November 24, 2014 2014-01-443

Mr. Mark Chandler
Vice President of Environmental Services
TOC Holdings Co.
2737 W. Commodore Way
Seattle, WA 98199

Subject: Groundwater Monitoring Report
Third Quarter, 2014
TOC Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington
Washington State Department of Ecology #85572141

This report summarizes the results of the Third Quarter 2014 groundwater sampling event conducted by HydroCon LLC (HydroCon) at the TOC Holdings Co. (formally Time Oil Co.) Facility No. 01-443 property located at 4910 Leary Avenue Northwest, Seattle, Washington (the Property). The Property location is shown on Figure 1. This report presents a summary of the site background, field activities, and results of the quarterly monitoring event.

Site Background

The Property was first developed with a single-family residence sometime between 1893 and 1905, and appeared to have been used for residential purposes until 1922, when the residence was demolished and a Mobil-brand retail gasoline station and automotive repair facility was constructed in its place. This facility was equipped with three fuel-dispensing pump islands, a hydraulic hoist, and grease shed. No information regarding the associated underground storage tanks (USTs) was observed in the available public record. In 1942, the 1922-vintage facility was demolished and the existing building was constructed. The 1942-vintage facility was reportedly equipped with a single pump island; a hydraulic hoist; and as many as four USTs with capacities of 125, 500, 650, and 1,000 gallons. The Property operated as a gasoline service station until at least 1954. TOC Holdings Co. (formerly Time Oil Co.) purchased the Property in 1957. The dispenser island was removed from the Property between 1954 and 1967. Between 1959 and 2006, automotive repair or tire sales facilities operated on the Property. The Property is currently occupied by the 1942-vintage, single-story building with an attached covered patio, an associated asphalt-paved parking lot, and perimeter landscaping. The building is currently occupied by the Shelter Lounge.

In 2001, the 125-gallon waste oil UST, hydraulic hoist, and approximately 35 tons of petroleum-contaminated soil (PCS) were removed from the Property. In 2004, the 500-gallon and 650-gallon USTs, the associated product delivery piping, and approximately 1,193 tons of PCS were removed from the Property. Information regarding the removal of the 1,000-gallon UST was not observed in the available records.

Subsurface investigations conducted on the Property since 2000 have confirmed that the historical use of the Property as a retail gasoline station and automotive repair facility has resulted in adverse environmental impacts to soil and groundwater. Laboratory analytical data indicated that concentrations of gasoline-range petroleum hydrocarbons (GRPH); diesel-range petroleum hydrocarbons; oil-range petroleum hydrocarbons; benzene, toluene, ethylbenzene, and total xylenes (BTEX); 1,2-dichloroethylene (EDC), and naphthalene exceeded their respective Washington State Model Toxics Control Act (MTCA) Method A cleanup levels in soil and/or groundwater beneath the Property.

In an effort to mitigate residual groundwater contamination, an in-situ chemical oxidation injection event was conducted at the Property in 2011 and a remedial excavation was completed between July and August of 2012. Multiple groundwater extraction events have also been performed using existing monitoring wells.

Petroleum impacted soil and groundwater have been encountered beneath the southern portion of the Property, extending a short distance beyond the eastern and southwestern boundaries of the Property. Although PCS and groundwater have been encountered at locations farther east, south, and southwest of the Property, these impacts appear to be related to releases from off-site locations and are, therefore, not included within the boundaries of the Property.

As remediation and monitoring for the Property has progressed, several wells have been removed from the monitoring program, replaced, or decommissioned as follows:

- Monitoring wells MW01 and MW05 were decommissioned in 2004 and later replaced with monitoring wells MW01A and MW05A.
- In 2008, the Washington State Department of Ecology (Ecology) determined that wells MW02 through MW04 and MW06 through MW10 did not need to be sampled to get a property specific No Further Action (NFA) determination. This is because EDC was detected in groundwater along the western property boundary in well MW03 and a later boring P06. EDC was not in use as an additive in gasoline during the time period that the TOC Holdings Co. station was in operation. A change in site monitoring has been implemented based on meetings with Ecology representatives. See below for futher explanation.
- Ecology determined that impacted groundwater in MW09 and MW10, located southwest of the Property was attributable to a release from a gasoline station that formally operated on the Property located southwest of the Property and that no additional monitoring or investigation was required in this area (Sound Environmental Strategies, 2008[1]).
- Monitoring wells MW11 and MW15 were decommissioned as part of the remedial excavation activities in 2012 and later replaced with monitoring wells MW11A and MW15A.

Site features including the historical facilities and monitoring wells are shown on Figure 2.

[1] Sound Environmental Strategies, November 10, 2008. Meeting Summary Ecology Site ID 85572141. Letter to Mark Kuntz, Washington State Department of Ecology.

Scope of Work

Groundwater samples were collected September 2 through 5, 2014 to evaluate the environmental quality of groundwater beneath the Property and to eventually demonstrate compliance with MTCA cleanup regulations. The monitoring event included the following activities:

- Measurement of depth to groundwater in monitoring wells MW01A, MW02 through MW04, MW05A, MW06 through MW10, MW11A, MW12 through MW14, MW15A, and MW16.
- Collection and analysis of groundwater samples were collected from monitoring wells MW01A, MW05A, MW11A, MW12 through MW14, MW15A, and MW16.
- Collection of a field duplicate sample from monitoring well MW03 for quality assurance/quality control (QA/QC) purposes
- Summarizing the groundwater sampling activities, analytical results, and upcoming work.

As noted in the previous section, several of the wells listed above for sampling and analysis have not been included in the monitoring program for this site for several years. At request of the Ecology Project Manager, all wells were sampled for this quarter (July 15, 2014).

Groundwater Sampling Procedures

HydroCon collected groundwater samples September 2 through 5, 2014 from monitoring wells MW01A, MW05A, MW11A, MW12 through MW14, MW15A, and MW16.

A field duplicate was collected from MW03 for QA/QC purposes. Monitoring wells were purged and sampled in accordance with U.S. Environmental Protection Agency (EPA) guidance for low-flow sampling[2].

Depth to water was measured in monitoring wells MW01A, MW02 through MW04, MW05A, MW06 through MW10, MW11A, MW12 through MW14, MW15A, and MW16 on September 5, 2014. The water levels were collected after sample collection due to an equipment malfunction. Prior to collecting depth to water measurements at the site, the well cap on each well was removed and the water level was allowed to equilibrate. The depth to water in each well was measured using a clean electronic water level indicator. Water levels were measured at the scribed reference mark (north side of the top of the polyvinyl chloride casing) at each well.

Prior to groundwater sampling, monitoring wells were purged with a low-flow peristaltic pump equipped with a new length of low-density polyethylene tubing attached to a new length of silicone tubing. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each well. During purging, water quality was monitored using a Quanta multi-parameter water quality meter equipped with a flow-through cell. The water quality parameters monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential.

[2] *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (*April 1996). EPA/540/S-95/504*

Each well was purged until all six water quality parameters stabilized or the minimum parameter subset of pH, specific conductance, temperature, and turbidity and/or dissolved oxygen stabilized. Groundwater sample collection forms are provided in Attachment A.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported under chain-of-custody to Friedman & Bruya, Inc. of Seattle, Washington, for laboratory analysis.

Purge water generated during the monitoring event was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data for proper disposal.

Laboratory Analysis

The analytical protocols followed for the samples collected at the Property include the required testing for petroleum releases for gasoline (Table 830-1 in the MTCA Cleanup Regulations Chapter 173-340 WAC). The analytical methods used include:

- GRPH using Northwest Method NWTPH-Gx
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8260.

Groundwater Conditions

Groundwater levels measured on September 5, 2014, ranged from 10.34 feet (monitoring well MW16) to 17.40 feet (monitoring well MW04) below the top of the monitoring well casings (Table 1). Groundwater elevations ranged from 80.85 feet above mean sea level (amsl) in MW04 to 90.05 feet amsl in MW16. The groundwater elevation contours indicate a groundwater flow direction toward the soutwest in the northeast corner of the site with a gradient of 0.19 feet per foot between monitoring wells MW01A and MW16. A relatively flat gradient is present in the middle of the site but generally maintains a southwesterly flow. The direction of groundwater flow from MW09 to MW03 is to the northwest with a gradient of 0.088 feet per foot. Groundwater elevation contours are shown on Figure 3.

Groundwater Sampling Results

Laboratory analytical results from the monitoring event were compared to applicable MTCA Method A cleanup levels for groundwater. GRPH exceeded Method A cleanup levels at MW03 and MW09 and benzene exceeded the Method A cleanup level at MW03. (Figure 4, Table 1).

As noted in the Background Section, in 2008, the Washington State Department of Ecology (Ecology) determined that wells MW03 and MW09 were included in wells that did not need to be sampled to get a property specific No Further Action (NFA) determination.

Data Quality Review

HydroCon performed a QA/QC review of the analytical results, which included a review of accuracy and precision of the data supplied by the laboratory. The relative percent difference for the field duplicate MW99, collected by HydroCon from monitoring well MW03. The RPD for each analyte present above the laboratory reporting limit was within acceptable limits. All other quality control criteria are acceptable for the groundwater samples; therefore, no action is required and analytical results are usable to meet the project objectives. A copy of the laboratory analytical report is provided in Attachment B.

Remediation System Performance

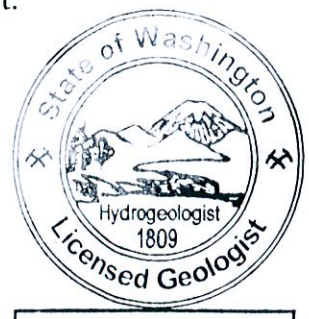
There are no remedial systems operating at the site.

Work Planned

HydroCon will perform groundwater monitoring at the Property in the Fourth Quarter 2014, the results of which will be included in a groundwater monitoring report.

Sincerely,

Craig Hultgren, LHG
Senior Geologist/Project Manager



cc: Eugene Freeman, Washington State Department of Ecology, Northwest Region

Figures
Figure 1 - Site Location Map
Figure 2 - Site Features
Figure 3 - Groundwater Elevation Contours
Figure 4 - Groundwater Analytical Results

Table
Table 1 - Summary of Groundwater Data

Attachments
Attachment A - Groundwater Sample Collection Forms
Attachment B - Laboratory Report and Chain-of-Custody Documentation

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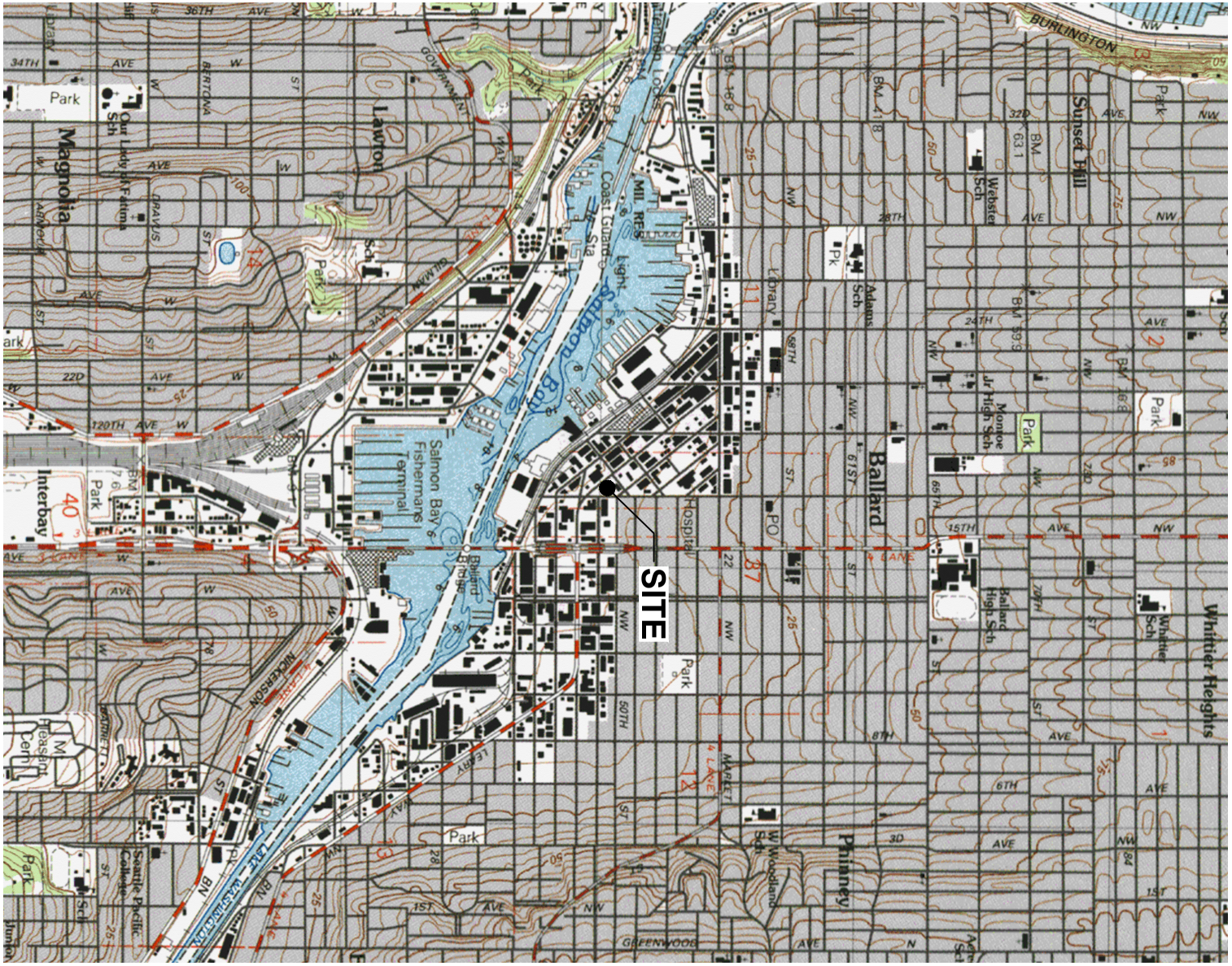
NOTE(S):
USGS, SEATTLE NORTH QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC)



N W E S

0 2000 4000
SCALE IN FEET
1" = 2000'

Hydro Con
510 Allen St. Suite B Kelso, Wa 98626, Ph(360)-703-6086

DATE: 9-18-14
DWN: JJT
CHK: NV
APPROVED:
PRJ. MGR: CH
PROJECT NO: 14-806

FIGURE 1
SITE LOCATION MAP

TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

LEGEND

- MW10/B06 — MONITORING WELL
- MW05 — DECOMMISSIONED MONITORING WELL
- E — ELECTRIC LINE
- GAS — GAS LINE
- SS — SANITARY SEWER
- SD — STORMWATER LINE
- COMBINED SEWER/STORMWATER LINE
- W — WATER LINE
- T — TELECOMMUNICATIONS LINE
- OHP — OVERHEAD POWER LINE
- PROPERTY BOUNDARY
- FORMER SITE FEATURE
- FORMER EXCAVATION AREA
- 2012 EXCAVATION AREA
- UST — UNDERGROUND STORAGE TANK

LEARY AVENUE NORTHWEST

MW06/B02
MW04
HYDRAULIC HOIST EXCAVATION
SHELTER LOUNGE
LUBRICATION BAY
1940s PUMP ISLAND
MW08/B04
MW07/B03
1920s PUMP ISLANDS
MW05
MW05A
MW03
FORMER USTs
1920s PUMP ISLANDS
COVERED PATIO
SUMP
WASTE OIL UST
2009 BUILDING ADDITION
MW13/B09
MW12/B08
MW01A
MW11A
MW11/B07
MW14/B10
MW01
MW10/B06
MW15/B11
MW15A
MW16/B12
MW02
MW09/B05
17TH AVENUE NORTHWEST

N E S W

0 15 30
SCALE IN FEET
1" = 15'

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FIGURE 2
SITE FEATURES

TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

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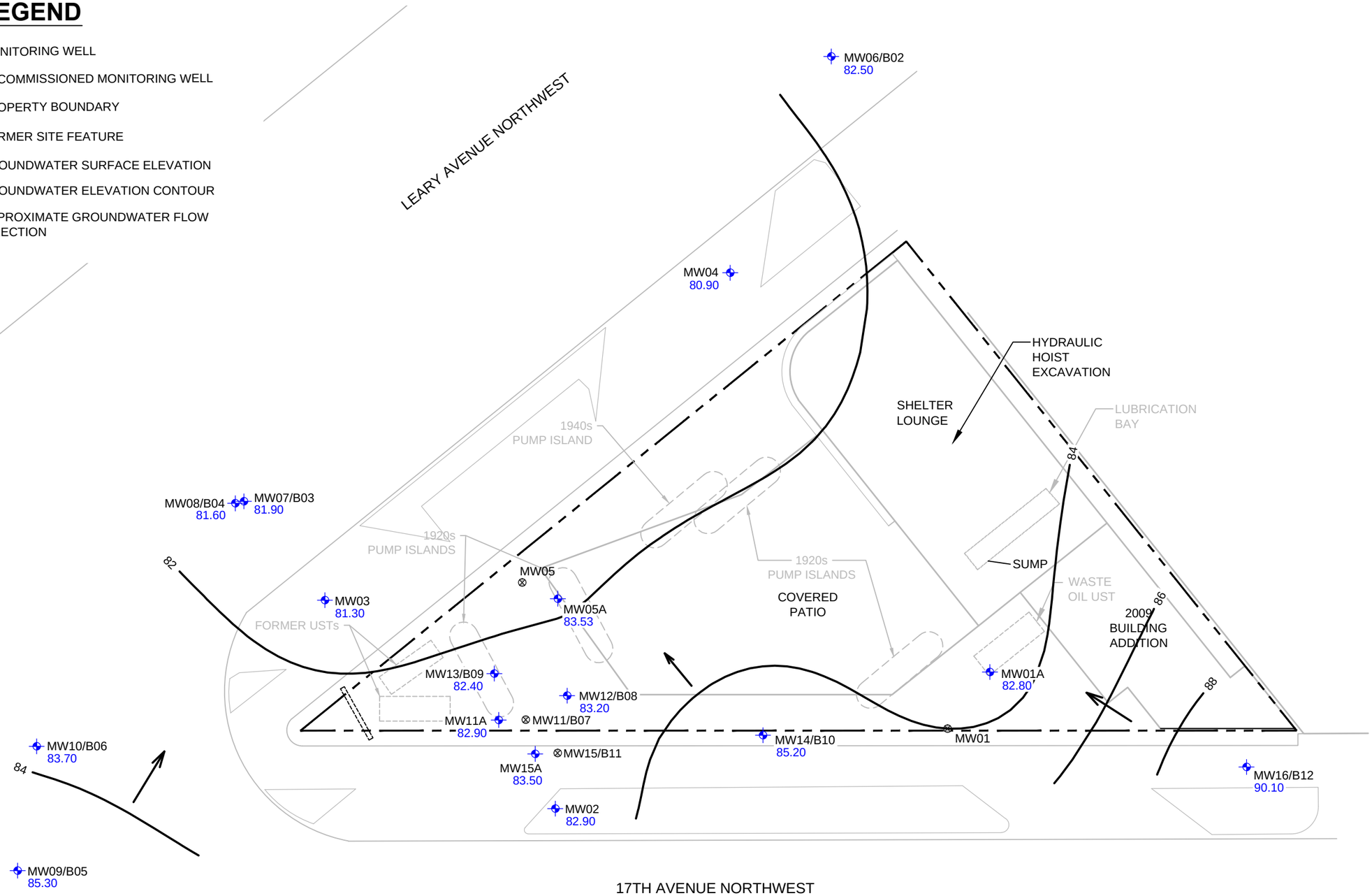
LEGEND

- MW10/B06 — MONITORING WELL
- MW05 — DECOMMISSIONED MONITORING WELL
- PROPERTY BOUNDARY
- FORMER SITE FEATURE
- 81.30 — GROUNDWATER SURFACE ELEVATION
- 84 — GROUNDWATER ELEVATION CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION



N E S W

0 15 30

SCALE IN FEET
1" = 15'

HydroCon
510 Allen St. Suite B Kelso, Wa 98626, Ph(360)-703-6086

DATE: 9-18-14
DWN: JJT
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FIGURE 3
GREOUNDWATER ELEVATION CONTOURS
FOR SEPTEMBER 2014
TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

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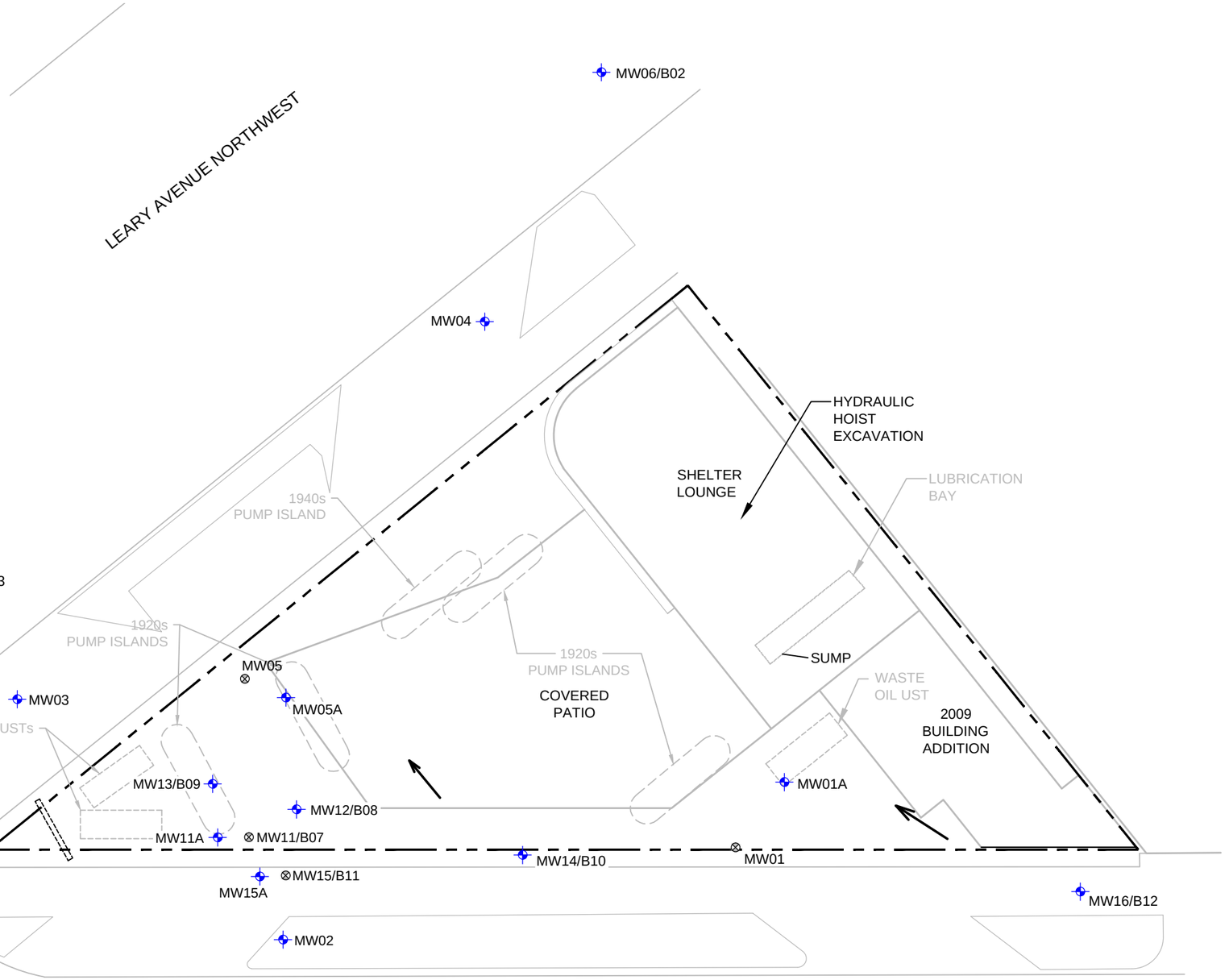
	Analytical Results (ug/L)					
	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDC
MTCA A	800/1,000	5	1,000	700	1,000	5
MW01A	<100	<0.35	<1	<1	<3	<1
MW02	<100	<0.35	<1	<1	<3	<1
MW03	3,300	420	2.5	55	104.5	<1
MW04	290	<0.35	<1	<1	<3	<1
MW05A	<100	<0.35	<1	<1	<3	<1
MW06	<100	<0.35	<1	<1	<3	<1
MW07	<100	<0.35	<1	<1	<3	<1
MW08	<100	<0.35	<1	<1	<3	1.4
MW09	7,700	3.2	33	430	161	<1
MW10	<100	<0.35	<1	<1	<3	<1
MW11A	<100	<0.35	<1	<1	<3	<1
MW12	<100	<0.35	<1	<1	<3	<1
MW13	<100	<0.35	<1	<1	<3	<1
MW14	<100	<0.35	<1	<1	<3	<1
MW15A	<100	<0.35	<1	<1	<3	<1
MW16	<100	<0.35	<1	<1	<3	<1

LEGEND

- MW10/B06 — MONITORING WELL
- MW05 — DECOMMISSIONED MONITORING WELL
- PROPERTY BOUNDARY
- FORMER SITE FEATURE
- APPROXIMATE GROUNDWATER FLOW DIRECTION



N W S E

0 15 30

SCALE IN FEET
1" = 15'

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PRJ. MGR: CH
PROJECT NO: 14-806

FIGURE 4
GREOUNDWATER ANALYTICAL RESULTS
FOR SEPTEMBER 2014
TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

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Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW01	99.87	12/11/01	10.39	--	89.48	--	--	--	--	--	--	--	--	--
MW01	99.87	01/08/02	9.86	--	90.01	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW01	99.87	05/29/02	10.75	--	89.12	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW01	99.87	09/10/02	11.50	--	88.37	<50.0	<1.00	<1.00	<1.00	<2.00	<1.00	--	--	--
MW01	99.87	12/06/02	16.63	--	83.24	<50.0	<0.200	<0.200	<0.200	<0.500	<0.200	--	--	--
MW01	99.87	03/26/03	10.90	--	88.97	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	06/20/03	11.18	--	88.69	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	09/16/03	12.13	--	87.74	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	12/22/03	11.11	--	88.76	<50.0	1.65	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	03/19/04	10.58	--	89.29	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	06/28/04	10.88	--	88.99	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01	99.87	Monitoring Well Decommissioned in 2004												
MW01A	99.64	12/27/04	10.06	--	89.58	<50	<1	<1	<1	<3	<0.01	--	--	--
MW01A	99.64	03/22/05	10.41	--	89.23	<50.0	<1	<1	<1	<3	<0.02	--	--	--
MW01A	99.64	06/29/05	11.04	--	88.60	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW01A	99.64	03/15/07	11.03	--	88.61	<100	<1	<1	<1	<3	<1	--	<50	<250
MW01A	99.64	09/21/07	12.61	--	87.03	<100	<1	<1	<1	<3	<1	--	<51	<260
MW01A	99.64	01/15/08	11.91	--	87.73	<100	<1	<1	<1	<3	<1	--	<50	<250
MW01A	99.64	09/23/08	11.92	--	87.72	<100	<1	<1	<1	<3	<1	--	<50	<250
MW01A	99.64	02/09/09	11.21	--	88.43	<100	<1	<1	<1	<3	<1	<1	<50	<250
MW01A	99.64	05/21/09	10.37	--	89.27	<100	<1	<1	<1	<3	<1	<1	--	--
MW01A	99.64	09/17/09	12.30	--	87.34	<100	<1	<1	<1	<3	<1	<1	<50	<250
MW01A	99.64	12/23/09	10.35	--	89.29	<100	<1	<1	<1	<3	<1	<1	<50	<250
MW01A	99.64	03/18/10	10.62	--	89.02	<100	<1	<1	<1	<3	<1	--	63[x]	<250
MW01A	99.64	06/29/10	10.84	--	88.80	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	10/14/10	11.21	--	88.43	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	12/10/10	10.63	--	89.01	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	03/03/11	10.58	--	89.06	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	05/31/11	10.55	--	89.09	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	08/29/11	11.73	--	87.91	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	12/21/11	14.57	--	85.07	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	03/22/12	15.35	--	84.29	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	06/13/12	15.71	--	83.93	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	09/06/12	16.71	--	82.93	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	12/03/12	16.12	--	83.52	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	02/12/13	15.28	--	84.36	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	05/21/13	15.64	--	84.00	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	08/14/13	16.53	--	83.11	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	12/17/13	17.11	--	82.53	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	02/28/14	16.45	--	83.19	<100	<0.35	<1	<1	<3	--	--	--	--
MW01A	99.64	05/20/14	15.40	--	84.24	<100	<1	<1	<1	<3	--	--	--	--
MW01A	99.64	09/03/14	16.8	--	82.8	<100	<0.35	<1	<1	<3	--	--	--	--
MW02	98.95	01/08/02	9.83	--	89.12	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW02	98.95	05/29/02	9.50	--	89.45	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW02	98.95	09/10/02	10.30	--	88.65	<50.0	<1.00	<1.00	<1.00	<2.00	<1.00	--	--	--
MW02	98.95	12/06/02	11.25	--	87.70	<50.0	<0.200	<0.200	<0.200	<0.500	<0.200	--	--	--
MW02	98.95	03/26/03	9.92	--	89.03	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	06/20/03	10.80	--	88.15	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	09/16/03	11.70	--	87.25	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	12/22/03	10.69	--	88.26	<50.0	0.628	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	03/19/04	10.30	--	88.65	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	06/28/04	10.78	--	88.17	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	11/08/04	10.37	--	88.58	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	12/27/04	9.97	--	88.98	<50.0	<1	<1	<1	<3	<0.01	--	--	--
MW02	98.95	03/22/05	10.38	--	88.57	<50.0	<1	<1	<1	<3	<0.02	--	--	--
MW02	98.95	06/29/05	10.21	--	88.74	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW02	98.95	03/15/07	11.76	--	87.19	<100	<1	<1	<1	<3	<1	--	<50	<250
MW02	98.95	09/21/07	11.73	--	87.22	<100	<1	<1	<1	<3	<1	--	<52	<260
MW02	98.95	01/15/08	10.64	--	88.31	<100	<1	<1	<1	<3	<1	--	<50	<250
MW02	98.95	09/23/08	11.62	--	87.33	<100	<1	<1	<1	<3	<1	--	<50	<250
MW02	98.95	02/09/09	10.98	--	87.97	--	--	--	--	--	--	--	--	--
MW02	98.95	05/21/09	10.16	--	88.79	--	--	--	--	--	--	--	--	--
MW02	98.95	09/17/09	12.04	--	86.91	--	--	--	--	--	--	--	--	--
MW02	98.95	12/23/09	10.55	--	88.40	--	--	--	--	--	--	--	--	--
MW02	98.95	03/18/10	10.40	--	88.55	--	--	--	--	--	--	--	--	--
MW02	98.95	06/29/10	10.56	--	88.39	--	--	--	--	--	--	--	--	--
MW02	98.95	10/14/10	10.90	--	88.05	--	--	--	--	--	--	--	--	--
MW02	98.95	12/10/10	10.30	--	88.65	--	--	--	--	--	--	--	--	--
MW02	98.95	03/03/11	10.36	--	88.59	--	--	--	--	--	--	--	--	--
MW02	98.95	05/31/11	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
MW02	98.95	08/29/11	11.56	--	87.39	--	--	--	--	--	--	--	--	--
MW02	98.95	12/21/11	13.73	--	85.22	--	--	--	--	--	--	--	--	--
MW02	98.95	03/22/12	14.28	--	84.67	--	--	--	--	--	--	--	--	--
MW02	98.95	06/13/12	14.83	--	84.12	--	--	--	--	--	--	--	--	--
MW02	98.95	09/06/12	16.01	--	82.94	--	--	--	--	--	--	--	--	--
MW02	98.95	12/03/12	13.84	--	85.11	--	--	--	--	--	--	--	--	--
MW02	98.95	02/12/13	14.12	--	84.83	--	--	--	--	--	--	--	--	--
MW02	98.95	05/20/13	14.58	--	84.37	--	--	--	--	--	--	--	--	--
MW02	98.95	08/13/13	15.64	--	83.31	--	--	--	--	--	--	--	--	--
MW02	98.95	12/17/13	16.14	--	82.81	--	--	--	--	--	--	--	--	--
MW02	98.95	02/28/14	14.81	--	84.14	--	--	--	--	--	--	--	--	--
MW02	98.95	05/21/14	14.07	--	84.88	--	--	--	--	--	--	--	--	--
MW02	98.95	09/02/14	16.04	--	82.9	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW03	98.43	12/11/01	9.49	--	88.94	--	--	--	--	--	--	--	--	--
MW03	98.43	01/08/02	9.33	--	89.10	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW03	98.43	05/29/02	10.07	--	88.36	<50.0	<0.500	<0.500	<0.500	<1.00	**46.4**	--	--	--
MW03	98.43	09/10/02	11.08	--	87.35	<50.0	<2.00	<2.00	<2.00	<4.00	**50.6**	--	--	--
MW03	98.43	12/06/02	12.16	--	86.27	<50.0	<1.00	<1.00	<1.00	<2.00	**36.5**	--	--	--
MW03	98.43	03/26/03	9.58	--	88.85	<50.0	<0.500	<0.500	<0.500	<1.00	**44.8**	--	--	--
MW03	98.43	06/20/03	10.83	--	87.60	<50.0	<0.500	<0.500	<0.500	<1.00	**41.4**	--	--	--
MW03	98.43	09/16/03	11.83	--	86.60	<50.0	<0.500	<0.500	<0.500	<1.00	**39.8**	--	--	--
MW03	98.43	12/22/03	10.29	--	88.14	<50.0	<0.500	<0.500	<0.500	<1.00	**32.2**	--	--	--
MW03	98.43	03/19/04	10.57	--	87.86	<50.0	<0.500	<0.500	<0.500	<1.00	**45.8**	--	--	--
MW03	98.43	06/28/04	10.69	--	87.74	<50.0	<0.500	<0.500	<0.500	<1.00	**37.8**	--	--	--
MW03	98.43	11/08/04	10.83	--	87.60	<50.0	<0.500	<0.500	<0.500	<1.00	**41.8**	--	--	--
MW03	98.43	12/27/04	9.92	--	88.51	<50.0	<1	<1	<1	<3	**41**	--	--	--
MW03	98.43	03/22/05	10.35	--	88.08	<50.0	<1	<1	<1	<3	**44**	--	--	--
MW03	98.43	06/29/05	10.34	--	88.09	<50.0	0.889	<0.500	<0.500	<1.00	**33.9**	--	--	--
MW03	98.43	03/15/07	11.09	--	87.34	190	1.5	<1	<1	<3	**30**	--	210	<250
MW03	98.43	09/21/07	11.66	--	86.77	110	<1	<1	<1	<3	**33**	--	180	<260
MW03	98.43	01/15/08	10.71	--	87.72	<100	<1	<1	<1	<3	**23**	--	120	<250
MW03	98.43	09/23/08	12.25	--	86.18	<100	<1	<1	<1	<3	**24**	--	180	<250
MW03	98.43	02/09/09	10.92	--	87.51	--	--	--	--	--	--	--	--	--
MW03	98.43	05/21/09	10.15	--	88.28	--	--	--	--	--	--	--	--	--
MW03	98.43	09/17/09	12.07	--	86.36	--	--	--	--	--	--	--	--	--
MW03	98.43	12/23/09	10.58	--	87.85	--	--	--	--	--	--	--	--	--
MW03	98.43	03/18/10	10.40	--	88.03	--	--	--	--	--	--	--	--	--
MW03	98.43	06/29/10	10.55	--	87.88	--	--	--	--	--	--	--	--	--
MW03	98.43	10/14/10	10.99	--	87.44	--	--	--	--	--	--	--	--	--
MW03	98.43	12/10/10	10.40	--	88.03	--	--	--	--	--	--	--	--	--
MW03	98.43	03/03/11	10.37	--	88.06	--	--	--	--	--	--	--	--	--
MW03	98.43	05/31/11	10.37	--	88.06	--	--	--	--	--	--	--	--	--
MW03	98.43	08/29/11	11.66	--	86.77	--	--	--	--	--	--	--	--	--
MW03	98.43	12/21/11	14.62	--	83.81	--	--	--	--	--	--	--	--	--
MW03	98.43	03/23/12	15.52	--	82.91	--	--	--	--	--	--	--	--	--
MW03	98.43	06/13/12	15.95	--	82.48	--	--	--	--	--	--	--	--	--
MW03	98.43	09/07/12	17.14	--	81.29	**3,700**	**140**	4.6	80	64	--	--	--	--
MW03	98.43	12/03/12	15.60	--	82.83	--	--	--	--	--	--	--	--	--
MW03	98.43	02/12/13	15.50	0.02	82.95	**SPH**	--	--	--	--	--	--		
MW03	98.43	05/20/13	15.94	--	82.49	--	--	--	--	--	--	--	--	--
MW03	98.43	08/13/13	16.75	--	81.68	--	--	--	--	--	--	--	--	--
MW03	98.43	12/17/13	NM	--	--	--	--	--	--	--	--	--	--	--
MW03	98.43	02/28/14	16.35	--	82.08	--	--	--	--	--	--	--	--	--
MW03	98.43	05/21/14	15.30	--	83.13	--	--	--	--	--	--	--	--	--
MW03	98.43	09/04/14	17.11	--	81.3	**3,300**	**420**	2.5	55	104.5	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW04	98.22	12/11/01	9.20	--	89.02	--	--	--	--	--	--	--	--	--
MW04	98.22	01/08/02	8.75	--	89.47	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW04	98.22	05/29/02	9.57	--	88.65	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW04	98.22	09/10/02	10.60	--	87.62	<50.0	<1.00	<1.00	<1.00	<2.00	3.19	--	--	--
MW04	98.22	12/06/02	10.90	--	87.32	<50.0	<0.200	<0.200	<0.200	<0.500	4.42	--	--	--
MW04	98.22	03/26/03	8.91	--	89.31	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW04	98.22	06/20/03	9.95	--	88.27	<50.0	<0.500	<0.500	<0.500	<1.00	3.73	--	--	--
MW04	98.22	09/16/03	10.90	--	87.32	<50.0	<0.500	<0.500	<0.500	<1.00	3.78	--	--	--
MW04	98.22	12/22/03	9.30	--	88.92	<50.0	<0.500	<0.500	<0.500	<1.00	<0.200	--	--	--
MW04	98.22	03/19/04	9.58	--	88.64	<50.0	<0.500	<0.500	<0.500	<1.00	3.01	--	--	--
MW04	98.22	06/28/04	9.90	--	88.32	<50.0	<0.500	<0.500	<0.500	<1.00	3.06	--	--	--
MW04	98.22	11/08/04	9.85	--	88.37	<50.0	<0.500	<0.500	<0.500	<1.00	3.46	--	--	--
MW04	98.22	12/27/04	9.43	--	88.79	<50.0	<1	<1	<1	<3	4	--	--	--
MW04	98.22	03/22/05	10.34	--	87.88	<50.0	<1	<1	<1	<3	3.5	--	--	--
MW04	98.22	06/29/05	9.64	--	88.58	<50.0	<0.500	<0.500	<0.500	<1.00	2.65	--	--	--
MW04	98.22	03/15/07	9.95	--	88.27	<100	<1	<1	<1	<3	4.8	--	130	<250
MW04	98.22	09/21/07	11.43	--	86.79	<100	<1	<1	<1	<3	**11**	--	82	<260
MW04	98.22	01/15/08	10.71	--	87.51	<100	<1	<1	<1	<3	**9.7**	--	<50	<250
MW04	98.22	09/23/08	11.49	--	86.73	<100	<1	<1	<1	<3	**14**	--	68	<250
MW04	98.22	02/09/09	10.71	--	87.51	--	--	--	--	--	--	--	--	--
MW04	98.22	05/21/09	9.85	--	88.37	--	--	--	--	--	--	--	--	--
MW04	98.22	09/17/09	11.85	--	86.37	--	--	--	--	--	--	--	--	--
MW04	98.22	12/23/09	10.34	--	87.88	--	--	--	--	--	--	--	--	--
MW04	98.22	03/18/10	10.04	--	88.18	--	--	--	--	--	--	--	--	--
MW04	98.22	06/29/10	10.27	--	87.95	--	--	--	--	--	--	--	--	--
MW04	98.22	10/14/10	10.77	--	87.45	--	--	--	--	--	--	--	--	--
MW04	98.22	12/10/10	10.18	--	88.04	--	--	--	--	--	--	--	--	--
MW04	98.22	03/03/11	10.04	--	88.18	--	--	--	--	--	--	--	--	--
MW04	98.22	05/31/11	10.02	--	88.20	--	--	--	--	--	--	--	--	--
MW04	98.22	08/29/11	11.30	--	86.92	--	--	--	--	--	--	--	--	--
MW04	98.22	12/21/11	14.65	--	83.57	--	--	--	--	--	--	--	--	--
MW04	98.22	03/22/12	15.69	--	82.53	--	--	--	--	--	--	--	--	--
MW04	98.22	06/13/12	16.17	--	82.05	--	--	--	--	--	--	--	--	--
MW04	98.22	09/06/12	17.32	--	80.90	--	--	--	--	--	--	--	--	--
MW04	98.22	12/03/12	16.17	--	82.05	--	--	--	--	--	--	--	--	--
MW04	98.22	02/12/13	15.81	--	82.41	--	--	--	--	--	--	--	--	--
MW04	98.22	05/20/13	16.14	--	82.08	--	--	--	--	--	--	--	--	--
MW04	98.22	08/13/13	16.95	--	81.27	--	--	--	--	--	--	--	--	--
MW04	98.22	12/17/13	17.66	--	80.56	--	--	--	--	--	--	--	--	--
MW04	98.22	02/28/14	16.92	--	81.30	--	--	--	--	--	--	--	--	--
MW04	98.22	05/21/14	15.71	--	82.51	--	--	--	--	--	--	--	--	--
MW04	98.22	09/04/14	17.37	--	80.9	290	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW05	99.06	12/11/01	--	--	--	--	--	--	--	--	--	--	--	--
MW05	99.06	01/08/02	9.36	--	89.70	91.4	<0.500	<0.500	<0.500	<1.00	--	--	--	--
MW05	99.06	05/29/02	10.18	--	88.88	398	3.98	0.770	7.32	2.90	--	--	--	--
MW05	99.06	09/10/02	11.11	--	87.95	594	**7.42**	26.0	1.94	33.01	<1.00	--	--	--
MW05	99.06	12/06/02	11.39	--	87.67	503	2.88	<1.00	4.60	<2.00	<1.00	--	--	--
MW05	99.06	03/26/03	9.51	--	89.55	**1,010**	**8.57**	1.79	20.3	4.08	<1.00	--	--	--
MW05	99.06	06/20/03	10.50	--	88.56	741	**10.1**	2.41	23.8	5.92	0.460	--	--	--
MW05	99.06	09/16/03	11.35	--	87.71	**1,340**	**13.6**	3.31	48.2	8.89	<0.200	--	--	--
MW05	99.06	12/22/03	9.79	--	89.27	**2,090**	**23.7**	7.34	66.6	21.8	<0.200	--	--	--
MW05	99.06	03/19/04	10.04	--	89.02	**1,550**	**15.1**	4.62	33.7	12.9	0.520	--	--	--
MW05	99.06	06/28/04	10.40	--	88.66	**2,960**	**24.2**	9.32	91.7	27.7	<0.200	--	--	--
MW05	99.06	Monitoring Well Decommissioned in 2004												
MW05A	99.11	12/27/04	10.13	--	88.98	<50.0	<1	<1	<1	<3	0.30	--	--	--
MW05A	99.11	03/22/05	11.31	--	87.80	<50.0	<1	<1	<1	<3	0.38	--	--	--
MW05A	99.11	06/29/05	10.47	--	88.64	<50.0	3.86	<0.500	<0.500	<1.00	0.51	--	--	--
MW05A	99.11	03/15/07	10.56	--	88.55	<100	<1	<1	<1	<3	<1	--	92	<250
MW05A	99.11	09/21/07	12.03	--	87.08	<100	<1	<1	<1	<3	<1	--	53	<260
MW05A	99.11	01/15/08	11.05	--	88.06	<100	<1	<1	<1	<3	<1	--	<50	<250
MW05A	99.11	09/23/08	12.06	--	87.05	<100	<1	<1	<1	<3	<1	--	58	<250
MW05A	99.11	02/09/09	11.32	--	87.79	<100	<1	<1	<1	<3	<1	<1	<50	<250
MW05A	99.11	05/11/09	10.51	--	88.60	<100	<1	<1	<1	<3	<1	<1	--	--
MW05A	99.11	09/17/09	12.43	--	86.68	<100	<1	<1	<1	<3	<1	<1	71	<250
MW05A	99.11	12/23/09	10.92	--	88.19	<100	<1	<1	<1	<3	<1	<1	<50	<250
MW05A	99.11	03/18/10	10.74	--	88.37	<100	<1	<1	<1	<3	<1	--	110[x]	<250
MW05A	99.11	06/29/10	10.90	--	88.21	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	10/14/10	11.35	--	87.76	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	12/10/10	10.71	--	88.40	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	03/03/11	10.71	--	88.40	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	06/01/11	10.71	--	88.40	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	08/29/11	11.96	--	87.15	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	12/21/11	14.82	--	84.29	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	03/22/12	15.73	--	83.38	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	06/13/12	16.19	--	82.92	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	09/06/12	17.38	--	81.73	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	12/03/12	15.70	--	83.41	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	02/12/13	13.66	--	85.45	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	05/20/13	16.09	--	83.02	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	08/13/13	17.01	--	82.10	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	12/17/13	17.54	--	81.57	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	02/27/14	16.5	--	82.61	<100	<0.35	<1	<1	<3	--	--	--	--
MW05A	99.11	05/20/14	15.58	--	83.53	<100	<1	<1	<1	<3	--	--	--	--
MW05A	99.11	09/02/14	17.4	--	81.7	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW06	98.42	09/23/08	13.20	--	85.22	<100	<1	<1	<1	<3	<1	--	420	360
MW06	98.42	02/09/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW06	98.42	05/11/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW06	98.42	09/17/09	13.51	--	84.91	--	--	--	--	--	--	--	--	--
MW06	98.42	09/04/14	15.93	--	82.5	<100	<0.35	<1	<1	<3	--	--	--	--
MW07	98.26	09/23/08	12.30	--	85.96	<100	<1	<1	<1	<3	<1	--	<50	<250
MW07	98.26	02/09/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW07	98.26	05/11/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW07	98.26	09/17/09	12.74	--	85.52	--	--	--	--	--	--	--	--	--
MW07	98.26	09/05/14	16.4	--	81.9	<100	<0.35	<1	<1	<3	--	--	--	--
MW08	98.18	09/23/08	12.23	--	85.95	<100	<1	<1	<1	<3	**13**	--	72	<250
MW08	98.18	02/09/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW08	98.18	05/11/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW08	98.18	09/17/09	12.69	--	85.49	--	--	--	--	--	--	--	--	--
MW08	98.18	09/05/14	16.62	--	81.6	<100	<0.35	<1	<1	<3	--	--	--	--
MW09	97.87	09/23/08	11.85	--	86.02	**8,700**	**12**	96	540	381	<1	--	**2,000[x]**	<250
MW09	97.87	02/09/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW09	97.87	05/11/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW09	97.87	09/17/09	12.37	--	85.50	--	--	--	--	--	--	--	--	--
MW09	97.87	09/05/14	12.61	--	85.3	**7,700**	3.2	33	430	161	--	--	--	--
MW10	97.94	09/23/08	12.34	--	85.60	<100	**5.7**	<1	<1	<3	1.1	--	<50	<250
MW10	97.94	02/09/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW10	97.94	05/11/09	Inaccessible		--	--	--	--	--	--	--	--	--	--
MW10	97.94	09/17/09	12.91	--	85.03	--	--	--	--	--	--	--	--	--
MW10	97.94	09/05/14	14.26	--	83.7	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW11	98.78	02/09/09	10.90	--	87.88	**15,000**	**27**	90	600	**1,930**	<1	**420**	**3,700[x]**	<250
MW11	98.78	05/11/09	10.37	--	88.41	**14,000**	**13**	79	**740**	**2,350**	<10	**580**	--	--
MW11	98.78	10/14/10	10.29	--	88.49	**4,800**	1.8	11	120	470	**--**	**--**	--	--
MW11	98.78	12/10/10	9.63	--	89.15	**1,600**	1.8	1.1	9.9	91	**--**	**--**	--	--
MW11	98.78	03/03/11	9.82	--	88.96	**1,900**	<1	1.8	29	79	**--**	**--**	--	--
MW11	98.78	06/01/11	9.73	--	89.05	720	<0.35	1.4	39	50	**--**	18	--	--
MW11	98.78	08/29/11	11.10	--	87.68	**930**	0.64	2.0	12	43	--	26	--	--
MW11	98.78	12/22/11	11.09	--	87.69	**8,900**	<0.35	4.6	210	575	--	**340**	--	--
MW11	98.78	03/22/12	12.46	0.09	86.39	**SPH**								
MW11	98.78	06/13/12	13.32	0.46	85.83	**SPH**								
MW11	98.78	09/17/09[b]	13.24	0.54	85.97	**SPH**								
MW11	98.78	12/23/09[b]	10.31	0.20	88.63	**SPH**								
MW11	98.78	3/18/10[b]	10.13	0.17	88.79	**SPH**								
MW11	98.78	6/29/10[b]	10.02	0.11	88.85	**SPH**								
MW11	98.78	Monitoring Well Decommissioned in 2012												
MW11A	99.12	09/07/12	16.19	--	82.93	670	<0.35	<1	<1	<3	--	4.6	--	--
MW11A	99.12	12/03/12	9.57	--	89.55	<100	<0.35	<1	<1	<3	--	<1	--	--
MW11A	99.12	02/13/13	10.22	--	88.90	<100	<0.35	<1	<1	<3	--	<1	--	--
MW11A	99.12	05/21/13	11.43	--	87.69	<100	<0.35	<1	<1	<3	--	<1	--	--
MW11A	99.12	08/14/13	13.30	--	85.82	<100	<1	<1	<1	<3	--	--	--	--
MW11A	99.12	12/17/13	16.03	--	83.09	<100	<1	<1	<1	<3	--	--	--	--
MW11A	99.12	02/27/14	12.04	--	87.08	<100	<0.35	<1	<1	<3	--	--	--	--
MW11A	99.12	05/20/14	10.66	--	88.46	<100	<1	<1	<1	<3	--	--	--	--
MW11A	99.12	09/02/14	16.18	--	82.9	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW12	99.18	06/29/10	8.57	--	90.61	<100	<1	<1	<1	<3	--	--	--	-
MW12	99.18	10/14/10	9.50	--	89.68	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	12/10/10	8.43	--	90.75	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	03/03/11	8.59	--	90.59	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	06/01/11	8.48	--	90.70	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	08/29/11	10.08	--	89.10	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	12/22/11	10.12	--	89.06	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	03/23/12	10.72	--	88.46	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	06/13/12	11.70	--	87.48	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	09/06/12	15.98	--	83.20	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	12/03/12	9.62	--	89.56	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	02/13/13	10.29	--	88.89	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	05/21/13	11.44	--	87.74	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	08/14/13	13.20	--	85.98	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	12/17/13	15.81	--	83.37	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	02/27/14	12.03	--	87.15	<100	<0.35	<1	<1	<3	--	--	--	--
MW12	99.18	05/20/14	10.72	--	88.46	<100	<1	<1	<1	<3	--	--	--	--
MW12	99.18	09/02/14	16.02	--	83.2	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW13	99.11	10/14/10	9.75	--	89.36	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	12/10/10	8.44	--	90.67	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	03/03/11	8.75	--	90.36	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	06/01/11	8.50	--	90.61	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	08/29/11	10.30	--	88.81	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	12/22/11	11.76	--	87.35	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	03/23/12	13.06	--	86.05	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	06/13/12	13.82	--	85.29	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	09/06/12	16.69	--	82.42	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	12/03/12	10.94	--	88.17	720	<1	<1	2.5	6.6	--	--	--	--
MW13	99.11	02/13/13	16.50	--	82.61	510	<1	<1	2.7	5.0	--	--	--	--
MW13	99.11	05/21/13	11.86	--	87.25	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	08/13/13	12.73	--	86.38	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	12/17/13	13.26	--	85.85	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	02/27/14	12.5	--	86.61	<100	<0.35	<1	<1	<3	--	--	--	--
MW13	99.11	05/20/14	10.69	--	88.42	<100	<1	<1	<1	<3	--	--	--	--
MW13	99.11	09/02/14	16.73	--	82.4	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW14	99.58	06/29/10	9.64	--	89.94	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	10/14/10	9.64	--	89.94	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	12/10/10	8.85	--	90.73	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	03/03/11	9.29	--	90.29	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	06/01/11	9.20	--	90.38	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	08/29/11	10.68	--	88.90	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	12/21/11	11.63	--	87.95	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	03/23/12	10.02	--	89.56	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	06/13/12	12.24	--	87.34	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	09/06/12	14.53	--	85.05	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	12/03/12	7.21	--	92.37	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	02/13/13	11.03	--	88.55	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	05/21/13	12.26	--	87.32	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	08/14/13	13.75	--	85.83	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	12/17/13	14.39	--	85.19	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	02/27/14	10.6	--	88.98	<100	<0.35	<1	<1	<3	--	--	--	--
MW14	99.58	05/20/14	11.42	--	88.16	<100	<1	<1	<1	<3	--	--	--	--
MW14	99.58	09/03/14	14.36	--	85.2	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW15	99.34	06/29/10	10.56	--	88.78	740	<1	3.0	8.6	11	--	--	--	--
MW15	99.34	10/14/10	10.85	--	88.49	260	<1	<1	2.4	<3	--	--	--	--
MW15	99.34	12/10/10	10.27	--	89.07	<100	<1	<1	<1	<3	--	--	--	--
MW15	99.34	03/03/11	10.48	--	88.86	<100	<1	<1	<1	<3	--	--	--	--
MW15	99.34	06/01/11	10.36	--	88.98	<100	<1	<1	<1	<3	--	--	--	--
MW15	99.34	08/29/11	11.73	--	87.61	340	<1	<1	3.3	<3	--	--	--	--
MW15	99.34	12/22/11	12.69	--	86.65	180	<1	<1	<1	<3	--	--	--	--
MW15	99.34	03/23/12	13.32	--	86.02	<100	<1	<1	<1	<3	--	--	--	--
MW15	99.34	06/13/12	14.22	--	85.12	<100	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	09/07/12	15.59	--	83.46	<100	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	12/03/12	11.44	--	87.61	650	<1	<1	1.7	3.4	--	--	--	--
MW15A	99.05	02/13/13	12.14	--	86.91	220	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	05/21/13	13.05	--	86.00	<100	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	08/14/13	14.49	--	84.56	<100	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	12/17/13	15.61	--	83.44	<100	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	02/27/14	13.31	--	85.74	<100	<0.35	<1	<1	<3	--	--	--	--
MW15A	99.05	05/20/14	12.39	--	86.66	160	<1	<1	<1	<3	--	--	--	--
MW15A	99.05	09/03/14	15.56	--	83.5	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**
MW16	100.39	10/14/10	6.78	--	93.61	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	12/10/10	5.68	--	94.71	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	03/03/11	6.44	--	93.95	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	05/31/11	6.95	--	93.44	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	08/29/11	7.93	--	92.46	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	12/21/11	8.36	--	92.03	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	03/22/12	6.52	--	93.87	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	06/13/12	7.80	--	92.59	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	09/06/12	11.11	--	89.28	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	12/03/12	6.10	--	94.29	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	02/13/13	7.58	--	92.81	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	05/21/13	8.19	--	92.20	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	08/14/13	9.49	--	90.90	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	12/17/13	10.65	--	89.74	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	02/27/14	7.17	--	93.22	<100	<0.35	<1	<1	<3	--	--	--	--
MW16	100.39	05/20/14	7.71	--	92.68	<100	<1	<1	<1	<3	--	--	--	--
MW16	100.39	09/04/14	10.34	--	90.1	<100	<0.35	<1	<1	<3	--	--	--	--

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest, Seattle, Washington

Well ID	TOC (feet)	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
						GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	EDC[5]	Naphthalene[5]	DRPH[6]	ORPH[6]
MTCA Method A Cleanup Level for Groundwater[7]						**800/1,000[8]**	**5**	**1,000**	**700**	**1,000**	**5**	**160**	**500**	**500**

NOTES:
Red denotes concentration in excess of MTCA Method A Cleanup Level for Groundwater.
Samples collected after June 29, 2005, analyzed by Friedman & Bruya, Inc. of Seattle, Washington.
TOC elevations were surveyed relative to an arbitrary benchmark with an assumed elevation of 100.00 feet.
[1]Measured in feet below the top of the well casing.
[2]Calculated by subtracting the depth to SPH from the depth to groundwater.
[3]Calculated by subtracting the depth to groundwater from the TOC. If SPH is present, the SPH thickness multiplied by its specific gravity relative to water (0.8) is added to the depth to groundwater measurement.
[4]Analyzed by Method NWTPH-Gx.
[5]Analyzed by EPA Method 8021B, 8260B, or 8260C; see text for method used for current reporting period.
[6]Analyzed by Method NWTPH-Dx.
[7]MTCA Method A Cleanup Levels, Table 720-1, Section 900, Chapter 173 Title 340 of the WAC, revised November 2007.
[8]800 µg/L when benzene is present and 1,000 µg/L when benzene is not present.
Laboratory Note:
[x]The pattern of peaks present is not indicative of diesel.

-- = not analyzed/not measured; SPH not detected
< = not detected at a concentration exceeding the laboratory reporting limit
µg/L = micrograms per liter
DRPH = diesel-range petroleum hydrocarbons
EDC = 1,2-dichloroethylene (ethylene dichloride)
EPA = U.S. Environmental Protection Agency
GRPH = gasoline-range petroleum hydrocarbons
MTCA = Washington State Model Toxics Control Act
NM = not measured
NWTPH = Northwest Total Petroleum Hydrocarbon
ORPH = oil-range petroleum hydrocarbons
SPH = separate-phase hydrocarbons
SPH = SPH deteced; well not sampled
TOC = top of casing elevation
WAC = Washington Administrative Code

ATTACHMENT A

GROUNDWATER SAMPLE COLLECTION FORMS

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW01A

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW01A - 20140903 Time: 1507
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 03 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 34.70 ft Bottom: ☐ Hard ☑ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 16.20 ft Intake Depth (BTOC): 19 Begin Purging Well: 1447
Casing volume: 18.50 ft (H_2O) X 0.16 gal/ft = 2.96 gal. X 3 = 8.88 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1449	16.37		19.73	0.490	1.10	6.92	217	168
1452	16.40	0.066	19.14	0.492	0.70	6.94	218	196
1455	16.49		19.13	0.505	0.54	6.99	217	215
1458	16.55		18.80	0.494	0.43	6.99	217	208
1501	16.62		18.73	0.501	0.44	7.00	217	210
1504	16.72		18.62	0.495	0.38	7.00	217	217

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW02

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW02-20140902 Time: 1427
Hydrocon Project Number: 14-806 Field Duplicate I.D.: Time:
Date: 02 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured ____ ppm ☐ Odor:
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other:
Comments

PURGING INFORMATION

Total well depth: 32.77 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s):
Depth to product: NM ft
Depth to water: 15.98 ft Intake Depth (BTOC): 18 Begin Purging Well: 1406
Casing volume: 16.79 ft (H_2O) X 0.16 gal/ft = 2.69 gal. X 3 = 8.07 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other
Bailer type: Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1409	16.09		21.58	0.526	2.32	6.84	128	57.6
1412	16.12	0.076	20.35	0.534	0.89	6.92	109	54.3
1415	16.17		19.89	0.525	0.65	6.85	83	57.5
1418	16.21		19.62	0.525	0.57	6.87	66	68.7
1421	16.24		19.52	0.530	0.55	6.83	55	73.2
1424	16.26		19.40	0.538	0.51	6.86	45	76.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments:

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW03

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW03-20140904 Time: 1538
Hydrocon Project Number: 14-806 Field Duplicate I.D.: MW99-20140904 Time: 1553
Date: 04 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor:
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other:
Comments: old absorbant sock in well. odor - hydrocarbon

PURGING INFORMATION

Total well depth: 35.28 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s):
Depth to product: ND ft
Depth to water: 17.13 ft Intake Depth (BTOC): 20 Begin Purging Well: 15:16
Casing volume: 18.15 ft (H_2O) X 0.16 gal/ft = 2.90 gal. X 3 = 8.70 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other
Bailer type: Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other

FIELD PARAMETERS

Odor and/or Sheen: Hydrocarbon odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1520	17.28		23.96	0.597	2.33	6.92	194	56.0
1523	17.32	0.084	22.65	0.581	0.95	6.88	189	41.7
1526	17.36		22.21	0.580	0.59	6.87	184	32.0
1529	17.42		21.72	0.592	0.45	6.88	181	25.5
1532	17.44		21.77	0.590	0.41	6.88	179	24.1
1535	17.47		21.58	0.594	0.35	6.90	175	24.9

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments:

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	(No) 0.45 0.10	Cl, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW04

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW04-20140904 Time: 1231
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 04 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: stripped ears ☐ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 33.96 ft Bottom: ☐ Hard ☑ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 17.40 ft Intake Depth (BTOC): 20 Begin Purging Well: 1208
Casing volume: 16.56 ft (H_2O) X 0.16 gal/ft = 2.65 gal. X 3 = 7.95 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: very faint H_2S

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1213	16.46		21.88	0.655	1.90	6.91	197	14.6
1216	16.48	0.086	21.23	0.640	1.00	6.95	193	11.4
1219	16.54		19.02	0.639	0.35	6.99	188	11.3
1222	16.58		19.10	0.632	0.32	6.99	188	10.8
1225	16.61		18.83	0.626	0.30	6.99	184	10.2
1228	16.62		18.89	0.626	0.29	6.98	183	10.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW05A

Project Name (Number): TOC Seattle - Ballard
Hydrocon Project Number: 14-806
Date: DZ Sept 2014

Sample I.D.: MW05A-20140902 Time: 1608
Field Duplicate I.D.: _____ Time: _____
Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Stripped ears ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 34.70 ft Bottom: ☐ Hard ☑ Soft (Semi) ☐ Not measured Screen Interval(s): ~~15~~
Depth to product: NM ft
Depth to water: 17.33 ft Intake Depth (BTOC): 20 Begin Purging Well: 1547
Casing volume: 17.37 ft (H_2O) X 0.16 gal/ft = 2.78 gal. X 3 = 8.34 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: H_2S

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1550	17.47		21.26	0.770	4.87	6.94	-149	111
1553	17.50	0.072	20.03	0.772	0.84	7.05	-159	140
1556	17.53		19.83	0.775	0.60	7.08	-161	150
1559	17.57		19.72	0.763	0.51	7.09	-162	152
1602	17.57		19.49	0.764	0.42	7.08	-163	153
1605	17.57		19.55	0.773	0.38	7.08	-165	154

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW06

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW06-20140904 Time: 1146
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 04 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Stripped ears - filled w/sediment ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 20.16 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 15.93 ft Intake Depth (BTOC): 19 Begin Purging Well: _____
Casing volume: 4.23 ft (H_2O) X 0.16 gal/ft = _____ gal. X 3 = _____ gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: faint H_2S (?)

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1128	16.04		21.09	0.740	3.84	6.27	221	86.1
1131	16.09	0.104	19.38	0.688	0.53	6.37	218	77.5
1134	16.18		19.05	0.679	0.41	6.40	217	72.0
1137	16.28		19.03	0.672	0.30	6.41	216	79.3
1140	16.36		19.02	0.673	0.25	6.42	213	82.4
1143	16.52		19.03	0.678	0.24	6.44	213	75.9

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW07

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW07-20140905 Time: 1414
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 05 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Broken ears - Mon. filled w/sed. ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 20.14 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 16.40 ft Intake Depth (BTOC): 19 Begin Purging Well: 1347
Casing volume: 3.74 ft (H_2O) X 0.16 gal/ft = 0.60 gal. X 3 = 1.80 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1350	16.53		23.26	0.526	2.10	6.87	184	63.8
1353	16.62	0.084	20.63	0.507	1.06	6.80	186	63.4
1356	16.65		20.61	0.498	1.15	6.79	186	62.7
1359	16.71		21.01	0.485	1.35	6.75	186	58.7
1402	16.78		21.10	0.483	1.41	6.72	186	54.4
1405	16.81		20.98	0.484	1.64	6.72	186	53.7
1408	16.87		21.57	0.488	1.63	6.72	186	51.8
1411	16.92		20.67	0.488	1.65	6.72	187	57.6

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: MW08

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW08 - 20140905 Time: 1334
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 05 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Broken ears - filled w/ sediment ☐ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs Replacement ☐ Surface Water Well Infiltration
Headspace reading: ☑ Not measured PID Reading _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 35.12 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 16.62 ft Intake Depth (BTOC): 19 Begin Purging Well: 1304
Casing volume: 18.50 ft (H_2O) X 0.16 gal/ft = 2.96 gal. X 3 = 8.88 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1307	16.74		25.34	0.640	1.39	7.02	205	70.7
1310	16.77	0.076	24.80	0.560	0.50	7.00	200	54.6
1313	16.82		23.51	0.554	0.40	6.99	194	51.9
1316	16.83		23.37	0.559	0.28	7.00	192	51.4
1319	16.89		24.20	0.550	0.26	7.00	187	51.8
1322	16.93		24.15	0.548	0.33	7.01	186	52.7
1325	16.96		22.87	0.547	0.29	7.01	185	56.7
1328	17.01		22.59	0.546	0.26	7.01	183	57.2
1331	17.03		22.50	0.545	0.25	7.03	182	60.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW09

Project Name (Number): TOC Seattle - Ballard (01-443)
Hydrocon Project Number: 14-806
Date: 05 Sept 2014
Sample I.D.: MW09-20140905 Time: 1053
Field Duplicate I.D.: Time:
Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: 2 stripped ears ☐ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs Replacement ☐ Surface Water Well Infiltration
Headspace reading: ☑ Not measured PID Reading _____ ppm ☐ Odor:
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other:
Comments

PURGING INFORMATION

Total well depth: 20.15 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s):
Depth to product: NM ft
Depth to water: 12.61 ft Intake Depth (BTOC): 15 Begin Purging Well: 1030
Casing volume: 7.54 ft (H_2O) X 0.16 gal/ft = 1.21 gal. X 3 = 3.63 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other
Bailer type: Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other

FIELD PARAMETERS

Odor and/or Sheen: faint hydrocarbon odor

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1032	12.74		21.89	0.487	0.99	6.45	214	49.4
1035	12.82	0.088	21.18	0.448	0.37	6.55	212	34.4
1038	12.87		21.33	0.449	0.35	6.57	210	22.0
1041	12.91		21.50	0.445	0.29	6.61	206	13.9
1044	12.97		21.49	0.445	0.30	6.60	205	13.4
1047	13.07		21.48	0.441	0.29	6.62	202	12.0
1050	13.11		21.58	0.442	0.26	6.62	199	10.1

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments:

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW10

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW10-20140905 Time: 1132
Hydrocon Project Number: 14-806 Field Duplicate I.D.: Time:
Date: 05 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: 2 stripped ears - sediment in Mon. ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured ____ ppm ☐ Odor:
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other:
Comments

PURGING INFORMATION

Total well depth: 20.14 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s):
Depth to product: NM ft
Depth to water: 14.26 ft Intake Depth (BTOC): 17 Begin Purging Well: 1109
Casing volume: 5.88 ft (H_2O) X 0.16 gal/ft = 0.94 gal. X 3 = 2.82 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other
Bailer type: Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1111	14.46		19.78	0.605	3.10	6.80	199	68.8
1114	14.50	0.084	19.34	0.613	2.60	6.81	199	61.5
1117	14.56		19.31	0.612	2.43	6.81	199	54.3
1120	14.62		19.63	0.606	2.36	6.81	199	50.3
1123	14.67		19.53	0.617	2.15	6.81	199	45.5
1126	14.73		@ & 19.63	0.614	2.29	6.81	199	45.0
1129	14.81		19.38	0.618	2.17	6.82	1.98	46.2

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments:

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW11A

Project Name (Number): TOC Seattle - Ballard (01-443)
Hydrocon Project Number: 14-806
Date: 02 Sept 2014

Sample I.D.: MW11A-20140902 Time: 1342
Field Duplicate I.D.: _____ Time: _____
Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 20.17 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 16.15 ft Intake Depth (BTOC): 18 Begin Purging Well: 1319
Casing volume: 4.02 ft (H_2O) X 0.16 gal/ft = 0.64 gal. X 3 = 1.92 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1324	16.27		22.24	0.913	4.19	6.62	170	44.7
1327	16.29	0.076	20.63	0.925	2.21	6.65	168	44.0
1330	16.30		20.91	0.925	1.52	6.67	164	42.8
1333	16.34		21.07	0.922	1.68	6.68	162	43.0
1336	16.44		19.85	0.908	1.54	6.67	160	42.2
1339	16.48		19.78	0.909	1.58	6.67	159	41.9

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW12

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW12-20140902 Time: 1307
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 02 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: _____ ☐ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 18.96 ft Bottom: ☐ Hard ☑ Semi Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 15.97 ft Intake Depth (BTOC): 17 Begin Purging Well: 1235
Casing volume: 2.99 ft (H_2O) X 0.16 gal/ft = 0.48 gal. X 3 = 1.44 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None -

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1237	16.06		20.72	0.465	3.73	6.27	231	411
1240	16.16	0.064	19.59	0.462	1.36	6.36	221	422
1243	16.18		19.51	0.456	1.28	6.37	216	438
1246	16.23		19.86	0.451	1.29	6.38	212	437
1249	16.29		19.68	0.473	1.43	6.39	208	198
1252	16.35		19.47	0.479	1.67	6.40	205	142
1255	16.41		19.58	0.480	1.65	6.41	203	154
1258	16.46		19.32	0.472	1.45	6.42	200	239
1301	16.50		19.31	0.463	1.31	6.42	198	268
1304	16.59		19.40	@0.6 0.465	1.27	6.41	195	254

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: milky

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX,
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW13

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW13-20140902 Time: 1507
Hydrocon Project Number: 14-806 Field Duplicate I.D.: Time:
Date: 02 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Stripped ears ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 18.70 ft Bottom: ☐ Hard ☑ Soft (Semi) ☐ Not measured Screen Interval(s): 7-44
Depth to product: NM ft
Depth to water: 16.69 ft Intake Depth (BTOC): 18 Begin Purging Well: 1446
Casing volume: 2.01 ft (H_2O) X 0.16 gal/ft = 0.32 gal. X 3 = 0.96 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1449	16.93		19.55	0.483	0.84	6.22	-46	1048
1452	16.95	0.068	19.69	0.479	0.46	6.21	-42	923
1455	16.99		20.15	0.480	0.48	6.19	-33	808
1458	17.02		20.13	0.478	0.41	6.19	-25	724
1501	17.08		20.15	0.477	0.36	6.19	-15	692
1504	17.12		19.84	0.477	0.35	6.18	-11	612

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	6, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW14

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW14-20140903 Time: 1418
Hydrocon Project Number: 14-806 Field Duplicate I.D.: Time:
Date: 03 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: ☐ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured ____ ppm ☐ Odor:
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other:
Comments

PURGING INFORMATION

Total well depth: 19.82 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s):
Depth to product: NM ft
Depth to water: 14.39 ft Intake Depth (BTOC): 17 Begin Purging Well: 1358
Casing volume: 5.43 ft (H_2O) X 0.16 gal/ft = 0.87 gal. X 3 = 2.61 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other
Bailer type: Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other

FIELD PARAMETERS

Odor and/or Sheen:

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1400	14.49		22.14	0.387	2.93	6.17	218	77.4
1403	14.51	0.070	20.78	0.380	2.93	6.14	218	73.4
1406	14.56		19.63	0.382	2.77	6.14	@ & 217	@ ~~7.9~~ 60.8
1409	14.62		19.21	0.384	2.67	6.13	218	46.7
1412	14.68		19.19	0.376	2.90	6.13	218	35.9
1415	14.72		19.14	0.373	2.84	6.13	218	34.1

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments:

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments:

GROUNDWATER SAMPLE COLLECTION

Hydro Con

Well I.D. Number: MW15A

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW15A-20140903 Time: 1324
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 03 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair: _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 20.15 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 15.56 ft Intake Depth (BTOC): 18 Begin Purging Well: 1300
Casing volume: 4.59 ft (H_2O) X 0.16 gal/ft = 0.73 gal. X 3 = 2.19 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1303	15.64		20.21	0.581	1.53	6.29	214	54.6
1306	15.67	0.076	19.16	0.569	1.48	6.44	214	49.3
1309	15.72		19.04	0.567	1.57	6.46	214	42.9
1312	15.79		18.97	0.555	1.99	6.45	216	39.1
1315	15.86		18.94	0.554	2.22	6.44	216	32.5
1318	15.92		18.96	0.552	2.37	6.45	216	30.8
1321	15.95		18.91	0.554	2.40	6.45	216	28.8

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 mL VOA	3	HCl	(No) 0.45 0.10	G, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

GROUNDWATER SAMPLE COLLECTION

Well I.D. Number: MW16

Project Name (Number): TOC Seattle - Ballard (01-443) Sample I.D.: MW16-20140904 Time: 1319
Hydrocon Project Number: 14-806 Field Duplicate I.D.: _____ Time: _____
Date: 04 Sept 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair: Stripped ears ☑ Water in Monument
Well cap condition: ☑ Good ☐ Needs replacement ☐ Replaced ☐ Surface Water in Well
Headspace reading: ☑ Not measured _____ ppm ☐ Odor: _____
Well diameter: ☑ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other: _____
Comments _____

PURGING INFORMATION

Total well depth: 19.47 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product: NM ft
Depth to water: 10.26 ft Intake Depth (BTOC): 13 Begin Purging Well: 1259
Casing volume: 9.21 ft (H_2O) X 0.16 gal/ft = 1.47 gal. X 3 = 4.41 gal.
Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type ☑ Peristaltic ☐ Centrifugal ☐ Dedicated Bladder ☐ Non-Dedicated Bladder Other _____
Bailer type: _____ Water Disposal: ☑ Drummed ☐ Remediation System ☐ Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1301	10.38		19.22	0.144	4.34	6.39	186	28.4
1304	10.42	0.082	19.23	0.145	3.95	6.29	185	19.8
1307	10.46		19.19	0.144	4.20	6.24	186	10.8
1310	10.56		19.20	0.143	4.10	6.21	187	2.2
1313	10.58		19.03	0.146	4.18	6.19	187	2.6
1316	10.67		18.98	0.148	4.14	6.18	187	0.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis
40 ml VOA	3	HCl	(No) 0.45 0.10	C_6, BTEX
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

ATTACHMENT B

LAB REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
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September 16, 2014

Craig Hultgren, Project Manager
HydroCon
510 Allen St, Suite B
Kelso, WA 98626

Dear Mr. Hultgren:

Included are the results from the testing of material submitted on September 5, 2014 from the TOC_01-443, WORFDB8 F&BI 409093 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Allison Greiner
HDC0916R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2014 by Friedman & Bruya, Inc. from the HydroCon TOC_01-443, WORFDB8 F&BI 409093 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	HydroCon
409093 -01	MW01A-20140903
409093 -02	MW02-20140902
409093 -03	MW03-20140904
409093 -04	MW04-20140904
409093 -05	MW05A-20140902
409093 -06	MW06-20140904
409093 -07	MW07-20140905
409093 -08	MW08-20140905
409093 -09	MW09-20140905
409093 -10	MW10-20140905
409093 -11	MW11A-20140902
409093 -12	MW12-20140902
409093 -13	MW13-20140902
409093 -14	MW14-20140903
409093 -15	MW15A-20140903
409093 -16	MW16-20140904
409093 -17	MW99-20140904

All quality control requirements were acceptable.

Date of Report: 09/16/14
Date Received: 09/05/14
Project: TOC_01-443, WORFDB8 F&BI 409093
Date Extracted: 09/08/14
Date Analyzed: 09/08/14

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW01A-20140903 409093-01	<100	77
MW02-20140902 409093-02	<100	93
MW03-20140904 409093-03	3,300	103
MW04-20140904 409093-04	290	103
MW05A-20140902 409093-05	<100	92
MW06-20140904 409093-06	<100	91
MW07-20140905 409093-07	<100	89
MW08-20140905 409093-08	<100	89
MW09-20140905 409093-09	7,700	107
MW10-20140905 409093-10	<100	92
MW11A-20140902 409093-11	<100	89

Date of Report: 09/16/14
Date Received: 09/05/14
Project: TOC_01-443, WORFDB8 F&BI 409093
Date Extracted: 09/08/14
Date Analyzed: 09/08/14

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW12-20140902 409093-12	<100	93
MW13-20140902 409093-13	<100	92
MW14-20140903 409093-14	<100	94
MW15A-20140903 409093-15	<100	95
MW16-20140904 409093-16	<100	90
MW99-20140904 409093-17	3,200	103
Method Blank 04-1791 MB	<100	88

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01A-20140903	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-01
Date Analyzed:	09/09/14	Data File:	090910.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW02-20140902	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-02
Date Analyzed:	09/09/14	Data File:	090911.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-03
Date Analyzed:	09/09/14	Data File:	090927.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	400 ve
Toluene	2.5
Ethylbenzene	55
m,p-Xylene	100
o-Xylene	4.5

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-03 1/10
Date Analyzed:	09/09/14	Data File:	090924.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	420
Toluene	<10
Ethylbenzene	53
m,p-Xylene	99
o-Xylene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-04
Date Analyzed:	09/09/14	Data File:	090912.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	100	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05A-20140902	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-05
Date Analyzed:	09/09/14	Data File:	090913.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-06
Date Analyzed:	09/09/14	Data File:	090914.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW07-20140905	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-07
Date Analyzed:	09/09/14	Data File:	090915.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW08-20140905	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-08
Date Analyzed:	09/09/14	Data File:	090916.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	100	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20140905	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-09
Date Analyzed:	09/09/14	Data File:	090931.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	103	93	107
4-Bromofluorobenzene	102	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	3.2
Toluene	33
Ethylbenzene	400 ve
m,p-Xylene	150
o-Xylene	11

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20140905	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-09 1/10
Date Analyzed:	09/09/14	Data File:	090926.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	3.6
Toluene	35
Ethylbenzene	430
m,p-Xylene	150
o-Xylene	10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW10-20140905	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-10
Date Analyzed:	09/09/14	Data File:	090917.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11A-20140902	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-11
Date Analyzed:	09/09/14	Data File:	090918.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-20140902	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-12
Date Analyzed:	09/09/14	Data File:	090919.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-20140902	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-13
Date Analyzed:	09/09/14	Data File:	090920.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW14-20140903	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-14
Date Analyzed:	09/09/14	Data File:	090921.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW15A-20140903	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-15
Date Analyzed:	09/09/14	Data File:	090922.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW16-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-16
Date Analyzed:	09/09/14	Data File:	090923.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	100	93	107
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-17
Date Analyzed:	09/09/14	Data File:	090928.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	400 ve
Toluene	2.6
Ethylbenzene	55
m,p-Xylene	100
o-Xylene	4.6

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20140904	Client:	HydroCon
Date Received:	09/05/14	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	409093-17 1/10
Date Analyzed:	09/09/14	Data File:	090925.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	420
Toluene	<10
Ethylbenzene	53
m,p-Xylene	99
o-Xylene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	HydroCon
Date Received:	Not Applicable	Project:	TOC_01-443, WORFDB8 F&BI 409093
Date Extracted:	09/09/14	Lab ID:	04-1817 mb
Date Analyzed:	09/09/14	Data File:	090907.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Date of Report: 09/16/14
Date Received: 09/05/14
Project: TOC_01-443, WORFDB8 F&BI 409093

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 409090-11 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	101	69-134

Date of Report: 09/16/14
Date Received: 09/05/14
Project: TOC_01-443, WORFDB8 F&BI 409093

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 409093-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	50	<0.35	97	79-109
Toluene	ug/L (ppb)	50	<1	93	73-117
Ethylbenzene	ug/L (ppb)	50	<1	96	71-120
m,p-Xylene	ug/L (ppb)	100	<2	96	63-128
o-Xylene	ug/L (ppb)	50	<1	97	64-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	102	102	81-108	0
Toluene	ug/L (ppb)	50	97	98	83-108	1
Ethylbenzene	ug/L (ppb)	50	101	102	84-110	1
m,p-Xylene	ug/L (ppb)	100	100	101	84-112	1
o-Xylene	ug/L (ppb)	50	101	103	82-113	2

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

409093

ME 09-05-14 V4

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Hydro Con

Hydrocon Environmental, LLC
Report to: Craig Hultrgren
cc: Allison Greiner
510 Allen Street
Kelso, Washington 98626
(360) 703-6079
CraigH@hydroconllc.net
allisongreiner@eurekaprojectsolutions.net

Samplers Name: Larry Namba
Project Name: TOC Holdings Company
Facility Number: 01-443
Facility Address: Seattle, WA
PO Number: 14-806
EDD Requested: EIM

Requested Turn Around Time
[x] Standard 10 business days
[ ] Rush ____
Rush Charges Authorized by: ____
Sample Disposal: (30 days) Return Will Call

Additional Comments: Sample ID Format: Sample ID-Sample Date
BTEX+ODEQ VOC = RBCA
~~Oxygenates: Napthalene, EDC, 1,3,5 Trimethylbeneze~~

	Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of containers	ANALYSES REQUESTED: TPH-Dx	TPH-Dx+SG	TPH-Gx	~~8021B BTEX~~	8260C Oxygenates	~~8260C EDC BTEX~~	8260C BTEX	200.8 Pb, Total	200.8 Pb, Diss FF			Notes
1	MW01A-20140903	01 A-C	09/03/14	1507	W	3			x	x		x						
2	MW02-20140902	02	09/02/14	1427	W	3			x	x		x						
3	MW03-20140904	03	09/04/14	1538	W	3			x	x		x						
4	MW04-20140904	04	09/04/14	1231	W	3			x	x		x						
5	MW05A-20140902	05	09/02/14	1608	W	3			x	x		x						
6	MW06-20140904	06	09/04/14	1146	W	3			x	x		x						
7	MW07-20140905	07	09/05/14	1414	W	3			x	x		x						
8	MW08-20140905	08	09/05/14	1334	W	3			x	x		x						
9	MW09-20140905	09	09/05/14	1053	W	3			x	x		x						
10	MW10-20140905	10	09/05/14	1132	W	3			x	x		x						

	Signature	Print Name	Time	Date
Relinquished by:		Larry Namba	1620	05 Sept 2014
Received by:		Nhan Phan	1620	05 Sept 2014
Relinquished by:				
Received by:				

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

Samples received at 4 °C

409093

ME 09-05-14

V4

Page # 2 of 2

Hydro Con

Hydrocon Environmental, LLC	
Report to: Craig Hultrgren	
cc: Allison Greiner	
510 Allen Street	
Kelso, Washington 98626	
(360) 703-6079	
CraigH@hydroconllc.net	
allisongreiner@eurekaprojectsolutions.net	

Samplers Name:	Larry Namba
Project Name:	TOC Holdings Company
Facility Number:	01-443
Facility Address:	Seattle, WA
PO Number:	14-806
EDD Requested:	EIM

Requested Turn Around Time

[x] Standard 10 business days

[ ] Rush _____

Rush Charges Authorized by: _____

Sample Disposal: 30 days Return Will Call

Additional Comments: Sample ID Format: Sample ID-Sample Date
BTEX+ODEQ VOC = RBCA
~~Oxygenates: Napthalene, EDC, 1,3,5 Trimethylbenzene~~ c

	Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of containers	ANALYSES REQUESTED: TPH-Dx	TPH-Dx+SG	TPH-Gx	~~8021B~~ BTEX	8260C Oxygenates	~~8260C EDC~~	8260C BETX	200.8 Pb, Total	200.8 Pb, Diss FF			Notes
1	MW11A-20140902	11 A-C	09/02/14	1342	W	3			x	x		x						
2	MW12-20140902	12	09/02/14	1307	W	3			x	x		x						
3	MW13-20140902	13	09/02/14	1507	W	3			x	x		x						
4	MW14-20140903	14	09/03/14	1418	W	3			x	x		x						
5	MW15A-20140903	15	09/03/14	1324	W	3			x	x		x						
6	MW16-20140904	16	09/04/14	1319	W	3			x	x		x						
7	MW99-20140904	17 V	09/04/14	1553	W	3			x	x		x						
8																		
9																		
10																		

	Signature	Print Name	Time	Date
Relinquished by:		Larry Namba	1620	05 Sept 2014
Received by:		Nhan Pham	1620	05 Sept 2014
Relinquished by:				
Received by:				

Samples received at 4 C

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