

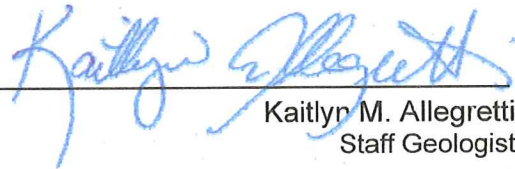
Quarterly Groundwater Monitoring Report
4th Quarter 2007

December 21, 2007

Project Location:
5961 West Powerhouse Road
Yakima, Washington

Prepared For:
Yakima County Public Works
128 N. 3rd Street, Room 408
Yakima, Washington 98901

Prepared by:
Environmental Management Services LLC
1142 Broadway, Suite 230
Fox Island, Washington 99333
(253) 238-9270



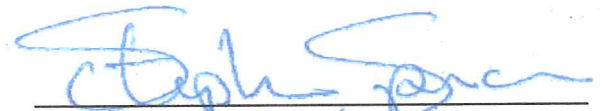
Kaitlyn M. Allegretti
Staff Geologist

Ecology Licensed/Registered Site Assessor



Reviewed By: Jim Coppernoll, L.G.
Licensed Geologist

Ecology Registered Site Assessor
Washington State Licensed Geologist



Stephen M. Spencer
Principal Consultant

EPA Licensed Risk Assessor - WA-R-9256-1
Washington State Licensed Risk Assessor - 0205
Ecology Licensed/Registered Site Assessor

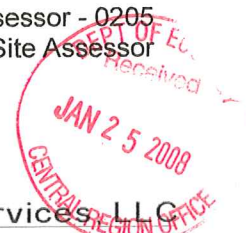


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PROJECT REVIEW

During a June 2006 UST closure (UST Closure & Site Assessment Report – June 2006 EMS), both olfactory and visual evidence of a petroleum release were observed in soil and groundwater at 5961 West Powerhouse Road, Yakima, Washington (Figure 1). Chemical analysis of soil and groundwater samples collected during the UST closure revealed that one soil sample and one groundwater sample contained heavy oil / motor oil range petroleum hydrocarbons (c24 to c36).

Following UST excavation and closure activities, confirmation soil samples were collected from the excavation perimeter and analyzed for total petroleum hydrocarbons by method NWTPH-HCID (Hydrocarbon Identification Scan). This analytical method provides definitive non-quantitative hydrocarbon identification differentiating between gasoline (carbons c6-c10), diesel (carbons c10-c24) and oil (carbons c25-c36) range hydrocarbons. Two of the analytical results showed that the soil samples contained heavy oil range hydrocarbons. A water sample was also reported to contain heavy oil range hydrocarbons. Based on the HCID results, additional testing for extended diesel range hydrocarbons (NWTPH-Dx) was completed on the three samples previously reported to contain hydrocarbons.

One soil sample was reported to contain diesel at 410 mg/kg, below the unrestricted MTCA Method A cleanup criteria (MTCA-A) of 2000 mg/kg. The water sample was reported containing heavy oil / motor oil at 730 µg/L exceeding the unrestricted MTCA Method A cleanup criteria of 500 µg/L.

Due to heavy oil / motor oil concentrations exceeding the laboratory reporting levels in the soil sample and exceeding the MTCA-A cleanup levels in the groundwater, additional sampling and analysis was completed in accordance with the Washington Department of Ecology (WAC 173-340) Table 830, "Required Testing for Petroleum Releases". These additional analyses, specifically polychlorinated biphenyls (PCBs), carcinogenetic polycyclic aromatic hydrocarbons (cPAHs), MTCA 5 Metals (lead, arsenic, cadmium, chromium and mercury), and chlorinated solvents were required to determine if specific contaminants typically found within waste motor oil were present. Testing results reported all additional analytes below practical quantitative reporting limits.

Based on the June 2006 sample results, soil excavation / remediation activities were started on January 16, 2007. These activities consisted of excavating the contaminated soils. The excavation area was located at the former June 2006 UST excavation. Excavation activities were initiated west of the former UST location (Figure 3). Soil was excavated to approximately six feet below ground surface (bgs), the depth at which groundwater was encountered. Excavation activities progressed to the east under the supervision of EMS professionals. Soil screening using a photoionization detector, olfactory evidence, visual evidence, and sheen testing was

completed to guide excavation activities. Following soil excavation activities, the excavation area was dewatered to remove as much contaminated water as possible. Approximately 357 tons of petroleum contaminated soil and 12,000 gallons of petroleum-contaminated water were removed.

Following excavation and dewatering activities, three borings were advanced in the area adjacent to the excavation (Figure 3). Two borings were placed near the south end of the excavation area in the anticipated down-gradient direction of groundwater flow. One boring was placed near the north end of the excavation area in the anticipated up-gradient direction of groundwater flow. Each of the three borings was converted into a 1-inch diameter monitoring well.

After installation and development, the wells were sampled on January 27, 2007. The results of the sampling showed that hydrocarbon constituents were not present in the groundwater at the time of sampling.

ACTIVITIES CONDUCTED/COMPLETED

- EMS completed a 4th Quarter 2007 groundwater sampling event on November 13, 2007. The services conducted during this sampling event included the collection of representative groundwater samples from the three groundwater monitoring wells on site and the field measurement of groundwater elevations, dissolved oxygen, pH, temperature and turbidity.
- The depth to groundwater was measured relative to the top of each monitoring well casing using an electric water level indicator / well sounder. Groundwater elevations were calculated by subtracting the measured depth to groundwater from the casing elevation previously provided EMS by a Yakima County survey crew.
- Representative groundwater samples were collected using a low-flow peristaltic pump and disposable polyethylene tubing. Groundwater samples were collected into laboratory provided sealed 40-milliliter glass vials preserved with hydrochloric acid (gasoline & volatile organic compounds) and one liter amber glass bottles (diesel / oil range hydrocarbons). The filled sample containers were labeled and placed into an ice chest containing frozen blue ice for transport to the analytical laboratory under industry standard chain of custody.
- The measurements for dissolved oxygen, pH, temperature and turbidity were collected during the purging of the wells prior to the collection of groundwater samples. Field measurements are presented in Attachment C.

LABORATORY ANALYSIS AND RESULTS

Libby Environmental in Olympia, Washington, an Ecology accredited laboratory, analyzed the groundwater samples for diesel extended range petroleum hydrocarbons (DRO) by Method NWTPH-Dx, gasoline range hydrocarbons (GRO) by Method NWTPH-Gx, and for the volatile aromatic hydrocarbons benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B.

Each sample was reported below the laboratory practical quantitative levels and the Model Toxic Control Act (MTCA) Method A Cleanup Levels for unrestricted land use for DRO, GRO and BTEX. Analytical results are presented in Attachment B, Table 1. A copy of the laboratory analytical report is presented in Attachment D.

CONCLUSIONS AND OPINION

It is the opinion of EMS that all of the heavy oil range hydrocarbons contaminated soil and groundwater was removed during the January 2007 remediation activities and that the potential source of contamination to groundwater on the property has been removed. The results of groundwater monitoring during the most recent four consecutive quarters have all been below laboratory method detection limits and the MTCA Method A Cleanup Levels for unrestricted land use.

SCHEDULED WORK/EVENTS

- EMS plans to prepare a project summary report in January 2008 detailing the activities conducted to date and the favorable results as well as providing the opinion that all potential sources of contamination have been removed.

DELIVERABLES SUBMITTED

Quarterly Groundwater Monitoring Report – 1st quarter 2007 (Submitted May 2007)
Quarterly Groundwater Monitoring Report – 2nd quarter 2007 (Submitted July 2007)
Quarterly Groundwater Monitoring Report – 3rd quarter 2007 (Submitted October 2007)
Quarterly Groundwater Monitoring Report – 4th quarter 2007 (Submitted December 2007)

Attachment A

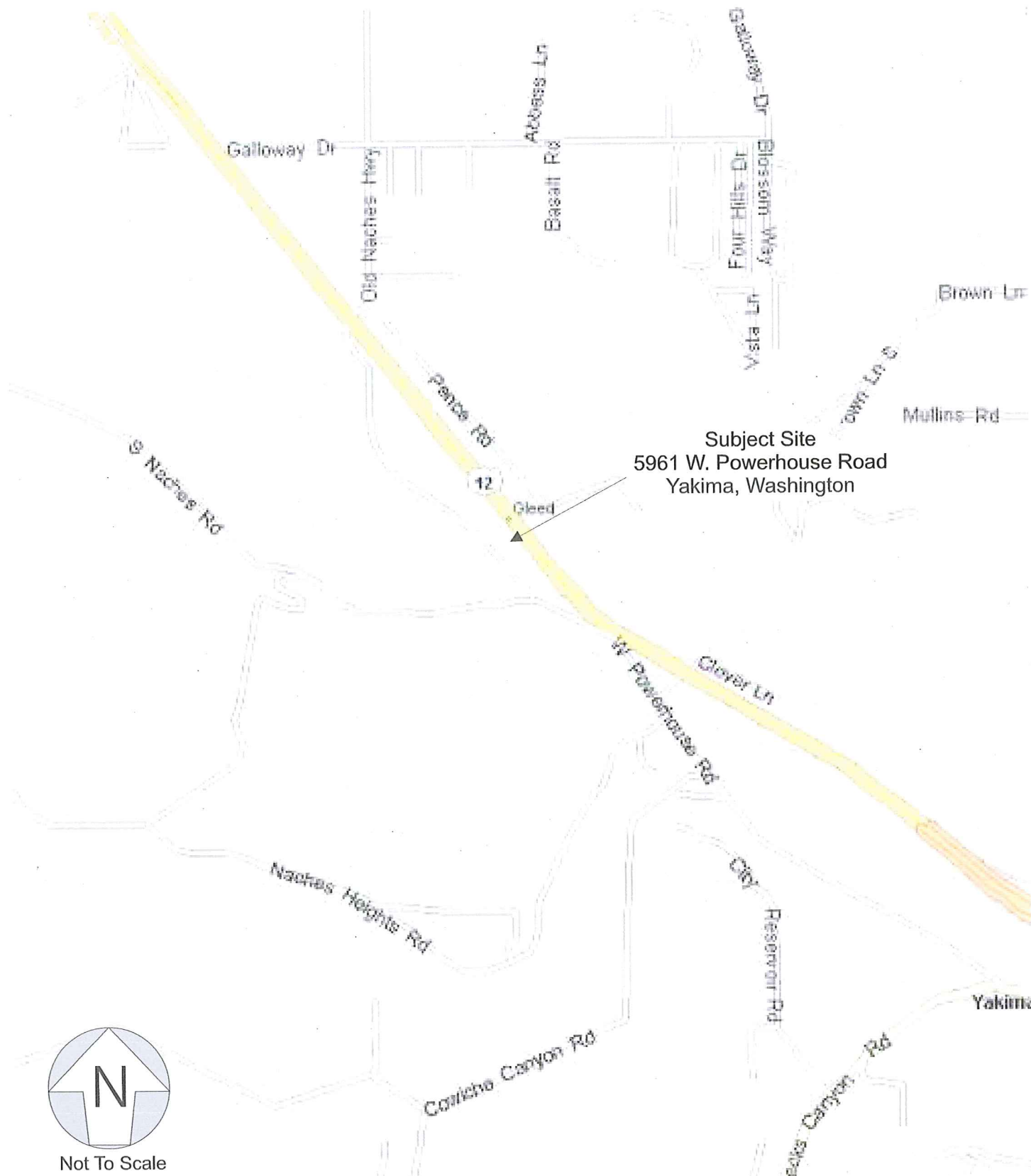
Project Figures

Figure 1 - Site Location map

Figure 2 - Site topographic map

Figure 3 - Site Map

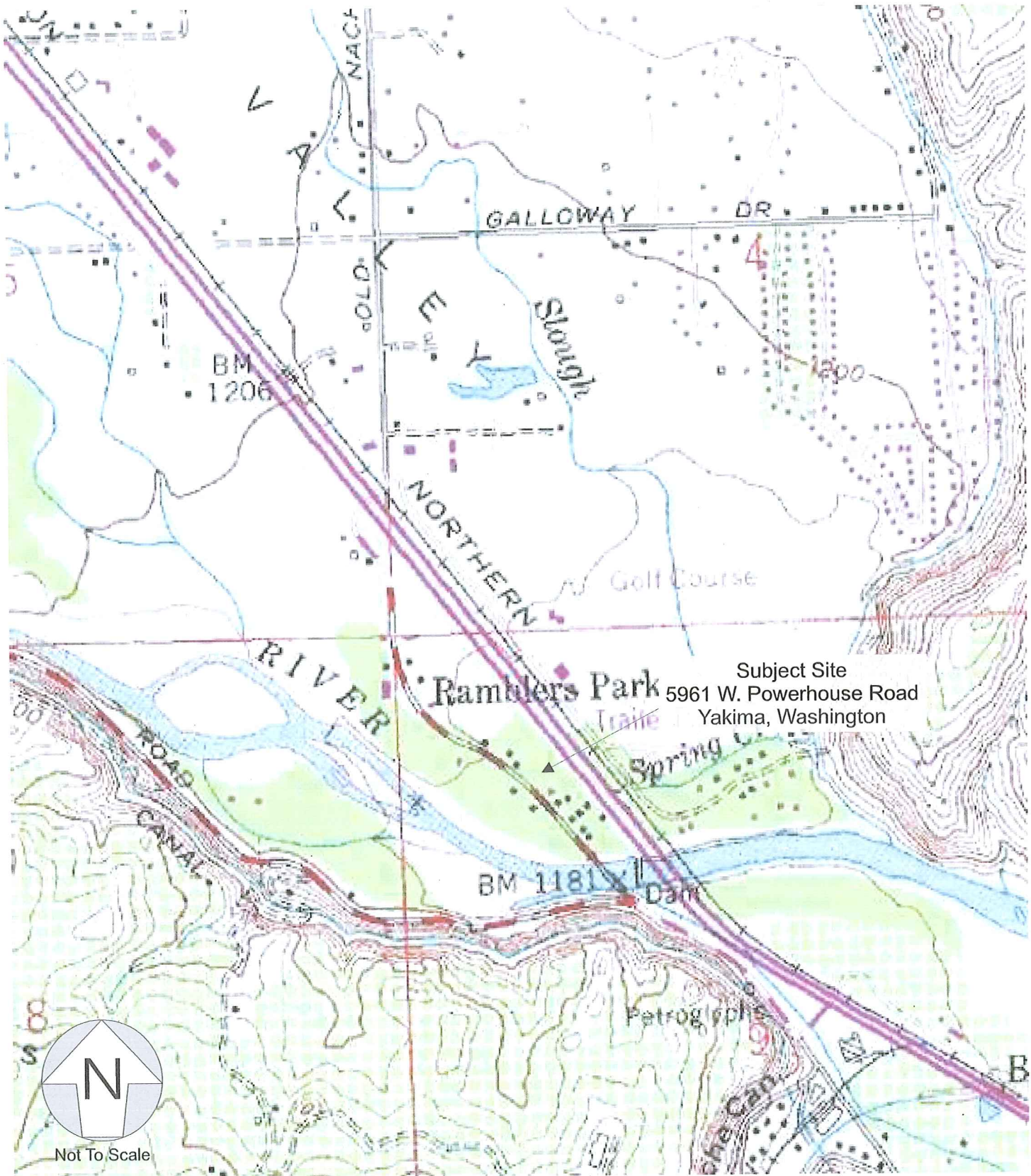
Attachment A



Site Location Map
Groundwater Monitoring
4th Quarter 2007
5961 West Powerhouse Road
Yakima, Washington

Date: December 21, 2007
Completed: S.Spencer
Checked By: S.Spencer

Figure No.
01

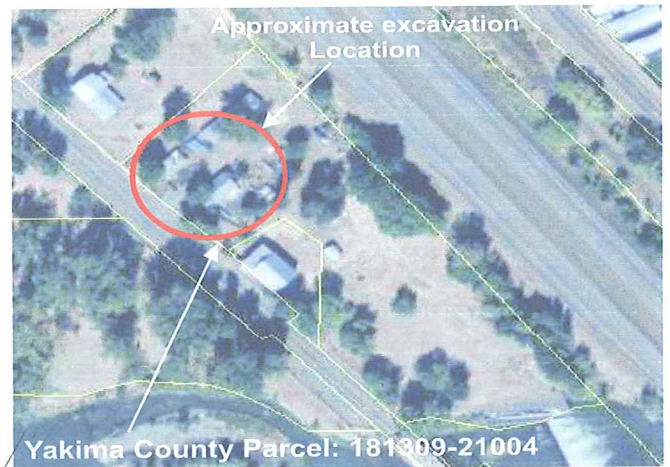


Site Topographic Map
Groundwater Monitoring
4th Quarter 2007
5961 West Powerhouse Road
Yakima, Washington

Date: December 21, 2007
Completed: S.Spencer
Checked By: S.Spencer

Figure No.

02



2005 Aerial Photograph - Yakima County Assessors Office

Diesel <200 ug/L
 Oil <400 ug/L
 Mineral Oil <400 ug/L
 Benzene <1.0 ug/L
 Toluene <2.0 ug/L
 Ethylbenzene <1.0 ug/L
 Total Xylene <3.0 ug/L
 Gasoline <100 ug/L

B3/MW3
 (1168.66)

Historic Excavation Area

Groundwater
 Flow Direction

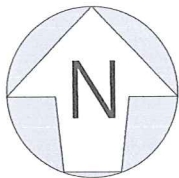
Powerhouse Road

B2/MW2
 (1167.72)

Diesel <200 ug/L
 Oil <400 ug/L
 Mineral Oil <400 ug/L
 Benzene <1.0 ug/L
 Toluene <2.0 ug/L
 Ethylbenzene <1.0 ug/L
 Total Xylene <3.0 ug/L
 Gasoline <100 ug/L

B1/MW1
 (1167.63)

Diesel <200 ug/L
 Oil <400 ug/L
 Mineral Oil <400 ug/L
 Benzene <1.0 ug/L
 Toluene <2.0 ug/L
 Ethylbenzene <1.0 ug/L
 Total Xylene <3.0 ug/L
 Gasoline <100 ug/L



Not To Scale

⊕ Soil Boring / Groundwater Well Location



Groundwater Sample & Flow Direction
 Groundwater Monitoring
 4th Quarter 2007
 5961 West Powerhouse Road
 Yakima, Washington

Date: December 21, 2007
 Completed: S.Spencer
 Checked By: S.Spencer

Figure No.

03

Attachment B

Project Tables

Table 1 - Quarterly Sampling results

Attachment B

Table 1 - MW1 - Quarterly Groundwater Sample Results
 5961 West Powerhouse Road
 Yakima, Washington

December 8, 2007



Monitoring Well ID	Date Sampled	NWTPH-Dx (ug/L)		NWTPH-Gx (ug/L)	8260c (ug/L)				Depth To Water (ft)	Ground Water Elevation (ft)	Top Of Casing (ft)
		Diesel	Motor Oil		Benzene	Toluene	Ethyl-benzene	Total Xylenes			
MW-1	01/25/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	5.95	1168.267	1174.217
	06/29/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	4.68	1169.54	1174.22
	08/09/07	<50	<250	<100	<1.0	<1.0	<1.0	<3.0	6.42	1167.80	1174.22
	11/13/07	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	6.59	1167.63	1174.22

BOLD/RED = Analyte above MTCA 2001 Method A Cleanup levels.
 Values are reported in micrograms per liter (ug/L).
 < # (ND) = analyte not detected above the analytical method detection limit cited.
 Diesel / Mineral Oil / Oil analytical method NWTPH-Dx
 Diesel range petroleum hydrocarbon Method A Cleanup Levels for soil are 500 ug/kg
 MTCA 2001 Method A Cleanup Levels for groundwater from the Model Toxics Control Act (MTCA) - Table 740-1 WAC 173-340 -900 Tables.
 bgs=below ground surface
 NA=Not Applicable

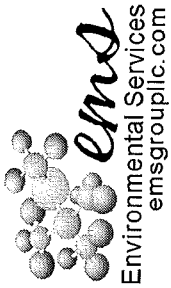


Table 1 - MW2 - Quarterly Groundwater Sample Results
 5961 West Powerhouse Road
 Yakima, Washington

December 8, 2007

Monitoring Well ID	Date Sampled	NWTPH-Dx (ug/L)		NWTPH-Gx (ug/L)	8260c (ug/L)				Depth To Water (ft)	Ground Water Elevation (ft)	Top Of Casing (ft)
		Diesel	Motor Oil		Benzene	Toluene	Ethyl-benzene	Total Xylenes			
MW-2	01/25/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	5.95	1168.203	1174.113
	06/29/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	4.72	1169.39	1174.11
	08/09/07	<50	<250	<100	<1.0	<1.0	<1.0	<3.0	6.24	1167.87	1174.11
	11/13/07	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	6.39	1167.72	1174.11

BOLD/RED = Analyte above MTCA 2001 Method A Cleanup levels.
 Values are reported in micrograms per liter (ug/L).
 < # (ND) = analyte not detected above the analytical method detection limit cited.
 Diesel / Mineral Oil / Oil analytical method NWTPH-Dx
 Diesel range petroleum hydrocarbon Method A Cleanup Levels for soil are 500 ug/kg
 MTCA 2001 Method A Cleanup Levels for groundwater from the Model Toxics Control Act (MTCA) - Table 740-1 WAC 173-340 -900 Tables.
 bgs=below ground surface
 NA=Not Applicable

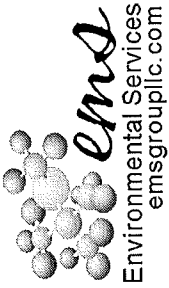


Table 1 - MW3 - Quarterly Groundwater Sample Results
 5961 West Powerhouse Road
 Yakima, Washington

December 8, 2007

Monitoring Well ID	Date Sampled	NWTPH-Dx (ug/L)		NWTPH-Gx (ug/L)	8260c (ug/L)				Depth To Water (ft)	Ground Water Elevation (ft)	Top Of Casing (ft)
		Diesel	Motor Oil		Benzene	Toluene	Ethyl-benzene	Total Xylenes			
MW-3	01/25/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	5.95	1168.89	1175.03
	06/29/07	<200	<400	<100	<1.0	<2.0	<1.0	<3.0	4.68	1170.35	1175.03
	08/09/07	<50	<250	<100	<1.0	<1.0	<1.0	<3.0	6.38	1168.65	1175.03
	11/13/07	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	6.37	1168.66	1175.03

BOLD/RED = Analyte above MTC A 2001 Method A Cleanup levels.

Values are reported in micrograms per liter (ug/L).

< # (ND) = analyte not detected above the analytical method detection limit cited.

Diesel / Mineral Oil / Oil analytical method NWTPH-Dx

Diesel range petroleum hydrocarbon Method A Cleanup Levels for soil are 500 ug/kg

MTC A 2001 Method A Cleanup Levels for groundwater from the Model Toxics Control Act (MTC A) - Table 740-1 WAC 173-340 -900 Tables.

bgs=below ground surface

NA=Not Applicable

Attachment C

Project Documentation

Field Groundwater Sampling Logs

Attachment C

EMS GROUNDWATER PURGE AND SAMPLE FORM

Date: November 13, 2007

Project Name: Cascade-
Powerhouse Road

Project No.:

Well No: MW 1

Field Personnel: Kaitlyn Allegretti

Static Water Level: 6.59'

Water Level Measurement Method: Water Sounder

Time Start Purge: 11:18

Time End Purge: 11:40

Time Sampled: 1:48

Measuring Point Description: North Side of Well Casing

Purge Method: peristaltic pump

Purge Depth: bottom

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)	Casing Volume (gal)
	8.68'	6.59'	2.09'	0.0229 gallons per linear foot	0.0479
Volume Purged (gal / time)			0.25g/ 11:30	0.5g/ 11:38	
pH			7.19	7.04	
TDS			0.10	0.11	
Temperature C°			15.21	15.01	
Dissolved Oxygen mg/L			13.25	12.71	
Turbidity			78.2	74.3	
Color (Heavy, Med., Light, Clear)			Light	Light-Clear	
Odor/Sheen			None	None	
ORP			125	132	
Conductivity					
Casing Volumes Removed					
Comments: Recharge rate is very slow, well ran dry at 11:40, allowed to recharge for 2 hours					

SAMPLE DATA: 3-40 Mill VOA / 1-1 liter Amber

Depth to Water at Sampling (ft): 8.5 feet (estimated)

Percent Recovery: 100%

Sampling Equipment: Peristaltic Pump / Dedicated / Disposable Tubing

Comments: None

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis (Method)
MW1	4	VOA/500ml	HCL/no pres.	No	Diesel Ex / Gas / BTEX

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): **Apx .075**

Disposal Method: Drum

Drum Designation(s)/Volume:
Purge Water

Comments: None

WELL HEAD CONDITIONS CHECKLIST (if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: Yes

Inside of Well Head and Outer Casing Dry?: Yes

Well Casing Conditions?: Good

Comments: None

EMS GROUNDWATER PURGE AND SAMPLE FORM

Date: November 13, 2007

Project Name: Cascade-
Powerhouse Road

Project No.:

Well No: MW 2

Field Personnel: Kaitlyn Allegretti

Static Water Level: 6.24'

Water Level Measurement Method: Water Sounder

Time Start Purge: 12:12 hrs

Time End Purge: 12:48 hrs

Time Sampled: 12:51

Measuring Point Description: North Side of Well Casing

Purge Method: peristaltic pump

Purge Depth: bottom

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)	Casing Volume (gal)	
	9.33	6.39'	2.94'	0.0229 gallons per linear foot	0.0673	
Volume Purged (gal / time)			0.25g/ 12:18	0.5g/ 12:26	0.75g/ 12:40	
pH			7.24	7.16	7.16	
TDS			0.01	0.01	0.01	
Temperature C°			15.88	15.81	15.58	
Dissolved Oxygen mg/L			13.78	13.54	13.40	
Turbidity			78	5.7	5.6	
Color (Heavy, Med., Light, Clear)			Clear	Clear	Clear	
Odor/Sheen			None	None	None	
ORP						
Conductivity						
Casing Volumes Removed						
Comments: Average recharge rate						

SAMPLE DATA: 3-40 Mill VOA / 1-1 liter Amber
Percent Recovery: 100%

Depth to Water at Sampling (ft): 9.0 feet (estimated)

Sampling Equipment: Peristaltic Pump / Dedicated / Disposable Tubing

Comments: None

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis (Method)
MW1	4	VOA/500ml	HCL/no pres.	No	Diesel Ex / Gas / BTEX

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): 1.0

Disposal Method: **Drum**

Drum Designation(s)/Volume:
Purge Water

Comments: None

WELL HEAD CONDITIONS CHECKLIST (if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)? : Yes
 Inside of Well Head and Outer Casing Dry?: Yes
 Well Casing Conditions?: Good
 Comments: None

EMS GROUNDWATER PURGE AND SAMPLE FORM

Date: November 13, 2007

Project Name: Cascade-
Powerhouse Road

Project No.:

Well No: MW 3

Field Personnel: Stephen Spencer

Static Water Level: 6.37'

Water Level Measurement Method: Water Sounder

Time Start Purge: 1:00

Time End Purge: 1:22 hrs

Time Sampled: 1:24 hrs

Measuring Point Description: North Side of Well Casing

Purge Method: peristaltic pump

Purge Depth: bottom

Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle)				Casing Volume (gal)
	9.37'	6.37'	3.0'	0.0229 gallons per linear foot				0.687
Volume Purged (gal / time)			0.25g/1:05	0.5g/1:10	0.75g/1:14	1.0g/1:18		
pH			7.26	7.17	7.16	7.16		
TDS			0.01	0.01	0.01	0.01		
Temperature C°			14.99	14.71	13.8	13.63		
Dissolved Oxygen mg/L			13.99	13.34	14.69	13.18		
Turbidity			79.7	8.3	5.2	5.0		
Color (Heavy, Med., Light, Clear)			Clear	Clear	Clear	Clear		
Odor/Sheen			None	None	None	None		
ORP								
Conductivity								
Casing Volumes Removed								
Comments: Recharge rate is very fast								

SAMPLE DATA: 3-40 Mill VOA / 1-1 liter Amber

Depth to Water at Sampling (ft): 9.0 feet (estimated)

Percent Recovery: 100%

Sampling Equipment: Peristaltic Pump / Dedicated / Disposable Tubing

Comments: None

Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis (Method)
MW1	4	VOA/500ml	HCL/no pres.	No	Diesel Ex / Gas / BTEX

PURGE WATER DISPOSAL NOTES:

Total Discharge (gal): 1.25

Disposal Method: **Drum**

Drum Designation(s)/Volume:
Purge Water

Comments: **None**

WELL HEAD CONDITIONS CHECKLIST (if NO, add comments)

Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock)?: Yes

Inside of Well Head and Outer Casing Dry?: Yes

Well Casing Conditions?: Good

Comments: None

Attachment D

Laboratory Analytical Results

Groundwater Analytical Results - Diesel Extended
Range Petroleum Hydrocarbons

Attachment D



Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

November 21, 2007

Kaitlyn Allegretti
Environmental Management Services, LLC
PO Box 153
Fox Island, WA 98333

Dear Mrs. Allegretti:

Please find enclosed the analytical data report for the Cascade Powerhouse Road 4TH Quarterly Sampling Project located in Yakima, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx, BTEX by EPA Method 8021B, and Diesel & Oil by NWTPH-Dx/Dx Extended on November 16, 2007.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
President
Libby Environmental, Inc.

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

CASCADE POWERHOUSE RD 4TH QTRLY SAMPLING PROJECT
Yakima, Washington
EMS, Inc.

Libby Project No.L071114-1

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (ug/l)	Mineral Oil (ug/l)	Oil (ug/l)
Method Blank	11/16/07	86	nd	nd	nd
MW-1-111307	11/16/07	91	nd	nd	nd
MW-2-111307	11/16/07	106	nd	nd	nd
MW-3-111307	11/16/07	84	nd	nd	nd
Practical Quantitation Limit			200	400	400

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-E Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chileutt

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chileutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

CASCADE POWERHOUSE RD 4TH QTRLY SAMPLING PROJECT
Yakima, Washington
EMS, Inc.

Libby Project No.1.071114-1

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Water

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	11/16/07	nd	nd	nd	nd	nd	108
LCS	11/16/07	90%	105%				82
MW-1-111307	11/16/07	nd	nd	nd	nd	nd	87
MW-2-111307	11/16/07	nd	nd	nd	nd	nd	77
MW-3-111307	11/16/07	nd	nd	nd	nd	nd	82
MW-3-111307 MS	11/16/07	93%	108%				91
Practical Quantitation Limit		1	2	1	3	100	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Attachment E

Professional Qualification

Attachment E

Environmental Management Services

Environmental Management Services (EMS) is an environmental services company providing practical environmental compliance solutions to clients throughout the Northwest. EMS understands the importance of blending a variety of expertise and experience in order to provide our clients the most effective support in addressing their projects needs. Our professionals combine a high level of technical ability with a broad understanding of the overall regulatory compliance requirements.

As an environmental services and consulting company, EMS is obligated to maintain a broad understanding of the most current regulatory compliance requirements, local and state permitting requirements and our regions environmental advocacy group's positions. EMS provides our clients the services they require by offering non-biased, practical, realistic solutions while maintaining positive relations with the regulatory community.

EMS associates have completed projects including remediation design and management, facility regulatory compliance reviews, due diligence assessments, regulatory compliance training for clients throughout the northwest in all avenues of business. The diverse background of our associates complements the diverse nature of our clientele providing better understanding of our client's needs and ultimate goals for their projects.

The information in the following pages outlines our experience and capabilities in providing environmental management and consulting services.

Stephen M. Spencer Principal Environmental Scientist

- Department of Ecology Licensed Site Assessor
- State of Washington Licensed Risk Assessor
- EPA Licensed Risk Assessor

Mr. Spencer started his career in the environmental services and construction industry in 1987. During his career, Mr. Spencer has worked on and successfully completed projects in many varied aspects of the environmental industry. During the past eight years, as a Senior Project Manager, Mr. Spencer has successfully completed jobs totaling over twenty million dollars for clients throughout the Northwest. His forte is in facility assessment, due diligence investigation, health & safety program development and remediation management. Mr. Spencer has established positive working relationships with regulatory agencies throughout the northwest, affording his clients a superior level of confidence in his approach to their specific project. The majority of Mr.



EMS PROFESSIONAL QUALIFICATIONS

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Spencer's remediation projects has been completed through the Washington State Department of Ecology voluntary cleanup program and ultimately received a "No Further Action" determination.

Mr. Spencer's skills as a project manager frequently result in significant savings in both time and budget to his clients. He is proficient in report writing providing a clear, concise detail of project activities including supporting documents and figures. His client's have ranged from property owners and facility operators to the regulatory agencies themselves. Mr. Spencer's overall understanding of environmental compliance requirements provides a unique perspective on assessing potential and realized environmental risk and a creative understanding of remediation technique.

Gina Mulderig, B.S. Chemistry (Employee) **Environmental Scientist / Chemist**

- Ecology Licensed Site Assessor

Ms. Mulderig Received here Bachelors degree in Chemistry from the University of Puget Sound in 1979. Ms. Mulderig has been working in the environmental regulatory compliance field since 1985, starting her career with a position as an environmental analyst for Weyerhaeuser Company. Here fifteen year position at Weyerhaeuser required a thorough knowledge of environmental regulatory compliance, focusing on waste management, stormwater management and facility compliance.

Ms. Mulderig worked with two local environmental services / consulting firms from 2000 untill 2007, greatly increasing here overall regulatory compliance, hydrogeology and environmental engineering knowledge.

Her position with EMS as a Project Manager / Environmental Scientist will provide a vast knowledge base to EMS clients in multiple areas of regulatory compliance and environmental science.

Collette Foley, B.S. Geology (Employee) **Environmental Scientist / Geologist**

- AHERA Licensed Building Inspector
- Ecology Licensed Site Assessor

Ms. Foley received her Bachelors degree in Geology and Environmental Science in 2003 from Pacific Lutheran University. Ms. Foley has one year of experience as a HAZMAT instructor including 40-hour and 24-hour HAZWOPER certification, 8-hour HAZWOPER refresher, 30 hour OSHA Compliance instruction and confined spaces certification. Ms. Foley has over four years experience as a field geologist /



hydrogeologist conducting Phase I due diligence investigations, sub-surface investigations and hydrogeologic regional characterization.

Ms. Foley's current position is as Staff Geologist / Environmental Scientist. Ms. Foley performs a variety of field activities associated with drilling and installing monitoring wells, completing subsurface investigation and Phase I Environmental Site Assessments.

Kaitlyn Allegretti, B.S. Geology (Employee)
Environmental Scientist / Technician

- ICC Licensed UST Decommissioner
- AHERA Licensed Building Inspector

Ms. Allegretti serves as a site manager and field technical for EMS. As a recent graduate from the University of Dayton (2005), Ms. Allegretti's primary responsibilities are field work including monitoring well sampling, underground storage tank closure and decommissioning and asbestos inspections. Ms. Allegretti was licensed as an AHERA building inspector and UST Decommissioner within the first 60 days of her employment.

Alex Flink, B.S. Geology (Employee)
Environmental Scientist / Geologist

- Certified Erosion & Sediment Control Lead
- Nucleonic Density Certification

Mr. Flink has seven years provided technical support in the completion of multiple Phase I and Phase II projects including soil samples including Macro-core, SPT, D&M, Dual Tube, and grab samples, PID, sheen pan, obtain water samples using low-flow and air gap methodology with peristaltic pumps, wale pumps, and bladder pumps. Identifying areas of contaminants and/or geo-structural concerns, maintain various remediation and extraction systems, nucleonic density testing, construction monitoring, construction observation, site walks, report writing, complying with state and federal regulations,

Mr. Flink operated an auger and direct push style drill rig and limited access drill rig for soil, soil vapor, water sampling, and for in-situ bioremediation injections. Mr. Flink was also responsible for the installation and abandonment of water monitoring wells and/or sparge points including the Department of Ecology required submittals.



David R. Polivka, M.S. Geology (Sub-Consultant)
Licensed Geologist & Hydrogeologist / Environmental Scientist

- State of Washington Licensed Geologist
- State of Washington Licensed Hydrogeologist

David Polivka is a Geologist/Hydrogeologist who has over 22 years of regulatory and technical experience. He has a variety of experience to include aquifer analysis conducted at contamination sites, the design and installing of monitoring wells and soil sampling for contaminant levels. Mr. Polivka has managed site investigations and cleanups under the Model Toxics Control Act (MTCA) and Corrective Action under RCRA/Dangerous Waste. Currently, he is managing the Environmental Program for White Shield's Bellevue Office.

Mr. Polivka was the project manager for Phase I ESAs and transaction screens of various commercial and industrial properties throughout Washington, including the Puget Sound Central Link Light Rail Project. Tasks included site reconnaissance, environmental records review, and historical records review.

As a Senior Project Manager, Mr. Polivka has supervised subsurface investigations at several sites to assess the lateral and vertical extent of contaminants in the soil and groundwater. The investigations included drilling and installation of monitoring wells, soil and groundwater sampling, groundwater monitoring, data analyses and technical report writing.

James D. Coppernoll (Sub-Consultant)
Environmental Scientist / Geologist

- Washington State Licensed Geologist and Hydrogeologist
- Department of Ecology Licensed Site Assessor

James D. Coppernoll is a Washington State licensed Geologist and Hydrogeologist with thirteen years of experience practicing environmental geology in the Northwest. During his career, Mr. Coppernoll worked with clients ranging from major oil companies and national corporations to local businesses to identify, manage, and resolve their environmental problems and helped local agencies, businesses, and individuals with their environmental, geological, and regulatory issues.

Mr. Coppernoll has conducted various environmental and geological investigations ranging from numerous Phase I Environmental Assessments to contaminated site investigations and remedial planning and implementation as well as land use and development studies in Washington, Oregon, Idaho, Montana, and Alaska, and has frequently acted as a regulatory liaison and client representative in third-party negotiations.



Mr. Coppernoll managed all phases of assessment and remediation at dozens of retail and bulk fuel facilities for major oil companies in the Northwest including: excavation and disposal of contaminated soil; free product recovery; feasibility studies; and design, installation, and operation/maintenance of in-situ soil and ground water remediation systems. Mr. Coppernoll managed many of these sites from initial assessment through remediation and closure with the state.

Mr. Coppernoll has conducted geological investigations and assessments for diverse property development projects in the northwest including landfills, hot springs, and residential properties. The purpose of these assessments and investigations was to provide professional and reliable information for use in developing sensitive areas properties.

