December 27, 2006 10077.015

Oregon Department of Environmental Quality Northwest Region 2020 SW Fourth Avenue, Suite 400 Portland, Oregon 97201

VIA Email/First Class

Attn:

Anna Coates

Subject:

Contaminated Media Management Plan - Response to DEQ Comments

Former Mobil/Niemi Oil Bulk Plant IRAM Remedial Investigation/Feasibility Study

Astoria Area-Wide Petroleum Site

Astoria, Oregon

DEQ ECSI File #2277

Dear Ms. Coates:

EnviroLogic Resources, Inc., has received a letter from Oregon Department of Environmental Quality (DEQ) dated September 14, 2006, regarding redevelopment activities at the former Mobil/Niemi Oil bulk plant and the adjacent Port of Astoria property to the east-northeast. Both of these properties are within the boundaries of the Regional Study Area for the Astoria Area-Wide Petroleum Site, as shown on Figure 1 and Figure 2. The DEQ letter provides comments and requests submittal of additional information related to the Contaminated Media Management Plan (CMMP), prepared by EnviroLogic Resources and dated August 24, 2006. The DEQ requested written responses to items 3 and 5 in its letter. Based upon a review of the DEQ letter, we provide the following response:

DEQ Comment #5

Site activities covered by the CMMP were apparently initiated prior to final DEQ approval of the document. Reporting and DEQ notification requirements specified in the CMMP are retroactive and need to be met. This would include information on material that has been excavated and sampled and/or has been staged for disposal (or disposed), and should include daily logs or other field documentation (e.g., photos). The contractor's health and safety plan needs to be submitted for inclusion into the CMMP. The contractor representative responsible for directing soil characterization and implementing health and safety protocols needs to be identified. EnviroLogic agreed to



provide an update on these activities. The update should include photographs, disposal receipts, and other pertinent information such as areas where the materials was removed.

Response to DEQ Comment #5 – Summary of Work Completed

On May 11, 2006, a site visit was conducted by *EnviroLogic Resources* for the purpose of assessing the scope of redevelopment work that developer, Riverlands LLC, informed us was occurring at and adjacent to the former Mobil/Niemi Oil bulk plant. During the site visit, *EnviroLogic Resources* observed and verified that between approximately 140-180 cubic yards of petroleum-contaminated soil (PCS) had recently been generated and stockpiled by construction workers performing site redevelopment preparation activities.

The PCS stockpile was covered in 6-mil plastic sheeting, and is shown on Photograph 1 and Photograph 2 in Appendix A. Where evident, soils appeared to have only been disturbed within the upper three feet of the subsurface at locations approximately where residual petroleum hydrocarbon-related compounds were identified during the course of previous site investigations.

The developer and construction workers could not attest to having the appropriate level of HAZWOPER training necessary to continue working in and/or around a hazardous waste site when asked. Therefore, our field staff requested that such further work at the site be suspended in areas of potential petroleum-related contamination until such time that a site-specific CMMP is prepared and approved by DEQ, and that appropriately trained HAZWOPER personnel are arranged to perform the necessary work in the areas of concern specified in the CMMP. The developer suspended construction work at that time.

On June 5, 2006, a site visit was conducted by *EnviroLogic Resources* in order to obtain representative waste characterization samples of stockpiled PCS and to verify the previous PCS soil stockpile volume estimate. Given the volume of the stockpile, and consistent with Section 3.3.2 of the CMMP dated August 24, 2006, four soil samples, PC North, PC East, PC South, and PC West, were collected from separate pits hand-dug into the soil stockpile for waste characterization purposes. The general location of the PCS stockpile and the associated sampling locations are shown on Figure 3. The structures historically located at the former Mobil/Niemi Oil bulk plant had all been demolished by the developer prior to this site visit, but some structures are shown on Figure 3 for reference. The laboratory analytical results obtained for the samples, and contained in Appendix B, verified that the temporarily stockpiled soil generated by the construction workers contained petroleum compounds and constitutes PCS.

On June 7, 2006, a draft CMMP was submitted to DEQ, and on June 16, 2006, an extension request letter was submitted to DEQ in order to continue temporary stockpiling of PCS at the former Mobil/Niemi Oil bulk plant until necessary client authorizations had been received. On July 17, 2006, DEQ issued a letter generally approving of the activities proposed in the CMMP



under the condition that specified comments are addressed during implementation of the activities covered by the CMMP, and that a revised CMMP be submitted for DEQ review according to the development schedule. In a separate letter dated July 17, 2006, DEQ also granted an extension to the timeframe for on-site PCS storage provided that stockpiled PCS is managed appropriately. A revised CMMP was submitted to DEQ on August 24, 2006, incorporating responses to DEQ comments.

On September 6-8, 2006, site construction preparation work in the areas of concern specified in the CMMP was reinitiated using Cowlitz Clean Sweep-PNE Corporation (CCS-PNE) of Longview, Washington, and their appropriately trained HAZWOPER personnel. This work was observed by *EnviroLogic Resources* and included removal of stockpiled PCS and three historical concrete features from areas where petroleum-related compounds were likely to be encountered. The areas disturbed by CCS-PNE are presented on Figure 3.

Photograph 3 through Photograph 6 show the removal of the eastern concrete structural footing presumed to be that of a former aboveground storage tank (AST). Photograph 7 through Photograph 10 show the removal of a smaller circular concrete feature. Photograph 11 through Photograph 14 show the removal of the western concrete structural AST footing. Both of the concrete AST footings appeared to have been constructed without an interior concrete base and were lined with an asphaltic-based sealant.

The broken-up concrete pieces were separately stockpiled for future recycling and reuse (for processing into gravelly base material via a rock crusher; Photograph 1). An additional 40-50 cubic yards of PCS was incidentally generated during removal of the three concrete features and temporarily stockpiled for disposal along with the larger PCS stockpile. Most of the additional PCS was excavated from the upper four feet of subsurface within the eastern large concrete AST footing. A total of 210 cubic yards of PCS was temporarily stockpiled between the May and September 2006 excavation events, and transported from the site for disposal at Hillsboro Landfill. Appendix C contains a copy of Hillsboro Landfill Disposal Permit #9862 received from Waste Management for the PCS and copies of CCS-PNE's associated shipping papers/bills of lading.

Photograph 15 and Photograph 16 reflect the nature of observed obviously-contaminated soils removed from the areas of the smaller concrete feature and the eastern AST footing, respectively. Photograph 17 and Photograph 18 show the temporary stockpiling of the additional 40-50 cubic yards of PCS. Photograph 19 through Photograph 22 show the removal of ancillary piping encountered during removal of the smaller concrete feature. The approximate location and orientation of this piping is shown on Figure 3.

Approximately 20-30 cubic yards of disturbed soil classified as non-contaminated per the CMMP was set aside for reuse as "cleaner" backfill in the disturbed areas after PCS and concrete



removal activities. Soil samples SS-3 and SS-5 were then obtained from the cleaner stockpiles for screening purposes. SS-2 was intended to be collected from a clean stockpile, but staff was directed to a PCS location. Thus the contents of sample SS-2 was returned to the PCS stockpile once it was realized that SS-2 was inadvertently collected from PCS and not the cleaner fill material slated for reuse. Photograph 23 through Photograph 26 show the disturbed areas subsequent to backfilling and the completion of PCS and concrete removal.

The lab results for soil samples SS-3 and SS-5 collected from the clean stockpiles generally reflect much lower concentrations of pertinent petroleum compounds, if any, in comparison to collected PCS stockpile samples PC North, PC East, PC South, and PC West, and *in situ* soil samples SS-1 and SS-4. In addition, the 20-30 cubic yards of stockpiled clean soils associated with samples SS-3 and SS-5 were returned to the area from which they were disturbed after removal of the additional 40-50 cubic yards of obviously-contaminated soil which generally reduces overall residual contaminant mass. The concentrations detected in samples SS-3 and SS-5 meet the generic petroleum DEQ risk-based concentrations (RBCs) considered applicable to the exposure pathways at the former Mobil Oil/Niemi Oil bulk plant, except for a minor exceedence for indeno(1,2,3-cd)pyrene in sample SS-3 at 25.3 mg/kg for the construction worker soil ingestion, dermal contact, and inhalation scenario (RBCs).

Potentially complete exposure pathways for the Astoria Area-Wide Petroleum Site have been evaluated within a Human Health Risk Assessment as part of the ongoing RI/FS process (Maul Foster & Alongi, Inc., 2006). Those exposure pathways considered applicable to occupational, construction, and excavation workers at the former Mobil Oil/Niemi Oil bulk plant include: soil ingestion, dermal contact, and inhalation (RBC_{ss}); soil and ground water volatilization to outdoor air (RBC_{so} and RBC_{wo}); soil and ground water vapor intrusion into buildings (RBC_{si} and RBC_{wi}); and, ground water in excavation (RBC_{we}). The potential for exposure to indeno(1,2,3-cd)pyrene-affected soil was remedied by ensuring that the CMMP and site-specific Health & Safety Plan (HASP) was properly implemented, including ensuring that subsurface workers in the affected areas were equipped with appropriate personal protective equipment as needed given atmospheric and/or other site conditions.

Soil samples were also obtained for additional site characterization purposes from native soils at a depth of approximately 6.5 feet for SS-1, and 4 feet for SS-4, beneath what had been the overlying eastern large AST footing and smaller concrete structure. The laboratory analytical results for both SS-1 and SS-4 show concentrations of gasoline- and diesel-range petroleum hydrocarbons, volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs). Heavy oil-range petroleum hydrocarbons were also detected in sample SS-1.

Gasoline-range hydrocarbons were detected at 1,120 milligrams per kilogram (mg/kg) in SS-1 and 1,240 mg/kg in SS-4. Diesel-range hydrocarbons were detected in SS-1 and SS-4 at 6,920 mg/kg and 3,480 mg/kg, respectively. Heavy oil-range hydrocarbons were detected in SS-1 at



381 mg/kg and were not detected in sample SS-4. RBDM VOCs detected in both SS-1 and SS-4 include ethylbenzene, xylene(s), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, isopropylbenzene, and n-propylbenzene. RBDM PAHs detected in both SS-1 and SS-4 include acenaphthene, anthracene, fluorene, phenanthrene, and pyrene; whereas, fluoranthene and naphthalene were only detected in sample SS-1. These results will be incorporated into the ongoing RI/FS process for the Astoria Area-Wide Petroleum Site. Generic petroleum DEQ RBCs were not exceeded in soil samples SS-1 and SS-4 for any of the detected compounds, including petroleum hydrocarbons, VOCs, and PAHs, given the site-specific potentially complete exposure pathways. Copies of the laboratory analytical results for the soil samples collected on September 6, 2006, are contained in Appendix B.

All work completed by CCS-PNE from September 6-8, 2006, was conducted according to the provisions of the CMMP dated August 24, 2006, which includes implementing a site-specific HASP and maintenance of the site controls specified in Section 3.2, 3.3 and 4.0 of the CMMP. The areas disturbed by CCS-PNE are presented on Figure 3. CCS-PNE's site-specific HASP and copies of the pertinent HASP signature pages for both *EnviroLogic Resources* and CCS-PNE are included in Appendix D.

On September 14, 2006, DEQ issued a letter requesting an update on status of the field activities that are subject to the CMMP. The letter also requested the submittal of additional information so that the site-specific CMMP could be used as a framework for other properties in the Astoria Area-Wide project area where similar contaminated media may be encountered. This correspondence is intended to fulfill DEQ requests to date regarding the CMMP and associated activities.

DEQ Comment #3

Although waste profiling is specified in the CMMP, it is not clear that sufficient testing to conduct an appropriate RCRA waste determination will be conducted. The CMMP states that the receiving facility "typically" determines the analytical requirements. It is not clear if the receiving facility requirements are sufficient to complete an adequate RCRA waste determination. It is incumbent upon the Port to ensure that appropriate waste characterization sampling is conducted, which may include determining flashpoint to assess ignitability, and toxicity characteristic leaching procedure (TCLP) analysis (e.g., for benzene, lead) to determine if it is toxicity characteristic waste. Unless bulk soil concentrations are greater than 20 times the TCLP toxicity characteristic waste criteria it is not necessary to conduct TCLP testing. It was agreed at today's meeting that soil exhibiting qualities of obviously contaminated soil as described in the CMMP will undergo appropriate hazardous waste determination testing. Please indicate the proposed analytical testing and sampling frequency.



Response to DEQ Comment #3 - Waste Characterization

Title 40 Code of Federal Regulations (40 CFR) Section § 261.4(a)(14)(b)(10) indicates that petroleum-contaminated media and debris that fail the Toxicity Characteristic Leachate Procedure (TCLP) test for the Toxicity Characteristic of § 261.24 (Hazardous Waste Codes D018 through D043 only), and are subject to corrective action regulations under part § 280 (i.e. for underground storage tank corrective actions), are specifically excluded from the definition of hazardous waste. However, media or debris that "contain" hazardous waste can become subject to regulation under Resource Conservation and Recovery Act (RCRA) requirements.

U.S. Environmental Protection Agency (EPA) policy is that the contaminated media or debris must be managed as if they were hazardous waste unless and until they no longer contain hazardous waste. This "contained-in" policy is that contaminated media or debris is considered to contain hazardous waste when: (1) the media or debris exhibit one of the characteristics of hazardous waste (e.g. toxicity); or, (2) when constituents from listed hazardous waste are present at concentrations greater than health-based levels calculated using a reasonable maximum exposure scenario (EPA, 1998). DEQ risk-based levels are acceptable for comparison toward the latter. Contaminated media and debris that do not contain hazardous waste (i.e. concentrations less than risk-based cleanup levels) are not subject to RCRA Subtitle C hazardous waste requirements (EPA, 1998).

As previously approved by DEQ, site-specific cleanup levels for petroleum-related compounds at the Astoria Area-Wide Petroleum Site are to be established during the RI/FS process. The process for establishing cleanup levels is set forth in the DEQ guidance document Risk-Based Decision Making [RBDM] for the Remediation of Petroleum-Contaminated Sites (DEQ, 2003). By replacing the DEQ RBDM spreadsheet values with quantifiable site-specific values, the site-specific cleanup levels for the individual petroleum constituents can be recalculated, including for indeno(1,2,3-cd)pyrene. These substitutions presumably would additionally increase the recalculated risk-based cleanup level for indeno(1,2,3-cd)pyrene.

Given that the laboratory analytical results for excavated soils meet DEQ generic RBCs, except for indeno(1,2,3-cd)pyrene as previously discussed, and that TCLP criteria for indeno(1,2,3-cd)pyrene does not exist, the cleaner soils generated during redevelopment work at the subject site to date is appropriate for reuse as backfill. Therefore, landfill disposal restrictions are not triggered since the TCLP criteria are met, and RBCs for the applicable pathways are generally not exceeded. This approach necessitates DEQ review and final approval of the CMMP.

The only pertinent D-listed petroleum compounds of concern, benzene and 1,2-dichloroethane, were not detected in the samples collected from the PCS stockpile on June 5, 2006, for waste characterization analyses. Benzene and 1,2-dichloroethane also were not detected in samples SS-1 and SS-4 collected on September 8, 2006, from those obviously-contaminated *in-situ* soils that



were not disturbed immediately beneath where incidental PCS was excavated during removal of overlying concrete footings. Therefore, since bulk soil concentrations are not greater than 20 times the TCLP criteria for either benzene or 1,2-dichloroethane, existing waste characterization analytical results are presumed adequate for waste characterization purposes.

Lead analyses were performed on 11 subsurface soil samples that were collected from 10 soil borings, SB-019(A), SB-615(N), SB-618(N), SB-620(N), SB-623(N), SB-624(N), SB-626(N), SB-627(N), SB-629(N), and SB-632(N), in this area of the former Mobil/Niemi Oil bulk plant during the course of previous site investigations. The associated laboratory analytical results indicate that concentrations of lead varied from 2.49 mg/kg to 31.4 mg/kg at depths between two and seven feet below grade (*EnviroLogic Resources*, 2002, and 2004). The average lead concentrations for surface soils from approximately 2 to 2.5 feet below grade is 17.01 mg/kg, and the average lead concentration for subsurface soils at approximately 7 to 7.5 feet below grade is 7.65 mg/kg, accordingly. Therefore, since bulk soil concentrations are less than 20 times the TCLP criteria for lead, existing analytical data was presumed adequate for waste characterization purposes and further testing was not performed for lead.

A review of the analytical results for the waste characterization samples collected from the PCS stockpile on June 5, 2006, indicate that DEQ generic RBCs were not exceeded for the occupational, construction worker, and excavation worker receptor scenarios being considered for the potential exposure pathways at the site (i.e. soil ingestion, dermal contact, and inhalation; volatilization to outdoor air; and, vapor intrusion into buildings), except for a minor exceedence for indeno(1,2,3-cd)pyrene as previously mentioned.

PCS was the only potentially contaminated media encountered to date during redevelopment work at the site. PCS is not a liquid, nor is PCS a solid that is capable under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes and, if ignitable, burns so vigorously and persistently that it creates a hazard. PCS by definition does not exhibit the characteristic of ignitability and further testing for flashpoint is not required for ignitability per 40 CFR § 261.21. Therefore, flashpoint analyses were not requested for the PCS transported from the site. Should such liquids or solids be encountered during future work at the site, flashpoint analyses will be requested as appropriate.

Future waste characterization samples will be collected for analyses depending on the nature of the materials encountered at the former Mobil/Niemi Oil bulk plant. If subject of the existing CMMP, an appropriate number of samples will be collected per Section 3.3.2 of the CMMP and analyzed for comparison with the associated waste characteristic.

As a general guideline, and unless otherwise requested by DEQ or the receiving facility, a minimum of one sample is required for PCS stockpiles smaller than 100 cubic yards. For stockpiles between 101 to 500 cubic yards, a minimum of three samples should be collected.



The sampling frequency will be the same regardless of the initial classification of soil. Samples will be collected from the soil that is furthest from the surface of the stockpile, or that is otherwise most likely to contain the highest concentrations of remaining contaminants, if any. After receiving laboratory analytical results, *EnviroLogic Resources* and the contractor will evaluate whether any further special handling is required and what end uses may be appropriate for the soil.

During the course of redevelopment of properties that are within the Astoria Area-Wide Petroleum Site, PCS will be managed in accordance with "contained-in" policy. It is good policy and best management practice to handle petroleum-contaminated media and debris according to the associated risks to human health and the environment.

CLOSING COMMENTS

Please call us at (503) 768-5121 if you have any questions or comments regarding this correspondence.

Sincerely,

EnviroLogic Resources, Inc.

pson C Howard

Jason C. Howard

Project Hydrogeologist

Thomas J. Calabrese, RG, CWRE

Principal/Hydrogeologist

Project Manager

distribution list attached

FIGURES

cc:

Figure 1 Site Location

Figure 2 Site Plan

Figure 3 Soil Stockpile Sampling Locations



APPENDICES

Appendix A Site Visit Photographs

Appendix B Pertinent Laboratory Analytical Results for Soil

Appendix C Disposal Permit / Shipping Papers

Appendix D Contractor's Health & Safety Plan / Safety Meeting Signature Pages

REFERENCES

EnviroLogic Resources, Inc., January 30, 2002, Technical Memorandum, Phase I Source/Soil Characterization, Remedial Investigation/Feasibility Study, Astoria Area-Wide Petroleum Site, Astoria, Oregon.

EnviroLogic Resources, Inc., November 1, 2004, Technical Memorandum, Phase 2 Soil Characterization, Remedial Investigation/Feasibility Study, Astoria Area-Wide Petroleum Site, Astoria, Oregon.

EnviroLogic Resources, Inc., August 24, 2006, Contaminated Media Management Plan, Port of Astoria Redevelopment, Former Mobil/Niemi Oil Bulk Plant, Astoria Area-Wide Petroleum Site, Astoria, Oregon.

Maul Foster & Alongi, Inc., July 20, 2006, Human Health Risk Assessment, Astoria Area-Wide Petroleum Site, Astoria, Oregon, DEQ ECSI No. 2277.



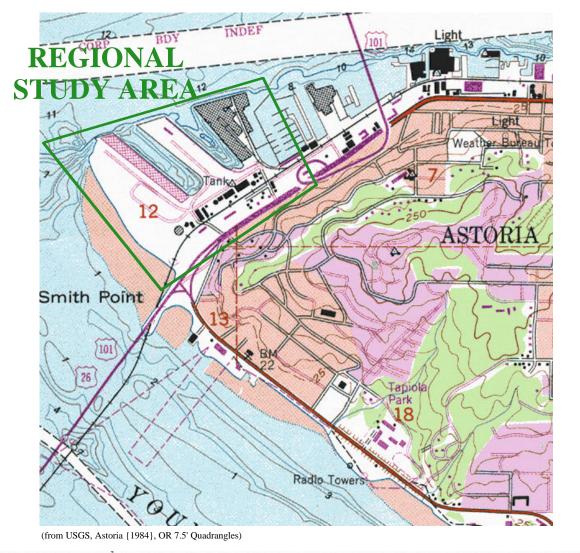
ASTORIA AREA-WIDE PETROLEUM SITE Distribution List

- 1 Anna Coates, DEQ Project Manager, Site Response
- 1 Peter Gearin, Port of Astoria
- 1 Tom Calabrese, EnviroLogic Resources, Inc., Consultant for AAW PRP Group
- 1 Max Miller, Tonkon Torp, Attorney for McCall Oil and Chemical Corporation
- 1 Ted McCall, McCall Oil and Chemical Corporation
- 1 John Edwards, Anchor Environmental, LLC, Consultant for McCall Oil and Chemical Corp
- 1 Cary E. Bechtolt, Niemi Oil Company
- 1 Jeff B. Kray, Marten Law Group, PLLC, Attorney for Niemi Oil Company
- 1 Kurt Harrington, AMEC, Inc., Consultant for Niemi Oil Company
- 1 Ed Platt, Shell Oil Company
- 1 Rick Glick, Davis Wright Tremaine, Attorney for Shell Oil Company
- 1 Leon Lahiere, Hart Crowser, Consultant for Shell Oil Company
- 1 Brian Harris, Harris Enterprises
- 1 Larry Vandermay, Flying Dutchman
- 1 David Bartz & Laura Maffei, Schwabe Williamson & Wyatt, Attorney for Flying Dutchman
- 1 Hong Huynh, Miller Nash, Attorney for Harris Enterprises
- 1 Lon Yandell, Kleinfelder, Consultant for Harris Enterprises
- 1 Richard Delphia, Delphia Oil Company
- 1 Chuck Smith, Attorney for Delphia Oil Company
- 1 Alistaire Clary, Maul Foster Alongi, Consultant for Delphia Oil Company
- 1 Darin Rouse, Chevron Environmental Management Company
- 1 Soniya Ziegler, Attorney for Chevron Environmental Management Company
- 1 Grant Sprick, Blasland, Bouck, and Lee, Consultant for Chevron Environ. Management Co.
- 1 Gerry Koschal, Blasland, Bouck, and Lee, Consultant for Chevron Environ. Management Co.
- 1 Brian Jacobson, Qwest Communications International, Inc.
- 1 David Bledsoe, Perkins Coie LLP, Attorney for Qwest Communications International, Inc.
- 1 Anita W. Lovely, Lovely Consulting, Inc., Consultant for ExxonMobil Corporation
- 1 Information Repository

EnviroLogic Resources, Inc.

Consulting Environmental & Water Resources Scientists

FIGURES



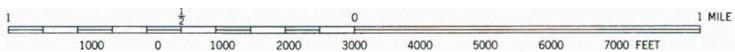
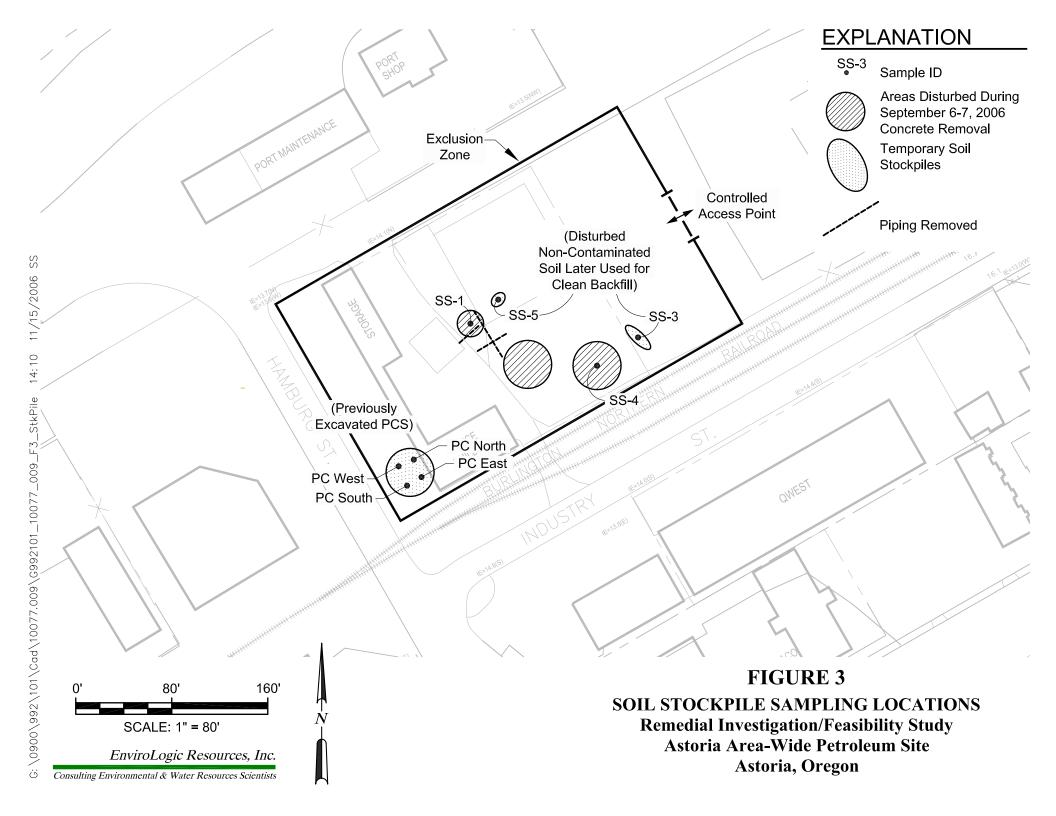




FIGURE 1 SITE LOCATION





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APPENDICES

EnviroLogic Resources, Inc.

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APPENDIX A SITE VISIT PHOTOGRAPHS





PHOTOGRAPHS 1 & 2





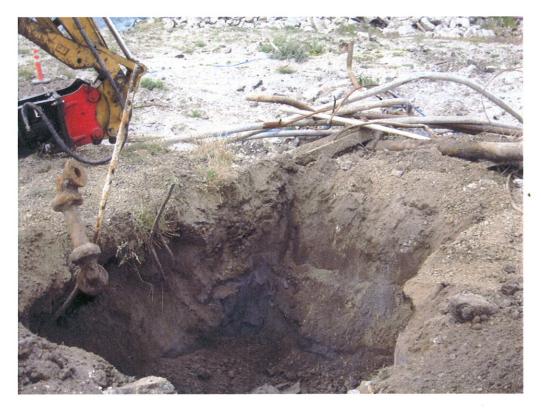
PHOTOGRAPHS 3 & 4





PHOTOGRAPHS 5 & 6





PHOTOGRAPHS 7 & 8





PHOTOGRAPHS 9 & 10





PHOTOGRAPHS 11 & 12





PHOTOGRAPHS 13 & 14





PHOTOGRAPHS 15 & 16





PHOTOGRAPHS 17 & 18



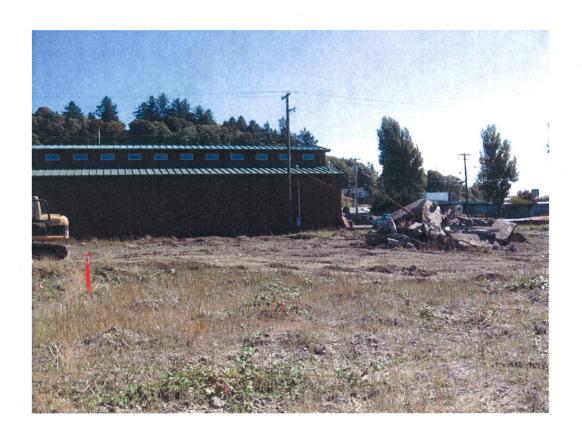


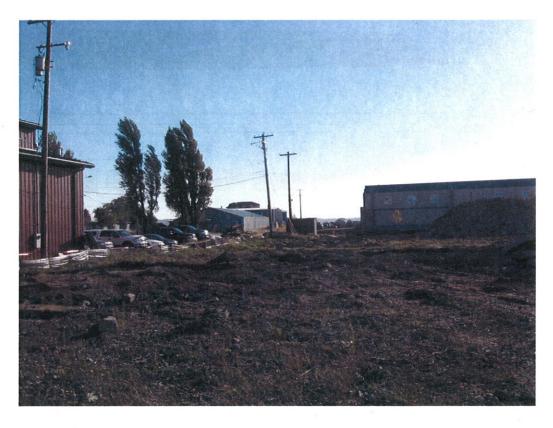
PHOTOGRAPHS 19 & 20





PHOTOGRAPHS 21 & 22





PHOTOGRAPHS 23 & 24





PHOTOGRAPHS 25 & 26

Envirol	noic	Resources,	Inc
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Consulting Environmental & Water Resources Scientists

APPENDIX B PERTINENT LABORATORY ANALYTICAL RESULTS FOR SOIL



ph: (503) 906.9200 fax: (503) 906.9210

July 06, 2006

Jason Howard EnviroLogic Resources, Inc. P.O. Box 80762 Portland, OR 97280-0762

RE: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

Enclosed are the results of analyses for samples received by the laboratory on 06/05/06 15:35. The following list is a summary of the Work Orders contained in this report, generated on 07/06/06 12:09.

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

Work Order	<u>Project</u>	<u>ProjectNumber</u>
PPF0173	Astoria Area Wide/MOBIL	10077.015

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210



Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant EnviroLogic Resources, Inc. Project Name:

P.O. Box 80762 Project Number: 10077.015 Report Created: 07/06/06 12:09 Portland, OR 97280-0762 Project Manager: Jason Howard

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PC North	PPF0173-01	Soil	06/05/06 12:00	06/05/06 15:35
PC West	PPF0173-02	Soil	06/05/06 12:00	06/05/06 15:35
PC East	PPF0173-03	Soil	06/05/06 12:00	06/05/06 15:35
PC South	PPF0173-04	Soil	06/05/06 12:00	06/05/06 15:35

TestAmerica - Portland, OR







P.O. Box 80762 Project Number: 10077.015 Report Created: Portland, OR 97280-0762 Project Manager: Jason Howard 07/06/06 12:09

Gasoline Hydrocarbons per NW TPH-Gx Method

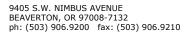
TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPF0173-01	(PC North)		So	il		Samp	led: 06	5/05/06 12:0	00		
Gasoline Range Hy	/drocarbons	NW TPH-Gx	ND		4.25	mg/kg dry	1x	6060191	06/05/06 17:16	06/06/06 15:09	
Surrogate(s):	a,a,a-TFT			75.6%		50 - 150 %	"			"	
PPF0173-02	(PC West)		So	il		Samp	led: 06	5/05/06 12:0	00		
Gasoline Range Hy	drocarbons	NW TPH-Gx	ND		4.30	mg/kg dry	1x	6060191	06/05/06 17:16	06/06/06 15:36	
Surrogate(s):	a,a,a-TFT			75.5%		50 - 150 %	"			"	
PPF0173-03	(PC East)		So	il		Samp	led: 06	5/05/06 12:0	00		
Gasoline Range Hy	/drocarbons	NW TPH-Gx	ND		4.41	mg/kg dry	1x	6060191	06/05/06 17:16	06/06/06 16:04	
Surrogate(s):	a,a,a-TFT			71.7%		50 - 150 %	"			"	
PPF0173-04	(PC South)		So	il		Samp	led: 06	5/05/06 12:0	00		
Gasoline Range Hy	/drocarbons	NW TPH-Gx	ND		4.47	mg/kg dry	1x	6060191	06/05/06 17:16	06/06/06 16:32	•
Surrogate(s):	a,a,a-TFT			72.9%		50 - 150 %	"			"	

TestAmerica - Portland, OR

Darrall Augil Project Manager







 P.O. Box 80762
 Project Number:
 10077.015
 Report Created:

 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPF0173-01 (PC North)		So	il		Samp	oled: 06	5/05/06 12:0	00		
Diesel Range Organics	NWTPH-Dx	1130		68.9 m	g/kg dry	5x	6060215	06/06/06 15:20	06/07/06 11:22	D-04
Heavy Oil Range Hydrocarbons	"	3920		138	"	"	"	"	"	D-04
Surrogate(s): 1-Chlorooctadecan	іе		92.6%	5	0 - 150 %	"			"	
PPF0173-02 (PC West)		So	il		Samp	oled: 06	5/05/06 12:0	00		
Diesel Range Organics	NWTPH-Dx	703		66.2 m	g/kg dry	5x	6060215	06/06/06 15:20	06/07/06 11:22	D-04
Heavy Oil Range Hydrocarbons	"	2360		132	"	"	"	"	"	D-04
Surrogate(s): 1-Chlorooctadecan	іе		105%	5	0 - 150 %	"			"	
PPF0173-03 (PC East)		So	il		Samp	oled: 06	5/05/06 12:0	00		
Diesel Range Organics	NWTPH-Dx	4510		282 m	g/kg dry	20x	6060215	06/06/06 15:20	06/07/06 11:54	D-04
Heavy Oil Range Hydrocarbons	"	17100		563	"	"	"	"	"	D-04
Surrogate(s): 1-Chlorooctadecan	1е		104%	5	0 - 150 %	"			"	
PPF0173-04 (PC South)		So	il		Samp	oled: 06	5/05/06 12:0	00		
Diesel Range Organics	NWTPH-Dx	2100		282 m	g/kg dry	20x	6060215	06/06/06 15:20	06/07/06 13:48	D-04
Heavy Oil Range Hydrocarbons	"	7030		564	"	"	"	"	"	D-04
Surrogate(s): 1-Chlorooctadecan	ie		NR	5	0 - 150 %	"			"	S-01

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





 P.O. Box 80762
 Project Number:
 10077.015
 Report Created:

 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPF0173-01	(PC North)		So	il		Samp	led: 06/	05/06 12:0	00		
1,2-Dibromoethar	ne	EPA 8260B	ND		26.6	ug/kg dry	1x	6060214	06/06/06 08:45	06/06/06 11:20	
1,2-Dichloroethan	ne	"	ND		26.6	"	"	"	"	"	
Benzene		"	ND		10.6	"	"	"	"	"	
Toluene		"	ND		26.6	"	"	"	"	"	
Ethylbenzene		"	ND		26.6	"	"	"	"	"	
Xylenes (total)		"	ND		53.2	"	"	"	"	"	
Methyl tert-butyl	ether	"	ND		21.3	"	"	"	"	"	
Naphthalene		"	ND		106	"	"	"	"	"	
1,2,4-Trimethylbe	enzene	"	ND		53.2	"	"	"	"	"	
1,3,5-Trimethylbe		"	ND		26.6	"	"	"	"	"	
Isopropylbenzene		"	ND		106	"	"	"	"	"	
n-Propylbenzene		"	ND		26.6	"	"	"	"	"	
Surrogate(s):	4-BFB			89.2%		75 - 125 %	0.02x			"	
	1,2-DCA-d4			93.0%		75 - 125 %	"			"	
	Dibromofluorome	thane		90.1%		75 - 125 %	"			"	
	Toluene-d8			95.3%		75 - 125 %	"			"	
PPF0173-02	(PC West)		So	oil		Samp	led: 06/	05/06 12:0	00		
1,2-Dibromoethar		EPA 8260B	ND		26.8	ug/kg dry	1x	6060214	06/06/06 08:45	06/06/06 11:47	
1,2-Dichloroethan		"	ND		26.8	"	"	"	"	"	
Benzene		"	ND		10.7	"	"	"	"	"	
Γoluene		"	ND		26.8	"	"	"	"	"	
Ethylbenzene		"	ND		26.8	"	"	"	"	"	
Xylenes (total)		"	ND		53.7	"	"	"	"	"	
Methyl tert-butyl	ether	"	ND		21.5	"	"	"	"	"	
Naphthalene		"	ND		107	"	"	"	"	"	
1,2,4-Trimethylbe	enzene	"	ND		53.7	"	"	"	"	"	
1,3,5-Trimethylbe		"	ND		26.8	"	"	"	"	"	
Isopropylbenzene		"	ND		107	"	"	"	"	"	
n-Propylbenzene		"	ND		26.8	"	"	"	"	"	
Surrogate(s):	4-BFB			89.3%		75 - 125 %	0.02x			"	
3 (-)	1,2-DCA-d4			89.8%		75 - 125 %	"			"	
	Dibromofluorome	thane		87.4%		75 - 125 %	"			"	
	Toluene-d8			96.7%		75 - 125 %	"			"	

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Warmer W. Harring





 P.O. Box 80762
 Project Number:
 10077.015
 Report Created:

 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPF0173-03 (PC East)		Soil Sampled: 06/05/06 12:00								
1,2-Dibromoethane	EPA 8260B	ND		28.3	ug/kg dry	1x	6060214	06/06/06 08:45	06/06/06 14:58	
1,2-Dichloroethane	"	ND		28.3	"	"	"	"	"	
Benzene	"	ND		11.3	"	"	"	"	"	
Toluene	"	ND		28.3	"	"	"	"	"	
Ethylbenzene	"	ND		28.3	"	"	"	"	"	
Xylenes (total)	"	ND		56.7	"	"	"	"	"	
Methyl tert-butyl ether	"	ND		22.7	"	"	"	"	"	
Naphthalene	"	ND		113	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND		56.7	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	29.5		28.3	"	"	"	"	"	
Isopropylbenzene	"	ND		113	"	"	"	"	"	
n-Propylbenzene	n .	ND		28.3	"	"	"	"	"	
Surrogate(s): 4-BFB			93.0%		75 - 125 %	0.02x			"	
1,2-DCA-d4			93.4%		75 - 125 %	"			"	
D:1	omethane		88.5%		75 - 125 %	"			"	
Dibromofluore	omemune									
Dibromofluore Toluene-d8	omenane		97.4%		75 - 125 %	"			"	
Toluene-d8	smentane	0				"	10=10<10		"	
		So			Samp	" led: 06/	/05/06 12:0	00	"	
Toluene-d8	EPA 8260B	So ND		27.0		1x	6060214	06/06/06 08:45	06/06/06 15:25	
Toluene-d8 PPF0173-04 (PC South)			il	27.0	Samp ug/kg dry	1x "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane	EPA 8260B	ND	oil		Samp ug/kg dry	1x	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane	EPA 8260B "	ND ND	il	27.0 10.8 27.0	Samp ug/kg dry	1x "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene	EPA 8260B "	ND ND ND	 	27.0 10.8	Samp ug/kg dry	1x "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene	EPA 8260B "	ND ND ND ND	 	27.0 10.8 27.0	Samp	1x " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene	EPA 8260B " " "	ND ND ND ND	oil 	27.0 10.8 27.0 27.0	Samp ug/kg dry " " " "	1x " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total)	EPA 8260B " " "	ND ND ND ND ND		27.0 10.8 27.0 27.0 54.1	Samp	1x " " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether	EPA 8260B " " "	ND ND ND ND ND ND	 	27.0 10.8 27.0 27.0 54.1 21.6	Samp	1x " " " " " " " " " " " " " " " " " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene	EPA 8260B " " "	ND		27.0 10.8 27.0 27.0 54.1 21.6 108	Samp	1x " " " " " " " " " " " " " " " " " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene 1,2,4-Trimethylbenzene	EPA 8260B " " "	ND		27.0 10.8 27.0 27.0 54.1 21.6 108 54.1	Samp	1x " " " " " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	EPA 8260B " " "	ND N		27.0 10.8 27.0 27.0 54.1 21.6 108 54.1 27.0	Samp	1x " " " " " " " " " " " " " " " " " " "	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Isopropylbenzene	EPA 8260B	ND N		27.0 10.8 27.0 27.0 54.1 21.6 108 54.1 27.0	Samp	1x	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Isopropylbenzene n-Propylbenzene	EPA 8260B	ND N		27.0 10.8 27.0 27.0 54.1 21.6 108 54.1 27.0	Samp	1x	6060214	06/06/06 08:45	06/06/06 15:25	
PPF0173-04 (PC South) 1,2-Dibromoethane 1,2-Dichloroethane Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Naphthalene 1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Isopropylbenzene n-Propylbenzene Surrogate(s): 4-BFB	EPA 8260B	ND N		27.0 10.8 27.0 27.0 54.1 21.6 108 54.1 27.0	Samp ug/kg dry " " " " " " " " " " " " " " " " " " "	1x " " " " " " " " " " " " " " " " " " "	6060214	06/06/06 08:45	06/06/06 15:25	

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EnviroLogic Resources, Inc. Project Name: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

P.O. Box 80762 Project Number: 10077.015 Report Created: Portland, OR 97280-0762 Project Manager: Jason Howard 07/06/06 12:09

Percent Dry Weight (Solids) per Standard Methods

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Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPF0173-01	(PC North)		Soi	il		Sam	pled: 06	/05/06 12:0	00		
% Solids		NCA SOP	91.3		0.00	% by Weight	1x	6060227	06/06/06 10:05	5 06/07/06 11:05	
PPF0173-02	(PC West)		Soi	il		Sam	pled: 06	/05/06 12:0	00		
% Solids		NCA SOP	92.8		0.00	% by Weight	1x	6060227	06/06/06 10:05	5 06/07/06 11:05	
PPF0173-03	(PC East)		Soi	il		Sam	pled: 06	/05/06 12:0	00		
% Solids		NCA SOP	87.8		0.00	% by Weight	1x	6060227	06/06/06 10:05	5 06/07/06 11:05	
PPF0173-04	(PC South)		Soil				pled: 06	/05/06 12:0	00		
% Solids		NCA SOP	88.2		0.00	% by Weight	1x	6060227	06/06/06 10:05	5 06/07/06 11:05	

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





EnviroLogic Resources, Inc. Project Name: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

 P.O. Box 80762
 Project Number:
 10077.015
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 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Gasol	line Hydro	carbons _j	•		1ethod - Portland,		oratory	Quali	ty Co	ontrol 1	Resu	lts		
QC Batch: 6060191	Soil Pi	eparation	Method:	EPA 503	5 Modified	i								
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limi	ts) Analyzed	Notes
Blank (6060191-BLK1)								Extr	acted:	06/05/06	5 13:29			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND		1.95	mg/kg wet	1x							06/05/06 15:47	
Surrogate(s): a,a,a-TFT		Recovery:	76.1%	Lim	ts: 50-150%	"							06/05/06 15:4	17
LCS (6060191-BS2)								Extr	acted:	06/05/06	5 13:29			
Gasoline Range Hydrocarbons	NW TPH-Gx	21.2		3.91	mg/kg wet	1x		24.4	86.9%	(70-130)			06/05/06 14:52	
Surrogate(s): a,a,a-TFT		Recovery:	78.7%	Lim	ts: 50-150%	"							06/05/06 14:5	52
Duplicate (6060191-DUP1)				QC Source	e: PPF0136-	-01		Extr	acted:	06/05/06	5 13:29			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND		5.34	mg/kg dry	1x	ND				NR	(40)	06/06/06 12:42	
Surrogate(s): a,a,a-TFT		Recovery:	73.4%	Lim	ts: 50-150%	"							06/06/06 12:4	12
Matrix Spike (6060191-MS2)				QC Source	e: PPF0136-	-04		Extr	acted:	06/05/06	5 13:29			
Gasoline Range Hydrocarbons	NW TPH-Gx	23.7		4.86	mg/kg dry	1x	ND	30.4	78.0%	(65-130)			06/06/06 14:42	
Surrogate(s): a,a,a-TFT		Recovery:	71.1%	Lim	ts: 50-150%	"							06/06/06 14:4	12

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





EnviroLogic Resources, Inc. Project Name: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

P.O. Box 80762 Project Number: 10077.015 Report Created: Portland, OR 97280-0762 Project Manager: Jason Howard 07/06/06 12:09

Diesel and H	eavy Rang	e Hydroc	-		PH-Dx Mo		l - Labo	oratoi	ry Qu	ıality C	ontr	ol Re	sults	
QC Batch: 6060215	Soil P	reparation	Method:	EPA 35	50 Fuels									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limi	ts) Analyzed	Notes
Blank (6060215-BLK1)								Ext	racted:	06/06/06	15:20			
Diesel Range Organics	NWTPH-Dx	ND		12.5	mg/kg wet	1x							06/07/06 04:19	
Heavy Oil Range Hydrocarbons	"	ND		25.0	"	"							"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	107%	Lin	nits: 50-150%	"							06/07/06 04:19	
LCS (6060215-BS1)								Ext	racted:	06/06/06	15:20			
Diesel Range Organics	NWTPH-Dx	121		12.5	mg/kg wet	1x		126	96.0%	(50-150)			06/07/06 03:45	
Heavy Oil Range Hydrocarbons	"	80.6		25.0	"	"		76.5	105%	"			"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	100%	Lin	nits: 50-150%	"							06/07/06 03:45	
Duplicate (6060215-DUP1)				QC Sour	ce: PPE1354	-02		Ext	racted:	06/06/06	15:20			
Diesel Range Organics	NWTPH-Dx	ND		13.9	mg/kg dry	1x	ND				18.0%	6 (50)	06/07/06 10:20	
Heavy Oil Range Hydrocarbons	"	ND		27.7	"	"	34.9				34.29	6 "	"	Q-06
Surrogate(s): 1-Chlorooctadecane		Recovery:	105%	Lin	nits: 50-150%	"							06/07/06 10:20	
Duplicate (6060215-DUP2)				QC Sour	ce: PPF0136	-01		Ext	racted:	06/06/06	15:20			
Diesel Range Organics	NWTPH-Dx	ND		17.7	mg/kg dry	1x	ND				NR	(50)	06/07/06 09:48	
Heavy Oil Range Hydrocarbons	"	ND		35.5	"	"	ND				NR	"	"	

Limits: 50-150%

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Surrogate(s): 1-Chlorooctadecane

Recovery:

96.9%

Darrell Auvil, Project Manager

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06/07/06 09:48



EnviroLogic Resources, Inc. Project Name: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

 P.O. Box 80762
 Project Number:
 10077.015
 Report Created:

 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results TestAmerica - Portland, OR

QC Batch: 6060214 **Soil Preparation Method: EPA 5035 Modified** Analyte Method MDL* MRL Units Dil Source Result Blank (6060214-BLK1) Extracted: 06/06/06 08:45 1,2-Dibromoethane EPA 8260B ND 24.9 ug/kg wet 1x06/06/06 18:08

1,2-Dichloroethane	"	ND		24.9	"	"	 	 	 	"
Benzene	"	ND		9.95	"	"	 	 	 	"
Toluene	"	ND		24.9	"	"	 	 	 	"
Ethylbenzene	"	ND		24.9	"	"	 	 	 	"
Xylenes (total)	"	ND		49.8	"	"	 	 	 	"
Methyl tert-butyl ether	"	ND		19.9	"	"	 	 	 	"
Naphthalene	"	ND		99.5	"	"	 	 	 	"
1,2,4-Trimethylbenzene	"	ND		49.8	"	"	 	 	 	"
1,3,5-Trimethylbenzene	"	ND		24.9	"	"	 	 	 	"
Isopropylbenzene	"	ND		99.5	"	"	 	 	 	"
n-Propylbenzene	"	ND		24.9	"	"	 	 	 	"
Surrogate(s): 4-BFB		Recovery: 91.	.0%	Limit	ts: 75-125	% 0.02x				06/06/06 18:08
1,2-DCA-d4		94.	.0%		75-12.	5% "				"
Dibromofluoromethan a	?	89.	9%		75-12.	5% "				"

Toluene-d8		97.	5%		75-1259	% "					"	
LCS (6060214-BS1)							Ext	racted:	06/06/06 0	8:45		
Benzene	EPA 8260B	999		9.99	ug/kg wet	1x	 999	100%	(80-120)		 06/06/06 09:31	
Toluene	"	1010		25.0	"	"	 "	101%	"		 "	
Ethylbenzene	"	1040		25.0	"	"	 "	104%	"		 "	
Xylenes (total)	"	3160		50.0	"	"	 3000	105%	(70-130)		 "	

Naphthalene	"	1040			99.9	"	"	 "	104% (76.1-153)	 	"
Surrogate(s): 4-BFB		Recovery:	95.0%	ó	Limits:	75-125%	0.02x				06/06/06 09:31
1,2-DCA-d4			97.0%	ó		75-125%	"				"
Dibromofluoromethane			99.0%	ó		75-125%	"				"
Toluene-d8			95.5%	6		75-125%	"				"

20.0

1070

Matrix Spike (6060214-N	MS1)			QC Source	: PPF017	3-01		Ext	racted:	06/06/06 0	8:45	
Benzene	EPA 8260B	1070		10.6 u	ıg/kg dry	1x	ND	1060	101%	(80-124)		 06/06/06 09:59
Γoluene	"	1080		26.6	"	"	5.32	"	101% ((79.7-131)		 "
Ethylbenzene	"	1160		26.6	"	"	ND	"	109%	(80-124)		 "
Xylenes (total)	"	3460		53.2	"	"	ND	3190	108%	(70-130)		 "
Methyl tert-butyl ether	"	1130		21.3	"	"	ND	1060	107%	(80-130)		 "
Naphthalene	"	1090		106	"	"	10.6	"	102%	(69-163)		 "
Surrogate(s): 4-BFB		Recovery: 96.	2%	Limits	s: 75-125%	6 0.02x						06/06/06 09:59

Surrogate(s): 4-BFB	Recovery: 96.2%	Limits: 75-125% 0.02x	06/06/06 09
1,2-DCA-d4	95.3%	75-125% "	"
Dibromofluorometh	ane 95.8%	75-125% "	"
Toluene-d8	96.7%	75-125% "	"

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Methyl tert-butyl ether

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107% (80-128)

Darrell Auvil, Project Manager







EnviroLogic Resources, Inc. Project Name: Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant

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 Project Number:
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 Portland, OR 97280-0762
 Project Manager:
 Jason Howard
 07/06/06 12:09

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6060214	Soil Pr	reparation I	Method:	EPA 503	5 Modific	ed								
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD ((Limits)	Analyzed	Notes
Matrix Spike Dup (6060214-	MSD1)			QC Sour	ce: PPF017	3-01		Ext	racted	: 06/06/06	08:45			
Benzene	EPA 8260B	1100		10.6	ug/kg dry	1x	ND	1060	104%	(80-124)	2.76%	(25) 06	5/06/06 10:26	
Toluene	"	1100		26.6	"	"	5.32	"	103%	(79.7-131	1.83%	"	"	
Ethylbenzene	"	1170		26.6	"	"	ND	"	110%	(80-124)	0.858%	· "	"	
Xylenes (total)	"	3500		53.2	"	"	ND	3190	110%	(70-130)	1.15%	"	"	
Methyl tert-butyl ether	"	1120		21.3	"	"	ND	1060	106%	(80-130)	0.889%	· "	"	
Naphthalene	"	1080		106	"	"	10.6	"	101%	(69-163)	0.922%	5 "	"	
Surrogate(s): 4-BFB		Recovery: 9	06.2%	Lim	its: 75-125%	6 0.02x							06/06/06 10:26	5
1,2-DCA-d4		9	3.9%		75-1259	% "							"	
Dibromofluorometha	ine	9	95.8%		75-1259	% "							"	
Toluene-d8		9	98.6%		75-1259	% "							"	

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





2.51% (20) 06/07/06 11:05



NCA SOP

% Solids

Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant EnviroLogic Resources, Inc. Project Name:

P.O. Box 80762 Project Number: 10077.015 Report Created: 07/06/06 12:09 Portland, OR 97280-0762 Project Manager: Jason Howard

Perce	nt Dry Weig	ght (Solids)	-		ethods · Portland,		oratory	Qual	ity C	ontrol	Results		
QC Batch: 6060227	Other o	lry Prepara	tion Meth	od: Dry	y Weight								
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	REC	(Limits)	RPD (Lin	nits) Analyzed	Notes
Duplicate (6060227-DUP1)				QC Source	: PPF0173	-01		Exti	racted:	06/06/06	10:05		
% Solids	NCA SOP	89.7		0.00 %	by Weight	1x	91.3				1.77% (20) 06/07/06 11:05	
Duplicate (6060227-DUP2)				QC Source	e: PPF0173	-02		Exti	racted:	06/06/06	10:05		

0.00 % by Weight 1x

TestAmerica - Portland, OR

Page 12 of 13



Astoria Area Wide/MOBIL-Niemi Oil Bulk Plant EnviroLogic Resources, Inc. Project Name:

P.O. Box 80762 Project Number: 10077.015 Report Created: Portland, OR 97280-0762 Project Manager: 07/06/06 12:09 Jason Howard

Notes and Definitions

Report Specific Notes:

D-04 The hydrocarbons present in this sample are a complex mixture of diesel range and heavy oil range organics.

0-06RPD is not applicable for analyte concentrations less than 5 times the MRL.

S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.

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

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

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

METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. MDL* *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.

Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution

Dil found on the analytical raw data.

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

Electronic Signature added in accordance with TestAmerica's Electronic Reporting and Electronic Signatures Policy. Electronic Signature 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 - Portland, OR

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

Wandle W. Ami





11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 11922 E 1st Ave, Spokane, WA 99206-5302 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 20332 Empire Ave, Ste F1, Bend, OR 97701-5712

2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

509-924-9200 503-906-9200 541-383-9310 907-563-9200

FAX 924-9290 FAX 906-9210 FAX 382-7588 FAX 563-9210

FAX 420-9210

CHAIN OF CUSTODY REPORT

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REPORT TO: ENVYVOL												•					in B	usiness Days *	
ADDRESS: P.O. BOY	x 80762															(Organic & I	norganic Analyses	$\overline{}$
PORTLAN PHONE: 503. 768.5121	D, OR 97280	4	tom (calabr	ويط	O NILIN	(DED.									10 7	5	4 3 2 (1)4
PHONE: 503. 768.5121	FAX: 503.768.5122	- 6	<u> </u>	<u>209eo</u>	Court.	O. NUN	IBEK:	10			019	5				\$110.	Petroleum F	lydrocarbon Analyse	
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SAMPLED BY: JASON	HOWARD	ام	到至	18	0												* Turnarosad Requests	less than standard may incur Rush Charge	
CLIENT SAMPLE	SAMPLING	5	4 5	7	2013	. <u> </u>										MATRIX	#OF	LOCATION /	NCA
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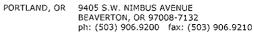
Non-Conformances?

Circle Y or N

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: (applies to temp at receipt)	Logged-in By:	Unpacked/Labeled	By: Cooler ID: (of	
Date: (1/2) Time: (1/36) Initials: (+	Date: Initials:	Date: ((()) Initials: (Work Order No. PPFO (Client: ENVIVO (G) (Project:	7
Container Type: Cooler BoxNone/Other	Ship. Conta	inerSign ByDateNone	Packing Material Bubble Bags Styrofca Foam Packs None/Other Other	
Loose IceNone/Other			Received Via: Bill# — Fed Ex Client — UPS NCA Courier — DHL Mid Valley — Senvoy TDP — GS Other edlars and aqueous Metals exempt)	
Temperature Blank?Sample Containers: Intact? Provided by NCA? Correct Type? #Containers match CO IDs/time/date match CO Hold Times in hold? PROJECT MANAGEM Is the Chain of Custody	C? Y or N OC? Y or N OC? Y or N OC! Y or N OC! Y or N OC! Y or N OC! Y or N	Trip Blank? Metals Preserv Client QAPP P Adequate Volu (for tests requeste Water VOAs: I	Y or N or NA Deved? Y or N or NA Preserved? Y or N or NA ume? Y or N Headspace? Y or N or NA Y or N If N, circle the items that were incomp	
Total access set up? Has client been contacted re PM Initials:			Y or N Y or N If Y,/	— — —





September 29, 2006

Tom Calabrese EnviroLogic Resources, Inc. P.O. Box 80762 Portland, OR 97280-0762

RE: Soil Stockpile Removal

Enclosed are the results of analyses for samples received by the laboratory on 09/08/06 14:30. The following list is a summary of the Work Orders contained in this report, generated on 09/29/06 14:22.

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

Work Order	<u>Project</u>	<u>ProjectNumber</u>
PP10328	Soil Stockpile Removal	1007.022

TestAmerica - Portland, OR





EnviroLogic Resources, Inc.

Project Name:

Soil Stockpile Removal

P.O. Box 80762 Portland, OR 97280-0762

1007.022 Project Number: Project Manager: Tom Calabrese

Report Created: 09/29/06 14:22

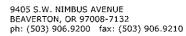
ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FMNBP-SS-1	. PPI0328-01	Soil	09/06/06 10:05	09/08/06 14:30
FMNBP-SS-3	PPI0328-02	Soil	09/06/06 10:45	09/08/06 14:30
FMNBP-SS-4	PPI0328-03	Soil	09/06/06 14:05	09/08/06 14:30
FMNBP-SS-5	PPI0328-04	Soil	09/06/06 14:20	09/08/06 14:30

TestAmerica - Portland, OR

Charle W. Amil Darrell Auvil, Project Manager







EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: 1007.022
Project Manager: Tom Calabrese

Report Created: 09/29/06 14:22

Gasoline Hydrocarbons per NW TPH-Gx Method

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PP10328-01	(FMNBP-SS-1)		So	il		Samp	led: 09	/06/06 10:	05		
Gasoline Range	Hydrocarbons	NW TPH-Gx	1120		86.3 ı	ng/kg dry	20x	6090403	09/11/06 09:28	8 09/13/06 23:43	
Surrogate(s):	a,a,a-TFT			149%	,	50 - 150 %	,,	a and a surfue of a set and a set of a field of a feet a se		и	
PP10328-02	(FMNBP-SS-3)		So	il		Samp	led: 09	/06/06 10:	45		
Gasoline Range F	lydrocarbons	NW TPH-Gx	ND		4,20 r	ng/kg dry	lx	6090403	09/11/06 09:28	09/12/06 23:29	
Surrogate(s):	a,a,a-TFT	en e		77.9%	,	50 - 150 %	#			11	
PPI0328-03	(FMNBP-SS-4)		So	il		Samp	led: 09	/06/06 14:	05		
Gasoline Range	Hydrocarbons	NW TPH-Gx	1240		84.9 r	ng/kg dry	20x	6090403	09/11/06 09:28	3 09/14/06 00:11	
Surrogate(s):	a,a,a-TFT			99.6%	•	50 - 150 %	п			H.	
PP10328-04	(FMNBP-SS-5)		So	il		Samp	led: 09	/06/06 14::	20		
Gasoline Range F	Iydrocarbons	NW TPH-Gx	ND		4.20 n	ng/kg dry	lx	6090403	09/11/06 09:28	09/12/06 23:57	
Surrogate(s):	a,a,a-TFT			77.9%		50 - 150 %	N			и	

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





PORTLAND, OR

9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

TestAmerica - Portland, OR

						rana, orc					
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Note
PPI0328-01	(FMNBP-SS-1)		So	oil		Samp	led: 09	9/06/06 1 0:	05		
Diesel Range Or:	ganics	NWTPH-Dx	6920		54.1	mg/kg dry	4x	6090442	09/12/06 14;5	0 09/14/06 03:13	
Heavy Oil Range	e Hydrocarbons	41	381		108	11	o	10	11	U	
Surrogate(s):	1-Chlorooctadecane	?		100%		50 - 150 %	μ			p	
PP10328-02	(FMNBP-SS-3)		So	oil		Samp	led: 09	0/06/06 10:	45		
Diesel Range Org	ganies	NWTPH-Dx	147	*****	65.5	mg/kg dry	5x	6090442	09/12/06 14:50	0 09/14/06 10:37	D-16
Heavy Oil Range	e Hydrocarbons	10	303	***	131	н	11	0	•	"	
Surrogate(s):	1-Chlorooctadecane	?		55.1%		50 - 150 %	n			Ŋ	
PP10328-03	(FMNBP-SS-4)		So	il		Samp	led: 09	/06/06 14:	95		
Diesel Range Org	ganies	NWTPH-Dx	3480	****	38.9	mg/kg dry	3x	6090442	09/12/06 14:50	0 09/14/06 11:11	
Heavy Oil Range	Hydrocarbons	D	ND	*****	77.8	"	U	u	0	11	R-05
Surrogate(s):	1-Chlorooctadecane	?		98.8%		50 - 150 %	H	A		н	*** /1/*****/************
PP10328-04	(FMNBP-SS-5)		So	il		Samp	led: 09	//06/06 14::	20		
Diesel Range Org	ganics	NWTPH-Dx	399		66.8	mg/kg dry	5x	6090442	09/12/06 14:50	0 09/14/06 11:45	D-16
Heavy Oil Range	e Hydrocarbons	n	213	·	134	"	v	11	"	II .	
Surrogate(s):	1-Chlorooctadecane			57.3%	,	50 - 150 %	"			"	
Heavy Oil Range	e Hydrocarbons			******		"	v				II

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





9405 S.W. NIMBUS AVENUE

BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Soil Stockpile Removal Project Name:

Project Number: 1007.022 Project Manager:

Tom Calabrese

Report Created: 09/29/06 14:22

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPI0328-01	(FMNBP-SS-1)		So	il		Samp	led: 09/	06/06 10:	05		
1,2-Dibromoeth	ane	EPA 8260B	ND		525	ug/kg dry	20x	6090696	09/14/06 09:00	09/19/06 00:20	
1,2-Dichloroeth	ane	н	ND		525	н	н	н	11	n .	
Benzene		μ	ND		210	11	**	н	0	n	
Toluene		33	ND	****	525	В	•	19	11	11	
Ethylbenzene		и	30600		525	*		11	**		
Xylenes (total)		11	26800		1050	ti .	н	n	н	o	
Methyl tert-buty	l ether	11	ND	*****	420	11	н	n	н	ır	
Naphthalene		m .	29000		2100		11	н	•	н	
1,2,4-Trimethyl	benzene	n	172000		1050	t+	0	u		n	
1,3,5-Trimethyl	benzene	19	13900		525	μ	*1	u	u	N	
Isopropylbenze		e	4020	*****	2100	11	н	u	н	11	
n-Propylbenzer		11	21400		525	o	**	n	n	19	
Surrogate(s)	: 4-BFB		***************************************	91.4%		75 - 125 %	0.02x			и	.,,,,.,.,.,.,.,,,,,,,,,,,,,,,,,,,
	1.2-DCA-d4			88.6%		75 - 125 %	0.021			п	
	Dibromofluorometh	ane		84.8%		75 - 125 %	"			"	
	Toluene-d8			93.8%		75 - 125 %	"			"	
DDX0220 02	ATTAINING OF 2)										
PPI0328-02	(FMNBP-SS-3)		So	il		Samp	led: 09/0	06/06 10:4	15		
1,2-Dibromoetha		EPA 8260B	ND		25.3	ug/kg dry	lx	6090696	09/14/06 09:00	09/18/06 22:03	
		0	7117			- C C					
1,2-Dichloroetha	me		ND		25.3	н	at .	11	п	tr	
Benzene	ine	n	ND		10.1	и	n	0	n 11	tr H	
Benzene Toluene	ine		ND ND		10.1 25.3	14 17 10	n				
Benzene Toluene Ethylbenzene	ane		ND ND ND		10.1 25.3 25.3	в • • • • • • • • • • • • • • • • • • •	n n	o	v		
Benzene Toluene Ethylbenzene Xylenes (total)			ND ND ND ND		10.1 25.3 25.3 50.6	14 17 10	м в и	D H H	u u u		
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl			ИО ИО ИО ИО		10.1 25.3 25.3 50.6 20.3	0 0 0 0	n n	0 0 0 0	0 0 0 11		
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene	l ether		ND ND ND ND ND		10.1 25.3 25.3 50.6 20.3 101	0 0 0 0	M H H H H H H H H H H H H H H H H H H H	0 11 11 11 0	0 0 0 0		
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb	ether		ND ND ND ND ND ND		10.1 25.3 25.3 50.6 20.3 101 50.6	0 0 0 0	11 11 11 11 11	0 0 0 0 0	0 0 0 0 0		
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb 1,3,5-Trimethylb	l ether penzene penzene		ND ND ND ND ND ND ND		10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	0 0 0 0 0 0 0	11 11 11 11 11 11 11 11 11 11 11 11 11	0 0 0 0 0 0	0 0 0 0 0 0	1) M M O O O U	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb 1,3,5-Trimethylb	l ether penzene penzene e		ND		10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	1) 31 31 41 41 42 42 43 44 44 44 44 44 44 44 44 44 44 44 44	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb 1,3,5-Trimethylb	l ether penzene penzene e		ND ND ND ND ND ND ND		10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	0 0 0 0 0 0 0	11 11 11 11 11 11 11 11 11 11 11 11 11	0 0 0 0 0 0	0 0 0 0 0 0	1) M M O O O U	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb 1,3,5-Trimethylb	l ether penzene penzene e		ND		10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	0 0 0 0 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	1) 31 31 41 41 42 42 43 44 44 44 44 44 44 44 44 44 44 44 44	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb Isopropylbenzene	ether penzene penzene e 4-BFB 1,2-DCA-d4	6 H H H H H H H H H H H H H H H H H H H	ND		10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	9 0 0 0 10 10 10 0 0 0	11 11 11 11 11 11 11 11 11 11 11 11 11	0 0 0 0 0 0	0 0 0 0 0 0 0	U U U U U U U U U U U U U U U U U U U	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl Naphthalene 1,2,4-Trimethylb Isopropylbenzene	l ether penzene penzene e	6 H H H H H H H H H H H H H H H H H H H	ND	84.7%	10.1 25.3 25.3 50.6 20.3 101 50.6 25.3	75 - 125 %	0.02x	0 0 0 0 0 0	0 0 0 0 0 0 0	U U U U U U U U U U U U U U U U U U U	

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





PORTLAND, OR

9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Note
PP10328-03	(FMNBP-SS-4)		So	il		Samp	led: 09/	06/06 14:	05		······
1,2-Dibromoetha	ne	EPA 8260B	ND	*****	259	ug/kg dry	10x	6090696	09/14/06 09:00	09/19/06 22:19	
1,2-Dichloroetha	ne	н	ND		259	н	ij	н	u	u	
Benzene		u	ND		104	n	ц	11	u	u	
Toluene		•	ND		259	ď	н	1)	*1	*1	
Ethylbenzene		n	2420		259	н	0	u	**	13	
Xylenes (total)		n	3700		518	и	•	n n	v	н	
Methyl tert-butyl	ether	h	ND	*****	207	ır	o	n n	ři.	н	
Naphthalene		0	4550		1040	19	**	н	v	11	
1,2,4-Trimethyll	oenzene	er e	53500		518	.,		"		•	
1,3,5-Trimethyll		3 1	7990		259	0	n	и	NI.	o.	
Isopropylbenzen		п	1210		1040	D	n	le .	u	12	
n-Propylbenzene		14	3870	****	259	· ·	ы	19	N	o	
Surrogate(s):		******		96.6%		75 - 125 %	0.02-	,		H	
Surrogate (s).	1,2-DCA-d4			87.4%		75 - 125 %	0.02x			ft.	
	Dibromofluorometh	nama		87.9%		75 - 125 %	"			п	
	Toluene-d8	ane		91.8%		75 - 125 %	,,			u	
	10thene we					10 ,00 ,0					
PP10328-04	(FMNBP-SS-5)		So	il		Samp	led: 09/	06/06 14:2	20		
1,2-Dibromoetha	ne	EPA 8260B	ND		25.8	ug/kg dry	lx	6090696	09/14/06 09:00	09/18/06 22:30	
2-Dichloroetha	ne	R	ND		25.8	U	н	н	49	н	
Benzene		11	ND		10.3	4	н		11	ii.	
Toluene		19	ND		25.8	н	0	17	11	II.	
Ethylbenzene		n	ND	****	25.8	п	17	41	e e	16	
Xylenes (total)			ND	*****	51.5	н	0	4	n	11	
Methyl tert-butyl	ether	н	ND	****	20.6	п	o	11	rj.	41	
Vaphthalene		и	ND		103	11	n	n	rj.	**	
,2,4-Trimethylbo	enzene	l)	ND		51,5	· ·	n	н	n	D.	
,3,5-Trimethylbo	enzene	· ·	ND		25.8	"	n	**	n		
		et e	ND		103	u	н	н	11		
•		н	ND		25.8	н	h	11	h	n	
sopropylbenzene											
sopropylbenzene	4-BFB			109%		75 - 125 %	0.02x			"	
sopropylbenzene 1-Propylbenzene	1,2-DCA-d4			109% 101%		75 - 125 % 75 - 125 %	0. 0 2x "			"	
lsopropylbenzene n-Propylbenzene		ane									

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Darrell Auvil, Project Manager





Batch

Prepared

9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Analyzed



Method

Result

EnviroLogic Resources, Inc.

P.O. Box 80762

Analyte

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Dil

Project Number: Project Manager: 1007.022 Tom Calabrese

Report Created: 09/29/06 14:22

Notes

Polynuclear Aromatic Compounds per EPA 8270M-SIM

MRL Units

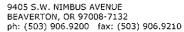
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MDL*

PPI0328-01	(FMNBP-SS-1)		So	il	,	Samp	oled: 09	/06/06 10:0)5		R-0
Acenaphthene		EPA 8270m	1290		146	ug∕kg dry	10x	6090533	09/14/06 12:15	09/22/06 23:04	
Acenaphthylene		u	ND	*****	365	0	n	n n	п	н	R-03
Anthracene		v	1290		146			•	н	n	
Benzo (a) anthrace	ene		ND		146	D	м	0	**		
Benzo (a) pyrene		19	ND		146		D	n	41	19	
Benzo (b) fluorant		e e	ND		146	н	47	n	α	Đ.	
Benzo (ghi) peryle		n .	ND		146	a a	•	н	(r	· ·	
Benzo (k) fluorant	thene	н	ND		146	ď		11	F I	п	
Chrysene		"	ND		146	"	"	11	ч	n	
Dibenzo (a,h) anth	rracene	"	ND		146	"	н	1)	н	н	
Fluoranthene		a	480	*****	146	U	M	1)	14	h	
Fluorene		п	1730		146	11	"		0	Ħ	
Indeno (1,2,3-cd)	ругене		ND		146	"	1)	11	11	*	
Naphthalene		10	14500		2920	"	200x	n	0	09/25/06 22:28	
Phenanthrene		ur	5300		146	ń	10x	н	u	09/22/06 23:04	
Pyrene		ti	797		146	н	U	11	н	1)	
Surrogate(s):	Fluorene-d10			103%		32 - 134 %	"			71	
	Pyrene-d10			116%		41 - 152 %	n			rt .	
	Benzo (a) pyrene-d1.	2		101%		36 - 145 %	u u			. "	
PP10328-02	(FMNBP-SS-3)		Soi	I		Samp	led: 09/	/06/06 10:4	.5		
	(FMNBP-SS-3)	EPA 8270m	Soi ND	<u> </u>	14.0	Samp	led: 09/	6090533	09/14/06 12:15	09/28/06 01:16	
Acenaphthene	(FMNBP-SS-3)	EPA 8270m			14.0 14.0			-		09/28/06 01:16	<u>.</u>
Acenaphthene Acenaphthylene	(FMNBP-SS-3)		ND			ug∕kg dry	lx	-		09/28/06 01:16 "	
Acenaphthene Acenaphthylene Anthracene			ND ND ND ND		14.0	ug∕kg dry	lx "	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (a) pyrene	ene		ND ND ND		14.0 14.0	ug/kg dry "	lx "	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (a) pyrene Benzo (b) fluoran	ene thene		ND ND ND ND ND		14.0 14.0 14.0	ug/kg dry	lx * *	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (a) pyrene Benzo (b) fluoran	ene thene		ND ND ND ND ND 20.4 49.1		14.0 14.0 14.0 14.0	ug/kg dry	lx * *	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorant	ene thene cne		ND ND ND ND ND 20.4 49.1 ND		14.0 14.0 14.0 14.0 14.0	ug/kg dry	lx	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorant	ene thene cne		ND ND ND ND ND 20.4 49.1 ND 22.5		14.0 14.0 14.0 14.0 14.0	ug/kg dry	lx	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth	ene thene ene hene		ND ND ND ND ND 20.4 49.1 ND 22.5 ND		14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	lx	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth	ene thene ene hene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6		14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	lx	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) perylo Benzo (k) fluorantl Chrysene Dibenzo (a,h) anthe Fluoranthene	ene thene ene hene racene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ix n n n n n n n n n n	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth Fluoranthene Fluorene indeno (1,2,3-cd) j	ene thene ene hene racene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND 25.3		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ix n n n n n n n n n n	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth- Fluoranthene Fluorene Indeno (1,2,3-cd) p Naphthalene	ene thene ene hene racene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ix n n n n n n n n n n	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth- Fluoranthene Fluorene Indeno (1,2,3-cd) p Naphthalene Phenanthrene	ene thene ene hene racene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND 25.3		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ex o o o o o o o o o o o o o o o o o o o	6090533	09/14/06 12:15	17	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluorant Benzo (ghi) perylo Benzo (k) fluorantl Chrysene Dibenzo (a,h) anthe Fluoranthene Fluorene Indeno (1,2,3-cd) p Naphthalene Phenanthrene	ene thene ene hene racene		ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND 25.3 30.3		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ex o o o o o o o o o o o o o o o o o o o	6090533	09/14/06 12:15		
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluorant Benzo (ghi) perylo Benzo (k) fluorantl Chrysene Dibenzo (a,h) anthe Fluoranthene Fluorene Indeno (1,2,3-cd) p Naphthalene	ene thene cne hene racene	0	ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND 25.3 30.3 44.4		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ex o o o o o o o o o o o o o o o o o o o	6090533	09/14/06 12:15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthrace Benzo (b) fluoran Benzo (ghi) peryle Benzo (k) fluorantl Chrysene Dibenzo (a,h) anth- Fluoranthene Fluorene Indeno (1,2,3-cd) p Naphthalene Phenanthrene Pyrene Surrogate(s):	ene thene cne hene racene	0	ND ND ND ND 20.4 49.1 ND 22.5 ND 44.6 ND 25.3 30.3 44.4		14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	ug/kg dry	Ex n n n n n n n n n n n n n n n n n n n	6090533	09/14/06 12:15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

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EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name: Soil Stockpile Removal

Project Number: 1007.022 Project Manager: Tom Calabrese Report Created: 09/29/06 14:22

Polynuclear Aromatic Compounds per EPA 8270M-SIM

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared /	Analyzed	Notes
PP10328-03 (F	FMNBP-SS-4)	,	So	il		Samp	led: 09	/06/06 14:	05		R-05
Acenaphthene		EPA 8270m	530		141	ug/kg dry	10x	6090533	09/14/06 12:15	09/23/06 00:11	
Acenaphthylene		н	ND		212	11	19	11	11	u	R-03
Anthracene		10	386	*****	141		18	•		a a	
Benzo (a) anthracene	e	п	ND		141	**	11	11	•	u .	
Benzo (a) pyrene		11	ND		141	et e	11	· ·	0	n	
Benzo (b) fluoranthe	ene	•	ND		141	et e	e	o	e e	п	
Benzo (ghi) perylene		45	ND		141	D	**	II.	· ·	n	
Benzo (k) fluoranthe	ene	ur .	ND		141		•	"	•		
Chrysene		u	ND	*****	141		"	II.	II.	h	
Dibenzo (a,h) anthrae	cene	n .	ND	*****	141			n n	II.	h	
Fluoranthene		þi	ND	*****	141	11		n n	If	н	
Fluorene		n	878		141	11	*1	н	н	n .	
Indeno (1,2,3-cd) pyr	rene	h	ND	****	141	n			ur.	N	
Naphthalene		h	ND	*****	1550				II.	H	R-03
Phenanthrene		11	1650		141	0	н	N	н	ц	
Pyrene		11	225		141	tr.	н	н	н	ņ	
Surrogate(s): Fi	luorene-d10			83.5%		32 - 134 %	н			п	
	yrene-d10			102%		41 - 152 %	н			o	
R	enzo (a) pyrene-d1	2		98.1%		36 - 145 %	п			μ	
1)6	enzo (u) pyrene-ar	4									
		4	Se				led: 09	/06/06 14:	20		R-05
PP10328-04 (F	FMNBP-SS-5)		Se	il	28.2	Samp		/06/06 14:2	,	09/23/06 20:31	R-05
PP10328-04 (F		EPA 8270m	МD	il 	28.2		led: 09	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene			D D	il 	28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene	FMNBP-SS-5)		ND ND ND	il 	28.2 28.2	Samp ug/kg dry	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene	FMNBP-SS-5)		ND ND ND ND	il 	28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene	FMNBP-SS-5)		ND ND ND ND ND	 	28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PPI0328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranther	FMNBP-SS-5)		ND ND ND ND	 	28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PPI0328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene	rMNBP-SS-5)		ND ND ND ND ND	:II	28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen	rMNBP-SS-5)		ND ND ND ND ND ND		28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene	PMNBP-SS-5)		ND ND ND ND ND ND ND	·····	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrace	PMNBP-SS-5)		ND N		28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrace Fluoranthene	PMNBP-SS-5)		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	,	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrace Fluoranthene Fluorene	ne ne cene		ND N	····	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrace Fluoranthene Fluorene Indeno (1,2,3-cd) pyr	ne ne cene		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrac Fluoranthene Fluorene indeno (1,2,3-cd) pyr Naphthalene	ne ne cene		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene	ne ne cene		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrac Fluoranthene Fluorene Indeno (1,2,3-cd) pyr Naphthalene Phenanthrene Pyrene	ne cene		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05
PP10328-04 (F Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (b) fluoranthen Benzo (ghi) perylene Benzo (k) fluoranthen Chrysene Dibenzo (a,h) anthrac Fluoranthene Fluorene Indeno (1,2,3-cd) pyr Naphthalene Phenanthrene Pyrene Surrogate(s): Fl	ne cene		ND N	il	28.2 28.2 28.2 28.2 28.2 28.2 28.2 28.2	Samp	2x	6090533	09/14/06 12:15	09/23/06 20:31	R-05

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Darrell Auvil, Project Manager



The results in this report apply to the samples analyzed in accordance with the chain



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EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Percent Dry Weight (Solids) per Standard Methods

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Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PP10328-01	. (FMNBP-SS-1)		So	l		Sam	pled: 09	/06/06 10:	05		
% Solids		NCA SOP	91.2	*	0.00	% by Weight	1x	6090538	09/14/06 08:5	5 09/14/06 08:55	
PPI0328-02	(FMNBP-SS-3)		So	il		Sam	pled: 09	/06/06 10:4	45		
% Solids		NCA SOP	95.7		0.00	% by Weight	lx	6090538	09/14/06 08:5	5 09/14/06 08:55	
PP10328-03	(FMNBP-SS-4)		Soi	i		Sam	pled: 09	/06/06 14:0	05		
% Solids		NCA SOP	94.0	***	0,00	% by Weight	lx	6090538	09/14/06 08:5:	5 09/14/06 08:55	
PP10328-04	(FMNBP-SS-5)		Soi	1		Sam	pled: 09	/06/06 14::	20		
% Solids		NCA SOP	94.2		0.00	% by Weight	Ix	6090538	09/14/06 08:5	5 09/14/06 08:55	

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EnviroLogic Resources, Inc.

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Portland, OR 97280-0762

Soil Stockpile Removal Project Name:

Project Number: Project Manager:

1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results

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					1 Orthand,	~~~								
QC Batch: 6090403	Soil Pr	eparation	Method:	EPA 503	35 Modified	ì	,							
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD (Limit	ts) Analyzed	Notes
Blank (6090403-BLK1)								Ext	racted:	09/11/06	13:53			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND		4.02	mg/kg wet	lx							09/12/06 02:15	
Surrogate(s): a,a,a-TFT		Recovery:	80.9%	Ln	nus: 50-150%	"					,		09:12:06 02:15	
LCS (6090403-BS1)								Ext	racted:	09/11/06	13:53			
Gasoline Range Hydrocarbons	NW TPH-Gx	22.0		4.00	mg/kg wet	lx		25.0	88.0%	(70-130)			09/12/06 02:42	
Surrogate(s): a,a,a-TFT		Recovery:	83.6%	Ln	nus: 50-150%	и	•••••••••••						09/12/06 02:42	
Duplicate (6090403-DUP1)				QC Source	ce: PPI0294-	01		Ext	racted:	09/11/06	13:53			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	***	4.55	mg/kg dry	1x	ND				20.7%	(40)	09/12/06 03:38	
Surrogate(s): a,a,a-TFT		Recovery:	78.5%	Ln	nus: 50-150%	n				,			09:12:06 03:38	
Duplicate (6090403-DUP2)				QC Source	ce: PP10290-0)2		Ext	racted:	09/11/06	13:53			
Gasoline Range Hydrocarbons	NW TPH-Gx	5.05	***	4.93	mg/kg dry	lx	ND	**			3.83%	(40)	09/12/06 10:03	
Surrogate(s): a,a,a-TFT		Recovery:	77.6%	Lm	ntts: 50-150%	11			*****				09:12:06:10:03	
Matrix Spike (6090403-MS1)			QC Source	e: PPI0248-0)3		Ext	racted:	09/11/06	13:53			
Gasoline Range Hydrocarbons	NW TPH-Gx	25,5		4.76	mg/kg dry	lx	1.72	29.7	80.1%	(65-130)		~~	09/12/06 11:25	
Surrogate(s): a,a,a-TFT		Recovery:	82.5%	Lm	nus: 50-150%					*			09:12:06 11:25	

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Darrell Auvil, Project Manager





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EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022 Tom Calabrese

Report Created: 09/29/06 14:22

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6090442	Soil Pr	eparation	Method:	EPA 35:	50 Fuels									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	ĸ₽D	(Limi	ts) Analyzed	Notes
Blank (6090442-BLK1)								Ext	racted:	09/12/06	14:50			
Diesel Range Organics	NWTPH-Dx	ND		12.5	mg/kg wet	lx							09/13/06 21:46	
Heavy Oil Range Hydrocarbons	H	МD	***	25.0	W.			**					11	
Surrogate(s); 1-Chlorooctadecane		Recovery:	107%	Lu	nus: 50-150%	, "					·		09 13 06 21:46	
LCS (6090442-BS1)								Ext	racted:	09/12/06	14:50			
Diesel Range Organics	NWTPH-Dx	132	***	12.5	mg/kg wet	ìχ		128	103%	(50-150)		••	09/13/06 21:16	
Heavy Oil Range Hydrocarbons	н	86.6		25.0	11	**		80.0	108%	•				
Surrogate(s): 1-Chloroociadecane		Recovery:	108%	Ln	nuts: 50-150%	, "							09 13:06 21:16	*******
Duplicate (6090442-DUP1)				QC Sour	e: PP10364-	01		Ext	racted:	09/12/06	14:50			
Diesel Range Organics	NWTPH-Dx	48.4	***	15.1	mg/kg dry	lх	42.3	**			13.5%	6 (50)	09/13/06 19:11	
Heavy Oil Range Hydrocarbons		140		30,2	v	н	126			~~	10.5%	ó "	e e	
Surrogate(s): 1-Chlorooctadecane		Recovery:	103%	Lii	nts: 50-150%	и						· · · · · · · · · · · · · · · · · · ·	09:13:06 19:11	
Duplicate (6090442-DUP2)				QC Sour	e: PPI0364-	02		Exti	racted:	09/12/06	14:50			
Diesel Range Organics	NWTPH-Dx	33.9		14.7	mg/kg dry	lx	ND				90.4%	á (50)	09/13/06 19:42	Q-14
Heavy Oil Range Hydrocarbons	н	98.5		29.4	U	н	37.6				89.5%	ó "	0	Q-14
Surrogate(s): 1-Chlorooctadecane		Recovery:	102%	Ln	nts: 50-150%	n n							09/13/06 19:42	

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name: Soil Stockpile Removal

Project Number: 1007.022
Project Manager: Tom Calabrese

Report Created: 09/29/06 14:22

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results TestAmerica - Portland, OR

	tch: 6090696	-50111		Method:	22.11.00	35 Modifi									
Analyte		Method	Result	MDL*	MRI.	Units	Dil	Source Result	Spik Amt	e % REC	(Limits)	R₽D	(Lim	its) Analyzed	Not
Blank (6090	0696-BLK1)								Ex	tracted:	: 09/18/06	13:00			
1,2-Dibromoetha	ne	EPA 8260B	ND	***	25.0	ug/kg wet	lx							09/18/06 21:35	
1,2-Dichloroethar	ne .	17	ND		25.0	D	u							н	
Benzene		D	ND		9.98	N	"			**				0	
Toluene		н	ND	420	25.0	11	н							11	
Ethylbenzene		μ	ND		25.0	0	п							n	
Xylenes (total)		v	ND	***	49.9	II .	e	**				**	***	n	
Methyl tert-butyl	ether		ND		20.0	н	11				••			n	
Naphthalene		"	ND	***	99.8	н	н							**	
1,2,4-Trimethylbe	enzene	м	ND		49,9	41	н				**			n	
1,3,5-Trimethylbe	enzene	n	ND		25,0	tt.	11			**				11	
Isopropylbenzene		D	ND		99.8	n	•				~-			19	
n-Propylbenzene		п	ND	~	25.0	н								47	
Surrogate(s)	: 4-BFB		Recovery:	94.0%	Lu	nus: 75-125	% 0.02x				,.,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		09:18:06 21:3.	5
	1.2-DCA-d4			89.5%		75-125								"	•
	Dibromofluoromethan	e		88.5%		75-1259	6 "							"	
	Toluene-d8			91.5%		75-1259	6 "							n	
LCS (60906	96-BS1)										00/10/07				
Benzene	20 201)	EPA 8260B	1110		9.98	ug/kg wet	1x		998		09/18/06 (81.8-125)			09/18/06 19:18	
Toluene		n	1080		25.0		41	**	"		(80-125)	***		"	
Ethylbenzene		н	1130		25.0	н			n		(80-120)			NI.	
Xylenes (total)		11	3360	tern	49.9	11	н		2990	112%	. ,			ы	
Methyl tert-butyl (ether		1140		20.0		h	4-	998		(80-128)			14	
Naphthalene	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11	1120		99.8	ır	æ				(76.1-153)			11	
Surrogate(s).	4-BFB	*. * *	Recovery:	108%		nits: 75-1259	6 0 02r				(,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			09:18:06:19:18	·
	1.2-DCA-d4			109%	,,	75-1259								"	,
	Dibromofluoromethane	?		110%		75-1259								"	
	Toluene-d8			111%		75-125%	6 "							"	
Matrix Spike	(6090696-MS1)				QC Source	e; PPI0328	-02		Ext	racted:	09/14/06	09:00			
Benzene		EPA 8260B	1050	+++	10.1	ug/kg dry	lx	ND	1010		(68.5-125)			09/18/06 19:45	
Foluene		11	1020		25.3	o	41	8.61	,	100%	(70.3-125)			11	
Sthylbenzene		10	1150		25.3		er e	ND	•	114%	(80-124)			п	
Xylenes (total)		0	3400		50,6	н	н	22.3	3040		(70-130)			н	
Methyl tert-butyl e	ther	н	1060		20.3	"	м	ND	1010		(80-130)			17	
Vaphthalene		•	1060		101	ч	"	13.7	и		(69-163)		~-	· ·	
Surrogate(s):	4-RFR		Recovery:	93.1%		ns: 75-125%	0.025					•		09:18:06:19:45	
imiroguetay.	1,2-DCA-d4		necorery.	86.7%	1.111	us: 75-1257 75-125%								<u> </u>	1
	Dibromofluoromethane			88.2%		75-125%								н	

TestAmerica - Portland, OR

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

Darrell Auvil, Project Manager





9405 S.W. NIMBUS AVENUE

BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6090696	Soil Pr	eparation	Method:	EPA 50.	35 Modifie	ed								
Analyte	Method	Result	MDL*	MRL	Units ·	Dil	Source Result	Spike Amt	REC (Limits)	R₽D	(Limits) Analyzed	Notes
Matrix Spike Dup (6090696-1	MSD1)			QC Sour	ce: PPI0328	3-02		Ext	racted:	09/14/06	09:00			
Benzene	EPA 8260B	1040		10.1	ug/kg dry	lχ	ND	1010	103% (0	38.5-125	0.957%	6(25) C	09/18/06 20:12	
Toluene	· ·	1010	~	25.3	n	H	8.61	n	99.1% (3	70.3-125	0.985%	6 "		
Ethylbenzene		1110		25.3	0	"	ND	17	110% ((80-124)	3,54%	.,	u .	
Xylenes (total)	н	3320		50.6	D.	e	22,3	3040	108% ((70-130)	2.38%	, "	3 3	
Methyl tert-butyl ether	v	1030		20.3	п		ND	1010	102% ((80-130)	2.87%) "	н	
Naphthalene	¥I	1040	***	101	н	н	13.7	**	102% ((69-163)	1.90%) "	н	
Surrogate(s): 4-BFB		Recovery:	88,7%	Lu	nuts: 75-1259	% 0.02x		•••••••••••••••••••••••••••••••••••••••					09:18:06 20:1.	2
1,2-DCA-d4			83.7%		75-1259	6 "							n	
Dibromofluoromethan	e		87.2%		75-1259	6 "							н	
Toluene-d8			89.2%		75-1259	6 "							п	

TestAmerica - Portland, OR







EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6090533	Soil P	reparation	Method:	EPA 355	50									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD	(Limit	s) Analyzed	Note
Blank (6090533-BLK1)								Exti	racted:	09/14/06	12:15			
Acenaphthene	EPA 8270m	ND		13.4	ug/kg wet	1x		***					09/22/06 19:44	,
Acenaphthylene	œ	ИD		13.4	u							**	**	
Anthracene	n n	ND	***	13.4	n	13							10	
Benzo (a) anthracene	и	ND		13.4		0							17	
Benzo (a) pyrene	U	ND	***	13.4	u	D			*-				11	
Benzo (b) fluoranthene	•	ND		13.4		n							u	
Benzo (ghi) perylene	31	ND	***	13.4	n	,,								
Benzo (k) fluoranthene	•	ND		13.4	n	11		**					n	
Chrysene		ND		13,4	н	υ						**	н	
Dibenzo (a,h) anthracene	11	СIN	~~	13.4	0	e		***					н	
Fluoranthene	0	ND		13.4	0	**				**				
Fluorene		ND	h++	13.4	v			**					h	
Indeno (1,2,3-cd) pyrene	31	ND		13.4	· v	Þ							Tr.	
Naphthalene	H	ND		13.4	н	n							11	
Phenanthrene	ņ	ND	***	13.4	n	19		**					**	
Pyrene	U	ND		13.4	(1	er e								
Surrogate(s): Fluorene-d10	****	Recovery:	80.9%		nts: 32-134%								09 22:06 19:4	
Pyrene-d10		Accorery.	103%	15111	41-152%	,							09 22:00 19.4	4
Benzo (a) pyrene-a	112		102%		36-145%								п	
Blank (6090533-BLK2)								* .			***			
Acenaphthene	EPA 8270m	ND		13,3	ug/kg wet	lx	*-	EXT	acteu:	09/14/06	20:30		09/22/06 20:17	······································
Acenaphthylene	n	ND		13.3	ugagaeaci	и		**					07/22/00/20:17	
Anthracene	19	ND		13.3	u	,,		**					•	
Benzo (a) anthracene		ND		13.3	,	14							н	
Benzo (a) pyrene		ND		13.3	н	**		***					E1	
	n	ND		13.3	0								ř.	
Benzo (b) fluoranthene	n	ND		13.3	0	н				**	H-P		11	
Benzo (ghi) perylene	9	ND				,,		**						
Benzo (k) fluoranthene	ur.		***	13.3				~-	**					
Chrysene	h	ND		13.3	p	ur.								
Dibenzo (a,h) anthracene	11	ND		13.3								**	· ·	
Fluoranthene	**	ND	***	13.3		н		**					,,	
Fluorene		ND		13.3		"		**					"	
Indeno (1,2,3-cd) pyrene		ND		13,3		"						**		
Naphthalene		ND		13.3									10	
Phenanthrene	,,	ND		13.3	•					***	**		11	
Pyrene		ND	***	13.3				**					N	
Surrogate(s): Fluorene-d10 Pyrene-d10		Recovery:	87.7% 106%	Lim	us: 32-134% 41-152%								09 22 06 20:1 "	7

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Darrell Auvil, Project Manager







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P.O. Box 80762

Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

QC I	Batch: 6090533	Soil Pr	eparation	Method: I	CPA 35:	50								
Analyte		Method	Result	MDL*	MRI	Units	Dil	Source Result	Spike Amt	e % (Lin	its) RP	o (Li	mits) Analyzed	Notes
Blank (60)90533-BLK2)								Ext	tracted: 09/	4/06 20:3	0		
Surrogati	e(s): Benzo (a) pyrene-d12		1)	10507		2 4 1 1 4 1							00.00.00.00.1	-
mirrogan	easy. Denzo aty pyrene-urz		Recovery:	107%	į.h	mus: 36-145%	£X.						09 22:06 20:1	/
	90533-BS1)		Recovery:	107%	f.h	mus: 36-145%	LX		Ext	tracted: 09/1	4/06 12:1	5	09 22:06 20:1	
	0533-BS1)	EPA 8270m	Recovery:		13.2	ug/kg wet	1x	**	Ext	tracted: 09/1		5		
LCS (609	00533-BS1)										139)		09/22/06 20:51	
LCS (609	00533-BS1)		148	hora	13.2	ug/kg wet	1x		165	89.7% (33-	139) 149)		09/22/06 20:51	Q-32

TestAmerica - Portland, OR

Darrell Auvil, Project Manager





PORTLAND, OR

9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

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Portland, OR 97280-0762

Project Name:

Soil Stockpile Removal

Project Number: Project Manager: 1007.022

Tom Calabrese

Report Created: 09/29/06 14:22

Percent Dry Weight (Solids) per Standard Methods - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 6090538 Soil Preparation Method: Dry Weight

Analyte Method Result MDL* MRL Units Dil Source Spike % (Limits) % (Limits) Analyzed Notes

Duplicate (6090538-DUP1)

% Solids

NCA SOP

91.6

QC Source: PP10328-01 0.00 % by Weight 1

91.2

Extracted: 09/14/06 08:55

0.438% (20) 09/14/06 08:55

TestAmerica - Portland, OR

Darrell Auvil, Project Manage

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Page 16 of 17



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OR 9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

EnviroLogic Resources, Inc.

P.O. Box 80762

Portland, OR 97280-0762

Project Name: Soil Stockpile Removal

Project Number: 1007.022
Project Manager: Tom Calabrese

Report Created: 09/29/06 14:22

Notes and Definitions

Report Specific Notes:

- D-16 Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel.
- Q-14 The matrix spike recovery, and/or RPD, for this QC sample is outside of control limits due to a non-homogeneous sample matrix.
- Q-32 No results were reported for the MS and or MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit.
- R-03 The reporting limit for this analyte was raised due to matrix interference.
- R-05 Reporting limits raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.

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 Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*.

 Signature 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 - Portland, OR

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Darrell Auvil. Project Manager



Report Number: DT 0328

Research & Laboratory Services

CHAIN OF CUSTODY

2415 SE 11th Ave. • Portland, Oregon 97214 • (503) 231-9320 • FAX (503) 231-9344

PROJECT# 10077.022 COMPANY ENVIROLOGIC RESOURCES SAMPLES COLLECTED BY J. Haward PRESERVATIVE USED? (HCI, etc.)	DATE(S)	COLLECTED 1/6	/ Stockaila Removal	STATE PHONE NUMBER SO3-860-9967 TIME(S) COLLECTED LO:05A -	PURCHASE ORDER 10077.000 FAX NUMBER 503-768- SAMPLES CHILLED TO Y Regular	512
FIELD ID	MEDIA	CONTAINER	VOLUME ET			LAB ID
FMN BP- 33-1 10205	SOIL	(BOZ)SOC	802	NWTPH Gx, NWTPH Dx, RI	BOM VOCS ROOM PAY	_
FMNBP-SS-Z 10:15	rr	10	1(_DO FAMPLE
FMNBP-53-3 10:45	1(rt.	1.1	1(
FMNBP-SS-4 2:05P	1(1 (11	11		
FMNBP-35-5 2:20F	11	11	1(
					<u></u>	
RELINQUISHED BY	'n	j	ATE / TIME	RECEIVED BY		DATE / TIME
RELINQUISHED BY	ownd		OG 2308	RECEIVED BY LAB	7	09/08/66 1430 DATE/TIME
						D/(/E//////

Submission of samples with testing requirements to WyEast Environmental Sciences will be understood to be an agreement for services in accordance with the conditions listed on the back of the client copy

LAI	•	

Non-Conformances?

Circle Y or N

(If Y, see other side)

TEST	AMERICA	SAMPLE	RECEIDT	CHECKLIST
1	MALTION		NEUEIPI	CHECKISI

Received By: (applies to temp at receipt)	Logged-in By:	Unp	acked/Labeled By	y: Co	ooler ID:	272 (_	L of L
Date: 69/08/06 Time: 1436 Initials: 0641	Date: (1)		e: C[[]	Work Orde Client: Project:	EN	PPIO	328 Jul
Container Type: Cooler Box None/Other	Ship. Conta			Foan	ele Bags n Packs	Sty	
Refrigerant: Gel Ice Pack Loose Ice None/Other				Received \ Fed B UPS DHL Senv	/ia: Bill# Ex	Client NCA Couri Mid Valley TDP	
Cooler Temperature (<i>IR</i> Temperature Blank?	1	(Glass)(Frozen filters, Tedl Trip Blank?		eous Meta		
Sample Containers: Intact? Provided by NCA? Correct Type? #Containers match COCIDs/time/date match COCIDs/time/date match COCIDs/time/date in hold?	Y or N		Client QAPP Pres Adequate Volume (for tests requested) Water VOAs: Hea	served?	or Nor or No	NA)	
PROJECT MANAGEME Is the Chain of Custody of Comments, Problems	complete?				, circle the it	ems that were i	ncomplete
Fotal access set up? Has client been contacted rega PM Initials:				Y or N Y or N If	Y/_ Date	Time	

EnviroLogic Resources, Inc.

Consulting Environmental & Water Resources Scientists

APPENDIX C DISPOSAL PERMIT/SHIPPING PAPERS

Hillsboro Landfill, Inc.

PERMIT # 9862

PERMIT TO DISPOSE OF NON-FIAZARDOUS MATERIALS This permit authorizes disputed of Costomor's waste materials in accordance with the industrial Waste & Disposal Services Agreement dated. 2/04

DESCRIPTION PCS - DIES	The state of the s	The state of the s
- WASTE XCS	CED TYPE	TONS:360
LOCATION: ASTORIS, OREGON POST OF ASTORIA	The second secon	
CONTACT EEN PARTEDOR	では、これでは、日本のでは、「できない。」では、「ない」というしい。「ない」というでは、「ない」という、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」というでは、「ない」といういは、「ない」といい、「ない」という、「ない」といい、「ない」といい、「ない」といい、「ない」といい」といい、「ない、これ」といい、「ないいい、これ、これ、これ、これ、これ、これいいいい、これ、これいいい、これ、これいいい、これ、これいいいい、これ、これいいいい、これい、これ	COUNTY: * Clamp - Autim
The second section of the secti	Comments of the second sections of the second section	FBONE: 360-423-6216 FAX: 360-423-3469
SPECIAL HANDLING: NOVE	Cush, PESA / Musicrard or ch	A JOBE: NA arge(with prior express)
		Ty'r
A COPY OF TOTE BETTE		6/13/06 2:16:96 PM
A MINIMUM CHAP.	T MUST BE SHOWN JE OF SECSIO FOR EACH LOAD.	BY EACH DRIVER OF SPECIAL WASER
		OF SPECIAL WASSE

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROBIBITED



55 international Way Longview, WA 98632 Office: (360) 423-5318 Fax: (353) 423-8409 24-Hours: 1-888-423-5310

B.O.L. / FREIGHT BILL

Enviro	rigal	Resources
PO Box	80762	
Portant) OR 97.	280-1760

DATE

STATEMENT

LOPPON MARKAGE W. PA.	97280-1760		PLEASE	PAY LAST AMO	UNT IN BA	LANCE COLUM
	Comb	ination Bili	of Lading and Fr	elaht Bill	***************************************	and the state of t
Generation: As	iden Unida PR	P Grows			000 to 10 to	**************************************
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55 International Way Longview, WA 88632 Office: (360) 423-6316 Fex: (382) 423-3409 24-Hours 1-888-423-891¢

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55 International Way Longview, WA 65632 Office: (380) 423-8916 Fax: (\$60) 423-3400 24-Hours: 1-888-423-6516

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Enviro Logie Resources
P.O. Box 80762
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Så treornational Way Longview, WA 98632 Office: (250) 420-5316 Fax: (380) 423-3409 24-Hours: 1-888-423-8516 A DIVISION OF PHE COPP. WWW.PROCOTO.COM

B.O.L. / FREIGHT BILL

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55 International Way Longview, WA 98632 Office: (200) 422-5316 Fax: (860) 423-3408 24-Hours; 1-888-729-6316 coam www.precarg.oum

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55 International Way Longview, WA 98622 Office: (860) 425-6216 Ax; (360) 423-3408 24-Keurs: 1-086-423-6316

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PLEASE PAY LAST AMOUNT IN BALANCE COLUMN

Combination Bill of Lading and Freight Bill Generation: Astoria Area Will PRP Receiving Facility: 14:1/5 6000 Operator: Z W.O.# & 5 Sugar Unit #: Received by (TSD): Customer warrants that the waste material being transferred by the above collector does not contain any conteminants including, without limitations; pesticides, chlorinated solvents at concentrations greater than 1,000 PPM, PCB's at greater concentrations than 2 PPM (or PPM with manifest), or any other material classified as hazardous by 40 CFR part 261, customer subparts C and D (implementing the Federal Resource Conservation and Recovery Act, or by any equivalent state hazardous waste or hazardous substance diassification program). Should laboratory tests find this waste product not in compliance with 40 CFR part 261, customer (generator) agrees to pay for all disposal costs incurred. Signature X Date 9-7-06 FOR ABBRIA PARED WIDE PRO GAZA QUANTITY DESCRIPTION CHARGES BALANCE 20 VAND Mon- REGULATED Protosolan Contracted Soth SUBTOTAL TOTAL

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	,
	Consulting Environmental & Water Resources Scientists
ADDENDIN	, n
APPENDIX	D
CONTRACTOR'S HEALTH & SAFETY PLAN / SA	AFETY MEETING SIGNATURE PAGES

HEALTH AND SAFETY PLAN FOR ACTIVITIES AT THE PNE CORP. JOB SITE - OPERATIONS FROM THE PROJECT AT

ASTORIA AREA WIDE/MOBIL-NIEMI OIL BULK PLANT CORNER OF HAMBERG & PORTWAY ASTORIA OR. 97103

PNE CORP.

Prepared by:

PNE Corp. 1081 Columbia Blvd. Longview, WA 98632, 360-703-0444

Site-Specific Health and Safety Plan

1.0 HEALTH AND SAFETY PLAN DESCRIPTION

The purpose of this Health and Safety Plan (HASP) is to establish personnel protection standards, specify safe operating procedures, and provide for contingencies that may arise during all work operations at the site at Corner of Hamburg and Portway, Astoria or. 97103

This HASP has been developed in accordance with the requirements set forth in OSHA. Additional aspects of construction safety are presented in the PNE Corp. Health and Safety Plan as adopted by PNE Corp. corporate officers.

2.0	PROJECT DESCRIPTION				
2.1 General					
Plant/Facility Description:	Astoria Area Wide- MOBIL- Niemi bulk Plant				
Project/Site History:	Fuel oil bulk plant				
2.2 Nature of Activity PreRI RI	Remediation X Other Demolition				
Project Name:	ASTORIA AREA WIDE – MOBIL-NIEMI BULK PLANT				
Project Manager:	Bob Matson				
PNE Corp. Safety Manager	Matt Brenes				

3.0 SCOPE OF WORK

A description of the scope of work covered by this Health & Safety Plan is as follows:

• Site Demolition. Remove concrete tank bottoms, concrete vaults, piping and, other structures specified by Envirologic.

4.0 HAZARD EVALUATION

4.1 Chemical Hazards

No contact anticipated; the sight is contaminated below the surface with hydrocarbons, primarily diesel and gasoline, both leaded and unleaded. See Envirolgics Hasp for a more detailed analysis of these products

4.2 **Physical Hazards**

Procedures to be used to monitor/reduce these hazards will include the following:

- □ Slip/trip/fall: Good housekeeping practices should be employed to prevent slip/trip/fall hazards. Caution must be employed when walking to prevent slip/trip/fall hazards caused by terrain. Due to the activities being performed on this project, particular attention must be given to the site's walking/working surfaces. Protruding debris, cords, trenches, and equipment are just some of the items that may create hazards for the site's walking and working surfaces. ☐ Vehicle traffic: Use barricades, traffic cones or other appropriate measures to control vehicle traffic through the work area. ☐ Heavy Equipment and Motorized Vehicles: Contact with heavy equipment and/or motorized vehicles could result in serious injury or death to workers. All workers will be alerted to the potential for accidents. Workers shall be aware of the location of vehicles and heavy equipment. All heavy equipment must comply with applicable federal and state regulations, including guards, lockouts, standard operating procedures and operator training. Vehicles will be inspected daily by a qualified operator. All workers shall be alerted to the potential of trauma from moving parts on equipment. Workers will be instructed to avoid wearing loose clothing to reduce the potential for hands and arms to be pulled into moving parts. □ Noise: Operation of equipment and tools may create situations where personnel may be exposed to levels of noise in excess of 85 decibels during a full eight-hour work shift. It is not anticipated that workers will be exposed above permissible limits; however, workers will wear hearing protection when using mechanized equipment.
- ☐ Lifting: The potential for personnel to engage in heavy lifting of tools, supplies, or debris is limited for this project; however, back injuries and other lifting-associated injuries are a concern for on-site personnel. Workers will lift heavy items properly and with sufficient help from co-workers.

4.3 **Biological Hazards**

None anticipated.

4.4 **Confined Space Entry**

Not required

5.0 WORKER PROTECTION

The levels of personal protection are selected by evaluating the performance characteristics of the clothing against the requirements and limitations of the site- and task-specific conditions. It is anticipated at this time that respiratory protection will not be required during the extended activities being performed by PNE Corp. or its subcontractors.

5.1 Level of Protection

The specific PPE listed for each level of protection was selected based on exposure potential.	The levels of
protection to be used during entry activities are as follows:	

- ☐ Level D
 - Safety vest
 - Hardhats
 - Leather work boots
 - Safety glasses and face shield (when cutting)

Note: If hydrocarbons are detected in the work area this level of protection will be upgraded.

6.0 AIR/WORKPLACE MONITORING

6.1	Rea	-time Monitoring
	No	X Yes Optional
6.2 X	Per No	onal Air Sampling Yes
6.3	Noi	e Monitoring
X	No	Yes
Noise	monito	ng will not be conducted. However, whenever individuals must raise their voices to
comm	unicate	t a distance of three feet or less and when operating heavy equipment, hearing protection
require	ed duri	that task.
6.4	Hea	/Cold Stress Monitoring
X	No	Yes
Heat o	r cold	ress monitoring is not required due to mild climatic conditions. Workers will be aware of
the syr	nptom	of heat stress. Workers will drink fluids rich in electrolytes and practice proper personal
hvgien	ne.	

7.0 PERSONNEL TRAINING/ASSIGNMENT OF RESPONSIBILITIES

PNE Corp. employees and subcontractor employees involved in work activities on site should attend an initial HASP review prior to initiating field activities. Visitors to the work area will be required to attend a site safety briefing.

7.1 Initial Site Briefing

PNE Corp. site employees and subcontract employees will attend an initial HASP review prior to initiating field activities. This review will include the following:

☐ Project Personnel Roles and Responsibilities

Personnel will understand the lines of authority regarding health and safety and site personnel roles and responsibilities.

☐ Site-specific Health and Safety Hazards

Personnel will be informed of specific hazards related to the site and site operations.

☐ Personal Protective Equipment

Personnel will be trained in the proper use of the PPE required for this project.

□ Safe Work Practices/Engineering Controls

Personnel will be informed of appropriate work practices and engineering controls that will reduce risk of site hazards.

☐ Communication Methods

Personnel will be informed of means for normal site and emergency communication.

☐ Air Monitoring

A PID and a 4 gas monitor will be on sight for use as needed.

☐ Medical Surveillance Program

Not applicable

☐ Site Control Methods

Personnel will understand site methods used to reduce exposure to on- and off-site personnel.

□ Decontamination Procedures

All decon equipment for petroleum products will be available on-sight to be used if needed.

☐ Emergency Response

Personnel will be trained to respond properly in the event of an emergency.

7.2 Daily Briefings

All PNE Corp. site personnel will attend a daily briefing to participate in the in-field activities for that day. The briefings will be documented and included in personnel training files and the site safety log.

7.3 Assignment of Responsibilities

The PNE Corp. Health and Safety Manager, or designated individual (PNE Corp. Superintendent), will have the authority and knowledge necessary to implement the Site Health and Safety Plan and verify compliance with the applicable regulations. Questions regarding this Site Health and Safety Plan may be forwarded to Mr. Matt Brenes at PNE Corp. Inc. at (360) 703-0444.

Duties of the Site Safety Officer include:

- Coordinate development of Site Health and Safety Plan.
- Respond to field requests for assistance in safety and health.
- Provide assistance to PNE Corp. contractors in conducting training of site workers, hazard communication, and other assistance as required.
- Ensure employer's responsibilities for safety and health are being implemented through daily inspections.
- Implement Site Safety and Health requirements in the field.
- Record any variances in conditions.
- Record any illness, disease, injury, pulmonary disorder, or death of any person on the site
- Communicate requirements to field personnel and subcontractors.
- Perform safety record keeping.
- Verify that medical monitoring and training has been performed.

Health and safety responsibilities of the Site Workers include:

- Read and follow the Site Health and Safety Plan.
- Check all personal safety equipment to ensure it is in good working condition prior to entering the exclusion zone.
- Immediately report any accidents/illness, spills, unsafe conditions, any unusual smells or chemical smell to the Site Safety Officer.
- Incidents must be reported in detail on a daily basis for spills or accidents.

8.0 MEDICAL MONITORING

Not required for this job.

9.0 SITE CONTROL

PNE Corp. employees and subcontractor employees will follow site control measures designated by PNE Corp. These controls are as follows:

• Only authorized, trained personnel are allowed to enter the job site.

- The facility is not a controlled site (e.g., no guarded-entry gate). Temporary fencing and banner guard shall be installed and all personnel shall only use recognized entry and exit points.
- Communications on site will be conducted orally. Hand signals will be used when parties are not within speaking distance.
- The buddy system will be employed to the extent feasible to assist in event of an emergency
- Toilet facilities and adequate washing facilities will be within a reasonable distance from site activities.
- Charged and inspected fire extinguishers will be available on site.
- A first aid box and eye wash station will be kept on site.

10.0 DECONTAMINATION

All personnel shall wash their hands prior to eating or drinking after working on site.

11.0 EMERGENCY CONTINGENCY PLAN

11.1 Emergency Phone Numbers

Contact	Name	Number
Police/Security	Police Department	911
Fire and Ambulance	Fire Department	911
Hospital: Name:	Columbia Memorial Hospital 2111 Exchange st Astoria Or	503-325-4321
Address:	2111 Exchange Street Astoria or	
Site Safety Officer	Matt Brenes	360-957-2221
Alternate Site Safety Officer	Mike Sasso	360 957 2195
Project Manager	Bon Matson	360-957-2015
Site/Client Contact	Jason Howard	503-860-9967
Regulatory Agency	Oregon Occupational Safety & Health Division (OSHA) OR-OSHA	503-378-3272

The evacuation route, assembly area, and alarm system will be identified by the site supervisor/SSO prior to onset of field activities and reviewed with all field personnel.

Directions to the hospital:

- Turn left on to marine drive thru down town astoria
- Turn RIGHT on 19th just past swimming pool
- Across street, emergency door on left
- 1.5 miles

11.2 Notification Procedure

In the event of an incident, the site supervisor or SSO will contact the following people:

	Name	Work
Initial	Matt Brenes	360-957-2221
Back-up		

Note: Administrative managers must be notified in the event of an unexpected occurrence or incident.

Appendix A provides injury and incident initial reporting forms. This information will be required when phoning or faxing the initial report to the health and safety manager.

11.3 Injury Response

Begin injury investigation.

In th	ne event a person becomes ill or injured, the project manager will:
	Ensure that all equipment has been shut off.
	Assess the nature of the injury.
	Phone 911 for emergency assistance if needed.
	Administer first aid (if certified to do so).
	Meet the emergency crew.
	Contact Jason Howard Astoria area Wide PRP Group Representative

11	.4 Fire/Explosion Response			
In t	In the event of a fire or explosion:			
	Ensure that all equipment is shut off.			
	Phone 911 for emergency assistance.			
	Rally at designated location and take head count.			
	Secure the area until emergency assistance arrives.			
	☐ Meet emergency crew and advise fire chief of location and nature of the situation.			
	Contact Jason Howard Astoria Area Wide PRP Group representative.			
11.	.5 Spill/Release Response			
In t	the event of a spill or leak:			
	Ensure that all equipment is shut off.			
	Sound emergency alarm or phone 911 for site spill response coordinator.			
	Secure the area.			
	Locate and stop or contain the spill if it can be done safely (proper PPE must be worn).			
	Meet spill response crew and advise them of the location and material that has spilled.			
	Contact Jason Howard PRP Astoria Wide Representative.			
	Begin investigation.			
11	.6 Emergency Equipment			
	First-aid kit,			
	Emergency shower/eyewash,			
	Fire extinguisher,			
	First-aid Locations: All PNE Corp. vehicles			

All personnel have been briefed on this site safety plan prior to the commencement of all work activities. This plan shall be available for review by all personnel working on site for PNE Corp.. Changes shall not be made to this plan without the prior approval of the PNE Corp.. Health and Safety Manager.

By signing below, I agree that I have read, understand and agree to abide by all the information set forth in this safety plan.

Project Foreman	Date
Employee	Date

ATTACHMENT B-1

HASP ACKNOWLEDGEMENT FORM

The following have read and understand the former Mobil/Niemi Oil bulk plant site health and safety plan and agree to comply with the requirements described within:

POSITION	NAME	NAME		SIGNATURE		
EnviroLogic Resources, Inc. Project Manager	e. Thomas J. Calabrese	, R.G.				
EnviroLogic Resources, Inc	. Thomas J. Calabrese	, R.G.				
Health and Safety Officer					^	
Backup HSO	Jason C. Howard		poore	of Jour	ard	
Site Specific Backup HSO	PRP Site Representat	tive -				
REPRESENTING	NAME	SIG	NATURE	DA	TE	
Emmologic RESOURCES	JASON HOUNRD		son Cffou	raid_	9/6/04	
](()	Dason	Ellowa	rd_	9/7/06	
-	((Jason	C Shew	rand	9/8/06	

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ATTACHMENT B-4

TAILGATE SAFETY MEETING FORM

This form is to be used as a guideline for briefing on-site consultant and subcontractor personnel regarding the potential hazards associated with the site. The tailgate safety meeting is a supplement to, and not a replacement for, the site-specific HSP.

Date: $9/6 \Rightarrow 9/8/06$	_ Time:	Project No
Client:	_ Site Address: _	PORT OF ASSORIA - AAW
Safety Topics Presented per	HASP	FMNBP
Protective Clothing/Equipment:	l,	
Chemical Hazards:	11	
Physical Hazards:	11	
Special Equipment:	1(
Decontamination Procedures:	1(
Emergency Procedures:	l(
Additional Information / Comments:	11	
Meeting Attendance 1. January & Lawrence	•	
2. Jaion C Stoward	9/7/06 8	
3. Joseph C. Howard	_9/06 9.	
4.	10.	
5.	11.	
6.	12.	



SAFETY MEETING REPORT FORM

		Emergency Phone #:	9//	Job #: 96007
Lead Person: Wike	<u>S4588</u>	Date:	9-6-06.	9-8-Time: 6755
Job Name: Astour	ARGauide - Piet	Client	Contact Name	
Closest Safety Showe	r:		st Eye Wash:	
Safety Glasses Full Face Resp. Face Shield Fall Protection Vac Truck/Hydrobiust/Pi	Hard Hat Gloves Safety T' ressure Wash Form		Steel Toed Boots Steel Toed Snoes Ear Plugs Heavy Equipment	Buddy System Orange Vest Slips, Trips, Falls
Brief Summary of Mee		THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO SERVE OF THE PERSON NAMED IN	-	o de la composiçõe de la c
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WHITE - OFFICE YELLOW - CUSTOMER

WA: PACKALEDSSMH OR COST 18140 COSS 18140 COM, CE 011L

ATTACHMENT B-4

TAIL GATE SAFETY MEETING FORM

This form is to be used as a guideline for briefing on-site consultant and subcontractor personnel regarding the potential hazards associated with the site. The tailgate safety meeting is a supplement to, and not a replacement for, the site-specific HSP.

Date: 9/0/00 - 9/7/00	Time: 0780 Project No. 96007
Client: <u>IRP</u>	
Safety Topics Presented	·
Protective Clothing/Equipment:	See CCS HSP
Chemical Hazards:	
Physical Hazards:	
Special Equipment:	
Decontamination Procedures:	
Emergency Procedures:	
Additional Information / Comments:	
Meeting Attendance	
1	7.
2 Keyra	8.
3. July Care	9.
4. Meya	10.
5. Stever Mc aloney	11.
6.	12.