INITIAL INVESTIGATION FIELD REPORT

WASHINGTON STATE DEPARTMENT OF ECOLOGY

☐ **Check this box if you have attached any documents to this form (using the paperclip icon on the left).**

ERTS #(s):	687156
Parcel #(s):	8817400125
County:	King
FSID #:	15518216
CSID #:	14878
UST #:	

SITE INFORMATION

Site Name (Name over door):	Site Address (including City, State and Zip):	Phone / Email
Carson Cleaners	4701 Brooklyn Ave NE Seattle, WA 98105	
Site Contact, Title, Business: Than Associates	Site Contact Address (including City, State and Zip): 644 164th Pl NE Bellevue, WA 98008-4013	Phone Email
Site Owner, Title, Business: Clara Chen (Agent) Than Associates	Site Owner Address (including City, State and Zip): 644 164th Pl NE Bellevue, WA 98008-4013	Phone (206) 244-3210 Email claralchen@gmail.com
Site Owner Contact, Title, Business:	Site Owner Contact Address (including City, State and Zip):	Phone Email
Previous Site Owner(s):	Additional Info (for any Site Information Item): See page 2 for summary of contacts.	
Alternate Site Name(s):		

Latitude (Decimal Degrees):	47.663251
Longitude (Decimal Degrees):	-122.314523

INSPECTION INFORMATION

☑ Please check this box if there is relevant inspection information, such as data or photos, in an existing site report for this site.

Inspection Conducted?	Yes ☒	No ☐	Date/Time: 01/31/2019	Entry Notice: Announced ☐	Unannounced ☒
Photographs taken?	Yes ☒	No ☐	Note: Attach photographs or upload to PIMS		
Samples collected?	Yes ☐	No ☒	Note: Attach record with media, location, depth, etc.		

RECOMMENDATION

No Further Action (Check appropriate box below):		**LIST on Confirmed and Suspected Contaminated Sites List**: ☒
Release or threatened release does not pose a threat	☐	
No release or threatened release	☐	
Refer to program/agency (Name: _____)	☐	
Independent Cleanup Action Completed (contamination removed)	☐	

COMPLAINT (Brief Summary of ERTS Complaint):

During remedial investigation at Chevron 90129 site, halogenated volatile organic compound (HVOC) contamination was discovered at Carson Cleaners; 4701 Brooklyn Ave NE. This property was not previously identified or listed as a MTCA cleanup site.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):

HVOCs (PCE, TCE, DCE, and VC above cleanup levels) were observed in groundwater samples from wells to the south, southeast, and southwest of Chevron 90129 (also benzene and TPH, mainly gasoline-range). HVOCs are likely to originate from the former dry cleaners across Brooklyn Avenue from the southeastern portion of the property (Parcel 8817400125).

Investigator: Dale Myers Date Submitted: 2/6/2019

OBSERVATIONS ☑ **Please check this box if you included information on the Supplemental Page at end of report.**

Description (If site visit made, please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

Analysis of HVOCs in groundwater (GW) samples was performed by the Riley Group (Riley) in January 2016 and by Aspect (Aspect) in November 2016. The wells sampled in 2016 included perimeter wells located near the margin of the property which have since been abandoned (wells MW-3, -6, -9, -13 by Riley and wells MW-9, -11, and -13 by Aspect), and are not the same wells as the off-property wells sampled in 2018, which were installed in January 2018 (analysis of perimeter/off-property GW samples for HVOCs does not appear to have been performed prior to 2016).

See attached Groundwater Map and Data Tables.

Contact Information Summary:

Than Associates, LLC (as listed in the 2018 Annual Report for THAN LLC):
Clara Chen (Agent)
644 164th Pl NE
Bellevue, WA 98008-4013
Email: claralchen@gmail.com
Phone: 206-244-3210

Rickert Ownership Group (return address listed in the 2013 Indemnity Memo):
Gary Rickert (also a co-trustee of the Wayne A. Rickert Testamentary Trust)
2115 NW 199th St
Shoreline, WA 98177

Carson Cleaners, Inc. (as listed in the 2015 Cert of Administrative Dissolution):
Roger E. Lageschulte (Agent)
320 Dayton St #127
Edmonds, WA 98020

Documents reviewed:

Title Review Tech Memo 4701 Brooklyn 02-01-2019. Prepared for Ecology. Dated February 2, 2019.

Interim Action Report, Former Chevron Service Station No. 90129, 4700 Brooklyn Avenue NE, Seattle, WA. Dated January 4th, 2019.

On-Property Remedial Investigation Data Report, 4700 Brooklyn Avenue NE, Seattle, WA. Memorandum to Dale Myers, Washington State Department of Ecology. Dated January 17th, 2017.

Summary of Recent Groundwater Sampling and Summary of Groundwater Data, Chevron Station No. 90129, 4700 Brooklyn Avenue NE, Seattle, WA. Technical Memorandum to Mr. Eran Fields of Fields Holdings, LLC. Dated January 18th, 2016.

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropranol, formic acid, acetic acid, stoddard solvent, Naptha). *Use this when TEX contaminants are present independently of gasoline.*
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						TEX
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Oil-range organics
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics						Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents	C	C				PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). *Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270*
Metals	Metals - Other						Cr, Se, Ag, Ba, Cd
	Lead						Lead
	Mercury						Mercury
	Arsenic						Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures						For sediments, a failure to meet bioassay criteria from the Sediment Management Standards. For soils, a failure to meet TEE bioassay criteria for plant, animal or soil biota toxicity.
Reactive Wastes	Unexploded Ordinance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes						Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)

(fill in contaminant matrix below with appropriate status choice from the key below the table)

Status choices for contaminants	
Contaminant Status	**Definition**
B— Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested
S— Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C— Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example—above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA— Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example—capped area).
RB— Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example— complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivative. Referral to the HSDB is recommended if you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in WAC 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY II REVIEWER USE ONLY (For Listing Sites):

How did the Site come to be known: ☐ **Site Discovery (received a report):** _____ (Date Report Received)
☐ **ERTS Complaint**
☑ **Other (please explain):** during remedial investigation being conducted at Chevron 90129

Does an Early Notice Letter need to be sent: ☒ Yes ☐ No
If *No*, please explain why: _____

NAICS Code (if known): _____
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):
_____

Site Unit(s) to be created (Unit Type): ☒ Upland (includes VCP & LUST) ☐ Sediment
If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit): ☐ No Process ☐ Independent Action
☐ Voluntary Cleanup Program ☑ Ecology-supervised or conducted
☐ Federal-supervised or conducted

Site Status: ☒ Awaiting Cleanup ☐ Construction Complete – Performance Monitoring
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring
☐ No Further Action Required

Site Manager (Default: _____): Dale Myers

Specific confirmed contaminants include:

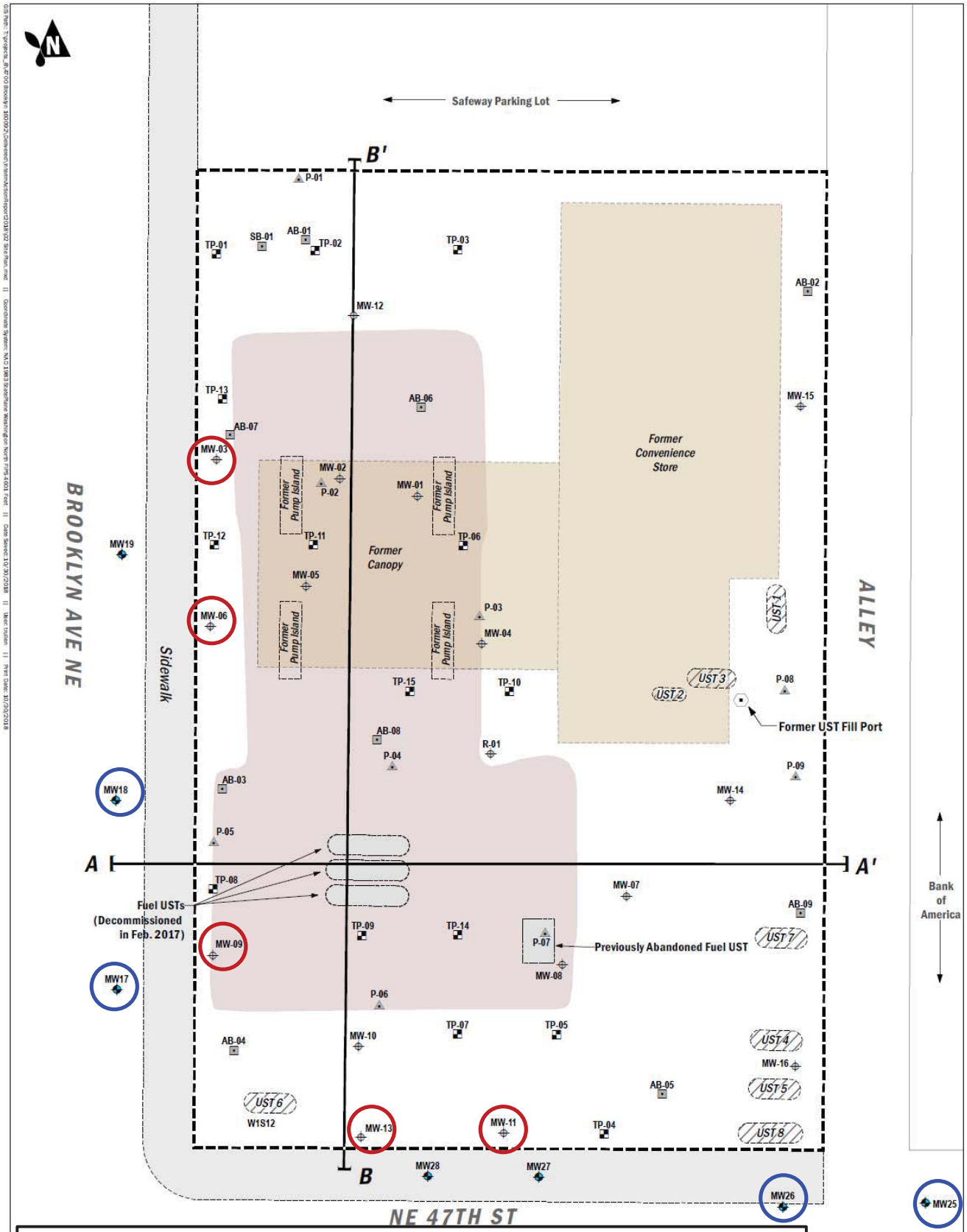
_____ in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
15518216
Cleanup Site ID No. (if known):
14878

COUNTY ASSESSOR INFO: Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.



Perimeter wells sampled in 2016 by Riley and/or Aspect (subsequently abandoned)

Off-Property wells sampled in 2018 by Aspect (installed January 2018)

- Abandoned on-Property Monitoring Well
- Existing off-Property Monitoring Well
- Test Pit (Aspect, 2018) *Completed during the Interim Action*
- Soil Boring (Aspect, 2016)
- Test Probe (Riley, 2015)
- Property Boundary
- 1990 Soil Excavation
- Cross Section
- USTs Discovered and Removed During Interim Action in 2018
- Former UST

UST: Underground Storage Tank

0 7.5 15
Feet

Site Plan

Interim Action Report
4700 Brooklyn Avenue NE
Seattle, Washington

Aspect Consulting	OCT-2018	DAH / EAC	FIGURE NO. 2
	PROJECT NO. 160092	REVISED BY: ---	

Table 6. Off-Property Groundwater Analytical Results

Project No. 160092, Seattle, Washington

Sample Location		MW-17	MW-18	MW-18	MW-25	MW-25	MW-25	MW-26	MW-26
Sample Date		08/02/2018	08/22/2018	08/31/2018	08/02/2018	08/22/2018	08/31/2018	08/22/2018	08/31/2018
Sample Identification		MW-17-080218	MW-18-082218	MW-18-083118	MW-25-080218	MW-25-082218	MW-25-083118	MW-26-082218	MW-26-083118
Chemical Name	**Cleanup Level (ug/L)**								
Total Petroleum Hydrocarbons in ug/L									
Gasoline-Range Organics	800*	**2800**	< 100 U	< 100 U	**1200**	**420**	**440**	**940**	**1300**
Diesel-Range Organics	500	**860 X**	**99 X**	**180 X**	**210 X**	**58 X**	< 50 U	**130 X**	**120 X**
Motor Oil-Range Organics	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 150 U
BTEX Compounds in ug/L									
Benzene	5	**45**	< 0.35 U	< 0.35 U	**32**	**9.7**	**12**	**28**	**23**
Toluene	1000	**4**	< 1 U	< 1 U	**2.7**	< 1 U	< 1 U	**1.9**	< 1 U
Ethylbenzene	700	**27**	< 1 U	< 1 U	**9.3**	< 1 U	< 1 U	**14**	< 1 U
Total Xylenes	1000	**87**	< 2 U	< 2 U	**6.9**	< 2 U	< 2 U	**1.2**	< 2 U
Volcatile Organic Compounds in ug/L									
Tetrachloroethene (PCE)	5	**110**	**2.9**	**1.6**	**26**	**59**	**42**	**7.5**	**43**
Trichloroethene (TCE)	5	**27**	R	< 1 U	**480**	**270 E**	**360**	**810**	**1400**
cis-1,2-Dichloroethene (DCE)	16	**39**	< 1 U	< 1 U	**540**	**230**	**280**	**430**	**660**
trans-1,2-Dichloroethene	160	**1.7**	< 1 U	< 1 U	**100**	**28**	**24**	**110**	**98**
Methylene Chloride	5	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Vinyl Chloride	0.2	< 0.2 U	< 0.2 U	< 0.2 UJ	**78**	**13**	**9.5 J**	**26**	**5.2 J**
1,2-Dibromoethane (EDB)	0.01	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane (EDC)	5	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	400	< 1 U	< 1 U	< 1 U	**1.8**	< 1 U	< 1 U	< 1 U	< 1 U
Methyl tert-butyl ether (MTBE)	20	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes

ug/L = micrograms per liter

* = Cleanup level for gasoline-range hydrocarbons when benzene is present.

U = Analyte not detected atbove the listed reporting limit

X = Chromatographic pattern does not match quantitation standard.

J = Listed value is an estimate.

E - exceeded calibration range (insufficient volume for reanalysis at dilution). Analyte is clearly present at a high concentration in sample, but numeric value is not viable for quantitative purposes.

R - Result is rejected. Unable to determine if analyte is present. Result is not usable for quantitative or qualitative purposes.

Select VOCs are listed in the table. Other VOCs either were not detected or detected at concentrations below the MTCA cleanup levels. Please refer to the laboratory report in Appendix D.

MTCA = Model Toxics Control Act

Bolded value indicates analyte detected at the listed concentration.

Blue shading indicates analyte detected at a concentration greater than the corresponding cleanup level.

Table 4 - Ground Water Analytical Results

Project #160092 - 4700 Brooklyn Avenue NE
Seattle, WA

	Proposed Cleanup Levels	MW-02 11/21/2016	MW-03 11/21/2016	MW-3D 11/21/2016	MW-04 11/21/2016	MW-05 11/21/2016	MW-06 11/21/2016	MW-07 11/22/2016	MW-09 11/22/2016	MW-11 11/22/2016	MW-12 11/22/2016	MW-13 11/22/2016	MW-14 11/21/2016	MW-15 11/22/2016	MW-16 11/22/2016
Total Petroleum Hydrocarbons in ug/L															
Gasoline Range Organics	800	< 100 U	**110**	**120**	**780**	< 100 U	< 100 U	< 100 U	**23,000**	**55,000**	**120,000**		< 100 U	< 100 U	**2,300**
Diesel Range Organics	500	**58 X**	**170 X**	**120 X**	**810**	< 50 U	< 50 U	**200 X**	**3,500 X**	**4,500 X**	**8,800 X**		**110 X**	< 60 U	**660 X**
Motor Oil Range Organics	500	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U		< 250 U	< 300 U	< 250 U
Metals in ug/L															
Lead (Dissolved)	15	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	< 1 UJ	**17.2 J**	**2.89 J**		< 1 UJ	< 1 UJ	< 1 UJ
Volatile Organic Compounds in ug/L															
Benzene	5	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	< 0.35 U	**940**	**90**	**5,500**		< 0.35 U	< 0.35 U	**77**
Toluene	1,000	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	**740**	**530**	**6,300**		< 1 U	< 1 U	**2.6**
Ethylbenzene	700	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	**420**	**1,500**	**2,300**		< 1 U	< 1 U	**100**
m,p-Xylenes		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	**660**	**5,800**	**10,000**		< 2 U	< 2 U	**5.3**
o-Xylene		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	**110**	**1,300**	**4,100**		< 1 U	< 1 U	**1.1**
Total Xylenes	1,000	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	**770**	**7,100**	**14,100**		< 2 U	< 2 U	**6.4**
Methyl tert-butyl ether (MTBE)	20	< 1 U	< 1 U	< 1 U	**1.8**	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U		< 1 U	< 1 U	< 1 U
Tetrachloroethene (PCE)	5								< 1 U	< 1 U		< 1 U			
Trichloroethene (TCE)	5								< 1 U	< 1 U		< 1 U			
1,1-Dichloroethene	400								< 1 U	< 1 U		< 1 U			
cis-1,2-Dichloroethene (DCE)	16								**15**	**9.7**		**15**			
trans-1,2-Dichloroethene	160								< 1 U	< 1 U		**1**			
Vinyl Chloride	0.2								< 0.2 U	< 0.2 U		**0.22**			
1,1,1-Trichloroethane	200								< 1 U	< 1 U		< 1 U			
1,1-Dichloroethane	7.68								< 1 U	< 1 U		< 1 U			
1,2-Dichloroethane (EDC)	5								**21**	< 1 U		< 1 U			
Chloroethane									< 1 U	< 1 U		< 1 U			
Methylene Chloride	5								< 5 U	< 5 U		< 5 U			

Notes

Groundwater samples were not collected from MW-1, MW-8, and MW-10. MW-1 casing bends to the east. MW-8 was dry. MW-10 had measureable product
MW-13 was only samples for chlorinated VOCs due to the presence of measureable product.
Bold indicates detected analyte.
Shading indicates detection above proposed cleanup level.
J - Analyte was positively identified. The reported result is an estimate.
U - Analyte was not detected at or above the reported result.
UJ - Analyte was not detected at or above the reported estimate
X - The sample chromatographic pattern does not resemble the fuel standard used for quantitation by the laboratory.

Table 1. Summary of Groundwater Analytical Laboratory Results - Brooklyn Chevron Station
4700 Brooklyn Avenue NE, Seattle, Washington
The Riley Group, Inc. Project #2015-006E

Sample Number	Depth to H20	HVOCs				Other HVOCs
		PCE	TCE	cis 1,2 DCE	VC	
MW 3	18.15	ND<1	ND<1	ND<1	ND<0.2	ND<1
MW 6	18.07	ND<1	ND<1	ND<1	ND<0.2	ND<1
MW 9	16.80	ND<1	ND<1	**22**	ND<0.2	ND<1
MW 13	15.92	ND<1	ND<1	**24**	**0.67**	BSL
MTCA Method A Groundwater Screening Levels		**5**	**5**	**----**	**0.2**	**Analyte Specific**
MTCA Method B Groundwater Screening Levels		**20.8**	**0.54**	**16**	**0.029**	**Analyte Specific**

Samples were collected by RGI on January 6, 2016

All results and detection limits are given in ug/L; equivalent to parts per billion (ug/L)

Depth to H2O = Depth to groundwater measured from top of well casing.

PID = Photoionization Detector

HVOCs = Halogenated Volatile Organic Compounds determined using EPA Test Method 8260C.

ND = Not Detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

BSL = All other concentrations below screening levels.

Ecology Model Toxics Control Act Method A and B Cleanup Levels for Ground Water obtained from CLARC database on January 20, 2016.

Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A or B Cleanup Levels for Ground Water.