GeoConsulting, Inc.

Environmental Geoscience

15306 Plainview Place
Monroe, Washington 98272
(425) 350-7645
JimCoppernoll@outlook.com

July 25, 2016

Rae Cho
PSY Contractors LLC.
22321 Mountain Highway
Spanaway, Washington 98387

Subject: ***Site Check Report***
Wagon Wheel Market
22321 Mountain Highway
Spanaway, Washington 98387

Dear Mr. Cho

In accordance with your request, GeoConsulting, Inc. (GeoConsulting) conducted a Site Check on July 8, 2016 at the above-referenced property. This letter report documents our Site Check procedures and results.

PROJECT DESCRIPTION AND BACKGROUND

The Site is located on the northeast corner at the intersection of Mountain Highway East and 224th Street E in Spanaway, Washington. At approximately 425 feet above sea level, the site slopes very slightly to the northwest. The neighborhood is highway commercial with retail stores and restaurants adjoining to the north, east and west.

According to Pierce County Assessor records, the site consists of a 1.3-acre irregular-shaped parcel improved with a 3,912-square-foot market building with gasoline sales built in 1987.[i] United States Geological Survey maps indicate that unconsolidated gravel and sand of the Steilacoom Gravel formation deposited by glacial outwash during glacial recession underlie the site.[ii]

According to Washington State Department of Ecology records, two 6,000-gallon, one 12,000-gallon, and one 10,000-gallon single-wall fiberglass reinforced plastic USTs were installed on the Property in 1987 and upgraded in 1997. The tanks contain gasoline and diesel fuel for retail sale. Product lines are double wall fiberglass and the system is monitored electronically. The UST system is equipped with automatic tank gauging and automatic line leak detection.[iii]

Contamination was first discovered at the Property in 1990. Characterization and remediation occurred from 1990 until a NFA letter was issued by the Washington Department of Ecology (WDOE) in 2011.[iv] In response to a failed tightness test for the plus gasoline UST (T2) on May 18, 2016, the WDOE issued a Notice of Non-compliance on May 23, 2016 requiring a Site Check to investigate for the presence of a release from UST T2, containing unleaded gasoline.[v]

INVESTIGATIVE ACTIVITIES

The purpose of this Site Check was to investigate the Property for the presence of a release from UST T2, as the failed May 18, 2016 tightness test indicates potentially occurred.

On July 8, 2016, James Coppernoll, a Washington state-licensed hydrogeologist and registered Site Check/Site Assessor from GeoConsulting, Inc. conducted a Site Check at the Wagon Wheel Market. The Site Check included the

following tasks:

- Review available background information on the UST and contamination history of the site;
- Review available information regarding the topographic, groundwater, and soil conditions at the site;
- Inspect the site for surface indications of a release;
- Purge and sample groundwater monitoring well MW-4, located approximately 10 feet west of UST T2;
- Deliver the groundwater sample from MW-4 to a qualified analytical laboratory for analysis; and
- Evaluate the results and prepare this Site Check Report with findings and conclusions.

Previous investigators have reported that the groundwater migration direction across the site is toward the northwest at a depth of approximately 35 to 40 feet below site grade. Monitoring well MW-4 is located approximately 10 feet west of UST T2 and therefore well positioned for assessment of a potential release from the UST. Groundwater was encountered in the well at approximately 35 feet below the ground surface. A new disposable polyethylene bailer was used to bail approximately three well-volumes from the well and the well was allowed to recover prior to collecting the sample. The sample was decanted from the bailer directly into laboratory-prepared containers, sealed, labeled, and placed in a cooler for transport to the laboratory under chain-of-custody procedures. OnSite Environmental, Inc. analyzed the sample for gasoline-range total petroleum hydrocarbons by Department of Ecology Method NWTPH-Gx; benzene, ethylbenzene, toluene, xylenes, MTBE and EDC by EPA Method 8260C; and EDB by EPA Method 8011.

RESULTS

No surface indications of a release were noted during the Site Check. However, OnSite Environmental, Inc. reported gasoline-range total petroleum hydrocarbons at 20,000 micrograms per liter (µg/l), benzene at 340 µg/l, toluene at 1,800 µg/l, ethylbenzene at 200 µg/l, and xylenes at 1,920 µg/l. The following table summarizes the groundwater analytical results:

Sample ID	Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	EDC (µg/L)	EDB (µg/L)
MW-4	07/8/16	20000	340	1800	200	1920	<10	<10	<0.0095
Method A Cleanup Level		800 µg/l / 1,000 µg/l*	5 µg/l	1,000 µg/l	700 µg/l	1,000 µg/l	20 µg/l	5 µg/l	0.01 µg/l
Laboratory Methods		NWTPH-Gx	8260C	8260C	8260C	8260C	8260C	8260C	EPA 8011

NWTPH-Gx = Northwest method for gasoline-range hydrocarbons.

<1.0 - Indicates concentrations were less than the stated laboratory reporting limit of 1.0 ug/L.

µg/L - Micrograms per liter.

800 µg/l / 1,000 µg/l* = The cleanup level is 800 µg/l when benzene is not present and 1,000 µg/l when benzene is present.

Analytical results were compared to Washington Department of Ecology Model Toxics Control Act Method A Cleanup Levels. The results are above the Cleanup Levels for gasoline-range total petroleum hydrocarbons, benzene, toluene, and xylenes.

Site Check Report
Wagon Wheel Market
22321 Mountain Highway
Spanaway, Washington 98387

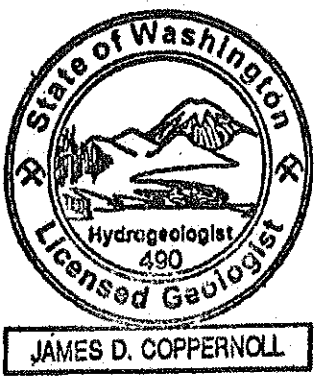
CONCLUSION

Based on the laboratory results from the groundwater sample collected on July 8, 2016 from on-site monitoring well MW-4, a release has occurred resulting in gasoline, benzene, toluene, and xylenes above Method A cleanup levels in the groundwater.

We appreciate the opportunity to be of service to you and would be pleased to discuss the contents of this proposal or other aspects of the project with you at your convenience.

Sincerely,
GeoConsulting, Inc.

James D. Coppernoll, L.G., L.HG., WA Site Assessor #
President



Attachments:
Site Location Map
Site and Sample Location Map
Analytical Laboratory Report
Site Check/Site Assessment Checklist

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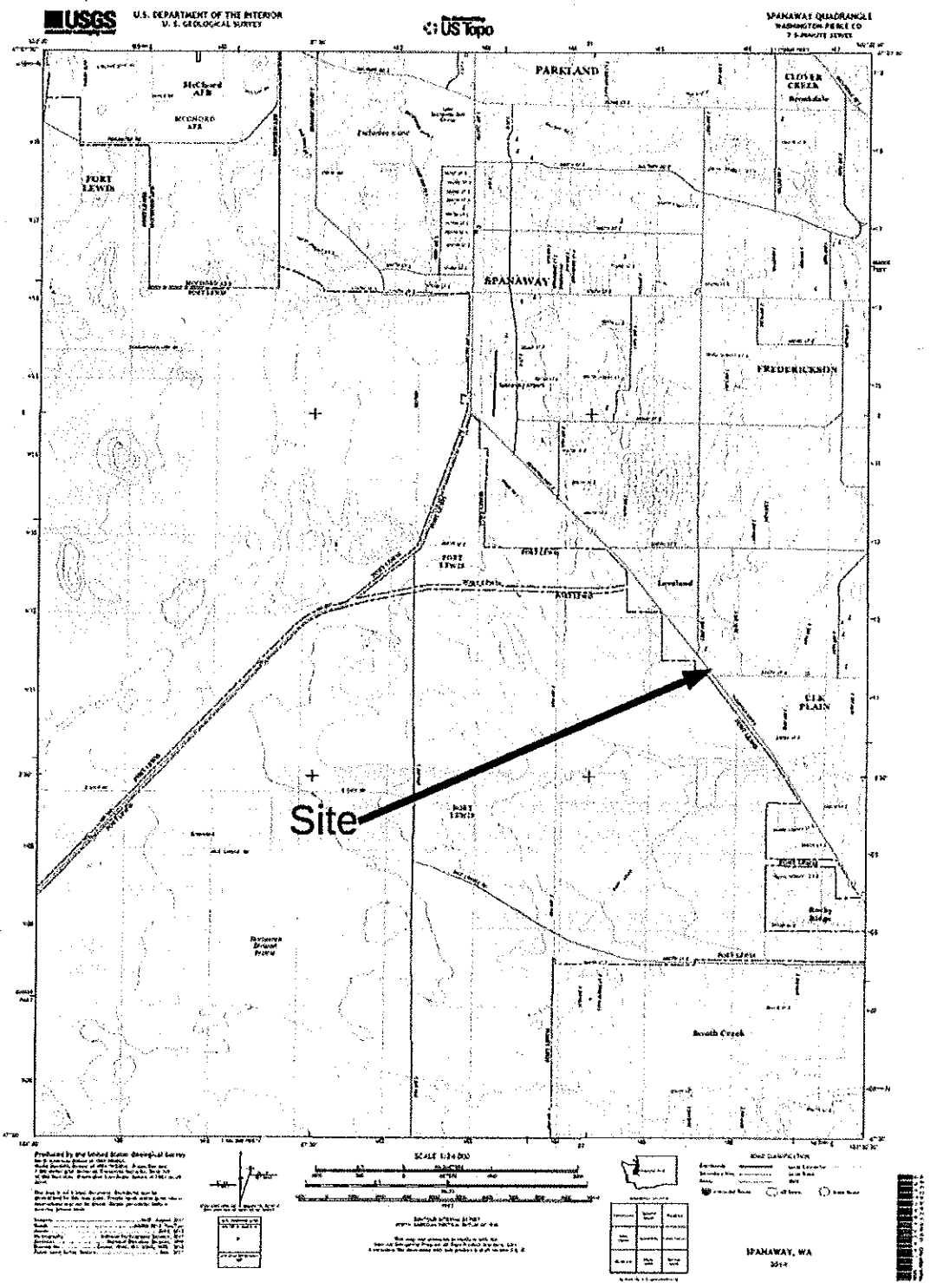
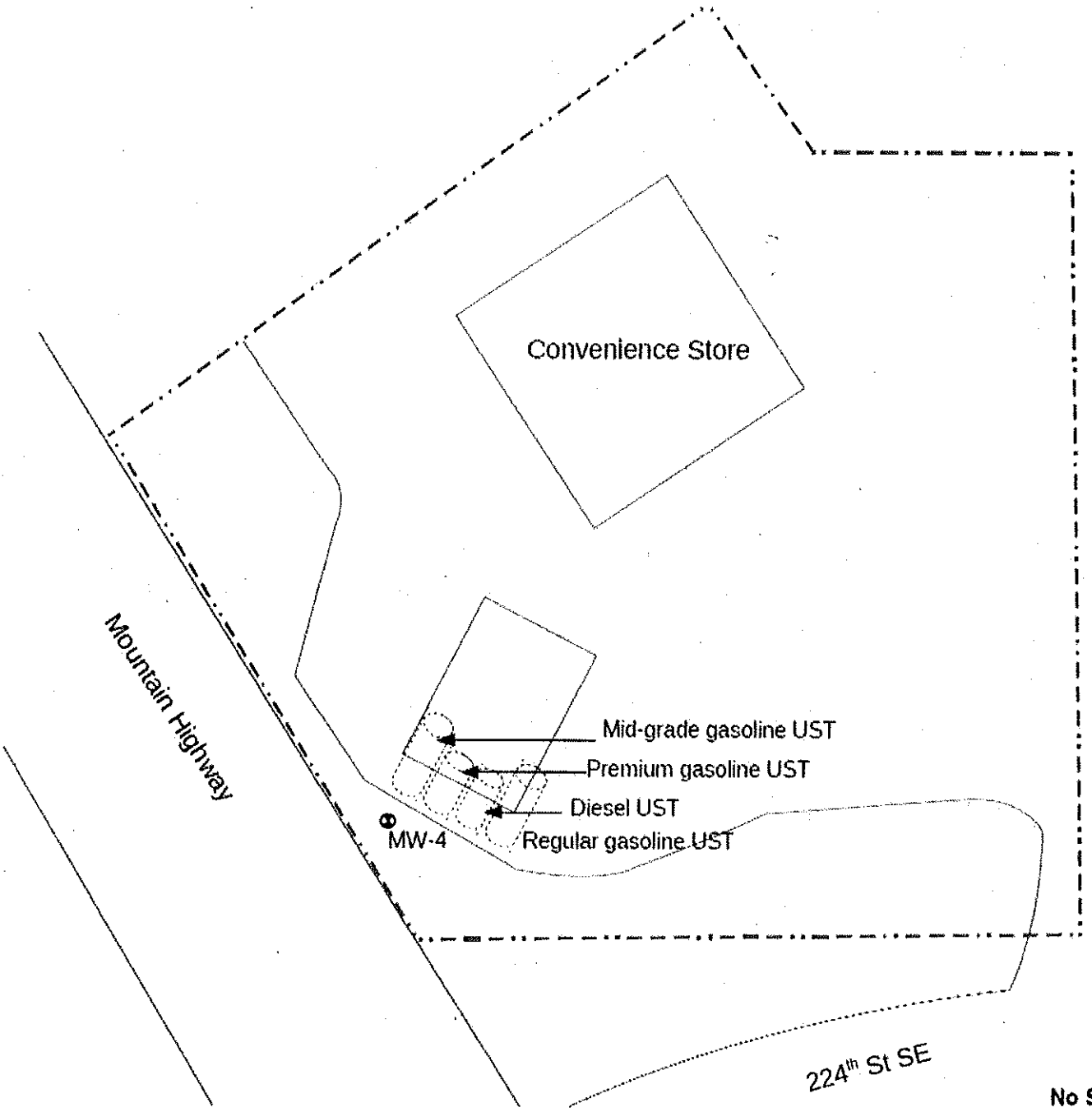
[i] Pierce County Assessor-Treasurer Electronic Property Information Profile, *https://epip.co.pierce.wa.us/cfapps/atr/epip/searchResults.cfm*, July 18, 2016.
[ii] Jones, M. A., 1998, *Geologic Framework for the Puget Sound Aquifer System, Washington and British Columbia, USGS Professional Paper 1424-C.*
[iii] Washington State Department of Ecology Toxics Cleanup Program Web Reporting, Regulated USTs, Active Facilities, *https://fortress.wa.gov/ecy/tcpwebreporting/report.aspx*, July 18, 2016.
[iv] Rose, Scott, L.G., State of Washington Department of Ecology, January 24, 2011 (Letter), *No Further Action at the following Site: Site Name: Wagon Wheel Market (a.k.a. Former Big O's Deli); Site Address: 22321 Mountain Highway E, State Route 7, Spanaway; Facility/Site No.: 1310; VCP Project No.: SW0837.*
[v] Washington State Department of Ecology, Site Information, Site Summary Report, *https://fortress.wa.gov/ecy/neighborhood/?lat=47.05369&lon=-122.39789*, July 18, 2016.



Site Location Map

Wagon Wheel Market
22321 Mountain Highway
Spanaway, Washington 98387

GeoConsulting, Inc.
July 13, 2016



Groundwater monitoring well

Figure 2 – Site Map

Wagon Wheel Market
22321 Mountain Highway
Spanaway, Washington 98387

GeoConsulting, Inc.
July 13, 2016

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

July 19, 2016

Jim Coppernoll
GeoConsulting, Inc.
15306 Plainview Place
Monroe, WA 98272

Re: Analytical Data for Project Spanaway
Laboratory Reference No. 1607-066

Dear Jim:

Enclosed are the analytical results and associated quality control data for samples submitted on July 11, 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

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

Case Narrative

Samples were collected on July 8, 2016 and received by the laboratory on July 11, 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.

BTEX/MTBE/EDC EPA 8260C Analysis

The MTCA Method A cleanup level for EDC is non-achievable due to the necessary dilution of the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-066-01					
Gasoline	**20000**	400	NWTPH-Gx	7-12-16	7-12-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*71-111*				

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0712W1					
Gasoline	**ND**	100	NWTPH-Gx	7-12-16	7-12-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-111*				

Analyte	Result		Spike Level	Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-077-01									
	ORIG	DUP								
Gasoline	**2680**	**2250**	NA	NA	NA		NA	17	30	
Surrogate:										
Fluorobenzene					*97*	*93*	*71-111*			

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

BTEX/MTBE/EDC
EPA 8260C

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-066-01					
Methyl t-Butyl Ether	ND	10	EPA 8260C	7-11-16	7-11-16	
Benzene	340	10	EPA 8260C	7-11-16	7-11-16	
1,2-Dichloroethane	ND	10	EPA 8260C	7-11-16	7-11-16	
Toluene	1800	50	EPA 8260C	7-11-16	7-11-16	
Ethylbenzene	200	10	EPA 8260C	7-11-16	7-11-16	
m,p-Xylene	1400	20	EPA 8260C	7-11-16	7-11-16	
o-Xylene	520	10	EPA 8260C	7-11-16	7-11-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*71-131*				
Toluene-d8	*95*	*80-127*				
4-Bromofluorobenzene	*97*	*80-125*				

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

BTEX/MTBE/EDC
EPA 8260C
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0711W1					
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-16	7-11-16	
Benzene	ND	0.20	EPA 8260C	7-11-16	7-11-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-16	7-11-16	
Toluene	ND	1.0	EPA 8260C	7-11-16	7-11-16	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-16	7-11-16	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-16	7-11-16	
o-Xylene	ND	0.20	EPA 8260C	7-11-16	7-11-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*71-131*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*97*	*80-125*				

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

BTEX/MTBE/EDC
EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0711W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.23**	**8.24**	10.0	10.0	82	82	62-132	0	20	
Benzene	**9.19**	**9.28**	10.0	10.0	92	93	76-121	1	15	
Trichloroethene	**8.87**	**8.69**	10.0	10.0	89	87	65-115	2	15	
Toluene	**9.58**	**9.26**	10.0	10.0	96	93	78-120	3	15	
Chlorobenzene	**9.82**	**9.44**	10.0	10.0	98	94	77-118	4	15	
Surrogate:										
Dibromofluoromethane					*95*	*100*	*71-131*			
Toluene-d8					*98*	*93*	*80-127*			
4-Bromofluorobenzene					*97*	*90*	*80-125*			

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

1,2-DIBROMOETHANE (EDB)
EPA 8011

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	07-066-01					
EDB	**ND**	0.0095	EPA 8011	7-18-16	7-18-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*53*	*25-143*				

Date of Report: July 19, 2016
Samples Submitted: July 11, 2016
Laboratory Reference: 1607-066
Project: Spanaway

1,2-DIBROMOETHANE (EDB)
EPA 8011
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0718W1					
EDB	**ND**	0.010	EPA 8011	7-18-16	7-18-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*82*	*25-143*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0718W1										
	SB	SBD	SB	SBD		SB	SBD				
EDB	**0.0961**	**0.0982**	0.100	0.100	N/A	**96**	**98**	77-128	2	15	
Surrogate:											
TCMX						*85*	*89*	*25-143*			

OnSite Environmental Inc.

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.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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

Page 1 of 1

Company: GeoConsulting, Inc
Project Number:
Project Name: Spanaway
Project Manager: J.M Coppernoll
Sampled by: J.M Coppernoll

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: 07-066

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (with 8260B)	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	TDS						% Moisture
1	mw-4	7/8/16	1315	w	9		X														X						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GeoConsulting, Inc	7/9/16	910 AM	
Received			7/9/16	910	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report

DEPARTMENT OF ECOLOGY
State of Washington

UST ID #: _____

County: _____

SITE CHECK/SITE ASSESSMENT CHECKLIST

FOR UNDERGROUND STORAGE TANKS

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360 WAC. Instructions are found on the last page.

I. UST FACILITY	II. OWNER/OPERATOR INFORMATION
Facility Compliance Tag #: 3058	Owner/Operator Name: Rae H. Cho
UST ID #: 100643	Business Name: Wagon Wheel Market
Site Name: Wagon Wheel Market	Address: 22321 Mountain Highway East
Site Address: 22321 Mountain Highway East	City: Spanaway State: WA Zip: 98272
City: Spanaway	Phone: 253-847-4328
Phone:	Email: spanawayshell@gmail.com

III. CERTIFIED SITE ASSESSOR	
Service Provider Name: James D. Coppernoll	Company Name: GeoConsulting, Inc.
Cell Phone: 425-350-7645 Email: jim.geoconsulting@gmail.com	Address: 15306 Plainview Place
Certification #: ICC-32003446 Exp. Date: 6/15/2018	City: Monroe State: WA Zip: 98272

IV. TANK INFORMATION

TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
T1	10000	Gasoline	June 8, 2016
T2	12000	Gasoline	June 8, 2016
T3	12000	Gasoline	June 8, 2106
T4	6000	Diesel	June 8, 2016

V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)

- ☐ Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).
- ☒ Release investigation following a failed tank and/or line tightness test.
- ☐ Release investigation following discovery of contaminated soil and/or groundwater.
- ☐ Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.
- ☐ UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).
- ☐ Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.
- ☐ Other (describe):

VI. Checklist

The site assessor must check each of the following items and include it in the report. Sections referenced below can be found in the Ecology publication *Guidance for Site Checks and Site Assessments for Underground Storage Tanks.*	YES	NO
1. The location of the UST site is shown on a vicinity map.	☒	☐
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	☒	☐
3. A summary of UST system data is provided (Section 3.1)	☒	☐
4. The soils characteristics at the UST site are described. (Section 5.2)	☒	☐
5. Is there any apparent groundwater in the tank excavation? N/A	☐	☐
6. A brief description of the surrounding land use is provided. (Section 3.1)	☒	☐
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	☒	☐
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	☒	☐
• If applicable, groundwater samples are distinguished from soil samples	☒	☐
• Location of samples collected from stockpiled excavated soil N/A	☐	☐
• Tank and piping locations and limits of excavation pit N/A	☐	☐
• Adjacent structures and streets	☒	☐
• Approximate locations of any on-site and nearby utilities N/A	☐	☐
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	☒	☐
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	☒	☐
11. Any factors that may have compromised the quality of the data or validity of the results are described.	☒	☐
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	☒	☐

VII. Required Signatures

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360-360 through -395.

James D Copperno II	James D. Copperno II	7/25/16
Print or Type Name	Signature of Certified Site Assessor	Date