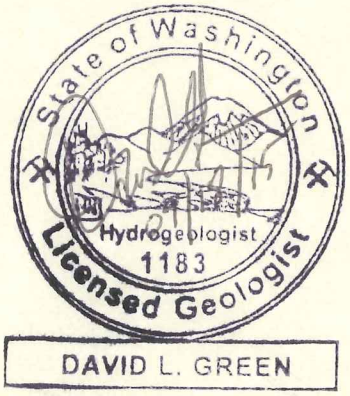
Groundwater Monitoring Report

For the GearJammer Truck Plaza
2310 Rudkin Road,
Union Gap, WA 98903

Prepared For:

GearJammer, Inc.
2310 Rudkin Road
Union Gap, WA 98903

Prepared By:



SAGE
Earth Sciences, Inc.

1705 S. 24th Ave.
Yakima, WA 98902

September 18, 2015

Executive Summary

The GearJammer Truck Plaza is located at 2310 Rudkin Road, Union Gap, WA. Sage Earth Sciences, Inc. was retained to collect and analyze a groundwater sample from Monitoring Well #3 to assess petroleum hydrocarbon concentrations. Sage conducted the limited groundwater monitoring field activities on August 31, 2015.

Sage checked for the presence of Light Non-Aqueous Phase Liquid (petroleum product), and collected Depth to Water (DTW) measurements, using a Solinst 122 interface probe during groundwater monitoring activities. No petroleum product was indicated by the interface probe. Sage observed no petroleum sheen or diesel odors during the sampling process.

Sage collected a groundwater samples (GTP-0117-MW3) from Monitoring Well #3 on August 31, 2015. Sage submitted the groundwater samples to Friedman & Bruya, Inc. (FBI), Seattle, WA for analysis using the following methods: 8021B/NWTPH-Gx (gasoline range and aromatic petroleum hydrocarbons) and NWTPH-Dx (diesel range petroleum hydrocarbons extended to include motor oil range compounds).

With the exception of diesel range petroleum hydrocarbons, the FBI independent laboratory analysis of the Groundwater Monitoring Well #3 sample found no detectable petroleum hydrocarbons. The FBI independent laboratory analysis found diesel range petroleum hydrocarbons at a concentration of 500 µg/L (ppb). Diesel range petroleum hydrocarbon concentrations were found to exceed the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 at the Monitoring Well #3 location for this sampling event. Sage recommends that purge water generated during monitoring well sampling activities be uncovered and allowed to evaporate. It should be covered during period of precipitation.

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1.0 Introduction

1.1 Purpose

The purpose of this report is to describe findings associated with limited groundwater monitoring activities at the GearJammer Truck Plaza located in Union Gap, Washington. These activities were performed to assess petroleum hydrocarbon concentrations in Monitoring Well #3, where diesel and heavy oil range petroleum hydrocarbons were historically found.

1.2 Scope of Work

Sage Earth Sciences, Inc. (Sage) performed sampling of Monitoring Well #3 and groundwater gradient characterization services. Groundwater samples were submitted to Friedman and Bruya, Inc. (FBI), Seattle, WA for independent laboratory analysis.

1.3 Site Location

The GearJammer Truck Plaza is located at 2310 Rudkin Road, Union Gap, WA. It is situated within the NE 1/4 of the SE 1/4, Section 32, Township 13 North, Range 19 East, Willamette Meridian. The Monitoring Well #3 latitude is approximately 46° 34' 3.8" and the longitude is approximately 120° 28' 22.4. The location of Monitoring Well #3 is shown by Figure 1.

2.0 Groundwater Monitoring

Rodney L. Heit, licensed by the International Code Council, collected the groundwater sample and Depth to Groundwater (DTW) measurements during groundwater monitoring activities. Sage conducted field activities on August 31, 2015.

2.1 Groundwater Gradient Monitoring

Sage checked for the presence of Light Non-Aqueous Phase Liquid (petroleum product), and collected Depth to Water (DTW) measurements, using a Solinst 122 interface probe during groundwater monitoring activities. No petroleum product was indicated by the interface probe. Groundwater level and survey data are included in Table 1. The water levels appear to represent the uppermost portion of an unconfined water-bearing unit.

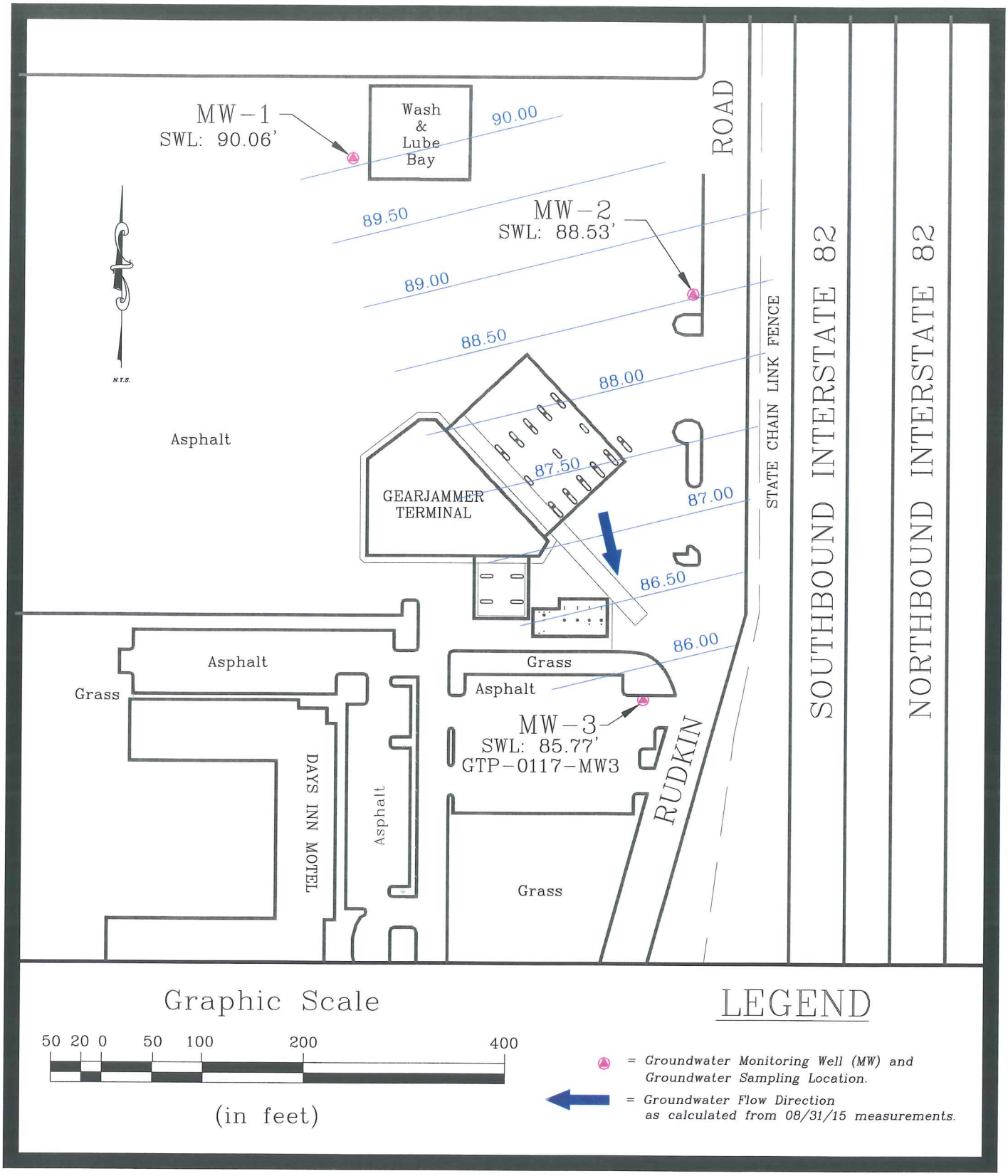

Figure 1. Groundwater Sampling Location & Water Table Contours on August 31, 2015

Table 1. Well Survey and Groundwater Level Data

Well ID	Date	Top of Casing Elevation (TBM)	Measured Depth to Groundwater (feet TOC)	Relative Groundwater Elevation (feet)	Change From Previous Elevation (feet)
MW-1	10/16/14	98.87	8.56	90.31	--
	02/23/15		10.31	88.56	-1.75
	06/01/15		9.63	89.24	+0.68
	08/31/15		8.81	90.06	+0.82
MW-2	10/16/14	97.20	8.44	88.76	--
	02/23/15		9.96	87.24	1.52
	06/01/15		9.36	87.84	+0.60
	08/31/15		8.67	88.53	+0.69
MW-3	10/16/14	95.56	9.79	85.77	--
	02/23/15		10.42	85.14	0.63
	06/01/15		10.45	85.11	-0.03
	08/31/15		9.79	85.77	+0.66

TBM – Relative to Temporary Bench Mark, BGS – Below Ground Surface, TOC – Relative to Top Of Casing

On August 31, 2015, the groundwater surface was found to lie at depths ranging from 8.67 to 9.79 feet below top of casing in the wells. The local groundwater gradient was calculated to be approximately 0.007 ft/ft from the north-northwest toward the south-southeast as shown by Figure 1.

2.2 Groundwater Sampling & Analysis

Sage collected a groundwater samples (GTP-0117-MW3) from Monitoring Well #3 on August 31, 2015. Sage collected the groundwater sample using methods described in Appendix A. The *Monitoring Well Sampling Log* (Appendix B) provides sampling observations. Sage observed no petroleum sheen or diesel odors during the sampling process. Approximately 10 gallons of well purge water was placed in barrels temporarily stored at the northern portion of the subject property.

Sage submitted the groundwater sample to Friedman & Bruya, Inc. (FBI), Seattle, WA for analysis using the following methods: 8021B/NWTPH-Gx (gasoline range and aromatic petroleum hydrocarbons) and NWTPH-Dx (diesel range petroleum hydrocarbons extended to include motor oil range compounds). The monitoring well and groundwater sampling location is shown by Figure 1.

FBI analytical results for the Monitoring Well #3 sample are summarized by Table 2. Comparison of the analytical results (Appendix C) with the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 (Appendix D) indicates that remedial action is required at the Groundwater Monitoring Well #3 sampling location for this groundwater sampling event to reduce diesel range petroleum hydrocarbon concentrations.

Table 2. FBI Analytical Results for Groundwater Monitoring Well #3 Samples

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
GTP-0114-MW3	10/16/14	<1	<1	<1	<3	<100	370	<250
GTP-0115-MW3	02/23/15	<1	<1	<1	<3	<100	62	<250
GTP-0116-MW3	06/01/15	<1	<1	<1	<3	<100	**2,100**	310
GTP-0117-MW3	08/31/15	<1	<1	<1	<3	<100	**500**	<250

Red Font indicates that concentration exceeds Method A Cleanup Levels of WAC 173-340-720
Green Font indicates that concentration does not exceed Method A Cleanup Levels of WAC 173-340-720
ug/L = parts per billion

3.0 Conclusions

With the exception of diesel range petroleum hydrocarbons, the FBI independent laboratory analysis of the Groundwater Monitoring Well #3 sample found no detectable petroleum hydrocarbons. The FBI independent laboratory analysis found diesel range petroleum hydrocarbons at a concentration of 500 µg/L (ppb). Diesel range petroleum hydrocarbon concentrations were found to exceed the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 at the Monitoring Well #3 location for this sampling event. Sage recommends that purge water generated during monitoring well sampling activities be uncovered and allowed to evaporate. It should be covered during period of precipitation.

4.0 Limitations

In performance of this project, Sage Earth Sciences has conducted its activities in accordance with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. The conclusions are based upon our field observations and independent laboratory analyses. Since the scope of work for this project is confined to sampling and analysis of Monitoring Well #3 for petroleum hydrocarbons and groundwater gradient characterization services, this document does not imply that the property is free of other environmental constraints. This report is solely for the use and information of our client. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and other parameters indicated. Sage Earth Sciences, Inc. is not responsible for the impacts of changes in environmental standards, practices, or regulations subsequent to the performance of services. Sage Earth Sciences, Inc. does not warrant the accuracy of information supplied by others, nor use of segregated portions of this report. Sage Earth Sciences, Inc. assumes no liability for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Appendix A

Groundwater Sampling Methodology – Low Flow Purging

Prior to introducing groundwater-sampling equipment into the monitoring well, Sage collected a Depth to Water (DTW) measurement and checked for the presence of floating product (LNAPL) on the water table using a Solinst Model 122 Interface Probe. DTW measurements are recorded on the Daily Field Sampling Log.

Unless sampling was conducted immediately after well development, Sage purged a minimum of three well column volumes of water from each well, prior to collecting groundwater samples, to introduce formation water into each well. Each well was purged using a Geotech Series II® Peristaltic Pump using a flow rate less than 1.0 liter per minute to minimize drawdown of the well. The flow rate was determined by measuring the volume of effluent collected in a graduated beaker in one-minute intervals (mL/min).

The peristaltic pump operates by mechanical peristalsis so the sample is only exposed to new polyethylene sampling tubing and norprene tubing. Water was pumped from depths between 2 feet and 3 feet below the water table. Pumped water was discharged into a 5-gallon pail for transfer into Investigative Derived Waste (IDW) storage barrels.

When three (3) well column volumes of water were purged from the well, water was discharged from the pump system directly into laboratory supplied sample containers. Sample containers consisted of:

- 40 mL VOA's preserved with HCl for NWTPH-G/VOC analysis,
- 500 mL amber jars with no preservative for NWTPH-Dx/SVOC analysis and
- 500 mL Poly containers preserved with HNO_3 for metals analysis.

Upon filling each sample container, the following methodology for sample handling was used:

1. Replace the sample container cap. Invert VOA's to ensure there is no airspace in the sample.
2. Label sample containers with a unique identification number, the analytical procedure to be used, the time/date of sample collection, and sample preservation method.
3. Log each sample on the Chain-of-Custody form.
4. Place samples in coolers containing wet ice to cool the samples to 4°C ± 2°C until transferred to a refrigerator at the Sage office for temporary storage.
5. Samples were packed on the day of transport in a shipping cooler packed with absorbent material and blue ice for shipment to the fixed laboratory.
6. The signed Chain-of-Custody forms were taped on the underside of the cooler lid in a sealed plastic bag.
7. The lid of the cooler was secured with strapping tape and custody seals were affixed across the lid/cooler interface. Appropriate waybills were taped to the top of the cooler.
8. The samples were transported to the fixed analytical laboratory via commercial carrier.

Appendix B

Daily Field Sampling Log

Project# GTP-0117 Date 8-31-2015

Field Crew Rodney Heit

Sheet 1 of 1

Partly Cloudy Breezy 74°F

Time	Sample #	Sample Location	Matrix	Staining	Odors	Depth	TOV	TLC
10:05	NA	Monitoring well #1	water	No	No	8.81	—	—
10:20	NA	Monitoring well #2	Water	NA	NA	8.67	—	—
11:48 (0:39)	GTP-0117-MW3	Monitoring well #3	water	None	None	9.79	—	—

Ambient Vapors NA Units

TLC Standards NA

Appendix C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 10, 2015

Rodney Heit, Project Manager
Sage Earth Sciences, Inc.
1705 S 24th Ave
Yakima, WA 98902

Dear Mr. Heit:

Included are the results from the testing of material submitted on September 1, 2015 from the GTP-0117, F&BI 509011 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
SES0910R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 1, 2015 by Friedman & Bruya, Inc. from the Sage Earth Sciences GTP-0117, F&BI 509011 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Sage Earth Sciences
509011 -01	GTP-0117-MW3

All quality control requirements were acceptable.

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011
Date Extracted: 09/02/15
Date Analyzed: 09/02/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
GTP-0117-MW3 509011-01	<1	<1	<1	<3	<100	94
Method Blank 05-1751 MB	<1	<1	<1	<3	<100	95

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011
Date Extracted: 09/03/15
Date Analyzed: 09/03/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
GTP-0117-MW3 509011-01	500 x	<250	77
Method Blank 05-1801 MB	<50	<250	81

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 509019-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	95	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	102	101	63-142	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

509011

ME 09-01-15

C04/11

SAGE Earth Sciences, Inc.

CHAIN OF CUSTODY

1705 South 24th Avenue
Yakima, WA 98902
Phone (509) 834-2333
Fax (509) 834-2334
info@sage-earth-sciences.com

Sampler: Rodney L Heit
Project ID: GTP-0117
Location: Gary Johnson Truck Plaza
Turn-around Time: Standard
Sampler Signature: Rodney L Heit
Date: 8/31/15

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	Sample Size	# of containers	NWTPH-HCID + BETX	NWTPH-Gx	NWTPH-Dx	Method 8260B	Method 8270	Method 6010/200.	Total Lead	Lab Archive	Notes:
GTP-0117-MW 3	01A-C	8/31/15	11:48	Water	2-40ml-Soils	3		X	X						

Laboratory Destination:

Friedman & Bruya, Inc.
3012 – 16th Avenue West
Seattle, WA 98119-2029
Phone (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Relinquished By	Rodney L Heit	Rodney L Heit	Sage Earth Sciences, Inc.	8/31/15	12:10
Received By	Nhan Phan	Nhan Phan	FedEx	9/1/15	0830
Relinquished By					
Received By					

Samples received at 4 °C

Appendix D

Table 720-1
Method A Cleanup Levels for Ground Water.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5 ug/liter[b]
Benzene	71-43-2	5 ug/liter[c]
Benzo(a)pyrene	50-32-8	0.1 ug/liter[d]
Cadmium	7440-43-9	5 ug/liter[e]
Chromium (Total)	7440-47-3	50 ug/liter[f]
DDT	50-29-3	0.3 ug/liter[g]
1,2 Dichloroethane (EDC)	107-06-2	5 ug/liter[h]
Ethylbenzene	100-41-4	700 ug/liter[i]
Ethylene dibromide (EDB)	106-93-4	0.01 ug/liter[j]
Gross Alpha Particle Activity		15 pCi/liter[k]
Gross Beta Particle Activity		4 mrem/yr[l]
Lead	7439-92-1	15 ug/liter[m]
Lindane	58-89-9	0.2 ug/liter[n]
Methylene chloride	75-09-2	5 ug/liter[o]
Mercury	7439-97-6	2 ug/liter[p]
MTBE	1634-04-4	20 ug/liter[q]
Naphthalenes	91-20-3	160 ug/liter[r]
PCB mixtures		0.1 ug/liter[s]
Radium 226 and 228		5 pCi/liter[t]
Radium 226		3 pCi/liter[u]
Tetrachloroethylene	127-18-4	5 ug/liter[v]
Toluene	108-88-3	1,000 ug/liter[w]
Total Petroleum Hydrocarbons[x]		
[Note: Must also test for and meet cleanup levels for other petroleum components--see footnotes!]		
Gasoline Range Organics		800 ug/liter
Benzene present in ground water		1,000 ug/liter
No detectable benzene in ground water		
Diesel Range Organics		500 ug/liter
Heavy Oils		500 ug/liter
Mineral Oil		1,000 ug/liter
1,1,1 Trichloroethane	71-55-6	200 ug/liter[y]
Trichloroethylene	79-01-5	5 ug/liter[z]
Vinyl chloride	75-01-4	0.2 ug/liter[aa]
Xylenes	1330-20-7	1,000 ug/liter[bb]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for drinking water beneficial uses at sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the ground water must be restored to those levels at all sites. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on background concentrations for state of Washington.

c **Benzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

d **Benzo(a)pyrene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10 $^{-5}$ risk. This value may also be used as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

f **Chromium (Total).** Cleanup level based on concentration derived using Equation 720-1 for hexavalent chromium. This is a total value for chromium III and chromium VI. If just chromium III is present at the site, a cleanup level of 100 ug/l may be used (based on WAC 246-290-310 and 40 C.F.R. 141.62).

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup levels based on concentration derived using Equation 720-2.

h **1,2 Dichloroethane (ethylene dichloride or EDC).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

i **Ethylbenzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

j **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.

k **Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

l **Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

m **Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).

n **Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

o **Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

p **Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

q **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).

r **Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

s **PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.

t **Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

u **Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).

v **Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

w **Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

x **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

– **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of ground water for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the ground water sample. If any detectable amount of benzene is present in the ground water sample, the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.

– **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.

– **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.

– **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic

effects during drinking water use. Sites using this cleanup level must analyze ground water samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

y **1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

z **Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

aa **Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10^{-5} risk.

bb **Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.