September 15, 2014 14-806

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

Subject: Groundwater Monitoring Report
Second 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 Second Quarter 2014 groundwater sampling event conducted by Anderson Environmental Contracting LLC (AEC) at the TOC Holdings 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 Propertyhave 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.
- 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 May 20 and 21, 2014 to evaluate the environmental quality of groundwater beneath the Propertyand 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, 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. Monitoring wells MW02 through MW04 are no longer a part of the sampling program.
- Collection of a field duplicate sample from monitoring well MW16 for quality assurance/quality control (QA/QC) purposes.
- Summarizing the groundwater sampling activities, analytical results, and upcoming work.

Groundwater Sampling Procedures

AEC collected groundwater samples May 20 and 21, 2014 from monitoring wells MW01A, MW05A, MW11A, MW12 through MW14, MW15A, and MW16. A field duplicate was collected from MW16 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, MW11A, MW12 through MW14, MW15A, and MW16 on May 21, 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 YSI or 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. 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.

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

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 includes 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 May 21, 2014, ranged from 7.71 feet (monitoring well MW16) to 15.71 feet (monitoring well MW04) below the top of the monitoring well casings (Table 1). Groundwater elevations ranged from 82.51 feet above mean sea level (amsl) in MW04 to 92.68 feet amsl in MW16. The groundwater elevation contours indicate a groundwater flow direction toward the northwest in the southeast corner of the site with a gradient of 0.21 feet per foot between monitoring wells MW01A and MW16. The gradient flattens out in the middle of the Property when GW encounters fill soil. A mound (commonly seen in previous reports) is present in the SE corner of the site. 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. There were no detections of GRPH or BETX in the wells sampled, except for GRPH detected in MW15A at 160 µg/L, which is well below the MTCA Method A cleanup level of 1,000 µg/L (Figure 4, Table 1).

Data Quality Review

AEC 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 (RPD) for the field duplicate MW99, which was collected by AEC from MW16, could not be calculated due to analyte results reported below the laboratory reporting limit (non-detects). All other quality control criteria are acceptable for the

groundwater samples; therefore, no action is required, and analytical results meet the project objectives for acceptable data. A copy of the laboratory report is provided in Attachment B.

Remediation System Performance

There are no remedial systems operating at the site.

Work Planned

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

Sincerely,

Craig Hultgren, LHG
Senior Geologist/Project Manager

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

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

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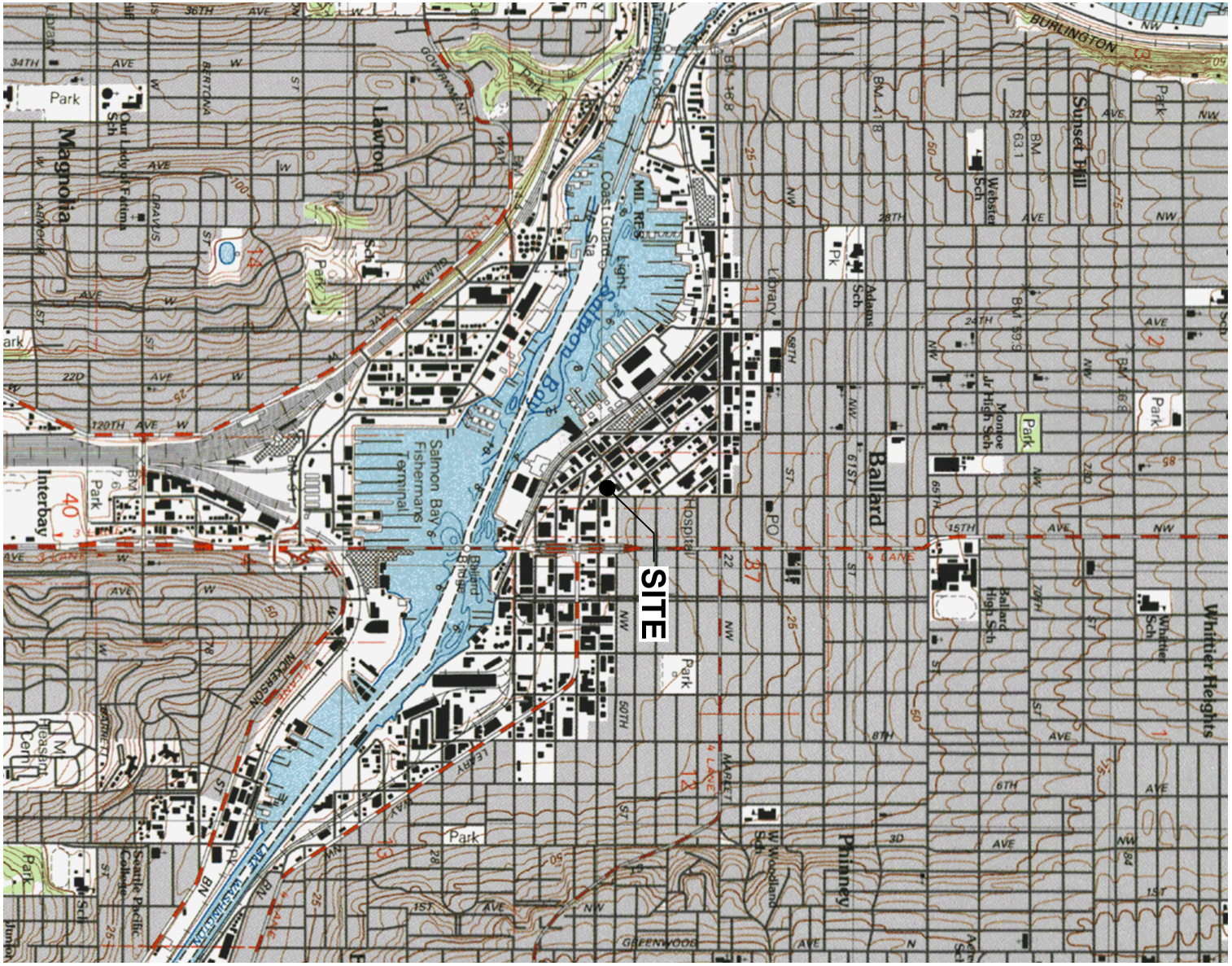
NOTE(S):
USGS, SEATTLE NORTH QUADRANGLE
WASHINGTON
7.5 MINUTE SERIES (TOPOGRAPHIC)



N W E S

0 2000 4000
SCALE IN FEET
1" = 2000'

ANDERSON ENVIRONMENTAL CONTRACTING LLC
AEC

DATE: 9-5-14
DWN: JJT
CHK: NV
APPROVED: CH
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
MW08/B04
MW07/B03
MW03
MW05
MW05A
MW13/B09
MW12/B08
MW11A
MW11/B07
MW10/B06
MW14/B10
MW15/B11
MW15A
MW01
MW01A
MW16/B12
MW02
MW09/B05

1940s PUMP ISLAND
1920s PUMP ISLANDS
1920s PUMP ISLANDS
FORMER USTs
COVERED PATIO
HYDRAULIC HOIST EXCAVATION
SHELTER LOUNGE
LUBRICATION BAY
SUMP
WASTE OIL UST
2009 BUILDING ADDITION

17TH AVENUE NORTHWEST

FIGURE 2
SITE FEATURES
TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

DATE: 9-8-14
DWN: JJT
CHK: NV
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 14-806

AEC
ANDERSON ENVIRONMENTAL CONSULTING, LLC

SCALE IN FEET
1" = 15'
0 15 30

N W E S

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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

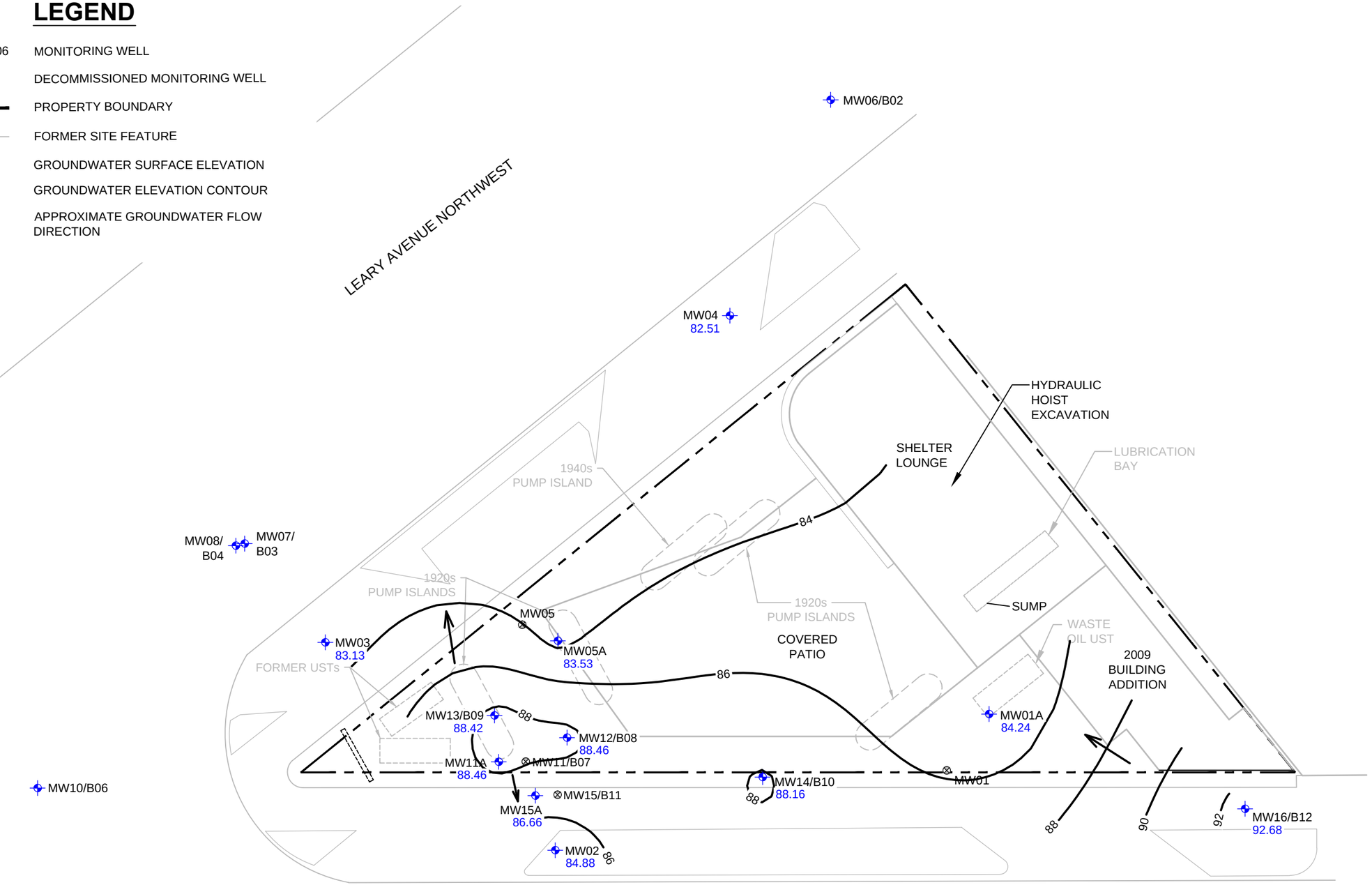

FIGURE 3
GREOUNDWATER ELEVATION CONTOURS
FOR MAY, 2014
TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

DATE: 9-5-14
DWN: JJT
CHK: NV
APPROVED: CH
PRJ. MGR: CH
PROJECT NO: 14-806

ANDERSON ENVIRONMENTAL CONSULTING, LLC

0 15 30
SCALE IN FEET
1" = 15'

N W E S

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Well ID	Analytical Results (ug/L)				
	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MTCA A	**800/1,000**	**5**	**1,000**	**700**	**1,000**
MW01A	<100	<1	<1	<1	<3
MW05A	<100	<1	<1	<1	<3
MW11A	<100	<1	<1	<1	<3
MW12	<100	<1	<1	<1	<3
MW13	<100	<1	<1	<1	<3
MW14	<100	<1	<1	<1	<3
MW15A	160	<1	<1	<1	<3
MW16	<100	<1	<1	<1	<3

LEGEND

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

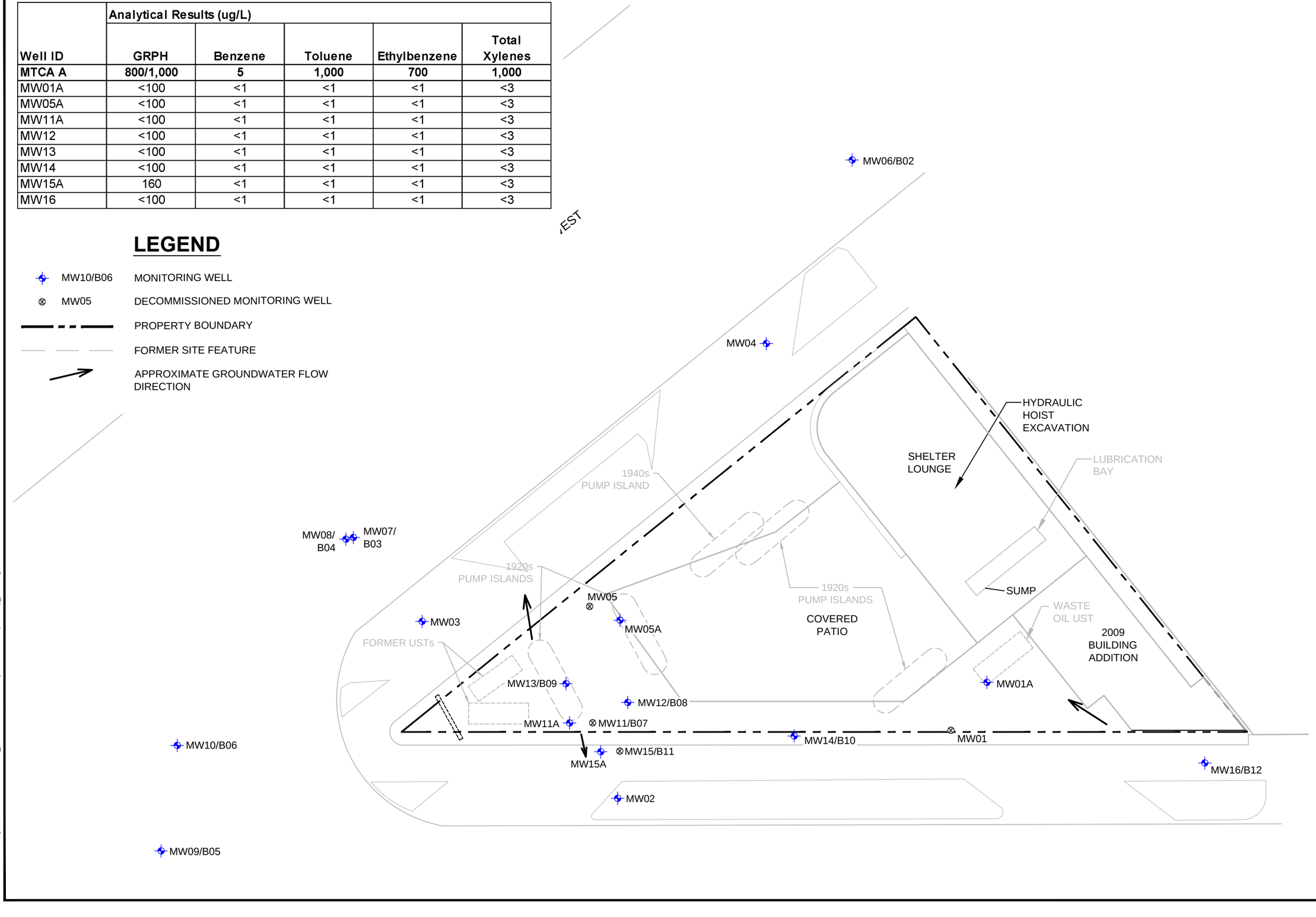

FIGURE 4
GREOUNDWATER ANALYTICAL RESULTS
FOR MAY, 2014
TOC HOLDINGS CO. FACILITY NO. 01-443
4910 LEARY AVE. NW
SEATTLE, WA.

DATE: 9-5-14
DWN: JJT
CHK: NV
APPROVED: CH
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PROJECT NO: 14-806

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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	--	--	--	--

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	01/08/02	9.83	--	89.12	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--
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	--	--	--	--	--	--	--	--	--

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	--	--	--	--	--	--	--	--	--

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	--	--	--	--	--	--	--	--	--

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	--	--	--	--

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	Monitoring Well Removed From Sampling Program In December 2009												
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	Monitoring Well Removed From Sampling Program In December 2009												
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	Monitoring Well Removed From Sampling Program In December 2009												
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	Monitoring Well Removed From Sampling Program In December 2009												
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	Monitoring Well Removed From Sampling Program In December 2009												
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	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	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	Monitoring Well Decommissioned in 2012												

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**
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	--	--	--	--
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	--	--	--	--
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	--	--	--	--

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	--	--	--	--
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	--	--	--	--

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	--	--	--	--

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:. TOC Seattle - Ballard (01-443) Sample I.D. MW01A-20140520 Time: 1444
AEC Project #: 14-806 Field Duplicate I.D. _____ Time: _____
Date 20 May 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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: 1424
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)
1426	16.23		19.56	0.522	2.46	7.11	101	228
1429	16.26	0.088	18.04	0.523	0.57	7.16	85	342
1432	16.30		17.88	0.523	0.41	7.19	68	382
1435	16.33		17.80	0.523	0.36	7.18	63	405
1438	16.34		17.84	0.524	0.33	7.20	57	438
1441	16.35		17.84	0.523	0.31	7.20	53	454

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 - sediments

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: MW05A

Project Name: TCC Seattle - Ballard (01-443) | Sample I.D. MW05 - 20140520 | Time: 0924
AEC Project #: 14-806 | Field Duplicate I.D. _____ | Time: _____
Date 20 May 2014 | Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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): 9-24
Depth to product NM ft
Depth to water 16.78 ft Intake Depth (BTOC) 19 Begin Purging Well: _____
Casing volume 17.92 ft (H_2O) X 0.16 gal/ft = 2.87 gal. X 3 = 8.61 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: 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)
0906	15.90		17.32	0.821	2.30	7.07	-133	162
0909	15.90	0.096	17.06	0.802	0.64	7.20	-158	116
0912	15.92		16.96	0.794	0.42	7.20	-151	126
0915	15.95		16.87	0.792	0.35	7.18	-157	139
0918	15.97		16.86	0.801	0.34	7.18	-159	154
0921	15.98		16.83	0.802	0.33	7.19	-160	165

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: Iron fouling

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: DOC Seattle - Ballard (01-443) Sample I.D. MW11A-20140520 Time: 1144
AEC Project #: 14-806 Field Duplicate I.D. _____ Time: _____
Date 20 May 2014 Personnel: _____

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☐ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 10.63 ft Intake Depth (BTOC) 13 Begin Purging Well: 1121
Casing volume _____ 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: 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)
1123	10.63		19.32	0.504	10.56	6.97	25	23.6
1126	10.64	0.120	17.67	0.461	3.83	6.71	52	25.1
1129	10.64		17.46	0.450	3.94	6.67	68	24.2
1132	10.64		17.16	0.441	3.99	6.63	75	22.1
1135	10.64		17.25	0.458	4.07	6.63	81	21.1
1138	10.64		17.34	0.457	4.05	6.64	85	20.4
1141	10.64		17.19	0.459	4.09	6.65	88	20.4

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: TOC Seattle - Ballard (01-443) Sample I.D. MW12-20140520 Time: 1036
AEC Project #: 14-806 Field Duplicate I.D. _____ Time: _____
Date 20 May 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☐ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 18.97 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product NM ft
Depth to water 10.68 ft Intake Depth (BTOC) 13 Begin Purging Well: 1017
Casing volume 8.29 ft (H_2O) X 0.16 gal/ft = 1.33 gal. X 3 = 3.99 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)
1018	10.70		18.30	0.360	6.55	6.51	92	84.8
1021	10.70	0.116	16.51	0.354	5.72	6.48	103	41.9
1024	10.70		16.32	0.352	5.88	6.48	108	27.8
1027	10.70		16.31	0.351	5.95	6.47	110	24.8
1030	10.70		16.33	0.348	6.12	6.47	112	22.5
1033	10.70		16.32	0.349	5.83	6.47	115	20.8

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	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: MW13

Project Name: TOC Seattle - Ballard (01-443) Sample I.D. MW13-20140520 Time: 1003
AEC Project #: 14-806 Field Duplicate I.D. _____ Time: _____
Date 20 May 2014 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 ☐ Not measured Screen Interval(s): _____
Depth to product NM ft
Depth to water 11.85 ft Intake Depth (BTOC) 14 Begin Purging Well: 0943
Casing volume 6.85 ft (H_2O) X 0.16 gal/ft = 1.10 gal. X 3 = 3.30 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)
0945	11.86		16.96	0.347	2.95	6.36	42	201
0948	11.86	0.100	16.12	0.345	0.67	6.31	63	204
0951	11.88		16.16	0.347	0.54	6.28	73	165
0954	11.91		16.10	0.344	0.46	6.30	82	162
0957	11.92		16.10	0.344	0.46	6.33	89	153
1000	11.92		16.07	0.347	0.49	6.32	91	147

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: MW14

Project Name:: TOC Seattle - Ballard
AEC Project #: 14-806
Date 20 may 2014

Sample I.D. MW14-20140520 Time: 1257
Field Duplicate I.D. _____ Time: _____
Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☐ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 19.83 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product NM ft
Depth to water 11.31 ft Intake Depth (BTOC) 14 Begin Purging Well: 1229
Casing volume 8.52 ft (H_2O) X 0.16 gal/ft = 1.36 gal. X 3 = 4.08 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)
1230	11.42		18.68	0.356	4.07	6.25	110	4.0
1233	11.47		17.05	0.352	2.31	6.24	115	5.2
1236	11.58	0.084	16.74	0.352	2.14	6.24	121	5.5
1239	11.64		17.00	0.352	2.04	6.25	123	5.8
1242	11.73		17.25	0.352	2.04	6.25	125	5.7
1245	11.80		17.10	0.349	2.11	6.26	126	5.6
1248	11.80		17.03	0.350	2.20	6.26	132	6.3
1251	11.90		16.86	0.349	2.06	6.26	133	5.9
1254	12.02		16.87	0.350	2.02	6.25	133	5.8

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: MW15A

Project Name: TOC Seattle - Ballard (01-443) | Sample I.D. MW15A-20140520 | Time: 1107
AEC Project #: 14-806 | Field Duplicate I.D. _____ | Time: _____
Date 20 May ~~2015~~ 2014 | Personnel: Larry Nambu

WELL INFORMATION

Monument condition: ☑ Good ☐ Needs repair _____ ☑ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 12.35 ft Intake Depth (BTOC) 15 Begin Purging Well: 1048
Casing volume 7.80 ft (H_2O) X 0.16 gal/ft = 1.25 gal. X 3 = 3.75 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)
1049	12.46		18.33	0.457	2.18	6.76	-114	22.0
1052	12.56		16.79	0.439	0.59	6.63	-83	22.8
1055	12.63	0.088	16.87	0.430	0.46	6.61	-60	22.8
1058	12.71		16.88	0.437	0.44	6.62	-50	23.8
1101	12.78		16.90	0.439	0.69	6.60	-36	24.7
1104	12.88		16.91	0.440	0.80	6.63	-28	24.0

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: MW16

Project Name: TOC Seattle-Ballard (01-443) Sample I.D. MW16-20140520 Time: 1353
AEC Project #: 14-806 Field Duplicate I.D. MW99-20140520 Time: 1408
Date 20 May 2017 Personnel: Larry Namba

WELL INFORMATION

Monument condition: ☐ Good ☑ Needs repair Stripped ears ☑ Water in Monument
Well cap condition: ☑ Good ☐ Replaced ☐ Needs replacement ☐ 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 19.48 ft Bottom: ☑ Hard ☐ Soft ☐ Not measured Screen Interval(s): _____
Depth to product NM ft
Depth to water 7.65 ft Intake Depth (BTOC) 10 Begin Purging Well: 1334
Casing volume 11.83 ft (H_2O) X 0.16 gal/ft = 1.89 gal. X 3 = 5.67 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)
1335	7.75		18.82	0.181	7.14	7.05	122	4.4
1338	7.82	0.100	16.54	0.165	5.99	6.24	127	4.3
1341	7.88		16.41	0.164	5.88	6.25	133	5.3
1344	7.93		16.40	0.163	5.99	6.27	135	5.3
1347	8.00		16.32	0.162	6.08	6.26	138	6.1
1350	8.08		16.05	0.163	5.90	6.27	140	6.0

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: _____

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.
Kurt Johnson, B.S.
Eric Young, B.S.

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May 27, 2014

Craig Hultgren, Project Manager
Anderson Environmental
705 Colorado Street
Kelso, WA 98626

Dear Mr. Hultgren:

Included are the results from the testing of material submitted on May 21, 2014 from the TOC_01-443, WORFDB8 F&BI 405414 project. There are 4 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
AEN0527R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 21, 2014 by Friedman & Bruya, Inc. from the Anderson Environmental TOC_01-443, WORFDB8 F&BI 405414 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Anderson Environmental
405414 -01	MW01A-20140520
405414 -02	MW05A-20140520
405414 -03	MW11A-20140520
405414 -04	MW12-20140520
405414 -05	MW13-20140520
405414 -06	MW14-20140520
405414 -07	MW15A-20140520
405414 -08	MW16-20140520
405414 -09	MW99-20140520

All quality control requirements were acceptable.

Date of Report: 05/27/14
Date Received: 05/21/14
Project: TOC_01-443, WORFDB8 F&BI 405414
Date Extracted: 05/22/14
Date Analyzed: 05/22/14

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW01A-20140520 405414-01	<1	<1	<1	<3	<100	86
MW05A-20140520 405414-02	<1	<1	<1	<3	<100	87
MW11A-20140520 405414-03	<1	<1	<1	<3	<100	84
MW12-20140520 405414-04	<1	<1	<1	<3	<100	85
MW13-20140520 405414-05	<1	<1	<1	<3	<100	84
MW14-20140520 405414-06	<1	<1	<1	<3	<100	82
MW15A-20140520 405414-07	<1	<1	<1	<3	160	87
MW16-20140520 405414-08	<1	<1	<1	<3	<100	85
MW99-20140520 405414-09	<1	<1	<1	<3	<100	84
Method Blank 04-1020 MB	<1	<1	<1	<3	<100	82

Date of Report: 05/27/14
Date Received: 05/21/14
Project: TOC_01-443, WORFDB8 F&BI 405414

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

Laboratory Code: 405414-01 (Duplicate)

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	90	65-118
Toluene	ug/L (ppb)	50	90	72-122
Ethylbenzene	ug/L (ppb)	50	86	73-126
Xylenes	ug/L (ppb)	150	89	74-118
Gasoline	ug/L (ppb)	1,000	91	69-134

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.

405414

ME 05-21-14 V2

Page # 1 of 1

AEC

Anderson Enviornmental Contracting, LLC
Report to: Craig Hultrgren
cc: Allison Greiner
705 Colorado Street
Kelso, Washington 98626
(360) 577-9194
craigh@aecllc.net
allisongreiner@eurekaprojectsolutions.net

Samplers Name: Larry Namba
Project Name: ~~Time Oil Holding Co.~~ TCC Holdings
Facility Number: 01-443 (14-806)
Facility Address: Seattle, WA
PO Number: 4901-0
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	8260 SIM RBCA	8260C BETX	200.8 Pb, Total	200.8 Pb, Diss FF			Notes
1	MW01A-20140520	01 A-C	05/20/14	1444	W	3			x	x								
2	MW05A-20140520	02	05/20/14	0924	W	3			x	x								
3	MW11A-20140520	03	05/20/14	1144	W	3			x	x								
4	MW12-20140520	04	05/20/14	1036	W	3			x	x								
5	MW13-20140520	05	05/20/14	1003	W	3			x	x								
6	MW14-20140520	06	05/20/14	1257	W	3			x	x								
7	MW15A-20140520	07	05/20/14	1107	W	3			x	x								
8	MW16-20140520	08	05/20/14	1353	W	3			x	x								
9	MW99-20140520	09	05/20/14	1408	W	3			x	x								
10										.								

	Signature	Print Name	Time	Date
Relinquished by:	Larry Namba	Larry Namba		21 May 2014
Received by:	Dave	DO VO FEDEX	12:30	05-21-14
Relinquished by:				
Received by:				

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

Samples received at 5 °C