

Groundwater Monitoring Report

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

March 27, 2020
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

March 27, 2020



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.

A handwritten signature in blue ink that reads "Kyle S. Bennett".

Kyle Bennett, G.I.T.
Staff Geologist

A handwritten signature in blue ink that reads "Matt Wheaton".

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

Terracon Consultants, Inc. 21905 64th Avenue West Suite 100 Mountlake Terrace, Washington 98043
P (425) 771 3304 F (425) 771 3549 terracon.com

Environmental ■ Facilities ■ Geotechnical ■ Materials

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

Terracon Project No. 81167550
March 27, 2020

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.

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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 benzene, toluene, ethylbenzene, and xylenes (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, four groundwater monitoring events were completed and monitoring wells MW1 and MW2 were sampled. 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. Although gasoline-range TPH concentrations decreased, relative to the June and July 2018 sampling events, diesel-range TPH concentration remained above the MTCA cleanup level during the October 2018 sampling event. With the exception of diesel-range TPH, the sample collected from MW2 during the March 2019 sampling event did not contain COCs at concentrations exceeding MTCA cleanup levels.

Terracon completed a groundwater monitoring event on all four monitoring wells (MW1 thru MW4) in December 2019. The groundwater samples collected from M1 thru MW4 did not contain COCs at concentrations exceeding laboratory reporting limits and/or their respective MTCA Method A cleanup levels.

Groundwater Monitoring Report

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March 27, 2020 ■ Terracon Project No. 81167550



This report presents the results of Terracon's recent quarterly groundwater monitoring event, conducted on March 2020.

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 Monitoring*, dated November 2, 2016; and Project Services Agreement, dated October 27, 2016. At the Client's request, our scope of services included completion of the following tasks:

- § Collect groundwater samples from all four of the on-site groundwater monitoring wells (MW1 through MW4);
- § Complete laboratory analyses of the four 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.

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Safeway #1436 Fueling Station ■ Tacoma, Washington

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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 March 6, 2020, a Terracon representative mobilized to the Site to perform groundwater monitoring activities and collect groundwater samples from wells MW1 through MW4.

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 4.91 feet below TOC at MW2 to 7.69 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 412.28 feet at monitoring well MW1 to 414.42 feet at monitoring well MW4 (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 south-southwest (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

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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 benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260.

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

Diesel-range TPH was detected in the groundwater samples collected from monitoring wells MW2 and MW4 at concentrations of 170 µg/l and 140 µg/l, respectively. The detected diesel-range TPH concentrations in MW2 and MW4 are below the MTCA Method A cleanup level of 500 µg/ for diesel.

Benzene was detected in the groundwater sample collected from monitoring well MW2 at a concentration of 1.1 µg/l, which is below the MTCA Method A cleanup level of 5 µg/l for benzene.

Gasoline- and oil-range TPH, toluene, ethylbenzene, and xylenes were not detected at concentrations above laboratory MRLs in the groundwater sample collected from monitoring well MW2.

Gasoline-, diesel-, or oil-range TPH, benzene, toluene, ethylbenzene, or xylenes were not detected at concentrations above laboratory MRLs and/or their respective MTCA cleanup levels in the groundwater samples collected from monitoring wells MW1, MW3 and MW4.

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. 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. The drum will be properly disposed by a licensed disposal facility. Once picked up and disposed, Terracon will forward the waste manifest to the Client.

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 4.98 to 5.56 feet bgs, with a groundwater gradient toward the south-southwest. This gradient is consistent with previously recorded groundwater migration directions.
- n Diesel-range TPH was identified in the groundwater samples collected from monitoring wells MW2 and MW4, but at concentrations below their respective MTCA Method A cleanup levels.
- n Benzene was identified in the groundwater sample collected from monitoring well MW2, but at a concentration below the respective MTCA Method A cleanup level.
- n Gasoline-, diesel-, and oil-range TPH, and BTEX were not detected at concentrations above laboratory MRLS and/or their respective MTCA cleanup levels in the groundwater samples collected from MW1, MW3, and MW4.

Gasoline-, diesel-, and oil-range TPH, and BTEX concentrations in all on-site groundwater monitoring wells are currently below MTCA Method A cleanup levels.

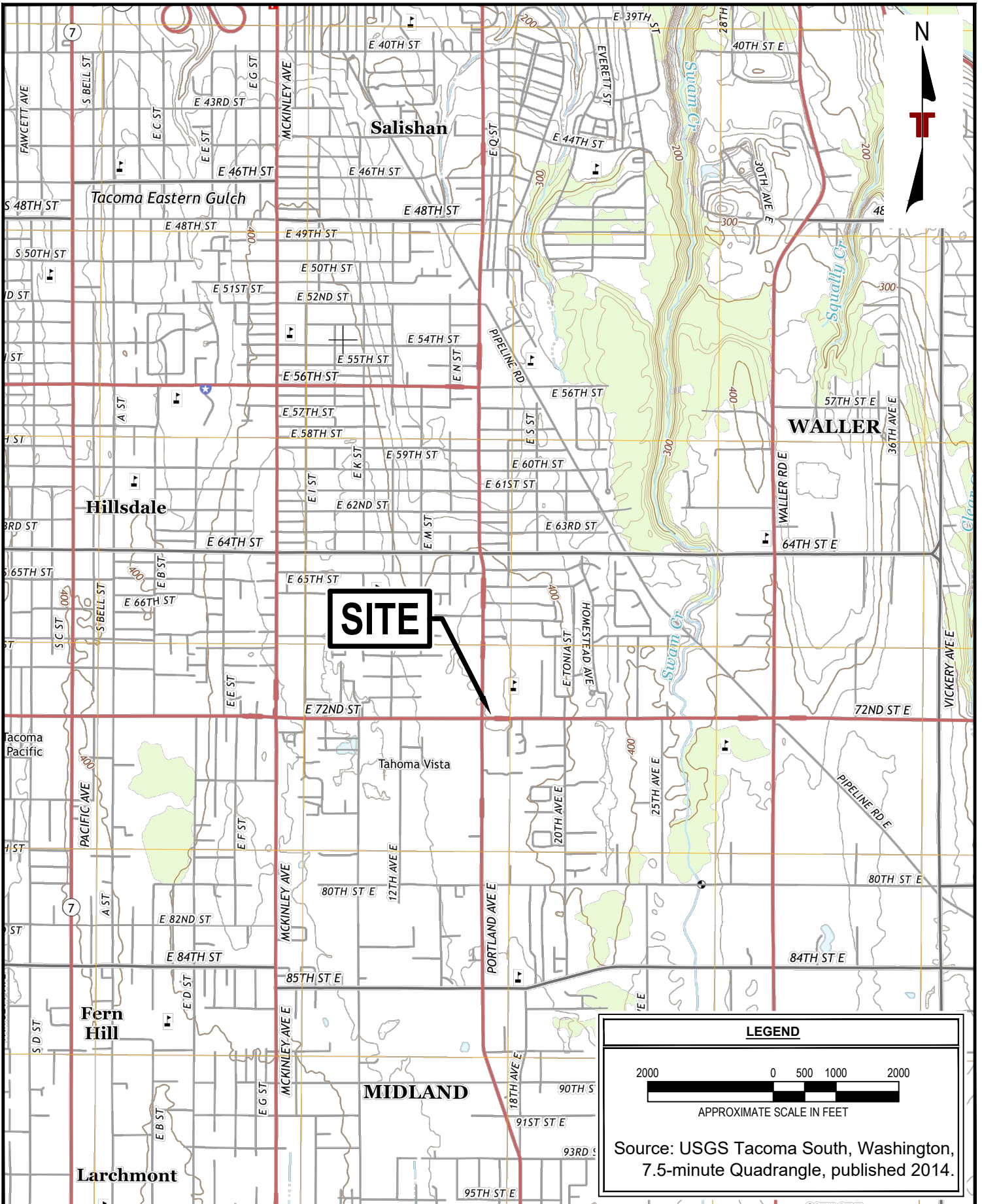
APPENDIX A - EXHIBITS

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram

Exhibit 3 – Groundwater Contour & Flow Map – March 2020

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 Mngr:	KSB
Drawn By:	AMP
Checked By:	KSB
Approved By:	MYW

Project No.	81167550
Scale:	AS SHOWN
File No.	Exhibit 1
Date:	DEC 2019

Terracon
 Consulting Engineers and Scientists

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

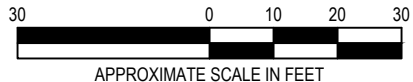
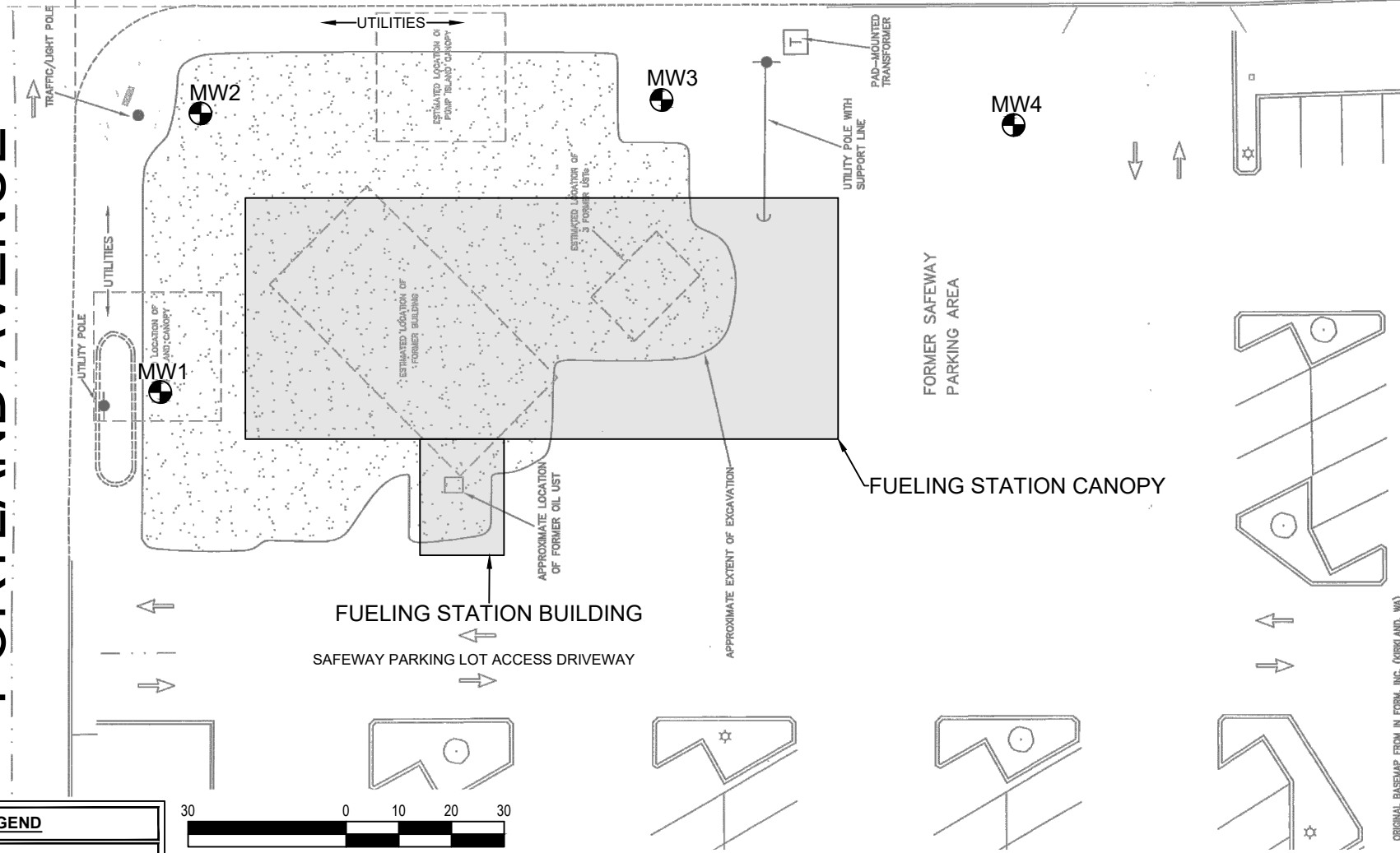
TOPOGRAPHIC MAP
 Safeway #1436 Fueling Station
 7201 Portland Ave E
 Tacoma, Pierce County, Washington

EXHIBIT

1

PORTLAND AVENUE

72ND STREET



LEGEND	
	MW1 APPROXIMATE LOCATION OF MONITORING WELL
	APPROXIMATE LOCATION OF REMEDIAL INJECTION POINT
	INFERRED GROUNDWATER FLOW DIRECTION (MARCH 2018)

Project Mngr:	KSB	Project No.	81167550
Drawn By:	AMP	Scale:	AS SHOWN
Checked By:	KSB	File No.	Exhibit 2
Approved By:	MYW	Date:	DEC 2019

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

ENVIRONMENTAL PROJECT 08256.2

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

EXHIBIT

2

PORTLAND AVENUE

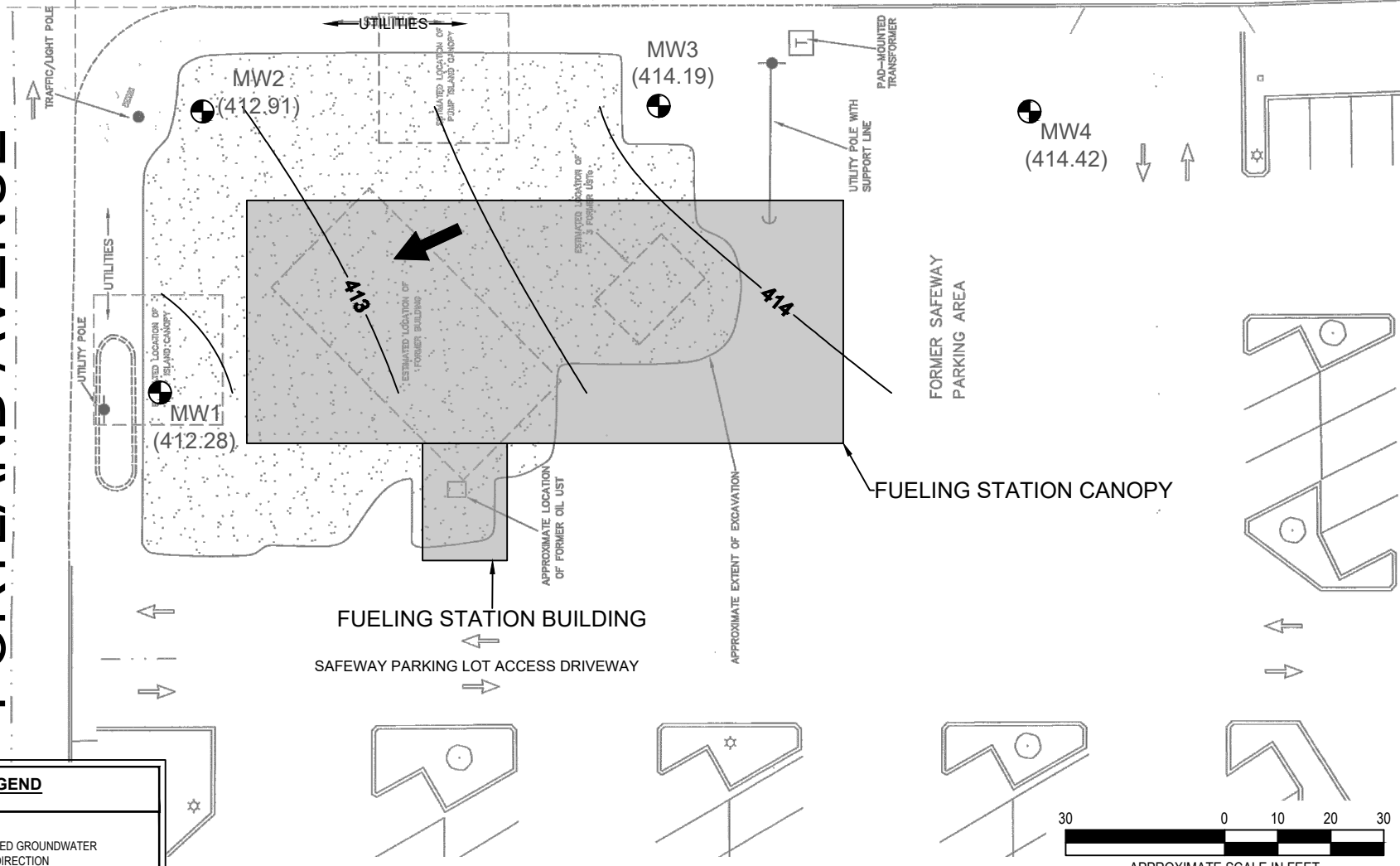
72ND STREET

08268.2

ENVIRONMENTAL PROJECT

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

JEL



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'r:	KSB	Project No.	81167550
Drawn By:	JWD	Scale:	AS SHOWN
Checked By:	KSB	File No.	Exhibit 3
Approved By:	MYW	Date:	MAR 2020

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 - MARCH 2020

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

EXHIBIT

3

PORTLAND AVENUE

72ND STREET

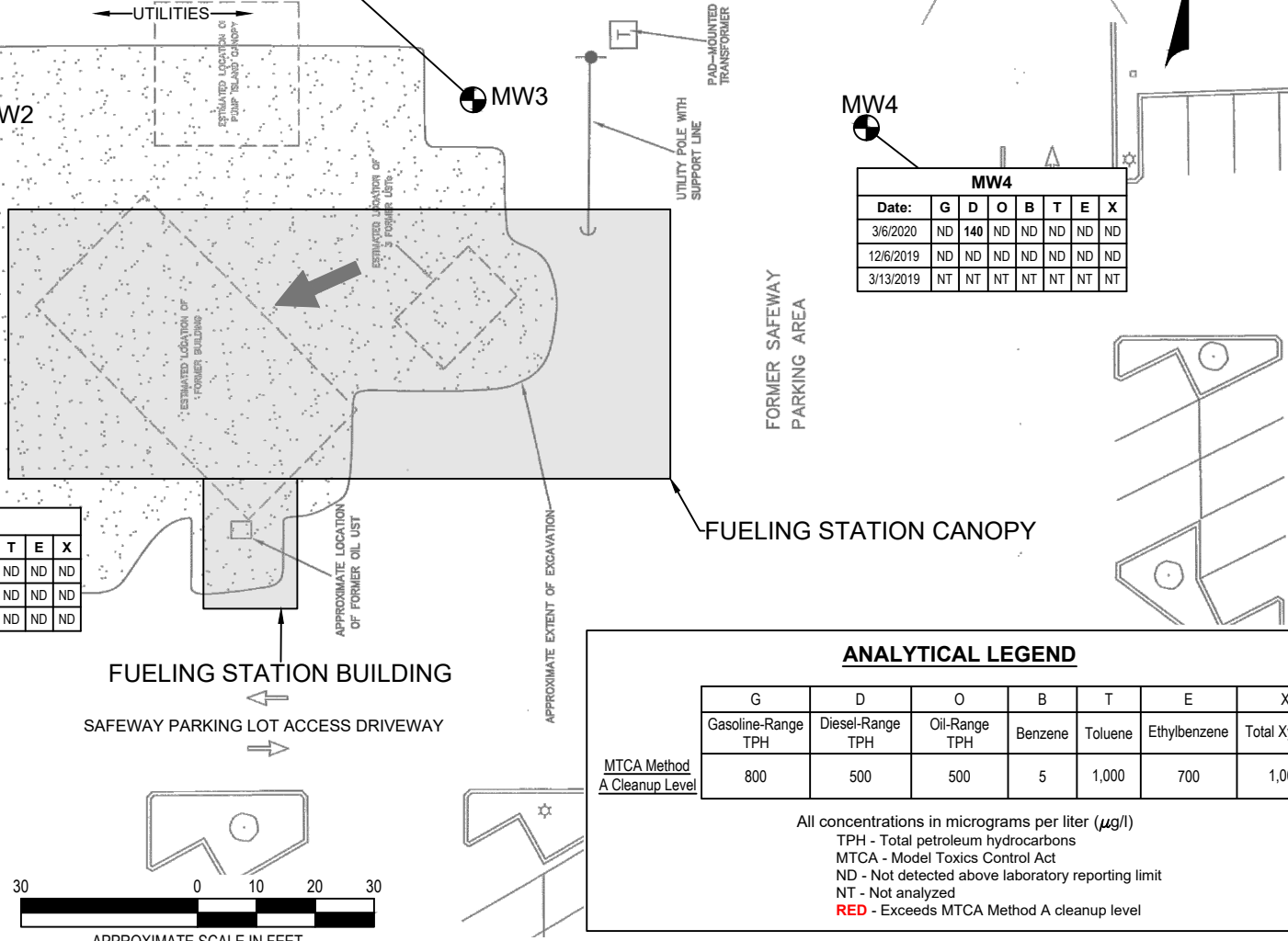


MW2							
Date:	G	D	O	B	T	E	X
3/6/2020	ND	170	ND	1.1	ND	ND	ND
12/6/2019	ND	490	380	3.3	ND	ND	ND
3/13/2019	ND	580	400	ND	ND	ND	ND

MW3							
Date:	G	D	O	B	T	E	X
3/6/2020	ND	ND	ND	ND	ND	ND	ND
12/6/2019	ND	ND	ND	ND	ND	ND	ND
3/13/2019	NT	NT	NT	NT	NT	NT	NT

MW4							
Date:	G	D	O	B	T	E	X
3/6/2020	ND	140	ND	ND	ND	ND	ND
12/6/2019	ND	ND	ND	ND	ND	ND	ND
3/13/2019	NT	NT	NT	NT	NT	NT	NT

MW1							
Date:	G	D	O	B	T	E	X
3/6/2020	ND	ND	ND	ND	ND	ND	ND
12/6/2019	ND	ND	ND	ND	ND	ND	ND
3/13/2019	ND	ND	ND	ND	ND	ND	ND



ANALYTICAL LEGEND						
G	D	O	B	T	E	X
Gasoline-Range TPH	Diesel-Range TPH	Oil-Range TPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
800	500	500	5	1,000	700	1,000

MTCA Method A Cleanup Level

All concentrations in micrograms per liter ($\mu\text{g/l}$)
 TPH - Total petroleum hydrocarbons
 MTCA - Model Toxics Control Act
 ND - Not detected above laboratory reporting limit
 NT - Not analyzed
RED - Exceeds MTCA Method A cleanup level

LEGEND	
	APPROXIMATE LOCATION OF MONITORING WELL
	INFERRED GROUNDWATER FLOW DIRECTION

Project Mngr:	KSB	Project No.	81167550
Drawn By:	JWD	Scale:	AS SHOWN
Checked By:	KSB	File No.	Exhibit 4
Approved By:	MYW	Date:	March 2020

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

ENVIRONMENTAL PROJECT 08265.2

EXHIBIT

4

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
Terracon Project No. 81167550

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

Well ID (Top of Casing Elevation [feet])	Sample Date	Depth to Water (feet)	Ground-water Elevation (feet)	TPH			VOCs											EPH ¹	VPH ¹	
				Gasoline-Range	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	S-Butylbenzene	N-Butylbenzene	Naphthalenes			
MW3 (419.22)	3/6/2020	5.03	414.19	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)	--	--	--	--	--	--	--	--	--	
	12/6/2019	6.87	412.35	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--	--	--	
	3/13/2019	4.72	414.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	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)	ND (<2)	--	--
	3/21/2017	4.21	415.01	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--	--	--	
	12/1/2016	5.82	413.40	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	--	--	--	--	--	--	--	--	--	
MW4 (419.98)	3/6/2020	5.56	414.42	ND (<50)	140	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)	--	--	--	--	--	--	--	--	--	
	12/6/2019	7.69	412.29	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--	--	--	
	3/13/2019	5.06	414.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	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)	ND (<2)	--	--
	3/21/2017	4.64	415.34	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<4)	--	--	--	--	--	--	--	--	--	
	12/1/2016	5.42	414.56	ND (<50)	ND (<130)	ND (<250)	ND (<2)	ND (<2)	ND (<2)	ND (<2)	--	--	--	--	--	--	--	--	--	

- Notes: Concentrations detected above laboratory reporting limits are in **BOLD** type.
Concentrations above MTCA cleanup levels are in **BOLD RED** type and a shaded cell.
Compounds for which no cleanup level has been established are not included in this table.
- TPH - total petroleum hydrocarbons
VOCs - volatile organic compounds
EPH - Extractable Petroleum Hydrocarbons
VPH - Volatile Petroleum Hydrocarbons
MTCA - Model Toxics Control Act
1 - See analytical results for full list of analytes.
NE - Not established
ND - Not detected above laboratory reporting limit.
-- - Not analyzed
* - MTCA Method B Cleanup Level

APPENDIX C – ANALYTICAL REPORT



March 12, 2020

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

Dear Mr. Wheaton,

On March 9th, 4 samples were received by our laboratory and assigned our laboratory project number EV20030048. The project was identified as your 81167550. 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:	3/12/2020
CLIENT CONTACT:	Matt Wheaton	ALS JOB#:	EV20030048
CLIENT PROJECT:	81167550	ALS SAMPLE#:	EV20030048-01
CLIENT SAMPLE ID	MW1	DATE RECEIVED:	03/09/2020
		COLLECTION DATE:	3/6/2020 12:25:00 PM
		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	03/10/2020	KLS
Benzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Toluene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Xylenes	EPA-8021	U	3.0	1	UG/L	03/10/2020	KLS
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/10/2020	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/10/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	69.1	03/10/2020	KLS
TFT	EPA-8021	99.9	03/10/2020	KLS
C25	NWTPH-DX	92.7	03/10/2020	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:	3/12/2020
CLIENT CONTACT:	Matt Wheaton	ALS JOB#:	EV20030048
CLIENT PROJECT:	81167550	ALS SAMPLE#:	EV20030048-02
CLIENT SAMPLE ID	MW2	DATE RECEIVED:	03/09/2020
		COLLECTION DATE:	3/6/2020 1:15:00 PM
		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	03/10/2020	KLS
Benzene	EPA-8021	1.1	1.0	1	UG/L	03/10/2020	KLS
Toluene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Xylenes	EPA-8021	U	3.0	1	UG/L	03/10/2020	KLS
TPH-Diesel Range	NWTPH-DX	170	130	1	UG/L	03/10/2020	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/10/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	72.5	03/10/2020	KLS
TFT	EPA-8021	99.6	03/10/2020	KLS
C25	NWTPH-DX	92.0	03/10/2020	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	3/12/2020
CLIENT CONTACT:	Matt Wheaton	ALS JOB#:	EV20030048
CLIENT PROJECT:	81167550	ALS SAMPLE#:	EV20030048-03
CLIENT SAMPLE ID	MW3	DATE RECEIVED:	03/09/2020
		COLLECTION DATE:	3/6/2020 11:45:00 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	03/10/2020	KLS
Benzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Toluene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Xylenes	EPA-8021	U	3.0	1	UG/L	03/10/2020	KLS
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	03/10/2020	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/10/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	72.4	03/10/2020	KLS
TFT	EPA-8021	103	03/10/2020	KLS
C25	NWTPH-DX	89.4	03/10/2020	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:	3/12/2020
CLIENT CONTACT:	Matt Wheaton	ALS JOB#:	EV20030048
CLIENT PROJECT:	81167550	ALS SAMPLE#:	EV20030048-04
CLIENT SAMPLE ID	MW4	DATE RECEIVED:	03/09/2020
		COLLECTION DATE:	3/6/2020 11:00:00 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	03/10/2020	KLS
Benzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Toluene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	03/10/2020	KLS
Xylenes	EPA-8021	U	3.0	1	UG/L	03/10/2020	KLS
TPH-Diesel Range	NWTPH-DX	140	130	1	UG/L	03/10/2020	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	03/10/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	73.7	03/10/2020	KLS
TFT	EPA-8021	104	03/10/2020	KLS
C25	NWTPH-DX	91.2	03/10/2020	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CERTIFICATE OF ANALYSIS

CLIENT: Terracon
 21905 - 64th Ave W, Suite 100
 Mountlake Terrace, WA 98043

DATE: 3/12/2020
 ALS SDG#: EV20030048
 WDOE ACCREDITATION: C601

CLIENT CONTACT: Matt Wheaton
 CLIENT PROJECT: 81167550

LABORATORY BLANK RESULTS

MBG-031020W - Batch 151540 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	03/10/2020	KLS

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

MB-031020W - Batch 151540 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	03/10/2020	KLS
Toluene	EPA-8021	U	UG/L	1.0	03/10/2020	KLS
Ethylbenzene	EPA-8021	U	UG/L	1.0	03/10/2020	KLS
Xylenes	EPA-8021	U	UG/L	3.0	03/10/2020	KLS

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

MB-030920W - Batch 151555 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	03/09/2020	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	03/09/2020	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:	3/12/2020
CLIENT CONTACT:	Matt Wheaton	ALS SDG#:	EV20030048
CLIENT PROJECT:	81167550	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 151540 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	87.8			66.5	122.7	03/11/2020	KLS
TPH-Volatile Range - BSD	NWTPH-GX	90.1	2		66.5	122.7	03/11/2020	KLS

ALS Test Batch ID: 151540 - Water by EPA-8021

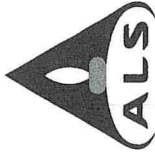
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Benzene - BS	EPA-8021	106			83	120	03/11/2020	KLS
Benzene - BSD	EPA-8021	105	0		83	120	03/11/2020	KLS
Toluene - BS	EPA-8021	110			85	115	03/11/2020	KLS
Toluene - BSD	EPA-8021	110	0		85	115	03/11/2020	KLS
Ethylbenzene - BS	EPA-8021	107			85	113	03/11/2020	KLS
Ethylbenzene - BSD	EPA-8021	108	1		85	113	03/11/2020	KLS
Xylenes - BS	EPA-8021	107			85	116	03/11/2020	KLS
Xylenes - BSD	EPA-8021	109	1		85	116	03/11/2020	KLS

ALS Test Batch ID: 151555 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	96.7			67	125.2	03/10/2020	EBS
TPH-Diesel Range - BSD	NWTPH-DX	94.2	3		67	125.2	03/10/2020	EBS

APPROVED BY

Laboratory Director



ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

E\120030048

Date 3/9/2020 Page 1 Of 1

PROJECT ID: REPORT TO COMPANY: PROJECT MANAGER: ADDRESS: PHONE: E-MAIL: INVOICE TO COMPANY: ATTENTION: ADDRESS:	ANALYSIS REQUESTED				OTHER (Specify)																							
	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 <input checked="" type="checkbox"/>	BTEX by EPA 8260 <input type="checkbox"/>	MTBE by EPA 8260 <input type="checkbox"/>	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 <input type="checkbox"/>	Pesticides by EPA 8081 <input type="checkbox"/>	Metals-MTCA-5 <input type="checkbox"/>	RCRA-8 <input type="checkbox"/>	Pri Pol <input type="checkbox"/>	TAL <input type="checkbox"/>	Metals Other (Specify)	TCLP-Metals <input type="checkbox"/>	VOA <input type="checkbox"/>	Semi-Vol <input type="checkbox"/>	Pest <input type="checkbox"/>	Herbs <input type="checkbox"/>	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?		
PROJECT ID: <u>81167550</u> COMPANY: <u>Terracon</u> PROJECT MANAGER: <u>Matt Wheaton</u> ADDRESS: <u>21905 64th Ave W, Ste 100</u> <u>Mountlake Terrace, WA 98043</u> PHONE: <u>425-771-3304</u> P.O. #: E-MAIL: <u>matt.wheaton@terracon, jett.dobbins@terracon</u> INVOICE TO COMPANY: <u>SAPE</u> ATTENTION: ADDRESS:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1. MW1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. MW2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. MW3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. MW4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS depending on Dx results, MW2 will be run for additional analysis

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Jett Dobbins, Terracon, 3/9/2020
Received By: Jett Dobbins ALS 3-9-20 1114
2. Relinquished By: _____
Received By: _____

TURNAROUND REQUESTED in Business Days*
OTHER: _____
Specify: _____
Organic, Metals & Inorganic Analysis
10 Standard 5 3 2 1 SAME DAY
Fuels & Hydrocarbon Analysis
 Standard 3 1 SAME DAY

*Turnaround request less than standard may incur Rush Charges