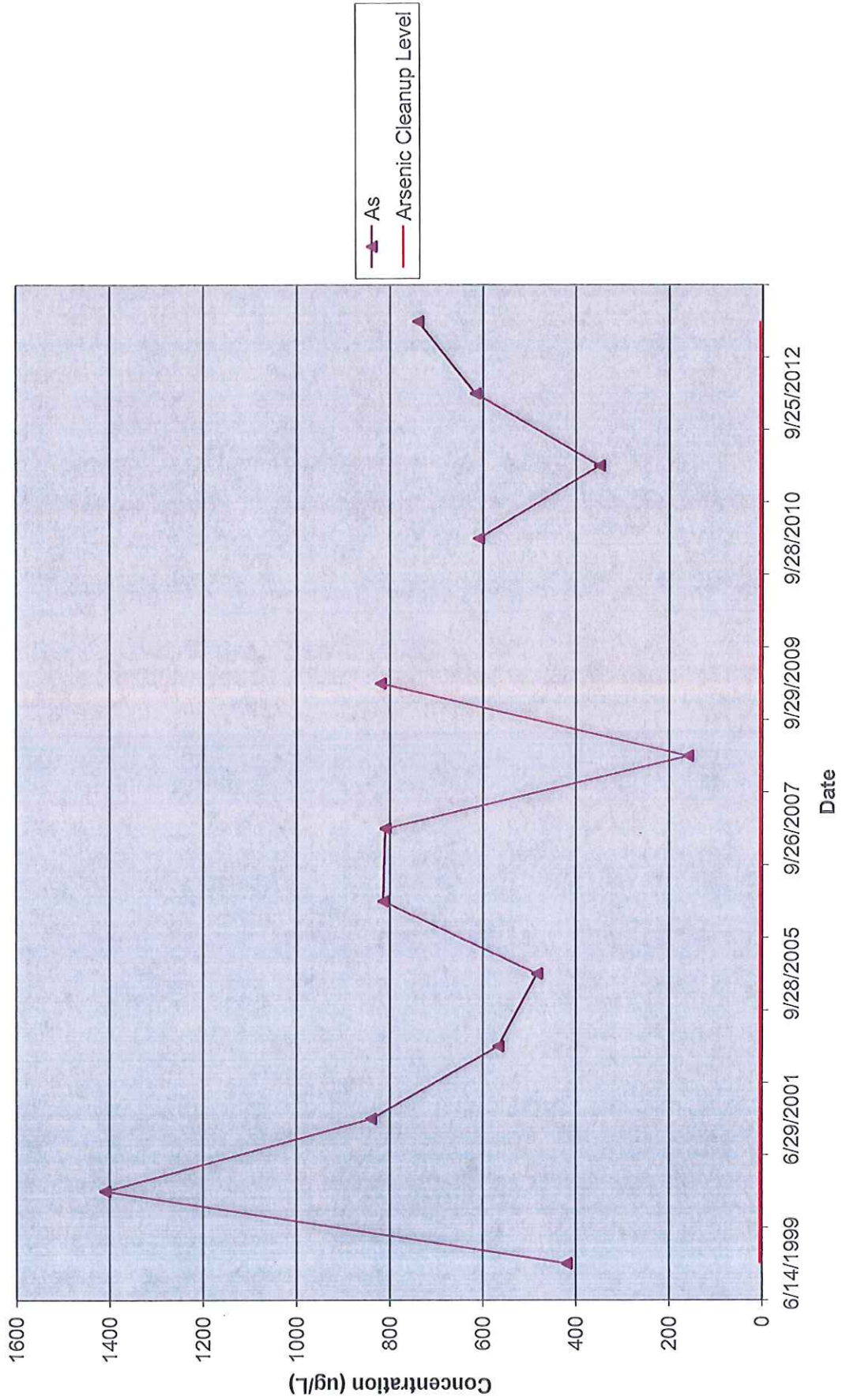




Figure 5 Mill E  
Arsenic Concentrations in Groundwater Well PZ-3A



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-40491-1  
Client Project/Site: Mill E, Everett

For:  
Associated Earth Sciences  
911 5th Avenue  
Suite 100  
Kirkland, Washington 98033

Attn: Jon Sondergaard



Authorized for release by:  
10/8/2013 10:01:11 AM  
Heather Wagner, Project Manager I  
[heather.wagner@testamericainc.com](mailto:heather.wagner@testamericainc.com)

Designee for  
Pam Johnson, Project Manager I  
(253)922-2310 x112  
[pamr.johnson@testamericainc.com](mailto:pamr.johnson@testamericainc.com)

### LINKS

Review your project  
results through  
**Total Access**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*







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## Case Narrative

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

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**Job ID: 580-40491-1**

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**Laboratory: TestAmerica Seattle**

### Narrative

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#### Comments

No additional comments.

#### Receipt

The sample was received on 9/24/2013 5:10 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8° C.

#### GC/MS Semi VOA

No analytical or quality issues were noted.

#### GC VOA

Method(s) NWTPH-Gx: The Gasoline Range Hydrocarbons (GRH) concentration reported for the following sample(s) is due to the presence of unknown discrete peaks: PZ-3A (580-40491-1).

No other analytical or quality issues were noted.

#### GC Semi VOA

Method(s) NWTPH-Dx: Detected hydrocarbons appear to be due to weathered diesel.PZ-3A (580-40491-1)

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

#### VOA Prep

No analytical or quality issues were noted.





## Definitions/Glossary

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

1

2

3

4

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11

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

**Client Sample ID: PZ-3A**

**Lab Sample ID: 580-40491-1**

Date Collected: 09/24/13 14:30

Matrix: Water

Date Received: 09/24/13 17:10

**Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		0.95		ug/L		10/01/13 13:01	10/02/13 15:25	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2,4,6-Tribromophenol (Surr)	74		10 - 150				10/01/13 13:01	10/02/13 15:25	1

**Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Hydrocarbons	660		160		ug/L			10/01/13 15:13	2
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
4-Bromofluorobenzene (Surr)	105		50 - 150					10/01/13 15:13	2

**Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	1.0		0.096		mg/L		10/03/13 08:11	10/03/13 14:27	1
RRO (nC25-nC36)	ND		0.24		mg/L		10/03/13 08:11	10/03/13 14:27	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1-Chlorooctadecane	101		50 - 150				10/03/13 08:11	10/03/13 14:27	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.74		0.0020		mg/L		10/02/13 08:02	10/02/13 17:02	2



## QC Sample Results

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 250-20683/1-A**  
**Matrix: Water**  
**Analysis Batch: 20876**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 20683**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND		1.0		ug/L		10/01/13 13:01	10/02/13 14:01	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	107		10 - 150				10/01/13 13:01	10/02/13 14:01	1

**Lab Sample ID: LCS 250-20683/2-A**  
**Matrix: Water**  
**Analysis Batch: 20876**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 20683**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	2.50	1.64		ug/L		66	10 - 135
Surrogate	%Recovery	LCS Qualifier	Limits				
2,4,6-Tribromophenol (Surr)	114		10 - 150				

**Lab Sample ID: LCSD 250-20683/3-A**  
**Matrix: Water**  
**Analysis Batch: 20876**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 20683**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	2.50	1.66		ug/L		66	10 - 135	1	35
Surrogate	%Recovery	LCSD Qualifier	Limits						
2,4,6-Tribromophenol (Surr)	116		10 - 150						

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 250-20716/6**  
**Matrix: Water**  
**Analysis Batch: 20716**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Hydrocarbons	ND		80		ug/L			10/01/13 12:01	1
Surrogate	%Recovery	MB Qualifier	Limits			D	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		50 - 150					10/01/13 12:01	1

**Lab Sample ID: LCS 250-20716/4**  
**Matrix: Water**  
**Analysis Batch: 20716**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Hydrocarbons	500	594		ug/L		119	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	105		50 - 150				

TestAmerica Seattle

# QC Sample Results

Client: Associated Earth Sciences  
 Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 250-20716/5  
 Matrix: Water  
 Analysis Batch: 20716

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Hydrocarbons	500	617		ug/L		123	70 - 130	4	35
<b>Surrogate</b>									
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
4-Bromofluorobenzene (Surr)		105		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 250-20755/1-A  
 Matrix: Water  
 Analysis Batch: 20787

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 20755

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C25)	ND		0.10		mg/L		10/03/13 08:11	10/03/13 13:32	1
RRO (nC25-nC36)	ND		0.25		mg/L		10/03/13 08:11	10/03/13 13:32	1
<b>Surrogate</b>									
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1-Chlorooctadecane		99		50 - 150			10/03/13 08:11	10/03/13 13:32	1

Lab Sample ID: LCS 250-20755/2-A  
 Matrix: Water  
 Analysis Batch: 20787

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 20755

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DRO (C10-C25)	2.50	2.23		mg/L		89	50 - 150
RRO (nC25-nC36)	1.50	1.43		mg/L		96	50 - 150
<b>Surrogate</b>							
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
1-Chlorooctadecane		104		50 - 150			

Lab Sample ID: LCSD 250-20755/3-A  
 Matrix: Water  
 Analysis Batch: 20787

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 20755

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
DRO (C10-C25)	2.50	2.24		mg/L		90	50 - 150	1	20
RRO (nC25-nC36)	1.50	1.43		mg/L		95	50 - 150	0	20
<b>Surrogate</b>									
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
1-Chlorooctadecane		105		50 - 150					

## QC Sample Results

Client: Associated Earth Sciences  
 Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

### Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 250-20721/1-A**  
**Matrix: Water**  
**Analysis Batch: 20746**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 20721**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		10/02/13 08:02	10/02/13 16:18	1

**Lab Sample ID: LCS 250-20721/2-A**  
**Matrix: Water**  
**Analysis Batch: 20746**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 20721**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.102		mg/L		102	80 - 120





# Lab Chronicle

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

Client Sample ID: PZ-3A

Lab Sample ID: 580-40491-1

Date Collected: 09/24/13 14:30

Matrix: Water

Date Received: 09/24/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			20683	10/01/13 13:01	NAF	TAL PRT
Total/NA	Analysis	8270C SIM		1	20876	10/02/13 15:25	NAF	TAL PRT
Total/NA	Analysis	NWTPH-Gx		2	20716	10/01/13 15:13	BJ1	TAL PRT
Total/NA	Prep	3510C			20755	10/03/13 08:11	CAD	TAL PRT
Total/NA	Analysis	NWTPH-Dx		1	20787	10/03/13 14:27	NMI	TAL PRT
Total/NA	Prep	3005A			20721	10/02/13 08:02	KTN	TAL PRT
Total/NA	Analysis	6020		2	20746	10/02/13 17:02	LQN	TAL PRT

**Laboratory References:**

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200



## Certification Summary

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1



### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-14
California	NELAP	9	01115CA	01-31-14
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-13
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14

### Laboratory: TestAmerica Portland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-012	12-26-13
California	State Program	9	2597	09-30-13 *
Oregon	NELAP	10	OR100021	01-09-14
USDA	Federal		P330-11-00092	02-17-14
Washington	State Program	10	C586	06-23-14

\* Expired certification is currently pending renewal and is considered valid.

# Sample Summary

Client: Associated Earth Sciences  
Project/Site: Mill E, Everett

TestAmerica Job ID: 580-40491-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-40491-1	PZ-3A	Water	09/24/13 14:30	09/24/13 17:10

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## Login Sample Receipt Checklist

Client: Associated Earth Sciences

Job Number: 580-40491-1

Login Number: 40491

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ ( $1/4''$ ).	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Associated Earth Sciences

Job Number: 580-40491-1

Login Number: 40491

List Source: TestAmerica Portland

List Number: 1

List Creation: 10/01/13 11:19 AM

Creator: Svabik-Seror, Phillip M

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	





# FIELD REPORT

Associated Earth Sciences, Inc.

Page 1



911 Fifth Avenue, Suite 100  
Kirkland, Washington 98033  
425-827-7701 FAX 827-5424

TO: Pacific Topsoil Inc.  
805 80<sup>th</sup> Street SW  
Everett, WA 98203

ATTN: Mr. Januz Bajsarowicz

AS REQUESTED BY: Performance and Compliance  
Monitoring Plan

Date <b>9-26-13</b>	Project Name <b>Mill E Site</b>	Project No. <b>KV050654</b>
Location <b>Riverside Business Park</b>		Weather <b>Clear 50's</b>
Municipality <b>Everett</b>		Report Number. <b>5</b>
Engineer/Architect <b>AESI</b>		
Client/Owner <b>Pacific Topsoil</b>		
General Contractor/Superintendent		
Grading Contractor/Superintendent		

THE FOLLOWING WAS NOTED:

As part of the Mill E Performance and Compliance Monitoring Plan, Associated Earth Sciences, Inc. (AESI) arrived on site to observe the existing asphalt section and fill soil covering previously identified contaminated soils on site.

Matthew A. Miller, PE a professional engineer with our firm was on site and performed site observations. The property is currently vacant. The stockpiles noted previously have been removed and the surface of the asphalt swept. During our site visit, the asphalt cap was observed to be in serviceable condition with no obvious signs of cracking, fissures, or pumping. There are areas where shallow depressions were noted that result in bird baths on the asphalt. These are mainly in the areas noted previously. See Photos below looking towards the northeast to east at the entrance:



AESI should be contacted if indications of pavement distress are observed before our next scheduled site visit.

While on site, AESI also observed fill soils along the southwestern edge of the property. Approximately 1 foot of soil was placed on top of the site. AESI did not observe pumping, however there was minimal indications of rutting from wheeled vehicles less than 4 inches deep. No visible indications of settling were observed.

COPIES TO: \_\_\_\_\_  
DATE MAILED: \_\_\_\_\_

FIELD REP.: Matthew A. Miller, PE  
PRINCIPAL / PM: 