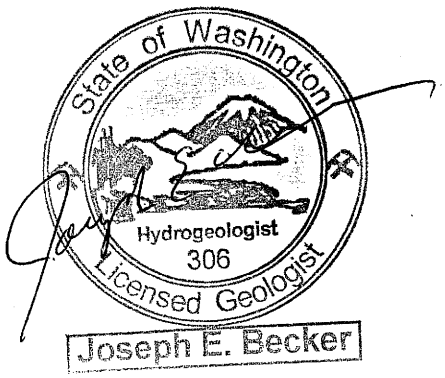
ROBINSON
NOBLE

MIZUKAMI PROJECT SITE (VCP SW1137)
4524 20TH STREET EAST
FIFE, WASHINGTON
MARCH 2011 GROUNDWATER MONITORING REPORT

JUNE 2011

by

John F. Hildenbrand
Associate Environmental Scientist
Environmental Services Manager



MIZUKAMI PROJECT SITE (VCP SW1137)
4524 20th Street East, Fife, Washington
March 2011 Groundwater Monitoring Report
June 2011

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1.0 Introduction

1.1 Purpose and Site Identification

This report presents the results of the April 2011 groundwater monitoring event at the Mizukami project site located in Fife, Washington. Included in these activities was the replacement of monitoring well MW-4 with a new well identified as MW-4B.

The site is located at 4524 20th Street East, Fife, Pierce County, Washington. The parcel is bordered by 20th Street to the north. Frank Albert Road borders the property to the east. Across Frank Albert Road is a commercial business park. The subject site is bordered on the south and west by property under the same ownership as the subject site, CMKM, LLC. Pierce County Assessor-Treasurer records indicate the subject property is identified as tax parcel number 0320126023.

1.2 Regional Geology/Hydrogeology

The subject property is mapped by the Geological *Map of the Puyallup 7.5 Minute Quadrangle, Washington* (Troost, in review) as being Quaternary alluvium (Qal). The alluvium is composed of over-bank deposits associated with the Puyallup River consisting of generally fine to very fine sand, silts, and clay. The soils in the area of the subject have been classified by the United States Department of Agriculture, as published in the *Soil Survey for the Pierce County Washington Area,* 1977, as Puyallup fine sandy loam. Previous site activities found groundwater occurring within the alluvial sediments at a depth of approximately six to seven feet below ground surface.

2.0 Background

The site is currently developed as a commercial warehouse. The current owner, CMKM, LLC, purchased the (then) residential property in July 2003. At that time, a heating-oil underground storage tank (UST) was excavated for removal. An aboveground, heating-oil storage tank was also in close proximity to this excavation. Fuel-oil service lines, associated with this aboveground tank, failed during the winter of 2003 and resulted in a leakage of over 150 gallons of diesel fuel into the subsurface.

Previous efforts have established that groundwater concentrations of diesel and diesel-range organics do not exceed MTCA Method A groundwater levels. However, some soil contamination has been shown to remain underneath sidewalk and utility right-of-ways.

Based on previous opinions provided by the Department of Ecology (Ecology), we have identified five final closure tasks we anticipate are necessary for a no-further-action (NFA) determination. They are:

1. Replace the damaged monitoring well MW4 and obtain three additional quarters of groundwater monitoring data to supplement the previously collected data.
2. Complete a remedial action feasibility study with a disproportionate cost analysis assessing the costs of removal of the previously documented residual contamination versus leaving it in place.
3. Prepare a draft environmental covenant which will need to be prepared for Ecology's approval. Once it is approved, it will be recorded against the property.
4. A long-term groundwater monitoring plan will need to be submitted to, and approved by, Ecology.
5. Complete EIM data entry of all project data. This will be completed prior to the time the environmental covenant is filed.

3.0 Quarterly Monitoring

Prior to completing this monitoring event, one of the existing groundwater monitoring wells (MW-4) was abandoned due to un-repairable damage. It was replaced by monitoring well 4B (MW-4B). MW-4B is located approximately two feet west of the original MW-4, and it was constructed and screened identically to MW-4. This newly completed well was developed and its relative elevation to the existing monitoring wells surveyed. A well construction log for MW-4B (Figure 3) is located in Appendix A.

Robinson Noble personnel collected water samples from six monitoring wells, including MW-4B, on March 30, 2011. Prior to sampling, the wells were opened and allowed to stabilize before water levels were sounded. Originally, the site had seven monitoring wells; however, after the current development of the site, one of the monitoring wells was removed. The observed flow direction from the remaining six wells was determined to be toward the northeast. A groundwater mound was observed in the area around MW4-B. This is likely due to the location of the well in a landscaped area receiving substantial precipitation run off immediately prior to the monitoring event and the proximity of storm drain catch basin with the road right-of-way. Table 1 displays the depth to water measured in each well.

Table 1. March 30, 2011 Water Levels (in feet)

Well No.	Top of Casing Elevation*	Depth to Groundwater	Groundwater Elevation*
MW1	95.36	5.81	89.55
MW-2	100.26	8.30	91.96
MW-3	93.01	2.10	90.91
MW-4B	94.81	4.32	90.49
MW-6	98.07	7.08	90.99
MW-7	99.19	9.52	89.67

* Elevations are relative to an arbitrary site benchmark of 100 feet.

A peristaltic pump and dedicated tubing were used to sample each well. Samples were collected after at least three volumes of water were purged from the wells and field measurements of temperature, conductivity, total dissolved solids, and dissolved oxygen had stabilized (within measurement error limits). The groundwater monitoring field sampling notes are attached in Appendix C.

Water samples were collected from the six wells and placed into laboratory-supplied, pre-cleaned containers with the proper preservatives for delivery to an accredited laboratory. The samples were placed in a laboratory-supplied, thick-walled cooler containing blue ice. The samples were delivered to Libby Environmental, Inc. of Olympia, Washington. The samples were submitted for analysis using Ecology NWTPH-GX, Ecology NWTPH-Dx/Dx Extended, EPA Method 8021B, and EPA Method 8270C.

3.1 Analytical Results

As indicated by the analytical results and summarized in Table 2 below (complete results attached in Appendix B), no detection of target analytes were reported above laboratory detection limits for any of the groundwater samples submitted for analysis except for MW-7. The sample collected from MW-7 was found to have gasoline-range petroleum hydrocarbons, xylenes, and ethylbenzene above laboratory detection limits[1]. The reported concentrations are, however, below the applicable MTCA Method A Cleanup Limits (CULs). MW-7 is located at the site where a groundwater sample from a direct-push boring was collected during the initial characterization activities that contained diesel-range petroleum hydrocarbons at a concentration of 50,000 µg/L.

Table 2. March 30, 2011 Sampling Event Analytical Results (µg/L)

Analyte/ Sample ID	MW-1	MW-2	MW-3	MW-4B	MW-6	MW-7	MTCA Method A
Gasoline	nd	nd	nd	nd	nd	613	800
Diesel	nd	nd	nd	nd	nd	nd	500
Oil	nd	nd	nd	nd	nd	nd	500
cPAH	nd	nd	nd	nd	nd	nd	0.1
Benzene	nd	nd	nd	nd	nd	nd	5
Toluene	nd	nd	nd	nd	nd	nd	1,000
Ethylbenzene	nd	nd	nd	nd	nd	1.0	700
Xylenes	nd	nd	nd	nd	nd	10.8	1,000
Naphthalene	nd	nd	nd	nd	nd	nd	160

nd = analyte concentration is below the laboratory detection limit.

4.0 Quality Assurance/Quality Control (QA/QC)

4.1 Daily Field QA/QC

The project manager reviewed all documentation including sample logs, custody forms, and field logs prior to samples being delivered to the laboratory. Review was done for completeness, accuracy, and consistency. One discrepancy on the chain-of-custody form was noted. Robinson Noble, Inc. staff misidentified monitoring well MW-4B as Monitoring Well Mw-4. After the error was identified, the analytical laboratory was instructed to correctly list the well as MW-4B in the laboratory analytical reports.

4.2 Sample Packaging and Shipping

The groundwater samples collected for chemical analysis were kept out of direct sunlight and were checked for label completeness and cap tightness. All samples submitted to the laborato-

[1] The reported concentrations for MW-7 are from the laboratory duplicate. The duplicate was used to present a "worst-case" picture of the levels detected.

ry were thermally preserved in the field (four degrees Celsius) immediately after sample collection by placing them upright in a pre-cooled, insulated ice chest containing uncontaminated blue ice. The cooler is constructed of plastic or fiberglass standard to those provided by environmental analytic laboratories. The cooler does not have a drain.

4.3 Chain-of-Custody

A chain-of-custody form accompanied samples submitted to the laboratory. Chain-of-custody forms were in order as noted in the analytical narrative from the contractor laboratory.

4.4 Laboratory QA/QC

A narrative regarding quality assurance and quality control is provided with the laboratory analysis reports. This narrative indicated quality control was within acceptable limits.

5.0 Conclusions

The results of this monitoring event indicate the previously established trend of the absence of target compounds above MTCA Method A limits is continuing. This indicates that the residual soil contamination located within the right-of-way does not appear to be impacting groundwater. Additionally, the continued absence of target compound concentrations above MTCA Method A limits in MW-7 indicates that groundwater in that area is not significantly impacted.

6.0 Recommendations

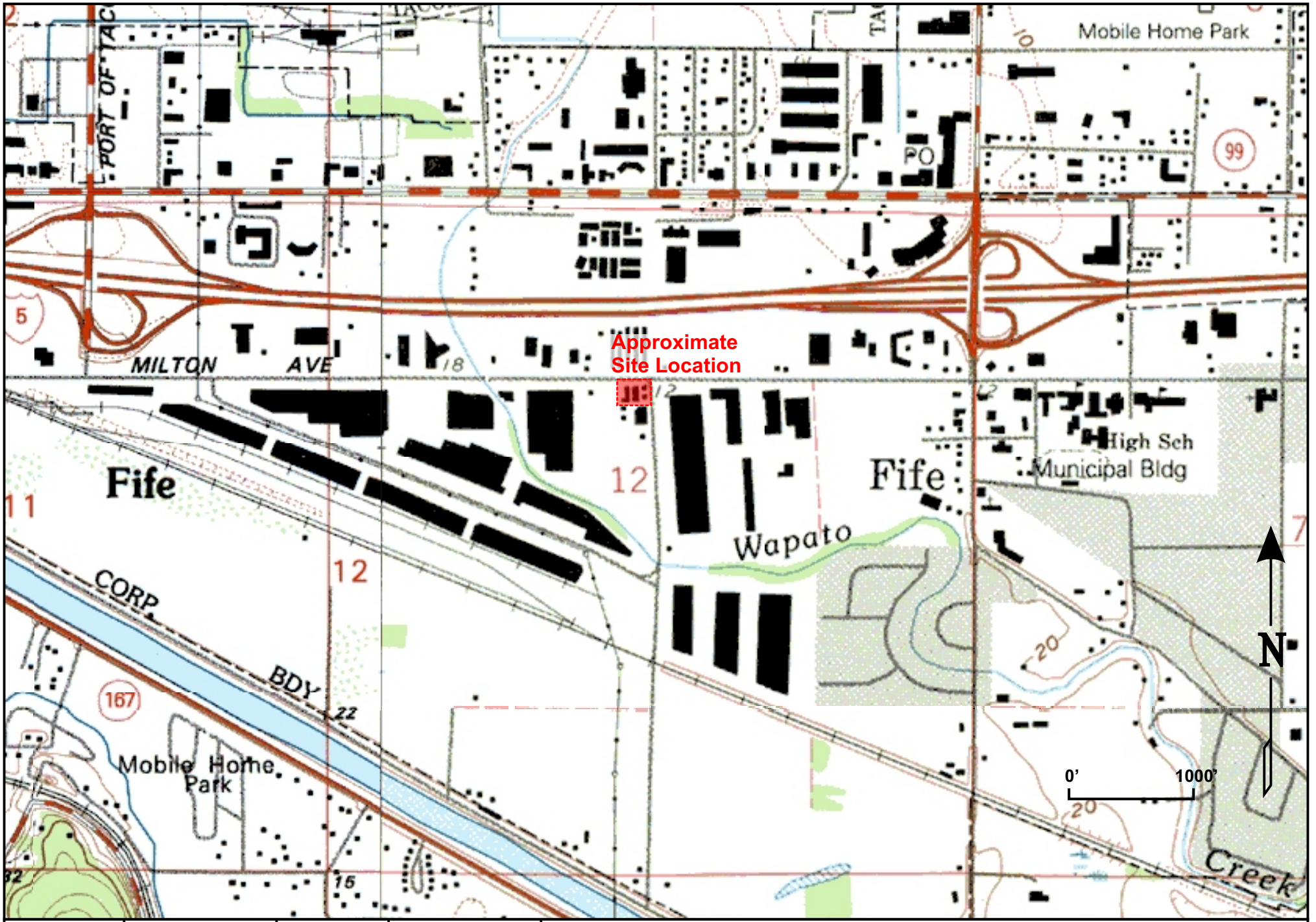
Along with continued quarterly monitoring, the remaining tasks outlined in Section 2.0 should be completed. The next monitoring event will be completed in June 2011 with the monitoring report likely available in July 2011. The next monitoring report will include completion of the feasibility study and disproportionate cost analysis.

7.0 Limitations

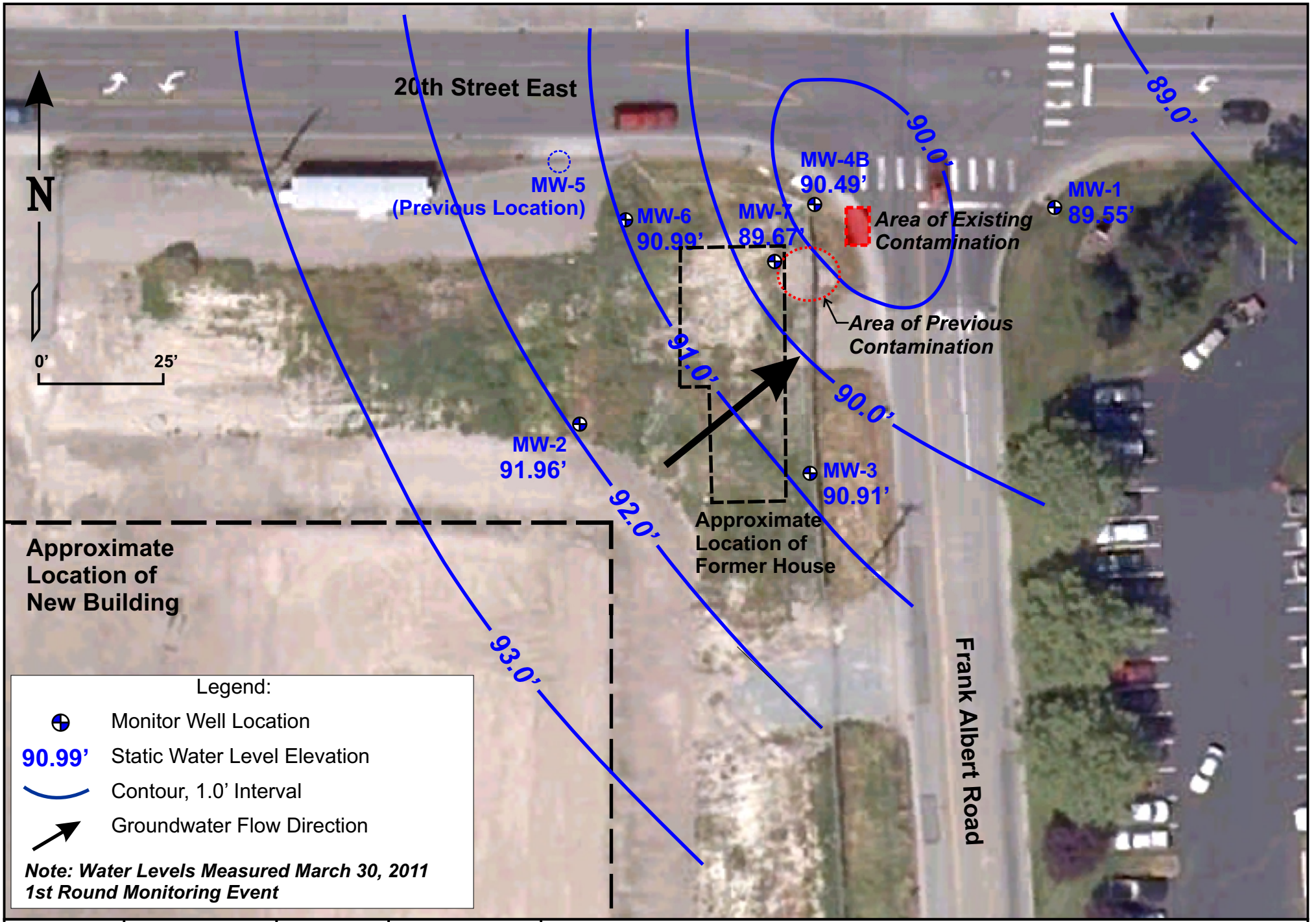
The services described in this report were performed consistently with generally accepted environmental consulting principles and practices. No other warranty, expressed or implied, is made. These services were consistent with the Robinson Noble, Inc. agreement with the client. This report is solely for the use and information of the client unless otherwise noted. Any reliance on this report by a third party is at the party's sole risk.

Opinions and recommendations contained in this report apply to existing conditions when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. Since site conditions and regulations beyond our control could change at any time after the completion of our site visit, we are not responsible for the impacts of any changes in environmental conditions, standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor do we warrant the use of segregated portions of this report.

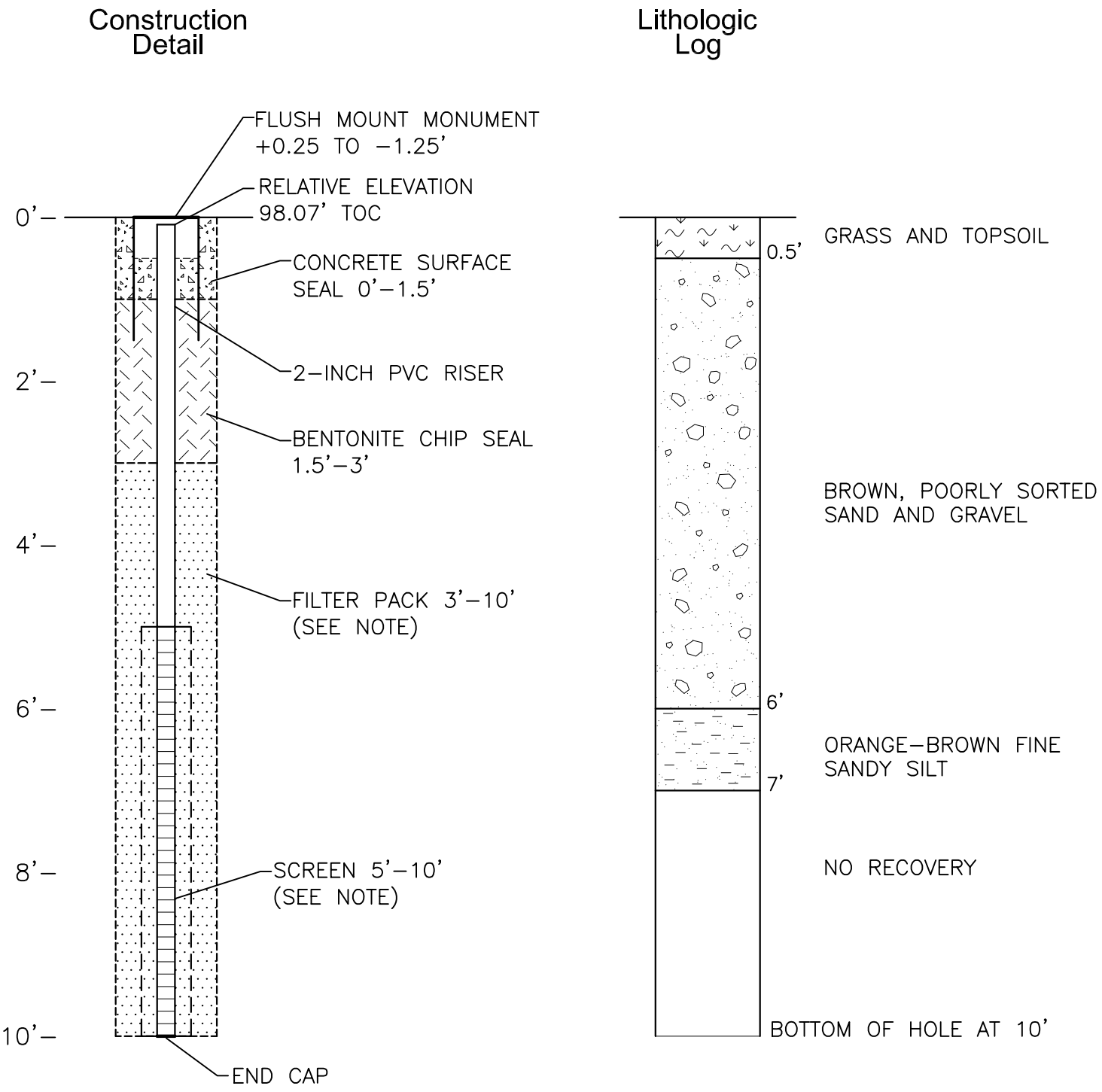
APPENDIX A



ROBINSON NOBLE	Note: Image taken from USGS Puyallup Quad.	PM: JFH June 2011 2203-001B	Pierce County T 20 N/R 03 E - 12 Scale 1" = 1000'	Figure 1 Vicinity Map Mizukami Project: 20th Street/Remedial Investigation



ROBINSON NOBLE	Note: Image taken from USGS Terra Server Website	PM: JFH June 2011 2203-001B	Pierce County T 20 N/R 03 E - 12 Scale 1" = 25'	Figure 2 Potentiometric Surface Contour Map Mizukami Project: 20th Street/Remedial Investigation



Notes:
Well construction measurements are measured from top of casing (2 inch BGS)

Well screen assembly is pre-pack, 2-inch diameter, 20-slot (0.020-Inch opening) PVC pipe.

Filter pack is 10x20 Colorado Silica Sand product.

ROBINSON NOBLE	PM: JFH T 20 N/R 03 E - 12 June 2011 2203-001B	Figure 3 Construction Detail and Lithologic Log for MW-4B Mizukami Project: 20th Street/Remedial Investigation

APPENDIX B

APPENDIX C

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

April 7, 2011

John Hildenbrand
Robinson Noble
3011 Huson Street South
Suite A
Tacoma, WA 98409

Dear Mr. Hildenbrand:

Please find enclosed the analytical data report for the Gensco-Langseth Project located in Fife, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B, Diesel & Oil by NWTPH-Dx/Dx Extended and PAH (Polyaromatic Hydrocarbons) by EPA Method 8270 on April 1, 4 & 5, 2011.

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 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,

Jamie L. Hart
President
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

GENSCO-LANGSETH 20th St. PROJECT
Fife, Washington
Robinson Noble, Inc.
Client Project # 2203-001A
Libby Project No. L110331-3

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	4/1/11	nd	nd	nd	nd	nd	98
LCS	4/1/11	107%	110%				100
MW-1	4/1/11	nd	nd	nd	nd	nd	96
MW-2	4/1/11	nd	nd	nd	nd	nd	93
MW-3	4/1/11	nd	nd	nd	nd	nd	97
MW-4B	4/1/11	nd	nd	nd	nd	nd	95
MW-6	4/1/11	nd	nd	nd	nd	nd	98
MW-7	4/1/11	nd	nd	nd	9.1	551	95
MW-7 Dup	4/1/11	nd	nd	1.0	10.8	613	100
L110331-30 MS	4/1/11	97%	100%				98
Practical Quantitation Lim		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

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

GENSCO-LANGSETH 20th St. PROJECT
Fife, Washington
Robinson Noble, Inc.
Client Project # 2203-001A
Libby Project No. L110331-3

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	4/1/11	111	nd	nd	nd
MW-1	4/1/11	110	nd	nd	nd
MW-2	4/1/11	101	nd	nd	nd
MW-3	4/1/11	109	nd	nd	nd
MW-4B	4/1/11	104	nd	nd	nd
MW-6	4/1/11	110	nd	nd	nd
MW-7	4/1/11	105	nd	nd	nd
MW-7 Dup	4/1/11	112	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-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Athanasius Shaw

2930 Westlake Ave N Suite 100
Seattle, WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Sherry Chilcutt
4139 Libby Rd. NE
Olympia, Washington 98506

RE: Gensco-Langseth 20th St.
Lab ID: 1104002

April 06, 2011

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 6 sample(s) on 4/1/2011 for the analyses presented in the following report.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee
Sr. Chemist / Principal

Fremont Analytical

Date: *06/02/2011*

CLIENT: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab Order: 1104002

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1104002-001	MW-1	03/30/2011 12:00 AM	04/01/2011 8:10 AM
1104002-002	MW-2		04/01/2011 8:10 AM
1104002-003	MW-3		04/01/2011 8:10 AM
1104002-004	MW-4B		04/01/2011 8:10 AM
1104002-005	MW-6		04/01/2011 8:10 AM
1104002-006	MW-7		04/01/2011 8:10 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1104002**
Date: **4/6/2011**

CLIENT: Libby Environmental
Project: Gensco-Langseth 20th St.

I. SAMPLE RECEIPT:
All samples were received intact. The internal ice chest temperatures were measured on receipt (7.2 Degrees C).

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) sample is tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS to ensure method criteria are achieved throughout the entre analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Fremont Analytical

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Collection Date: 3/30/2011
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-001
Matrix: Water
Client Sample ID: MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Chrysene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/4/2011 10:02:00 PM
Surr: 2-Fluorobiphenyl	82.4	65-135		%REC	1	4/4/2011 10:02:00 PM
Surr: p-Terphenyl	67.7	65-135		%REC	1	4/4/2011 10:02:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-002
Client Sample ID: MW-2

Collection Date:
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Chrysene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/4/2011 10:43:00 PM
Surr: 2-Fluorobiphenyl	79.5	65-135		%REC	1	4/4/2011 10:43:00 PM
Surr: p-Terphenyl	82.2	65-135		%REC	1	4/4/2011 10:43:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-003
Client Sample ID: MW-3

Collection Date:
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Chrysene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/5/2011 12:06:00 AM
Surr: 2-Fluorobiphenyl	76.7	65-135		%REC	1	4/5/2011 12:06:00 AM
Surr: p-Terphenyl	83.7	65-135		%REC	1	4/5/2011 12:06:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-004
Client Sample ID: MW-4B

Collection Date:
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Chrysene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/5/2011 12:48:00 AM
Surr: 2-Fluorobiphenyl	82.3	65-135		%REC	1	4/5/2011 12:48:00 AM
Surr: p-Terphenyl	80.0	65-135		%REC	1	4/5/2011 12:48:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-005
Client Sample ID: MW-6

Collection Date:
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Chrysene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/5/2011 1:29:00 AM
Surr: 2-Fluorobiphenyl	92.0	65-135		%REC	1	4/5/2011 1:29:00 AM
Surr: p-Terphenyl	78.8	65-135		%REC	1	4/5/2011 1:29:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1104002**
Date Reported: **4/6/2011**

Client: Libby Environmental
Project: Gensco-Langseth 20th St.
Lab ID: 1104002-006
Client Sample ID: MW-7

Collection Date:
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)						Analyst: **PH**
Benz(a)anthracene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Chrysene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Benzo(a)pyrene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	4/5/2011 2:51:00 AM
Surr: 2-Fluorobiphenyl	95.3	65-135		%REC	1	4/5/2011 2:51:00 AM
Surr: p-Terphenyl	82.9	65-135		%REC	1	4/5/2011 2:51:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *4/6/2011*

Work Order: 1104002
CLIENT: Libby Environmental
Project: Gensco-Langseth 20th St.

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-297** SampType: **MBLK** Units: **µg/L** Prep Date: **4/1/2011** RunNo: **487**
Client ID: **MBLKW** Batch ID: **297** Analysis Date: **4/4/2011** SeqNo: **9881**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)fluoranthene	ND	0.100									
Benzo(k)fluoranthene	ND	0.100									
Benzo(a)pyrene	ND	0.100									
Indeno(1,2,3-cd)pyrene	ND	0.100									
Dibenz(a,h)anthracene	ND	0.100									
Surr: 2-Fluorobiphenyl	8.98		8.000		112	65	135				
Surr: p-Terphenyl	6.48		8.000		81.1	65	135				

Sample ID: **LCS-297** SampType: **LCS** Units: **µg/L** Prep Date: **4/1/2011** RunNo: **487**
Client ID: **LCSW** Batch ID: **297** Analysis Date: **4/4/2011** SeqNo: **9884**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	7.16	0.100	8.000	0	89.5	65	135				
Pyrene	6.25	0.100	8.000	0	78.1	65	135				
Surr: 2-Fluorobiphenyl	7.01		8.000		87.7	65	135				
Surr: p-Terphenyl	6.31		8.000		78.9	65	135				

Sample ID: **1104002-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/1/2011** RunNo: **487**
Client ID: **MW-2** Batch ID: **297** Analysis Date: **4/4/2011** SeqNo: **9887**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	0.100						0	0	30	
Chrysene	ND	0.100						0	0	30	
Benzo(b)fluoranthene	ND	0.100						0	0	30	

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not detected at the Reporting Limit
R RPD outside accepted recovery limits
RL Reporting Limit
S Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *4/6/2011*

Work Order: 1104002
CLIENT: Libby Environmental
Project: Gensco-Langseth 20th St.

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **1104002-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/1/2011** RunNo: **487**
Client ID: **MW-2** Batch ID: **297** Analysis Date: **4/4/2011** SeqNo: **9887**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	ND	0.100						0	0	30	
Benzo(a)pyrene	ND	0.100						0	0	30	
Indeno(1,2,3-cd)pyrene	ND	0.100						0	0	30	
Dibenz(a,h)anthracene	ND	0.100						0	0	30	
Surr: 2-Fluorobiphenyl	6.44		8.000		80.5	65	135		0		
Surr: p-Terphenyl	6.35		8.000		79.3	65	135		0		

Sample ID: **1104002-005AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/1/2011** RunNo: **487**
Client ID: **MW-6** Batch ID: **297** Analysis Date: **4/5/2011** SeqNo: **9891**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	6.03	0.100	8.000	0	75.4	65	135				
Pyrene	6.87	0.100	8.000	0	85.9	65	135				
Surr: 2-Fluorobiphenyl	7.46		8.000		93.2	65	135				
Surr: p-Terphenyl	6.39		8.000		79.9	65	135				

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not detected at the Reporting Limit	R	RPD outside accepted recovery limits	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits				

a total of 3.5 gallons
was been purged from well

Material bailed was a
brown silty slurry with brown
silt & fine sand.

1155 ACY depart site

3/30/2011 RAINY

930 MBR ON SITE OPEN WELLS

1005	DTW	TD
MW-1	5.81	9.00
MW-2	8.30	19.55
MW-3	2.10	9.70
MW-4	4.32	9.72
MW-6	7.08	18.50
MW-7	9.52	18.80

1020

SET UP AT MW-6

scale: 1 square=

1030 PUMP ON MW-6

TIME	t	GAL	TEMP	COND	TDS	DO	pH	ORP
1035	5	1.0	11.09	0.970	0.68	382	6.71	242
1037	7	1.25	11.71	1.046	0.676	1.37	6.53	243.6
		SLOWED PUMPING RATE						
1040	10	1.50	12.15	1.047	0.681	1.64	6.49	244.0
1043	13	1.75	12.17	1.044	0.679	0.77	6.49	244.2
1045	15	2.00	12.10	1.041	0.676	0.94	6.47	246.2
1047	17	2.25	12.08	1.045	0.679	1.03	6.47	247.2
1050	20	2.50	12.03	1.047	0.680	1.25	6.47	247.8
1052	SAMPLED MW-6							

1107 PUMP ON MW-7

TIME	t	GAL	TEMP	COND	TDS	DO	pH	ORP
1110	3	0.25	11.57	1.534	0.997	0.8	6.67	170.4
1115	8	0.75	11.77	1513	0.983	0.41	6.48	(64)
1117	10	1.0	11.86	1.475	0.959	0.40	6.45	153.6
1122	15	1.5	12.13	1.309	0.849	0.32	6.45	90.4
1125	18	1.75	12.16	1.278	0.829	0.32	6.45	58.4
1127	20	2.0	12.21	1.231	0.799	0.30	6.46	34.9
1129	22	2.25	12.26	1.159	0.752	0.28	6.45	7.0
1132	25	2.50	12.34	1.137	0.741	0.27	6.48	-10.3
1135	28	2.75	12.39	1.084	0.705	0.25	6.46	-25.1
1137	30	3.00	12.55	1.099	0.714	0.25	6.46	-29.6
1140	SAMPLED MW-7							

scale: 1 square=_____

1050 PUMP ON MW-4

TIME	t	GAL	TEMP	COND	TDS	DO	pH	ORP
1055	5	0.25	11.26	0.864	0.562	0.78	6.54	-35.9
1057	7	0.40	11.26	0864	0.561	0.74	6.53	-35.7
1100	10	0.50	11.30	0.860	0.559	0.68	6.52	-35.7
1105	15	0.75	10.80	0.817	0.530	0.91	6.52	-36.4
1107	17	1.00	10.63	0.783	0.510	1.47	6.49	-35.2
1110	20	1.25	10.69	0.801	0.521	1.92	6.49	-35.8
1112	22	WELL IS DRY, RECOVER						
1115	25	SAMPLED MW-4						

1225 PUMP ON MW-1

TIME	t	GAL	TEMP	COND	TDS	DO	pH	ORP
1230	5	1.0	10.09	0348	0.227	0.71	6.48	-10.1
	REDUCE FLOW RATE							
1232	7	1.25	10.19	0355	0.231	0.44	6.41	-8.3
1235	10	1.50	10.34	0383	0.249	0.23	6.31	-7.1
1237	12	1.75	10.41	0399	0.260	0.22	6.28	-7.9
1240	15	2.00	10.42	0.397	0.259	0.80	625	-8.7
1241	WELL IS DRY, RECOVER							
1245	SAMPLED MW-1							

scale: 1 square=_____

1305 PUMP ON MW-3

Time	t	Gal	Temp	Cond.	TDS	DO	pH	ORP
1307	2	0.25	10.68	0.548	0.356	1.00	6.58	-27.4
1310	5	0.75	10.46	0.546	0.354	0.29	6.54	-26.5
1312	7	1.00	10.37	0.531	0.345	0.24	6.54	-26.9
1315	10	1.75	10.45	0.517	0.336	0.21	6.56	-28.5
1317	12	2.25	10.77	0.527	0.343	0.24	6.58	-31.1
1320	15	2.50	11.04	0.545	0.354	0.25	6.60	-34.3
1322	17	2.75	11.16	0.552	0.359	0.26	6.61	-37.1
1325	20	3.00	11.19	0.555	0.361	0.27	6.62	-40.5
1327	22	3.25	11.20	0.554	0.360	0.27	6.62	-41.1

1330 25 SAMPLED MW-3

1340 PUMP ON MW-2

Time	t	Gal	Temp	Cond	TDS	DO	pH	ORP
1345	5	0.5	12.26	2.075	1.348	1.79	6.38	-35.3
1347	7	1.0	11.79	2.084	1.354	1.43	6.39	-37.4
1350	10	1.5	11.66	2.094	1.361	0.57	6.42	-37.0
1352	12	2.0	11.65	2.096	1.363	0.53	6.42	-36.5
1355	15	2.5	11.63	2.099	1.364	0.46	6.44	-37.0
1357	17	2.75	11.62	2.100	1.365	0.44	6.44	-36.9
1400	20	3.00	11.61	2.101	1.366	0.43	6.45	-37.0

1402 SAMPLED MW-2

1430 MPB OFF

scale: 1 square=_____

4/4/2011

1505 MPB ON-SITE
MW-1 CONTROL
MW-4 FILL 0.55'
1530 MPB OFF

scale: 1 square=_____