# INDEPENDENT REMEDIAL ACTION REPORT GROW COMMUNITY BAINBRIDGE ISLAND, WA

Resolve Project 16-027G June 26, 2016

Prepared for:

Bainbridge Island Holdings LLC and PHC Construction 710 John Nelson Lane Bainbridge Island, WA

Prepared by:

Resolve Environmental & Geotechnical, Inc. 8842 NE Lacey Street Indianola, Washington 98342 (360) 297-8870; resolveEG@comcast.net June 20, 2016

Resolve Project No. 16-027IRA

# INDEPENDENT REMEDIAL ACTION REPORT GROW COMMUNITY PROPERTY; SOUTHEASTERN PORTION BAINBRIDGE ISLAND, WASHINGTON

#### INTRODUCTION and SUMMARY

Based on the findings presented in our recent Phase II Environmental Site Assessment (ESA) report, dated May 4, 2016, Resolve Environmental & Geotechnical, Inc. (Resolve) was retained by Bainbridge Island Holdings LLC to consult on an Independent Remedial Action for the contaminated soils in the southeastern portions of the Grow Community, Bainbridge Island, Washington. Contaminated soils were identified in the subsurface near the existing Building H of the subject site during common excavation of a trench for utility emplacements. The corresponding Washington State Department of Ecology (DOE) ERTS Number for this project is 664841. We are presenting the attached information with the goal of obtaining a "Cleanup Completed" or No Further Action Letter for the site from the DOE.

Soils excavated initially from the utility trench were placed in a pile and covered with plastic, then subsequently sampled by Resolve. A Photo Ionization Detector and soil odors were utilized to isolate potentially contaminated soils from those with no reason to suspect contamination. Samples were initially collected from the pile on April 16, 2016 and sent by USPS by priority mail to Onsite Laboratories of Kirkland, Washington for analysis.

The utility trench area and surrounding soils were not sampled at the time of the pile sampling, but were subsequently sampled on April 23, 2016 following establishment of a subsurface sampling plan. During initial excavation and removal of the known contaminated soils, further contamination was discovered in the trench excavation area, extending beneath a portion of Building H, at the north end of the previously-known contaminated area. Initial testing of the soils in both the pile and the trench excavation area showed that diesel range contamination of soils was above DOE Model Toxics Control Act (MTCA) cleanup standards. This included areas at the southern margin of Building H.

An Independent Remedial Action was instigated by BIH with the assistance of PHC Construction Company, and soils were subsequently excavated for disposal. The excavation proceeded to a depth of approximately 6.5 feet, and extended to the south an additional seven feet beyond the original excavation in order to reach the margins of the contaminated soils plume. This excavation also included undermining more than five feet beneath Building H to locate the northern margin of the plume. Plume delineation was determined by odor and visual methods in the field, and by laboratory testing of floors and walls of the excavation.

Verification that soils had been removed from the identified areas of contamination was carried out by sampling and testing of soils, and analysis of laboratory results. It is Resolve's opinion that the contaminated soils have been removed from the subject site, and that appropriate due diligence was utilized in the investigation and remediation.

#### PURPOSE AND SCOPE

The purpose of this Independent Remedial Action was to remove diesel and lube oil-range petroleum hydrocarbon-contaminated soils from the site, and to verify through laboratory testing that contaminated soils had been removed. The IRA included the following basic scope of work:

- Initial sampling of excavated soils in an existing soil pile;
- Initial sampling of excavated soils in the utility trench area;
- Establishment of a sampling plan for the utility trench area;

& Geotechnical, Inc

- Soil sampling and laboratory analyses of both pile soils and trench area;
- Interpretation of laboratory results;
- Information regarding the nature and extent of any contamination;
- Excavation and removal of contaminated soils from the subject site;
- Disposal of soils at an appropriate disposal site; and,
- Preparation of this report documenting the cleanup efforts and results.

# FIELD ACTIVITIES AND ACTIONS

Initial field investigation and sampling activities were conducted on April 16<sup>th</sup> and April 23rd, 2016 by Ronald Nance, a Washington State Licensed Geologist and Environmental Professional representing Resolve. Subsequent sample collection, testing, and evaluations were an integral element of the Independent Remedial Action, designed to verify that contaminated soils had been removed from the site. Soil excavation was conducted by PHC Construction, Incorporated of Bainbridge Island, Washington, using a mini excavator. Selected photographs of the field activities are attached to this report.

# INITIAL CHARACTERIZATION ACTIVITIES

Resolve initially collected five samples from the soils in the pile, and three samples from the subsurface trenching area for characterization of soils by laboratory analysis. Soils initially encountered with obvious visual and olfactory contamination in the pile were isolated to prevent cross-contamination of other soils on the site. Soil samples from suspect contamination areas were collected for laboratory analysis and were transported to the laboratory. Soils in the trench area were sampled from walls and floor of the trench.

**Soil Stockpile**: Those soils encountered with visual and olfactory contamination in the pile were placed on 6 mil plastic and covered by 6 mil plastic to prevent cross-contamination of other soils on the site. After the obviously-contaminated soils were removed from the suspected zone of contamination, Photoionization Detector (PID) and odor field screening was undertaken in order to delineate the extent of any contamination through and around the pile.

Once suspect soils had been removed, cleanup verification samples were collected for laboratory analysis and were transported to the laboratory. None of the verification samples were reported with concentrations greater than MTCA Method A Cleanup Standards. Those soils surrounding the remaining isolated pile did not show any reason to suspect contamination.

**Trench Area**: A grid for methodical sampling was first established across the trench area, with grid lines east to west at 10-foot intervals (40, 50, 60, 70, feet) from the eastern wall of existing Building H and north to south at 10- foot intervals from approximately 23, 33, and 43 feet from the southern wall of Building H.

Subsurface soils encountered during the exploratory excavations were generally a thin (one to two foot) layer of topsoil and fill material, underlain by generally brown, damp, dense, silty sand with gravel (USCS SM), followed at depth by gray silty sand with minor gravel, and some intervals of gray, moist, dense silt sand with gravel (USCS SM) and minor sand.

Excavation of narrow trenches for investigation began with Test Pit H-1, approximately 23 feet from the southern wall of the building, and approximately 40 feet from the eastern margin of the building, where apparently contaminated soils were encountered at a depth of approximately 2.5 feet below the existing ground surface (bgs). The suspect soils appeared to extend to a depth of approximately 4 feet bgs. Another narrow test pit was excavated approximately 2 feet east of the first trench to a depth of greater than 4.5 feet bgs, and no soils with suspected contamination were encountered, indicating that the first trench had been initiated at the northeastern-most margin of contamination.

Test Pit H-2 was excavated at approximately 33 feet from the southern wall of the building, and approximately 38 feet from the eastern margin of the building. Again, the trench was excavated to a depth of approximately 4.5 feet bgs and no suspect soils were encountered.

Moving westward, Test Pit H-3 was excavated at approximately 23 feet from the southern wall of the building, and approximately 50 feet from the eastern margin of the building. Soils encountered at approximately 4 feet bgs appeared to be contaminated with diesel, and were subsequently sampled. The apparently contaminated horizon appeared to shallow upward toward the south, to a depth of approximately 2 feet bgs.

A southern margin for the suspected contaminated soils was initially established with the excavation of Test Pit H-3, at approximately 33 feet from the building, and 50 feet from the eastern margin of the building, wherein no suspect soils were encountered to a depth of greater than 4.5 feet bgs. A sample of the non-suspect soils was collected for verification of methodology and extent of contamination.

Excavation of the Test Pits established a relatively clear zone of contamination. It appeared that the area of contaminated soil was generally described as a 15 foot by 15 foot area between 2 and 4.5 foot in depth below grade. Boundaries suggested by the excavations were as follows:

- North boundary at 23 feet from the South face of Bldg G/H wall
- South boundary at approximately 35 feet from the South face of Bldg G/H wall
- East boundary at 38 feet from the East edge of Bldg H
- West boundary at 55 feet from East edge of Bldg H

# INITIAL CHARACTERIZATION

The contamination initially appeared likely to have been related to relict home heating oil, and samples were therefore tested for diesel and oil by EPA Method NWTPH Dx. No groundwater was encountered in the course of sampling. Soil samples were collected in sealed, 4-ounce jars for processing by Method NWTPH-Dx. The samples were delivered under Chain of Custody to Onsite Laboratories of Kirkland, Washington for processing. Expedited turnaround times for laboratory testing for the soils were requested by Resolve.

Table 3 below is a summary of laboratory results from the samples that were initially analyzed for soils characterization. Laboratory results are attached to this report.

Table 3 – Summary of Laboratory Soil Sample Results

Sample Number	Sample Location and Depth bgs	Laboratory Test	Test Results (parts per million-ppm)	MTCA METHOD A Cleanup Levels	
P-1 Pile	Central Pile: 2'	Diesel by NWTPH- Dx	Diesel Fuel No. 2; 1,300 Lube Oil; 2,000	Diesel range hydrocarbons 2,000 ppm	
P-2 Pile	West Pile: 2'	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 100 Lube Oil; 59	Diesel range hydrocarbons 2,000 ppm	
P-3 Pile	North Pile: 2'	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 98 Lube Oil; 200	Diesel range hydrocarbons 2,000 ppm	
P-4 Pile	East Pile: 2'	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 77 Lube Oil; Non Detect	Diesel range hydrocarbons 2,000 ppm	
P-5 Pile	South Pile: 2'	Diesel by NWTPH- Dx	Diesel Fuel No. 2; 1,200 Lube Oil; 2,300	Diesel range hydrocarbons 2,000 ppm	
H-1 Excavation	23' de S; 40' de E of Bldg H	Diesel by NWTPH- Dx	Diesel Fuel No. 2; 7,400 Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm	
H-2 Excavation	23' de S; 40' de E of Bldg H	Diesel by NWTPH- Dx	Diesel Fuel No. 2; 5,300 Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm	
H-3 Excavation	33' de S; 40' de E of Bldg H	Diesel by NWTPH-Dx	Diesel Fuel No. 2; ND Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm	

Based on the laboratory results, the samples collected from suspect areas showed high concentrations of diesel fuel and, in some cases, lube oil. Those samples collected from areas that were not suspect of contamination showed low concentrations (below MTCA cleanup standards) or non-detect results.

It is Resolve's opinion that the soils in the pile that were contaminated with high concentrations of diesel and lube oil were isolated and were properly delineated for disposal. Moreover, the results of the excavations near Building H initially indicated that the subsurface contamination was limited to the area described in the previous section.

# REMEDIATION ACTIVITIES and SUBSEQUENT FINDINGS

Following receipt of the laboratory samples, Resolve recommended that an Independent Remedial Action (IRA) should be undertaken at the site. This measure was recommended in order to remove the existing contaminated soils in the soil pile from the site, and to excavate and remove contaminated soils from the trench area as defined by our investigation.

It was recommended that a soil profile form be submitted to PRS Group of Tacoma for approval of disposal. Following approval from PRS Group of Tacoma to dispose of soils at their 3003 Taylor Way Disposal Site, removal of the contaminated soils from the site was initiated.

The soil pile was completely removed from the site, and verification samples of the pile area were collected and analyzed. It is our opinion that the pile and surrounding areas are free from contaminated soils. However, as the trench area was being excavated for removal of contaminated soils, it was discovered that the diesel plume extended beyond the areas initially discovered, described, and sampled.

The discovery of additionally contaminated soils extended the remediation excavation, with some obviously contaminated soils extending deeper than originally estimated, and to the north of previously delineated contaminated soils. The contaminated area was found to extend to a depth of approximately 6.5 feet bgs, and northward beneath Building H.

It was determined that a structural engineer should be contacted prior to undermining of Building H to remove soils, and limited undermining was approved. At approximately 4.5 feet beneath the southeastern margin of the building, soils appeared to be free from, or have low concentrations of, the subject contaminant.

Excavation beneath the building continued to an undermine depth of approximately 5 feet, at which point verification samples were collected for laboratory analysis. A total of approximately 250 cubic yards of contaminated soil were removed from the site. Photographs of the excavation are attached to this report.

# **VERIFICATION LABORATORY RESULTS**

Following excavation of the trench area and apparent removal of the contaminated soils from the site, verification samples were collected and laboratory tested. Samples from the southern and western portions of the excavation site were collected on May 20, 2016. Further samples, including from below Building H, were collected on May 25, May 30, and June 7, 2016. Laboratory results are attached to this report. The following table summarizes laboratory results as tested and analyzed:

# **Verification Sampling Results**

Sample Number	Sample Location and Depth bgs	Laboratory Test	Test Results (parts per million-ppm)	MTCA METHOD A Cleanup Levels
PV-1 SW (5/25/16)	SW Pile	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 33 Lube Oil; 160	Diesel range hydrocarbons 2,000 ppm
PV-1C (5/25/16)	Central Pile	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 48 Lube Oil; 110	Diesel range hydrocarbons 2,000 ppm

# **Verification Sampling Results (continued)**

PV-1NE (5/25/16)	Eastern Pile Northward	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 53 Lube Oil; Non Detect	Diesel range hydrocarbons 2,000 ppm
HV-1 E Wall (5/27/16)	East Wall:	Diesel by NWTPH-Dx	Diesel Fuel No. 2; Non Detect Lube Oil; Non Detect	Diesel range hydrocarbons 2,000 ppm
HV-2 S Wall (5/27/16)	South Wall	Diesel by NWTPH-Dx	Diesel Fuel No. 2; Non Detect Lube Oil; Non Detect	Diesel range hydrocarbons 2,000 ppm
HV-3 Floor (5/27/16)	Floor Central- North	Diesel by NWTPH-Dx	Diesel Fuel No. 2; Non Detect Lube Oil; Non Detect	Diesel range hydrocarbons 2,000 ppm
HV-4 W Wall (5/27/16)	West Wall	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 72 Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm
HV-6a N Wall (5/27/16)	North Wall West (under bldg)	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 1500 Lube Oil; ND Note: QA was 1500, Dry sample was 486 to 1260	Diesel range hydrocarbons 2,000 ppm
HV-6b N Wall E (Lower) (6/7/16)	North Wall E (under bldg.)	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 180 Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm
HV-7 N Wall E (Upper) (6/7/16)	North Wall E (under bldg.)	Diesel by NWTPH-Dx	Diesel Fuel No. 2; 41 Lube Oil; ND	Diesel range hydrocarbons 2,000 ppm

As can be seen in the table above, none of the samples tested and analyzed were above MTCA cleanup standards for Diesel-range petroleum hydrocarbons. The significant excavation and testing efforts located the margins of the contaminant plume and successfully remediated the site. Based on laboratory results, visual, and olfactory field screening, it is our opinion that the contaminated soils have been removed from the site, and remaining soils do not exceed MTCA Method A cleanup standards.

# IRA REPORT SUMMARY and LIMITATIONS

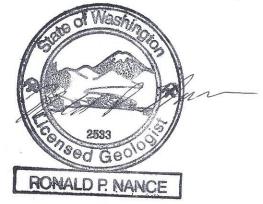
This Independent Remedial Action has been conducted in good faith and was limited in scope to those areas defined by the client; namely the contaminated soil pile, and the trench area near Building H on the subject property. This investigation was undertaken with the risk that visual observations and random sampling alone would not reveal the presence, full nature, and extent of contaminants in the subsurface, however common industry practices were applied, and Resolve is confident that the appropriate testing, observation, remediation, and disposal of soils were undertaken for contaminants discovered at the site.

The opinions presented herein apply to the site conditions existing at the time of the investigation, and are based upon the interpretation of current regulations pertaining to hydrocarbons in the subsurface and in pile areas. Opinions and recommendations provided herein may not apply to future conditions that may exist at the site. The data obtained are clear and accurate only to the degree implied by the sources and methods used. The information presented herein is based on professional interpretation using presently accepted methods with a degree of conservatism deemed proper as of the report date. We do not warrant that future technical developments cannot supersede such data. Laboratory analysis was conducted by a laboratory accredited under the guidance of the EPA. The results of the analyses are accurate only to the degree of care exercised by the independent laboratories and the representative nature of the samples obtained.

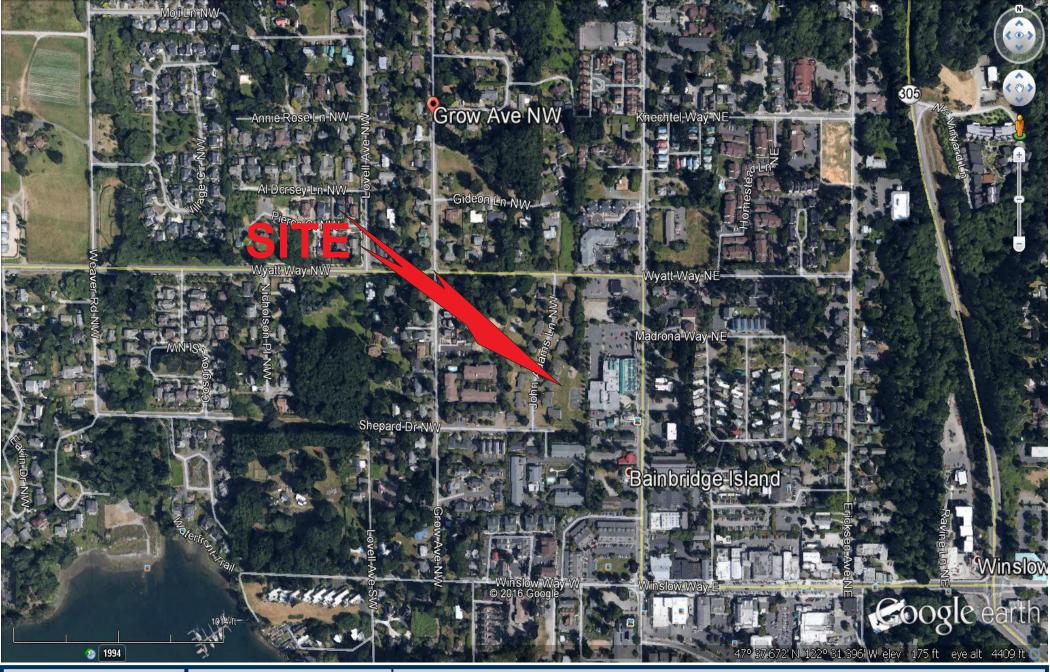
Resolve appreciates the opportunity to present this letter report. If you have any questions or comments, or need additional information, please feel free to contact us at (360) 865-1843.

Sincerely,

Resolve Environmental & Geotechnical, Incorporated



Ronald Nance, P.G. Senior Environmental Geologist Washington State License No. 2533



Resolve Environmental & Geotechnical, Inc.

(360) 865-1843 resolveeg@comcast.net

FIGURE 1:

Site Vicinity Map

**PROJECT No. 16-027** 

DATE: APRIL. 2016

**PROJECT:** 

Limited Phase II Site Investigation Grow Community; Building H Vicinity Bainbridge Island, Washington



Grow Community - Ph2 4/23/2016

Fuel Oil Investigation

Mostly Sunny ~ 60d

On Site:

Ron Nance

Resolve

**Greg Lotakis** 

BIH

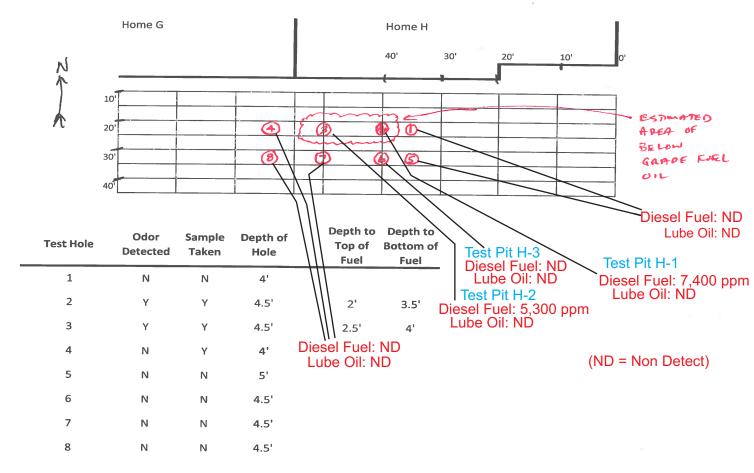
Chris Bodner

PHC - Operator

Marty Sievertson PHC - Manager

#### Notes:

Pot holing done with small kubota excavator. A test grid was prepared based on distance from from new home foundations under construction.



4/23/16 G. LOTAKIS

# Field Notes Compiled by Mr. Greg Lotakis, Grow Community LLC

Resolve Environmental & Geotechnical, Inc.

PROJECT No. 16-027

(360) 297-8870; Cell (360) 865-1843 resolveeg@comcast.net

PIGURE 2A:Initial Excavation Sample Location Diagram

PROJECT:

Limited Phase II Site Investigation
428 Grow Avenue NE
Bainbridge Island, Washington

Prepared for: Grow Community LLC

#### **Grow Community -**

# INDEPENDENT REMEDIAL ACTION: FINAL EXCAVATION VERIFICATION SAMPLE LOCATION DIAGRAM

on site:

Ron Nance

Resolve

**Greg Lotakis** 

BIH

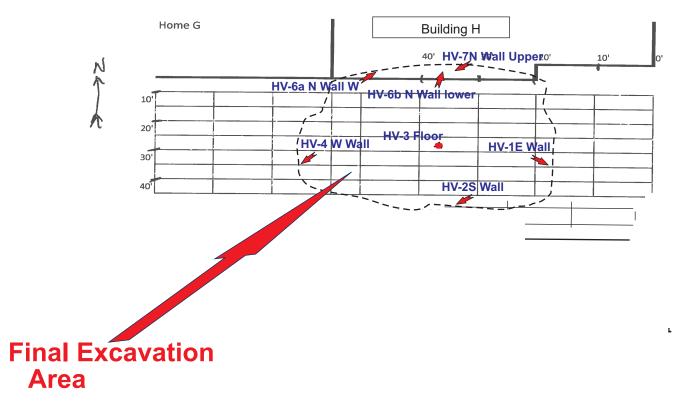
Chris Bodner

PHC - Operator

Marty Sievertson PHC - Manager

#### Notes:

Pot holing done with small kubota excavator A test grid was prepared based on distance from from new home foundations under construction.



**Resolve Environmental** & Geotechnical, Inc.

(360) 297-8870; Cell (360) 865-1843 resolveeg@comcast.net

FIGURE 2B: Final Excavation Verification Sample Location Diagram

**PROJECT No. 16-027** DATE: MAY-JUNE, 2016

# **PROJECT:**

**Limited Phase II Site Investigation 428 Grow Avenue NE Bainbridge Island, Washington** 

**Prepared for: Grow Community LLC** 



# **LABORATORY RESULTS**



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

May 26, 2016

Ron Nance Resolve Environmental & Geotechnical, Inc. 8842 NE Lacey Street Indianola, WA 98342

Re: Analytical Data for Project 16-029-C

Laboratory Reference No. 1605-197

Dear Ron:

Enclosed are the analytical results and associated quality control data for samples submitted on May 24, 2016.

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,

David Baumeister Project Manager

**Enclosures** 

Project: 16-029-C

#### **Case Narrative**

Samples were collected on May 20, 2016 and received by the laboratory on May 24, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Project: 16-029-C

#### **NWTPH-Dx**

Matrix: Soil

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
PV-1SW					
05-197-01					
33	27	NWTPH-Dx	5-25-16	5-25-16	
160	54	NWTPH-Dx	5-25-16	5-25-16	
Percent Recovery	Control Limits				
89	50-150				
PV-1C					
	28	NW/TPH-Dv	5-25-16	5-25-16	
-	_				
		144411111 DX	0 20 10	0 20 10	
	00 .00				
PV-1NE					
05-197-03					
53	28	NWTPH-Dx	5-25-16	5-25-16	
ND	57	NWTPH-Dx	5-25-16	5-25-16	
Percent Recovery	Control Limits			·	
110	50-150				
	PV-1SW 05-197-01 33 160 Percent Recovery 89  PV-1C 05-197-02 48 110 Percent Recovery 88  PV-1NE 05-197-03 53 ND Percent Recovery	PV-1SW	PV-1SW           05-197-01         33         27         NWTPH-Dx           160         54         NWTPH-Dx           Percent Recovery 89         Control Limits 50-150           PV-1C 05-197-02         WTPH-Dx NWTPH-Dx           48 28 NWTPH-Dx NWTPH-Dx         NWTPH-Dx           Percent Recovery 88         Control Limits 50-150           PV-1NE 05-197-03         WTPH-Dx NWTPH-Dx NWTPH-Dx           Poercent Recovery ND 57         NWTPH-Dx NWTPH-Dx           Percent Recovery         Control Limits	Result         PQL         Method         Prepared           PV-1SW 05-197-01	Result         PQL         Method         Prepared         Analyzed           PV-1SW 05-197-01         5-197-01         5-25-16         5-25-16           33         27         NWTPH-Dx         5-25-16         5-25-16           160         54         NWTPH-Dx         5-25-16         5-25-16           Percent Recovery 05-197-02         Control Limits 57         5-25-16         5-25-16         5-25-16           Percent Recovery 88         Control Limits 50-150         5-25-16         5-25-16         5-25-16           PV-1NE 05-197-03         05-197-03         5-25-16         5-25-16         5-25-16           Percent Recovery ND         57         NWTPH-Dx         5-25-16         5-25-16           Percent Recovery         Control Limits         5-25-16         5-25-16         5-25-16

Project: 16-029-C

# NWTPH-Dx QUALITY CONTROL

Matrix: Soil

A 1 . 4 .	<b>D K</b>	501	80.41	Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0525S2					
Diesel Range Organics	ND	25	NWTPH-Dx	5-25-16	5-25-16	
Lube Oil Range Organics	ND	50	NWTPH-Dx	5-25-16	5-25-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-14	17-06								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						95 91	50-150			

Project: 16-029-C

# % MOISTURE

Date Analyzed: 5-25-16

Client ID	Lab ID	% Moisture
PV-1SW	05-197-01	7
PV-1C	05-197-02	12
PV-1NE	05-197-03	12



#### **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-napthalene) 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.

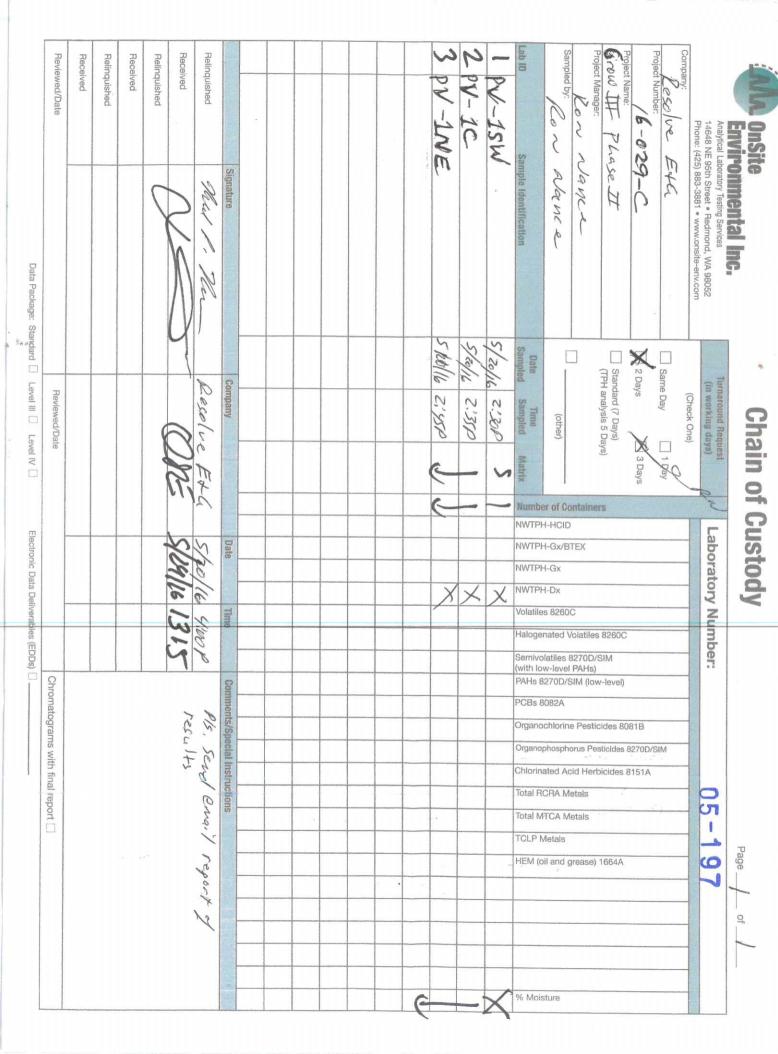
7 -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference







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

May 31, 2016

Ron Nance Resolve Environmental & Geotechnical, Inc. 8842 NE Lacey Street Indianola, WA 98342

Re: Analytical Data for Project 16-029D

Laboratory Reference No. 1605-247

Dear Ron:

Enclosed are the analytical results and associated quality control data for samples submitted on May 27, 2016.

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,

David Baumeister Project Manager

**Enclosures** 

Project: 16-029D

#### **Case Narrative**

Samples were collected on May 24 and 25, 2016 and received by the laboratory on May 27, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Project: 16-029D

#### **NWTPH-Dx**

Matrix: Soil

0 0 11 7				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HV-1 E. Wall					
Laboratory ID:	05-247-01					
Diesel Range Organics	ND	29	NWTPH-Dx	5-27-16	5-27-16	
Lube Oil Range Organics	ND	58	NWTPH-Dx	5-27-16	5-27-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	74	50-150				
Client ID:	HV-2 S. Wall					
Laboratory ID:	05-247-02					
Diesel Range Organics	ND	30	NWTPH-Dx	5-27-16	5-27-16	
Lube Oil Range Organics	ND	59	NWTPH-Dx	5-27-16	5-27-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	77	50-150				
Client ID:	HV-3 Floor					
Laboratory ID:	05-247-03					
Diesel Range Organics	ND	27	NWTPH-Dx	5-27-16	5-27-16	
Lube Oil Range Organics	ND	54	NWTPH-Dx	5-27-16	5-27-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				
Client ID:	HV-4 W. Wall					
Laboratory ID:	05-247-04					
Diesel Fuel #2	72	30	NWTPH-Dx	5-27-16	5-27-16	
Lube Oil Range Organics	ND	61	NWTPH-Dx	5-27-16	5-27-16 5-27-16	
Surrogate:	Percent Recovery	Control Limits		0 27 10	0 27 10	
o-Terphenyl	61	50-150				
o respirently	0,1	00 100				

Project: 16-029D

# NWTPH-Dx QUALITY CONTROL

Matrix: Soil

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527S1					
Diesel Range Organics	ND	25	NWTPH-Dx	5-27-16	5-27-16	
Lube Oil Range Organics	ND	50	NWTPH-Dx	5-27-16	5-27-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	71	50-150				

					Source	Perc	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Reco	very	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-21	3-14									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		N.	Α	NA	NA	NA	
Lube Oil	119	65.2	NA	NA		N.	Α	NA	58	NA	
Surrogate:											
o-Terphenyl						84	68	50-150			

Project: 16-029D

# % MOISTURE

Date Analyzed: 5-27-16

Client ID	Lab ID	% Moisture
HV-1 E. Wall	05-247-01	14
HV-2 S. Wall	05-247-02	15
HV-3 Floor	05-247-03	8
HV-4 W. Wall	05-247-04	18



#### **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-napthalene) 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.

7 -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference





# **Chain of Custody**

8270D/SIM	16-0290	OVCETAR		Phone: (425) 883-3881 * www.onsite-env.com	atory Testing Service h Street • Redmo	Environmental Inc.
81B 8270D/SIM			(Uneck One)	()	Turnaround Request (In working days)	
	8270D/S	M			0	Taga - C

Received	Relinquished	Received	Relinquished	Received	Relinquished								2	S	2	-	Lab ID	Sampled by:	- iojeor	Project	Projec	Company:	
	d		shed	94	ished Red P. Hen	Signature						#125-	HV-4 W. WO!	AV-3 Floor	HU-2 5. Wall	HV-1 E, Wall	Sample Identification	ed Dy: 1200 Nonce	RON NAME	Could Manager The Pr. T	Project Number: 16-029D	Resolve E+a	Phone: (425) 883-3881 • www.onsite-env.com
	-		(	1000	m Resolve Ex	Company							5/75/16 5:000 11	11 4.500 11	11 dohih 11	5/64/16 41:30 So;)	Date Time Sampled Sampled Matrix	(other)		Standard (7 Days) (TPH analysis 5 Days)	A2 Days 3 Days	Same Day 1 Day	(Check One)
				5/2/11/8/1918	S/26/16 10:69/4	Date Time						#	X	X	X	X	NWTPI NWTPI NWTPI Volatile Haloge	H-HCID H-Gx/E H-Gx H-Dx es 8260	or o	s 8260C			
					V	Comments/Special Instructions											(with lo PAHs & PCBs & Organo Chlorin Total R	w-leve 3270D/ 3082A ochlorir phosph ated A	I PAHs SIM (lo	w-level) icides 80 esticides	8270D/5	SIM	
																	TCLP	Vietals		1664A			
					COSC S/2/11/6 1918	Norm Resolve E+ 9 5/26/16 10:0	Company Date Time  Resolve Ex 9 Spoke 10:0  OSC SMILL 14	Company Date Time  Resolve Ex 9 S/26/16 10:69/4  OSC SMILL 1918	Company Date Time  Resolve Ex 9 S/26/16 10:69/4  OSC SMILL 1918	Company Date Time  Resolve Ex S SROM 10:00/4  Manual Manua	Company Date Time  Resolve Ex S SROM 10:00/4  Resolve Ex S SROM 10:00/4	Company Date Timo  Resolve E+ & S/R6/16 10:69/4  S/NAIL 1418	Company  Company  Date  Time  Resolve Ex S 576/16 10:094	1. Well 5/R5/16 5.000 11 C X  1. Wel	11 4:50 P 11 U X  12 None Company  Comp	11 4:500 11 4:500 11 4:500 11 4:500 11 4:500 11 4 X X X X X X X X X X X X X X X X X	Wall 5/6/16 41:30 So.;) \ Wall 11   5/6/16 41:30 P So.;) \ X   Wall   11   4.50 P   11   X   X   X   X   X   X   X   X	Sumpled Sampled Sample	Spanture  Signature  S	Signature  Signature	Samplad Sampled Containers  Not Help Containers  No	A	Sample   S



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

May 31, 2016

Ron Nance Resolve Environmental & Geotechnical, Inc. 8842 NE Lacey Street Indianola, WA 98342

Re: Analytical Data for Project Grow III Ph. II

Laboratory Reference No. 1605-254

Dear Ron:

Enclosed are the analytical results and associated quality control data for samples submitted on May 31, 2016.

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,

David Baumeister Project Manager

**Enclosures** 

Project: Grow III Ph. II

#### **Case Narrative**

Samples were collected on May 27, 2016 and received by the laboratory on May 31, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Project: Grow III Ph. II

#### **NWTPH-Dx**

Matrix: Soil

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HV-6 N Wall W					
Laboratory ID:	05-254-01					
Diesel Fuel #2	1500	29	NWTPH-Dx	5-31-16	5-31-16	
Lube Oil Range Organics	ND	88	NWTPH-Dx	5-31-16	5-31-16	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenvl	95	50-150				

Project: Grow III Ph. II

# NWTPH-Dx QUALITY CONTROL

Matrix: Soil

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0531S1					
Diesel Range Organics	ND	25	NWTPH-Dx	5-31-16	5-31-16	
Lube Oil Range Organics	ND	50	NWTPH-Dx	5-31-16	5-31-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	97	50-150				

					Source	Perc	ent	Recovery		RPD	
Analyte	Res	sult	Spike Level		Result	Recovery		Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-25	54-01									
	ORIG	DUP									
Diesel Fuel #2	1260	486	NA	NA		N/	4	NA	89	NA	
Lube Oil Range	ND	ND	NA	NA		N/	4	NA	NA	NA	U1
Surrogate:											
o-Terphenyl						95	90	50-150			

Project: Grow III Ph. II

% MOISTURE

Date Analyzed: 5-31-16

Client ID Lab ID % Moisture

HV-6 N Wall W 05-254-01 13



#### **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-napthalene) 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.

7 -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference



	70
	ac
	e
	1
1	-
	1
	0
	1
	1

□ Other (specify) □	Turn-around Time Requirement  ☐ Standard (10 Business days)  ☑ Rush (specify date needed)±	Samples intact? Received Via:	nt? in	Sample Receipt:	7 8 8 9 9 11 11		1 HV-6 N Wed W	esolving to the second
Received by:	Relinquished by:	Received by: M.V	Relinquished by:	Routine Disposal		1100	Date Time	Client Information  Whe Cases  Res Mark  Project Information  Ph. IT Sample  865-1843 Fax No  Weke Concost, net
(print)		(print) (print)	Ronala	0 0			Matrix	To bled b
(Signature)		(Signature)	1 P. Nance Hear	☐ Hazardous sample disposal (Cost of disposal will be billed to client)  Signature			Hazard Lab ID	Zip 98347
Company	Company	Company OSE	olve	Special Instructions  ant)  Special Instructions  Signatures (Name, Company Date, Time)			e desired parameters	Number of Containers  RCRA Metals: As Ba Cd Cr Pb Hg Se Ag  Priority Pollutant Metals: Sb As Be Cr Cr Cu Pb Hg Ni Se Ag TI Zn  503 Regs: As Cd Cu Pb Hg Mo Ni Se Zn  Metals (Specify):  BOD CBOD COD  HEM SGT (Oil & Grease/TPH)
Date	Date	Date \$\frac{3}{16}	EHG Date 5/27/16	Turnarand		×	if multiple tests a	HEM SGT (Oil & Grease/TPH)  Solids: TDS TSS TVS TVSS TS  Turbidity pH  Nitrate-N Ammonia-N Orthophosphate-P  Nitrate+Nitrite-N  TKN Total Phosphorous
_Time	Time	Time 1000	Time 1:02 PM				the same line	Ag Soil: pH and EC crop:



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

June 7, 2016

Ron Nance Resolve Environmental & Geotechnical, Inc. 8842 NE Lacey Street Indianola, WA 98342

Re: Analytical Data for Project 16-026K

Laboratory Reference No. 1606-049

Dear Ron:

Enclosed are the analytical results and associated quality control data for samples submitted on June 6, 2016.

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,

David Baumeister Project Manager

**Enclosures** 

Project: 16-026K

#### **Case Narrative**

Samples were collected on June 4, 2016 and received by the laboratory on June 6, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

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.

Project: 16-026K

#### **NWTPH-Dx**

Matrix: Soil

5 5 W 1 7	D #	DOL	BB . (1 1	Date	Date	<b>F</b> 1
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HV-6 North wall					
Laboratory ID:	06-049-01					
Diesel Fuel #2	180	28	NWTPH-Dx	6-6-16	6-6-16	
Lube Oil Range Organics	ND	57	NWTPH-Dx	6-6-16	6-6-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	98	50-150				
Client ID:	HV-7 NW wall					
Laboratory ID:	06-049-02					
Diesel Fuel #2	41	29	NWTPH-Dx	6-6-16	6-6-16	
Lube Oil Range Organics	ND	57	NWTPH-Dx	6-6-16	6-6-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	107	50-150				

Project: 16-026K

# NWTPH-Dx QUALITY CONTROL

Matrix: Soil

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0606S1					_
Diesel Range Organics	ND	25	NWTPH-Dx	6-6-16	6-6-16	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-6-16	6-6-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	108	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Res	Spike Level		Result	Recovery	Limits	RPD	Limit	Flags	
DUPLICATE										
Laboratory ID:	06-03	37-04								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	U1
Lube Oil	103	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						93 106	50-150			

Project: 16-026K

# % MOISTURE

Date Analyzed: 6-6-16

Client ID	Lab ID	% Moisture
HV-6 North wall	06-049-01	12
HV-7 NW wall	06-049-02	13



#### **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-napthalene) 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.

7 -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference





# **Chain of Custody**

	_
	Pag
	0
	ļ
	of
	-
ı	

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished Hall P. Haure	Signature				2 HV-7 NW Wall	1 HV-6 North Wall & E	Lab ID Sample Identification	Sampled By: RON Nance	RON Nance	Grow III Phase II	16-026K	Resolve E+6	14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com
Reviewed/Date					1	R. Namo Resolve Extor	Company				6/4/16 8:30 A Soil	6/4/16 8:15A Soil	Date Time Sampled Sampled Matrix	(other)	ontaine	Standard (7 Days) (TPH analysis 5 Days)	2 Days 3 Days	Same Day X 1 Day	(In working days)
					0051 911919	6/4/16 11:3014	Date Time				X	*	NWTPI NWTPI NWTPI Volatile Haloge Semivo (with lo	H-Gx/B H-Gx H-Dx es 8260 enated \text{\text{Parameters}}	C Volatile:		,	3	Laboratory Number:
Chromatograms with final report				be affected 15 time and	- 7	Email results please of a	Comments/Special Instructions						PAHs & PCBs & Organo Organo Chlorin Total R Total M	3270D/3 3082A ochlorin ophosph ated Ar CCRA M TTCA M Wetals bill and o	SIM (lo	w-level) cides 8( esticides bicides	081B 8270D/		Ub-U49

Data Package: Standard 
Level III 
Level IV

Electronic Data Deliverables (EDDs) [] .

# **SELECTED PHOTOGRAPHS**



1. Initial
excavation for
characterization
began in the
eastern portion of
the Grow
Community
Phase III site.
Covered piles of
contaminated
soils can be seen
in the
background.



2. Several initial test pit locations were excavated for soils characterization. Building H is the concrete structure to the left of the photo.



3. Beneath the fill and topsoil, some of the gray silty sand with gravel and sand were found to be contaminated with diesel range hydrocarbons.



4. These conduits were being emplaced when the contamination was initially discovered.



5. Obvious decreases in contamination along the margins of the excavation were noted. Some expansion of the plume was observed as remediation was underway.



6. Samples were collected for laboratory testing from walls and floors of the trench area excavation.



7. The western portion of the site was excavated beyond what appeared to be the margins of the plume, to where contamination was no longer indicated or suspected.



8. Following approval of undermining by structural and geotechnical engineers, contaminated soils were removed from beneath Building H.



9. Excavation proceeded beneath Building H until it was determined that contamination was either very low in concentration or not present.



10. A total of five feet was excavated beneath Building H in order to verify that contaminated soils had been removed.