

Groundwater Monitoring Report

**Safeway #1436 Fueling Station/Former My Uncle's Store
7201 Portland Avenue
Tacoma, Washington**

January 8, 2019
Terracon Project No. 81167550
TPCHD UST Permit #0000648

Prepared for:
Albertsons Companies
Boise, Idaho

Prepared by:
Terracon Consultants, Inc.
Mountlake Terrace, Washington

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

January 8, 2019



Albertsons Companies
250 Parkcenter Blvd
PO Box 20
Boise, Idaho 83726

Attn: Mr. Doug Kasefang


Re: **Groundwater Monitoring Report**
Safeway #1436 Fueling Station/Former My Uncle's Store
7201 Portland Avenue
Tacoma, Pierce County, Washington 98404
TPCHD UST Permit #0000648
Terracon Project No: 81167550


Dear Mr. Kasefang:


Terracon Consultants, Inc. (Terracon) is pleased to submit this Groundwater Monitoring Report for the site referenced above (the Site). The services described herein were performed in general accordance with Terracon's Proposal dated October 24, 2016, *Work Plan for Groundwater Monitoring Well Installations and Quarterly Monitoring* dated November 2, 2016 (Terracon Project No. 81167550), and Project Services Agreement dated October 27, 2016.

Terracon appreciates this opportunity to provide environmental services to Albertsons Companies. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.


Kyle Bennett, G.I.T.
Staff Geologist


Matt Wheaton, L.G., P.E.
Principal


The seal is circular with "State of Washington" around the top edge and "Licensed Geologist" around the bottom edge. In the center is a landscape with mountains and a river. The number "2872" is printed below the landscape.

Matthew Y. Wheaton

1.0 SITE DESCRIPTION.....1
2.0 SCOPE OF SERVICES.....2
 2.1 Standard of Care.....3
 2.2 Additional Scope Limitations3
 2.3 Reliance.....3
3.0 GROUNDWATER SAMPLING.....4
4.0 ANALYTICAL RESULTS.....4
 4.1 Groundwater Analytical Results5
 4.2 Quality Assurance/Quality Control Results.....5
6.0 FINDINGS AND CONCLUSIONS6

APPENDIX A – EXHIBITS

- Exhibit 1 – Topographic Map
- Exhibit 2 – Site Diagram
- Exhibit 3 – Groundwater Contour & Flow Map – October 2018
- Exhibit 4 – Groundwater Sample Concentrations

APPENDIX B – TABLES

- Table 1 – Summary of Groundwater Analytical Results

APPENDIX C – ANALYTICAL REPORT

Groundwater Monitoring Report
Safeway #1436 Fueling Station/Former My Uncle's Store
7201 Portland Avenue
Tacoma, Washington

Terracon Project No. 81167550
January 8, 2019

1.0 SITE DESCRIPTION

The Safeway store property is an approximately 4.43-acre tract of land (Pierce County tax parcel 0320274090) located on the southeast corner of Portland Avenue and East 72nd Street in Tacoma, Washington. The Site location is depicted on Exhibit 1 in Appendix A, a portion of the 1994 Tacoma South USGS Topographic map. The Site layout is shown on Exhibit 2 in Appendix A, including the locations of current Site structures, former USTs and dispensers, approximate extents of the former UST removal and remedial excavation, and the current groundwater monitoring wells.

The northwest portion of the property parcel (the Site) was developed as a gasoline station and convenience store around 1953 and operated until the 1970s. A Chevron-branded gasoline station/convenience store (My Uncle's Store) was constructed on the Site in the late 1970s and operated until 2001, when the underground storage tanks (USTs) were removed. According to Washington State Department of Ecology (Ecology) online records, the former Chevron facility was most recently equipped with three 10,000-gallon single-walled steel USTs that were installed in 1982 and upgraded in 1997. A Safeway fueling station was constructed on the Site in 2002. The Safeway fueling station consists of two 20,000-gallon jacketed steel USTs. Double-walled fiberglass piping supplies fuel to dispensers located on seven dispenser islands, which are covered with a canopy.

Between 2000 and 2002, approximately 5,100 tons of petroleum contaminated soil (PCS) were removed from the excavation for offsite disposal. Confirmation soil samples collected from the final northern and western extents of the excavation at depths ranging from 3 to 13 feet below ground surface (bgs) contained gasoline-range total petroleum hydrocarbons (TPH) concentrations ranging from 53 to 6,500 milligrams per kilogram (mg/kg) and/or benzene concentrations ranging from 0.08 to 99 mg/kg, which exceed the Model Toxics Control Act (MTCA) Method A cleanup levels of 30 mg/kg and 0.03 mg/kg, respectively. Soil samples collected from the final extent of the southern and eastern excavation sidewalls and from the excavation bottom reportedly did not contain contaminants exceeding the MTCA Method A cleanup levels.

Groundwater Monitoring Report

Safeway #1436 Fueling Station ■ Tacoma, Washington

January 8, 2019 ■ Terracon Project No. 81167550



As detailed in Terracon's *Groundwater Monitoring Well Installation and Sampling Report*, dated February 10, 2017, Terracon advanced four soil borings (MW1 through MW4) to depths of approximately 20 feet bgs along the western and northern property boundaries in order to address a request from the Tacoma-Pierce County Health Department (TPCHD) for additional Site characterization data. All soil borings were converted to permanent groundwater monitoring wells. With the exception of benzene and gasoline-range total petroleum hydrocarbons (TPH) identified at concentrations exceeding MTCA cleanup levels in soil and groundwater samples collected from monitoring well MW2, analytes were not detected above laboratory method reporting limits (MRLs). Additional soil and groundwater sampling results are discussed further in Terracon's February 2017 report.

Between March 2017 and March 2018, quarterly groundwater monitoring has been completed by Terracon on groundwater monitoring wells MW1 through MW4. During each sampling event, groundwater samples were analyzed for gasoline-, diesel-, and oil-range TPH, and for BTEX. The groundwater samples collected from well MW2 have generally contained benzene at concentrations exceeding MTCA Method A cleanup levels during all sampling events, with the exception of one event conducted in September 2017. Gasoline-range TPH was also initially detected at concentrations exceeding the MTCA Method A cleanup level; however, the detected concentrations reported for the June through March 2018 sampling events were below the MTCA cleanup level.

In May 2018, Terracon completed an interim remedial action in the area of MW2 that consisted of advancing a total of five in-situ injection points to allow for the introduction of the remedial compound, ORC-A, at depths ranging from 5 to 15 feet bgs. A total of approximately 480 pounds of ORC-A were injected throughout the approximate 400-square-foot injection area.

Subsequent to the remedial injections, two groundwater monitoring events have been completed on monitoring wells MW1 and MW2. Diesel- and gasoline-range TPH were identified in the groundwater sample collected from MW2 at concentrations exceeding MTCA Method A cleanup levels during the June 2018 sampling event; however, only gasoline-range TPH was identified above the MTCA cleanup level in the subsequent, July 2018 sampling event. Benzene concentrations remained above the MTCA Method A cleanup level during both sampling events.

This report presents the results of Terracon's recent quarterly groundwater monitoring event, conducted on October 10, 2018.

2.0 SCOPE OF SERVICES

Terracon's scope of work was conducted in general accordance with our proposal, dated October 24, 2016; *Work Plan for Groundwater Monitoring Well Installations and Quarterly*

Groundwater Monitoring Report

Safeway #1436 Fueling Station ■ Tacoma, Washington

January 8, 2019 ■ Terracon Project No. 81167550



Monitoring, dated November 2, 2016; and Project Services Agreement, dated October 27, 2016. Our scope of services included completion of the following tasks:

- § Collect groundwater samples from two of the on-site groundwater monitoring wells (MW1 and MW2);
- § Complete laboratory analyses of groundwater samples; and
- § Prepare this Groundwater Monitoring summary report.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and work plan.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this investigation. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of Albertsons Companies, and any authorization for use or reliance by any other party (except for a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Albertsons Companies and Terracon. Any unauthorized distribution or reuse is at Albertsons Companies' sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the

terms, conditions, and limitations stated in the proposal, report, and the Master Environmental Services Agreement between Terracon and Albertsons Companies.

3.0 GROUNDWATER SAMPLING

On October 25, 2018, a Terracon representative mobilized to the Site to perform groundwater monitoring activities and collect groundwater samples from wells MW1 and MW2.

Prior to sample collection, monitoring wells MW1 through MW4 were opened and exposed to surficial atmospheric conditions, and static depth to groundwater below the top of the well casing (TOC) was measured in each well. The water level probe was decontaminated using a non-phosphate soap wash and distilled water rinse before use in each well.

Measured depth to water in the wells ranged from 6.54 feet below TOC at MW1 to 8.10 feet below TOC at MW4. Based on depth to water measurements and well TOC survey data, the groundwater elevations at the monitoring wells ranged from 410.00 feet at monitoring well MW2 to 412.06 feet at monitoring well MW3 (see Table 1 in Appendix B). Based on groundwater level measurements collected during Terracon's groundwater sampling event, the groundwater flow direction at the Site is generally toward the west (see Exhibit 3 Groundwater Contour and Flow Map in Appendix A).

The groundwater samples were collected using a peristaltic pump and dedicated tubing. Prior to sample collection, each well was purged at a low flow rate (less than 500 milliliters per minute [mL/min]). During the purging process, groundwater quality parameters, including temperature, electrical conductivity (EC), pH, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP), were measured at regular intervals using a Horiba U-22 or equivalent water quality meter. Purging was considered complete when three consecutive readings for EC, pH, turbidity, DO, and ORP were observed within 10% of one-another.

Samples were collected using the peristaltic pump. The same low flow rate used for purging the wells was used for collecting the samples. The discharge from the peristaltic pump was directed into laboratory-supplied glassware. The sample containers were labeled with the project number, date, time, well number, and sample number and placed in a chilled cooler immediately after sampling. The sample containers were subsequently transported to ALS Laboratory Group (ALS), a Washington-certified analytical laboratory, under standard chain-of-custody procedures.

4.0 ANALYTICAL RESULTS

Groundwater samples were analyzed for gasoline-range TPH by Northwest Method NWTPH-Gx, diesel- and oil-range TPH by Northwest Method NWTPH-Dx, and BTEX by EPA Method 8260.

Groundwater Monitoring Report

Safeway #1436 Fueling Station ■ Tacoma, Washington

January 8, 2019 ■ Terracon Project No. 81167550



Reported groundwater concentrations were compared with the MTCA Method A cleanup levels for unrestricted land use, as applicable, established under Chapter 70.105D Revised Code of Washington (RCW) and its implementing regulation, MTCA Chapter 173-340 Washington Administrative Code (WAC).

The laboratory analytical report and chain-of-custody record are attached in Appendix C.

4.1 Groundwater Analytical Results

Gasoline-, diesel- and oil-range TPH were identified in the groundwater sample collected from monitoring well MW2 at concentrations of 640 µg/l, 530 µg/l, and 250 µg/l, respectively. Only the diesel-range TPH concentration exceeded its respective MTCA Method A cleanup level of 500 µg/l for diesel.

In addition, benzene, toluene, ethylbenzene, and xylenes were identified in the groundwater sample collected from monitoring well MW2 at a concentration of 14 µg/l, 2 µg/l, 29 µg/l, and 5.1 µg/l, respectively. Only the benzene concentration exceeded its respective MTCA Method A cleanup level of 5 µg/l for benzene.

The groundwater sample from monitoring well MW1 did not contain concentrations of gasoline-, diesel-, or oil-range TPH, benzene, toluene, ethylbenzene, or xylenes above laboratory MRLs.

The groundwater analytical results are summarized in Table 1 of Appendix B and on Exhibit 4 in Appendix A.

4.2 Quality Assurance/Quality Control Results

The analytical results for the current investigation were checked for completeness upon receipt from the laboratory to ensure that data and quality assurance and quality control (QA/QC) information requested were present. Data quality was assessed by considering hold times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate (MS/MSD) recovery, and detection limits. QA/QC review was completed using guidance described in *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (Draft Final, USEPA, 2005). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results.

Based upon our interpretation of quality control information provided by the laboratories, it is our opinion that the overall dataset is useable as qualified for the purposes of this investigation.

5.0 INVESTIGATION DERIVED WASTES

Investigation derived wastes (IDW) generated during the groundwater monitoring activities, which consisted of equipment decontamination water and well purge water, were containerized in one Department of Transportation (DOT) approved 55-gallon drum, properly labeled, and temporarily staged onsite, pending receipt of laboratory analytical results. The IDW drum was staged on the east side of the grocery store building near the loading dock.

6.0 FINDINGS AND CONCLUSIONS

Based on the scope of services described in this report, and subject to the limitations described herein, Terracon concludes the following:

- n Measured depth to groundwater in the monitoring wells MW1 through MW4 ranged from approximately 6.54 to 8.10 feet bgs, with a groundwater gradient toward the west-northwest. This gradient is consistent with previously recorded groundwater migration directions.
- n Benzene and diesel-range TPH were identified in the groundwater sample collected from Monitoring well MW2 at concentrations exceeding their associated MTCA Method A cleanup levels.
- n Gasoline- and oil-range TPH, ethylbenzene, xylenes, and toluene were identified in the groundwater sample collected from MW2; however, none of the concentrations exceeded the MTCA cleanup levels.
- n TPH and BTEX were not identified in the groundwater sample collected from MW1 at concentrations exceeding laboratory MRLs.

Although gasoline-range TPH concentrations have decreased, relative to the June and July 2018 sampling events, diesel-range TPH and benzene concentrations remain above MTCA cleanup levels. Regardless, all TPH and benzene concentrations have decreased since the June 2018 sampling event suggesting that ORC-A injections may be contributing to the decline in concentrations of these compounds.

It should be noted that groundwater elevations reported in MW2 during all post-injection monitoring events are, on average, approximately 1.8 feet below the highest pre-injection groundwater elevations in this well. Given that TPH and BTEX impacts were identified in a soil sample collected from MW2 at a depth of approximately 6 ½ to 7 feet bgs, it appears that the current groundwater elevation is coinciding with soil impacts identified in MW2. Groundwater

Groundwater Monitoring Report

Safeway #1436 Fueling Station ■ Tacoma, Washington

January 8, 2019 ■ Terracon Project No. 81167550



TPH and BTEX concentrations may have been diluted during sampling events with higher groundwater elevations.

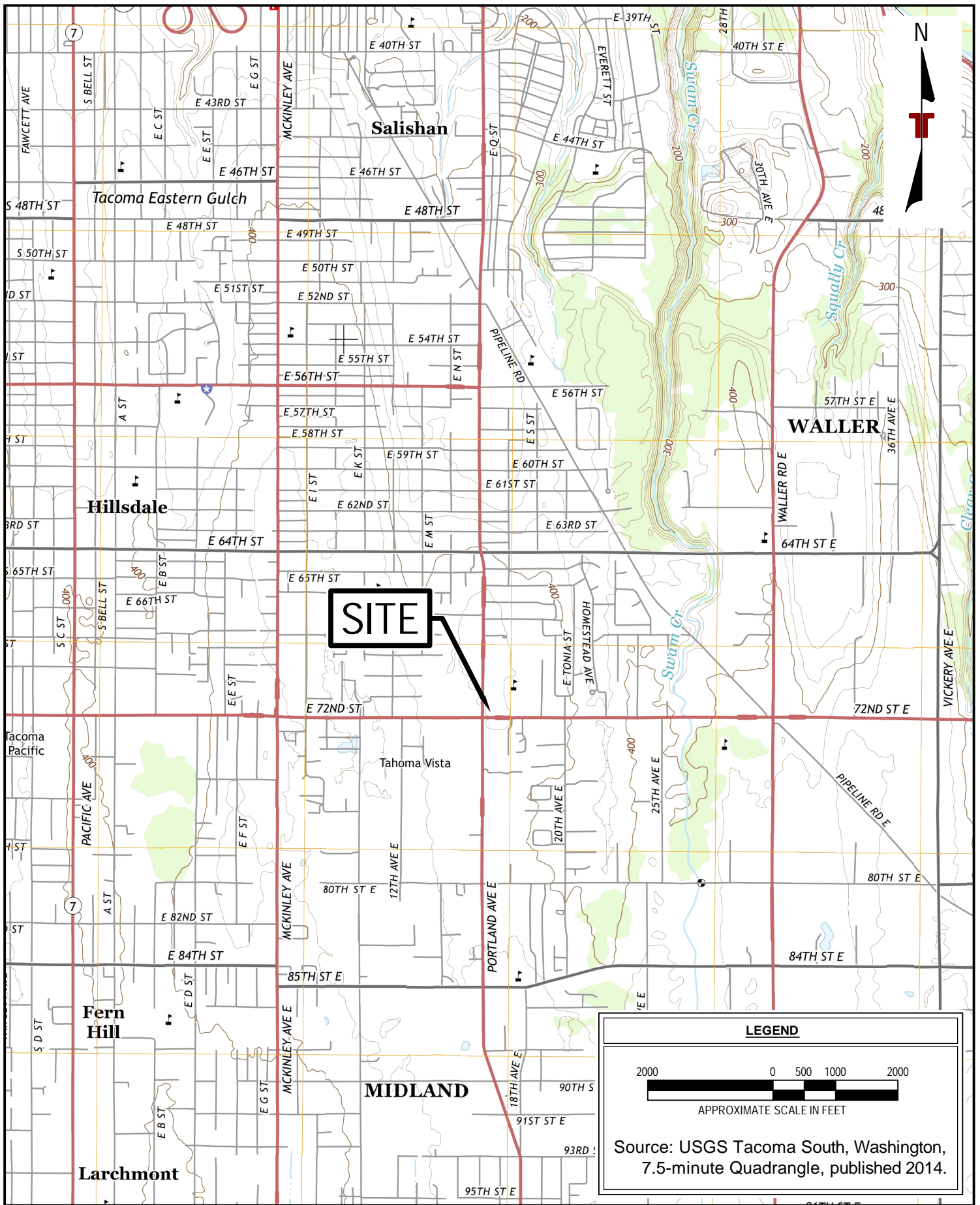
APPENDIX A - EXHIBITS

Exhibit 1 - Topographic Map

Exhibit 2 - Site Diagram

Exhibit 3 – Groundwater Contour & Flow Map – October 2018

Exhibit 4 – Groundwater Sample Concentrations



LEGEND

2000 0 500 1000 2000
APPROXIMATE SCALE IN FEET

Source: USGS Tacoma South, Washington, 7.5-minute Quadrangle, published 2014.

Project Mgr:	MDN
Drawn By:	AMP
Checked By:	MDN
Approved By:	MDN

Project No.	81167550
Scale:	AS SHOWN
File No.	Exhibit 1
Date:	October 2018

Terracon
Consulting Engineers and Scientists

21905 64th Avenue W., Ste 100 Mounlake Terrace, WA 98043
PH. (425) 771-3304 FAX. (425) 771-3549

TOPOGRAPHIC MAP
Safeway #1436 Fueling Station
7201 Portland Ave E
Tacoma, Pierce County, Washington

EXHIBIT
1

PORTLAND AVENUE

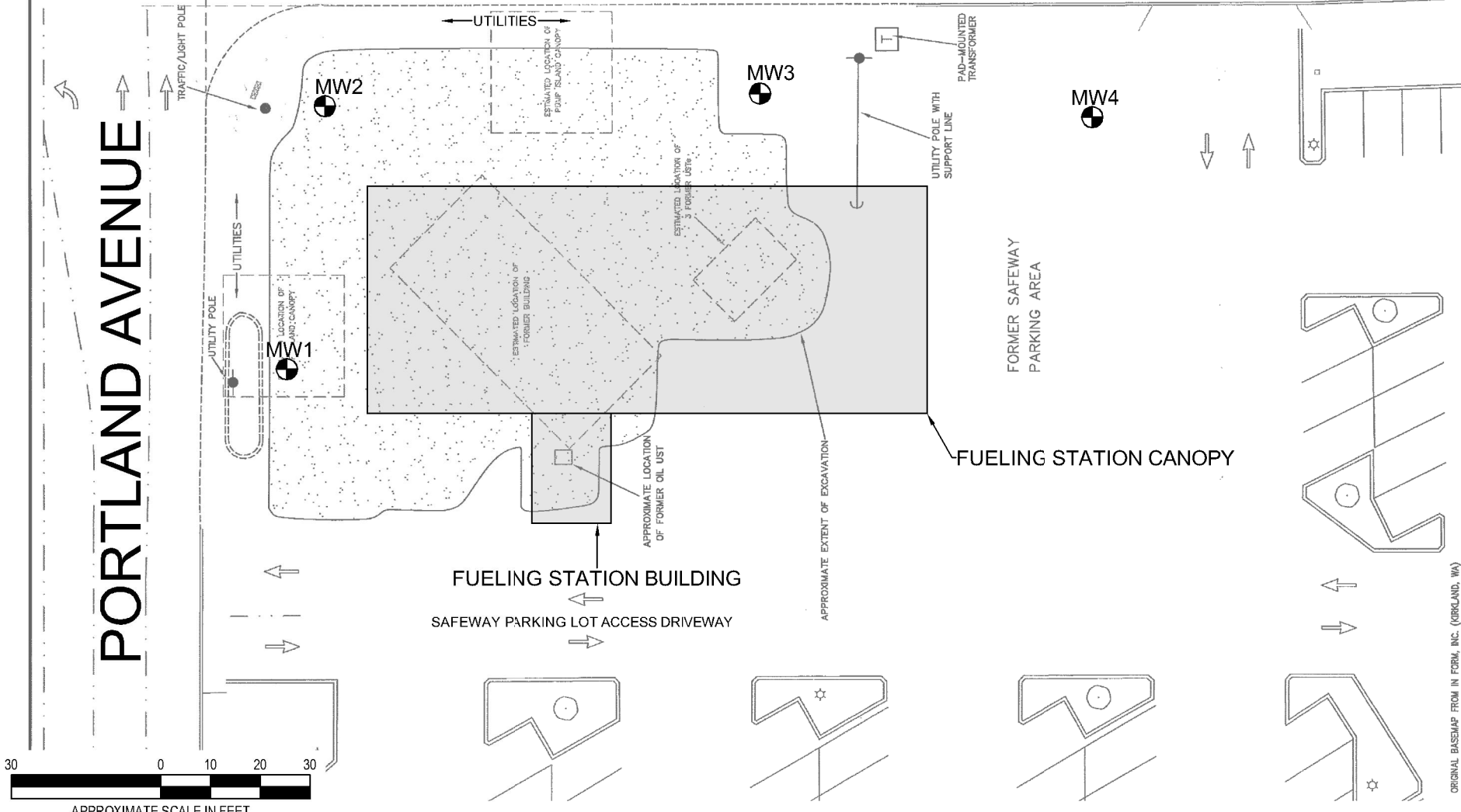
72ND STREET



ENVIRONMENTAL PROJECT

ORIGINAL BASEMAP FROM IN FORM, INC. (ORCLAND, WA)

08268.2



LEGEND

MW1 APPROXIMATE LOCATION OF MONITORING WELL

Project Mngr:	MDN	Project No:	81167550
Drawn By:	AMP	Scale:	AS SHOWN
Checked By:	MDN	File No:	Exhibit 2
Approved By:	MDN	Date:	Oct 2018

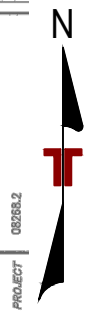
Terracon
 Consulting Engineers and Scientists
 21905 64th Avenue W, Ste 100 Mountlake Terrace, WA 98043
 PH. (425) 771-3304 FAX. (425) 771-3549

SITE DIAGRAM

Safeway #1436 Fueling Station
 7201 Portland Ave E
 Tacoma, Pierce County, Washington

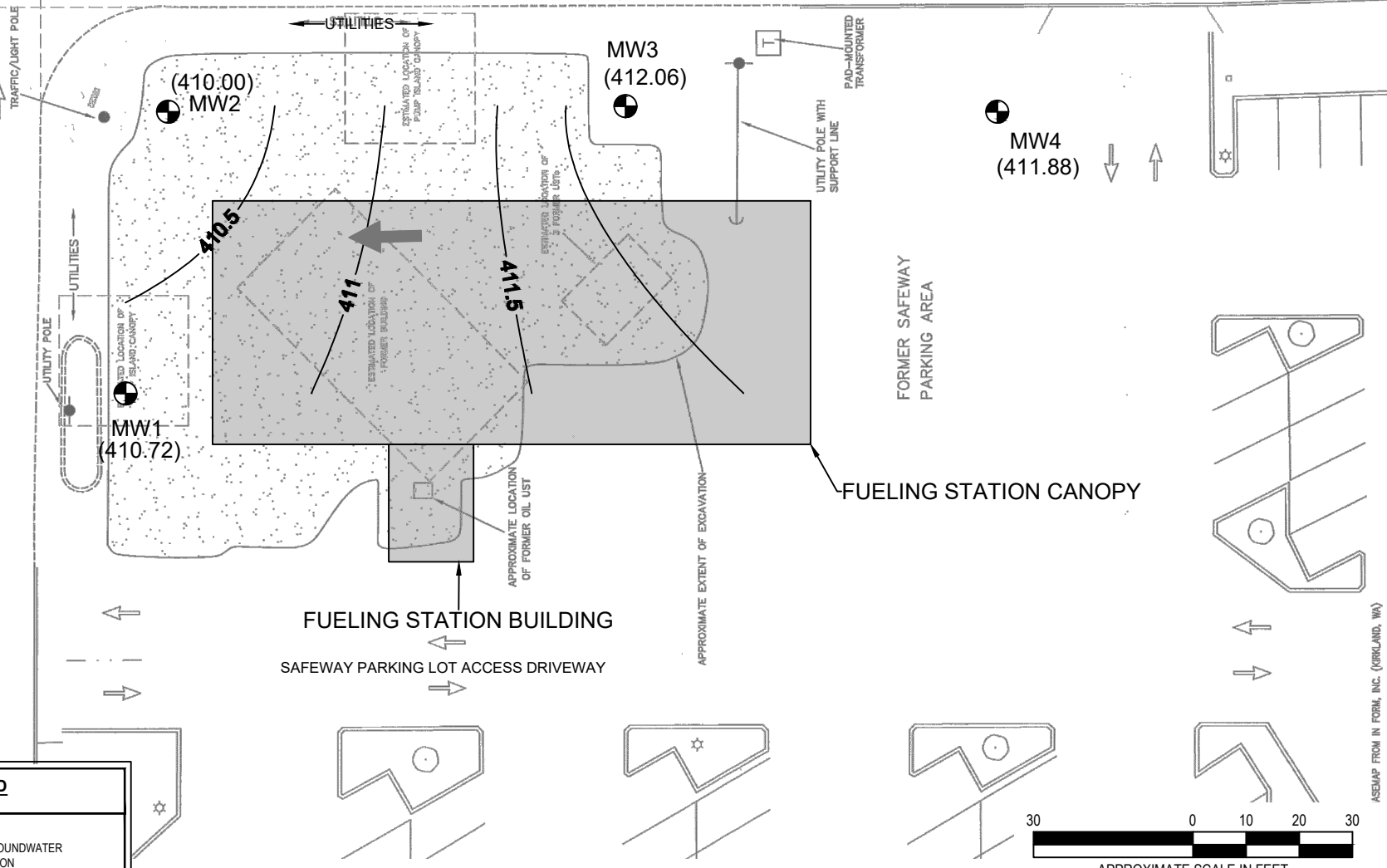
EXHIBIT

2



72ND STREET




PORTLAND AVENUE



ASEMAP FROM IN FORM, INC. (KIRKLAND, WA)

ENVIRONMENTAL PROJECT 08268.2

LEGEND

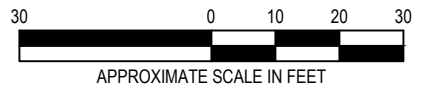
-  INFERRED GROUNDWATER FLOW DIRECTION
-  MW1 (400) APPROXIMATE LOCATION AND NUMBER OF PERMANENT GROUNDWATER MONITORING WELL, GROUNDWATER ELEVATION (FEET)
-  400 GROUNDWATER CONTOUR ELEVATION (FEET)

Project Mng:	MDN	Project No.	81167550
Drawn By:	SPL	Scale:	AS SHOWN
Checked By:	MDN	File No.	Exhibit 3
Approved By:	MDN	Date:	December 2018

Terracon
 Consulting Engineers and Scientists
 21905 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043
 PH. (425) 771-3304 FAX. (425) 771-3549

GROUNDWATER CONTOUR & FLOW MAP-OCTOBER 2018
 Safeway #1436 Fueling Station
 7201 Portland Ave E
 Tacoma, Pierce County, Washington

EXHIBIT
 3



MW2							
Date:	G	D	O	B	T	E	X
10/25/2018	640	530	250	14	2	29	5.1
7/25/2018	1,100	250	ND	18	3.7	37	12
6/26/2018	1,100	1,100	ND	21	ND	16	7.0
3/28/2018	650	ND	ND	6.6	ND	16	7.0
12/26/17	600	ND	ND	8.2	ND	7.3	5.8
9/27/17	ND	ND	ND	ND	ND	ND	ND
6/28/17	670	ND	ND	6.7	ND	ND	ND
3/21/17	970	290	ND	18	ND	25	26
11/30/16	820	190	ND	46	3.1	12	21

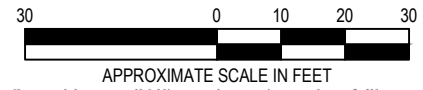
MW3							
Date:	G	D	O	B	T	E	X
10/25/2018	NT	NT	NT	NT	NT	NT	NT
7/25/2018	NT	NT	NT	NT	NT	NT	NT
6/26/2018	NT	NT	NT	NT	NT	NT	NT
3/28/2018	NT	NT	NT	NT	NT	NT	NT
12/26/17	ND	ND	ND	NT	NT	NT	NT
9/27/17	ND	ND	ND	ND	ND	ND	ND
6/28/17	ND	ND	ND	ND	ND	ND	ND
3/21/17	ND	ND	ND	ND	ND	ND	ND
11/30/16	ND	ND	ND	ND	ND	ND	ND

MW4							
Date:	G	D	O	B	T	E	X
10/25/2018	NT	NT	NT	NT	NT	NT	NT
7/25/2018	NT	NT	NT	NT	NT	NT	NT
6/26/2018	NT	NT	NT	NT	NT	NT	NT
3/28/2018	NT	NT	NT	NT	NT	NT	NT
12/26/17	ND	ND	ND	NT	NT	NT	NT
9/27/17	ND	ND	ND	ND	ND	ND	ND
6/28/17	ND	ND	ND	ND	ND	ND	ND
3/21/17	ND	ND	ND	ND	ND	ND	ND
11/30/16	ND	ND	ND	ND	ND	ND	ND

MW1							
Date:	G	D	O	B	T	E	X
10/25/2018	ND	ND	ND	ND	ND	ND	ND
7/25/2018	ND	ND	ND	ND	ND	ND	ND
6/26/2018	NT	NT	NT	NT	NT	NT	NT
3/28/2018	ND	ND	ND	ND	ND	ND	ND
12/26/17	ND	ND	ND	NT	NT	NT	NT
9/27/17	ND	ND	ND	ND	ND	ND	ND
6/28/17	ND	ND	ND	ND	ND	ND	ND
3/21/17	ND	ND	ND	ND	ND	ND	ND
11/30/16	ND	ND	ND	ND	ND	ND	ND

72ND STREET

PORTLAND AVENUE



LEGEND

MW1 APPROXIMATE LOCATION OF MONITORING WELL

INFERRED GROUNDWATER FLOW DIRECTION

Project Mngr:	MDN	Project No.	81167550
Drawn By:	SPL	Scale:	AS SHOWN
Checked By:	MDN	File No.	Exhibit 4
Approved By:	MDN	Date:	December 2018

Terracon
Consulting Engineers and Scientists

21905 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043
PH. (425) 771-3304 FAX. (425) 771-3549

GROUNDWATER SAMPLE CONCENTRATIONS

Safeway #1436 Fueling Station
7201 Portland Ave E
Tacoma, Pierce County, Washington

ENVIRONMENT

PROJECT 08266.2

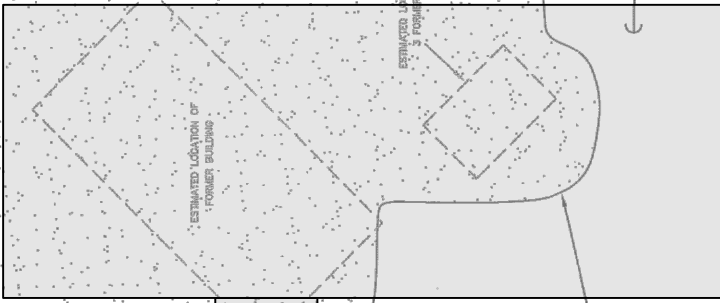
4

ANALYTICAL LEGEND

	G	D	O	B	T	E	X
	Gasoline-Range TPH	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes
MTCA Method A Cleanup Level	800	500	500	5	1,000	700	1,000

All concentrations in micrograms per liter (µg/l)

TPH - Total petroleum hydrocarbons
MTCA - Model Toxics Control Act.
ND - Not detected above laboratory reporting limit.
NT - Not analyzed
RED = Exceeds MTCA Method A



APPENDIX B - TABLES

Table 1-Summary of Groundwater Analytical Results

TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 Safeway #1436 Fueling Station
 7201 Portland Avenue
 Tacoma, Washington

all concentrations are in micrograms per liter (µg/l)

Well ID (Top of Casing Elevation [feet amsl])	Sample Date	Depth to Water (feet)	Ground-water Elevation (feet)	TPH						VOCs							
				Gasoline-Range	Diesel-Range	OH-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	S-Butylbenzene	N-Butylbenzene	Naphthalene
MW1 (417.26)	10/25/2018	6.54	410.72	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	-	-	-	-	-	-	-
	7/25/2018	6.32	410.94	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	3/28/2018	5.15	412.11	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	12/26/2017	4.02	413.24	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	9/27/2017	6.65	410.61	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	6/28/2017	5.36	411.90	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)
	3/21/2017	3.98	413.28	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	11/30/2016	5.43	411.83	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	--	--	--	--	--	--	--
MW2 (417.62)	10/25/2018	7.62	410.00	640	530	250	14	2	29	5.1	--	--	--	--	--	--	--
	7/25/2018	7.41	410.21	1,100	250	ND (<250)	18	3.7	37	12	--	--	--	--	--	--	--
	6/26/2018	6.79	410.83	1,000	1,100	350	21	3.9	25	12	--	--	--	--	--	--	--
	3/28/2018	5.37	412.25	650	ND (<130)	ND (<250)	6.6	ND (<2)	16	7	--	--	--	--	--	--	--
	12/26/2017	4.64	412.98	600	ND (<130)	ND (<250)	8.2	ND (<2)	7.3	5.8	--	--	--	--	--	--	--
	9/27/2017	4.88	412.74	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	6/28/2017	5.46	412.16	670	ND (<130)	ND (<250)	6.7	ND (<2)	ND (<2)	ND (<4)	7.2	24	ND (<2)	ND (<2)	2.6	ND (<2)	2.3
	3/21/2017	4.53	413.09	970	290	ND (<250)	18	ND (<2)	25	26	12	29	3.1	4	3.1	12	4.5
11/30/2016	5.23	412.39	820	190	ND (<250)	46	3.1	12	21	--	--	--	--	--	--	--	
MW3 (419.22)	10/25/2018	7.16	412.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/28/2018	4.96	414.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/26/2017	4.33	414.89	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	9/27/2017	6.88	412.34	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	6/28/2017	5.44	413.78	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)
	3/21/2017	4.21	415.01	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	11/30/2016	5.82	413.40	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	--	--	--	--	--	--	--
MW4 (419.98)	10/25/2018	8.10	411.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/28/2018	5.34	414.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/26/2017	4.75	415.23	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	9/27/2017	7.99	411.99	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	6/28/2017	5.91	414.07	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	ND (<2)
	3/21/2017	4.64	415.34	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--
	11/30/2016	5.42	414.56	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	--	--	--	--	--	--	--
MTCA Method A Cleanup Level				800	500	500	5	1,000	700	1,000	NE	800*	80*	NE	800*	400*	160

Notes: Concentrations detected above laboratory method reporting limits (MRLs) are in **BOLD** type. Concentrations above MTCA cleanup levels are in red **BOLD** and shaded.

TPH - total petroleum hydrocarbons

VOCs - volatile organic compounds

MTCA - Model Toxics Control Act

ND - Not detected above laboratory reporting limit.

* - MTCA Method B Cleanup Level - Unrestricted land use. Referenced when a Method A cleanup level has not been established.

-- - Not analyzed and/or sampled

APPENDIX C – ANALYTICAL REPORT



October 26, 2018

Mr. Kyle Bennett
Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

Dear Mr. Bennett,

On October 25th, 2 samples were received by our laboratory and assigned our laboratory project number EV18100154. The project was identified as your 811676550. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	10/26/2018
CLIENT CONTACT:	Kyle Bennett	ALS JOB#:	EV18100154
CLIENT PROJECT:	811676550	ALS SAMPLE#:	EV18100154-01
CLIENT SAMPLE ID	MW-1	DATE RECEIVED:	10/25/2018
		COLLECTION DATE:	10/25/2018 6:45:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	10/25/2018	KLS
Benzene	EPA-8021	U	1.0	1	UG/L	10/25/2018	KLS
Toluene	EPA-8021	U	1.0	1	UG/L	10/25/2018	KLS
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	10/25/2018	KLS
Xylenes	EPA-8021	U	3.0	1	UG/L	10/25/2018	KLS
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	10/25/2018	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	10/25/2018	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	93.1	10/25/2018	KLS
TFT	EPA-8021	88.0	10/25/2018	KLS
C25	NWTPH-DX	95.5	10/25/2018	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	10/26/2018
CLIENT CONTACT:	Kyle Bennett	ALS JOB#:	EV18100154
CLIENT PROJECT:	811676550	ALS SAMPLE#:	EV18100154-02
CLIENT SAMPLE ID	MW-2	DATE RECEIVED:	10/25/2018
		COLLECTION DATE:	10/25/2018 7:30:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	640	50	1	UG/L	10/25/2018	KLS
Benzene	EPA-8021	14	1.0	1	UG/L	10/25/2018	KLS
Toluene	EPA-8021	2.0	1.0	1	UG/L	10/25/2018	KLS
Ethylbenzene	EPA-8021	29	1.0	1	UG/L	10/25/2018	KLS
Xylenes	EPA-8021	5.1	3.0	1	UG/L	10/25/2018	KLS
TPH-Diesel Range	NWTPH-DX	530	130	1	UG/L	10/25/2018	EBS
TPH-Oil Range	NWTPH-DX	250	250	1	UG/L	10/25/2018	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	100	10/25/2018	KLS
TFT	EPA-8021	92.7	10/25/2018	KLS
C25	NWTPH-DX	98.3	10/25/2018	EBS

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline, an unidentified diesel range product and an unidentified oil range product.



CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	10/26/2018
CLIENT CONTACT:	Kyle Bennett	ALS SDG#:	EV18100154
CLIENT PROJECT:	811676550	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MBG-102518W - Batch 133906 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	10/25/2018	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-102518W - Batch 133906 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	10/25/2018	KLS
Toluene	EPA-8021	U	UG/L	1.0	10/25/2018	KLS
Ethylbenzene	EPA-8021	U	UG/L	1.0	10/25/2018	KLS
Xylenes	EPA-8021	U	UG/L	3.0	10/25/2018	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-102518W - Batch 133914 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	10/25/2018	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	10/25/2018	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	10/26/2018
CLIENT CONTACT:	Kyle Bennett	ALS SDG#:	EV18100154
CLIENT PROJECT:	811676550	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 133906 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	84.4			66.5	122.7	10/25/2018	KLS
TPH-Volatile Range - BSD	NWTPH-GX	91.5	8		66.5	122.7	10/25/2018	KLS

ALS Test Batch ID: 133906 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Benzene - BS	EPA-8021	89.2			83	120	10/25/2018	KLS
Benzene - BSD	EPA-8021	91.0	2		83	120	10/25/2018	KLS
Toluene - BS	EPA-8021	91.5			85	115	10/25/2018	KLS
Toluene - BSD	EPA-8021	94.0	3		85	115	10/25/2018	KLS
Ethylbenzene - BS	EPA-8021	94.7			85	113	10/25/2018	KLS
Ethylbenzene - BSD	EPA-8021	96.0	1		85	113	10/25/2018	KLS
Xylenes - BS	EPA-8021	94.9			85	116	10/25/2018	KLS
Xylenes - BSD	EPA-8021	96.2	1		85	116	10/25/2018	KLS

ALS Test Batch ID: 133914 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	79.9			67	125.2	10/25/2018	EBS
TPH-Diesel Range - BSD	NWTPH-DX	81.9	3		67	125.2	10/25/2018	EBS

APPROVED BY

Laboratory Director

