Associated Earth Sciences, Inc.

Celebrating 25 Years of Service

Technical Memorandum

Date: October 24, 2008

To: Pacific Topsoils, Inc.
805 80th Street SW
Everett, Washington 98203
Attn: Mr. Januz Bajsarowicz

Project Name: Mill E Site

From: Jon N. Sondergaard, P.G., P.E.G.

Project No: KV050654A

Subject: Mill E 2008 Ground Water Monitoring Summary

GROUND WATER MONITORING

Associated Earth Sciences, Inc. (AESI) performed ground water monitoring at the Mill E site on September 16, 2008 consistent with the Mill E's Performance and Compliance Monitoring Plan (PCMP) dated October 1998. During the September 2008 monitoring event, depth to water measurements were made in 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[1]

Piezometer	Date	Reference Elevation (feet) Top of PVC[2]	Depth to Water (feet)[1]	Ground Water Elevation (feet)[3]
PZ-1A	9/16/08	9.90	5.69	4.21
PZ-1B	9/16/08	7.93	3.01	4.92
PZ-2A	9/25/07	9.40	4.81	4.59
PZ-2B	9/25/07	8.38	3.73	4.65
PZ-3A	9/25/07	10.31	7.83	2.48
PZ-3B	9/25/07	7.54	4.92	2.62

[1] Measurements collected at low tide
[2] Top of casing elevations referenced to mean sea level (Shaw, 2003)
[3] "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 Analytical Testing Corporation in Bothell, Washington. The COC form outlining the requested analyses is attached.

Table 2
Field Monitoring Parameters
September 2007

Sample Location	Sample Date	Depth to Water (ft-BTOC)	Gallons Removed	pH (S.U.)	Specific Conductance (µS/cm)	Temperature (°C)
PZ-3A	9/16/08	7.83	2	6.34	716	16.90

ft-BTOC = feet below top of PVC casing
S.U. = standard pH units
µS/cm = microSiemens per centimeter
°C = degrees Celcius

ASPHALT CAP AND SOIL COVER

An asphalt cap and soil cover inspection was performed on July 17, 2008. A copy of the field report from that visit is attached. The majority of the cap was visible. The southern interior portion of the cap was covered with wood chips and shipping containers and the asphalt was not visible in these areas. Where observed, the asphalt cap exhibited little evidence of deterioration and no signs of excessive settlement. The areas to the south of the cap were covered with grass and some scattered brush.

QUALITY ASSURANCE/QUALITY CONTROL

Laboratory quality assurance/quality control (QA/QC) analyses were performed in conjunction with the September 2008 ground water quality monitoring event. Routine laboratory QA procedures included analyzing surrogate spikes, matrix spikes, matrix duplicates, laboratory control samples, and method blanks. The QA/QC results were judged to be acceptable for their intended use and are presented with the analytical data from Test America Analytical Testing Corporation.

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 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 investigated, and was determined to be a result of surface water collecting in the monument. This problem was corrected by installing a gasket around the monument lid and replacing the old well cap, as described in our "Addendum to 2007 Annual Monitoring Report" letter dated January 31, 2008.

The ground water elevation data suggests the barrier wall is generally performing as intended and isolating ground water inside the barrier from that outside the barrier. The water levels inside of the barrier are consistently lower than those outside of the barrier.

RESULTS AND CONCLUSIONS

The September 2008 ground water analytical results for the Mill E site were compared to the Washington Model Toxics Control Act (MTCA) cleanup standards and 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 2008 PZ-3A result of 160 micrograms per liter (µg/L) for arsenic is above the MTCA cleanup standard of 5 µg/L. Review of historic ground water quality data for the site indicates the 2008 results are within the range of past measurements. The concentrations of diesel and motor oil in the sample decreased significantly compared to the 2007 results.

Table 3
Comparison of Ground Water Analytical Results
and MTCA Cleanup Standard for Ground Water
September 2007

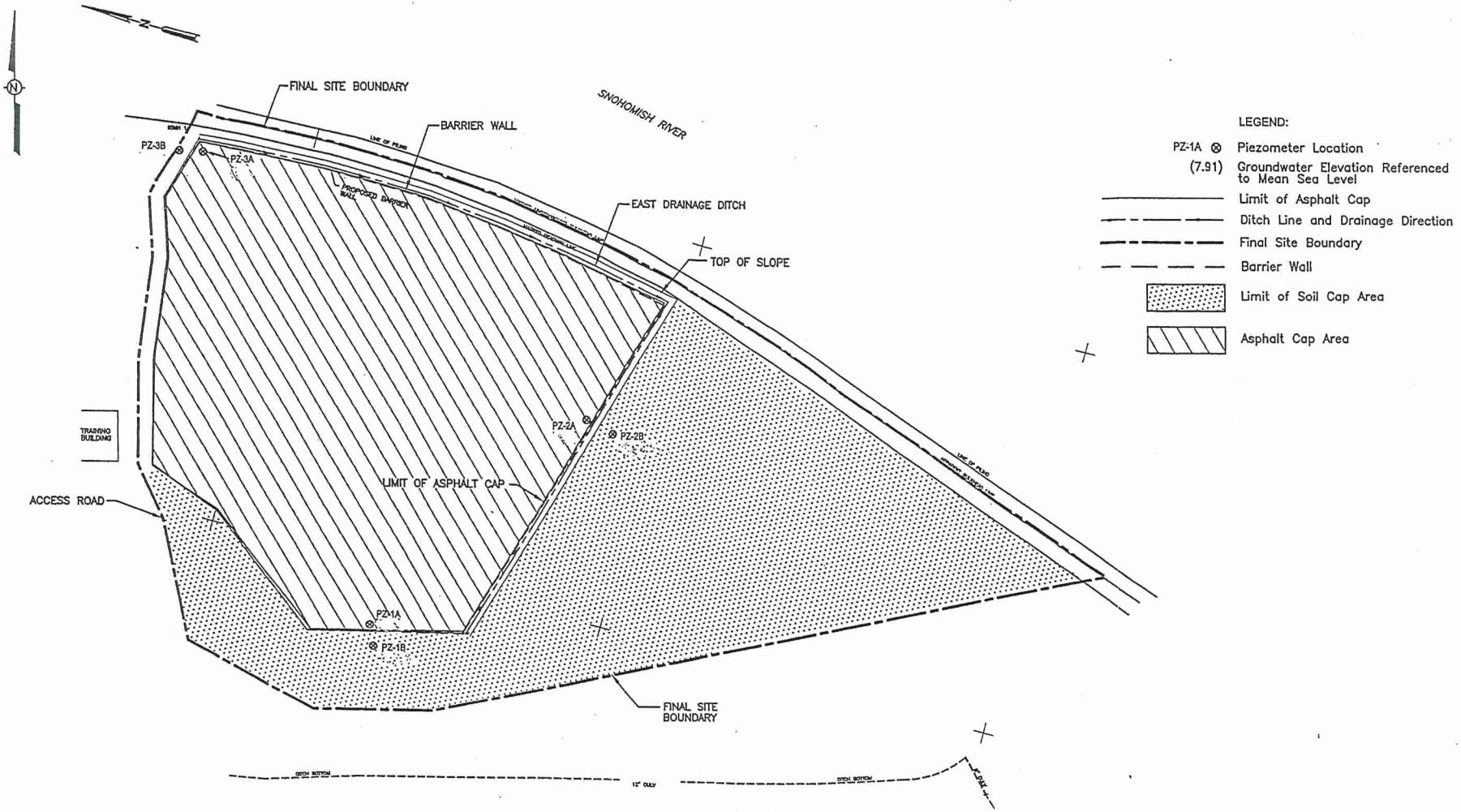
Sample Location	Sample Date	TPH-D (µg/L)	TPH-G (µg/L)	TPH-M (µg/L)	PCP (µg/L)	Arsenic (µg/L)
PZ-3A	9/16/08	384	ND	ND	0.474	**160**
MTCA[(1)]		*10,000*	*10,000*	*10,000*	*7.29*	*5*

TPH-D = total petroleum hydrocarbons-diesel
TPH-G = total petroleum hydrocarbons-gasoline
TPH-M = total petroleum hydrocarbons-motor oil
PCP = pentachlorophenol
µg/L = micrograms per liter
Bold denotes an exceedance of the MTCA cleanup standard for ground water.
(1) MTCA = Model Toxics Control Act cleanup standards for ground water (WAC 173-340-720).

We trust that this information 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: Historic Ground Water Elevations
Chain-of-Custody Form
Analytical Data

JNS/ld
KV050654A3
Projects\20050654\KV\WP



BASE MAP TOPOGRAPHY BASED ON AERIAL PHOTOGRAMMETRIC MAPPING BY RICHARD B. DAVIS CO., WITH CONTROL SURVEY BY CLARK M. LEEMAN SURVEYING, IN DECEMBER, 1997. **(SHAW, 2003)**

Associated Earth Sciences, Inc.

projects\

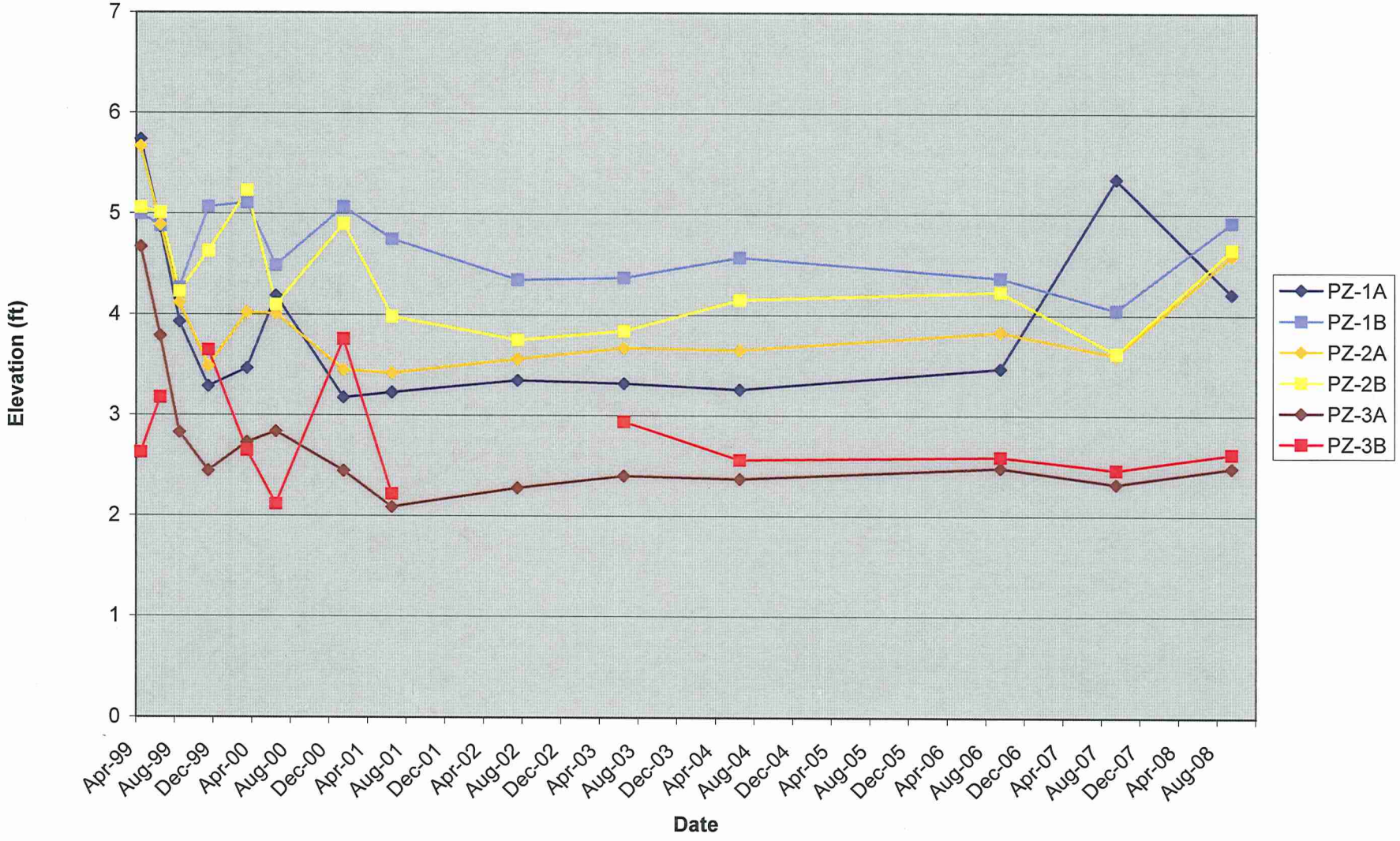
FORMER MILL E/KOPPERS SITE PLAN

FIGURE 1

DATE 9/2007

PROJ. NO. KE050654A

Figure 2 Mill E Ground Water Elevations (ft)



FIELD REPORT

Associated Earth Sciences, Inc.

Celebrating 25 Years of Service

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

Date	Project Name	Project No.
7/17/2008	**Mill E Site Monitoring**	**KV050654A**
Location		Weather
Everett, WA		**Overcast, 70s**
Municipality / Permit Number		Report Number
		1
Engineer / Architect		
Client / Owner		
Pacific Topsoils		
General Contractor / Superintendent		
Grading Contractor / Superintendent		

TO: Pacific Topsoils, Inc.
805 80th Street SW
Everett, Washington 98203

ATTN: Januz Bajsarowicz

AS REQUESTED BY Jerome Cruz / Ecology

THE FOLLOWING WAS NOTED:

We visited the site as the recommendation of Mr. Jerome Cruz with Ecology to observe current asphalt pavement landfill cap conditions. On arrival, we observed that the site was being used for wood chip processing and stockpiling. Equipment observed were: rubber-tired front-end loader, trackhoe, wood processing equipment (chipper?), cargo containers, dumpsters, truck scales (stored above ground), truck-trailers, and automobiles parked along the north edge. An approximately 15-ft high (visually estimated) stockpile was located on the site as shown on the attached site plan sketch.

We observed numerous scratches in the pavement near the east side of the stockpile. The scratches appear to be where the front-end loader scrapes the pavement when scooping material up. The scratches appear to be less than ½ inch in width and less than 3/8 inch in depth. The scratches may be from the ends of bolts extending away on the bottom of the front-end loader bucket. Although the scratches are minor, we recommend that these areas be observed periodically for cracking. We also recommend that the bottom of the bucket be fitted with a smooth steel plate, if bolts or other extensions are causing these scratches or the bucket tilted/operated in such a way to minimize scratching. Photo 1 below shows of one of the larger scratches.

We did not observe cracks in the pavement, except for along the very eastern edge of the asphalt cap. The cracks here appeared to be at the lap between the asphalt-paved drainage ditch and the flat interior portion of the asphalt cap. The cracks appeared to be minor and were covered with asphalt crack sealer. These cracks do not appear to be from traffic-related stress, but from overlap joints when paving the drainage ditch. We recommend that these cracks be observed periodically for integrity. Photo 2 below shows a typical sealed crack area.

We observed areas adjacent to stored equipment, such as cargo containers and dumpsters. We did not observe cracks in the areas adjacent to these structures.

Except where noted above, we did not observe cracks, especially in high traffic areas near the entrances to the asphalt cap area, near the soil processing/stockpile area where the heavy equipment is operated most, and near the truck-trailer parking area. We recommend continued annual site monitoring visits to assess the condition of the asphalt cap.

COPIES TO:		FIELD REP.:	Eric Lim, PE
DATE MAILED:	7-24-08	PRINCIPAL / PM:	Jon Sondergaard, P.E.G.

FIELD REPORT

PROJECT NAME:	Mill E Site Monitoring	DATE:	7/17/2008
PROJECT NUMBER:	KV050654A	Page 2 of 4	

Photo 1: Scratch near the stockpile area with a pencil in the scratch and 8.5" x 11"clipboard for scale.

COPIES TO:		FIELD REP.:	Eric Lim, PE
DATE MAILED:		PRINCIPAL / PM:	Jon Sondergaard, P.E.G.

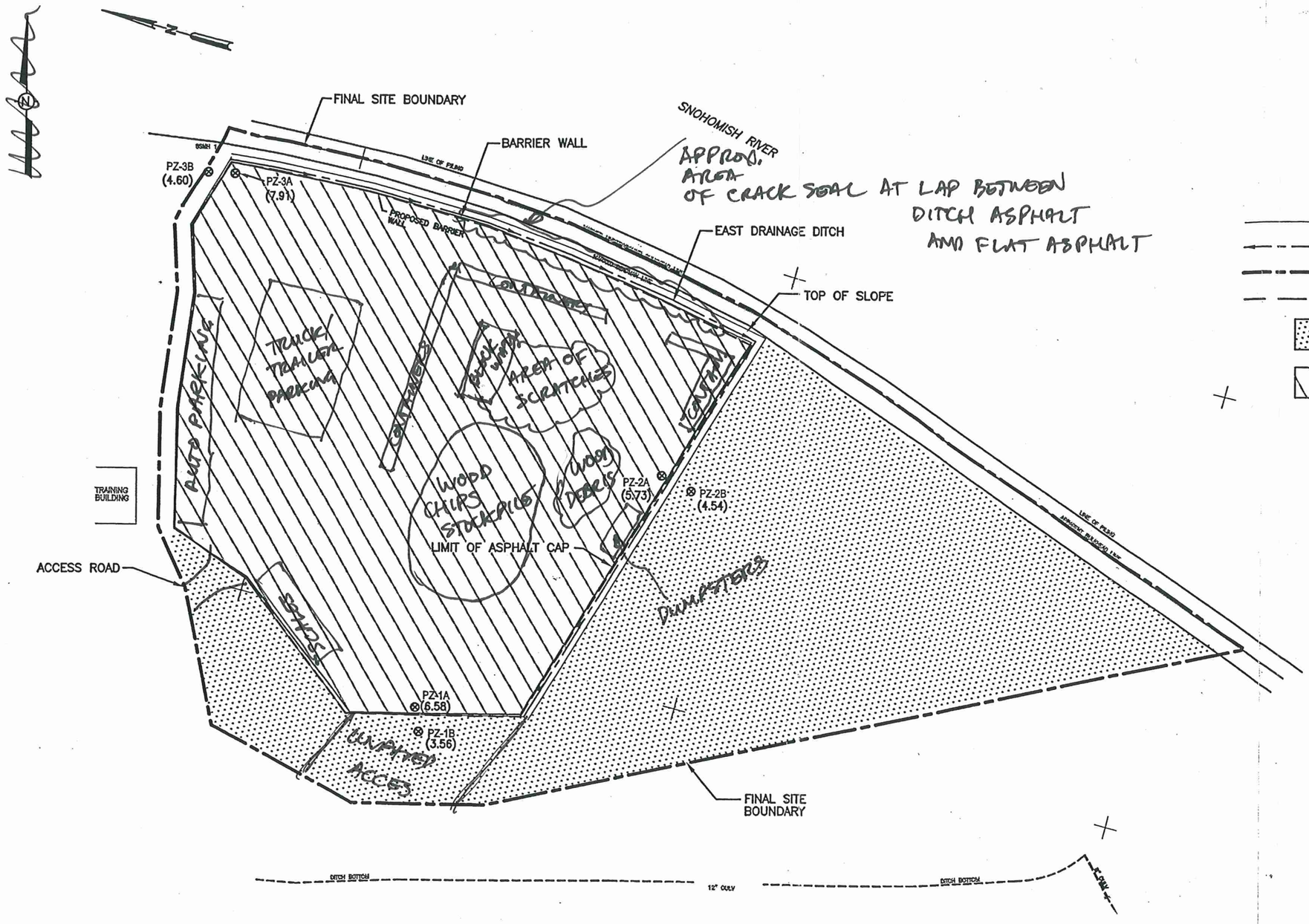
FIELD REPORT

PROJECT NAME:	Mill E Site Monitoring	DATE:	7/17/2008
PROJECT NUMBER:	KV050654A	Page 3 of 4	

Photo 2: Sealed crack at ditch pavement overlap at east edge of cap.

COPIES TO:		FIELD REP.:	Eric Lim, PE
DATE MAILED:		PRINCIPAL / PM:	Jon Sondergaard, P.E.G.

DRAWN BY	CHECKED BY	APPROVED BY	OFFICE	DRAWING NUMBER
MPortacio 8/2003			BOTHELL	844386.11



KV050654A MILLE
AESI FIELD REPORT
7/17/08 EJL

PAGE 4 OF 4

BASE MAP TOPOGRAPHY BASED ON AERIAL PHOTOGRAMMETRIC MAPPING BY RICHARD B. DAVIS CO., WITH CONTROL SURVEY BY CLARK M. LEEMAN SURVEYING, IN DECEMBER, 1997.

Shaw™
Shaw Environmental, Inc.
19909 120th Avenue N.E., Suite 101
Bothell, Washington 98011
Phone (425) 485-5000
Fax. (425) 486-9766

FIGURE 2
FORMER MILL "E"/KOPPERS SITE
SITE PLAN AND GROUNDWATER ELEVATIONS
JUNE 18, 2003
WEYERHAEUSER COMPANY
WEYERHAEUSER EVERETT MILL
EVERETT, WASHINGTON

XREF Files: IMAGE Files:
Files: N:\Project\final\Weyerhaeuser\844386\Drawings\BT-844386-EVERETT-F2.dwg Layout: Layout1 User: marla.portacio Aug 05, 2003 - 3:17pm

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

October 10, 2008

Jon Sondergaard
Associated Earth Sciences, Inc.- Kirkland
911 5th Ave, Suite 100
Kirkland, WA/USA 98033

RE: Mill E Site Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 09/16/08 16:19. The following list is a summary of the Work Orders contained in this report, generated on 10/10/08 12:26.

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

Work Order	Project	ProjectNumber
BRI0254	Mill E Site Monitoring	KV050654A

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PZ-3A	BRI0254-01	Water	09/16/08 14:45	09/16/08 16:19

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Volatile Petroleum Products by NWTPH-Gx

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRI0254-01RE1 (PZ-3A)		**Water**				**Sampled: 09/16/08 14:45**				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	-----	50.0	ug/l	1x	8I19034	09/19/08 13:20	09/20/08 03:50	
Surrogate(s): 4-BFB (FID)			*86.1%*		*58 - 144 %*	"			"	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRI0254-01 (PZ-3A)		**Water**			**Sampled: 09/16/08 14:45**					
Diesel Range Hydrocarbons	NWTPH-Dx	**0.384**	-----	0.236	mg/l	1x	8I17046	09/17/08 16:35	09/18/08 08:14	**Q3**
Lube Oil Range Hydrocarbons	"	ND	-----	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP			*87.0%*		*53 - 125 %*	"			"	
Octacosane			*95.2%*		*68 - 125 %*	"			"	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Total Metals by EPA 6000/7000 Series Methods

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRI0254-01 (PZ-3A)		**Water**					**Sampled: 09/16/08 14:45**			
Arsenic	EPA 6020	**0.160**	-----	0.00100	mg/l	1x	8I19003	09/19/08 06:08	09/19/08 22:58	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

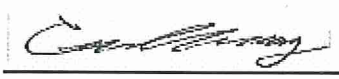
Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Pentachlorophenol by GC/MS with Selected Ion Monitoring

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRI0254-01 (PZ-3A)		**Water**			**Sampled: 09/16/08 14:45**					
Pentachlorophenol	EPA 8270 Mod	**0.474**	-----	0.472	ug/l	1x	8I22028	09/22/08 10:18	10/10/08 08:28	
Surrogate(s): 2,4,6-TBP			*72.2%*		*22 - 162 %*	"			"	

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8I18014 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8I18014-BLK1)									Extracted: 09/18/08 10:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	09/18/08 12:44	
Surrogate(s): 4-BFB (FID)		*Recovery: 85.2%*			*Limits: 58-144%*	"							*09/18/08 12:44*	
LCS (8I18014-BS1)									Extracted: 09/18/08 10:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	975	---	50.0	ug/l	1x	--	1000	97.5%	(80-120)	--	--	09/18/08 13:16	
Surrogate(s): 4-BFB (FID)		*Recovery: 92.7%*			*Limits: 58-144%*	"							*09/18/08 13:16*	
Duplicate (8I18014-DUP1)					QC Source: BRI0249-01				Extracted: 09/18/08 10:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(25)	09/18/08 14:58	
Surrogate(s): 4-BFB (FID)		*Recovery: 86.3%*			*Limits: 58-144%*	"							*09/18/08 14:58*	
Duplicate (8I18014-DUP2)					QC Source: BRI0249-02				Extracted: 09/18/08 10:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	2.17%	(25)	09/18/08 16:03	
Surrogate(s): 4-BFB (FID)		*Recovery: 86.2%*			*Limits: 58-144%*	"							*09/18/08 16:03*	
Matrix Spike (8I18014-MS1)					QC Source: BRI0249-01				Extracted: 09/18/08 10:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	1050	---	50.0	ug/l	1x	15.5	1000	104%	(75-131)	--	--	09/18/08 17:09	
Surrogate(s): 4-BFB (FID)		*Recovery: 96.0%*			*Limits: 58-144%*	"							*09/18/08 17:09*	

QC Batch: 8I19034 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8I19034-BLK1)									Extracted: 09/19/08 13:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	09/19/08 17:38	
Surrogate(s): 4-BFB (FID)		*Recovery: 83.8%*			*Limits: 58-144%*	"							*09/19/08 17:38*	
LCS (8I19034-BS1)									Extracted: 09/19/08 13:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	998	---	50.0	ug/l	1x	--	1000	99.8%	(80-120)	--	--	09/19/08 18:14	
Surrogate(s): 4-BFB (FID)		*Recovery: 93.8%*			*Limits: 58-144%*	"							*09/19/08 18:14*	
LCS Dup (8I19034-BSD1)									Extracted: 09/19/08 13:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	1000	---	50.0	ug/l	1x	--	1000	100%	(80-120)	0.442%	(25)	09/19/08 18:51	
Surrogate(s): 4-BFB (FID)		*Recovery: 91.8%*			*Limits: 58-144%*	"							*09/19/08 18:51*	
Matrix Spike (8I19034-MS1)					QC Source: BRI0238-01RE1				Extracted: 09/19/08 13:20					
Gasoline Range Hydrocarbons	NWTPH-Gx	232000	---	5000	ug/l	100x	134000	100000	97.6%	(75-131)	--	--	09/20/08 05:03	
Surrogate(s): 4-BFB (FID)		*Recovery: 97.7%*			*Limits: 58-144%*	*1x*							*09/20/08 05:03*	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results

TestAmerica Seattle

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8I17046 **Water Preparation Method: EPA 3510C**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8I17046-BLK1)								**Extracted: 09/17/08 16:35**						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	09/18/08 07:10	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 2-FBP		*Recovery: 83.9%*			*Limits: 53-125%*	"							*09/18/08 07:10*	
Octacosane		*97.0%*			*68-125%*	"							"	
LCS (8I17046-BS1)								**Extracted: 09/17/08 16:35**						
Diesel Range Hydrocarbons	NWTPH-Dx	1.71	---	0.250	mg/l	1x	--	2.00	85.5%	(61-132)	--	--	09/18/08 07:32	
Surrogate(s): 2-FBP		*Recovery: 92.7%*			*Limits: 53-125%*	"							*09/18/08 07:32*	
Octacosane		*91.9%*			*68-125%*	"							"	
LCS Dup (8I17046-BSD1)								**Extracted: 09/17/08 16:35**						
Diesel Range Hydrocarbons	NWTPH-Dx	1.66	---	0.250	mg/l	1x	--	2.00	82.8%	(61-132)	3.20%	(40)	09/18/08 07:52	
Surrogate(s): 2-FBP		*Recovery: 86.8%*			*Limits: 53-125%*	"							*09/18/08 07:52*	
Octacosane		*95.7%*			*68-125%*	"							"	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8I19003 **Water Preparation Method: EPA 3020A**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8I19003-BLK1)								**Extracted: 09/19/08 06:08**						
Arsenic	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	09/19/08 21:15	
LCS (8I19003-BS1)								**Extracted: 09/19/08 06:08**						
Arsenic	EPA 6020	0.0745	---	0.00100	mg/l	1x	--	0.0800	93.1%	(80-120)	--	--	09/19/08 21:21	
Duplicate (8I19003-DUP1)				**QC Source: BRI0270-07**				**Extracted: 09/19/08 06:08**						
Arsenic	EPA 6020	ND	---	0.00100	mg/l	1x	ND	--	--	--	10.7%	(20)	09/19/08 21:39	
Matrix Spike (8I19003-MS1)				**QC Source: BRI0270-07**				**Extracted: 09/19/08 06:08**						
Arsenic	EPA 6020	0.0812	---	0.00100	mg/l	1x	0.000710	0.0800	101%	(75-125)	--	--	09/19/08 21:33	
Post Spike (8I19003-PS1)				**QC Source: BRI0270-07**				**Extracted: 09/19/08 06:08**						
Arsenic	EPA 6020	0.0991	---		ug/ml	1x	0.000710	0.0995	98.9%	(80-120)	--	--	09/19/08 21:27	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Pentachlorophenol by GC/MS with Selected Ion Monitoring - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8I22028 **Water Preparation Method: EPA 3520C**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8I22028-BLK3)								**Extracted: 09/22/08 10:18**						
Pentachlorophenol	EPA 8270 Mod	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	10/10/08 07:12	
Surrogate(s): 2,4,6-TBP		*Recovery: 89.6%*			*Limits: 22-162%*	"							*10/10/08 07:12*	
LCS (8I22028-BS3)								**Extracted: 09/22/08 10:18**						
Pentachlorophenol	EPA 8270 Mod	22.8	---	0.500	ug/l	1x	--	20.0	114%	(20-128)	--	--	10/10/08 07:37	
Surrogate(s): 2,4,6-TBP		*Recovery: 83.0%*			*Limits: 22-162%*	"							*10/10/08 07:37*	
LCS Dup (8I22028-BSD3)								**Extracted: 09/22/08 10:18**						
Pentachlorophenol	EPA 8270 Mod	22.0	---	0.500	ug/l	1x	--	20.0	110%	(20-128)	3.41%	(50)	10/10/08 08:03	
Surrogate(s): 2,4,6-TBP		*Recovery: 87.6%*			*Limits: 22-162%*	"							*10/10/08 08:03*	

TestAmerica Seattle

Curtis D. Armstrong, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

Associated Earth Sciences, Inc.- Kirkland	Project Name:	**Mill E Site Monitoring**	
911 5th Ave, Suite 100	Project Number:	KV050654A	Report Created:
Kirkland, WA/USA 98033	Project Manager:	Jon Sondergaard	10/10/08 12:26

Notes and Definitions

Report Specific Notes:

Q3 - The chromatographic pattern is not consistent with diesel fuel.

Z2 - Surrogate recovery was above the acceptance limits. Data not impacted.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

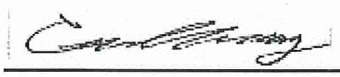
MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong, Project Manager

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave,Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: BRI0254

CLIENT: Associated Earth Sciences, Inc

REPORT TO: Jim Sondergaard cc: Lara Koger
ADDRESS: jsondergaard@aesgeo.com lkoger@aesgeo.com

PHONE: 425-827-7701 FAX: 425-827-5424

INVOICE TO: AESI
911 - 5th Ave.
Kirkland, WA 98033

P.O. NUMBER:

PROJECT NAME: Mill E

PROJECT NUMBER: 1V050654A

SAMPLED BY: JBK

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: (10) STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: (5) STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: TPH-D	TPH-G	TPH-M	PCP	total arsenic	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	PZ-3A	9/16/08 14:45		X	X	X	X	X	W	8		-01
2	Trip Blank	9/16/08 16:19										02
3												
4												
5												
6												
7												
8												
9												
10												

RELEASED BY: Lara Koger DATE: 9/16/08
PRINT NAME: Lara Koger FIRM: AESI TIME: 16:19

RECEIVED BY: Colette Weaver DATE: 09-16-08
PRINT NAME: Colette Weaver FIRM: TAL-Seattle TIME: 1619

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP: 7.8c W/O
PAGE OF

TAL-1000(0408)

TAT: _____ Paperwork to PM – Date:_____ Time:_____ Non-Conformances?

Page Time & Initials:_____ Circle (Y) or N

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: (applies to temp at receipt)
Date: 09.16.08
Time: 1619
Initials: CW

Logged-in By:
Date: 09.16
Time: 1732
Initials: CW

Unpacked/Labeled By:
CB 9/17
Date: ~~9/17~~ 9/18
Time: 6:25
Initials: CB

Cooler ID: 326

Work Order No. BRI0254

Client: AESI

Project: _____

Container Type:
X Cooler
___ Box
___ None/Other _____

COC Seals:
___ Ship Container ___ Sign By
___ On Bottles ___ Date
X None

Packing Material:
X Bubble Bags ___ Styrofoam
___ Foam Packs
X None/(Other) voa holders

Refrigerant:
X Gel Ice Pack _____
___ Loose Ice _____
___ None/Other _____

Received Via: Bill#_____
___ Fed Ex X Client
___ UPS ___ TA Courier
___ DHL ___ Mid Valley
___ Senvoy ___ TDP
___ GS ___ Other_____

Cooler Temperature (*IR*): 7.8 °C (Plastic) Glass (Frozen filters, Tedlars and aqueous Metals exempt)
(circle one)

Temperature Blank? _____°C or (NA)

Trip Blank? (Y) or N or NA

BP, OPLC,ARCO-Temperature monitoring every 15 minutes:
(initial/date/time):_____
Comments:_____

Sample Containers:		ID			ID
Intact?	(Y) or N	_____	Metals Preserved?	Y or N or NA	_____
Provided by TA?	(Y) or N	_____	Client QAPP Preserved?	Y or N or (NA)	_____
Correct Type?	(Y) or N	_____	Adequate Volume? (for tests requested)	(Y) or N	_____
#Containers match COC?	Y or (N)	_____	Water VOAs: Headspace?	(Y) or N or NA	01 B+C
IDs/time/date match COC?	(Y) or N	_____	Comments:		
Hold Times in hold?	(Y) or N	_____			

PROJECT MANAGEMENT

Is the Chain of Custody complete? Y or N If N, circle the items that were incomplete

Comments,Problems_____

Total access set up? Y or N
Has client been contacted regarding non-conformances? Y or N If Y, ____/____ Date Time

PM Initials: _____ Date: _____ Time: _____

(rev 4, 01/24/07)

NOTIFICATION OF DISCREPANCY

DATE: 09.16.08	*TIME:* 1436	*PM:* Curtis Armstrong	*SC INITIALS:* CN
Rush/Short Hold? ☐ *Yes* ☒ *No*			

☐ **Project Not Set Up in ELM** ☐ **New Client** ☐ **COC Received ON HOLD**
☐ **Analysis Requested on COC – Not Listed for Project in ELM**

☐ **PM To Add Analysis:** _____
☐ **Clarification of Analysis:** _____
☐ **Hold Time Expired: (Analysis)** _____
☐ **Turnaround Time Not Checked:** _____
☐ **Did Not Receive Sample(s) Listed on COC:** _____
☒ **Received Extra Sample(s) Not Listed on COC:** Trip Blank, added to COC.
☐ **Sample Description(s) or Date/Time Sampled Do Not Match COC:**

☐ **Improper Preservative For method:** _____
☐ **Sample Received Broken:** _____
☐ **Insufficient Sample Volume:** _____
☐ **Sample preserved upon receipt:** _____
☒ **Temperature Outside recommended range (4°C±2°C):** 7.8c
☒ **Received on-ice within 4 hours of collection, temperature between ambient to 2°C acceptable.**
☐ **Other:**

PROJECT MANAGER RESOLUTION:	(Date & Time when returned to SC)
Approval By:	**Date:** **Time:**

(rev 4, 01/24/07)