



June 15, 2020

Elton Lee
Phil Carmody
LMI – West Seattle Holdings, LLC
125 High Street
High Street Tower, 24th Floor
Boston, Massachusetts 02110

Re: Groundwater Monitoring Report, SKS Shell Station Site, First Quarter 2020

LMI – West Seattle Holdings, LLC PPCD No. 13-3-27556-2
Facility ID #39196282, Cleanup ID #6015
Project No. 160328

Dear Mr. Carmody:

This report has been prepared by Aspect Consulting, LLC (Aspect) to summarize the results of compliance groundwater monitoring in First Quarter 2020 for the SKS Shell Station Site (Site; Figure 1) located at 3901 Southwest Alaska Street in Seattle, Washington. Post-cleanup compliance sampling and reporting has been occurring since cleanup and redevelopment of the Site was completed in 2015, in accordance with Prospective Purchaser Consent Decree #13-2-27556 and Washington Administrative Code (WAC) Chapter 173-340. This report includes a brief background of the project, a description of the scope of work for the First Quarter 2020 monitoring event, and a summary of the results in comparison to results from prior compliance monitoring events. The location of the Site is shown in Figure 1.

Background

Use of the SKS Shell Station Site property as an auto repair facility and subsequently as various gasoline refueling and service stations from 1934 until 2013 resulted in soil and groundwater with gasoline-, diesel-, and heavy oil-range total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and total xylenes (BTEX) at concentrations above Model Toxics Control Act (MTCA) Method A cleanup levels. The areas in which these contaminants have been found exceeding the MTCA cleanup levels constitute the Site, which consists of portions of the property located at 3901 Southwest Alaska Street, as well as the Southwest Alaska Street and Fauntleroy Way Southwest rights-of-way (ROW) adjoining on the north and west, respectively (Figure 2).

Cleanup action activities included remedial excavation that was completed in 2015, concurrently with property redevelopment and construction of the existing Whittaker building.¹ Excavation beyond the former SKS property boundaries was not feasible, and localized areas of contaminated soil remains beneath adjoining ROWs. Cleanup and redevelopment were conducted in coordination with cleanup activities and redevelopment at the neighboring Kennedy-Huling Brothers Site

¹ The new building (known as The Whittaker) was completed in 2016 and extends across northeast three quarters of the city block that fronts Fauntleroy Way SW, south of the SW Alaska St intersection.



(Voluntary Cleanup Program ID #NW2715), which received a No Further Action (NFA) determination in March 2019.

For more detail on the former SKS property history, extent of contamination, and remedial actions completed at the SKS Shell Station Site, refer to the Cleanup Action Plan² (CAP) and Cleanup Action Report³ (CAR).

Compliance Groundwater Monitoring

Post-cleanup compliance and natural attenuation monitoring of groundwater began in March 2016 and is ongoing on a quarterly basis at the SKS Shell Station Site. The original compliance well network consisted of 15 wells located in the Southwest Alaska Street ROW, the Fauntleroy Way Southwest ROW, and the parking garage of the Whittaker building (RW-02 to RW-05, MW101 to MW106, and MW108 to MW113; Figure 2). Table 1 presents a summary of the construction details and status for each of the 15 original compliance groundwater monitoring wells for the Site.

As of First Quarter 2020, Ecology approved discontinuing sampling at four of the original compliance wells (RW-02, and MW101, MW102 and MW-103), and the existing compliance well network for the Site now consists of 11 wells. To date, 17 consecutive quarters of groundwater monitoring have been completed. The following sections describe the field and analysis methods and the analytical results.

Field and Analysis Methods

The First Quarter 2020 groundwater monitoring event was completed on April 21-22, 2020, one month later than originally scheduled; a schedule extension for this groundwater sampling event was approved via email by Dale Myers of the Washington State Department of Ecology on April 6, 2020.

On April 21, 2020, groundwater levels were measured in 13 existing wells.⁴ Each water level measurement was recorded to the hundredth of a foot, relative to the top of the north side of the well casing. Groundwater elevations were calculated using the surveyed top of casing elevations. Depth to water measurements and water level elevations from the groundwater monitoring event are shown in Table 1 and on Figure 2.

Sampling was completed at the 11 compliance groundwater monitoring wells located on the Site and in the surrounding ROWs. All 11 wells were sampled using standard low flow methodology.⁵ Field parameters were collected during groundwater sampling—including depth to water, flow rate, temperature, specific conductivity, dissolved oxygen, pH, oxidation reduction potential, and

² SoundEarth Strategies, Inc. (SoundEarth), 2016, Cleanup Action Plan, SKS Shell Property, 3901 Southwest Alaska Street, Seattle, Washington, June 16, 2014

³ SoundEarth Strategies, Inc. (SoundEarth), 2016, Cleanup Action Report, SKS Shell Property, 3901 Southwest Alaska Street, Seattle, Washington, October 20, 2016.

⁴Consistent with approval from Mr. Myers in a January 6, 2020 email, monitoring wells MW101 and MW102 were monitored for depth to water, but were not sampled during this quarterly monitoring event.

⁵United States Environmental Protection Agency (EPA). 1996. Low Flow (Minimal Drawdown) Ground-Water Sampling Procedures. April 1996.

turbidity—and sampling occurred once all parameters had stabilized.⁶ None of the well screens were fully submerged during sampling and the tubing intake was placed at the midpoint of the water column. Dedicated tubing left in each well from the prior sampling event(s) was disposed of and fresh tubing supplied. Samples were collected in laboratory supplied bottleware, transported under standard chain of custody procedures, and submitted to Friedman and Bruya, Inc. of Seattle, Washington for laboratory chemical analysis of the following:

- Gasoline-, diesel- and oil-range TPH using Northwest Methods NWTPH-Gx and NWTPH-Dx
- BTEX using EPA Method 8021B

Wells MW104 and MW108 were purged dry before field parameters had stabilized and sampling could be completed. Both were purged and allowed to recharge at least three times before sampling was completed. A field duplicate for all analytes was collected at RW-04.

Groundwater Monitoring Results

Groundwater Elevations and Flow Direction

First Quarter 2020 groundwater elevations ranged from a low of 239.97 feet NAVD88 (MW109) to a high of 242.90 ft NAVD88 (MW101). Groundwater elevations from the groundwater monitoring event were contoured to show generalized groundwater flow direction at the Site. As shown on Figure 2, groundwater flow across the Site area is generally toward the west with localized variability, ranging from west to south to southeast. Refer to the Findings section for a discussion of groundwater elevation and flow changes over the compliance monitoring period.

Analytical Results

Table A below presents a summary of the chemical analytical results for the First Quarter 2020 monitoring event.

⁶ Stabilization consists of the following over no less than 9 minutes: less than 10 percent change in dissolved oxygen and turbidity; less than 3 percent change in specific conductance; less than 10 millivolt change in oxidation reduction potential; and less than 0.1 change in pH.

Table A. Summary of Groundwater Analytical Results

Sample Location	Benzene	Gasoline-Range TPH	Diesel-Range TPH	Heavy Oil-Range TPH
MW104	< 1 U	< 100 U	200 X	< 250 U
MW105	< 1 U	< 100 U	< 50 U	< 250 U
MW108	< 1 U	< 100 U	160 X	< 250 U
MW109	< 1 U	< 100 U	100 X	< 250 U
MW110	< 1 U	< 100 U	250 X	< 250 U
MW111	< 1 U	< 100 U	< 50 U	< 250 U
MW112	< 1 U	< 100 U	< 50 U	< 250 U
MW113	< 1 U	< 100 U	< 50 U	< 250 U
RW-03	< 1 U	1400	700 X	< 250 U
RW-04	2.9	1400	700 X	< 250 U
RW-05	< 1 U	140	420 X	< 250 U
MTCA Method A Cleanup Level	5	1000/800 ¹	500	500

Notes:

All concentrations are listed in mg/L (micrograms per liter)

Bold indicates a detected concentration; **shading** indicates a concentration that exceeds the MTCA Cleanup Level

¹Gasoline-range TPH is measured against a lower cleanup level when benzene is present.

U – the analyte indicated was not detected above the laboratory reporting limit

X – chromatographic pattern did not match the standard used for quantification

Gasoline-range TPH, diesel-range TPH, and/or benzene were detected above laboratory reporting limits in 7 of the 11 wells sampled, and in two wells (RW-03 and RW-04) at concentrations exceeding MTCA Method A cleanup levels (Figure 3). Complete compliance groundwater monitoring data for the wells sampled during this event is shown in Table 2 and chemical analytical results are summarized on Figure 3. Laboratory reports are included in Appendix A.

Findings

Groundwater Elevations and Flow Direction

First Quarter 2020 groundwater elevations ranged from 239.97 feet NAVD88 to 242.90 ft NAVD88, with the lowest elevation measured at MW109 located in the northeast corner of the Whittaker building garage and near the center of the compliance well network. The small-scale groundwater flow directions are variable, ranging from west to south to southeast to west during the First Quarter 2020 event. This local variability in groundwater flow direction is likely attributed to dewatering effects of the footing drains and stormwater sump below the northeast corner of the Whittaker building (Figure 2).

The inferred groundwater flow direction at the Site for the First Quarter 2020 event and the measured seasonal variation in groundwater elevations are consistent with those recorded during previous sampling events occurring since construction of the Whittaker building in 2015-2016. Groundwater flow direction at the Site prior to construction (in 2015) was generally to the northeast, consistent with topography of the neighborhood, based on groundwater elevations measured during four pre-construction monitoring events.

Following construction of the Whittaker building, including footing drains and stormwater sump, generalized groundwater flow direction has reversed, and has been observed flowing generally to the south-southwest. Average seasonal Site-wide groundwater elevations also dropped relative to pre-construction levels since compliance groundwater monitoring began.

Groundwater Analytical Results

Gasoline-range TPH and diesel-range TPH were detected above the MTCA Method A cleanup levels in two compliance wells, RW-03 and RW-04, during the First Quarter 2020 event (Figure 3). Wells RW-03 and RW-04 are located in the vicinity of gasoline-range TPH-contaminated soil that remains in place beyond the east extent of the 2015 remedial excavation.

Exceedances at RW-03 are generally consistent with data from prior compliance monitoring events and have decreased in concentrations since the last sampling event in Fourth Quarter 2019.

Exceedances at RW-04 have not been observed in recent compliance monitoring events and represent an anomalous increase in concentrations. During the First Quarter 2020 event, diesel-range TPH exceeded the MTCA cleanup level for the first time since the Fourth Quarter 2018 event, and gasoline-range TPH exceeded the MTCA cleanup level for the first time since compliance groundwater monitoring at this well began in March 2017. RW-04 is located approximately 15 feet north of RW-03, where gasoline-range TPH has been detected above the MTCA Method A cleanup level in 12 of the 17 successive quarterly sampling events completed at the Site to date.

Fluctuating concentrations of contaminants of concern in groundwater, including occasional intermittent rebounds, have been consistently observed over the compliance groundwater monitoring period, and appear to reflect seasonal variability and/or be affected by changes in groundwater elevations and small-scale flow direction possibly due to dewatering affects in the immediate Site area. However, concentrations of contaminants in groundwater show an overall downward trend when evaluated collectively for the entire compliance monitoring period. Trendlines fitted to benzene, gasoline-, and diesel-range TPH concentrations are shown on Figures 4 through 7, which include post-construction time series charts for all wells where contaminants of concern have been detected above MTCA Method A cleanup levels at any time during the past 8 quarterly sampling events (MW104, MW108, RW-03, and RW-04).

Data Validation

Aspect completed a State 2A data validation on the data reported from Friedman and Bruya, Inc. in accordance with United States Environmental Protection Agency guidance⁷ and Ecology's guidance. A data validation report is attached as Appendix B.

Although determined to be acceptable for use, the following should be noted when reviewing diesel-range TPH detections from the First Quarter 2020 sampling:

- The laboratory flagged all diesel-range TPH detections with an "X" to indicate that the sample chromatographic patterns did not resemble the fuel standard used for quantitation.

All data were found to be acceptable for use as qualified. Validated data were submitted to EIM prior to the submittal of this report.

Recommendations

Contaminants of concern continue to be detected at concentrations above the applicable MTCA Method A cleanup levels in groundwater at the Site, and continued quarterly groundwater monitoring is recommended. Second Quarter 2020 groundwater monitoring is scheduled to occur in June 2020. Quarterly groundwater sampling will continue at the Site until contaminants of concern at all wells are detected below applicable MTCA Method A cleanup levels for four successive quarterly sampling events.

Limitations

Work for this project was performed for the LMI – West Seattle Holding, LLC (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

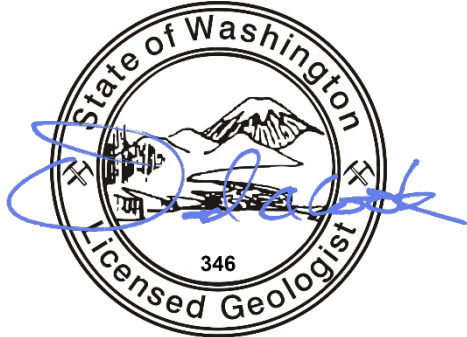
All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix C titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

⁷ United States Environmental Protection Agency, 2009, Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, March 5, 2009.

Sincerely,

Aspect consulting, LLC



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Attachments: Table 1 – Compliance Groundwater Monitoring Well Network
Table 2 – Summary of Compliance Groundwater Monitoring Results
Figure 1 – Site Location
Figure 2 – Compliance Well Network and Groundwater Elevation Contours
Figure 3 – Groundwater Analytical Results
Figure 4 – MW104 Post-Construction Data
Figure 5 – RW03 Post-Construction Data
Figure 6 – RW04 Post-Construction Data
Figure 7 – MW108 Post-Construction Data
Appendix A – Laboratory Analytical Reports
Appendix B – Data Validation Report
Appendix C – Report Limitations and Guidelines for Use

TABLES

Table 1. Compliance Groundwater Monitoring Well Network

Project 160328, SKS Shell Station Site, Seattle, Washington

Well Name ¹	Top of Casing Elevation (ft. NAVD88)	Well Diameter (in.)	Screen Length (ft.)	Total Depth (ft. bgs)	Screened Interval				Status	Last Accessed	First Quarter 2020 Water Levels ²	
					Top Depth (ft. bgs)	Bottom Depth (ft. bgs)	Top Elevation (ft. NAVD88)	Bottom Elevation (ft. NAVD88)			Depth to Water (ft. BTOC)	Elevation (ft. NAVD88)
RW02	268.60	4	15	39.5	24.5 to 39.5	244.10 to 229.10	Existing	Jun-17	--	--		
RW03	269.50	4	15	39.6	24.6 to 39.6	244.90 to 229.90	Existing	April-20	28.64	240.86		
RW04	269.22	4	15	40	25 to 40	244.22 to 229.22	Existing	April-20	28.39	240.83		
RW05	269.09	4	15	40.5	25.5 to 40.5	243.59 to 228.59	Existing	April-20	28.44	240.65		
MW101	269.54	2	10	30	20 to 30	249.54 to 239.54	Existing	Dec-19	26.64	242.90		
MW102	269.06	2	10	31.5	20 to 30	249.06 to 239.06	Existing	Dec-19	26.77	242.29		
MW103	269.55	2	10	31.5	20 to 30	249.55 to 239.55	Decommissioned	Dec-19	--	--		
MW104	269.37	2	10	36.5	20 to 30	249.37 to 239.37	Existing	April-20	28.79	240.58		
MW105	269.30	2	10	36.5	22 to 32	247.30 to 237.30	Existing	April-20	28.25	241.05		
MW108	247.83	0.75	10	12.5	2.5 to 12.5	245.33 to 235.33	Existing	April-20	7.75	240.08		
MW109	247.92	0.75	10	13	3 to 13	244.92 to 234.92	Existing	April-20	7.95	239.97		
MW110	248.21	1	10	12	2 to 12	246.21 to 236.21	Existing	April-20	8.16	240.05		
MW111	270.62	2	15	35	20 to 35	250.62 to 235.62	Existing	April-20	30.15	240.47		
MW112	269.32	2	10	36	26 to 36	243.32 to 233.32	Existing	April-20	28.78	240.54		
MW113	248.06	1	15	20	5 to 20	243.06 to 228.06	Existing	April-20	7.92	240.14		

Notes

Wells in **bold** were sampled as part of the most recent sampling event. Ecology has approved discontinuation of groundwater sampling at wells RW02 and MW101 to MW103. Per Ecology's request, wells MW101 and MW102 are still included in the quarterly synoptic water level measurement

¹This table is not an all-inclusive list of all monitoring wells located historically on the Site. Only wells that have been used in post-construction compliance groundwater monitoring are shown. For full list of historical Site groundwater monitoring wells, see the Cleanup Action Report (SES, 2016)

²Synoptic water levels were measured on April 20, 2020

BTOC = below Top of Casing (North)

ft = feet

NAVD88 = North American Vertical Datum 1988

in = inches

bgs = below ground surface

-- = not measured

Table 2. Summary of Compliance Groundwater Monitoring Results

Project No. 160328, SKS Shell Station Site, Seattle, Washington

Sample Location ¹	Sample Date	Depth to Water (ft. BTOC)	Groundwater Elevation (ft. NAVD88)	BTEX				Total Petroleum Hydrocarbons (TPH)			TPH with Silica Gel	
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics	Diesel Range Organics	Motor Oil Range Organics
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
				5	1000	700	1000	1000 / 800	500	500	500	500
MW104	03/17/2016	26.41	242.94	1.2	1.8	2.2	5.7	480	1200 X	< 300 U	--	--
	06/24/2016	25.16	244.19	2.5	2	3	9.5	940	3200 X	< 250 U	--	--
	09/28/2016	25.55	243.80	7.2	< 1 U	3.7	7.4	940	4000 X	340 X	--	--
	12/23/2016	27.28	242.07	2.1	2.1	17	27	2000	16000	380 X	180	< 250 U
	03/17/2017	27.55	241.80	< 1 U	< 1 U	8.5	10	1400	7900	< 400 U	290 X	< 400 U
	06/15/2017	27.92	241.45	< 1 U	< 1 U	4	3.1	700	3000	< 300 U	370	< 250 U
	9/14/2017	28.21	241.16	< 1 U	< 1 U	1.3	< 3 U	460	2200	< 300 U	230 X	< 250 U
	12/12/2017	28.86	240.51	< 1 U	1.1	1.3	< 3 U	340	780 X	< 350 U	--	--
	3/22/2018	28.88	240.49	< 1 U	< 1 U	< 1 U	< 3 U	220	590 X	< 250 U	--	--
	06/21/2018	28.96	240.41	< 1 U	< 1 U	< 1 U	< 3 U	130	720	< 350 U	--	--
	09/17/2018	29.27	240.10	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	480	< 350 U	--	--
	12/18/2018	29.02	240.35	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	390	< 250 U	--	--
	03/14/2019	29.25	240.12	< 1 U	< 1 U	< 1 U	< 3 U	170	690 X	< 300 U	--	--
	06/06/2019	29.32	240.05	< 1 U	< 1 U	< 1 U	< 3 U	210	750 X	290	--	--
09/12/19	Dry	--	Insufficient water for sampling									
12/19/2019	29.01	240.36	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	310 X	300 X	--	--	
04/22/2020	28.78	240.59	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	200 X	< 250 U	--	--	
MW105	06/13/2017	27.36	241.94	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	9/13/2017	27.96	241.34	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 60 U	< 300 U	--	--
	12/12/2017	28.41	240.89	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	3/22/2018	28.45	240.85	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 65 U	< 320 U	--	--
	06/21/2018	28.56	240.74	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	09/17/2018	28.96	240.34	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	12/18/2018	28.9	240.40	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	03/14/2019	28.66	240.64	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	06/06/2019	29.06	240.24	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	96 X	< 250 U	--	--
	09/12/2019	29.37	239.93	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
12/18/2019	28.97	240.33	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
04/21/2020	28.25	241.05	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
MW108	03/17/2016	5.52	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	93 X	< 300 U	--	--
	06/24/2016	3.33	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	09/28/2016	3.85	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 60 U	< 300 U	--	--
	12/23/2016	6.56	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	94 X	< 350 U	< 70 U	< 350 U
	03/03/2017	6.64	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 80 U	< 400 U	< 80 U	< 400 U
	06/14/2017	7.06	240.77	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	140 X	< 250 U	--	--
	9/14/2017	6.69	241.14	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	160 X	< 250 U	--	--
	12/12/2017	7.7	240.13	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	03/23/2018	7.44	240.39	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	71 X	< 250 U	--	--
	06/21/2018	7.75	240.08	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	150 X	< 450 U	--	--
	09/17/2018	7.83	240.00	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	110	< 480 U	--	--
	12/18/2018	7.98	239.85	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	03/14/2019	7.78	240.05	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	680 X	< 350 U	--	--
	06/06/2019	7.87	239.96	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	590 X	< 250 U	--	--
09/12/2019	8.28	239.55	< 1 U	< 1 U	< 1 U	< 3 U	100	1200 X	< 320 U	--	--	
12/18/2019	7.88	239.95	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	280	< 250 U	--	--	
04/22/2020	7.58	240.25	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	160 X	< 250 U	--	--	

Table 2. Summary of Compliance Groundwater Monitoring Results

Project No. 160328, SKS Shell Station Site, Seattle, Washington

Sample Location ¹	Sample Date	Depth to Water (ft. BTOC)	Groundwater Elevation (ft. NAVD88)	BTEX				Total Petroleum Hydrocarbons (TPH)			TPH with Silica Gel	
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics	Diesel Range Organics	Motor Oil Range Organics
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
				5	1000	700	1000	1000 / 800	500	500	500	500
MW109	03/17/2016	5.42	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	97 X	< 250 U	--	--
	06/24/2016	3.35	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	160 X	< 250 U	--	--
	09/28/2016	3.96	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	260 X	< 250 U	--	--
	12/23/2016	6.59	--	< 1 U	< 1 U	< 1 U	< 3 U	250	430 X	< 250 U	< 50 U	< 250 U
	03/03/2017	6.7	--	< 1 U	< 1 U	1.2	< 3 U	370	490 X	< 250 U	55 X	< 250 U
	06/14/2017	6.87	241.05	< 1 U	< 1 U	< 1 U	< 3 U	220	330	< 250 U	--	--
	09/14/2017	6.84	241.08	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	140 X	< 250 U	--	--
	12/12/2017	7.69	240.23	< 1 U	1.1	< 1 U	< 3 U	150	< 50 U	< 250 U	--	--
	03/23/2018	7.75	240.17	< 1 U	< 1 U	1.3	< 3 U	190	110 X	< 250 U	--	--
	06/21/2018	7.87	240.05	< 1 U	1.2	< 1 U	< 3 U	190	200	< 250 U	--	--
	09/17/2018	8.05	239.87	< 1 U	< 1 U	1.8	< 3 U	150	110 X	< 250 U	--	--
	12/18/2018	7.61	240.31	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	61 X	< 250 U	--	--
	03/14/2019	7.94	239.98	< 1 U	< 1 U	< 1 U	< 3 U	140	< 60 U	< 300 U	--	--
	06/06/2019	8.1	239.82	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	140 X	< 250 U	--	--
09/12/2019	8.39	239.53	< 1 U	< 1 U	< 1 U	< 3 U	110	110 X	< 250 U	--	--	
12/18/2019	7.67	240.25	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
04/22/2020	7.84	240.08	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	100 X	< 250 U	--	--	
MW110	03/17/2016	5.7	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	06/24/2016	3.56	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	100 X	< 250 U	--	--
	09/28/2016	4.19	--	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	590 X	440	--	--
	12/23/2016	6.96	--	2.3	< 1 U	9.7	18	500	1200	< 300 U	68 X	< 300 U
	03/03/2017	7.57	--	2.1	< 1 U	9.3	4.7	570	1000 X	< 250 U	110 X	< 250 U
	06/14/2017	7.78	240.43	< 1 U	< 1 U	2	< 3 U	260	520	< 250 U	--	--
	9/14/2017	7.44	240.77	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	150 X	< 250 U	--	--
	12/12/2017	8.02	240.19	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	99 X	< 250 U	--	--
	03/23/2018	8.05	240.16	--	--	--	--	--	73 X	< 250 U	--	--
	06/21/2018	8.15	240.06	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	96 X	< 250 U	--	--
	09/17/2018	8.4	239.81	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	12/18/2018	7.98	240.23	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	03/14/2019	8.2	240.01	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	74 X	< 300 U	--	--
	06/06/2019	8.3	239.91	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	91 X	< 250 U	--	--
09/12/2019	9.03	239.18	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	73 X	< 180 U	--	--	
12/18/2019	7.68	240.53	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
04/22/2020	8.15	240.06	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	250 X	< 250 U	--	--	
MW111	10/09/2018	30.51	240.11	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	55 X	< 250 U	--	--
	12/18/2018	29.9	240.72	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	03/14/2019	30.15	240.47	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	83 X	< 250 U	--	--
	06/06/2019	30.5	240.12	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	84 X	< 250 U	--	--
	09/13/2019	30.72	239.9	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	12/18/2019	30.26	240.36	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	94 X	< 280 U	--	--
04/22/2020	30.11	240.51	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
MW112	03/14/2019	28.88	240.44	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	58 X	< 250 U	--	--
	06/06/2019	29.15	240.17	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	59 X	< 250 U	--	--
	09/12/2019	29.44	239.88	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--
	12/18/2019	28.65	240.67	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	58 X	< 250 U	--	--
04/21/2020	28.78	240.54	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	

Table 2. Summary of Compliance Groundwater Monitoring Results

Project No. 160328, SKS Shell Station Site, Seattle, Washington

Sample Location ¹	Sample Date	Depth to Water (ft. BTOC)	Groundwater Elevation (ft. NAVD88)	BTEX				Total Petroleum Hydrocarbons (TPH)			TPH with Silica Gel		
				Analytes	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics	Diesel Range Organics	Motor Oil Range Organics
				Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
				MTCA Method A Cleanup Level	5	1000	700	1000	1000 / 800	500	500	500	500
MW113	03/23/2018	7.68	240.38	--	--	--	--	--	93 X	< 250 U	--	--	
	06/21/2018	7.81	240.25	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	71 X	< 250 U	--	--	
	09/17/2018	8.05	240.01	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--	
	12/18/2018	7.58	240.48	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	100 X	< 250 U	--	--	
	03/14/2019	7.98	240.08	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	79 X	< 250 U	--	--	
	06/06/2019	8.13	239.93	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	89 X	< 250 U	--	--	
	09/12/2019	8.31	239.75	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	87 X	< 250 U	--	--	
	12/18/2019	8.04	240.02	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	80 X	< 250 U	--	--	
04/21/2020	7.94	240.12	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	< 50 U	< 250 U	--	--		
RW03	03/17/2016	26.23	--	41	6.9	51	260	2300	1400 X	< 250 U	--	--	
	06/24/2016	25.4	--	27	4.4	27	59	1600	3600	< 250 U	--	--	
	09/28/2016	25.71	--	6.7	< 1 U	20	45	1100	2400 X	< 300 U	--	--	
	12/23/2016	26.77	--	470	16	380	750	9000	11000	< 300 U	720 X	< 300 U	
	03/02/2017	27.22	--	150	< 10 U	220	190	4900	11000 X	< 250 U	880 X	< 250 U	
	06/14/2017	27.91	241.59	7	< 1 U	32	11	1300	1500	< 250 U	320 X	< 250 U	
	09/14/2017	28.3	241.2	2.8	1.3	15	4.5	560	690 X	< 300 U	140 X	< 300 U	
	12/12/2017	28.82	240.68	8.8	17	39	170	2500	1000 X	< 300 U	--	--	
	03/23/2018	28.85	240.65	3	5.2	29	140	2100	760 X	< 250 U	--	--	
	06/22/2018	28.94	240.56	< 1 U	2.3	31	34	730	740 X	< 250 U	--	--	
	09/17/2018	29.28	240.22	< 1 U	< 1 U	11	15	370	430	< 250 U	--	--	
	12/18/2018	29.05	240.45	6.5	5	75	250	2800	1600	< 250 U	--	--	
	03/15/2019	29.05	240.45	1.9	1.7	46	140	1700	730 X	< 250 U	--	--	
	06/07/2019	29.35	240.15	< 1 U	< 1 U	14	4.3	410	680 X	< 250 U	--	--	
09/13/2019	29.81	239.69	< 1 U	< 1 U	1.4	3	270	360 X	< 250 U	--	--		
12/19/2019	29.13	240.37	2.4	< 1 U	36	100	2200	1400 X	< 250 U	--	--		
04/22/2020	28.58	240.92	< 1 U	< 1 U	77	78	1400	700 X	< 250 U	--	--		

Table 2. Summary of Compliance Groundwater Monitoring Results

Project No. 160328, SKS Shell Station Site, Seattle, Washington

Sample Location ¹	Sample Date	Depth to Water (ft. BTOC)	Groundwater Elevation (ft. NAVD88)	BTEX				Total Petroleum Hydrocarbons (TPH)			TPH with Silica Gel		
				Analytes	Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Organics	Diesel Range Organics	Motor Oil Range Organics	Diesel Range Organics	Motor Oil Range Organics
				Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
				MTCA Method A Cleanup Level	5	1000	700	1000	1000 / 800	500	500	500	500
RW04	06/14/2017	27.62	241.6	2.5	< 1 U	16	< 3 U	790	400	< 250 U	--	--	
	09/14/2017	27.93	241.29	6.4	< 1 U	26	21	400	330 X	< 250 U	--	--	
	12/12/2017	28.55	240.67	3	1.1	12	5.2	360	200 X	< 300 U	--	--	
	03/22/2018	28.57	240.65	1.5	< 1 U	14	< 3 U	450	500 X	< 250 U	--	--	
	06/21/2018	28.6	240.62	< 1 U	2.6	4.8	4.5	360	400 X	< 250 U	--	--	
	09/17/2018	29.08	240.14	< 1 U	< 1 U	1.5	< 3 U	130	120	< 250 U	--	--	
	12/18/2018	28.74	240.48	< 1 U	< 1 U	1.1	< 3 U	160	510	< 250 U	--	--	
	03/15/2019	28.76	240.46	< 1 U	< 1 U	1.9	< 3 U	300	310 X	< 250 U	--	--	
	06/07/2019	29.05	240.17	< 1 U	< 1 U	< 1 U	< 3 U	240	470 X	< 250 U	--	--	
	09/13/2019	29.44	239.78	< 1 U	< 1 U	< 1 U	< 3 U	180	290 X	< 250 U	--	--	
12/18/2019	28.86	240.36	< 1 U	< 1 U	< 1 U	< 3 U	160	250 X	< 250 U	--	--		
04/22/2020	28.34	240.88	2.9	1.2	83	36	1400	700 X	< 250 U	--	--		
RW05	06/14/2017	27.64	241.45	< 1 U	< 1 U	4.4	< 3 U	400	470	< 250 U	--	--	
	09/14/2017	27.91	241.18	< 1 U	1.2	1.5	< 3 U	280	300 X	< 300 U	--	--	
	12/12/2017	28.54	240.55	< 1 U	1.3	1.5	< 3 U	230	170 X	< 300 U	--	--	
	03/22/2018	28.56	240.53	< 1 U	< 1 U	1.4	< 3 U	180	140 X	< 260 U	--	--	
	06/21/2018	28.63	240.46	< 1 U	1.4	1.4	< 3 U	140	180 X	< 250 U	--	--	
	09/17/2018	28.96	240.13	< 1 U	< 1 U	2.1	< 3 U	140	140	< 250 U	--	--	
	12/18/2018	28.75	240.34	< 1 U	< 1 U	1.4	< 3 U	110	160 X	< 250 U	--	--	
	03/14/2019	28.74	240.35	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	120 X	< 250 U	--	--	
	06/06/2019	29.00	240.09	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	99 X	< 250 U	--	--	
	09/12/2019	29.33	239.76	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	190 X	< 250 U	--	--	
12/19/2019	28.75	240.34	< 1 U	< 1 U	< 1 U	< 3 U	< 100 U	130 X	< 250 U	--	--		
04/21/2020	28.43	240.66	< 1 U	< 1 U	< 1 U	< 3 U	140	420 X	< 250 U	--	--		

Notes

Bold = indicates concentrations of the analyte detected above the reporting limits

Purple shaded = indicates concentrations of the analyte detected above the Model Toxics Control Act (MTCA) Method A Cleanup Level

¹This table is not an all-inclusive list of all monitoring wells located at the Site historically. Only compliance monitoring wells that are currently being accessed for quarterly compliance groundwater sampling are included in this table. Further, Table 2 only presents data from the post-cleanup compliance monitoring events for each well shown. Refer to the Cleanup Action Report (SES, 2016) and the Fourth Quarter 2019 Compliance Groundwater Monitoring Report (SES, 2019) for a full list of all historical Site wells and groundwater analytical data from samples collected prior to the start of compliance monitoring.

U = indicates analyte not detected at or above reporting limit shown

J = indicates that the reported or calculated concentration is an estimate

X = Chromatographic pattern does not match fuel standard used for quantitation

E = Result exceeded calibration range. Result usable for qualitative analysis of analyte presence, but numeric value should not be included in quantitative analysis

ft = feet

BTOC = below top of casing (north)

NAVD88 = North American Vertical Datum 1988

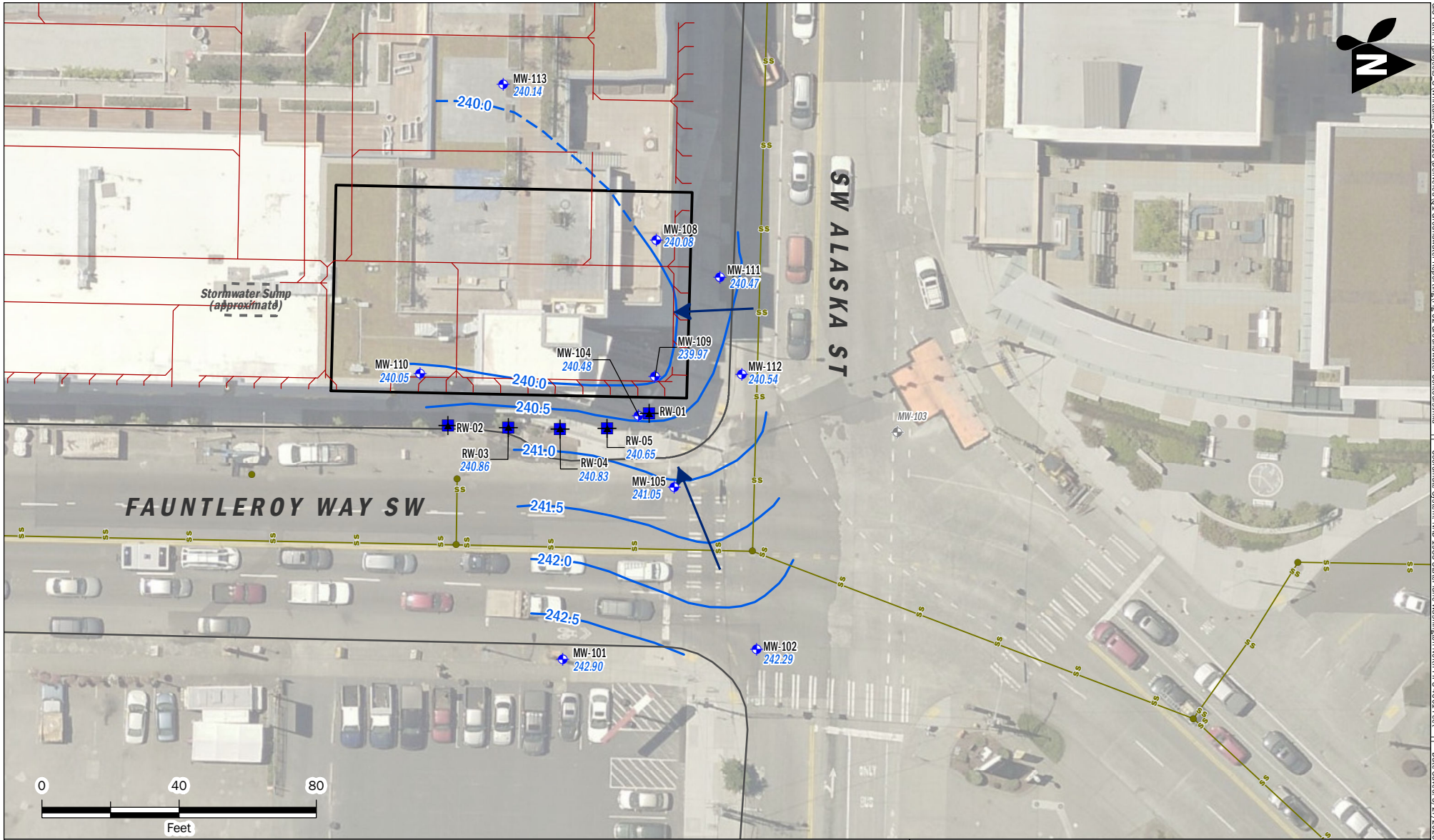
ug/L = micrograms per liter

FIGURES



Site Location
 Q1 2020 Groundwater Monitoring Report
 SKS Shell Station Site
 3901 Southwest Alaska Street
 Seattle, Washington

	MAY-2020	BY: EAC / KB	FIGURE NO. 1
	PROJECT NO. 160328-006	REVISED BY: KB / RAP	



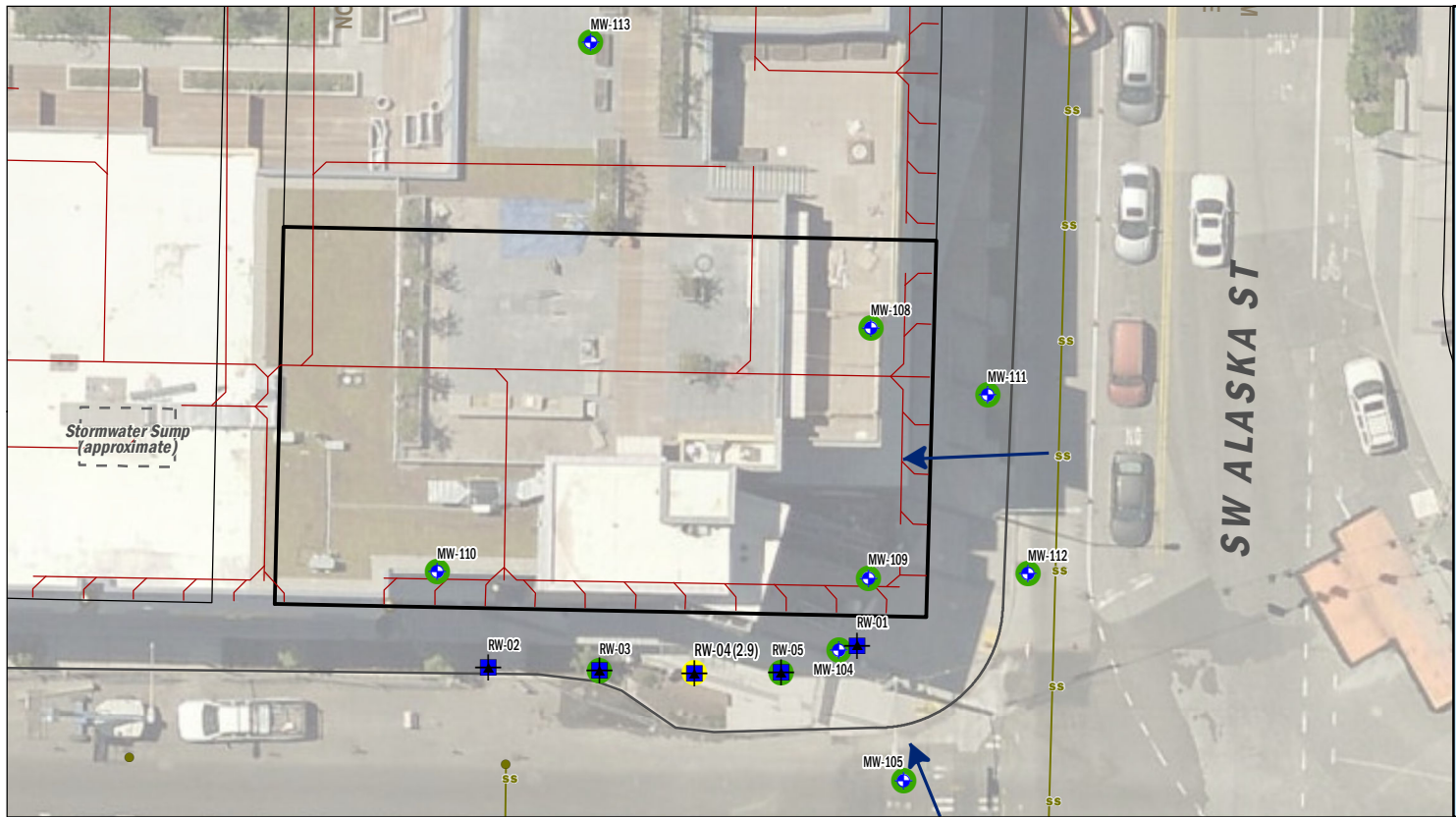
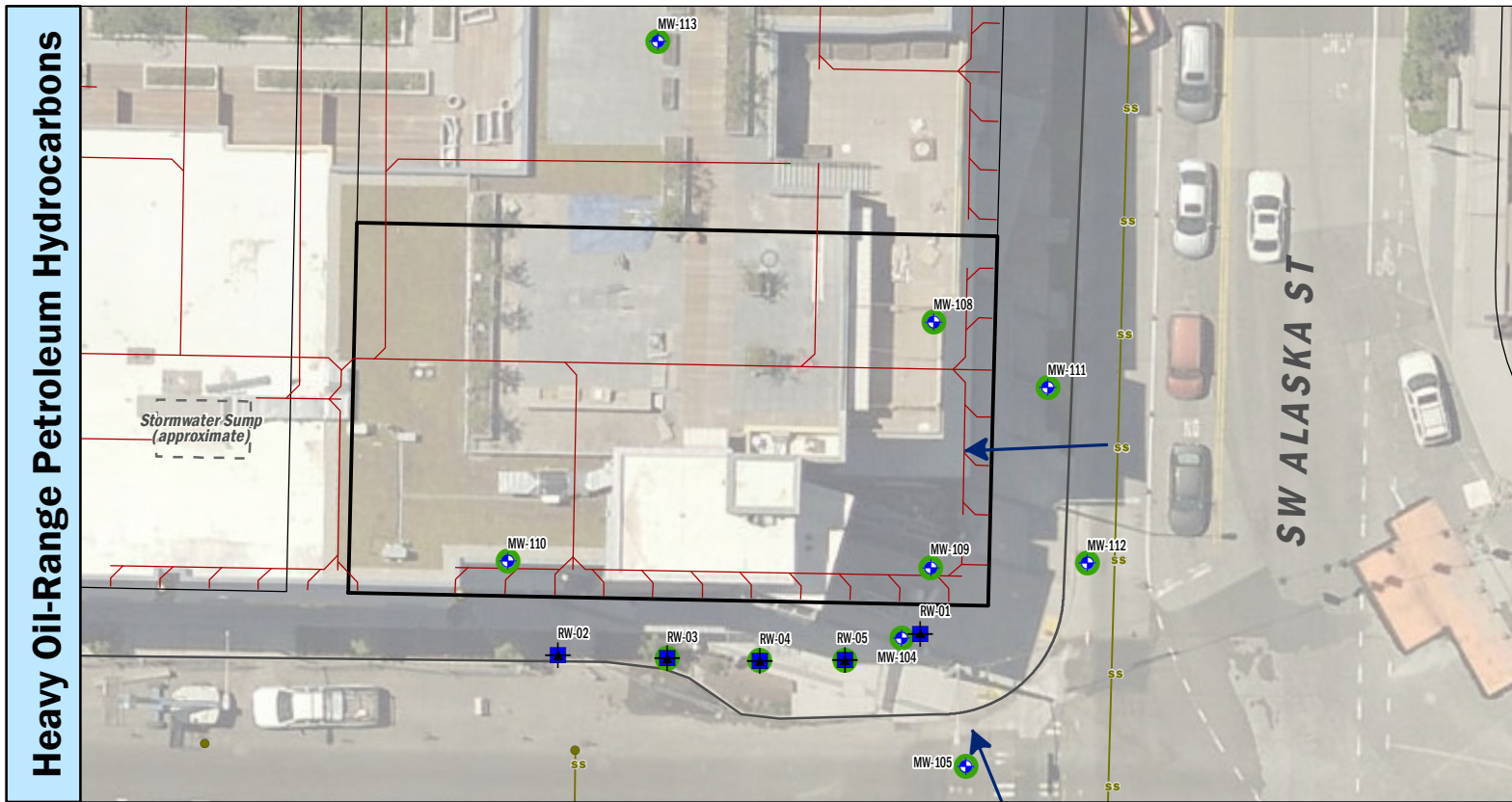
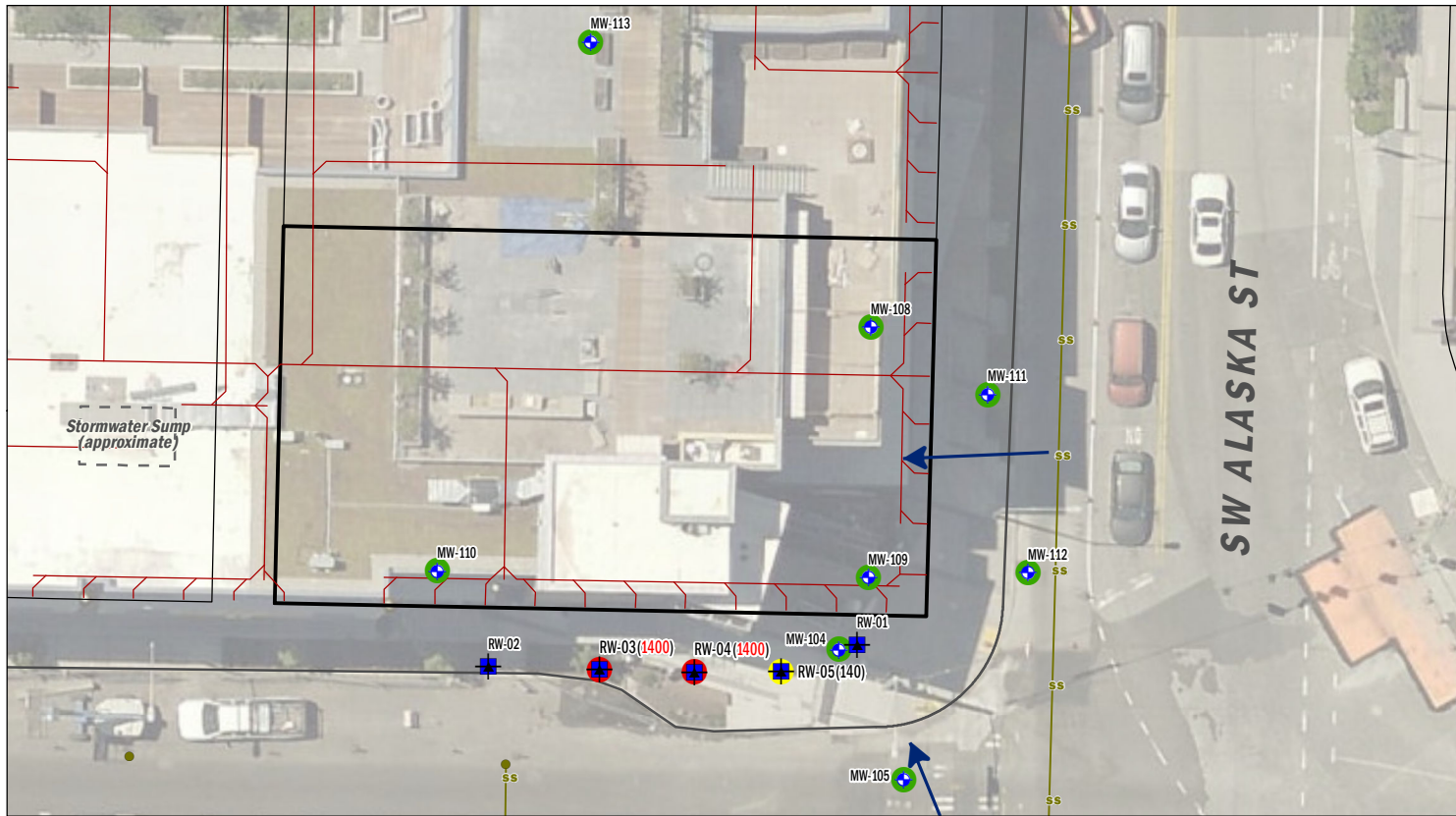
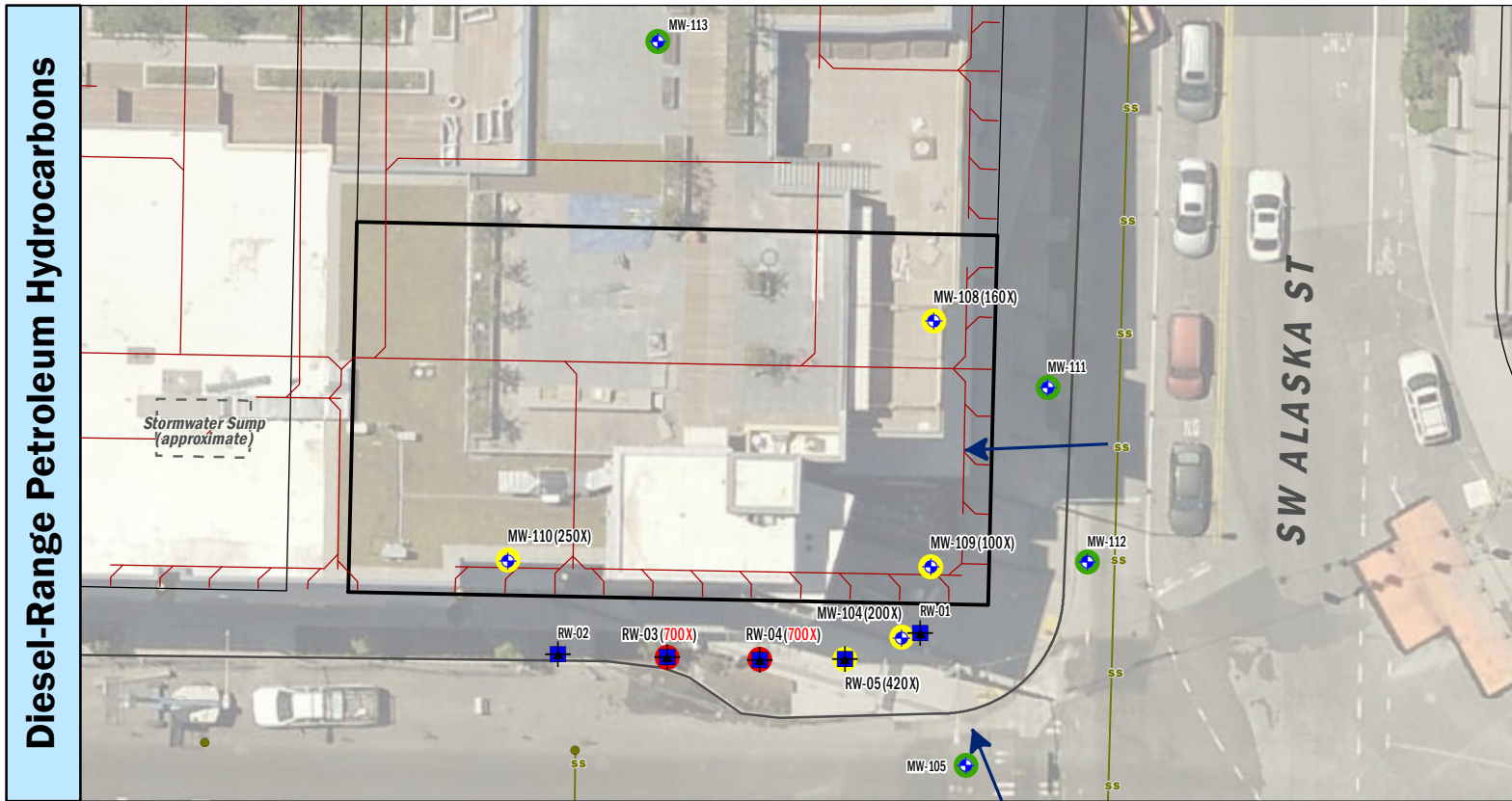
<p>Exploration Name</p> <p>MW-113 240.14</p> <p>Monitoring Well</p>	<p>Existing Remediation Well</p>	<p>Footing Drain</p>	<p>King County Parcel (2020)</p>
<p>Groundwater Elevation (ft)</p>	<p>Decommissioned Monitoring Well</p>	<p>Sidewalk Edge</p>	<p>Groundwater Flow Direction</p>
<p>Sewer Manhole</p>	<p>Sanitary Sewer</p>	<p>Groundwater Elevation Contour (dashed where inferred)</p>	<p>SKS Shell Property</p>

Compliance Well Network and Groundwater Elevation Contours

Q1 2020 Groundwater Monitoring Report
SKS Shell Station Site
3901 Southwest Alaska Street
Seattle, Washington

	MAY-2020	BY: EAC / KB	FIGURE NO. 2
	PROJECT NO. 160328-006	REVISED BY: - - -	

Note:
 - All features shown are approximate
 - Only select prior borings are shown, refer to the Cleanup Action Report for additional historical boring locations



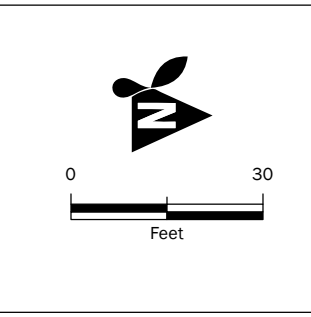
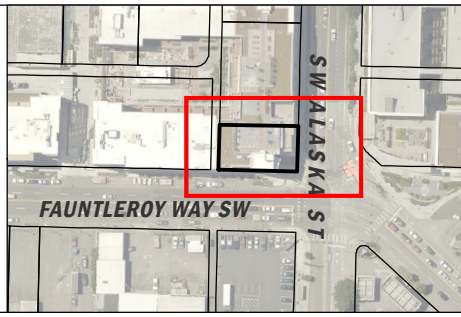
Analytical Results

- Contaminant indicated was detected at a concentration greater than the MTCA Method A cleanup level.
- Contaminant indicated was detected at concentrations less than the MTCA Method A cleanup level.
- Contaminant indicated was not detected.

● Sample ID: RW-03 (700X) ● Monitoring Well
■ Existing Remediation Well
● Sewer Manhole
- - - Sanitary Sewer
— Footing Drain

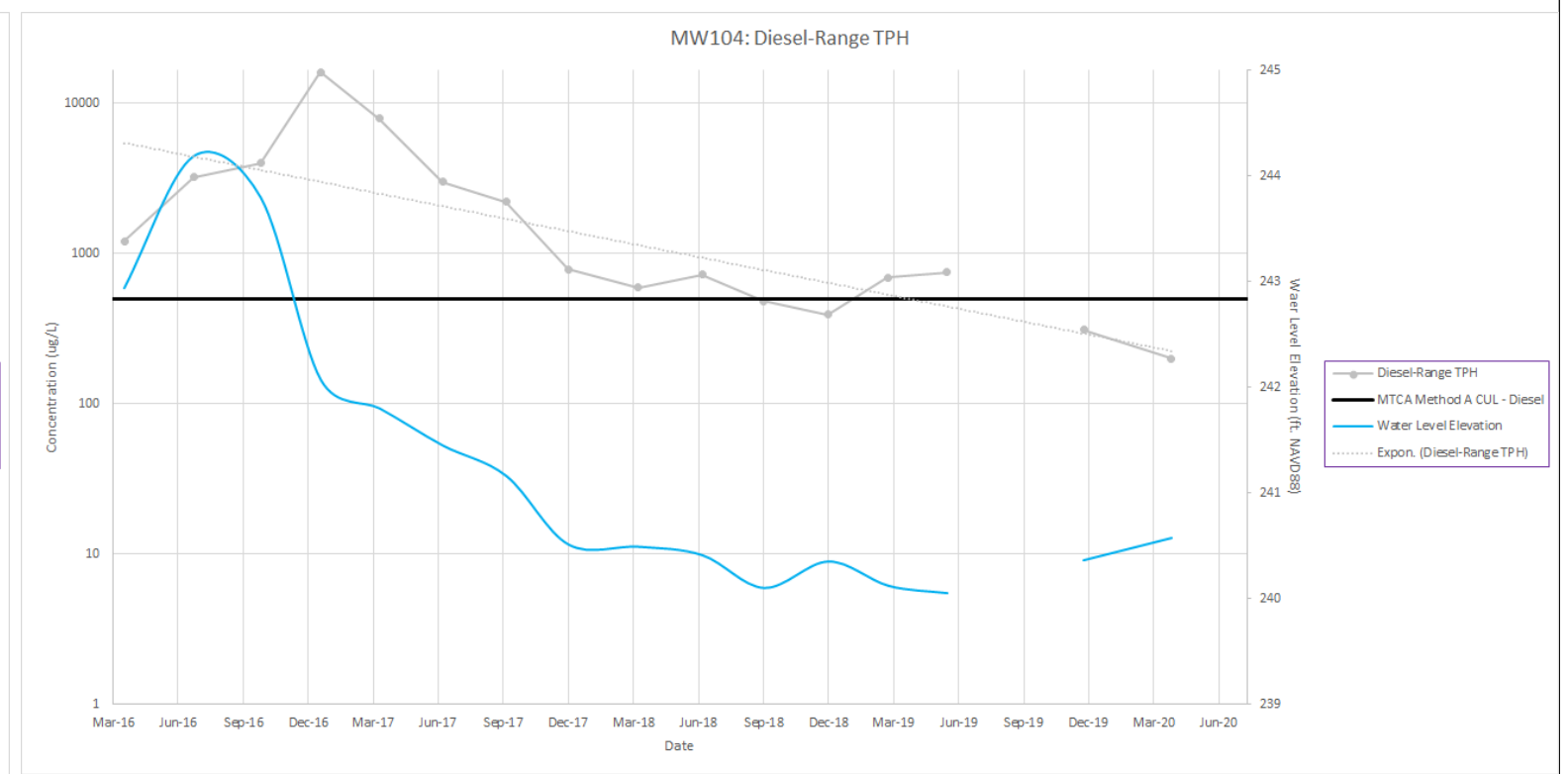
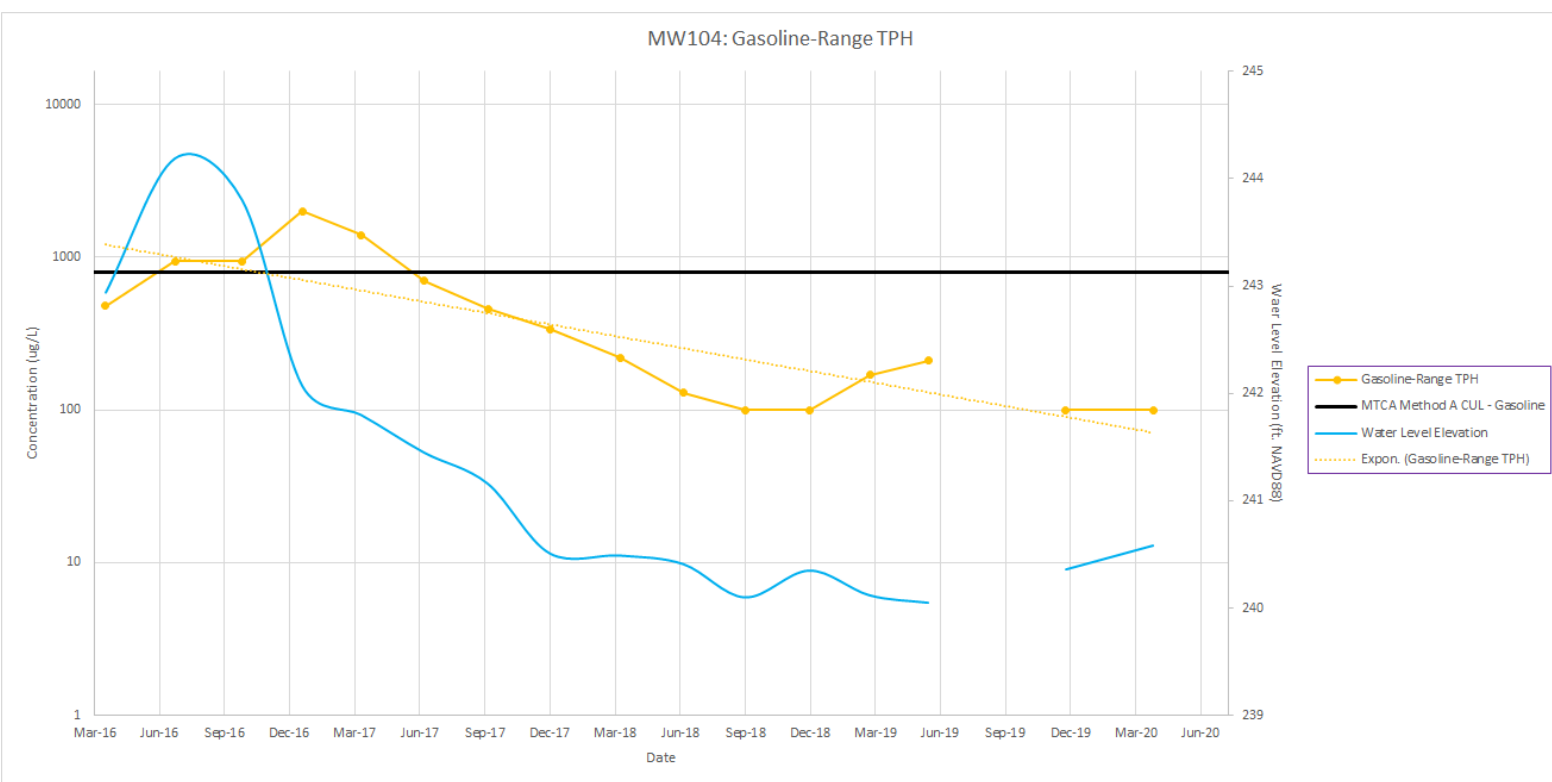
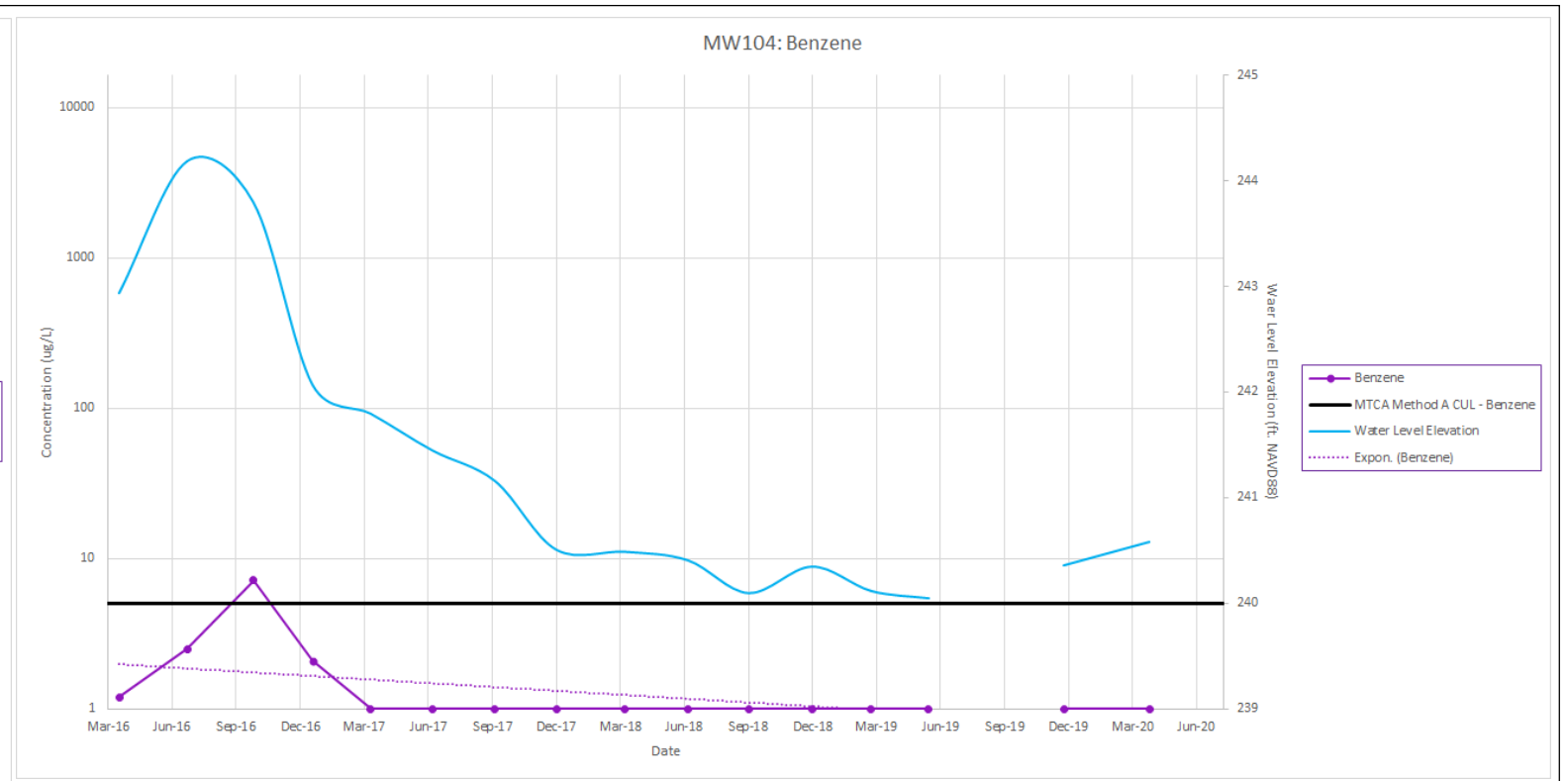
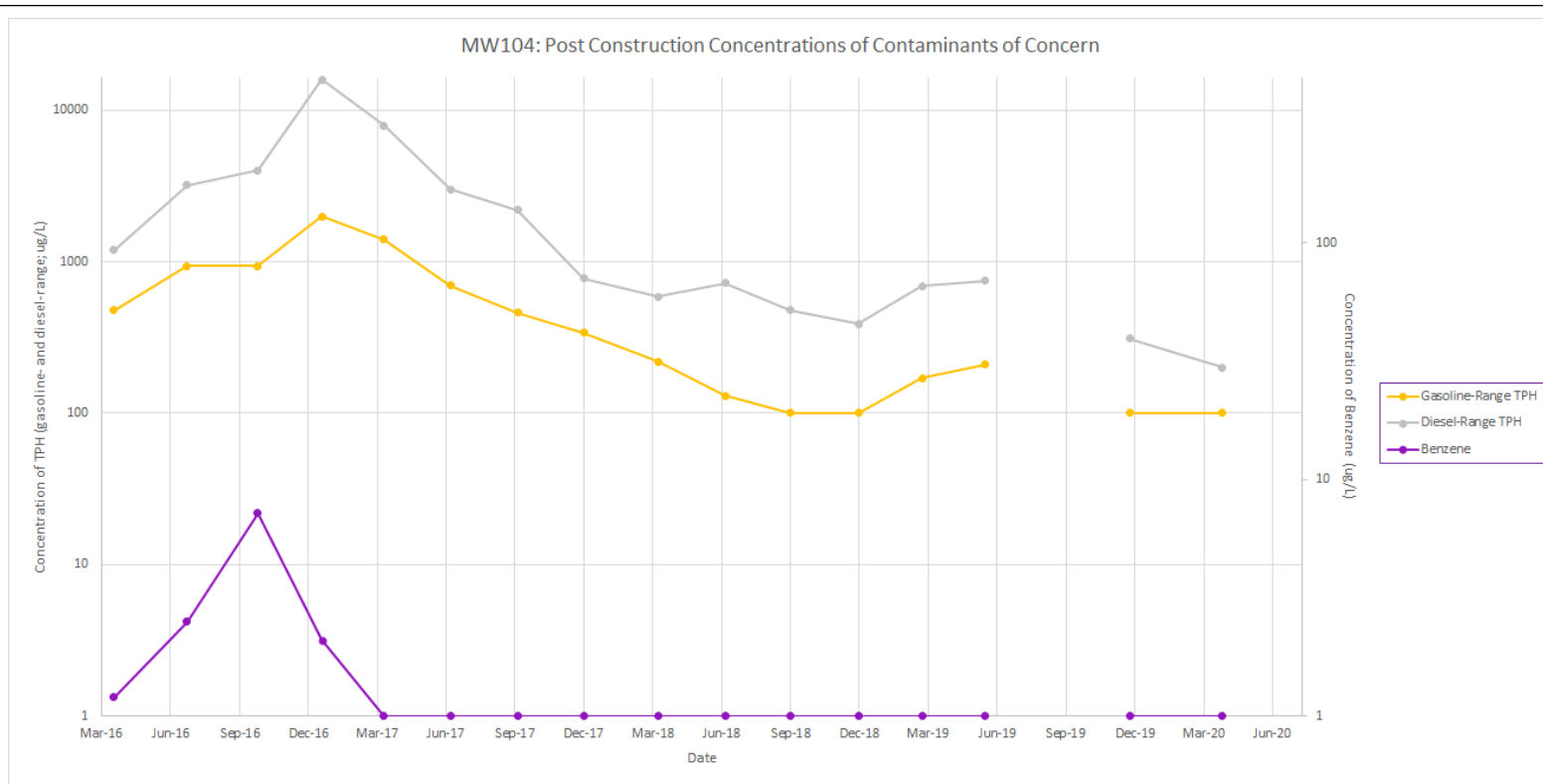
— Sidewalk Edge
 SKS Shell Property
 King County Parcel (2020)
➔ Groundwater Flow Direction

Basemap Layer Credits | | Pictometry, King County



Groundwater Analytical Results
 Q1 2020 Groundwater Monitoring Report
 SKS Shell Station Site
 3901 Southwest Alaska Street
 Seattle, Washington

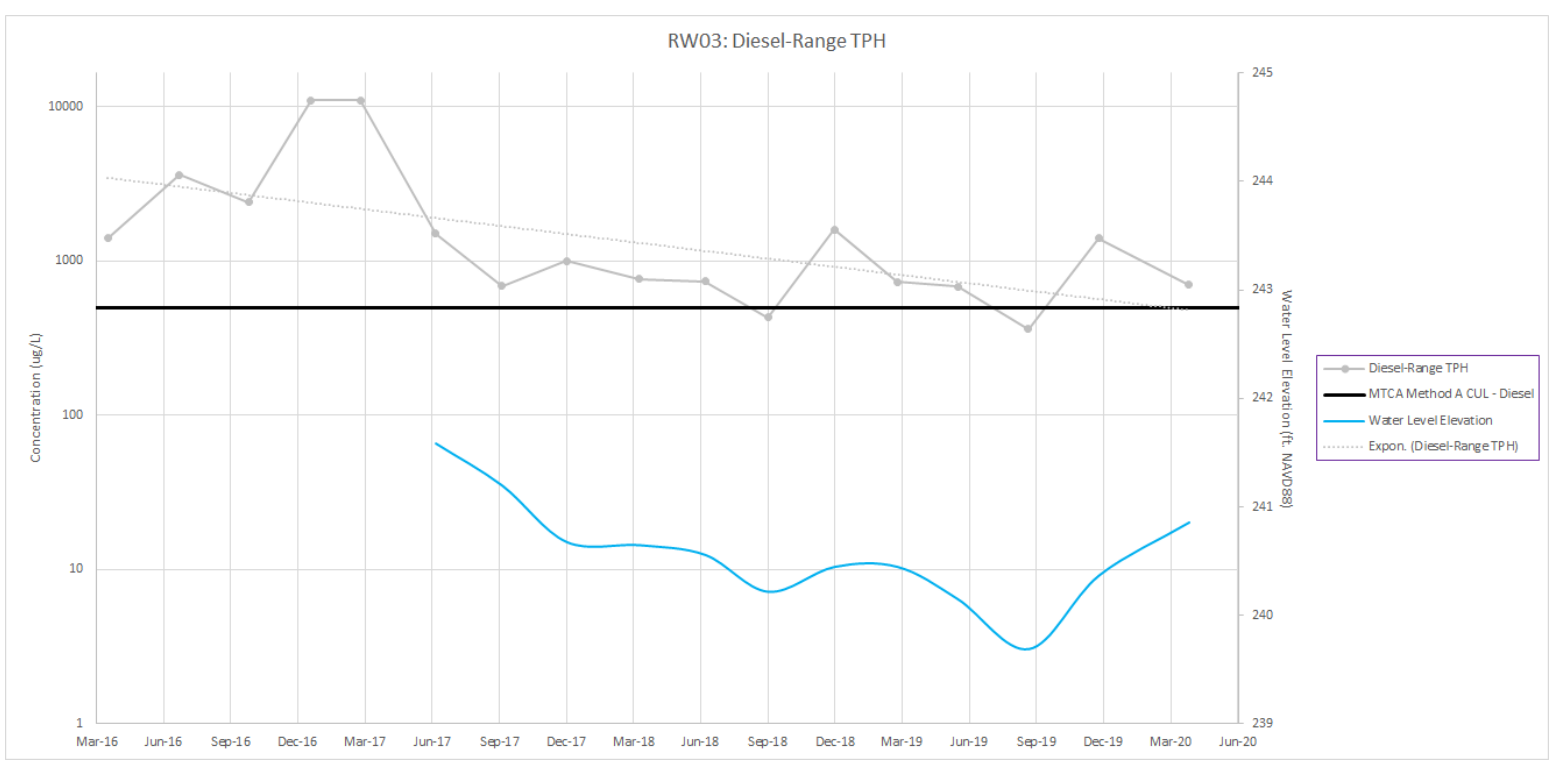
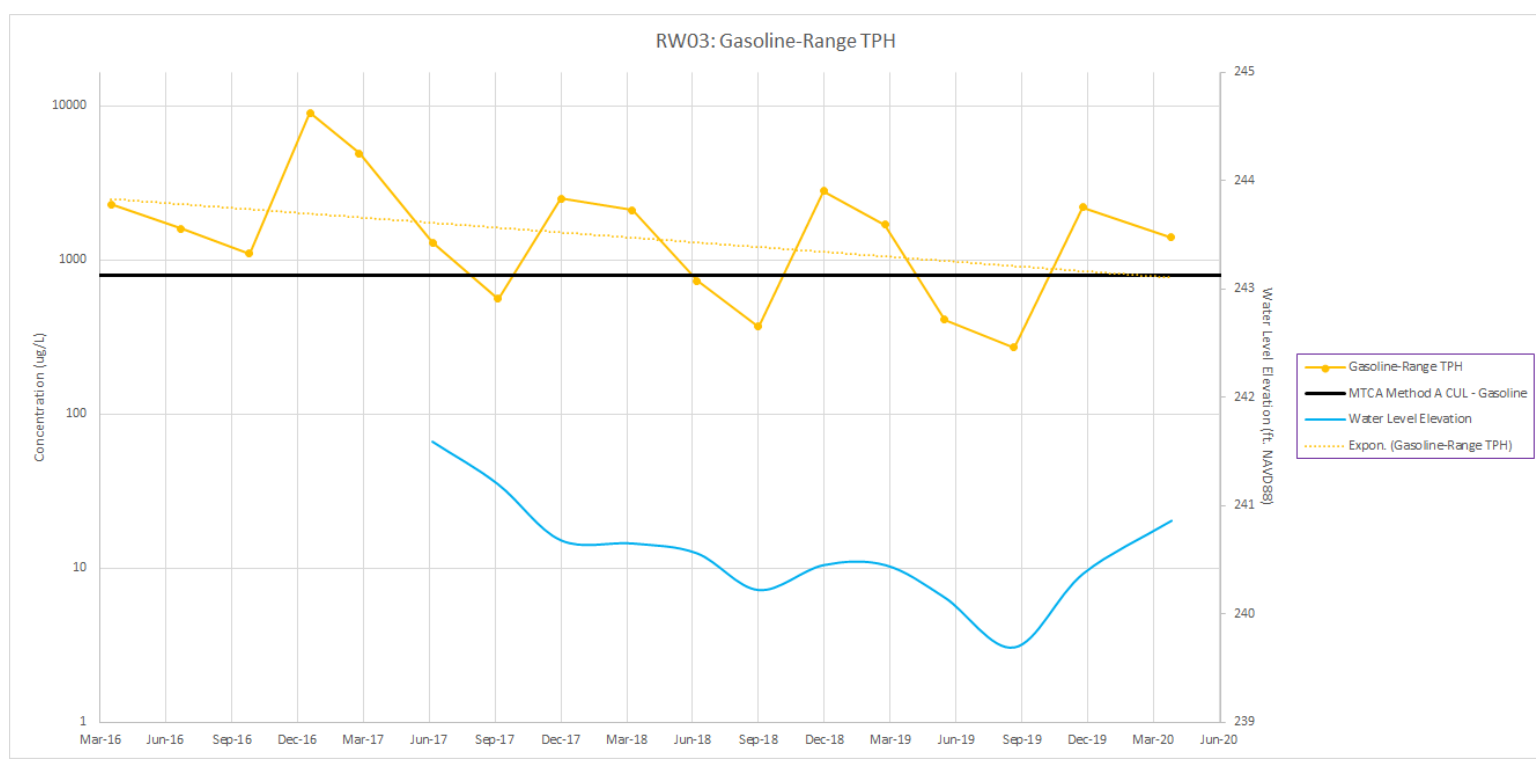
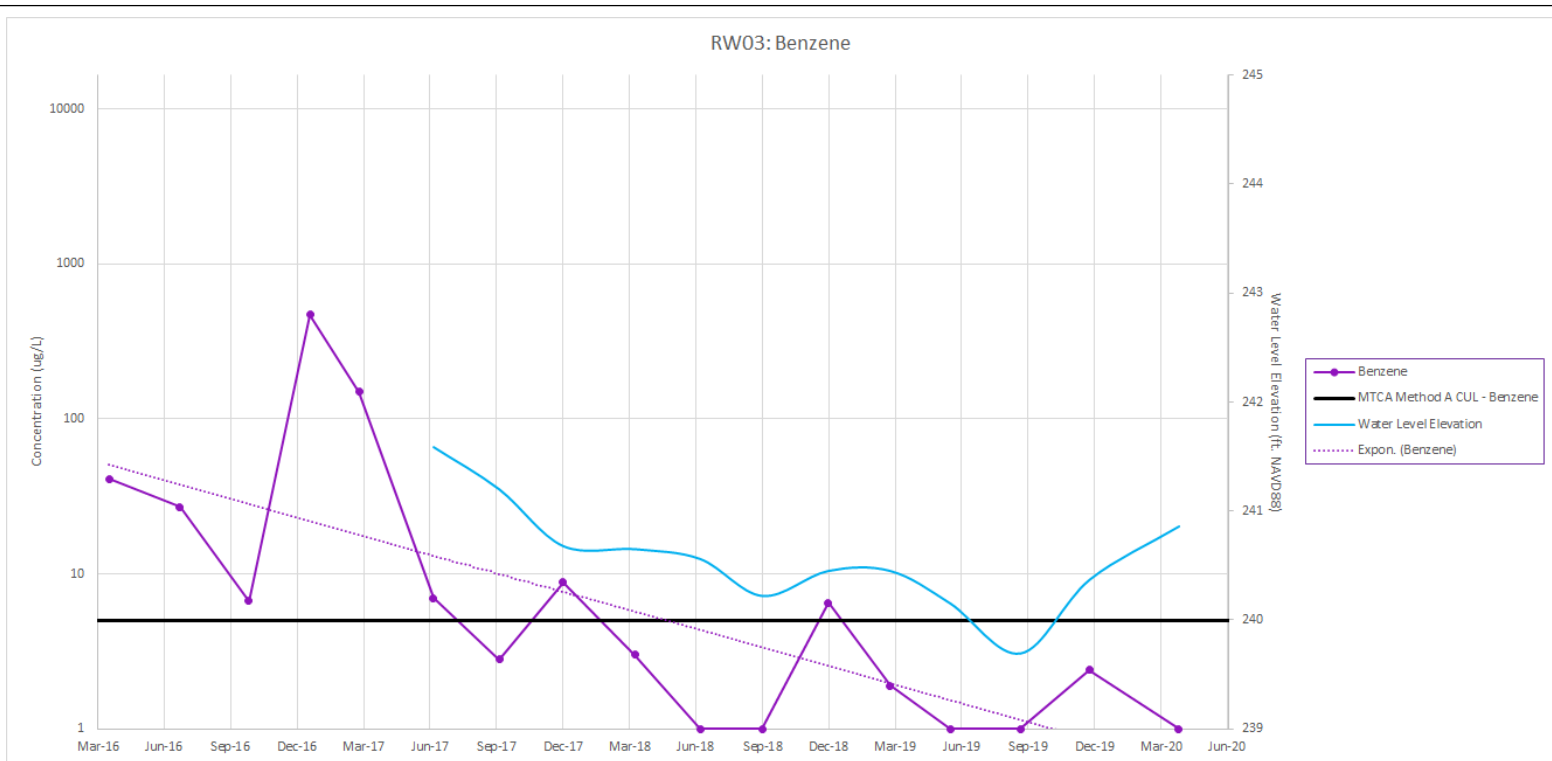
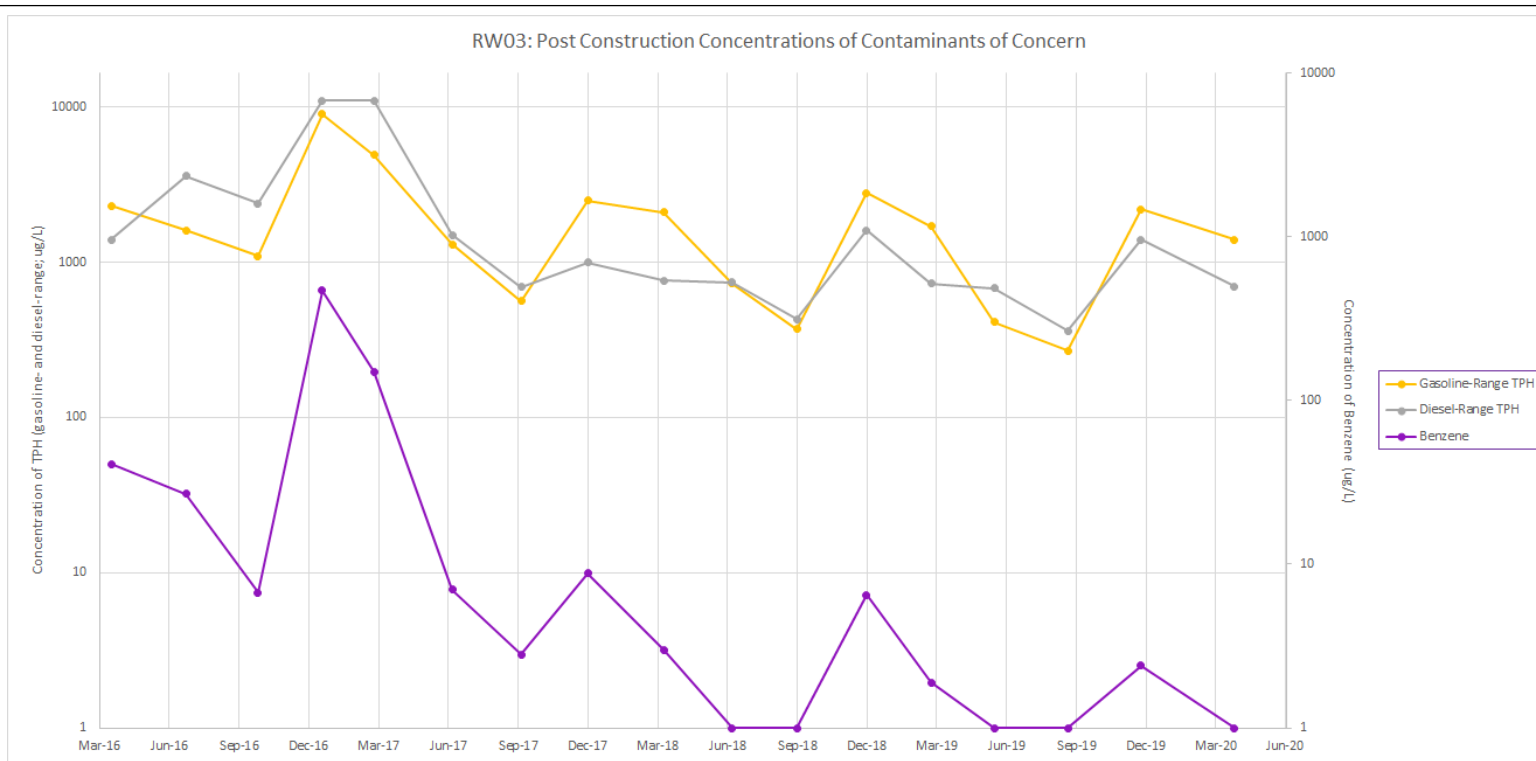
	MAY-2020	BY: EAC / KB	FIGURE NO. 3
	PROJECT NO. 160328-006	REVISED BY: AY / RAP	



Notes:
 -Laboratory reporting limit for benzene is 1 ug/L
 -Laboratory reporting limit for gasoline-range TPH is 100 ug/L
 -Laboratory reporting limit for diesel-range TPH is 50 ug/L

MW104 Post-Construction Data
 Q1 2020 Groundwater Monitoring Report
 SKS Shell Station Site
 Seattle, Washington

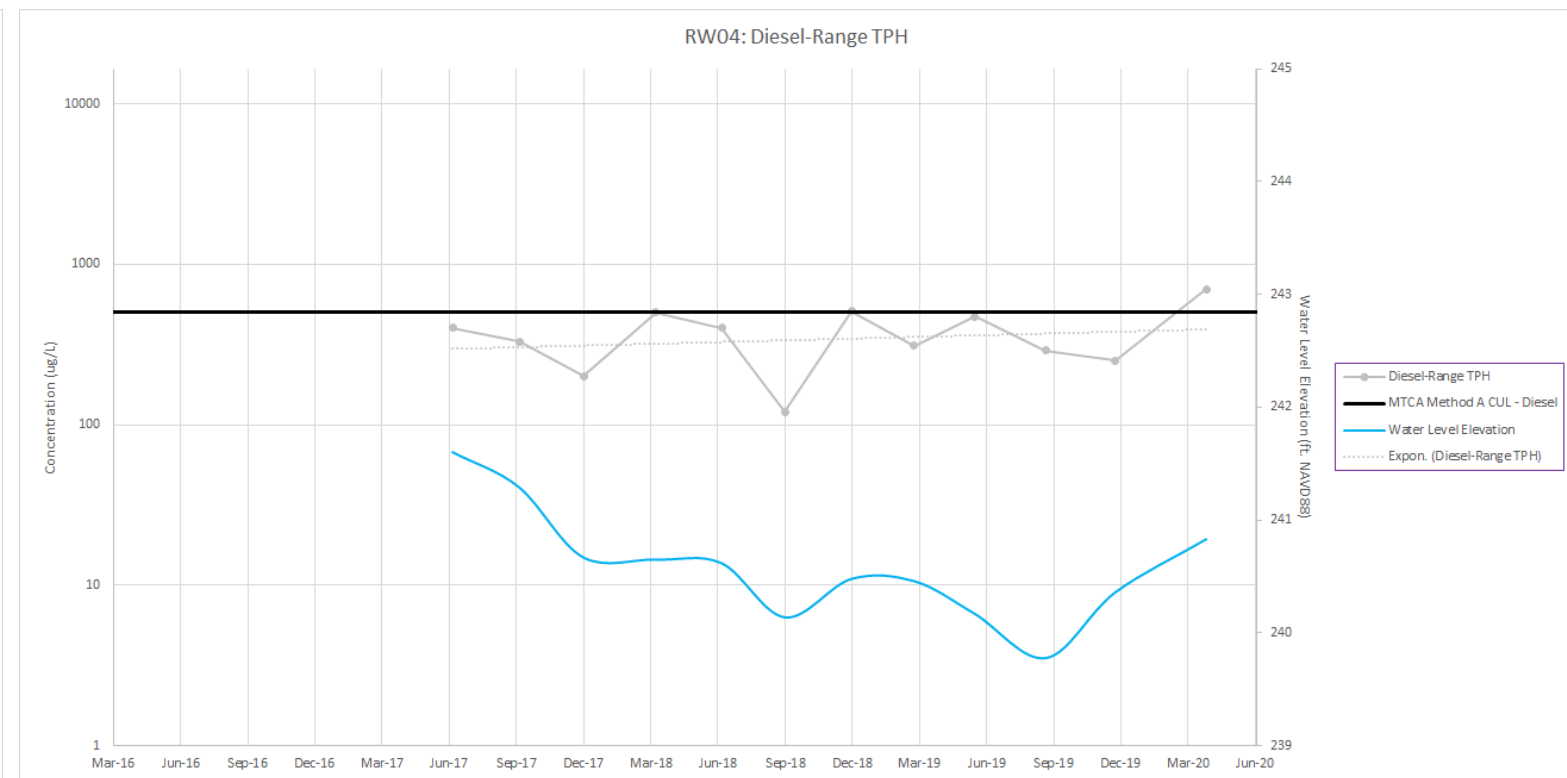
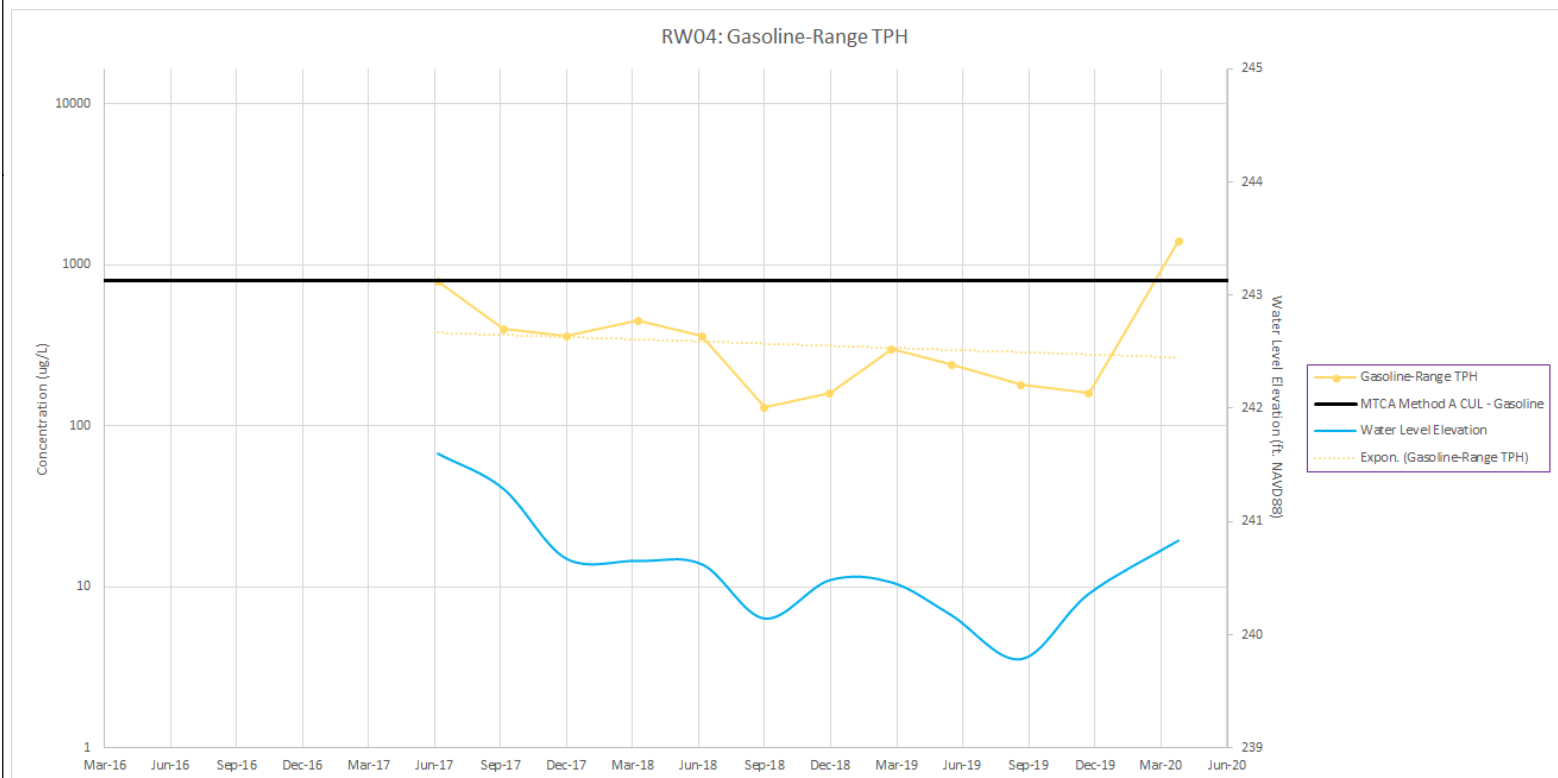
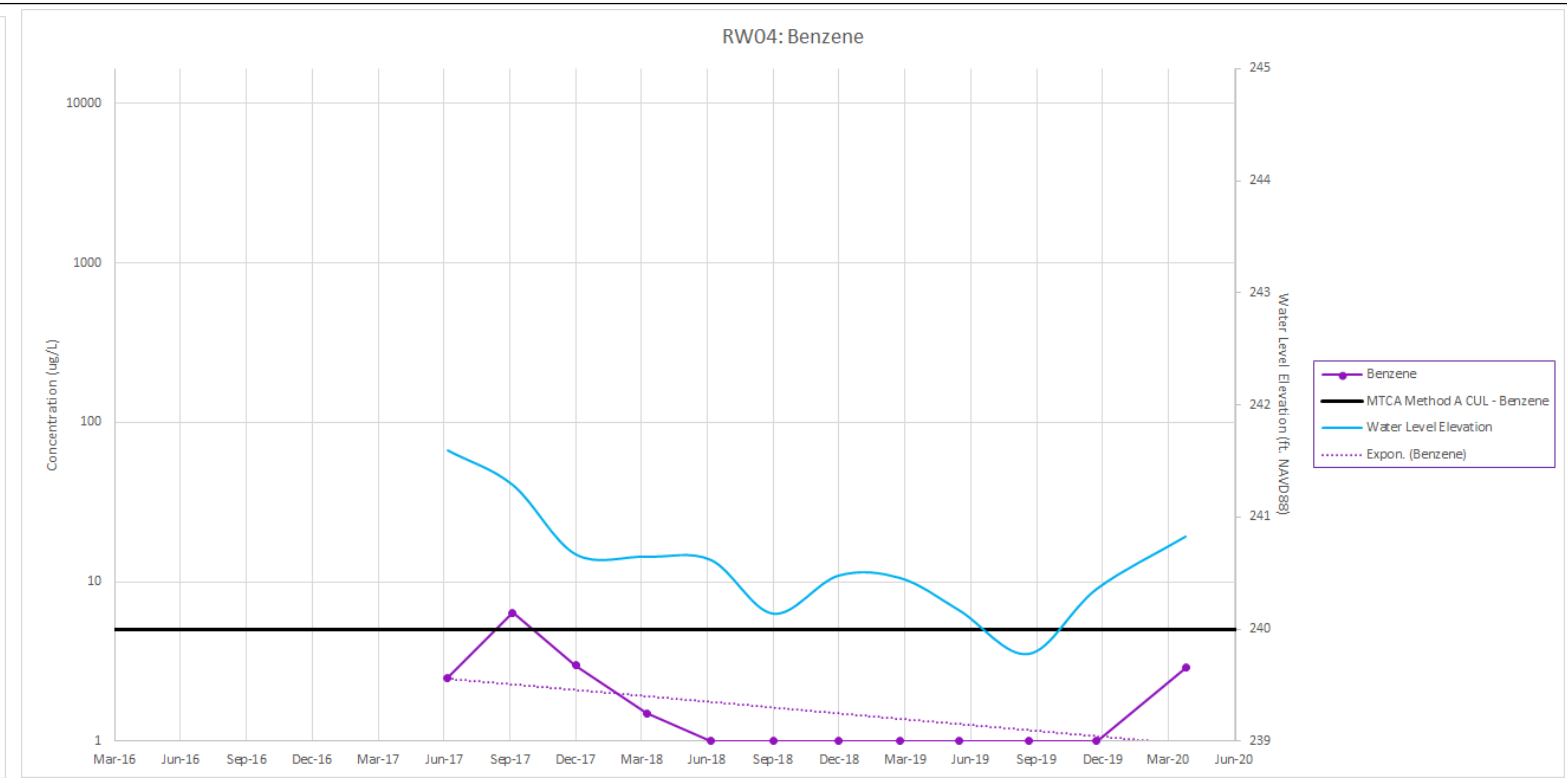
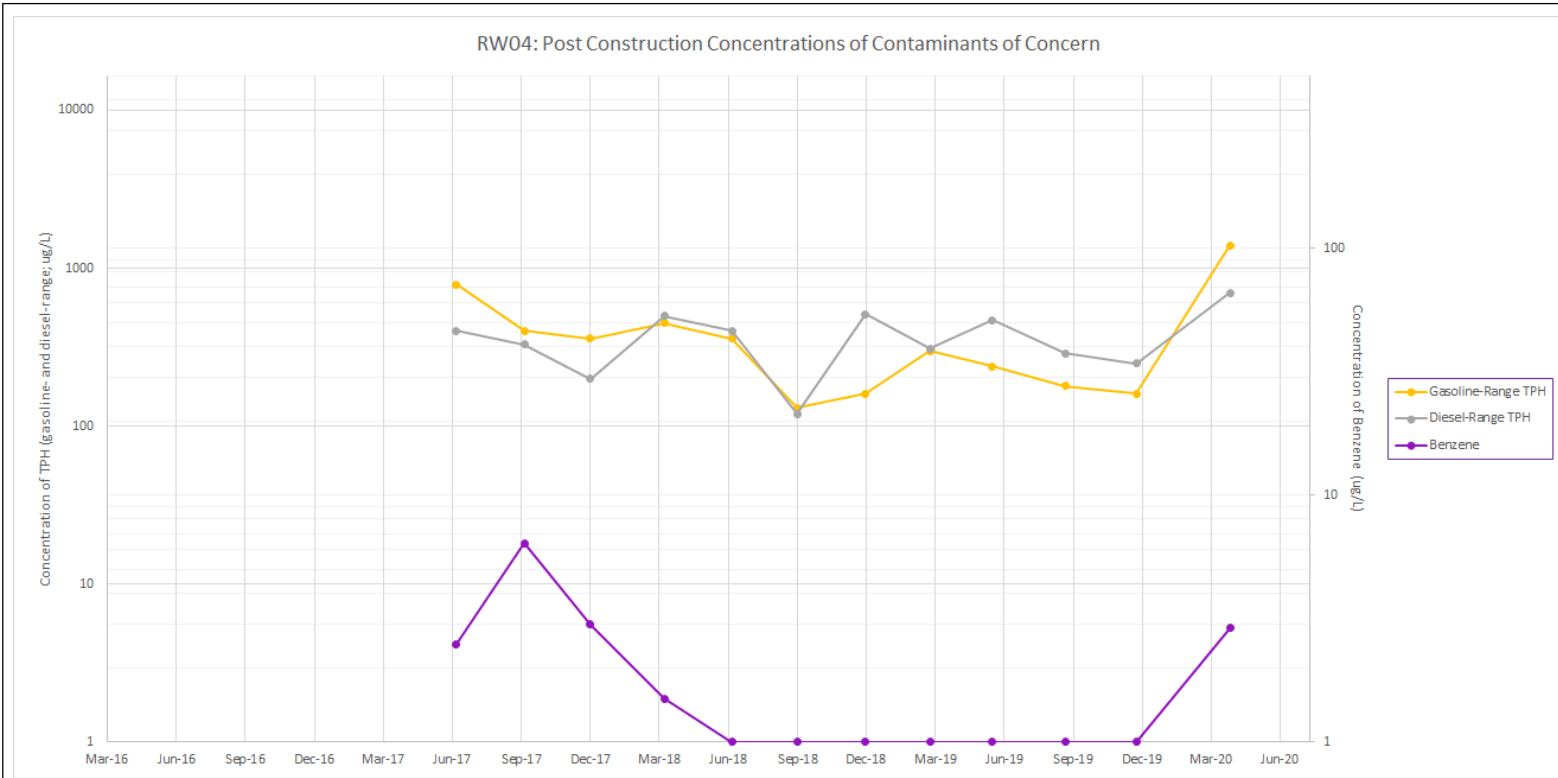
	MAY-2020	BY: KB	FIGURE NO. 4
	PROJECT NO. 160328	REVISED BY: ---	



Notes:
 -Laboratory reporting limit for benzene is 1 ug/L
 -Laboratory reporting limit for gasoline-range TPH is 100 ug/L
 -Laboratory reporting limit for diesel-range TPH is 50 ug/L

RW03 Post-Construction Data
 Q1 2020 Groundwater Monitoring Report
 SKS Shell Station Site
 Seattle, Washington

	MAY-2020	BY: KB	FIGURE NO. 5
	PROJECT NO. 160328	REVISED BY: ---	



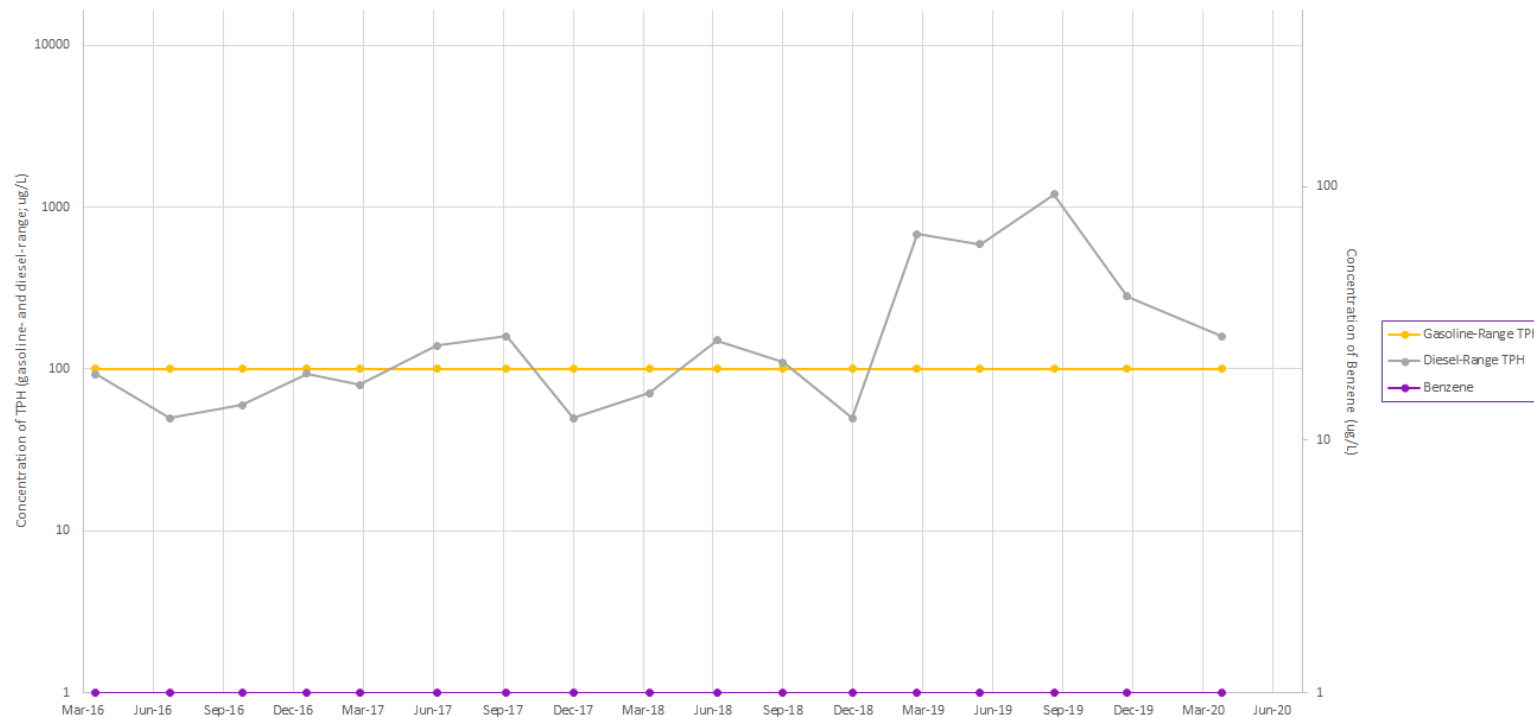
Notes:
 -Laboratory reporting limit for benzene is 1 ug/L
 -Laboratory reporting limit for gasoline-range TPH is 100 ug/L
 -Laboratory reporting limit for diesel-range TPH is 50 ug/L

RW04 Post-Construction Data

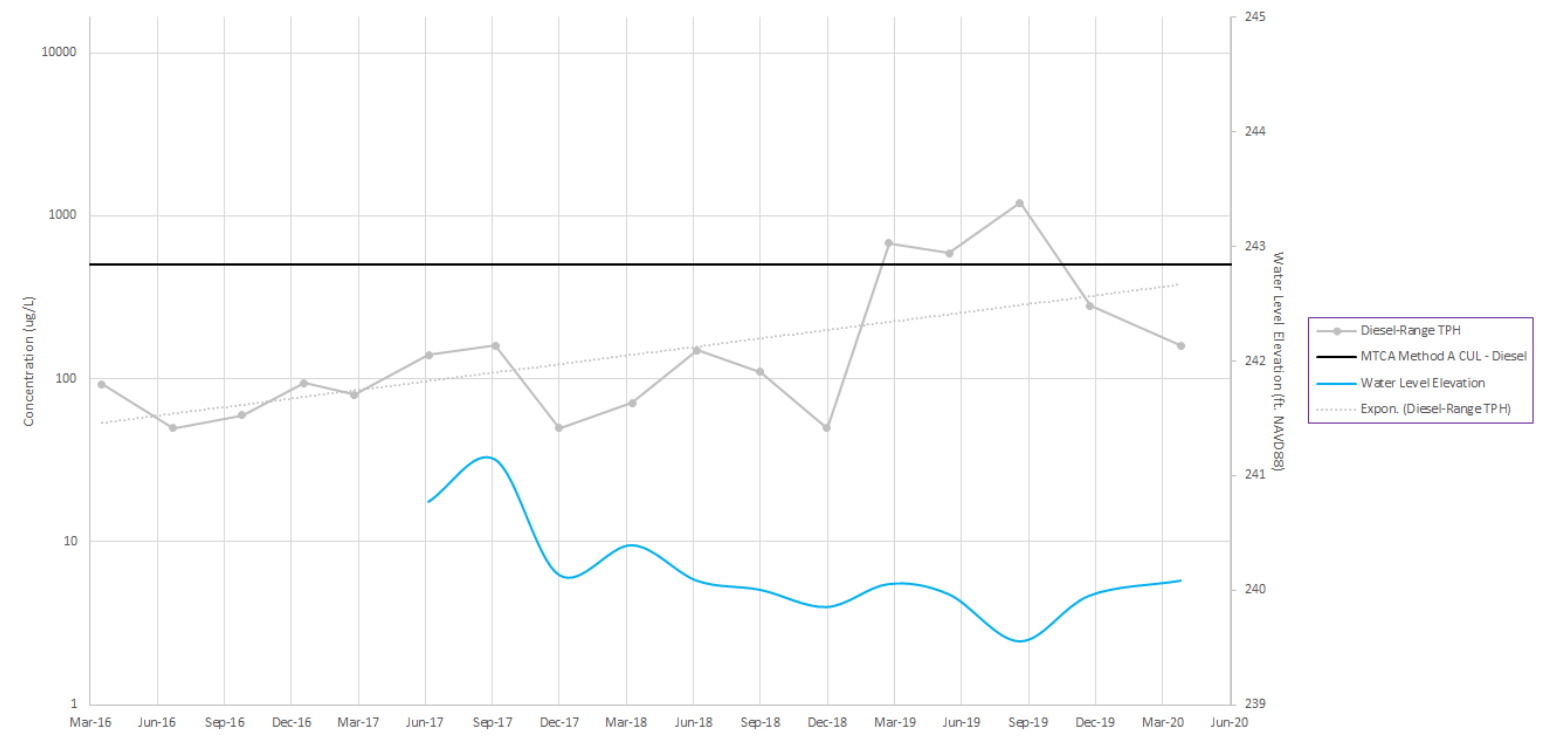
Q1 2020 Groundwater Monitoring Report
 SKS Shell Station Site
 Seattle, Washington

	MAY-2020	BY: KB	FIGURE NO. 6
	PROJECT NO. 160328	REVISED BY: ---	

MW108: Post Construction Concentrations of Contaminants of Concern



MW108: Diesel-Range TPH



Notes:

- Benzene and gasoline-range TPH have not been detected above the laboratory reporting limit during compliance monitoring at MW108
- Laboratory reporting limit for diesel-range TPH is 50 ug/L

MW108 Post-Construction Data

Q1 2020 Groundwater Monitoring Report
SKS Shell Station Site
Seattle, Washington



MAY-2020
PROJECT NO.
160328

BY:
KB
REVISED BY:

FIGURE NO.
7

APPENDIX A

Laboratory Analytical Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

April 30, 2020

Kristin Beck, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Ms Beck:

Included are the results from the testing of material submitted on April 23, 2020 from the SKS Shell Site 160328, F&BI 004259 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Ali Cochrane
ASP0430R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 23, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC SKS Shell Site 160328, F&BI 004259 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
004259 -01	RW03-042220
004259 -02	RW04-042220
004259 -03	RW05-042120
004259 -04	MW100-042220
004259 -05	MW104-042220
004259 -06	MW105-042120
004259 -07	MW108-042220
004259 -08	MW109-042220
004259 -09	MW110-042220
004259 -10	MW111-042220
004259 -11	MW112-042120
004259 -12	MW113-042120

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20
 Date Received: 04/23/20
 Project: SKS Shell Site 160328, F&BI 004259
 Date Extracted: 04/28/20
 Date Analyzed: 04/28/20

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR BENZENE, TOLUENE, ETHYLBENZENE,
 XYLENES AND TPH AS GASOLINE
 USING METHODS 8021B AND NWTPH-Gx**
 Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
RW03-042220 004259-01	<1	<1	77	78	1,400	97
RW04-042220 004259-02	2.9	1.2	83	36	1,400	ip
RW05-042120 004259-03	<1	<1	<1	<3	140	90
MW100-042220 004259-04	3.8	1.3	85	37	1,400	102
MW104-042220 004259-05	<1	<1	<1	<3	<100	94
MW105-042120 004259-06	<1	<1	<1	<3	<100	91
MW108-042220 004259-07	<1	<1	<1	<3	<100	94
MW109-042220 004259-08	<1	<1	<1	<3	<100	94
MW110-042220 004259-09	<1	<1	<1	<3	<100	95
MW111-042220 004259-10	<1	<1	<1	<3	<100	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20
Date Received: 04/23/20
Project: SKS Shell Site 160328, F&BI 004259
Date Extracted: 04/28/20
Date Analyzed: 04/28/20

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW112-042120 004259-11	<1	<1	<1	<3	<100	96
MW113-042120 004259-12	<1	<1	<1	<3	<100	96
Method Blank 00-861 MB	<1	<1	<1	<3	<100	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20
 Date Received: 04/23/20
 Project: SKS Shell Site 160328, F&BI 004259
 Date Extracted: 04/24/20
 Date Analyzed: 04/24/20

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND MOTOR OIL
 USING METHOD NWTPH-D_x**
 Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
RW03-042220 004259-01	700 x	<250	107
RW04-042220 004259-02	700 x	<250	105
RW05-042120 004259-03	420 x	<250	102
MW100-042220 004259-04	720 x	<250	104
MW104-042220 004259-05	200 x	<250	102
MW105-042120 004259-06	<50	<250	114
MW108-042220 004259-07	160 x	<250	117
MW109-042220 004259-08	100 x	<250	111
MW110-042220 004259-09	250 x	<250	119
MW111-042220 004259-10	<50	<250	109

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20
Date Received: 04/23/20
Project: SKS Shell Site 160328, F&BI 004259
Date Extracted: 04/24/20
Date Analyzed: 04/24/20

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-D_x**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW112-042120 004259-11	<50	<250	116
MW113-042120 004259-12	<50	<250	114
Method Blank 00-956 MB	<50	<250	110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20

Date Received: 04/23/20

Project: SKS Shell Site 160328, F&BI 004259

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

Laboratory Code: 004259-12 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	99	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	103	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20

Date Received: 04/23/20

Project: SKS Shell Site 160328, F&BI 004259

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	100	112	63-142	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

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

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

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

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

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

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

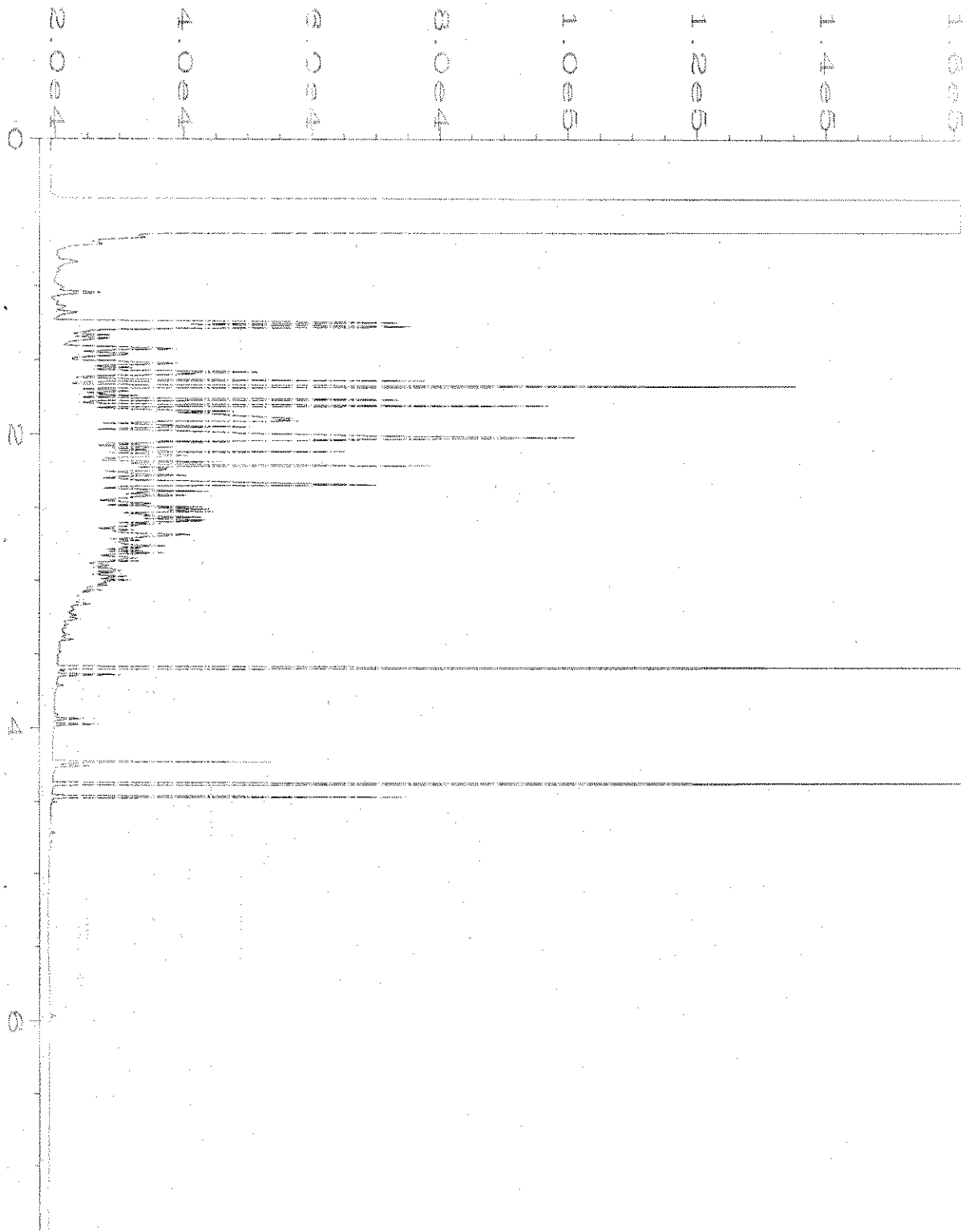
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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

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

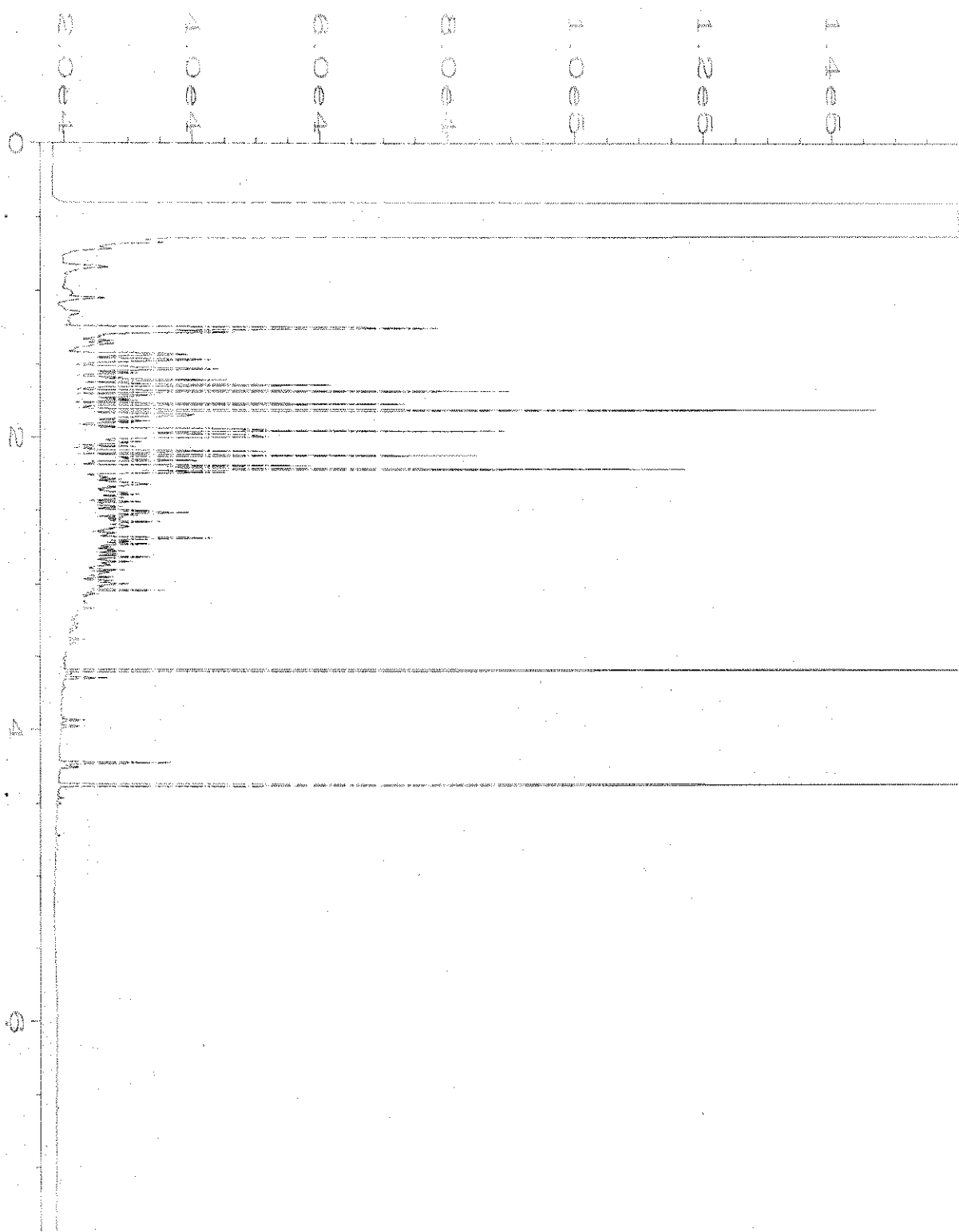
vo - The value reported fell outside the control limits established for this analyte.

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

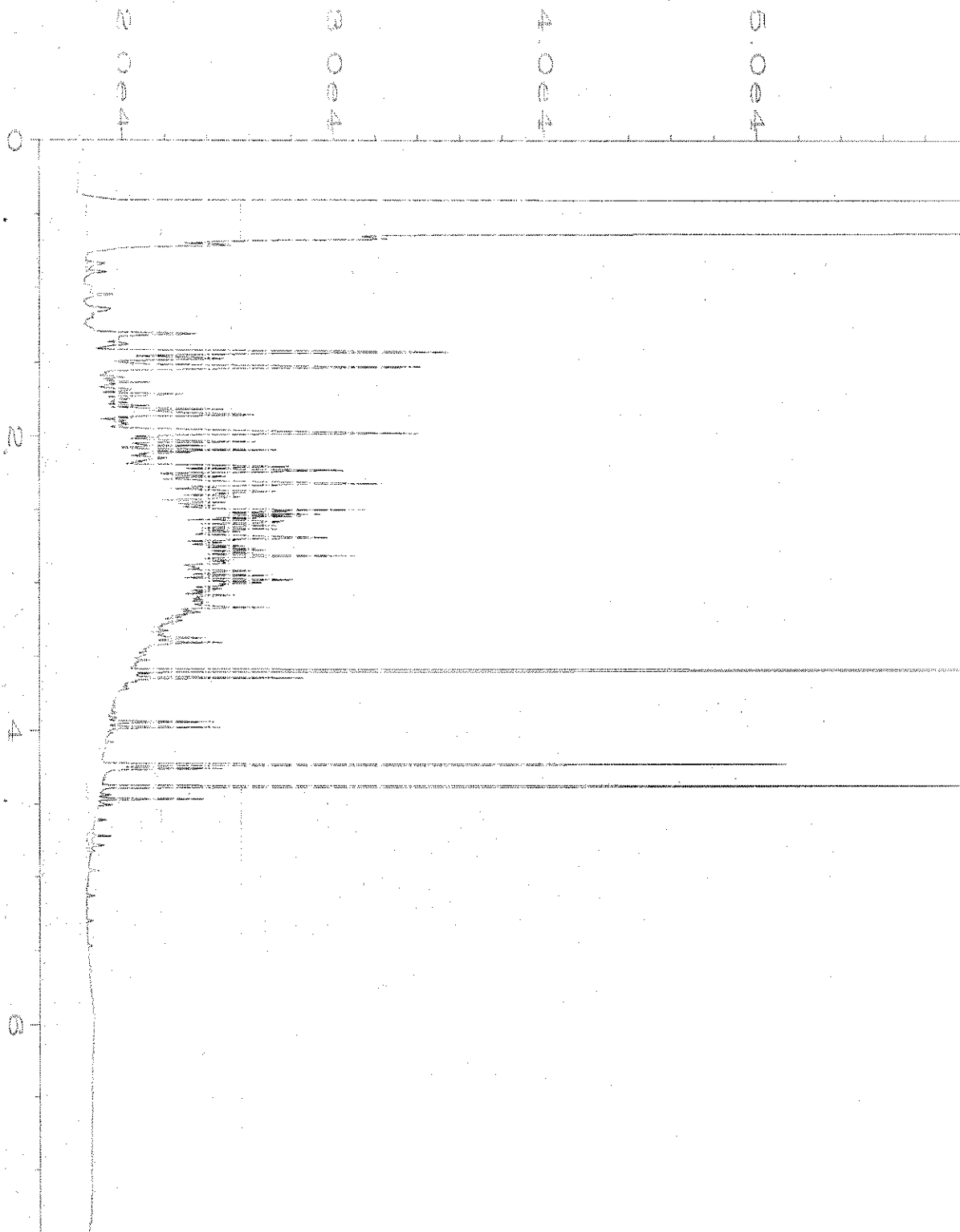


Data File Name : C:\HFCHEM\1\DATA\04-24-20\012F0501.D
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 Instrument : GC1
 Sample Name : 004259-01
 Run Time Bar Code:
 Acquired on : 24 Apr 20 03:13 PM
 Report Created on: 27 Apr 20 09:27 AM

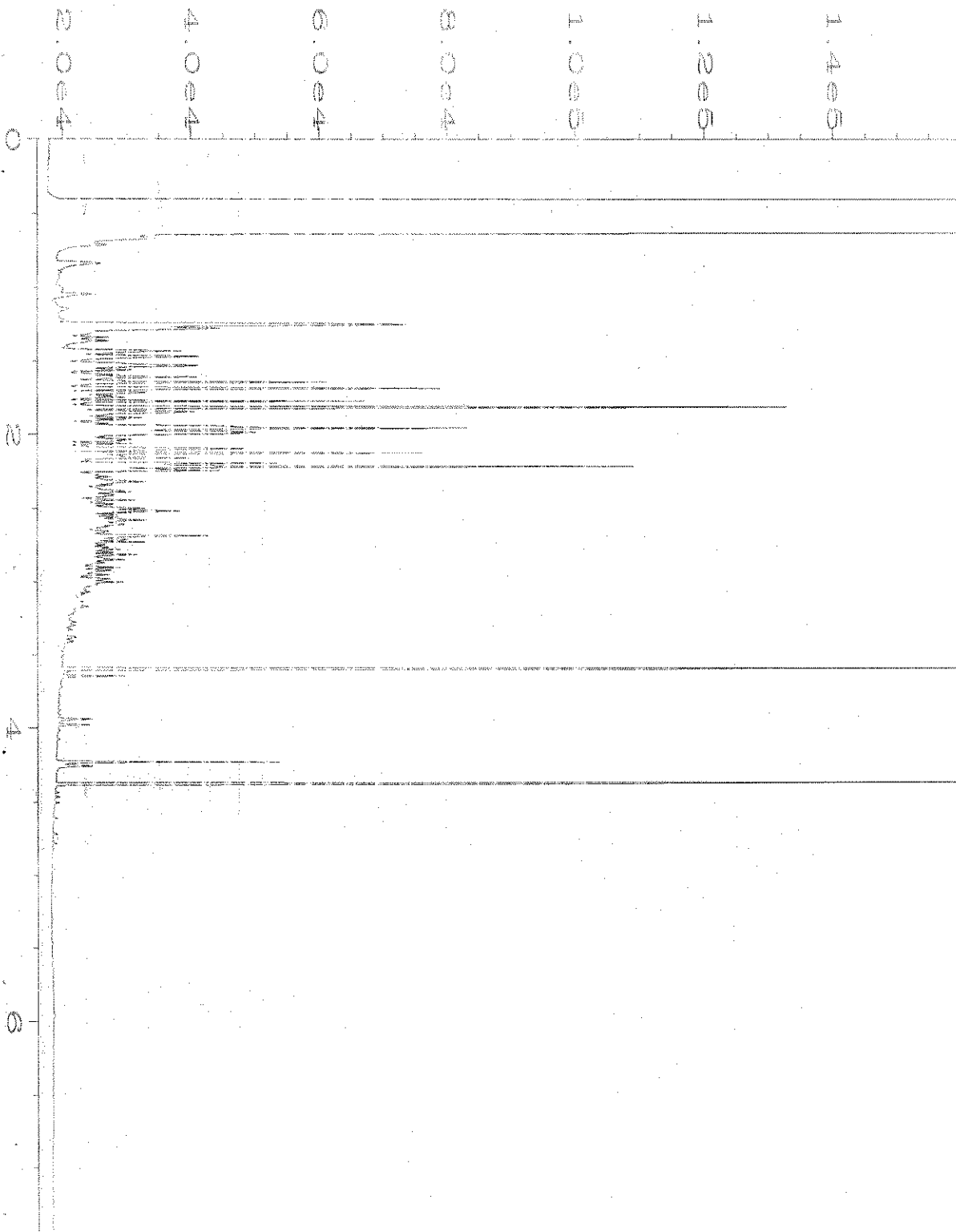
Page Number : 1
 Vial Number : 12
 Injection Number : 1
 Sequence Line : 5
 Instrument Method: DX.MTH
 Analysis Method : DEFAULT.MTH



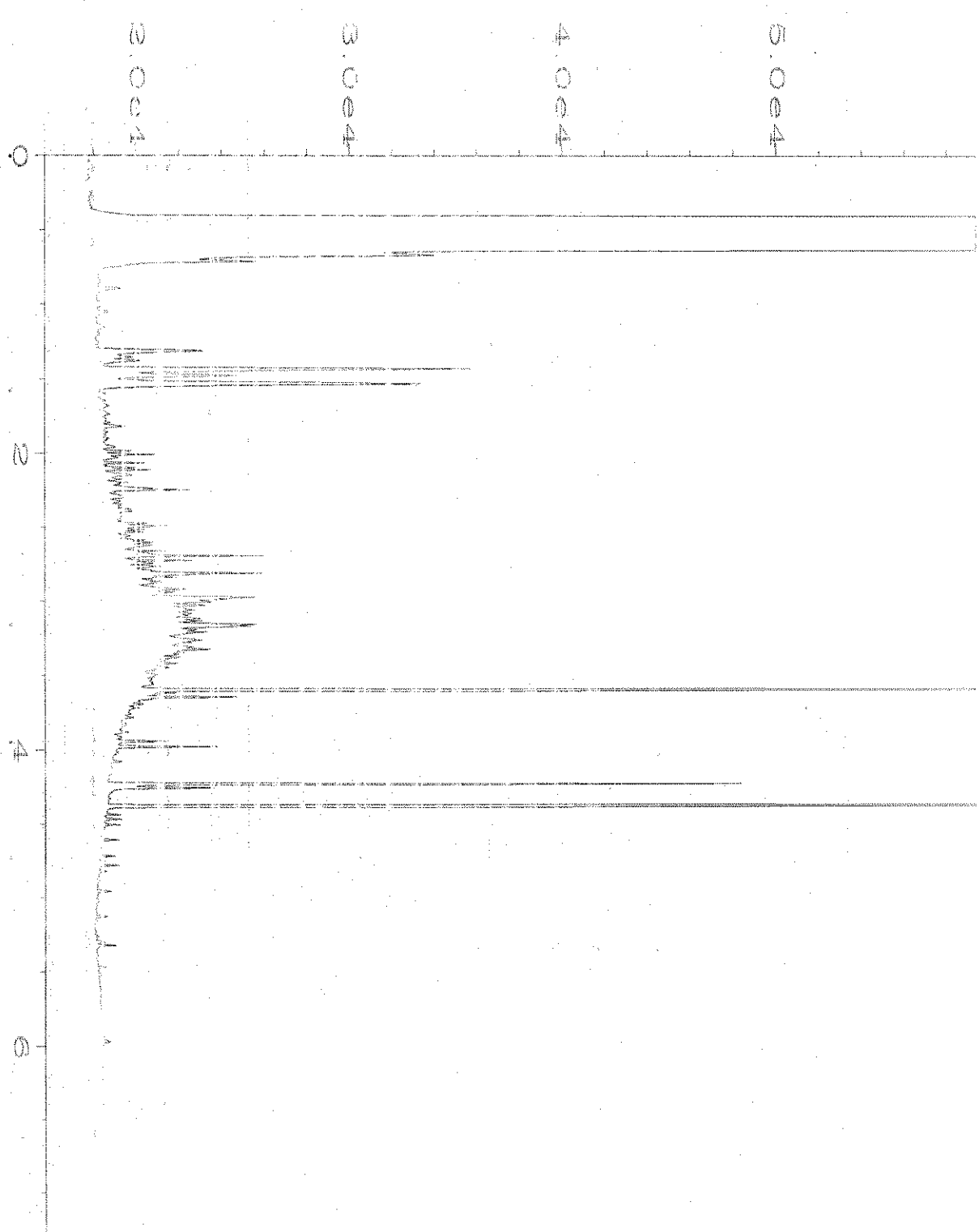
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Operator	: TL	Vial Number	: 13
Instrument	: GCL	Injection Number	: 1
Sample Name	: 004259-02	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Apr 20 03:22 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:27 AM		



Data File Name	: C:\HPCHEM\1\DATA\04-24-20\014F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 14
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-03	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 24 Apr 20 03:33 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:28 AM		

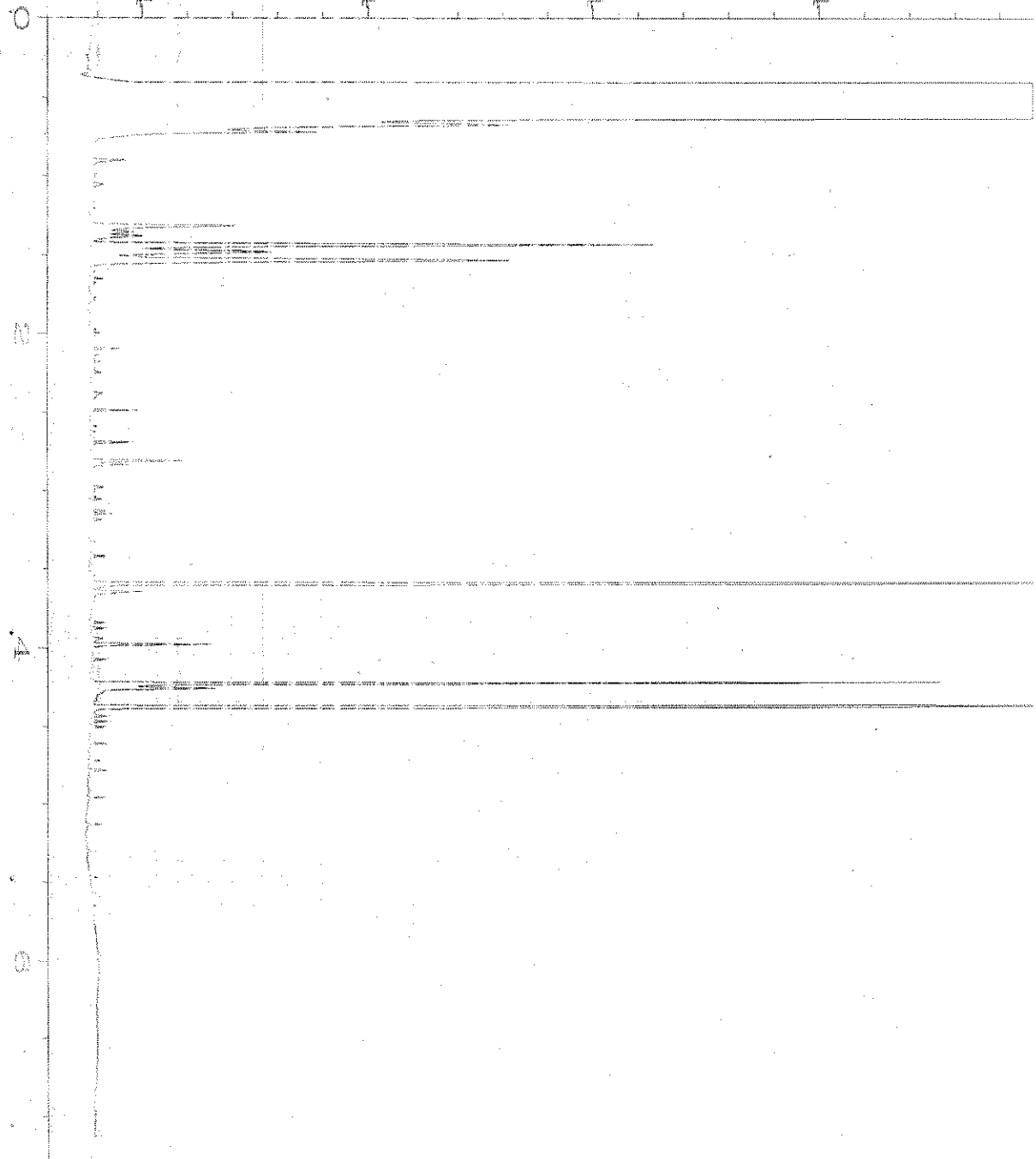


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Operator	: TL	Vial Number	: 15
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-04	Sequence Line	: 5
Run Time Bar Code	:	Instrument Method	: DX.MTH
Acquired on	: 24 Apr 20 03:45 PM	Analysis Method	: DEFAULT.MTH
Report Created on	: 27 Apr 20 09:28 AM		



Data File Name	: C:\HFCHEM\1\DATA\04-24-20\016F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 16
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-05	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 03:56 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:28 AM		

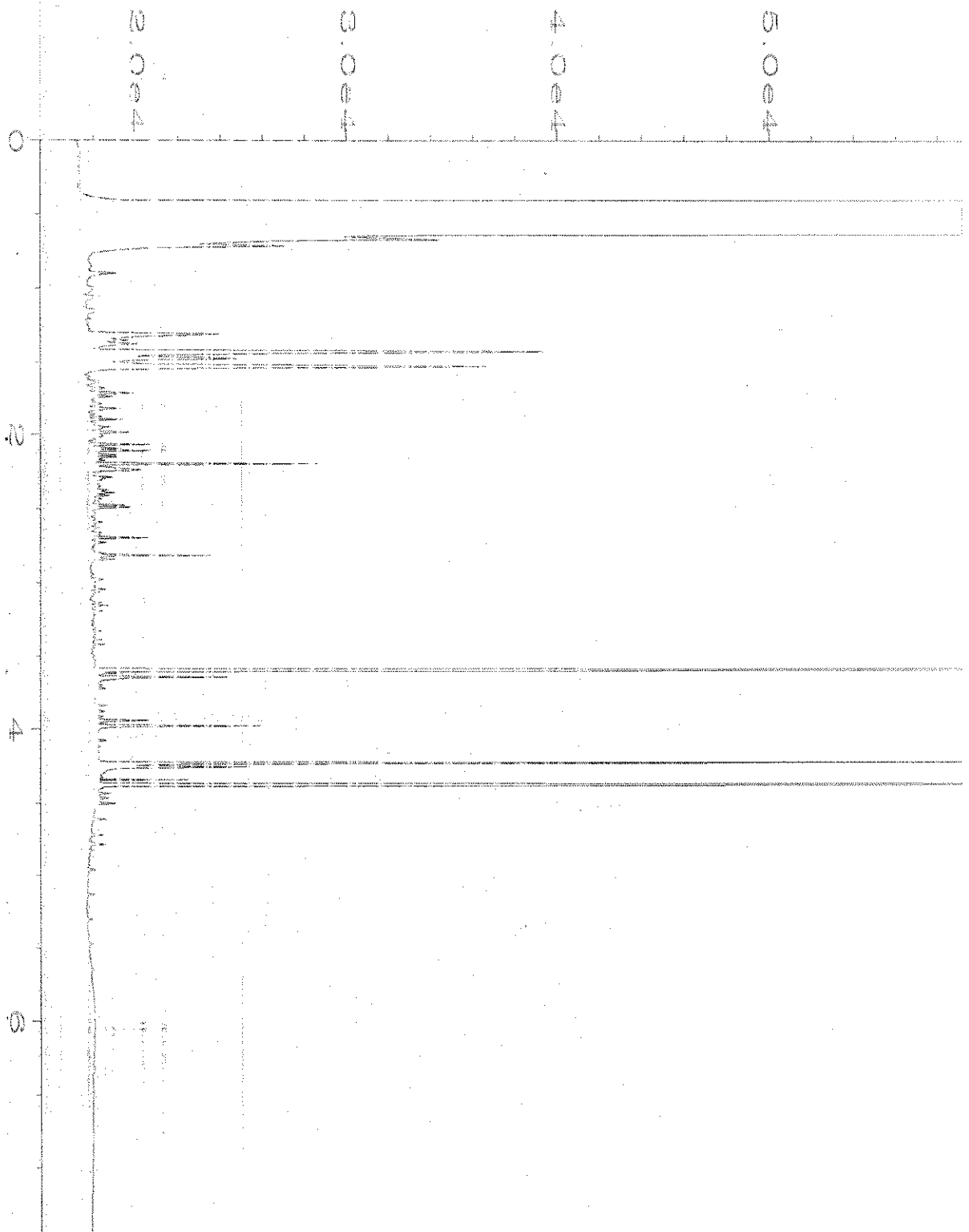
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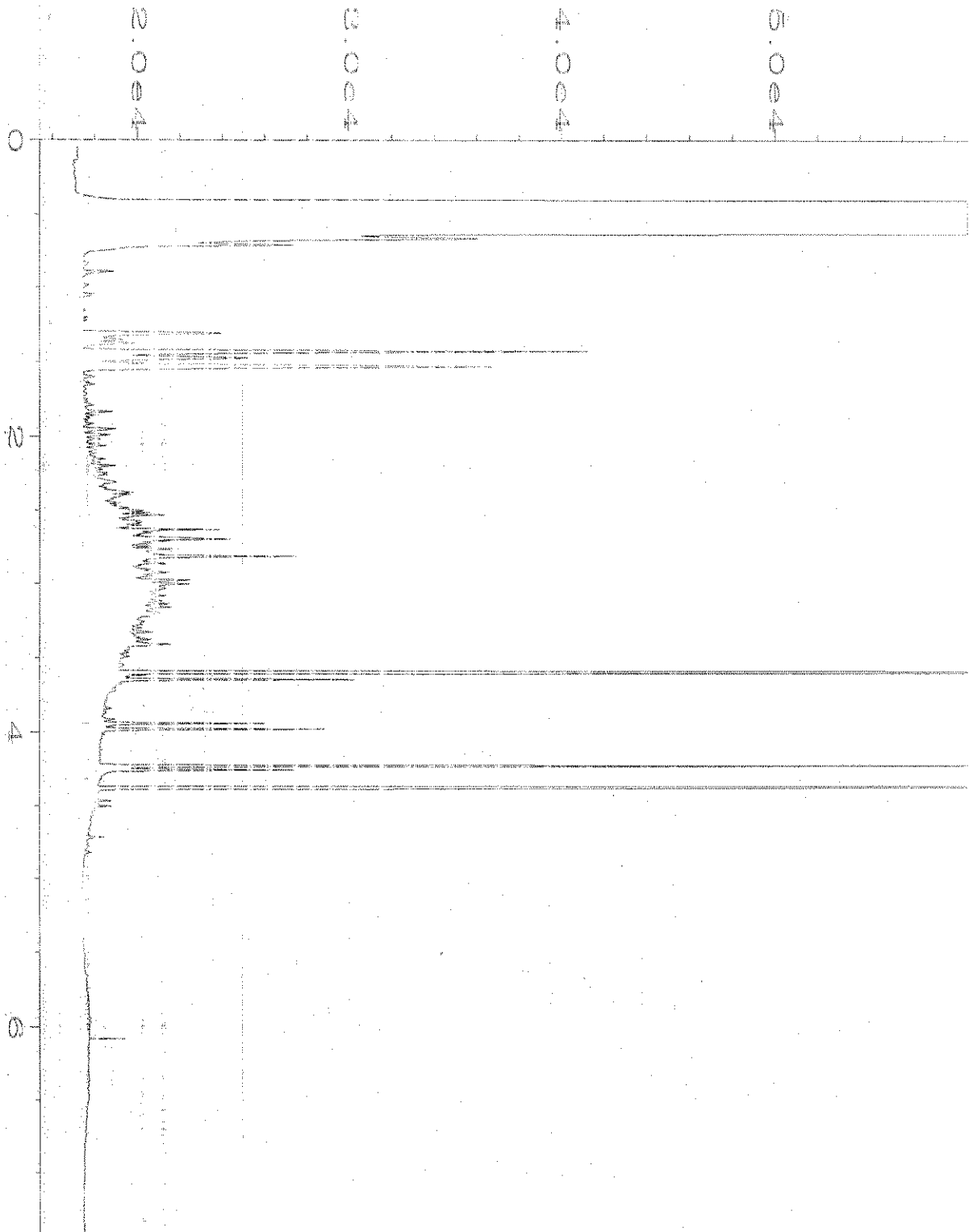
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Operator : TL Page Number : 1
Instrument : GCL Vial Number : 17
Sample Name : 004259-06 Injection Number : 1
Run Time Bar Code: Sequence Line : 5
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Report Created on: 27 Apr 20 09:28 AM Analysis Method : DEFAULT.MTH



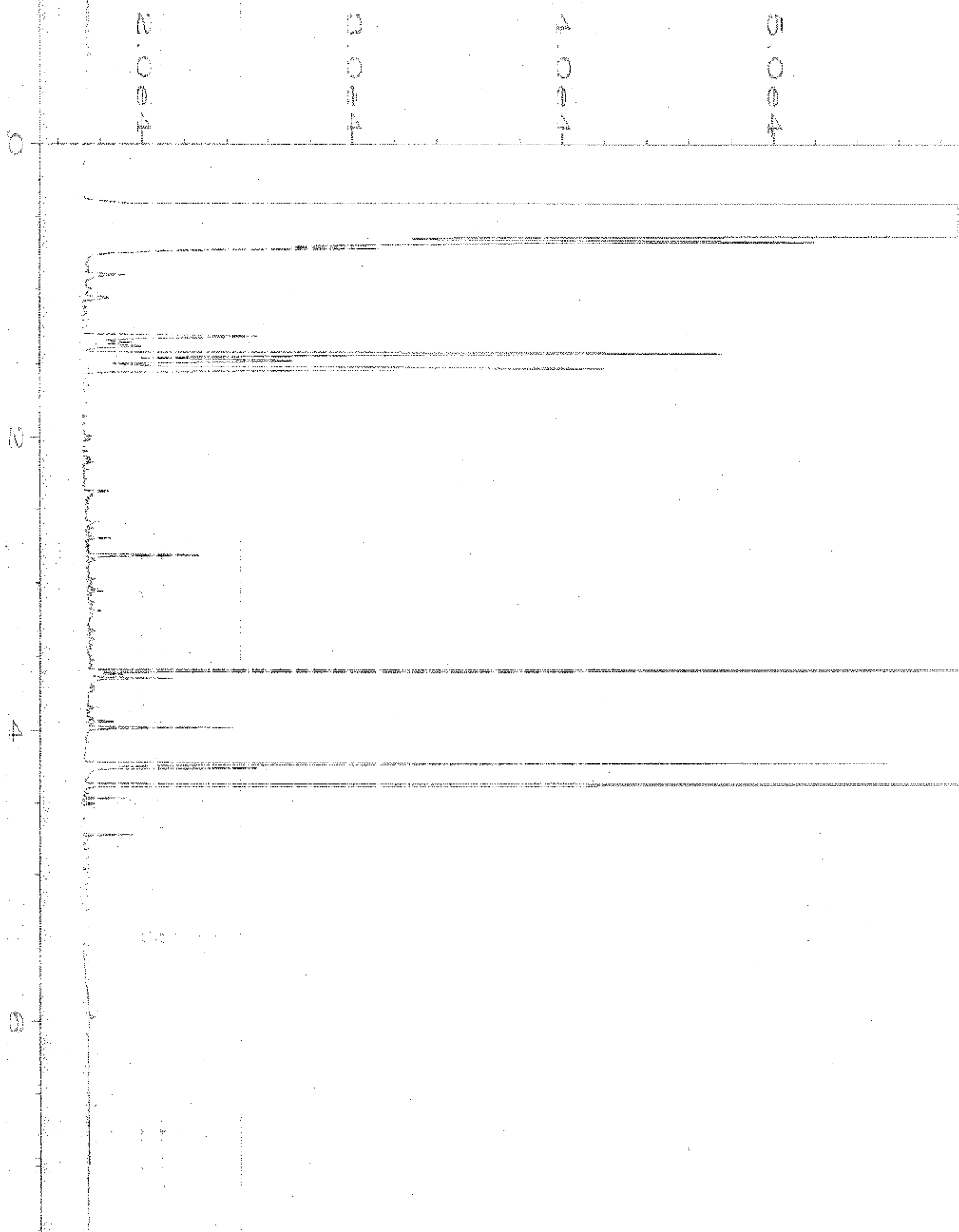
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-07	Sequence Line	: 5
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Report Created on:	27 Apr 20 09:28 AM		



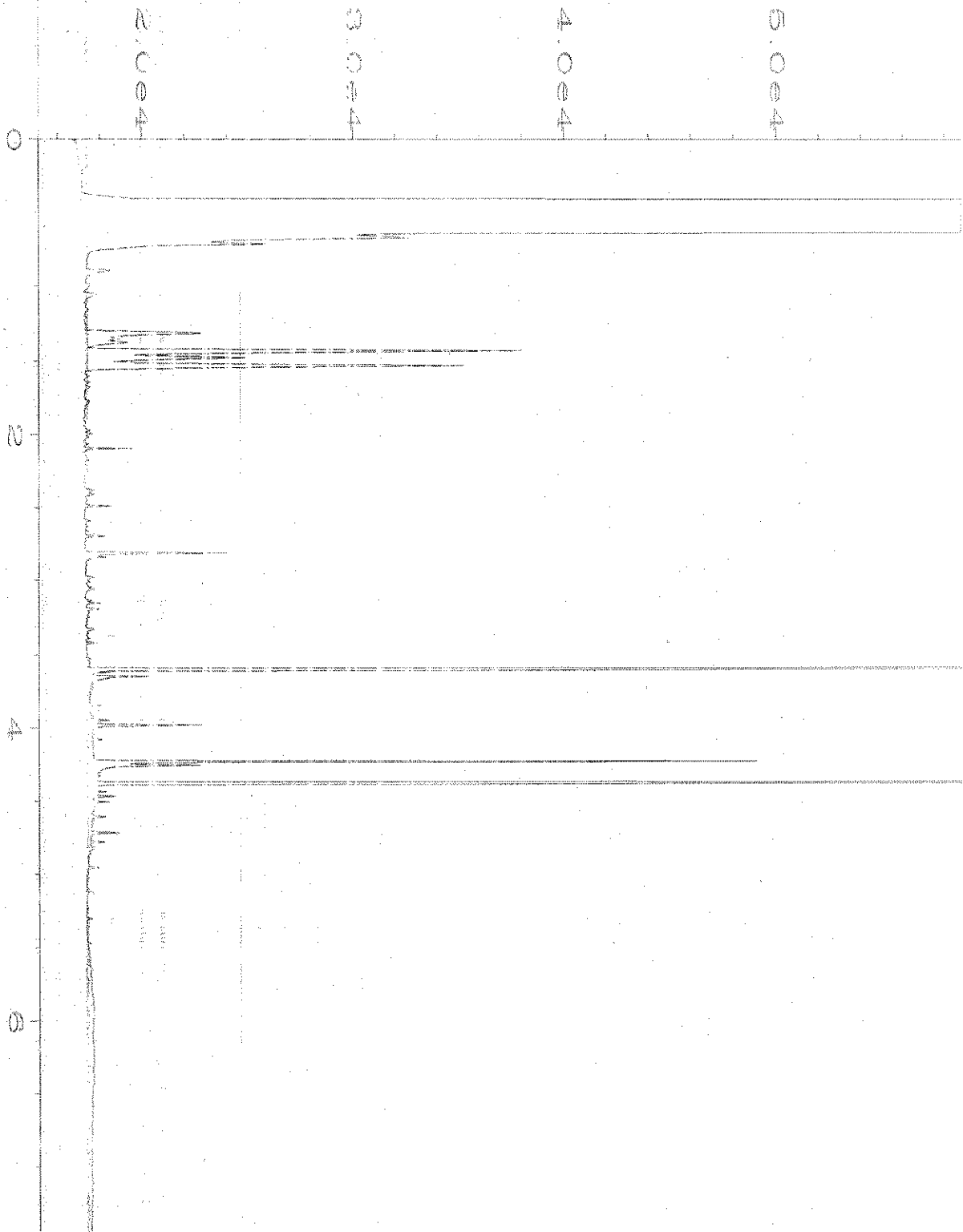
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Instrument	: GCL	Injection Number	: 1
Sample Name	: 004259-08	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 04:31 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:28 AM		



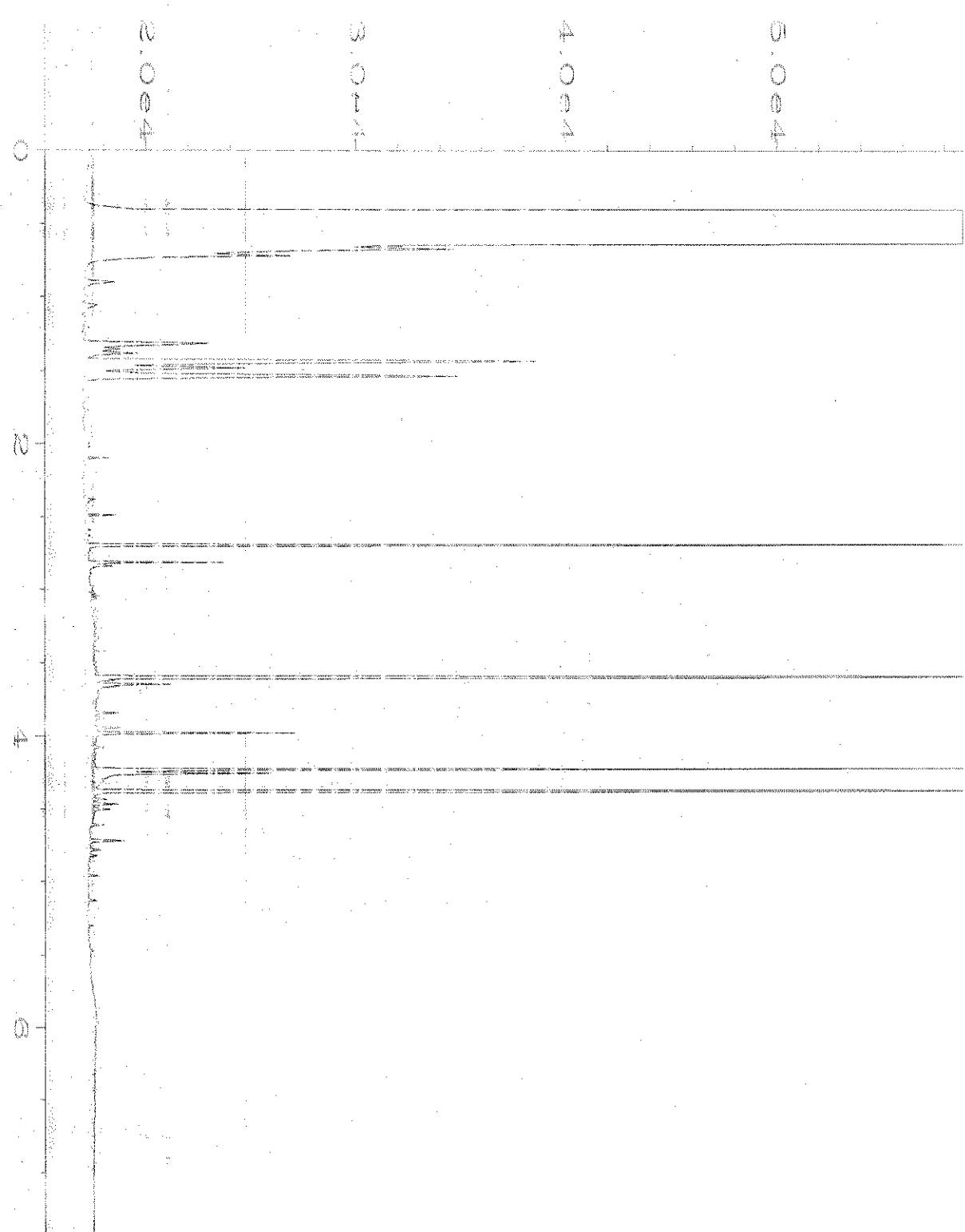
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Operator	: TL	Vial Number	: 20
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-09	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 04:43 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:28 AM		



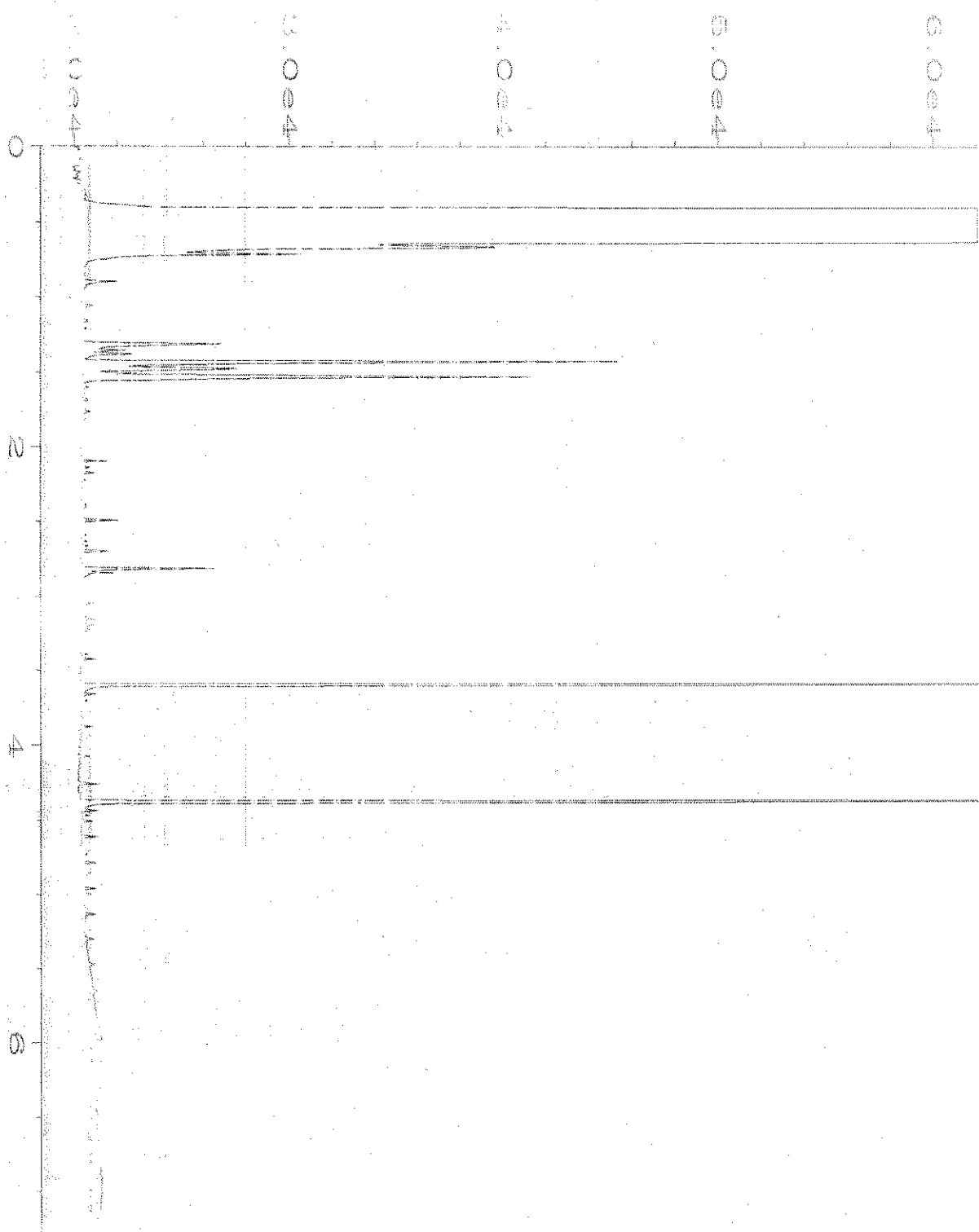
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-10	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 04:54 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:29 AM		



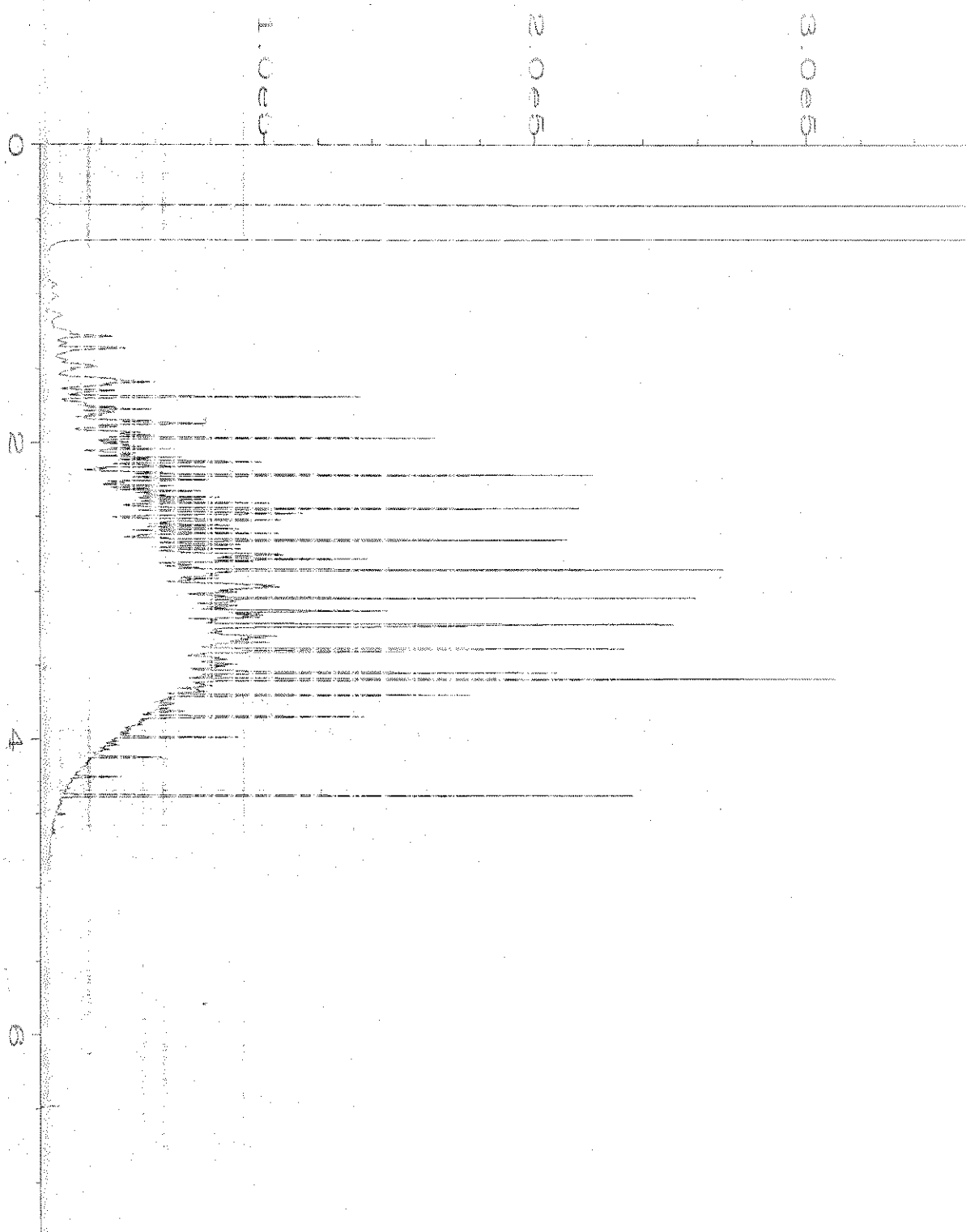
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Operator	: TL	Vial Number	: 22
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-11	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 05:06 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:29 AM		



Data File Name	: C:\HPCHEM\1\DATA\04-24-20\023F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 23
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004259-12	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 05:18 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:29 AM		



Data File Name	: C:\HPCHEM\1\DATA\04-24-20\008F0301.D	Page Number	: 1
Operator	: TL	Vial Number	: 8
Instrument	: GCL	Injection Number	: 1
Sample Name	: 00-956 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 01:58 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:29 AM		



Data File Name	: C:\HECHEM\1\DATA\04-24-20\005F0401.D	Page Number	: 1
Operator	: TL	Vial Number	: 5
Instrument	: GC1	Injection Number	: 1
Sample Name	: 1000 Dx 59-162B	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 24 Apr 20 02:56 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	27 Apr 20 09:29 AM		

004259

SAMPLE CHAIN OF CUSTODY

ME 04/23/20

204/vwy

Report To Kristin Beck & Ali Cochran

Company Aspect Consulting

Address 710 2nd Ave, Suite 570

City, State, ZIP Seattle, WA 98104

Phone _____ Email _____

Page #

TURNAROUND TIME

Standard turnaround
 RUSH
Rush charges authorized by:

SAMPLE DISPOSAL

Archive samples
 Other
Default: Dispose after 30 days

SAMPLERS (signature) <u>K Beck</u>	PROJECT NAME <u>Ses Shell Site</u>	PO# <u>160328</u> 160329
REMARKS	INVOICE TO <u>AP</u>	
Project specific RIs? - Yes / <u>No</u>		

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes	
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082		
RW#03-042220	01 A.D	4/22/20	1641	Water	4	X	X	X						
RW04-042220	02	↓	1357			X	X	X						
RW05-042120	03	4/21/20	1431			X	X	X						
MW#02-042220	04	4/22/20	0955			X	X	X						
MW104-042220	05	↓	1549			X	X	X						
MW105-042120	06	4/21/20	1225			X	X	X						
MW108-042220	07	4/22/20	1217			X	X	X						
MW109-042220	08	↓	1031			X	X	X						
MW110-042220	09	↓	1121			X	X	X						
MW111-042220	10	↓	0836			X	X	X						

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Relinquished by: <u>K Beck</u>		Kristin Beck		Aspect		4/23/20	0730
Received by: <u>m phan</u>		Nhan Phan		FERT		4/23/20	0730
Relinquished by:							
Received by:				Samples received at		4	oC

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

004259

SAMPLE CHAIN OF CUSTODY ME 04/23/20 way/2 Day

Page # of 2

Report To Kristin Beck & Ali Cochane
 Company Aspect Consulting
 Address 710 2nd Ave, Suite 550
 City, State, ZIP Seattle, WA 98104
 Phone _____ Email _____

SAMPLERS (signature) <u>K Beck</u>	PROJECT NAME <u>SFS Shell Site</u>	PO # <u>160328</u> 170322
REMARKS	INVOICE TO <u>AP</u>	
Project specific RIs? - Yes / <u>No</u>		

TURNAROUND TIME
 Standard turnaround
 RUSH
 Rush charges authorized by: _____
 SAMPLE DISPOSAL
 Archive samples
 Other _____
 Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes		
						NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082			
MW112-042120	11 A-D	4/21/20	1141	Water	4	X	X	X							
MW113-042120	12 A-D	↓	1331	↓	↓	X	X	X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>K Beck</u>	<u>Kristin Beck</u>	<u>Aspect</u>	<u>4/23/20</u>	<u>0930</u>
Received by: <u>MW</u>	<u>Phan Phan</u>	<u>FBT</u>	<u>4/23/20</u>	<u>0930</u>
Relinquished by:				
Received by:				
Samples received at			<u>4</u>	<u>OC</u>

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

APPENDIX B

Data Validation Report

DATA VALIDATION REPORT

Whittaker Groundwater Sampling
April 2020
SDG 004259

Prepared by:

Aspect Consulting, LLC
710 Second Ave, Suite 550
Seattle, WA 98104

Project No. 160328 • May 2020

Contents

1	Introduction	1
2	Data Validation Findings for SDG 004259	1
2.1	Sample Receipt and Preservation.....	2
2.2	BTEX and Gasoline (SW 8021B and NWTPH-Gx)	2
2.2.1	Holding Times.....	2
2.2.2	Method Blanks	2
2.2.3	Laboratory Control Samples	2
2.2.4	Surrogates.....	2
2.2.5	Lab Duplicate	2
2.2.6	Field Duplicate	2
2.2.7	Overall Assessment	2
2.3	Diesel and Motor Oil (NWTPH-Dx)	3
2.3.1	Holding Times.....	3
2.3.2	Method Blanks	3
2.3.3	Laboratory Control Samples/Laboratory Control Sample Duplicates 3	3
2.3.4	Field Duplicate	3
2.3.5	Laboratory Flags	3
2.3.6	Overall Assessment	3
3	Qualified Data Summary	4
4	Acronyms and Definitions	5

1 Introduction

This report summarizes the findings of the United States Environmental Protection Agency (USEPA) Stage 2A data validation performed on analytical data for groundwater samples collected in April 2020 for the Whittaker Environmental Review Quarterly Groundwater Monitoring. This data quality review is divided into sections by sample delivery group (SDG). A complete list of samples and analyses for each SDG is provided in the Sample Index at the beginning of each section.

Samples were sent to Friedman & Bruya in Seattle, Washington for analysis of various parameters. The analytical methods are summarized in Table 1 below:

Table 1. Analytical Methods

Analysis	Method	Lab	Validation Level
BTEX	SW8021B	Friedman & Bruya	2A
Gasoline	NWTPH-Gx	Friedman & Bruya	2A
Diesel and Motor Oil	NWTPH-Dx	Friedman & Bruya	2A

Data assigned a J/UJ qualifier (estimated) may be used for site evaluation purposes but the reasons for qualification should be considered when interpreting sample concentrations. Values without qualification meet all data measurement quality objectives and are suitable for use.

Data qualifier definitions and a summary table of the qualified data are included in the Qualified Data Summary at the end of this report. Data qualifiers have been incorporated into the project chemistry database to reflect the validation in this report.

2 Data Validation Findings for SDG 004259

Samples in this SDG, and the chemical analyses performed on them, are tabulated below. The sections below describe the results of the data quality review for this SDG by analyte group (analysis).

Table 2. Sample Index

Sample Name	Sample Date	SW8021B	NWTPH-Gx	NWTPH-Dx
RW03-042220	4/22/20	X	X	X
RW04-042220	4/22/20	X	X	X
RW05-042120	4/21/20	X	X	X
MW100-042220	4/22/20	X	X	X
MW104-042220	4/22/20	X	X	X
MW105-042120	4/21/20	X	X	X
MW108-042220	4/22/20	X	X	X

Sample Name	Sample Date	SW8021B	NWTPH-Gx	NWTPH-Dx
MW109-042220	4/22/20	X	X	X
MW110-042220	4/22/20	X	X	X
MW111-042220	4/22/20	X	X	X
MW112-042120	4/21/20	X	X	X
MW113-042120	4/21/20	X	X	X

2.1 Sample Receipt and Preservation

All samples were received in good condition and in the correct containers and no qualification was necessary.

Note that sample MW100-042220 is a field duplicate of RW04-042220.

2.2 BTEX and Gasoline (SW 8021B and NWTPH-Gx)

2.2.1 Holding Times

Samples were analyzed within the requisite holding time. No qualification or action was needed.

2.2.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.2.3 Laboratory Control Samples

All LCS %R were within the laboratory specified control limits. No qualification or action was needed.

2.2.4 Surrogates

All surrogate %R values were within laboratory specified control limits, with the following exception:

RW04-042220: The lab indicated that the surrogate for this sample was out of control limits due to matrix effects. The results agree with those from the field duplicate, which had acceptable surrogate recovery. No qualification was necessary.

2.2.5 Lab Duplicate

All LD RPD were within the laboratory control limits. No qualification or action was needed.

2.2.6 Field Duplicate

All FD RPD were within the 35% control limit. No qualification or action was needed.

2.2.7 Overall Assessment

Accuracy was acceptable based on the LCS %R. Precision was acceptable based on the LD and FD RPD values. The data are of known quality and are acceptable for use as qualified.

2.3 Diesel and Motor Oil (NWTPH-Dx)

2.3.1 Holding Times

Samples were analyzed within the requisite holding time. No qualification or action was needed.

2.3.2 Method Blanks

Target analytes were not detected at or above the reporting levels in the method blank. No qualification or action was needed.

2.3.3 Laboratory Control Samples/Laboratory Control Sample Duplicates

All LCS/LCSD %R and RPD were within the laboratory specified control limits. No qualification or action was needed.

2.3.4 Field Duplicate

All FD RPD were within the 35% control limit. No qualification or action was needed.

2.3.5 Laboratory Flags

The laboratory flagged all diesel detections with an “x” to indicate that the sample chromatographic patterns did not resemble the fuel standard used for quantitation. The results were qualified accordingly (X).

2.3.6 Overall Assessment

Accuracy was acceptable based on the LCS/LCSD %R. Precision was acceptable based on the LCSD and FD RPD values. The data are of known quality and are acceptable for use as qualified.

3 Qualified Data Summary

Qualified sample results are listed below. Results just flagged non-detect (U) by lab with no further qualification necessary are not listed.

Table 11. Qualified Data Summary

Sample ID	Method	Analyte	Qualifier	Reason
MW104-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
MW108-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
MW109-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
MW110-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
RW03-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
RW04-042220	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard
RW05-042120	NWTPH-Dx	Diesel Range Organics	X	Chrom pattern did not match fuel standard

Table 12. Data Qualifier Definitions

Data Qualifier	Definition
J	The analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
U	The analyte was analyzed for but was considered not detected at the reporting limit or reported value.
UJ	The analyte was analyzed for, and the associated quantitation limit was an estimated value.

4 Acronyms and Definitions

%D – Percent Difference

%R – Percent Recovery

ASTM – American Standard Test Method

COC – Chain of Custody

EB – Equipment Blank

EPA – Environmental Protection Agency

FB – Field Blank

FD – Field Duplicate

HCID – Hydrocarbon Identification

LCS – Laboratory Control Sample

LCSD – Laboratory Control Sample Duplicate

LD – Laboratory Duplicate

MB – Method Blank

MDL – Method Detection Limit

MS – Matrix Spike

MSD – Matrix Spike Duplicate

NWTPH – Northwest Total Petroleum Hydrocarbon

PCB – Polychlorinated Biphenyl

PFAS – Polyfluoroalkyl Substances

PPCP – Pharmaceuticals and Personal Care Products

QAPP – Quality Assurance Project Plan

QC – Quality Control

RL – Reporting Limit

RPD – Relative Percent Difference

SDG – Sample Delivery Group

SM – Standard Methods

SVOC – Semi-Volatile Organic Compound

SW – Solid Waste

TB – Trip Blank

TCLP – Toxicity Characteristic Leaching Procedure

TPH – Total Petroleum Hydrocarbon

VOC – Volatile Organic Compound

APPENDIX C
Report Limitations and
Guideline for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.