
INITIAL SOIL INVESTIGATION

FOR

HORSE HEAVEN HILLS TRAVEL PLAZA
101 MERLOT DRIVE
PROSSER, WASHINGTON

September 24, 2013

Prepared for:

HORSE HEAVEN HILLS TRAVEL PLAZA
101 MERLOT DRIVE
PROSSER, WASHINGTON

Prepared by:

Yancy Meyer

Environmental Professional

And

Peter Trabusiner

Senior Engineer

Blue Mountain Environmental and Consulting Company, Inc.
Po Box 545/125 Main St.
Waitsburg, WA 99361
509-520-6519

PROJECT SUMMARY

Client: Horse Heaven Hills Travel Plaza
101 Merlot Dr.
Prosser, Washington 99350

Point of Contact: Mr. Brian Rogers

Property: Horse Heaven Hills Travel Plaza
101 Merlot Dr.
Prosser, Washington 99350

Major Commercial Activity: Fuel Station

Decommissioning Supervisors: Peter Trabusiner, Senior Engineer
Yancy Meyer, BMEC, Inc.

License Number/Expiration: UST Decommissioning # 24070, expires 3/5/2014
WA Site Assessment # 5226971, expires 3/5/2014

Project Number: E2013/0906

Report Date: September 24, 2013

Legal Description: Parcel number 1-3594-301-1661-001, in northwest quarter of the southeast quarter of Section 35, in Township 9 N., Range 24 E.W.M.

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Site Location Map
Site Photographs
Sample Location Map
Laboratory Report
Initial Field Investigation Report

1.0 EXECUTIVE SUMMARY

Horse Heaven Hills Travel Plaza (Brian Rogers) retained Blue Mountain Environmental and Consulting Company, Inc. (BMEC) to investigate the diesel fuel pumps and perform soil sampling at the site. There are 13 diesel fuel pumps at the site, and none of the dispensers have containment. Site observations and field sampling indicate diesel soil contamination above MTCA cleanup levels under at least three of the diesel pumps at the site. Four soil samples were taken for NWTPH-Dx and sent to On-Site Environmental Laboratory in Redmond, Washington for analysis. The soil sampling and the site assessment was done by Yancy Meyer, State registered UST Site Assessor and Decommissioning Supervisor, and employee of BMEC.

All 13 diesel fuel pumps at the site were examined, and the pumps with the most evidence of contamination were field tested using a Photo-Ionization Detector (PID) and by basic sheen testing. PID readings were collected by obtaining several hundred grams of soil and placing that sample aliquot in a Ziploc baggie, sealing the baggie, and allowing the sealed sample to “heat up” on the hood of a vehicle for 10 to 15 minutes, prior to inserting the tip of the PID probe into the Ziploc baggie to obtain the PID measurement. PID measurements indicate the presence or absence of volatile compounds with some indication of concentration. Because many of the constituents of diesel fuel are not volatile, a basic sheen test was employed on the field samples as well (adding water to a sample retained in a sampling spoon and checking for the presence of a visible oily sheen). The four samples with the highest PID readings were shipped to On Site Environmental Laboratory for analysis for diesel and lube oil by NWTPH-Dx. All four samples were well above MTCA Cleanup levels. It is the opinion of BMEC that the soil under the diesel pumps at the site has diesel contamination above MTCA cleanup levels. The current dispensers and piping should be removed and the petroleum contaminated soil (PCS) should be removed and disposed of properly, with confirmation sampling to insure that no PCS above MTCA cleanup levels remains at the site. The dispensers and piping should be replaced with new dispensers with containment, and piping according to WAC 173-360-305.

1.1 Action Summary:

The soil investigation was conducted on September 18, 2013, by BMEC of Waitsburg, Washington, as the Environmental Consultant. All 13 diesel fuel pumps at the site were examined, and the pumps with the most evidence of contamination were field tested using a Photo-Ionization Detector (PID) and by basic sheen testing. The four samples with the highest PID readings were shipped to On Site Environmental Laboratory for analysis for diesel and lube oil by NWTPH-Dx.

1.2 Site Background:

Historic business practices, land use and development were not identified associated with the subject site. However, information obtained by BMEC indicates that the site was developed as a retail fuel facility in 1995.

1.3 Purpose:

The purpose of this soil investigation is to determine the amount of soil contamination under the diesel dispensers at the site, which have no containment. The initial investigation outlines the need for remedial action at the site

1.4 Protocol:

The procedure for this soil investigation was to perform in practical and reasonable steps, employing currently available technology, existing regulations, and generally acceptable engineering practices, an investigation to ascertain the possibility, presence, or absence of petroleum releases.

2.0 SUBJECT PROPERTY SITE DESCRIPTION

2.1 Physical Setting Source:

The property is located in Prosser, Washington. The United States Geological Survey (USGS) 7.5 Minute Topographic map was used for this assessment. The USGS 7.5 Minute Quad Map has an approximate scale of 1 inch to 2,000 feet, and shows physical features such as wetlands, water bodies, roadways, mines, and buildings.

The map indicated that the subject property is located within the city limits. The site is surrounded primarily by commercial properties. The property consists of one parcel of land with improvements. The site is accessible from Merlot Dr. The nearest major roadway is I-82, adjoining the site to the north. The elevation of the property is approximately 720 feet above mean sea level.

2.2 Topography, Geology, and Hydrology

The subject site was identified along a terrace of the Yakima River, at an elevation of approximately 720 feet above mean sea level. Topography at and adjacent to the subject site was relatively flat, with slight regional slope to the southeast, toward the Yakima River located approximately 5 miles north northeast of the subject site. Elevations decrease steadily along Yakima River, which flows to the southeast toward the Columbia River.

According to the U.S. Department of Agriculture *Soil Survey of Yakima County, Washington*, the subject site is underlain by the Ashue Silt Loam. The Ashue Silt Loam is considered very deep and moderately well drained soils with moderate coarse textures.

A typical cross-section of the Ashue Silt Loam includes an 9-inch thick surface layer of light brown and brown loam, underlain by an approximate twenty-inch thick layer of pale brown very gravelly sandy clay loam, underlain by an approximate fifteen-inch thick layer of light gray very

gravelly sandy loam, and completely underlain by light yellowish brown and pale brown very gravelly sand measuring in excess of 60 inches thick.

Based on topography and surface water body presence, the predominant groundwater flow direction is presumably to the southeast.

3.0 Sampling Methodology:

All 13 diesel fuel pumps at the site were examined, and the pumps with the most evidence of contamination were field tested using a Photo-Ionization Detector (PID) and by basic sheen testing. PID readings were collected by obtaining several hundred grams of soil and placing that sample aliquot in a Ziploc baggie, sealing the baggie, and allowing the sealed sample to “heat up” on the hood of a vehicle for 10 to 15 minutes, prior to inserting the tip of the PID probe into the Ziploc baggie to obtain the PID measurement. PID measurements indicate the presence or absence of volatile compounds with some indication of concentration. Because many of the constituents of diesel fuel are not volatile, a basic sheen test was employed on the field samples as well (adding water to a sample retained in a sampling spoon and checking for the presence of a visible oily sheen). The four samples with the highest PID readings were shipped to On Site Environmental Laboratory for analysis for diesel and lube oil by NWTPH-Dx.

Soil sampling was conducted by Mr. Meyer. Discrete grab samples were collected about 12 inches below the bottom of four separate dispensers. Each sample was placed in one four ounce, pre-cleaned glass container with Teflon lined lid. The samples were stored in a cool environment (4 degrees C) until released, with a chain-of-custody, to the laboratory. The sampling tools were decontaminated between samples, or disposed of. The field testing showed no detectable petroleum contamination. Analysis of the four discrete grab samples conducted by OnSite Environmental, Inc., in Redmond, WA, which indicated no detectable petroleum contamination:

6.0 Laboratory Results:

Soil samples 9-18-P13-01, 9-18-P12-03, 9-18-P11-04, and 9-18-P16-07 were all sampled for diesel and lube oil by NWTPH-Dx.

Matrix: Soil Units: mg/Kg (ppm)

| Sample Number (a) | | 9-18-P13-01 | 9-18-P12-03 | 9-18-P11-04 | 9-18-P16-07 |
|-------------------|---------------|-------------|-------------|-------------|-------------|
| Sample Depth (ft) | | 1 | 1 | 1 | 1 |
| Analyte | MTCA Criteria | | | | |
| TPH Diesel | 2000 | 66000 | 18000 | 16000 | 140000 |
| TPH Lube Oil | 2000 | <9300 | <2300 | <1600 | <14000 |

Notes:

(a) Samples taken on September 18, 2013

Concentrations for all chemicals and MTCA criteria in mg/kg

MTCA – Model Toxics Control Act

Analyses by OnSite Environmental, Redmond, WA

7.0 Conclusions:

The four samples with the highest PID readings were shipped to On Site Environmental Laboratory for analysis for diesel and lube oil by NWTPH-Dx. All four samples were well above MTCA Cleanup levels. It is the opinion of BMEC that the soil under the diesel pumps at the site has diesel contamination above MTCA cleanup levels. The current dispensers and piping should be removed and the petroleum contaminated soil (PCS) should be removed and disposed of properly, with confirmation sampling to insure that no PCS above MTCA cleanup levels remains at the site. The dispensers and piping should be replaced with new dispensers with containment, and piping according to WAC 173-360-305.

A site map, a sample location map, site photographs, and a copy of the laboratory report are included in the Appendix.

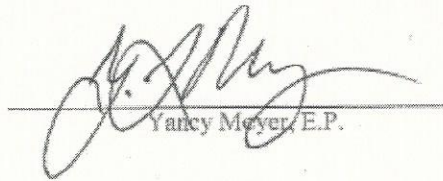
8.0 Statement of the Environmental Professionals

Statement of Quality Assurance

I have performed this Assessment in accordance with generally accepted environmental practices and procedures, as of the date of this report. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area. The conclusions contained within this Assessment are based upon site conditions I readily observed or which were reasonably ascertainable and present at the time of the site inspection.

The conclusions and recommendations stated in this report are based upon personal observations made by employees of BMEC and upon information provided by others. I have no reason to suspect or believe that the information provided by others is inaccurate.

Blue Mountain Environmental Consulting, Inc.



Yancy Meyer, E.P.

Yancy Meyer, WA USTs Site Assessor

Statement of Quality Control

The objective of this Environmental Site Assessment was to ascertain the potential presence or absence of environmental problems that could impact the subject property, as delineated by the Scope of Work. The procedure was to perform reasonable steps in accordance with the existing regulations, currently available technology, and generally accepted engineering practices in order to accomplish the stated objective.

To the best of my knowledge, this site investigation has been performed in compliance with BMEC's Standard Operating Procedures protocol for Environmental Site Assessments.

Blue Mountain Environmental Consulting, Inc.



Peter H. Trabusiner, Engineer

Report Limitations:

The enclosed site assessment has been performed for the exclusive use of HHH, or agents specified by them, for the transaction at issue concerning the subject property, located at 101 Merlot Dr., in Prosser, Washington.

The purpose of an environmental investigation is to evaluate potential or actual effects of past or current practices on a given site. In performing an environmental investigation, a balance must be struck between reasonable inquiry into environmental issues and an exhaustive analysis of every conceivable issue of possible concern. This environmental assessment contains BMEC opinion regarding environmental issues of concern and/or additional issues that may need to be addressed. In rendering our professional opinion, BMEC warrants that the services provided within the scope of this assessment were performed, within the limits described, in accordance with generally accepted environmental consulting principles and practices. No other warranty, expressed or implied, is made. The following paragraphs describe the assumptions and standard parameters under which such opinion is rendered.

Any opinions and/or recommendations presented in this report apply to site conditions existing at the time of performance of services. BMEC is unable to report on or accurately predict events that may affect the site after performance of services, whether occurring naturally or caused by human forces. BMEC assumes no responsibility for conditions BMEC did not investigate, or conditions not generally recognized as environmentally unacceptable at the time services were performed.

Where subsurface work was performed, BMEC professional opinions are based in part on the interpretation of data from discrete sample locations that may not represent actual conditions at the non-sampled locations.

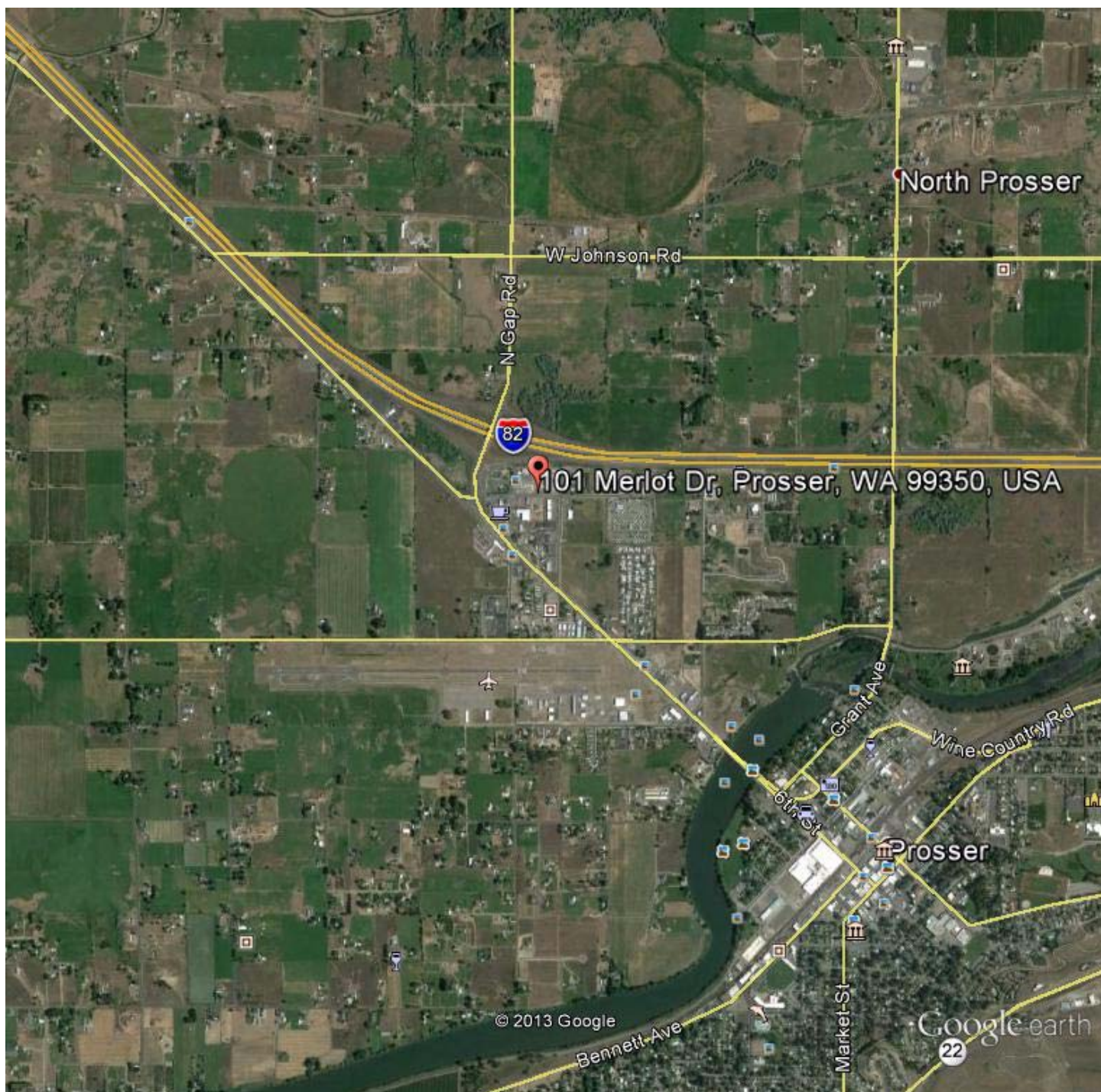
Except where there is expressed concern of our client, or where specific environmental contaminants have previously been reported by others, naturally occurring toxic substances, potential environmental contaminants located inside buildings, or contaminant concentrations not of current environmental concern, may not be addressed in this document.

No assessment is thorough enough to exclude the presence of hazardous materials at a given site. Therefore, if specific hazardous materials have not been identified during this assessment, the lack of such identifications should not be construed as a guarantee of the absence of hazardous materials, but merely as the result of services performed within the scope, limitations, and cost of work done.

BMEC is not responsible for the effects of changes in applicable environmental standards, practices, or regulations after the performance of services.

Services provided for this assessment were performed in accordance with BMEC's agreement and understanding with our client, which may not be fully disclosed in this report. Opinions and/or recommendations are intended for the client, purpose, site, location, time frame, and project parameters indicated.

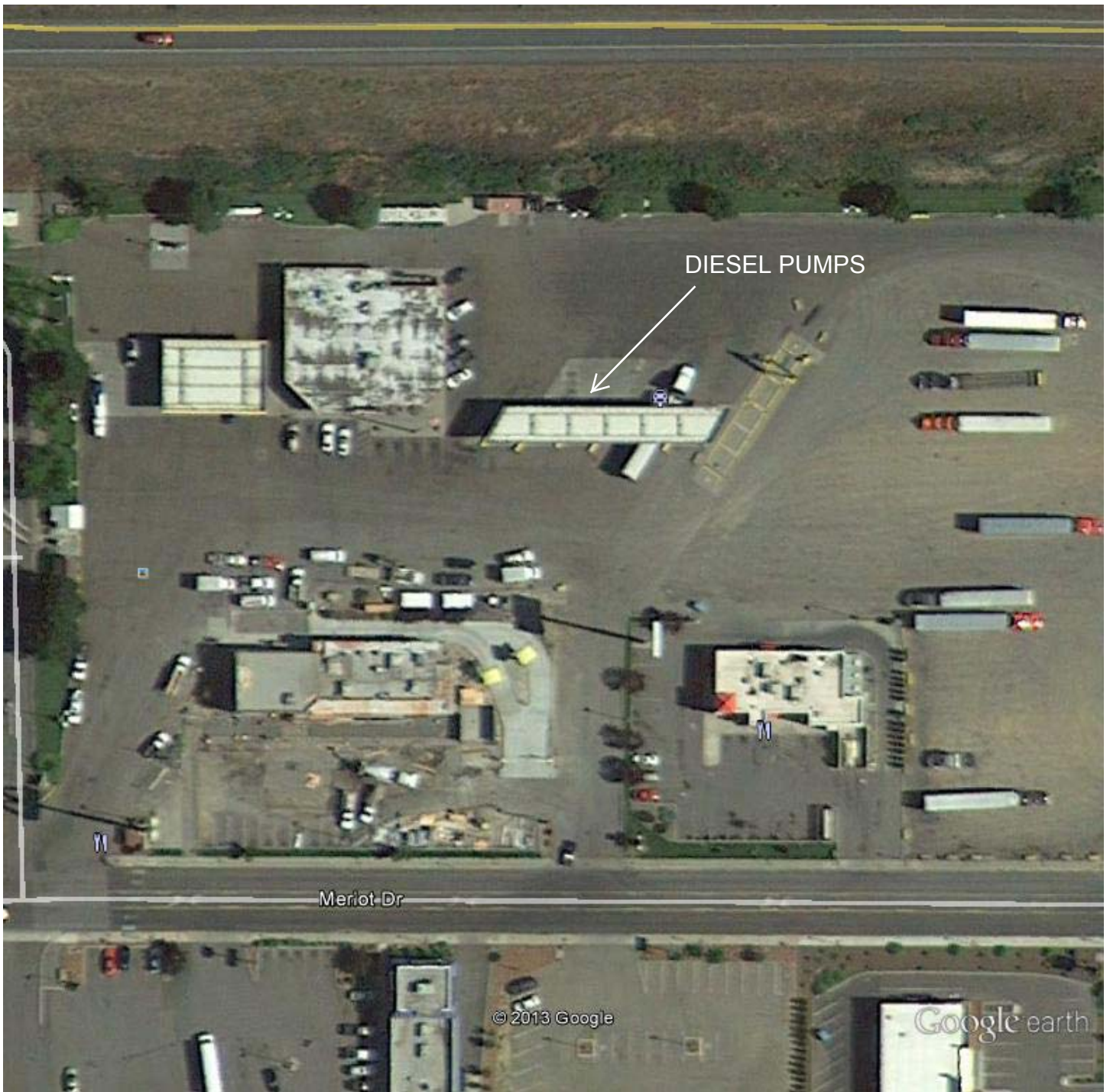
This report was prepared solely for the use of our client, and should be reviewed in its entirety; BMEC is not responsible for subsequent separation, detachment, or partial use of this document. Any reliance on this report by a third party shall be at such party's sole risk.



Google earth

miles 1
km 2





Google earth

feet
meters





DIESEL PUMPS ISLANDS LOOKING EAST.



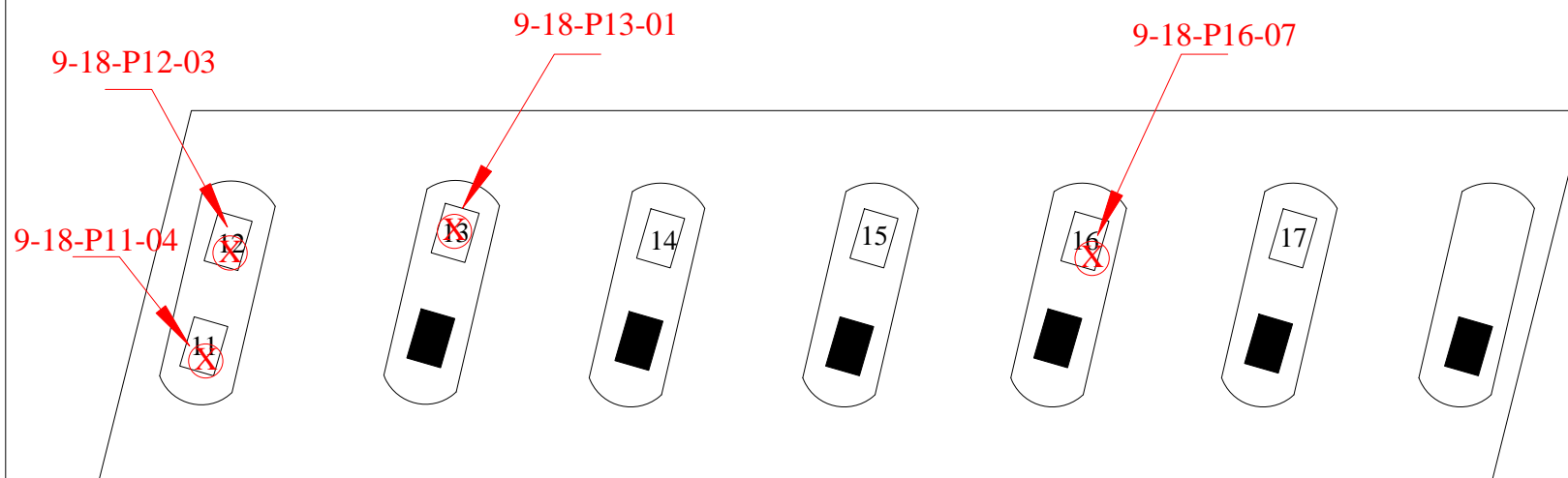
PUMPS 13 AND 14.



INSIDE DIESEL PUMPS.



N



Blue Mountain Environmental Consulting Co., Inc.
E2013/0906 Horse Heaven Hills Travel Plaza,
101 Merlt Dr., Prosser, WA PH II soil sampling



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 23, 2013

Yancy Meyer
Blue Mountain Environmental, Inc.
90 Baldwin Road
Walla Walla, WA 99362

Re: Analytical Data for Project E2013/0906
Laboratory Reference No. 1309-177

Dear Yancy:

Enclosed are the analytical results and associated quality control data for samples submitted on September 20, 2013.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DeB" followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures

Date of Report: September 23, 2013
Samples Submitted: September 20, 2013
Laboratory Reference: 1309-177
Project: E2013/0906

Case Narrative

Samples were collected on September 18, 2013 and received by the laboratory on September 20, 2013. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 23, 2013
 Samples Submitted: September 20, 2013
 Laboratory Reference: 1309-177
 Project: E2013/0906

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|-------------------------|--------------------|----------------|---------------|----------------------|----------------------|--------------|
| Client ID: | 9-18-P13-01 | | | | | |
| Laboratory ID: | 09-177-01 | | | | | |
| Diesel Fuel #2 | 69000 | 1300 | NWTPH-Dx | 9-20-13 | 9-23-13 | |
| Lube Oil Range Organics | ND | 10000 | NWTPH-Dx | 9-20-13 | 9-23-13 | U1 |
| Surrogate: | Percent Recovery | Control Limits | | | | |
| o-Terphenyl | --- | 50-150 | | | | S |
| Client ID: | 9-18-P12-03 | | | | | |
| Laboratory ID: | 09-177-02 | | | | | |
| Diesel Fuel #2 | 18000 | 130 | NWTPH-Dx | 9-20-13 | 9-20-13 | |
| Lube Oil Range Organics | ND | 2300 | NWTPH-Dx | 9-20-13 | 9-20-13 | U1 |
| Surrogate: | Percent Recovery | Control Limits | | | | |
| o-Terphenyl | 143 | 50-150 | | | | |
| Client ID: | 9-18-P11-04 | | | | | |
| Laboratory ID: | 09-177-03 | | | | | |
| Diesel Fuel #2 | 16000 | 130 | NWTPH-Dx | 9-20-13 | 9-20-13 | |
| Lube Oil Range Organics | ND | 1600 | NWTPH-Dx | 9-20-13 | 9-20-13 | U1 |
| Surrogate: | Percent Recovery | Control Limits | | | | |
| o-Terphenyl | --- | 50-150 | | | | F |
| Client ID: | 9-18-P16-07 | | | | | |
| Laboratory ID: | 09-177-04 | | | | | |
| Diesel Fuel #2 | 150000 | 1500 | NWTPH-Dx | 9-20-13 | 9-23-13 | |
| Lube Oil Range Organics | ND | 14000 | NWTPH-Dx | 9-20-13 | 9-23-13 | U1 |
| Surrogate: | Percent Recovery | Control Limits | | | | |
| o-Terphenyl | --- | 50-150 | | | | S |

Date of Report: September 23, 2013
 Samples Submitted: September 20, 2013
 Laboratory Reference: 1309-177
 Project: E2013/0906

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|-------------------------|------------------|----------------|----------|---------------|---------------|-------|
| METHOD BLANK | | | | | | |
| Laboratory ID: | MB0920S2 | | | | | |
| Diesel Range Organics | ND | 25 | NWTPH-Dx | 9-20-13 | 9-20-13 | |
| Lube Oil Range Organics | ND | 50 | NWTPH-Dx | 9-20-13 | 9-20-13 | |
| Surrogate: | Percent Recovery | Control Limits | | | | |
| o-Terphenyl | 96 | 50-150 | | | | |

| Analyte | Result | | Percent Recovery | | Recovery Limits | RPD | RPD Limit | Flags | |
|-----------------------|-----------|-----|------------------|----|-----------------|-----|-----------|-------|----|
| DUPLICATE | | | | | | | | | |
| Laboratory ID: | 09-168-03 | | | | | | | | |
| | ORIG | DUP | | | | | | | |
| Diesel Range Organics | ND | ND | | | | | NA | NA | U1 |
| Lube Oil | 471 | 384 | | | | | 20 | NA | |
| Surrogate: | | | | | | | | | |
| o-Terphenyl | | | 91 | 86 | 50-150 | | | | |

Date of Report: September 23, 2013
Samples Submitted: September 20, 2013
Laboratory Reference: 1309-177
Project: E2013/0906

% MOISTURE

Date Analyzed: 9-20-13

| Client ID | Lab ID | % Moisture |
|-------------|-----------|------------|
| 9-18-P13-01 | 09-177-01 | 4 |
| 9-18-P12-03 | 09-177-02 | 3 |
| 9-18-P11-04 | 09-177-03 | 2 |
| 9-18-P16-07 | 09-177-04 | 15 |



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

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09-177

Turnaround Request (in working days)

(Check One)

☒ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☐ Standard (7 Days)
(TPH analysis 5 Days)

☐ (other) _____

Laboratory Number:

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Gx

NWTPH-Dx

Volatiles 8260C

Halogenated Volatiles 8260C

Semivolatiles 8270D/SIM
(with low-level PAHs)

PAHs 8270D/SIM (low-level)

PCBs 8082A

Organochlorine Pesticides 8081B

Organophosphorus Pesticides 8270D/SIM

Chlorinated Acid Herbicides 8151A

Total RCRA Metals/ MTCA Metals (circle one)

TCLP Metals

HEM (oil and grease) 1664A

% Moisture

Lab ID Sample Identification

Sampled by:

Y. Meyer
Y. Meyer

Project Manager:

Project Name: E2013/0906
Horse Heaven Hills Travel Plaza

Date Sampled Time Sampled Matrix

9-18-13 1115 50L

✓

9-18-13 1125 1138

✓

9-18-13 1145

✓

9-18-13 1145

✓

Signature

Company

BMEC
BMEC

Date

9-18-13 1400
9/20/13 100PM

Time

Comments/Special Instructions

Received

Relinquished

Received

Relinquished

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐