TOC Facility 01 176 / SIT 4.9.2



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Date: June 26, 2013

GROUNDWATER MONITORING REPORT Fourth Quarter 2012

TOC Holdings Co. Facility No. 01-176 Mountlake Terrace, Washington

Property Address:	24205 56 th Avenue West, Mountlake Terrace, Washington
Client Contact:	Mark Chandler, Vice President of Environmental Services
Client Work Order/Purchase Order:	WOR1176SES18/WOR1176SES19
	Washington Department of Ecology Site ID #6885/
Primary Regulatory Agency/ID:	Agreed Order #DE 8661
Project Number:	0440-030
Project Manager:	Deborah Gardner, LG #1243
Frequency of Groundwater Sampling:	Limited Quarterly
Property Owner/Land Use	Vacant/Romio's Pizza/Getaway Spirits Tavern
Off-Property Land Use	Commercial/Residential

SoundEarth Strategies, Inc. (SoundEarth) prepared this report to present the results of the Fourth Quarter 2012 groundwater monitoring event (monitoring event) conducted at TOC Holdings Co. Facility No. 01-176 located at 24205 56th Avenue West in Mountlake Terrace, Washington (the TOC Property). The TOC Property location is shown on Figures 1, 2, and 3.

A petroleum hydrocarbon plume has migrated west and south off the TOC Property to the 56th Avenue West right-of-way (ROW), the private property located at 24225 56th Avenue West (TOC/Farmasonis Property), and the private property located at 24309 56th Avenue West (Drake Property). The TOC Property, TOC/Farmasonis Property, Drake Property, and portions of the 56th Avenue West ROW are collectively referred to as the Interim Remedial Action Project Area, as defined in the Interim Remedial Action Work Plan (IRAWP; SoundEarth 2011) attached to Agreed Order No. DE 8661. The monitoring well network employed for this monitoring event extends as far south as the private property located at 24325 56th Avenue West (Shin/Choi Property). Per the IRAWP, the monitoring wells located at the Shin/Choi Property were not included in the scope of groundwater monitoring, and the scope of Fourth Quarter sampling is limited to 31 sample locations.

TOC Holdings Co. formerly operated a retail gasoline station on the TOC Property, which is currently vacant. One 8,000-gallon and two 6,000-gallon underground storage tanks (USTs) were removed from the TOC Property in 1991 (ES&E 1992). A dual-phase extraction remediation system (former DPE system) was installed at the TOC Property in 1996 and operated until October 2004 (Landau 2005). Since August 2005, SoundEarth has conducted groundwater monitoring and resumed remedial investigations to the

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south and west of the TOC Property, as well as designed remediation system upgrades and expansion. In 2006, SoundEarth confirmed that gasoline contamination extends off the TOC Property to the south and west, and identified at least three separate water-bearing zones at the TOC Property: the Shallow Zone, the Intermediate Zone, and the Deep Zone (Figures 4.1, 4.2, and 4.3).

Construction of three in situ groundwater remediation systems for the TOC Property, TOC/Farmasonis Property, and the Drake Property, respectively, was completed during Third Quarter 2012. The remediation systems were started at the beginning of Fourth Quarter 2012 on October 3, 2012.

Shallow Zone

The Shallow Zone occurs within 20 feet of the ground surface, perched within glacial till soil consisting of poorly sorted, ice-laid silty sand with varying amounts of gravel. The primary source of recharge to the Shallow Zone is natural precipitation that infiltrates pervious land surfaces. Other potential sources of recharge to the Shallow Zone include a topographic closed depression where surface runoff ponds and a former stormwater infiltration pit, both of which are located in the southeast portion of the TOC Property. According to a TOC Holdings Co. blueprint drawing, the stormwater infiltration pit measured 10 feet square by 4 feet deep and was backfilled with coarse gravel (Time Oil Co. 1975). Surface runoff intercepted by a catch basin located near the southeast corner of the paved parking area formerly discharged into the stormwater infiltration pit via a 6-inch-diameter drain pipe, which has been capped. The locations of the southern catch basin and former stormwater infiltration pit at the TOC Property are shown on Figures 3, 4.1, 4.2, and 4.3. Monitoring wells MW02 through MW06, MW12, MW19, MW34, MW54, MW61, MW62, MW67, MW68, and MW79 are screened within the Shallow Zone (Figures 3 and 4.1).

Intermediate Zone

The Intermediate Zone is situated at depths of approximately 20 to 60 feet below ground surface (bgs), and is perched within glacial till soil consisting of poorly sorted, ice-laid silty sand with varying amounts of gravel. The Intermediate Zone is the primary zone of contaminant transport at the Interim Remedial Action Project Area. The stratigraphy of the Intermediate Zone includes water-laid silty sands with varying amounts of gravel. The Intermediate Zone appears to receive recharge from artificial sources in the proximity of natural and/or artificial pathways, in addition to natural precipitation. The primary source of artificial recharge appears to be Shallow Zone groundwater accumulations within the backfill of the former UST cavity. Monitoring wells MW09 through MW11, MW13, MW15, MW16, MW18, MW20, MW23, MW31 through MW33, MW35, MW36, MW41 through MW53, MW55 through MW60, MW63, MW65, MW66, MW69, MW70, MW75 through MW77, MW81, MW84 through MW87, MW89 through MW99, and MW101 are screened in the Intermediate Zone (Figures 3 and 4.2). The following monitoring wells have been adapted for use as remediation wells: MW11, MW15, MW18, MW24, MW27, MW29, MW31, MW32, MW41, MW57, MW69, MW70, MW70, MW84, MW90 through MW99, and MW101. The following Intermediate Zone monitoring wells were connected to the former remediation system between 1996 and 2004: MW09, MW10, MW11, MW21, MW22, MW24, and MW25.

Monitoring wells MW80, MW82, MW88, and MW100 are screened in the upper Intermediate Zone, between the approximate depths of 20 and 30 feet bgs. The screened intervals for monitoring wells MW08, MW22, MW24, MW25, MW27, MW28, MW29, MW32, MW37, and MW38 are shallower than

20 feet bgs, potentially intersecting both the Shallow and Intermediate Zones; data obtained from those monitoring wells and any current or former remediation wells may be used, qualified, or rejected based on seasonal variations in the two water-bearing zones as discussed in the "Results" section of this report. During Fourth Quarter 2012, data obtained from monitoring wells MW22 and MW32 are consistent with Intermediate Zone conditions and are tabulated accordingly.

Deep Zone

The Deep Zone is a semi-confined aquifer situated within glacial advance sand and gravel at depths of more than 60 feet bgs. The term "semi-confined" describes an aquifer that is trapped beneath a stratigraphic confining layer that prevents groundwater from equilibrating with atmospheric pressure. Groundwater within a semi-confined aquifer can equilibrate with atmospheric pressure inside a properly constructed well. Deep Zone groundwater equilibrates in a properly constructed well at an elevation higher than the bottom of the glacial till deposits, while Intermediate Zone groundwater elevations equilibrate with atmospheric pressure under unconfined conditions near the bottom of the glacial till deposits. South of the TOC Property, Intermediate Zone groundwater descends through the glacial till to an elevation deeper than the elevation at which the Deep Zone equilibrates with atmospheric pressure. Under those circumstances, the Deep Zone gives the appearance of being approximately 1.9 to 2.4 feet shallower than the Intermediate Zone, maintaining an upward vertical gradient between the two zones. Monitoring wells MW26, MW30, MW39, MW40, MW64, and MW78 are screened in the Deep Zone (Figures 3 and 4.3).

Decommissioned Wells

Of the 101 monitoring wells that have been installed at the Interim Remedial Action Work Area and the Shin/Choi Property, six have been decommissioned. Monitoring wells MW01, MW07, MW14, MW17, MW21, and MW83 were decommissioned by a licensed well driller in accordance with *Minimum Standards for Construction and Maintenance of Wells*, Chapter 173-160 of the Washington Administrative Code, by overdrilling and removing the well casing. Monitoring well MW01 at the TOC Property was decommissioned on October 2, 2009, immediately upon the discovery that its surface seal had been removed in 1996 during the installation of the former DPE system and that it was situated in an area where surface water ponded seasonally. Monitoring wells MW07, MW14, and MW17 at the TOC/Farmasonis Property were decommissioned on November 29, 2004, in accordance with an agreement between Time Oil Co. and the former owner of the TOC/Farmasonis Property (Landau 2005). Monitoring/remediation well MW21 was damaged during spring 2012 and decommissioned on April 16, 2012. Monitoring well MW83 was damaged in autumn 2011, decommissioned on November 21, 2011, and replaced with MW100 on November 22, 2012.

QUARTERLY GROUNDWATER MONITORING

The monitoring event was conducted on December 3 through 5, 2012, to evaluate the environmental quality, flow direction, and gradient of groundwater beneath the Interim Remedial Action Project Area and to eventually demonstrate compliance with Washington State Model Toxics Control Act cleanup regulations. This report presents a summary of field activities performed during the monitoring event, laboratory analytical results, and a description of upcoming work. In the preparation of Figures 2 through 4.3, which are attached to this report, SoundEarth referenced one or more of the following

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sources of information: as-built utility maps (City of Mountlake Terrace 2005), Herman Short Plat No. 106 (Reisdorff 1985), K&S Environmental report drawings (K&S 2001), Snohomish County Assessor maps (Snohomish County Assessor's Office 2009), owner's facility drawings (Time Oil Co. 1975), maps prepared by previous consultants (Landau 2005), and recent aerial photographs (USGS 2002). The base map for Figures 2 through 4.3 was developed in 2012 by Axis Survey & Mapping, professional land surveyors of Kirkland, Washington.

The monitoring event included measuring depth to groundwater in each monitoring well and collecting groundwater samples from Intermediate Zone monitoring wells MW09, MW10, MW15, MW20, MW22, MW27, MW32, MW48, MW49, MW51 through MW53, MW55, MW56, MW58, MW59, MW60, MW63, MW65, MW66, MW69, MW70, MW77, MW84, MW85, MW86, and MW89. The scope of work included collection and analysis of 26 groundwater samples and 8 quality assurance/quality control (QA/QC) samples.

Fourth Quarter 2012 groundwater elevations and sample analytical results are summarized on Table 1. Historical groundwater elevations and analytical results for groundwater samples collected from June 1992 through December 5, 2012, are presented in Table 2. Laboratory analyses of groundwater for fuel additives from September 2005 through December 5, 2012, are presented on Table 3. The results of Fourth Quarter 2012 QA/QC sample analysis are presented on Table 4.

FIELD ACTIVITIES

Upon arrival at the Interim Remedial Action Project Area on December 3, 2012, SoundEarth personnel opened the existing monitoring wells. Water levels in the wells were permitted to equilibrate with atmospheric pressure prior to recording depth-to-liquid-level measurements on the same day. SoundEarth measured and recorded groundwater levels relative to the top of well casing using an electronic water level meter or an oil/water interface probe to an accuracy of 0.01 feet. SoundEarth personnel recorded the depth to liquid level in monitoring well MW09 using each of the water level meters and interface probes used during the monitoring event. The depth-to-liquid-level measurements shown on Table 2 have been corrected for differences between instruments based on the measurements recorded for monitoring well MW09 (maximum 0.03 feet). Whenever separate-phase hydrocarbons (i.e., light nonaqueous-phase liquid, or LNAPL) were encountered, SoundEarth used an interface probe to measure both the depth to LNAPL and the depth to groundwater.

LNAPL, which is lighter than water, slightly depresses the groundwater table as a function of the specific gravity difference between the two media. In wells where LNAPL was measureable, the reported groundwater elevations shown on Table 2 were normalized using the industry-standard specific gravity estimate of 0.8 for LNAPL relative to 1.0 for water. The following equation was used for the normalization:

Normalized Groundwater Elevation (feet) = $[(H_{TOC} - H_W) * 1.0] + [(H_W - H_{LNAPL}) * 0.8]$

Where H_{TOC} is the top of casing elevation, H_W is the measured depth to groundwater below the top of casing, and H_{LNAPL} is the measured depth to LNAPL below the top of casing.

Peristaltic pumps are the default, low-flow sample collection method at the Interim Remedial Action Project Area, but they are ineffective for collection of samples deeper than approximately 31 feet. Because depths to groundwater exceed 31 feet in over half of the monitoring wells at the Interim Remedial Action Project Area, SoundEarth considered the advantages and disadvantages of the following sampling methods:

- Peristaltic pumps and dedicated tubing collect representative low turbidity samples, pose the least risk of sample cross contamination, and meet the criteria for low-flow protocols (EPA 1996) but are limited to collection of samples shallower than approximately 31 feet.
- Disposable bailers are not depth-limited and do not pose any greater risk of cross-contamination than peristaltic pumps but retrieve turbid samples and potentially volatilize petroleum hydrocarbons, resulting in overstated or understated petroleum hydrocarbon concentrations compared to samples collected in accordance with low-flow protocols.
- Bladder pumps and submersible pumps are not depth-limited and retrieve representative low turbidity samples but pose risks for sample cross-contamination because each sample contacts the interior of the pump, requiring extensive decontamination between samples.
- The use of submersible pumps to collect groundwater samples from the Intermediate Zone generally is precluded by insufficient groundwater recharge rates, insufficient water column heights, and/or the potential to entrain pump-damaging levels of turbidity. Submersible pumps are feasible for sampling Deep Zone monitoring wells, but so are bailers and bladder pumps; historical analytical results indicated that purging and sampling Deep Zone monitoring wells by bailer method would be protective of the project data quality objectives.
- Each remediation well is equipped with a dedicated pneumatic pump to suppress groundwater elevations under induced vacuum. A pneumatic pump delivers groundwater to surface elevations using pulses of compressed air, resulting in a loss of volatile compounds. Pneumatic wells obstruct the use of other groundwater sampling methods; therefore, pneumatic pumps are used to collect performance groundwater samples from selected remediation wells.

SoundEarth decided to restrict the number of sampling methods to four (peristaltic pump, bladder pump, bailer, and pneumatic pump) and elected not to use a fifth sampling method (submersible pumps). The sampling method used to collect each sample is indicated on Tables 1 and 4 with the sample analytical results.

On December 3 through 5, 2012, SoundEarth collected groundwater samples from selected Intermediate Zone wells according to the following methods, protocols, and rationale:

- SoundEarth used pneumatic pumps to collect performance groundwater samples from selected remediation wells (remediation wells MW15, MW27, MW32, MW69, MW70, and MW84).
- Whenever depths to groundwater were shallower than approximately 31 feet bgs, SoundEarth collected groundwater samples in accordance with low-flow protocols using a peristaltic pump (monitoring wells MW09 and MW22).
- In wells where depths to groundwater exceeded approximately 31 feet bgs, SoundEarth collected samples using bottom-loading bladder pumps in accordance with low-flow protocols (monitoring wells MW55, MW56, MW58, MW59, MW60, MW63, MW65, MW85, MW86, and MW89), or disposable polyethylene bailers under the following circumstances:

- Historical analytical results indicated that elevated turbidity associated with bailing likely would not result in detectable concentrations of petroleum hydrocarbons (monitoring wells MW49, MW51, MW53, MW66, and MW77).
- Historical analytical results exceeded their respective cleanup levels to an extent that sampling method would have no bearing on the status of contamination or interpretation of the extent of contamination (monitoring well MW48).
- In order to evaluate the effects of sampling method on data quality, SoundEarth collected one initial groundwater sample and three QA/QC groundwater samples from monitoring well MW09 in the following order: (1) initial sample by bladder pump, (2) method duplicate by peristaltic pump, (3) blind field duplicate by peristaltic pump, and (4) method duplicate by bailer. SoundEarth collected field duplicate samples from monitoring well MW32 and MW86 using a pneumatic pump and a bladder pump, respectively. The results of method duplicate sampling are discussed in the Data Quality Review section of this report and summarized in Table 4.
- The following wells either were dry or insufficient water was present for sample collection: MW13, MW31, MW33, MW42, MW43, MW44, MW45, and MW47 (the scope of quarterly monitoring for Second, Third, and Fourth Quarters of a year is detailed in the IRAWP [SoundEarth 2011] attached to the Agreed Order and includes analysis of groundwater samples collected from the following locations: monitoring wells MW09, MW10, MW20, MW21, MW33, MW45, MW48, MW49, MW50, MW51, MW52, MW53, MW55, MW56, MW58, MW59, MW60, MW63, MW65, MW66, MW77, MW84, MW85, MW86, and MW89, and remediation wells MW15, MW27, MW31, MW32, MW69, MW70).
- LNAPL conditions were encountered in remediation wells MW90 and MW91; however, neither of these remediation wells was included in the Fourth Quarter 2012 scope of sample collection.

Purging and sampling with a peristaltic pump was performed using dedicated polyethylene tubing at flow rates ranging from 45 to 90 milliliters per minute. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater in each monitoring well. Purging and sampling with a bottom-loading bladder pump was performed using disposable polyethylene tubing at flow rates ranging from 48 to 320 milliliters per minute. Bladder pumps were suspended approximately 2 to 3 feet below the surface of the groundwater or at least 1 foot above the bottom of each monitoring well.

When purging and sampling in accordance with low-flow protocols, SoundEarth monitored water quality using a HydroLab Quanta or YSI Model 556 water quality meter equipped with a flow-through cell. The water quality parameters that SoundEarth monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Following purging and stabilization of water quality parameters, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into laboratory-prepared sample containers. The following exceptions to the sample collection protocol were encountered during the sampling event:

 Turbidity did not meet low-flow criteria of less than 10 nephelometric turbidity units (NTU) or varying less than 10 percent prior to collecting groundwater samples from the following locations:

- MW59: The measured turbidity was 20.6 NTU, which varied 38 percent at the time of sample collection from the prior measurement; however, all other purging parameters were documented to have reached stabilization.
- MW56: The measured turbidity was 64.2 NTU, which varied 25 percent at the time of sample collection from the prior measurement; however, all other purging parameters were documented to have reached stabilization.
- MW60: The measured turbidity was 26.8 NTU, which varied 14 percent at the time of sample collection from the prior measurement; however, all other purging parameters were documented to have reached stabilization.

Other exceptions were encountered in the following wells:

- MW89: The turbidity meter malfunctioned during well purging. At the time of sample collection, the measured turbidity was 7,200 NTU; however, all other purging parameters were documented to have reached stabilization.
- MW22: No functioning turbidity meter was available. However, the groundwater was noted to be very clear and all other purging parameters except oxidation-reduction potential were documented to have reached stabilization.

Purging and sampling with disposable bailers required the removal of at least three well volumes to purge each monitoring well prior to collecting samples, with some exceptions as described below. Water quality parameters were not monitored during purging and sampling with bailers. Upon removal of at least three well volumes of groundwater, water samples were collected by carefully pouring from the bailer directly into laboratory-prepared sample containers, while intentionally minimizing disturbance of the sample. As a result of naturally low-yielding groundwater conditions, fewer than three well volumes were purged from the following wells prior to collecting a groundwater sample: MW09, MW10, MW20, MW49, MW51, and MW53.

Each set of sample containers was labeled with a unique sample identification number, placed on ice in a cooler, and transported to Friedman & Bruya, Inc. of Seattle, Washington, under standard chain-ofcustody protocols for laboratory analysis. The groundwater samples were submitted for analysis of gasoline-range petroleum hydrocarbons (GRPH) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Gx, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8021B or 8260C. The groundwater samples collected from monitoring wells MW65, MW69, MW70, MW77, MW84, MW85, MW86, and MW89 were analyzed for methyl tertiary-butyl ether (MTBE) and 1,2-dichloroethane (EDC) by EPA Method 8260C. Purge water generated during this sampling event was placed in labeled 55-gallon steel drums and temporarily stored on the TOC Property pending authorization to treat and discharge on-site in accordance with State Waste Discharge Permit No. ST-7384 and the City of Mountlake Terrace Special Use Permit dated September 24, 2012.

RESULTS

Groundwater levels measured on December 3, 2012, ranged from 7.97 feet (Shallow Zone monitoring well MW61) to 48.14 feet (Deep Zone monitoring well MW26) below the top of the well casings

(Table 2). Groundwater elevations from the monitoring wells were contoured using the water level measurements collected on December 3, 2012 (Figures 4.1, 4.2, and 4.3).

During the monitoring event, the overall directions of groundwater flow within the Shallow and Deep Zones generally trended south-southeast (Figures 4.1 and 4.3), while groundwater appears mounded within the Intermediate Zone (Figure 4.2) across the following elevation ranges:

- Shallow Zone groundwater elevations ranged from 339.93 feet (monitoring well MW79) to 350.82 feet (monitoring well MW62). A groundwater mound is visible in the Shallow Zone enclosing the former stormwater infiltration pit; surface runoff ponds in the same area during periods of wet weather (Figure 4.1).
- Intermediate Zone groundwater elevations ranged from 308.17 feet (monitoring well MW101) to 336.09 feet (monitoring well MW91). Mounding of groundwater is evident within the Intermediate Zone, as characterized by the following conditions:
 - The primary mound is centered beneath the southern end of the former UST excavation as characterized by groundwater elevations of elevations 334 to 336 feet (monitoring wells MW11, MW90, and MW91), and measures approximately 20 to 23 feet high (Figure 4.2). The southern margin of the primary mound is characterized by groundwater elevations of 313.28 to 313.31 feet (monitoring wells MW56, MW59, MW66).
 - A secondary mound is evident in the vicinity of monitoring well MW45; where the groundwater elevation is up to 4 feet higher (elevation 317.69 feet) than in surrounding monitoring wells MW46, MW48, MW53, MW56, MW57, and MW60 (elevations 312.65 to 315.72 feet). The groundwater elevation in monitoring well MW45 (over 4 feet higher than in nearby well MW49) signifies semiconfined or confined conditions that appear to be hydrologically connected to the mounded conditions. The groundwater elevation in well MW49 was disregarded in preparation of Figure 4.2 in favor of groundwater elevation data for well MW45; well MW45 is screened 10 feet shallower than well MW49 and more accurately represents the zone of contaminant transport (Tables 1 and 2).
 - The configurations of the primary and secondary mounds are consistent with the contaminant distributions documented throughout 2012 in monitoring wells MW32, MW45, MW48, MW98, and MW69.
 - The flattening of the groundwater gradient south of the TOC Property (such as the flattening observed between monitoring wells MW93 and MW59, MW93 and MW66, MW94 and MW56, and MW53 and MW60) signifies the apparent southern limits of the mounded conditions.
 - The range of groundwater elevations observed in the mounded portion of the Intermediate Zone in the vicinity of the former UST excavation (elevations 334 to 336 feet) approaches the range of elevations in the Shallow Zone (elevations 348 to 349 feet) in the same area. The mounded conditions are attributed to leakage from the Shallow Zone into the Intermediate Zone where the confining conditions between the two layers likely have been breached by the former UST excavation.

- In situ remediation technologies in use at the Interim Remedial Action Work Area include soil vapor extraction (SVE) combined with groundwater pumping; the purpose of groundwater pumping is to counteract the effects of the SVE vacuum on the groundwater table and prevent the groundwater table from submerging the well screens. The effects of SVE and/or pumping are apparent in wells MW15, MW41, MW57, MW93, MW96, MW99, and MW101. The areas around remediation wells MW93 and MW101 (Figure 4.2) show the formation of cones of depression as pumping progresses. The effects of the SVE vacuum prevail in remediation wells MW15, MW41, MW57, and MW99, where the Intermediate Zone groundwater table is elevated approximately 0.4 feet (MW57) to 8.3 feet (MW41) relative to prevailing groundwater elevations surrounding each remediation well.
- The anomalous groundwater elevation in monitoring well MW45 (over 4 feet higher than in nearby well MW49) signifies semiconfined or confined conditions that appear to be hydrologically connected to the mounded conditions. The connection likely occurs beneath the 56th Avenue West ROW between monitoring wells MW13 and MW53 at depths of approximately 40 feet bgs, consistent with the distribution of GRPH and BTEX in groundwater beneath the eastern margin of the 56th Avenue West ROW. The groundwater elevation in well MW49 was disregarded in preparation of Figure 4.2, in favor of groundwater elevation data for well MW45; well MW45 is screened 10 feet shallower than well MW49 and more accurately represents the zone of contaminant transport (Tables 1 and 2).
- Beyond the apparent limits of the mounded groundwater conditions, the Intermediate Zone groundwater table flattens from an elevation of approximately 313 feet in monitoring wells MW56, MW59, and MW66 at the TOC/Farmasonis Property to elevations ranging from 311 to 312 feet in monitoring wells MW65, MW76, MW77, MW84, MW85, MW86, MW87, and MW89 at the Drake Property (Figure 4.2); the deeper groundwater elevation measured in remediation well MW101 reflects the dynamic conditions associated with remedial pumping.
- Deep Zone groundwater elevations ranged from 312.91 feet in monitoring well MW78 (Figure 4.3) to 315.72 feet in monitoring well MW26. The range of groundwater elevations observed in the Deep Zone equilibrates at higher elevations than the range of elevations observed in the Intermediate Zone outside the area where mounded groundwater conditions exist, even though the Deep Zone monitoring wells are screened at greater depth intervals than the Intermediate Zone monitoring wells. During Fourth Quarter 2012, an upward vertical gradient of 2.12 feet was measured between Intermediate Zone monitoring well MW64 (elevation 314.33 feet). Similarly, a slight vertical upward gradient of 0.26 feet was recorded between Intermediate Zone monitoring well MW77 (elevation 312.65 feet) and Deep Zone monitoring well MW78 (elevation 312.91 feet). These conditions signify confined or semiconfined conditions within the Deep Zone and substantiate evidence of an aquitard between the two water-bearing zones.

The following monitoring wells potentially intersect both the Intermediate and Shallow Zones: MW08, MW24, MW25, MW27, MW28, MW29, MW37, and MW38. Groundwater elevation data associated with

those wells were disregarded in the calculation of Fourth Quarter 2012 groundwater contours for the Shallow and Intermediate Zones. SoundEarth calculated the following hydraulic gradients for each zone:

- Hydraulic gradients in the Shallow Zone range from 0.015 feet per foot between wells MW54 and MW79 to 0.030 feet per foot between wells MW05 and MW79, toward the southeast.
- The hydraulic gradient in the Intermediate Zone outside the mounded conditions is approximately 0.003 feet per foot between wells MW58 and MW84, toward the south.
- Hydraulic gradients within the mounded portion of the Intermediate Zone range from 0.00 at the crest of the mound to 0.78 feet per foot between wells MW32 and MW20, toward the south, perpendicular to the groundwater contours.
- The hydraulic gradient in the Deep Zone is approximately 0.007 feet per foot between wells MW26 and MW78, toward the southeast, perpendicular to the contours.

Groundwater elevation data for former remediation well MW10 and monitoring well MW33 were excluded from the calculation of the Intermediate Zone contours presented on Figure 4.2. The groundwater elevation in former remediation well MW10 is anomalously deep compared with groundwater elevations in monitoring wells MW09, MW20, MW22, and MW24. Groundwater elevation data for monitoring well MW33 was excluded from the calculation of the Intermediate Zone contours; water detected in the bottom of well MW33 does not intersect the well screen and therefore is not representative of the groundwater table measured on December 3, 2012. Although groundwater elevation data for monitoring wells MW08, MW24, MW25, MW27, MW28, MW29, MW37, and MW38 were excluded from calculation of Intermediate Zone groundwater contours, groundwater analytical results for those wells historically have been representative of Intermediate Zone conditions for the purpose of evaluating the lateral distribution of petroleum hydrocarbons. Specifically, monitoring wells where petroleum hydrocarbons have never been detected (monitoring wells MW37 and MW38) define the northeast lateral extent of contamination in the Intermediate Zone, regardless of groundwater elevation. Furthermore, in cases where petroleum hydrocarbons are detected in these wells, historical maximum concentrations of petroleum hydrocarbons generally coincide with groundwater elevations deeper than 340 to 345 feet (monitoring wells MW08, MW24, MW27, and MW29), consistent with the hypothesis that the Intermediate Zone remains the primary zone of contaminant transport.

Laboratory analytical results from the monitoring event indicated the following (Tables 1, 2, 3, and 4).

Shallow Zone

No groundwater samples were collected from the Shallow Zone during Fourth Quarter 2012.

Intermediate Zone

- LNAPL conditions were not observed during Fourth Quarter 2012. Concentrations of GRPH exceeded the cleanup level in monitoring wells MW09, MW10, MW20, MW27, MW32, MW48, MW84, and MW86.
- Concentrations of benzene exceeded the cleanup level in monitoring wells MW09, MW20, MW27, MW32, and MW48.

- Concentrations of toluene exceeded the cleanup level in monitoring well MW32.
- Concentrations of total xylenes exceeded the cleanup level in monitoring wells MW27, MW32, and MW48.
- Concentrations of GRPH and/or BTEX compounds either were not detected or were below the cleanup level in groundwater samples collected from monitoring wells MW15, MW22, MW49, MW51, MW53, MW55, MW56, MW58, MW59, MW60, MW63, MW65, MW66, MW69, MW70, MW77, MW85, and MW89.
- Concentrations of the fuel additives MTBE were not detected in the selected groundwater samples collected from monitoring wells at the Drake Property: MW65, MW69, MW70, MW77, MW84, MW85, MW86, and MW89. MTBE has been detected in Intermediate Zone groundwater samples collected from monitoring wells MW73 and MW74, located south and downgradient from the Drake Property (Table3).

The subsurface distributions of GRPH and benzene in Intermediate Zone groundwater beneath the southern 120 feet of the Interim Remedial Action Project Area are illustrated on Figures 5.1 and 5.2, respectively, in relation to surface features and approximate property boundaries. Because the Fourth Quarter 2012 monitoring event was limited in scope, insufficient data were collected to illustrate the subsurface distributions of GRPH and benzene throughout the entire Interim Remedial Action Project Area. Therefore, Figures 5.1 and 5.2 focus on the southern 120 feet of the Interim Remedial Action Project Area, including the leading edge of the ongoing remedial investigation along the southern boundary of the Drake Property. Figures 5.1 and 5.2 were prepared using ESRI ArcGIS 3D Analyst software (version 9.3.1) and RockWare, Inc. Surfer software (version 8.2) to map three-dimensional surfaces according to the methods described in Attachment A.

Actual concentrations may vary from those illustrated on Figures 5.1 and 5.2 due to lithology, stratigraphy, well screen interval depths, and/or spacing between individual monitoring wells.

Deep Zone

No groundwater samples were collected from the Deep Zone during Fourth Quarter 2012.

DATA QUALITY REVIEW

The scope of groundwater monitoring included the collection and laboratory analysis of 26 groundwater samples and 8 QA/QC samples. SoundEarth 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 QA/QC program for this sampling event included collection and analysis of the following samples:

The laboratory prepared four trip blanks for this sampling event. The two trip blanks that accompanied samples collected from the TOC Property and the Drake Property were submitted for analysis of GRPH by Method NWTPH-Gx and BTEX by EPA Method 8021B or 8260C. The trip blank that accompanied samples collected from the Drake Property also was analyzed for MTBE and EDC by EPA Method 8260C.

- SoundEarth collected a sample of the rinsate water poured through the bladder pump that was used at monitoring well MW86 (01176-20121203-R1). SoundEarth submitted this sample for analysis of GRPH by Method NWTPH-Gx and for BTEX, MTBE, and EDC by EPA Method 8260C.
- SoundEarth collected field duplicate sample MW999-20121205-PE from monitoring well MW09.
 SoundEarth submitted this sample for analysis of GRPH by Method NWTPH-Gx and of BTEX by EPA Method 8021B. The sample and the field duplicate sample were collected using the same equipment (peristaltic pump).
- SoundEarth collected samples and method duplicate samples from the following monitoring wells with the objective of comparing the effect(s), if any, of sample method on the variability of analytical results:
 - MW09, using a peristaltic pump, a bladder pump, and a bailer (sample MW09-20121205-PE, and method duplicate samples MW09-20121204-BL and MW09-20121205-BA). SoundEarth submitted all three samples for GRPH and BTEX analyses.
 - MW32 using its dedicated pneumatic pump (sample MW32-20121205-PN and method duplicate sample MW32-20121205-PN2). SoundEarth submitted both samples for GRPH and BTEX analyses.
 - MW86 using a bladder pump (sample MW86-20121204-BL and method duplicate sample MW86-20121204-BL2). SoundEarth submitted both samples for GRPH, BTEX and MTBE analyses.

Analytical results for field quality assurance samples are summarized on Table 4. In the event that a QA/QC result for any chemical of concern exceeded the sample result, and the QA/QC sample was collected using the same method as the sample, then the higher of the two values is reported on Tables 1 and 2; however, if the sample collection methods differed, then the primary sample results are reported on Tables 1 and 2, regardless of the QA/QC analytical result. Analytical results for laboratory quality assurance samples are included in the laboratory analytical reports, which are appended to this report (Attachment B). The results of the QA/QC review indicated the following:

- GRPH, BTEX, and MTBE constituents were not detected in the trip blanks associated with the groundwater samples collected from the Drake Property and the TOC Property. Laboratory trip blanks serve as an indicator of the integrity of sample handling and shipping procedures.
- GRPH and BTEX constituents were not detected in the rinsate blank associated with the groundwater samples collected using bladder pumps, in particular the bladder pump specified for deployment in monitoring well MW86 at the Drake Property. Rinsate blanks serve as an indicator of the integrity of equipment decontamination procedures.
- GRPH and BTEX detection limits for groundwater samples collected from monitoring wells MW09, MW32, and MW48 were elevated because of sample dilution. With the exception of toluene in monitoring well MW48, each of the GRPH and BTEX concentrations for these groundwater samples exceeded the elevated laboratory detection limits. Toluene was not detected in the groundwater sample collected from monitoring well MW48, and the elevated toluene detection limit of 40 micrograms per liter (µg/L) was less than the cleanup level of 1,000

 μ g/L. Therefore, the analytical results for the groundwater samples and field duplicates are considered usable to meet the objectives of the monitoring event.

- The relative percent difference calculations (RPD) for each analyte that was detected were within acceptable limits (less than 20 percent) for the field duplicate samples collected by peristaltic pump from monitoring well MW09, by pneumatic pump from monitoring well MW32, and by bladder pump from monitoring well MW86. The field duplicate sample RPD serves as a measure of the reproducibility of sampling and analysis procedures.
- The analytical results for the sample method duplicates (Table 4) indicated the following:
 - Consistent with First Quarter 2012 results, sampling by bailer resulted in understated GRPH and BTEX concentrations in groundwater (method duplicate sample MW09-20121205-BA), compared to sampling by peristaltic pump (sample MW09-20121205-PE and method duplicate sample MW999-20121205-PE). RPDs for samples collected by bailer compared with peristaltic pump ranged between 8 and 28 percent.
 - Sampling by peristaltic pump (sample MW09-20121205-PE and field duplicate sample MW999-20121205-PE) resulted in understated GRPH and BTEX concentrations in groundwater, compared to sampling by bladder pump (method duplicate samples MW09-20121204-BL). RPDs for samples collected by bladder pump compared with peristaltic pump ranged between 14 and 30 percent.
 - Reported concentrations of GRPH and BTEX in groundwater samples collected using bladder pump may be overstated due to elevated retention of volatiles compared with other sample collection methods.
- Low-flow criteria for turbidity were not achieved prior to collecting groundwater samples from monitoring wells MW56, MW59, and MW60, even though the wells were purged at minimum pump flow rates. Turbidity at the time of sample collection ranged from 26.8 to 64.2 NTU, and final turbidity readings varied more than plus or minus 10 percent in each case. Therefore, the reported concentrations of GRPH and BTEX in the groundwater samples collected from MW56, MW59, and MW60 may be overstated or exaggerated due to elevated/unstable turbidity.
- Although low-flow criteria for stability of turbidity readings were met prior to collection of groundwater samples from monitoring wells MW09, MW63, MW85, and MW86, final turbidity readings ranged from 12.4 to 483 NTU. Therefore, the reported concentrations of GRPH and BTEX in the groundwater samples collected from MW09, MW63, MW85, and MW86 may be overstated or exaggerated due to elevated turbidity.
- Monitoring wells MW09, MW10, MW20, MW49, MW51, and MW53 ran dry prior to removal of three well-volumes of groundwater. SoundEarth allowed the wells to recharge and collected samples the same day. The groundwater analytical data associated with these wells should be qualified as screening results appropriate for assessing the absence of petroleum hydrocarbons in groundwater as follows:
 - In wells where GRPH and BTEX are not detected (MW49, MW51, and MW53), the GRPH and benzene data are assumed to be representative of unimpaired groundwater quality,

primarily because the groundwater cleanup levels for GRPH and BTEX are between 5 and 1,000 times (500 and 100,000 percent) their respective laboratory reporting limits.

The remaining QA/QC criteria are acceptable for the groundwater samples; therefore, no action is required and analytical results meet the project objectives. Copies of the laboratory analytical reports are provided in Attachment B.

CONCLUSIONS

SoundEarth draws the following conclusions from an evaluation of the data obtained during the monitoring event:

- The overall directions of groundwater flow through the Shallow, Intermediate, and Deep Zones are toward the south-southeast. Although groundwater flow directions appear to radiate away from the center of the mounded groundwater conditions in the Intermediate Zone, the distribution of petroleum hydrocarbons in Intermediate Zone groundwater, relative to the former UST excavation at the TOC Property, is consistent with the overall direction of groundwater flow toward the south and southeast.
- Mounded groundwater conditions within the Intermediate Zone appear to be centered beneath the southern portion of the former UST excavation. The location and elevation of the mounded conditions, and the vertical and lateral distributions of petroleum hydrocarbons, support the working hypothesis that the former UST excavation cross-connects with the Shallow Zone and portions of the Intermediate Zone.
- The current conceptual model for the Interim Remedial Action Project Area assumes the following:
 - The former UST excavation intersects the Shallow Zone and granular strata within the Upper Intermediate Zone. Seasonal diminishment of saturated conditions within the Shallow Zone facilitates vertical downward migration of petroleum hydrocarbons into the Intermediate Zone where they become adsorbed to the soil formation. Seasonal recharge of the Shallow Zone traps and surcharges the adsorbed petroleum hydrocarbons. One basis for this working hypothesis is the former occurrence of LNAPL in monitoring well MW48, which is located more than 180 feet from the southern end of the former UST excavation, and at elevations 308 and 314 feet, over 34 feet deeper than the bottom of the former UST excavation.
 - Intermittent saturation, soil adsorption, wicking, and anisotropic stratigraphy contribute to the lateral and downward vertical migration of petroleum hydrocarbons through the icemelt and water-laid glacial deposits of the Intermediate Zone, while the vertical upward gradient between the Intermediate Zone and Deep Zone inhibits the descent of petroleum hydrocarbons through the lower reaches of the Intermediate Zone.
- The extent of petroleum hydrocarbons in groundwater south of the Drake Property remains the focus of an ongoing remedial investigation. Currently, the southernmost line of Intermediate Zone monitoring wells is defined, from west to east, by MW52, MW75, MW51, MW89, MW84, MW86, MW85, MW77, and MW87. During Fourth Quarter 2012, concentrations of GRPH exceeded the cleanup limit in monitoring wells MW84 and MW86 and were detected below the

cleanup level in monitoring wells MW51, MW77, MW85, and MW89 (Figure 5.1). Concentrations of benzene were detected below their respective cleanup levels in monitoring wells MW51, MW77, MW84, MW85, MW86, and MW89 (Figure 5.2). Further remedial investigation of Intermediate Zone groundwater south of and downgradient from monitoring wells MW84, MW85, and MW86 is pending.

Based on an evaluation of the analytical results for method duplicate samples collected from monitoring well MW09 using a bladder pump, a peristaltic pump, and a bailer, all three sampling methods are protective of human health and the environment. Bladder pumps appear to be the most conservatively protective sampling equipment for documenting compliance of GRPH and benzene concentrations with groundwater cleanup levels. Therefore, around the western and southern perimeter of the monitoring well network, where demonstration of compliance is crucial, groundwater samples are collected using bladder pumps (monitoring wells MW55, MW60, MW75, MW85, MW86, and MW89). A more detailed analysis of sample collection methods is presented in the First Quarter 2012 Groundwater Monitoring Report (SoundEarth 2012). SoundEarth will continue to collect groundwater samples using bailers and peristaltic pumps for screening and performance monitoring purposes, and using bladder pumps for crucial compliance purposes, SoundEarth will also continue to collect method duplicate samples for data qualification purposes.

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WORK PLANNED

In First Quarter 2013, SoundEarth will conduct a comprehensive groundwater monitoring event at the Interim Remedial Action Work Area in accordance with the IRAWP. The results will be presented in a formal groundwater monitoring report.

CLOSING

SoundEarth appreciates the opportunity to work with you on this project. Please contact the undersigned at (206) 306-1900 if you have any questions or require additional information.

Respectfully,

SoundEarth Strategies, Inc.

Deborah H. Gardner, LG #1243 Associate Geologist

Ryan K. Bixby, LG #1691 Environmental Division President

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FIGURES

















TABLES



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
	Section of the sectio	31 1 1 m		SHAL	LOW WATER-B	EARING ZONE	(0 TO 20 FEET	BGS)	and the second	chul chul			
		03/08/12	Peristaltic Pump	346.04	<100	<1	<1	<1	<3			-	-
		06/04/12	Not Sampled	347.51			-						1
MW02	TOC	09/10/12	Not Sampled	345.05				-	-				
	and a strand strand	12/03/12	Not Sampled	346.09									-
		03/08/12	Peristaltic Pump	348.79	<100	<1	<1	<1	<3			-	-
10000		06/04/12	Not Sampled	350.28			-	11	-			-	
MW03	TOC	09/10/12	Not Sampled	347.24			1	-					
	ľ l	12/03/12	Not Sampled	349.02								-	-
		03/07/12	Peristaltic Pump	347.68	<100	<1	<1	1.5	<3				
	DOWN (FORM)	06/04/12	Not Sampled	351.61									
MW04	ROW (56th)	09/10/12	Not Sampled	347.71	-								-
		12/03/12	Not Sampled	Dry		-							
		03/08/12	Peristaltic Pump	351.31	<100	<1	<1	<1	12				-
MANOE	DOW (242-4)	06/04/12	Not Sampled	353.37									
MW05	ROW (242nd)	09/10/12	Not Sampled	349.26									
		12/03/12	Not Sampled	349.15									
		03/08/12	Peristaltic Pump	345.99	<100	<1	<1	<1	<3			-	
MW06	тос	06/04/12	Not Sampled	347.04	-								
1010006	TUC	09/10/12	Not Sampled	344.17		-							
		12/03/12	Not Sampled	344.21		-							
		03/08/12	Peristaltic Pump	346.05	<100	<1	<1	<1	<3				
MW12	ROW (56th)	06/04/12	Not Sampled	347.52		-			-				
1010012	KOW (Soli)	09/10/12	Not Sampled	344.97		-							
		12/03/12	Not Sampled	345.87									
		03/09/12	Peristaltic Pump	345.34	<100	<1	<1	<1	<3				
MW19	тос	06/04/12	Not Sampled	345.75			-		-				-
1010015	100	09/10/12	Not Sampled	343.25	-	-	-	-	-	-		-	-
		12/03/12	Not Sampled	345.18		-				-		-	
		03/09/12	Peristaltic Pump	345.56	<100	<1	<1	<1	<3	1		-	
MW34	тос	06/04/12	Not Sampled	346.40				-		-		-	
1111134	100	09/10/12	Not Sampled	342.43		-		-		-	-	-	-
	the second s	12/03/12	Not Sampled	349.01	-	-							-
		03/07/12	Peristaltic Pump	345.25	<100	<1	<1	<1	<3	-			
MW54	TOC/Farmasonis	06/04/12	Not Sampled	346.54		-	-						
	1 SC/raimasonis	09/10/12	Not Sampled	344.32			-			-			
		12/03/12	Not Sampled	344.99	-				-		-		-
		03/08/12	Peristaltic Pump	346.68	<100	<1	<1	<1	<3	1	-	-	
MW61	ROW (56th)	06/04/12	Not Sampled	347.18	-	-			-		·		
IN TOT	(OV (SOUI)	09/10/12	Not Sampled	345.13			-			-			
	a and a second	12/03/12	Not Sampled	349.27	-	-			-			-	
CA Metho	od A Cleanup Level ⁶	1.5.1	in the second second	and the second	1,000/800ª	5	1,000	700	1,000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
S. Renned				SHAL	LOW WATER-B	EARING ZONE	(0 TO 20 FEET	BGS)	and the second second	As a lot of the second	State and	A CONTRACTOR	
		03/08/12	Peristaltic Pump	348.50	<100	<1	<1	<1	<3	-		-	
		06/04/12	Not Sampled	349.73									
MW62	ROW (56th)	09/10/12	Not Sampled	345.96			-	-				-	
		12/03/12	Not Sampled	350.82								-	-
		03/06/12	Peristaltic Pump	341.33	<100	<1	<1	<1	<3	-	-		
		06/04/12	Not Sampled	343.12				-					
MW67	Drake	09/10/12	Not Sampled	340.54		-							
		12/03/12	Not Sampled	340.34								1	
		03/06/12	Peristaltic Pump	341.04	<100	<1	<1	<1	<3		-		
MALICO	Durka	06/04/12	Not Sampled	342.83					-				
MW68	Drake	09/10/12	Not Sampled	340.23		-							-
		12/03/12	Not Sampled	340.24	-				-				-
		03/07/12	Peristaltic Pump	340.64	<100	<1	<1	<1	<3	1			-
141170	TOC/Fermania	06/04/12	Not Sampled	341.25									
MW79	TOC/Farmasonis	09/10/12	Not Sampled	337.12									
		12/03/12	Not Sampled	339.93									
	An enderstein der		Sector March 1	INTERMEDIATE 2	ONE WELLS TH	HAT INTERSECT	SHALLOW ZO	NE CONDITION	s			AND IN THE	
	1 1	03/08/12	Peristaltic Pump	344.93	<100	<1	<1	<1	<3				-
		06/04/12	Not Sampled	347.73								-	-
MW08	ROW (56th)	09/10/12	Not Sampled	338.85									1
		12/03/12	Not Sampled	339.91									
		03/09/12	Peristaltic Pump	340.84	4,400	7.3	39	39	770		-		-
		06/04/12	Not Sampled	347.67									
MW24	TOC	09/10/12	Not Sampled	336.66									
		12/03/12	Not Sampled	337.40								/	
		03/05/12	Not Sampled			-	Wel	lhead	Ina	cess	ible		
		06/04/12	Not Sampled	340.02							-		-
MW25	TOC	09/10/12	Not Sampled	330.73								1	
		12/03/12	Not Sampled	328.61									-
		03/09/12	Peristaltic Pump	343.24	23,000	8.5	94	620	3,900			-	
		06/05/12	Peristaltic Pump	345.38	23,000	7.3	110	720	4,600			-	
MW27	TOC	09/10/12	Not Sampled	Dry									
		12/05/12	Pneumatic Pump	343.50	11,000	5.8	69	220	2,800			-	
		03/05/12	Not Sampled				Wel			cess	ible		
		06/04/12	Not Sampled	331.36			-			-	-	-	-
MW28	TOC	09/10/12	Not Sampled	330.72						1			
		12/03/12	Not Sampled	330.56	-				1			-	-
		03/09/12	Peristaltic Pump	345.21	6,700	1.5	2.7	220	840				-
		06/04/12	Not Sampled	346.50							-		-
MW29	TOC	09/10/12	Not Sampled	340.67									
		12/03/12	Not Sampled	345.17									-
	od A Cleanup Level ⁶	34/00/24	1		1,000/800°	5	1.000	700	1,000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ^s
				INTERMEDIATE	ZONE WELLS TH	AT INTERSECT	SHALLOW ZO	NE CONDITION	S	Artes of the second	T Z Corrector	- HA-7 18	
		03/09/12	Peristaltic Pump	339.56	<100	<1	<1	<1	<3				
	TOC	06/04/12	Not Sampled	342.06			-						
MW37	TOC	09/10/12	Not Sampled	334.97	-	-	-		-		-		
		12/03/12	Not Sampled	336.69			-				1		
		03/08/12	Peristaltic Pump	345.17	<100	<1	<1	<1	<3			-	
		06/04/12	Not Sampled	346.88		-						-	
MW38	TOC	09/10/12	Not Sampled	341.71	-	-		-					-
		12/03/12	Not Sampled	343.08		-							
				201 201 202	RMEDIATE WA	TER-BEARING	ZONE (20 TO 3	0 FEET BGS)	and the state	100 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1 2 N. C T. W.	C.M. M. MOREN	
		03/07/12	Peristaltic Pump	339.58	<100	<1	<1	<1	<3				
MILLOO	TOC/Fermine	06/04/12	Not Sampled	340.46		-		-					
MW80	TOC/Farmasonis	09/10/12	Not Sampled	336.60				-					
		12/03/12	Not Sampled	338.47		-	-	-	-				-
		03/07/12	Peristaltic Pump	327.07	<100	<1	<1	<1	<3				-
14400	TOC/Formation	06/04/12	Not Sampled	326.66									
MW82	TOC/Farmasonis	09/10/12	Not Sampled	326.02									
		12/03/12	Not Sampled	326.14			-						
		03/06/12	Peristaltic Pump	336.76	<100	<1	<1	<1	<3				
MW88	Drake	06/04/12	Not Sampled	336.54									
1010088	Drake	09/10/12	Not Sampled	331.62									
		12/03/12	Not Sampled	332.63		-							
		03/06/12	Bailer	340.08	<100	<1	<1	<1	<3			50.6	1.15
MW100	TOC/Farmasonis	06/04/12	Not Sampled	340.20									
10100	TOC/Farmasonis	09/10/12	Not Sampled	336.63		-				-			-
		12/03/12	Not Sampled	338.33		-		· · ·					-
1.1		Part Dr		INTERM	EDIATE WATER	-BEARING ZON	IE (20 TO 60 FE	ET BGS)		and the second second	and a second	100 TO 100	10 102
		03/07/12	Peristaltic Pump	336.97	11,000	30	76	370	2,400			-	-
1000	TOC	06/06/12	Peristaltic Pump	338.91	6,400	6.4	22	180	1,000			-	
MW09	тос	09/11/12	Peristaltic Pump	333.28	3,300	21	21	130	750				
		12/04/12	Bladder Pump	333.25	5,500	28	25	73	720			:	
		03/07/12	Peristaltic Pump	330.52	1,400	62	7.3	27	89				
MW10	тос	06/06/12	Peristaltic Pump	331.50	830	11	5.1	28	84	-			
INIMATO	100	09/11/12	Peristaltic Pump	329.71	1,500	38	<10	110	86				
		12/05/12	Bailer	323.38	4,900	4.6	<1	19	63	-			
		03/07/12	Not Sampled	Dry			A. 4		Dry				1
MW11	тос	06/06/12	Not Sampled	339.39		-	-	-		-		-	
NINTT	100	09/10/12	Not Sampled	337.25		-		-		-			
		12/03/12	Not Sampled	336.65									
TCA Meth	od A Cleanup Level ⁶				1,000/800°	5	1,000	700	1,000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

		AN LE		Groundwater Elevation				Ethyl-	Total			Total	Dissolved
Well ID	Property Owner	Date	Sample Method	(feet)1	GRPH ²	Benzene ³	Toluene ³	benzene ³	Xylenes ³	MTBE ⁴	EDC ⁴	Lead ⁵	Lead ⁵
112		and the second s		INTERMEDIATE	WATER-BEAR	NG ZONE (20	TO 60 FEET BG	5), CONTINUED	Field Street		with the state		and the state of the
	Contraction of the second s	03/05/12	Not Sampled	Dry			1000		Dry	100			
MW13	ROW (56th)	06/04/12	Not Sampled	Dry		1000			Dry			and the second	
1010013	KOW (Solin)	09/10/12	Not Sampled	Dry	and the second second			A	Dry				
		12/03/12	Not Sampled	Dry	Carl Carl		10	1 1 1 L	Dry				
		03/08/12	Peristaltic Pump	324.38	8,200	<5	<5	88	480		1		
MW15	тос	06/04/12	Peristaltic Pump	323.81				LNA	PL (Heavy She	een)		1000	
10110112	100	09/12/12	Pneumatic Pump	321.39	2,300	3.23	<5	14	330				
		12/05/12	Pneumatic Pump	321.04	300	<1	1.8	<1	9.7		-		
		03/05/12	Not Sampled	Dry	1.1.1.1.1.1.1	1-1-10-1 T			Dry		100		
LANIAC	0011/242-4	06/04/12	Not Sampled	319.94									
MW16	ROW (242nd)	09/10/12	Not Sampled	317.85									
		12/03/12	Not Sampled	Dry	_	- N.	1 1 K		Dry				
		03/07/12	Peristaltic Pump	329.12	5,900	43	<10	110	720	-			-
		06/04/12	Not Sampled	324.46		-							
MW18	TOC	09/10/12	Not Sampled	324.57									
		12/03/12	Not Sampled	329.79									
		03/09/12	Peristaltic Pump	330.63	5,800	200	57	310	480				
		06/06/12	Peristaltic Pump	332.07	7,800	220	250	300	910				
MW20	TOC	09/11/12	Peristaltic Pump	329.34	5,000	100	21	210	450				
		12/05/12	Bailer	327.07	840	<1	3	5.9	14				
		03/05/12	Not Sampled				Wel	lhead	Inac	cess	ible		
		06/06/12	Peristaltic Pump	328.54	<100	<1	<1	<1	<3				-
MW22	TOC	09/11/12	Peristaltic Pump	329.01	<100	<1	<1	<1	<3				
		12/04/12	Peristaltic Pump	330.36	<100	<1	<1	<1	<3				
		03/05/12	Not Sampled	318.25				Insuffici	ent water for s	ampling.			
		06/04/12	Not Sampled	318.49		-							
MW23	TOC	09/10/12	Not Sampled	317.98	-								
		12/03/12	Not Sampled	318.02						-			
		03/07/12	Bailer	320.74	2,800	7.2	5.2	23	400	<1	<1	26.5	24.6
1210000000		06/05/12	Bailer	322.64	8,400	21	8.3	18	880				
MW31	TOC/Farmasonis	09/10/12	Not Sampled	Dry		-				-			1200
		12/03/12	Not Sampled	Dry									-
		03/09/12	Peristaltic Pump	337.16	120	3.1	11	1.1	16		-		-
		06/06/12	Peristaltic Pump	338.29	4,300	14	160	87	650				-
MW32	TOC	09/11/12	Pneumatic Pump	335.86	16,000	170	330	470	3,000		-	-	-
		12/05/12	Pneumatic Pump	335.65	33,000	29	790	920	6,900	-	-		-
		03/05/12	Not Sampled	323.94	33,000	23	150		ent water for s			-	
		06/04/12	Not Sampled	324.02		-			ent water for s				_
MW33	TOC	09/10/12	Not Sampled	323.80			-		ent water for s				
		12/03/12	Not Sampled	323.80					ent water for s				
		03/05/12	Not Sampled	525.86 Dry	100000			msumer	D r y	amping.	1		
	4	06/04/12	Not Sampled	Dry		-	the second second			-			and the second
MW35	TOC	09/10/12		Dry			-		Dry	CALCE IN COM			
			Not Sampled	319.19		-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	In suff -1	D r y	ampling		1. 1. 1.	
		12/03/12	Not Sampled	319.19	1,000/800ª	5	1,000	700	ent water for s	ampling.	5		-



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
		a starter and		INTERMEDIATE	WATER-BEAR		TO 60 FEET BGS), CONTINUED			State State		
		03/09/12	Bailer	316.38	<100	<1	<1	<1	<3		3 D-0	-	-
		06/04/12	Not Sampled	316.48	-		-				-	-	
MW36	TOC	09/10/12	Not Sampled	315.19	-								
	1.1.1	12/03/12	Not Sampled	315.53				-					
		03/05/12	Not Sampled	316.13		2000	1.1.1.1	Insuffici	ent water for sa	ampling.	1	ly l	
	TOCIT	06/04/12	Not Sampled	316.24						-			
MW41	TOC/Farmasonis	09/10/12	Not Sampled	Dry	1. I	1.1.1.1	1.		Dry				
		12/03/12	Not Sampled	321.64								-	-
		03/05/12	Not Sampled	Dry				1.00	Dry			1.1.2	
101/10	TOCIC	06/04/12	Not Sampled	Dry				1000	Dry				
MW42	TOC/Farmasonis	09/10/12	Not Sampled	316.58	10 C			Not s	ampled; just ga	uged.			
		12/03/12	Not Sampled	Dry	1				Dry				
		03/05/12	Not Sampled	Dry					Dry				
	2011/2011	06/04/12	Not Sampled	Dry				1.00	Dry				
MW43	ROW (56th)	09/10/12	Not Sampled	Dry	5 C	· · · · · · · · · · · · · · · · · · ·			Dry				
		12/03/12	Not Sampled	Dry					Dry				
		03/05/12	Not Sampled	Dry					Dry				
	DOW/FOLD	06/04/12	Not Sampled	Dry					Dry				
MW44	ROW (56th)	09/10/12	Not Sampled	Dry					Dry				
		12/03/12	Not Sampled	Dry					Dry				
		03/05/12	Not Sampled	318.47				Insuffici	ent water for sa	ampling.			
	DOWN (ECH)	06/06/12	Bailer	320.06	6,900	33	7.6	95	1,300				-
MW45	ROW (56th)	09/11/12	Bailer	319.05	4,700	10	5.7	<1	540			-	
		12/03/12	Not Sampled	317.69				Insuffici	ent water for s	ampling.			100
		03/05/12	Not Sampled	314.12				Insuffici	ent water for sa	ampling.			1
MANAG	DOWN (FCAL)	06/04/12	Not Sampled	316.14		-							
MW46	ROW (56th)	09/10/12	Not Sampled	315.05		-					-		-
		12/03/12	Not Sampled	314.66		1 (m)			-		-		
		03/05/12	Not Sampled	Dry		1.1		1	Dry				
	DOW (FOR)	06/04/12	Not Sampled	314.34								-	
MW47	ROW (56th)	09/10/12	Not Sampled	Dry	1		Coloring 14	No. 1	Dry				
		12/03/12	Not Sampled	Dry		1 10 10	1 - A. C.	Wards of	Dry				
		03/08/12	Bailer	311.86	37,000	220	140	770	5,400 ^{ve}	-			
MALLAG	DOWN (FCH)	06/05/12	Bailer	314.60	14,000	<5	13	210	1,900				
MW48	ROW (56th)	09/11/12	Bailer	312.94	24,000	300	130	550	4,300			-	
		12/04/12	Bailer	312.65	21,000	62	<40	390	3,000				
TCA Meth	od A Cleanup Level ⁶	1000	1.11.1		1,000/800*	5	1,000	700	1,000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
TT CH TE	Thoparty office	Dutt	- sumple meaned	INTERMEDIATE			Name and a state of the state o	Card Deside the Deside of the Control of the Contro		miller		1	
		03/08/12	Bladder Pump	313.01	<100	<1	<1	<1	<3	-		-	-
		06/05/12	Bailer	315.68	<100	<1	<1	<1	<3				
MW49	ROW (56th)	09/11/12	Bailer	313.96	<100	1.2	<1	<1	<3				
		12/04/12	Bailer	313.81	<100	<1	<1	<1	<3	-			
		03/08/12	Bailer	327.08	<100	<1	<1	<1	<3	-			
	DOM/FORD	06/05/12	Bailer	329.06	<100	<1	<1	<1	<3	-			
MW50	ROW (56th)	09/11/12	Bailer	326.45	<100	<1	<1	<1	<3				
		12/03/12	Not Sampled	Dry	1. · · · · · · · · · · · · · · · · · · ·		1		Dry			1.1	
		03/08/12	Bailer	310.89	<100	<1	<1	<1	<3				
		06/05/12	Bailer	312.85	<100	<1	<1	<1	<3				
MW51	ROW (56th)	09/11/12	Bailer	311.36	<100	<1	<1	<1	<3				
		12/04/12	Bailer	311.56	<100	<1	<1	<1	<3				
		03/05/12	Not Sampled	Dry					Dry				
		06/06/12	Bailer	314.17	<100	<1	<1	<1	<3				-
MW52	ROW (56th)	09/10/12	Not Sampled	312.49		L		Insuffici	ent water for s	ampling.	•		
		12/03/12	Not Sampled	312.61				Insuffici	ent water for s	ampling.			
		03/07/12	Bailer	316.30	<100	<1	<1	<1	<3				
	0000/5500	06/05/12	Bailer	318.73	<100	<1	<1	<1	<3				
MW53	ROW (56th)	09/11/12	Bailer	316.78	<100	<1	<1	<1	<3				
		12/04/12	Bailer	315.72	<100	<1	<1	<1	<3				
		03/08/12	Bladder Pump	312.40	<100	<1	<1	<1	<3				
MW55	ROW (56th)	06/06/12	Bladder Pump	315.82	<100	<1	<1	<1	<3				
MW 55	ROW (S6th)	09/12/12	Bladder Pump	313.48	<100	<1	<1	<1	<3				
		12/05/12	Bladder Pump	312.80	<100	<1	<1	<1	<3				
		03/06/12	Bladder Pump	312.92	<100	<1	<1	<1	<3				
MW56	TOC/Farmanania	06/05/12	Bladder Pump	315.30	<100	<1	<1	<1	<3				
10100.20	TOC/Farmasonis	09/12/12	Bladder Pump	313.73	<100	<1	<1	<1	<3		1 - I		-
	the second se	12/05/12	Bladder Pump	313.31	<100	<1	<1	<1	<3				
		03/07/12	Bailer	311.96	2,100	9.7	2.3	87	160			-	
MW57	TOC/Farmasonis	06/04/12	Not Sampled	314.46									
IVIVV5/	TOC/Parmasonis	09/10/12	Not Sampled	312.83									
Haller		12/03/12	Not Sampled	313.09	-			-	-				
TCA Metho	od A Cleanup Level ⁶				1,000/800*	5	1,000	700	1,000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
1	- milder			INTERMEDIATE	WATER-BEAR	NG ZONE (20	TO 60 FEET BGS), CONTINUED			a hard a star in	a la contraction	COVER DO.
		03/07/12	Bladder Pump	311.69	<100	<1	<1	<1	<3	-			
MW58	TOC/Fermanenia	06/05/12	Bladder Pump	314.10	<100	<1	<1	<1	<3	-			-
10100 28	TOC/Farmasonis	09/11/12	Bladder Pump	312.54	<100	<1	<1	<1	<3	-			-
	in the second	12/05/12	Bladder Pump	312.13	<100	<1	<1	<1	<3				
		03/06/12	Bladder Pump	312.86	<100	<1	<1	<1	<3				
MW59	TOC/Farmasonis	06/05/12	Bladder Pump	315.23	<100	<1	<1	<1	<3				-
10100 59	TOC/Farmasonis	09/12/12	Bladder Pump	313.66	<100	<1	<1	<1	<3				
		12/05/12	Bladder Pump	313.28	<100	<1	<1	<1	<3	-			
		03/08/12	Bladder Pump	314.58	<100	<1	<1	<1	<3			<1	<1
	DOM//ECH)	06/06/12	Bladder Pump	316.83	<100	<1	<1	<1	<3	-			
MW60	ROW (56th)	09/12/12	Bladder Pump	315.42	<100	<1	<1	<1	<3				
		12/05/12	Bladder Pump	314.54	<100	<1	<1	<1	<3				
		03/08/12	Bladder Pump	311.80	<100	<1	<1	<1	<3				
	DOUL/DOUL)	06/05/12	Bladder Pump	314.21	<100	<1	<1	<1	<3				-
MW63	ROW (56th)	09/11/12	Bladder Pump	312.55	<100	<1	<1	<1	<3				
		12/04/12	Bladder Pump	312.21	<100	<1	<1	<1	<3				
		03/07/12	Bladder Pump	310.98	<100	<1	<1	<1	<3	<1	<1		
		06/05/12	Bailer	313.36	<100	<1	<1	<1	<3	<1			
MW65	Drake	09/11/12	Bladder Pump	311.49	<100	<1	<1	<1	<3	<1			
		12/05/12	Bladder Pump	312.12	<100	< 0.35	<1	<1	<3	<1	<1		
		03/07/12	Bladder Pump	312.85	<100	<1	<1	<1	<3				
ANNES	TOC/Fermentie	06/05/12	Bailer	315.21	<100	<1	<1	<1	<3			-	
MW66	TOC/Farmasonis	09/11/12	Bailer	313.66	<100	<1	<1	<1	<3				-
		12/04/12	Bailer	313.30	<100	<1	<1	<1	<3		-		
		03/06/12	Bailer	310.88	5,400	1.5	<1	100	440	<1	<1		
MANICO	Deales	06/05/12	Bailer	313.43	9,700	2.6	15	220	900	<1			
MW69	Drake	09/12/12	Pneumatic Pump	312.01	7,900	7.2	13	170	750	<1			
		12/04/12	Pneumatic Pump	312.09	200	1.5	<1	<1	2.8	<1	<1		
		03/06/12	Bailer	311.37	280	7.6	<1	<1	4.1	<1	<1		
14470	Dealer	06/05/12	Bailer	313.66	<100	2.3	<1	<1	<3	<1			
MW70	Drake	09/12/12	Pneumatic Pump	312.18	<100	2.1	<1	<1	<3	<1			
		12/04/12	Pneumatic Pump	312.36	<100	1.5	<1	<1	<3	<1	<1		
MW75	ROW (56th)	03/07/12	Bladder Pump	311.37	<100	<1	<1	<1	<3	-		<1	<1
		03/06/12	Bailer	311.50	<100	<1	<1	<1	<3	<1	<1	-	
NAME OF	Dealer	06/04/12	Not Sampled	313.85						7		-	
MW76	Drake	09/10/12	Not Sampled	311.94	-			-		-			
		12/03/12	Not Sampled	312.11	· · · ·					-			
		03/06/12	Bailer	310.78	<100	<1	<1	<1	<3	<1	<1	-	-
A 414/77	Dealer	06/05/12	Bailer	312.94	<100	<1	<1	<1	<3	<1			
MW77	Drake	09/11/12	Bailer	311.33	<100	<1	<1	<1	<3	<1		-	
		12/04/12	Bailer	312.65	<100	< 0.35	<1	<1	<3	<1	<1		
TCA Moth	od A Cleanup Level ⁶			10 - St 11 - St 11	1,000/800*	5	1,000	700	1.000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
		1.13		INTERMEDIATE	WATER-BEAR	NG ZONE (20	TO 60 FEET BGS), CONTINUED					
1.11	A STREET STREET	03/06/12	Bailer	312.44	<100	<1	<1	<1	<3	-			
MW81	TOC/Farmacania	06/04/12	Not Sampled	314.93	-		-			-			
181/1/1	TOC/Farmasonis	09/10/12	Not Sampled	313.17		1	-			-	-		
		12/03/12	Not Sampled	312.99				-					
		03/07/12	Bladder Pump	311.01	680	<1	1.6	5.0	14	<1	<1		-
MW84	Drake	06/05/12	Bladder Pump	312.89	990	<1	2.5	11.0	28	<1			
1010004	Drake	09/12/12	Pneumatic Pump	311.69	1,200	2.0	2.9	8.5	28	<1			
		12/05/12	Pneumatic Pump	311.76	1,000	0.45	<1	17	41	<1	<1		
		03/06/12	Bladder Pump	310.86	<100	3.1	<1	<1	<3	<1	<1	<1	<1
MW85	Drake	06/05/12	Bladder Pump	313.09	<100	1.8	<1	<1	<3	<1			
1010085	Drake	09/11/12	Bladder Pump	311.51	<100	1.4	<1	<1	<3	<1			
		12/04/12	Bladder Pump	311.61	<100	< 0.35	<1	<1	<3	<1	<1		-
		03/06/12	Bladder Pump	310.76	140	3.8	<1	<1	<3	<1	<1		
MW86	Dealer	06/05/12	Bladder Pump	313.04	130	1.2	<1	<1	<3	<1			
1111186	Drake	09/11/12	Bladder Pump	311.54	1,600	2.6	5.8	2.9	3.4	<1			
		12/04/12	Bladder Pump	311.66	860	0.77	<1	1.7	4.6	<1	<1		
		03/06/12	Bailer	310.89	<100	<1	<1	<1	<3	<1	<1		
	Dealer	06/04/12	Not Sampled	312.86									
MW87	Drake	09/10/12	Not Sampled	311.25									
		12/03/12	Not Sampled	311.32									
		03/06/12	Bladder Pump	311.00	<100	<1	<1	<1	<3	<1	<1		-
111/00	Deska	06/05/12	Bladder Pump	313.38	<100	<1	<1	<1	<3	<1			
MW89	Drake	09/11/12	Bladder Pump	311.81	<100	<1	<1	<1	<3	<1			
		12/04/12	Bladder Pump	311.77	<100	< 0.35	<1	<1	<3	<1	<1		
		03/05/12	Not Sampled	338.03				LN	APL (0.09 FE	ET)			
	TOC	06/04/12	Not Sampled	340.49				LN	APL (0.14 FE	ET)			
MW90	TOC	09/10/12	Not Sampled	338.02				LN	APL (0.38 FE	ET)			
		12/03/12	Not Sampled	334.21									
		03/08/12	Bailer	337.71	15,000	36	95	410	3,100			15.9	<1
		06/04/12	Not Sampled	339.09				LN	APL (0.01 FE	ET)	1.		
MW91	TOC	09/10/12	Not Sampled	336.40	Succession			LN	APL (0.19 FE	ET)	102		
		12/03/12	Not Sampled	336.09									
		03/06/12	Bailer	312.87	<100	<1	<1	<1	<3			4.19	<1
	TOCIF	06/04/12	Not Sampled	315.37						-			
MW92	TOC/Farmasonis	09/10/12	Not Sampled	317.20									
		12/03/12	Not Sampled	313.32									-
TCA Moth	od A Cleanup Level ⁶				1.000/800*	5	1.000	700	1.000	20	5	15	NE



Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID Property Owner MW93 TOC/Farmasonis											and	
	wner Date	Sample Method	Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE	EDC	Total Lead ⁵	Dissolved Lead ⁵
			INTERMEDIATE	INTERMEDIATE WATER-BEARING ZONE (20 TO 60 FEET BGS), CONTINUED	NG ZONE (20 T	O 60 FEET BGS), CONTINUED			A REAL PROPERTY.	NA THE REAL	
	03/06/12	Bailer	312.73	<100	4	4	4	\$	1	1	5.60	4
		Not Sampled	315.09	1	1	1	1	1	1	1	1	1
	09/10/12	Not Sampled	Dry	1	1	1	1	1	1	1	1	1
	12/03/12	Not Sampled	314.22	1	1	1	1	1	1	1	1	1
	03/06/12	Bailer	313.11	<100	4	4	<1	\$	1	1	4	4
TOC/Entrance	_	Not Sampled	315.02	1		1	1		1	1	1	
	09/10/12	Not Sampled	Dry	1	1	:	1	,	1	1	1	1
	12/03/12	Not Sampled	318.18	1	1	r	1	1	1	1	1	1
	03/07/12	Bailer	311.47	<100	4	4	<1	Ø	4	4	2.74	4
		Not Sampled	313.86	1	1	1	I	1	1	1	1	1
		Not Sampled	312.03	1	1	1	1	1	1	1	1	1
	12/03/12	Not Sampled	312.31	1	1	1	1	,	1	1	1	1
	03/07/12	Bailer	311.82	<100	4	4	41	\$	41	<1	11.4	4
	06/04/12	Not Sampled	314.39	1	1	1	1	1	1	1	1	ı
INIW35 DIAKE		Not Sampled	310.56	1	:	,	1	1	1	1	1	1
	12/03/12	Not Sampled	313.87	1	1	1	1	1	1	1	1	1
	03/07/12	Bailer	311.46	420	9.4	<1	<1	3.4	<1	4	2.07	4
COMMA TOWNA	06/04/12	Not Sampled	313.85	1		1	,	1	1		1	1
		Not Sampled	312.25	1	1	r		1				
	12/03/12	Not Sampled	312.48	:	1	1	1	1	1		1	:
	03/08/12	Bailer	311.45	3,800	13	4.6	56	130	4	4	1.87	41
ANN/00	06/04/12	Not Sampled	313.76	1	1	,		1	1	,	1	1
	09/10/12	Not Sampled	311.45	1	1	1	1	1	1	1	1	1
	12/03/12	Not Sampled	312.48	1	1	1	1	1	1	1	1	1
	03/06/12	Bailer	310.95	<100	2.1	4	<1	3	<1	<1	1.08	<1
MINIOD DOININ		Not Sampled	312.97	1		I	r	-	1	1	1	1
_		Not Sampled	Dry	1	1				1		1	1
	12/03/12	Not Sampled	315.61	1	1	1	1	1	1	1	1	1
	03/06/12	Bailer	311.02	<100	<1	<1	4	<3	4	<1	22.6	<1
odero COLINIA		Not Sampled	312.93	1	1		1		1	1	1	1
	09/10/12	Not Sampled	311.58		1	1	1	•			1	•
	12/03/12	Not Sampled	308.17	1	ĩ	-	1	11 m	1		1	1
MTCA Method A Cleanup Level ⁶	evel ⁶			1,000/800ª	5	1,000	700	1,000	20	5	15	NE

P-)0440 TOC Holdings Co\01-176 Mountlake Terrace\7 echnica\7ables\2012\2012\2012\2012\2012\405W\01-176_201204_60_Fxitx7able 1 201204 By Zone

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Table 1 Summary of 2012 Groundwater Analytical Results Sorted by Water-Bearing Zone TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID	Property Owner	Date	Sample Method	Groundwater Elevation (feet) ¹	GRPH ²	Benzene ³	Toluene ³	Ethyl- benzene ³	Total Xylenes ³	MTBE ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
				DE	EP WATER-BEA	RING ZONE (O	VER 60 FEET B	GS)			1		North Com
	and the second second	03/07/12	Bailer	316.38	<100	<1	<1	<1	<3				-
MW26	тос	06/04/12	Not Sampled	316.16	-					-	-		
1010020	100	09/10/12	Not Sampled	316.87	-		-	-					
	1	12/03/12	Not Sampled	315.72									
		03/07/12	Bailer	315.36	<100	<1	<1	<1	<3	-			
MW30	TOC/Farmasonis	06/04/12	Not Sampled	317.66									
10100 50	TOC/Farmasonis	09/10/12	Not Sampled	315.78						-			
		12/03/12	Not Sampled	314.98							-		
		03/07/12	Bailer	314.80	<100	<1	<1	<1	<3		-		
MW39	TOC/Farmasonis	06/04/12	Not Sampled	316.80							-		
1010039	TOC/Farmasonis	09/10/12	Not Sampled	315.08							-		-
		12/03/12	Not Sampled	314.49	-						-		
		03/07/12	Bailer	315.16	<100	<1	<1	<1	<3				
MW40	TOC/Farmasonis	06/04/12	Not Sampled	317.26									
1010040	TOC/Farmasonis	09/10/12	Not Sampled	315.59									
		12/03/12	Not Sampled	314.80									
		03/08/12	Bailer	314.63	<100	<1	<1	<1	<3				
MW64	ROW (56th)	06/04/12	Not Sampled	316.74									
1010064	KOW (S6th)	09/10/12	Not Sampled	315.02				-					
		12/03/12	Not Sampled	314.33									
		03/06/12	Bailer	313.09	<100	<1	<1	<1	<3	<1	<1		
MW78	Drake	06/04/12	Not Sampled	314.91									
10100/8	Urake	09/10/12	Not Sampled	313.24									
		12/03/12	Not Sampled	312.91									
CA Metho	d A Cleanup Level ⁶				1,000/800"	5	1,000	700	1,000	20	5	15	NE

NOTES:

Results measured in µg/L.

Red denotes concentration exceeds MTCA Method A Cleanup Levels for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

¹Elevations in feet above sea level (NAVD88 Datum) by Axis Survey & Mapping, April 2012.

²Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

³Analyzed by EPA Method 8021B.

⁴Analyzed by EPA Method 8260C.

⁵Analyzed by EPA Method 200.8.

⁶MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

 7 1,000 µg/L when benzene is not present and 800 µg/L when benzene is present.

Laboratory Notes:

"Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

-- = not sampled/not analyzed

< = not detected at concentration exceeding the value of the laboratory reporting limit

µg/L = micrograms per liter

- bgs = below ground surface
- Drake = Property at 24309 56th Avenue West Dry = groundwater not encountered in well
- EDC = 1.2-Dichloroethane
- EPA = U.S. Environmental Protection Agency
- GRPH = gasoline-range petroleum hydrocarbons LNAPL = light non-aqueous phase liquid
- MTBE = methyl tertiary-butyl ether
- MTCA = Washington State Model Toxics Control Act
- NE = cleanup level not established ROW (242nd) = 242nd Street Southwest right-of-way
- ROW (56th) = 56th Avenue West right-of-way
- TOC = Property at 24205 56th Avenue West (TOC Holdings Co. Facility No. 01-176)
- TOC/Farmasonis = Property at 24225 56th Avenue West



 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

MTCA M																											TOC:		TOC:	MW01ª	W	
ethod A Cle																											354.76		354.87		Well ID	
MTCA Method A Cleanup Levels for Groundwater ⁶	10/02/09	02/12/08	07/31/07	05/24/07	02/21/07	11/16/06	08/24/06	06/01/06	02/24/06	12/20/05	09/26/05	03/09/05	10/09/03	03/27/03	09/26/02	03/27/02	10/11/01	04/03/01	09/28/00	03/23/00	09/17/99	03/19/99	86/80/60	03/16/98	09/17/97	03/11/97	09/11/96	01/11/94	07/30/92	06/15/92	Sample Date	
oundwater ⁶		1	1	1	I	1	1	1	1	1	1	1	I	1	1	L	1	I	I	I	I	1	I	1	1	ŗ	1	t	1	1	(feet)	Depth to
		10.48	15.02	11.51	9.86	11.53	13.23	8.90	6.52	11.63	11.33	9.79	15.94	9.12	14.22	6.18	16.62	11.03	16.52	5.72	11.02	2.00	17.88	6.93	12.32	4.93	11.71	12.65	8.07	6.01	Groundwater* (feet)	Depth to
		1	1	1	I	1	1	I	1	1	1	1	t	1	1	1	1	ſ	1	1	1	1	1	1	1	1	1	I	1	1	Thickness (feet)	LNAPL
		344.28	339.74	343.25	344.90	343.23	341.53	345.86	348.24	343.13	343.43	344.97	338.82	345.64	340.54	348.58	338.14	343.73	338.24	349.04	343.74	352.76	336.88	347.83	342.44	349.83	343.05	342.22	346.80	348.86	Elevation* (feet)	Groundwater
1.000/800 ^b		<100	<100	<100	<100	<50	<100	<100	<100	<100	<50.0	<50.0	160	78.9	544	142	191	<50.0	163	<50.0	910	<50.0	9,320	490	76.7	<100	320	1,600	1	33,000	GRPH ³	
5	DEC	-1	4	4	4	<1	4	-1	4	-1	<1.00	<1.00	0.548	<0.5	1.15	<0.5	<0.5	<0.5	0.610	<0.5	<0.5	<0.5	42.5	1.15	0.595	<0.5	2.6	29	1	2,300	Benzene ⁴	
1.000	O M M I S	4	4	2	4	2	4	4	4	1	<1.00	<1.00	<0.5	<0.5	<0.5	0.741	1.41	<0.5	1.31	<0.5	1.07	<0.5	866	<0.5	2.9	<0.5	<0.5	4.6	ī	1,700	Toluene ⁴	
700	N O I S	4	4	~ ~1	4	Δ	Δ	4	Δ	-1	<1.00	<1.00	2.84	0.634	8.38	4.84	13.4	<0.5	1.95	<0.5	4.39	<0.5	346	7.38	1.99	0.6	15	28	1	1,400	Ethyl-benzene ⁴	
1.000	E D	۵	۵	\$	\$	۵	\$	\$	\$	۵	<3.00	<3.00	11.3	<1.00	11.2	33.3	54.7	<1.0	38.3	<1.0	5.57	<1.0	1,550	18.2	13.4	<1.5	46	140	1	9,200	Total Xylenes ⁴	
20		1	1	1	I	1	4	1	4	4	<5.00	<3.00	I	1	1	1	1	I)	1	1	1	1	1	1	1	1	1	1	1	1	MTBE ⁴	
0.01		1	1	1	I	1	1	1	1	4	<1.00	1	1	1	1	1	1	I	1	1	1	1	I	1	1	1	1	1	1	1	ED84	
5		1	1	1	1	1	1	t	1	4	<1.00	1	ſ	1	1	1	1	1	I	1	I	I	1	I	1	I	1	1	1	1	EDC4	
15		1	L	1	1	1	1	1	1	1.36	I	1	I	1	1	I	1	I	1	1	I	1	1	1	1	t	1	t	I	1	Total Lead ⁵	
NE		1	I	1	1	1	I	I	ļ	1	ţ	1	1	1	1	I	I	1	I	1	I	I	1	I	1	I	I	1	I	1	Dissolved Lead ^S	

P:\0440 TOC Holdings Co\01-176 Mountlake Terrace\Tecl

(2012\2012Q4\Q6W\01-176_2012Q4_GD_F.xbxTable 2 GD

Depth to Groundwater ¹ (feet)	o LNAPL ter ¹ Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Ethyl-benzene ⁴ Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC4	Tota ⁶ Lead ⁵	Dissolved Lead ⁵
4.00	1	352.44	13,000	590	1,900	350	2,500	1	t	1	1	1
7.61	1	348.83	1	1	I	1	1	1	1	1	1	1
15.50	1	340.94	50,000	4,600	7,300	1,200	8,300	1	1	I	1	1
11.99	1	343.26	33,000	1,800	4,000	780	5,400	1	I	1	1	1
6.02	1	349.23	100	4.8	3.7	2.5	16	1	1	1		1
12.75	1	342.50	25,700	709	2,200	617	4,050	1	ı	1	1	1
8.27	1	346.98	1,700	28.3	53	55	276	1	1	1	1	1
15.90	1	339.35	15,300	259	2,040	<50	2,700	1	1	1	1	1
2.79	1	352.46	3,490	4.94	41.7	30.6	310	1	1	1	1	1
1	1	I	9,250	<25	1,300	173	1,910	J	1	1	1	1
7.39	ı	347.86	4,920	<5.0	241	133	1,000	1	t	1	1	1
15.37	1	339.88	20,700	135	1,830	845	5,390	1	1	1	1	1
13.86	1	341.39	18,800	<100	351	802	5,050	1	T	1	1	1
16.33	1	338.92	16,900	69.7	469	643	4,650	1	1	1	1	1
6.79	Trace	348.46	11,500	16.3	23.0	331	1,930	1	1	1	1	1
14.18	Trace	341.07	8,260	<5.0	40.6	226	2,420	I	I	I	1	I
12.80	1	342.45	14,700	<10.0	11.3	324	3,020	1	1	1	1	1
14.28	1	340.97	3,600	<5.0	11.1	67.5	639	1	1	1	1	1
9.42	1	345.83	1,400	<1.00	2.00	4.00	71.0	<3.00	I	1	ī	I
9.20	1	346.05				NG	Not sampled; truck parked over wellhead	rked over wellhe	ad			
11.50	1	343.75	<100	<1	4	4	3	<1	4	4	4	1
5.88	1	349.37	<100	4	4	4	Ø	4	I	1	1	I
7.86	1	347.39	<100	4	4	4	3	1	1	1	1	1
12.96	I	342.29	<100	4	4	<1	4.2	4	I	I	1	Ĩ
15.89	1	339.36	260	4	1.1	2	<8.9	1	1	1	1	1
10.38	1	344.87	<100	4	4	4	Ø	1	1	1	1	L
11.74	1	343.51	<100	4	4	41	Ø	I	1	1	I	1
13.85	1	341.40	<100	4	4	<1	3	1	1	1	1	1
12.04	1	343.21	<100	<1	4	<1	3	I	L	I	I	Ĩ
9.94	1	345.31	<100	4	4	4	3	<1	4	4	I	1
12.74	1	346.04	<100	<1	4	4	3	1	T	1	1	1
11.27	1	347.51					Not sampled; just gauged	ust gauged				
13.73	1	345.05					Not sampled; just gauged	ust gauged				
12.69	1	346.09					Not sampled; just gauged	ust gauged				
			1 000/800 ^b	2	1 000	700	1.000	20	0.01	5	-	NF



A Denta	Sample Date	06/15/92	07/30/92	01/11/94	09/11/96	03/11/97	09/11/97	03/16/98	86/80/60	03/19/99	09/11/99	03/23/00	09/28/00	04/03/01	10/11/01	03/27/02	09/26/02	03/27/03	10/09/03	03/09/02	09/26/05	12/21/05	02/23/06	06/01/06	08/23/06	11/15/06	02/21/07	10/57/50	08/01/07	02/13/08	02/04/10	03/08/12	04	09/10/12	121
	Well ID		356.44		355.25																										or or o	358.78			
	M	MW02ª	TOC:		TOC:																											100:			



Well ID IW03* TOC: 359.16 TOC: 358.40	Sample Date 06/15/92 07/30/92 01/11/94 09/11/96 03/11/97	(feet) 	(feet) 4.83	(feet)	(feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
TOC: 359.16	07/30/92 01/11/94 09/11/96		4.00	-	354.33	92,000	5,800	22,000	1,900	16,000	-				
	01/11/94 09/11/96		8.05		351.11	52,000	5,800	22,000	1,900	16,000	_	-	-	-	-
roc: 358.40	09/11/96	-	14.34	-	344.82	110,000	6,200	21.000	1,600	13.000			-	-	-
		13.12	13.17	0.05	345.23		0,200	21,000	-	13,000		-	-		-
		-	7.02	Trace	351.38	-	-	_	-	-	_			-	-
F	09/17/97	_	15.82	-	342.58	80,500	836	8,740	839	10,800		_	_	-	-
	03/16/98	_	8.75	Trace	349.65	-	-	-	-	10,000	-	_		-	-
	09/08/98	-	17.44	-	340.96	63,900	303	3,700	1,030	11,800	_	_	_		
	03/19/99	_	4.66	_	353.74	8,130	13.5	502	50.6	1,150	_	_	_	-	-
	09/17/99	-	13.30	-	345.10	15,700	27.1	2,010	240	4,270	-	-			_
-	03/23/00	-	8.14	-	350.26	25,000	88.2	2,050	434	4,280	-	_		-	
	09/28/00	-	Dry	-	-	-	-	-	-	-	-	-	-	-	-
	04/03/01		15.16	-	343.24	9,120	15.4	829	124	2,230	-	-	-		-
	10/11/01	_	Dry	-	-	-	-	-	-	_	-	_	_		-
	03/27/02	_	8.63	-	349.77	1.960	2.99	88.9	31.6	404	-	-	_		
-	09/26/02	_	Dry	-	-	-	-	-	-	-	_	-	_	_	-
	03/27/03	_	12.00	_	346.40	<50.0	0.663	<0.50	<0.50	<1.0	_	_	-	-	
	10/09/03	-	14.86	-	343.54	5,040	6.79	166	170	1,760	-	_	-	_	-
	03/09/05	_	9.77	-	349.39	730	2.00	2.00	15.0	98.0	<3.00	_	-	-	-
	09/27/05	-	9.35	-	349.81	<50.0	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	-	-
	12/22/05	-	11.01	-	348.15	<100	<1	<1	<1	<3	-	-	_	2.28	-
	02/22/06	_	5.73	_	353.43	<100	<1	<1	<1	<3	<1	-	-	-	-
	05/31/06	_	7.33	-	351.83	<100	<1	<1	<1	<3	-	-	-	-	-
	08/23/06	_	13.49	-	345.67	1,000	<1	1.1	35	188.4	<1	_	_	_	-
	11/14/06	_	17.61	-	340.79				Not sample	ed; insufficient wat	er to fill sample	containers			
	02/20/07		10.30	-	348.10	<100	<1	<1	<1	<3	-	_		-	-
	05/22/07	-	11.78	-	346.62	<100	<1	<1	<1	<3	_	-	-	-	-
	08/01/07	-	14.08	-	344.32	330	<1	<1	6	31	-	-		-	-
	02/13/08	-	12.49	-	345.91	<100	<1	<1	1	5	-		-	-	-
	03/04/10		9.61	-	348.79	<100	<1	<1	<1	<3	<1	<1	<1	-	-
TOC: 361.87	03/08/12	-	13.08	-	348.79	<100	<1	<1	<1	<3	-	-	_	-	-
	06/04/12	-	11.59	-	350.28					Not sampled;	just gauged				
	09/10/12	-	14.63	-	347.24					Not sampled;	just gauged				
	12/03/12		12.85	-	349.02					Not sampled;	just gauged				



	/ell ID	Course Parts	Depth to LNAPL ¹	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Vidence ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	
MW04	ren ib	Sample Date 07/30/92	(feet)	(reet) 7.19	(leet)	351.32	100,000	470	15,000	2,500	18,000	WITE	EDB	EDC	-
TOC:	358.51		_			551.52	100,000	470	13,000	2,500	18,000				+
100:	358.51	01/11/94		Dry			22,000	77	480	600	4,800		-		+
1		09/11/96	-	12.65	-	345.86	7,200	3.2	220	170	1,400	_	-	-	+
1		03/11/97	-	6.08	-	352.43	17,400	30.1	92.9	78.4	846		-	-	+
		09/17/97		14.76	-	343.75			-			-	-	-	+
		03/16/98	-	7.95	-	350.56	37,200	44.3	3,760	804	5,970	-	-	-	+
		09/08/98	-	18.03	-	340.48	22,200	77.9	1,390	199	3,520	_	-	-	-
		03/19/99	-	3.97	-	354.54	22,900	32.7	1,300	334	3,440		-	-	-
		09/17/99	-	12.86	_	345.65	-	-	-	-	-	-	-	-	-
		03/23/00	-	-	-	-	-	-	-	-	-	-	-	-	-
		09/28/00	-	16.95	-	341.56	1,010	<10.5	34.8	243	829	-	-	-	_
		04/03/01	-	16.03	-	342.48	12,900	<25	102	538	2,870	-	-	-	-
		10/11/01	-	Dry	-	-	-	-	-	-	-	-	-	-	
		03/27/02	-	6.26	-	352.25	3,900	2.95	181	89.1	714	-	-	-	
		09/26/02	-	15.30	-	343.21	1,000	1.85	5.97	112	135	-	-	-	
		03/27/03		11.92		346.59	38,100	<50.0	3,890	1,270	7,840	-	-	-	
		10/09/03	-	15.47	_	343.04	24,900	<100.0	1,760	1,020	7,220	-	-	-	
		03/09/05	-	9.35	-	349.16	<50.0	<1.00	<1.00	<1.00	<3.00	<3.00	-	-	T
		09/26/05	9.20	9.20	0.00	349.31				LN	APL; not sampled of	due to heavy she	en		
		12/22/05	-	11.11	-	347.40	<100	<1	<1	<1	<3	<1	-	-	
		02/22/06	_	4.25	-	354.26	<100	<1	<1	<1	<3	<1	-	_	T
		05/31/06	_	5.00		353.51	<100	<1	<1	<1	<3	_	-	_	
		08/23/06	_	12.76	_	345.75	<100	<1	<1	<1	<3	<1	-	-	1
		11/14/06					No	t gauged or samp	pled; inaccessible	due to road constr	ruction activity				-
		02/21/07	-	8.97	-	349.54	<100	<1	<1	<1	<3	-	-	-	T
		05/22/07	-	10.84	-	347.67	<100	<1	<1	<1	<3	-	-	-	+
		08/01/07	-	13.62	_	344.89	<100	<1	<1	<1	<3	-	-	_	+
		02/13/08		11.51	_	347.00	<100	<1	<1	<1	4	-	-	-	1
		03/02/10	-	8.53	-	349.98	<100	<1	<1	<1	<3	<1	<1	<1	1
TOC:	362.02	03/07/12	-	14.34	_	347.68	<100	<1	<1	1.5	<3	_	-	-	+
		06/04/12		10.41	-	351.61			1		Not sampled;	iust gauged			-
		09/10/12	-	14.31	-	347.71					Not sampled;				
		12/03/12		Dry	_	-				Not in	cluded in scope of		auged		
		nup Levels for Gro		U DIY		L	1.000/800 ^b	5	1,000	700	1,000	20	0.01	5	—

	Total Lead ⁵	Dissolved Lead
T	-	-
T	-	-
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Г	15	NE



Well ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
MW05	07/30/92	_	9.10	-	351.15	<50.0	<0.5	< 0.5	< 0.5	<0.5	-	-	-	-	-
TOC: 360.25	01/11/94	_	Dry	-	-	-	-	-	-	-	-	-	-	-	-
	09/11/96	-	13.33	-	346.92	88.0	<0.5	0.53	1.1	6.4	-	-	-	-	-
	03/11/97	_	6.15	-	354.10	<100	<0.5	< 0.5	< 0.5	<1.5	-	-	-	-	-
	09/17/97	-	13.79	-	346.46	<50.0	<0.5	< 0.5	< 0.5	<1.0	-	-	-	-	-
	03/16/98	-	7.86	-	352.39	<50.0	<0.5	< 0.5	<0.5	<2.0	_	-	-	-	-
	09/08/98	_	Dry	_	-	-	-	_	-	-		-	-	-	-
	03/19/99	-	4.75	-	355.50	<50.0	<0.5	<0.5	<0.5	1.07	-	-	-	-	-
	09/17/99	_	Dry		-	-	-	-	-	-	_	-	-	-	_
	03/23/00	-	7.35	-	352.90	<50.0	<0.5	1.64	0.501	3.43	-	-	-	-	-
	09/28/00	-	Dry	-	-	-	-	-	-	-	-	-	-	-	-
	04/03/01	_	13.39	-	346.86	<50.0	<0.5	<0.5	<0.5	<1.0	-	-	-	-	-
	10/11/01	_	Dry	-	-	-	-	-	-	-	_	-	-	-	-
	03/27/02	-	6.41	-	353.84	<50.0	<0.5	<0.5	< 0.5	<1.0	_	-	-	-	-
	09/26/02	-	Dry	-	-	-	-	-	-	-	-	-	-	-	-
	03/27/03	-	10.80	-	349.45	<50.0	<0.5	<0.5	<0.5	<1.0	-	-	-	-	-
	10/09/03	_	Dry	-	-	-	-	-	-	-	-	-	_	-	-
	03/09/05	_	11.57	-	348.68	<50.0	<1.00	<1.00	<1.00	<3.00	<3.00	-	-	-	-
	09/27/05	-	12.57	-	347.68	<50.0	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	-	-
	12/22/05	—	Dry	-	-	-	-	-	-	-	-	-	-	-	-
	02/22/06	-	6.76	-	353.49	<100	<1	<1	<1	<3	<1	-	-	-	-
	05/31/06	_	8.42	-	351.83	<100	<1	<1	<1	<3	-	-	-	-	-
	08/23/06	_	14.10	-	346.15				Not sampl	ed; insufficient wat	ter to fill sample	containers			
	11/14/06		14.75	-	345.50				Not sample	ed; insufficient wat	ter to fill sample	containers			
	02/20/07	-	9.50	-	350.75	<100	<1	<1	<1	<3	-	-	-	-	-
	05/22/07	-	11.35	-	348.90	<100	<1	<1	<1	<3	-	-	-	-	-
	08/03/07	-	14.36	-	345.89	<100	<1	<1	<1	<3	-	-	-		
	02/13/08	-	11.68	-	348.57	<100	<1	<1	<1	<3	-	-	-	-	-
	03/02/12	-	11.68	-	348.57	<100	<1	<1	<1	<3	<1	<1	<1	-	-
TOC: 363.76	03/08/12	/	12.45	-	351.31	<100	<1	<1	<1	12	-	_	-		-
	06/04/12		10.39	-	353.37					Not sampled;					
	09/10/12		14.50	-	349.26					Not sampled;					
	12/03/12	-	14.61	-	349.15					Not sampled;	just gauged				

	Depth to LNAPL ¹	Depth to Groundwater ¹	LNAPL Thickness	Groundwater Elevation ²										
Sample Date	(feet)	(feet)	(feet)	(feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Tota	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
07/30/92	I	8.66	1	346.71	<50.0	<0.5	<0.5	<0.5		1	1	1	1	1
01/11/94	1	12.92	L	342.45	<50.0	<0.5	2	<0.5	2.6	I	1	1	1	1
09/11/96	1	12.26	1	343.11	<50.0	<0.5	<0.5	<0.5	<0.5	1	1	1	1	1
03/11/97	ſ	4.96	t	350.41	<100	<0.5	<0.5	<0.5	<1.5 0.12	1	1	1	1	1
15/17/50	1	C0.21		248.60	20.02	202	302	302				1	!	1
06/01/c0	1	15.00	1	340.37	868	1.92	73.0	21.3	172	1				
03/19/99	1	3.95	1	351.42	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	1
66/11/60	1	12.53	1	342.84	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	1
03/23/00	1	7.97	1	347.40	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	1
09/28/00	1	Dry	1	1	1	1	1	1	1	1	1	1	1	1
04/03/01	I	11.64	I	343.73	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	I	I	1
10/11/01	I	Dry	1	1	1	1	I	1	1	1	1	1	1	
03/27/02	I	6.06	1	349.31	<50.0	<0.5	<0.5	<0.5	<1.0	1	I	I	1	
09/26/02	1	Dry	1	1	1	1	1	I	1	1	I	1	1	
03/27/03	I	8.10	1	347.27	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	
10/09/03	ī	Dry	1	1	I	1	ſ	I	I	1	1	1	1	
03/09/05	1	9.30	I	346.07	<50.0	<1.00	<1.00	<1.00	<3.00	<3.00	1	1	1	
09/26/05	Î	12.26	1	343.11	<50.0	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	1	
12/22/05	1	Dry	Ĩ	1	1	1	1	1	1	1	1	1	1	
02/22/06	1	5.93	I	349.44	<100	4	<1	<1	Ø	<1	I	1	1	
05/31/06	I	9.88	1	345.49	<100	4	<1	4	4 3	I.	1	I	1	
08/22/06	1	14.68	1	340.69				Not sample	ed; insufficient wat	ter to fill sample	e containers			
11/14/06	1	Dry	1	1	I	1	1	1	1	I		1	1	
02/21/07	1	10.05	1	345.32	<100	7	0	4 4	2 7 2 3 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4			1	1	
10/77/CD	1	67.21 57.71	1	246.30	DOTY	7	7	Not cample	ten traiticiant und	tar to fill comple	Containarc	1	1	
10/	1	14.11	ı	00.040	0017	*	*		יי ווואחוורובוור אמו	ובו וה ווו אמווחוב	COLICAL			
02/02/08		02.01	1	244.41	100	7 5	7 5	7 5	2 9	1 7	1 7	1 7		
07/08/10		12.49		342.88	DOT	7	7	7	Not sampled, just gauged.	iust gauged.	7	7		
03/08/12	î	12.87	1	345.99	<100	4	41	4	8		r	I	1	
06/04/12	1	11.82	1	347.04					Not sampled, just gauged.	just gauged.				
09/10/12		14.69		344.17					Not sampled, just gauged.	just gauged.				
12/03/12	1	14.65	1	344.21					Not sampled, just gauged.	just gauged.				
07/30/92	ï	8.40	1	344.58	<50.0	<0.5	<0.5	<0.5	<0.5	1	1	1	1	
01/11/94	ï	12.93	I	340.05	<50.0	<0.5	<0.59	<0.5	<1.0	I	I	I	I	
09/11/96	I	11.95	I	341.03	<50.0	<0.5	<0.5	<0.5	<0.5	1	1	1	1	
03/11/97	T	5.63	1	347.35	<100	<0.5	<0.5	<0.5	<1.5	1	1	1	1	
09/17/97	I	12.00	I	340.98	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	
03/16/98	1	1.70	1	345.28	<50.0	<.0>	<.0>	<.U>	<1.0	I	1	1	1	
09/08/38	1	And C	1		1	1	1 10	1		1	'	1	1	
00/11/00		12.11		10.000	<50.0	505	<0.1 <0.5	5.05	<1.00					
03/23/00	1	6.80	1	346.18	<50.0	<0.5	<0.5	<0.5	<1.0	1	1	1	1	
09/28/00	1	13.92	1	339.06	<50.0	<0.5	<0.5	<0.5	<1.0	1	,	1	,	
04/03/01	1	12.51	1	340.47	604	<0.5	<0.5	<0.5	3.17	1	1	1	(
10/11/01	1	Dry	1	1	1	1	1	1	1	I	1	1	1	
03/27/02	1	7.05	t	345.93	<50.0	<0.5	<0.5	<0.5	<1.0	1	I	1	1	
09/26/02	I	13.52	ı	339.46	<50.0	<0.5	<0.5	<0.5	<1.0	I	1	I	I	
03/27/03	I	11.22	1	341.76	<50.0	<0.5	1.41	0.745	4.08	1	1	I	1	
10/09/03	ï	14.31	1	338.67	<50.0	<0.5	<0.5	<0.5	<1.0	I	1	1	t	
11/08/04	I	12.27	1	340.71	<50.0	0	<1.00	<1.00	<3.00	<3.00	I	1	L	
11/29/04						U	O M M I S	S I O N	۵					
	3				4						and			





MTCA Me				TOC:																											TOC:	MW08	We	
thod A Clear				360.40																											356.92		Well ID	Contraction of the second
MTCA Method A Cleanup Levels for Groundwater ⁶	12/03/12	09/10/12	06/04/12	03/08/12	03/02/10	02/12/08	08/02/07	05/22/07	02/21/07	11/14/06	08/23/06	05/31/06	02/22/06	12/22/05	09/26/05	03/09/05	10/09/03	03/27/03	09/26/02	03/27/02	10/11/01	04/03/01	09/28/00	03/23/00	09/17/99	03/19/99	86/80/60	03/16/98	09/17/97	03/11/97	09/11/96	01/11/94	Sample Date	
undwater ⁶	1	1	1	1	1	1	1	1	1	1	I	1	I	1	1	I	1	1	1	1	I	1	1	1	Ţ	1	1	T	1	I	Ţ	1	(feet)	Depth to LNAPL ¹
	20.49	21.55	12.67	15.47	9.61	12.56	21.83	14.09	10.91	23.77	17.30	6.41	4.36	11.30	12.87	12.46	25.82	15.13	24.66	8.08	26.61	24.35	25.70	7.57	9.30	3.23	25.59	12.53	24.18	9.68	22.30	24.86	(feet)	Depth to Groundwater ¹
	1	I	I	1	I	I	1	I	1	1	1	1	I	1	Sheen	I	1	I	I	1	Ē	1	1	1	1	I	1	ſ	I	I	t	1	(feet)	LNAPL
	339.91	338.85	347.73	344.93	347.31	344.36	335.09	342.83	346.01	333.15	339.62	350.51	352.56	345.62	344.05	344.46	331.10	341.79	332.26	348.84	330.31	332.57	331.22	349.35	347.62	353.69	331.33	344.39	332.74	347.24	334.62	332.06	(feet)	Groundwater Elevation ²
1,000/800 ^b				<100	<100	<100	<100	<100	<100	<50	<100	<100	<100	<100		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	60.0	<50.0	<50.0	<100	<50.0	290	GRPH ³	
5				4	4	4	1	4	4	4	۵	4	4	4		<1.00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.53	Benzene ⁴	
1,000				4	Δ	4	4	4	Δ	Δ	Δ	4	4	۵		<1.00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.508	<0.5	2.33	<0.5	<0.5	<0.5	<0.5	0.54	Toluene ⁴	
700				4	4	4	-1	4	4	4	Δ	4	4	Δ		<1.00	<0.5	<0.5	<0.5	<0.5	<0.5	1.53	<0.5	<0.5	<0.5	<0.5	1.21	<0.5	<0.5	<1.5	<0.5	<0.5	Ethyl-benzene ⁴	
1,000	Not sampled	Not sampled	Not sampled	\$	۵	۵	\$	۵	۵	ŝ	۵	۵	۵	<3.6	Not sampled due	<3.00	<1.0	<1.0	<1.0	<1.0	<1.0	7.92	<1.0	<1.0	1.30	<1.0	10.5	<1.0	<1.0	<1.5	<0.5	_	Total Xylenes ⁴	
20	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	I	Δ	1	1	Ŀ	1	T	4	Ĭ	-1	1	Not sampled due to apparent sheen	<3.00	1	I	1	1	I	1	1	I	1	I	I	1	1	1	I	1	MTBE ⁴	
0.01				1	4	I	1	I	1	1	I	1	1	1	2	I	1	I	I	1	Ē	1	I	I	1	Ĩ	1	1	Ĩ	1	Ĩ	I	EDB4	
5				1	4	I	1	1	I	1	I	I	I	I		I	I	T	ī	1	1	1	1	ſ	I	1	Ĭ	1	I	1	1	Ĩ.	EDC4	
15				1	1	I	1	1	I	1	I	I	L	4		1	I	1	I	1	1	I	1	I	1	1	I	I	I	1	1	1	Total Lead ⁵	
NE				I	1	ſ	I	1	1	1	I	1	1	L		1	I	ï	t	1	1	1	I	1	1	1	I	1	1	1	1	1	Dissolved Lead ⁵	

P:\0440 TOC Holdings Co\01-176 Mo

104\06W\01-176_201204_6D_F.xtsxTable 2.6D



We	110	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴					
					2000							MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
MW09*		01/11/94	-	30.27	-	327.57	94,000	16,000	26,000	1,800	13,000	-	-	-	-	-
	357.84	09/11/96	26.70	28.41	1.71	328.45					LNA					
TOC:	356.86	03/11/97	-	21.42	-	335.44					LNAPL; not samp	led due to sheen	1			
		09/17/97	-	29.90	-	326.96	17,200	157	82.8	<10	2,690	-	-	-	-	-
		03/16/98	21.96	21.97	0.01	334.89					LNA					
		09/08/98	31.83	31.84	0.01	325.02					LNA					
		03/19/99	16.97	16.98	0.01	339.88					LNA					
		09/17/99	25.05	25.06	0.01	331.80					LNA	APL				
		03/23/00	-	20.25	-	336.61					LNAPL; not samp	led due to sheen				
		09/28/00	-	Dry	-	-	-	-	-	-	-	-	-	-	-	-
		04/03/01	_	28.64	-	328.22					LNAPL; not samp	led due to sheen	í.			
		10/11/01	-	29.71	-	327.15	18,400	495	904	270	5,110	-	-	-	-	-
		03/27/02	_	19.27	-	337.59	14,000	131	1,370	190	4,000	-	-	-	-	-
		09/26/02	-	27.47	-	329.39	26,500	740	1,940	669	5,790	-	-	-	-	-
		03/27/03	_	24.82	_	332.04	42,700	264	3,040	777	9,500	-	-	-		-
		10/09/03	-	27.54	_	329.32	1,400	33.2	119	41.8	386	-	-	-	-	-
		03/09/05	-	16.75	-	340.11	15,000	94.0	160	120	2,200	<30.0	-	-	_	-
		09/27/05		Unable to gauge; pr	obe diameter too	o large	2,320	<1.00	6.21	41.8	575	<5.00	<1.00	<1.00	-	-
		12/22/05	-	22.33	-	334.53	2,200	<1	10	26	990	-	-	-	1.07	-
		02/22/06	-	11.51	-	345.35	660	<1	<1	11	147	<1	-	-	-	-
		06/01/06		14.34	-	342.52	1.500	1,500	4	40	450	_	_	-	-	-
		08/24/06	-	25.79	-	331.07	24,000	330	420	550	4,800	<1	-	-	-	_
		11/15/06	-	34.12	-	322.74	3,800	360	150	68	1,820	_	_	-	-	-
		02/20/07	_	19.79	_	337.07	4,100	5	32	83	1,100	-	-	-	-	-
		05/23/07	-	23.19	_	333.67	13,000	91	270	330	3,100	-	-	-		
		08/01/07	-	26.98	_	329.88	4,800	59	120	100	1,200	-	-	-	-	-
		02/12/08	-	23.30	-	333.56	5,900	23	100	96	1,500	-	-	-		
		03/04/10	-	17.50	-	339.36	5,000	<1	4	45	980	<1	<1	<1		
TOC:	360.32	03/07/12	_	23.35	_	336.97	11,000	30	76	370	2,400	-		-		-
		06/06/12	-	21.41	-	338.91	6,400	6.4	22	180	1.000	-		<u> </u>		
		09/11/12	_	27.04	_	333.28	3,400	21	21	130	750	_	_		-	
		12/04/12	_	27.04	_	333.25	5,500	28	25	73	720	_	_	-	1 -	-
	1 1 1 0	nup Levels for Gro	6	27.07		333.60	1,000/800 ^b	5	1,000	700	1,000	20	0.01	5		NE



Well ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Tota Lead ⁵	Dissolved Lead
MW10 ^ª	11/20/95	_	Drv	-	-	-	-	-	-	-	_		_	-	
TOC: 354.43	09/11/96	33,36	33.63	0.27	320.80				1	LNA	PL				
	03/11/97	28.41	28.50	0.09	325.93					LNA					
	09/17/97	_	35.20	Trace	319.23	34,500	1,430	2,710	188	5,720	-	-	-	-	1 -
	03/16/98	_	26.67	-	327.76	-	-	-	-	-	-	-	-	-	-
	09/08/98	-	35.12		319.31	18,400	1,470	1,050	283	3,990	-	-	-	-	-
	03/19/99	24.39	24.43	0.04	330.00					LNA	PL				1
	09/17/99	-	32.43	-	322.00	26,000	1,090	2,130	621	6,180	-	-	-	-	-
	03/23/00	-	-	-	-	33,200	1,290	3,650	903	7,130	-	-	-	-	_
	09/28/00	-	33.02	Trace	321.41	11,900	608	645	54.0	3,270	_	-	-	-	-
	04/03/01	-	-	-	-	19,600	979	1,360	532	414	-	-	-	-	-
	10/11/01	_	32.73	_	321.70	9,110	342	478	94.5	2,050	-	-	-	-	-
	03/27/02	-	25.09	-	329.34	39,600	548	1,950	419	2,480	-	-	_	-	-
	09/26/02	-	27.90	-	326.53	72,800	5,130	8,260	1,640	11,800	-	-	-	-	-
	03/27/03	-	-	_	_	-	-		-	-	_	-	-	-	-
	10/09/03	-	-	-	-	26,500	2,390	2,870	948	6,670	-	_	-	-	-
	03/09/05	-	26.04	-	328.39	15,000	580	820	320	2,100	<150		-	-	-
	09/26/05	-	25.56	-	328.87	1,440	38.4	79.2	24.9	150.4	<5.00	<1.00	<1.00	-	-
	12/20/05	-	28.40	-	326.03	15,000	960	670	560	3,700	<1	<1	<1	9.39	-
	02/24/06	-	22.68		331.75	830	20	89	22	141	<1	-	_	-	-
	06/01/06	-	24.09	-	330.34	2,600	19	67	28	360	-	-		-	-
	08/24/06	-	27.64	-	326.79	4,800	150	98	110	1,010	<1	-	_	-	-
	11/14/06	-	34.02	-	320.41			N	ot sampled; too de	ep for peristaltic p	ump and bailer o	bstructed by pac	ker		
	02/20/07	25.16	25.21	0.05	329.26					LNA	PL				
	05/22/07	27.10	27.18	0.08	327.31					LNA	PL				
	08/02/07	—	37.89	-	316.54	7,700	200	100	92	780	-	_	-	-	-
	02/13/08	-	26.64	-	327.79	1,700	66	29	17	160	-	-	_		-
	03/04/10	-	25.23	-	329.20	320	3	<1	<1	7	<1	<1	<1	-	-
TOC: 357.97	03/07/12	-	27.45	-	330.52	1,400	62	7.3	27	89	-	-	-	-	-
	06/06/12	-	26.47	-	331.50	830	11	5.1	28	84	_	-	-	-	-
	09/11/12	-	28.26	-	329.71	1,500	38	<10	110	86	-	-	-	-	-
	12/05/12	-	34.59	-	323.38	4,900	4.6	<1	19	63		-	-	-	-
MTCA Method A Cle	anup Levels for Gro	oundwater ⁶				1,000/800 ^b	5	1,000	700	1.000	20	0.01	5	15	NE

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 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

		_		TOC:			_	_		-				_		_		_	-		TOC:	MWN 2	100	TOC:	TOC:	1				_	_			-						-							-		TOC:	MW11ª	
				357.69																	354.19		202.40	00 (36	362.25																								358.12		Well ID
	12/03/12	09/10/12	06/04/12	03/08/12	03/02/10	05/14/08	02/13/07	08/02/07	05/23/07	02/21/07	11/16/06	08/23/06	05/31/06	02/22/06	12/22/05	09/26/05	20/09/05	10/09/03	03/27/03	09/26/02	03/27/02	71/01/11	71/01/01	71/a0/a0	03/05/12	03/04/10	02/12/08	08/01/07	05/22/07	02/20/07	11/14/06	08/23/06	05/21/06	12/21/05	09/27/05	03/09/05	10/09/03	03/27/03	09/26/02	TD/91/01	04/03/01	09/28/00	03/23/00	09/17/99	03/19/99	86/80/60	86/91/20 16/11/60	16/11/50	09/11/96	11/20/95	Sample Date
	1	I	I	1	I	Ĩ	ī	I	1	ï	T	1	I	1	1	I	1	I	1	I	1 1			1	1	1	1	I	22.40	t	26.90	I	b	i t	1	22.00	Ţ	I		100	I	26.22	I	1	19.39	1		1	34.29	27.33	LNAPL ¹ (feet)
	11.82	12.72	10.17	11.64	9.03	10.30	10.59	13.02	10.80	9.66	15.61	12.12	8.65	6.34	13.37	12.97	11.06	15.10	11.20	13.60	7.01	162/	25.75	75.90	YU	19.74	21.71	24.22	22.41	20.58	27.02	23.53	16 25	18 47	21.86	22.01	26.25	22.84	25.19	28.49	25.14	26.23	20.64	24.89	19.40	25.41	20.61	19.83	34.56	27.33	Groundwater ¹ (feet)
	1		I	1	I	I	1	I	1	1	1	1	1	1	£	I	1	1	1	1	1				1	1	1	1	0.01	L	0.12	1			1	0.01	I	1	0.04	Irace	1	0.01	Trace	1	0.01	1	Trace	Irace	0.27	1	Thickness (feet)
	345.87	344.97	347.52	346.05	345.16	343.89	343.60	341.17	343.39	344.53	338.58	342.07	345.54	347.85	340.82	341.22	343.13	339.09	342.99	340.59	347.18	227 25	23 366	227 75	1	338.38	336.41	333.90	335.72	337.54	331.20	334.59	241 27	335.43	336.26	336.11	331.87	335.28	332.93	50.675	332.98	331.89	337.48	333.23	338.72	332.71	337.51	230.66	323.56	330.79	Elevation ² (feet)
				<100	<100		<100	<100	<100	<100	<50	<100	<100	<100	<100	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	~50.0				44,000	48,000	45,000		48,000		53,000	48,000	44,000	50,300	I	21,100	72,900	15,400	1	38,700	1	1	11,200	1	6,220	1,000	17 000	1	15,000	GRPH ³
				4	Δ		<1	4	Δ	Δ	4	4	Δ	<1	4	<1.00	<1.00	<0.5	<0.5	<0.5	<0.5	202				22	41	64		88		24	5	32	22.2	1	109	88.2	120		403	1	I	120	1	189	1 200	1 200	1	1,000	Benzene
				<1	<1		<1	<1	<1	<1	<1	-1	4	<1	<1	<1.00	<1.00	<0.5	1.00	<0.5	<0.5	2 0.2				350	640	1,100		800		2,000	1 700	2,200	2,710	1	1,430	5,330	556		4,950	I	1	1,250	1	461		1 000	1	3,800	Toluene ⁴
				4	Δ		4	4	4	4	Δ	4	4	<1	4	<1.00	<1.00	<0.50	0.556	<0.5	<0.5	202				1,400	1,700	1,800		2,000		2,200	2 500	2,700	2,050	1	625	2,100	420		1,530	1	1	152	1	12.5	1		1	570	Ethyl-benzene ⁴
-	Not sampled	Not sampled	Not sampled	۵	۵	Not sampled	۵	<3	۵	۵	۵	۵	۵	3	۵	<3.00	<3.00	<1.0	2.29	<1.0	<1.0	~1 O	Not sampled	Not sampler	Not complex	8,400	14,000	12,000		12,000		15,200	14 000	17,600	14,930	1	7,020	16,900	3,500	1	9,860	1	1	2,790	1	1,380	6,400	7 100		-	Total Xylenes ⁴
	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	1	4	Not sampled; just gauged	I	1	1	I	1	4	I	4	<1	<5.00	<3.00	1	1	1	1	C10 - Budger	1. just pauged	Not campled: just gauged		-1	1	I	LNAPL	1	LNAPL	4	1 4	2 4	<5.00	1	1	I	1	1	1	1	1	I	1	1	1 1	1	1		MTBE ⁴
				1	<1		T	I	1	t	I	1	1	1	t	<1.00	1	I.	1	1.	1	1				4	1	I		I		1	(1	<1.00	1	1	I	1	1	1	1	1	1	1	1	1 1	1	1	1	EDB4
				1	4		1	T	I	1	ī	1	1	1	1	<1.00	1	I	1	1	1					<1	1	1		L		1		4	<1.00	1	I	t	1	1	1	1	1	1	ı	1	1 1	1	1	1	EDC4
		-		1	1		1	1	1	Ĩ	1	1	1	1	4	t	1	I	1	1						1	1	1		1		1		Δ	1	1	1	1	1	1	1	1	1	Î	1	1	1	1	1	1	Total Lead ⁵
				I	1	Ì	1	1	ĩ	1	I	1	Ĩ	I	1	I	1	1	1	1	1					1	1	t		1		1 1	1	1	1	I	1	1	1 1	1	1	1	1	1	1	1 1	1	1	t	1	Dissolved Lead ⁵

P:\0440 TOC Holdings Co\01-176

2Q4\QGW\01-176_2012Q4_GD_F.xlsxTable 2 GD



			Depth to LNAPL ¹	Depth to Groundwater ¹	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	the second	
WW13	lell ID	Sample Date	(feet)	(feet) Dry	(ieer)	Dry	GRPH	benzene	Toluelle	-	Total Aylelles	IVITE	EDB	EDC ⁴	+
	252.07	10/11/01			_	313.30	11,300	1,450	<25.0	1,210	1,470			-	╀
TOC:	353.87	03/27/02		40.57		-				1,210			-	-	+
		09/26/02	_	Dry	_		-	-	-	_	-	-	-	-	∔
		03/27/03	_	Dry						-		-	-	-	∔
		10/09/03	-	Dry	-	-	-	-	-	-	-	-	-		+
		03/09/05	-	Dry		-	-	-	-	-	-	-	-	-	+
		09/26/05	-	41.69	-	312.18	NA ⁷	NA ⁷	NA ⁷	NA ⁷	NA ⁷	NA ⁷	-	-	
		12/22/05	-	Dry	-	-	-	-	-	-	-		-	-	
		02/02/06	-	41.59	-	312.28	8,400	520	9.4	680	1,239	<1	<1	3.5	Т
		02/22/06	_	41.36	-	312.51	-	-	-	-	-	-	-	-	Г
		05/31/06	-	41.29	-	312.58	6,700	340	22	520	810	-	-	-	T
		08/23/06	_	Dry	-	-	-	-	-	-	-	-	-	_	T
		11/14/06	_	Dry	-	_	_	_		-	_	_	-	-	t
		02/20/07	-	41.21	-	312.66				Not sampl	ed; insufficient wa	ater to fill sample	containers		-
		05/22/07	_	Dry	-	-	-	-	-	-	-	_	-	-	Т
		07/31/07	-	Dry		-			•	Not sampl	ed; insufficient wa	ater to fill sample	containers		1
		02/13/08	_	Dry	-	-					ed; insufficient wa				
		05/14/08	-	Dry	-	-					Not sampled	and the second se	containers		_
		03/04/10	_	41.23		312.64	1,700	60	17	94	150	<1	<1	1.7	Т
00	257 20				_	-	1,700	00	1 1/	54	D		~1	1.7	1
TOC:	357.39	03/05/12	_	Dry	_	_					Di				-
		06/04/12		Dry											
		09/10/12	-	Dry	-	-					Di				_
		12/03/12		Dry	-	-		0.5.6	0 14 14 1 4		Di	ry			
MW14		11/29/04								SIONI					-
MW15		10/29/04	-	36.37	-	318.02	5,400	<10.0	46.0	270	880	-	-	-	1
TOC:	354.39	03/09/05	33.12	33.16	0.04	321.23	-	_	-	-	-	-	-	-	L
		09/26/05	32.32	32.67	0.35	322.00					LNA				
		12/22/05	32.64	32.89	0.25	321.70					LNA				_
		02/22/06	-	29.47	-	324.92				1	lot sampled; abso	rbent socks in w	ell		
		06/01/06	-	30.55	-	323.84	12,000	28	23	470	1,700	-	-	-	
		08/23/06	-	37.29	-	317.10					LNA	PL			
		11/14/06	36.65	36.68	0.03	317.73					LNA				
		02/20/07	—	-	-	-				Not m	easured; LNAPL, a		in well.		
		05/22/07	33.00	33.00	0.00	321.39					LNA	PL			
		08/01/07	-	34.31	-	320.08				N	ot sampled; absor	rbent socks in w	ell		
		02/11/08	34.60	34.62	0.02	319.79					LNA	PL			_
		03/01/10	31.95	32.12	0.17	322.41					LNA	PL			_
		12/06/10	36.29	36.46	0.17	318.07				Not s	ampled, just gaug	ed for LNAPL rec	overy		
TOC:	357.50	03/08/12	-	33.12	_	324.38	8,200	<5	<5	88	480	_	- 1	-	Г
		06/04/12	33.69	33.69	Heavy Sheen	323.81					LNA	PL			-
TOC:	357.54	09/12/12	_	36.15	_	321.39	2,300	3.23 ⁱ	<5	14	330	-	_	_	Г
IUC.	557.54	12/05/12		36.50	_	321.04	300	<1	1.8	<1	9.7	_		_	⊢
MW16					-	-	-	-	-	-	-			_	⊢
		03/09/05		Dry				-	-		-				-
TOC:	361.89	09/26/05	-	Dry	-	-						-	-	-	-
		12/22/05	_	Dry	-	-	-	-	-	-	-	-	-	-	
		02/22/06	_	Dry	-	-		-	-	-	-	-	-	-	-
		06/01/06	-	45.05	-	316.84	<100	<1	<1	<1	<3	-	-	-	
		08/23/06	-	Dry	-	-	-	-	-	-	-	-	-	-	
		11/14/06	-	Dry	-	-	-	-	-	-	-	-	-	-	
		02/20/07	-	46.30	-	315.59	<100	<1	<1	<1	<3	-	-	-	
		05/23/07	-	46.06	-	315.83	<100	<1	<1	<1	<3	-	-	-	
		07/31/07	-	Dry	-	-					ed; insufficient wa				
		02/11/08	-	Dry	—	-				Not sample	ed; insufficient wa	ter to fill sample	containers		_
		03/02/10	-	45.54	-	316.35	<100	<1	<1	<1	<3	<1	<1	<1	Г
TOC:	365.24	03/05/12	-	Dry	_	-					Dr				-
		06/04/12		45.30	-	319.94					Not sampled,				-
		09/10/12	_	47.39	-	317.85					Not sampled,				-
		12/03/12	-	Dry	-	-				Not in	cluded in scope of	f sampling; just g	auged		

		and the set
	Total Lead ⁵	Dissolved Lead ⁵
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v	Vell ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	I
MW17		07/27/04	-	43.18	-	309.47	<80	<0.5	<0.5	<0.5	<1.5	-	-	-	T
TOC:	352.65	11/29/04						DEC	OMMIS	SIONI	E D				-
MW18		03/09/05	35.18	35.33	0.15	319.49	-	-	-	-	-	-	-	-	Т
TOC:	354.82	09/26/05	12.94	13.15	0.21	341.84					LNA	PL			-
		12/22/05	35.72	35.72	0.00	319.10					LNA	PL			_
		02/22/06						Not gauged	or sampled; veh	icle parked over va	ult lid.				_
		06/01/06	-	29.65	-	325.17	32,000	290	340	1,100	7,000	-	-	-	T
		08/22/06						L	LNAPL; absorben	t socks in well					-
		11/14/06						1	LNAPL; absorben	t socks in well					_
		02/20/07						Not sa	ampled; truck pa	rked over well-hea	ł				_
		05/22/07	-	36.00	-	318.82	22,000	96	63	440	4,200	-	-	-	T
		07/31/07	-	37.01	_	317.81					LNAPL; absorbe	nt socks in well			-
		02/14/08	-	35.58	-	319.24	13,000	98	28	<10	2,200	-	-	-	Т
		03/04/10	-	32.35	-	322.47	12,000	96	28	270	1,600	<1	<1	<1	t
TOC:	357.86	03/07/12	-	28.74	-	329.12	5,900	43	<10	110	720	-	-	-	T
		06/04/12	-	33.40	-	324.46					Not sampled,	just gauged			-
TOC:	357.97	09/10/12	-	33.40	-	324.57					Not sampled	; just gauged			-
		12/03/12	-	28.18	-	329.79					Not sampled	; just gauged			_
MW19		03/09/05	-	11.25	-	344.17	<50.0	<1.00	<1.00	<1.00	<3.00	<3.00	-	-	Г
TOC:	355.42	09/26/05	11.29	11.30	0.01	344.13					LNA	PL			-
		12/21/05	-	13.13	-	342.29	<100	<1	<1	<1	<3	<1	-	-	
		02/22/06	-	7.96	-	347.46	<100	<1	<1	<1	<3	<1	-	-	T
		06/01/06	-	9.91	-	345.51	<100	<1	<1	<1	<3	-	-	-	
		08/24/06	-	14.12	-	341.30	<100	<1	<1	<1	<3	<1	-	-	
		11/15/06	-	18.19	-	337.23	<50	<1	<1	<1	<3	-	-	-	
		02/20/07	-	12.47	-	342.95	<100	<1	<1	<1	<3	-	-	-	
		05/24/07	-	13.63	-	341.79	<100	<1	<1	<1	<3	-	-	-	
		08/01/07	-	14.89	-	340.53	<100	<1	<1	<1	<3	-	-	-	
		02/12/08	-	13.64	-	341.78	<100	<1	<1	<1	<3	-	-	-	
		03/04/10	_	11.98	-	343.44	<100	<1	<1	<1	<3	<1	<1	<1	
TOC:	358.90	03/09/12	-	13.56	-	345.34	<100	<1	<1	<1	<3	-	-	-	
		06/04/12	-	13.15	-	345.75					Not sampled,				_
		09/10/12	-	15.65	-	343.25					Not sampled,				_
		12/03/12	-	13.72	-	345.18					Not sampled;				
MW20		03/09/05	27.86	27.88	0.02	328.59					LNA				
TOC	356.47	09/26/05	26.16	28.25	2.09	329.89					LNA	PL			
		12/20/05	-	29.08	-	327.39	13,000	740	640	330	2,790	<1	-	-	
		02/22/06	-	24.60	-	331.87	25,000	710	1,800	710	5,100	<1	-	-	
		05/31/06	26.30	26.41	0.11	330.15					LNA	PL			
		08/22/06	29.71	29.73	0.02	326.76					LNAPL; absorber				
		11/14/06	36.00	36.00	0.00	320.47					LNAPL; absorber	nt socks in well			_
		02/20/07	27.19	27.22	0.03	329.27					LNA	PL			
		05/22/07	28.82	28.94	0.12	327.63					LNAPL; absorber	nt socks in well			
		07/31/07	-	31.01	-	325.46				N	ot sampled; absor	bent socks in we	U.		_
		02/13/08	-	28.65	-	327.82	20,000	450	990	450	3,600	-	-	-	
		03/04/10	-	27.16	-	329.31	11,000	390	1,100	390	1,700	<1	<1	<5	Γ
TOC:	359.98	03/09/12	-	29.35	-	330.63	5,800	200	57	310	480	-	-	-	
		06/06/12	-	27.99	-	331.99	7,800	220	250	300	910	-	_	-	Г
[09/11/12	-	30.64	-	329.34	5,000	100	21	210	450	-	-	-	
		12/05/12	-	32.91	-	327.07	840	<1	2.5	5.9	14	-		-	
MICAN	Anthod A Clea	nup Levels for Gro	undwater ⁶				1,000/800 ^b	5	1,000	700	1,000	20	0.01	5	

	B. Barrison B.
Total Lead ⁵	Dissolved Lead ⁵
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15	INE



14	/ell ID	Sample Date	Depth to LNAPL ¹	Depth to Groundwater ¹ (feet)	LNAPL Thickness	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴							
MW21°	ren ib		(feet)		(feet)					Ethyl-benzene ⁴		MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
11.1.1 A.S. (2017)	256.44	10/29/04	-	29.90	-	326.51	4,800	200	140	9.00	470	-	-	-	-	-
TOC:	356.41	03/09/05	-	28.35	-	328.06	1,600	92.0	64.0	39.0	170	<3.00	-	-	-	-
		09/26/05		Unable to gauge; pr	robe diameter too	1	<50.0	<1.00	1.76	<1.00	<3.59	<5.00	<1.00	<1.00	-	-
		12/20/05	-	29.63	-	326.78	1,700	61	320	42	249	<1	<1	<1	4.52	-
		02/22/06	-	25.00	-	331.41	130	1.9	6.8	3.4	14.8	<1	-	-	-	-
		05/31/06	-	26.58	-	329.83	130	2	11	2	20	-	-	-	-	-
		08/23/06	-	30.31	-	326.10	340	38	25	8.2	100	<1	-	-	-	-
		11/14/06	-	39.35	-	317.06				Not sample	ed; insufficient wa	ater to fill sample	containers			
		02/21/07	-	27.75	-	328.66	310	3	30	6.5	47	-	-	- 1	-	-
		05/23/07	-	29.69	-	326.72	<100	2	1	<1	5	-	-	-	-	-
1		08/02/07	-	31.69	-	324.72	2,500	140	17	65	550	_	-	-	-	-
		02/13/08	-	29.50		326.91	940	2	6	6	78	-	-	-	-	-
		05/14/08	-	29.38	-	327.03				•	Not sampled	; just gauged				1
		03/04/10	-	28.65	-	327.76	370	<1	5	3	32	<1	<1	<1	-	-
		03/05/12	-	-	-	-					Wellhead in	naccessible				1
		04/16/12				•		DEC	OMMIS	SIONE	D					
MW22*		10/29/04	-	30.27	-	325.34	130	4.00	<1.00	<1.00	19.0	-	_	-	-	
TOC:	355.61	03/09/05	-	26.98	_	328.63	<50.0	1.00	<1.00	<1.00	<3.00	<3.00	-	-		
		09/26/05		Unable to gauge; pr	obe diameter too		<50.0	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00		
		12/20/05	_	28.27	_	327.34	<100	<1	<1	<1	<3	<1	<1.00	<1	<1	
		02/22/06	_	23.02	_	332.59	<100	<1	<1	<1	<3	<1	-	-	-	
		06/01/06	-	25.14	-	330.47	<100	<1	<1	<1	<3	-		1 -		
		08/24/06	_	28.25	-	327.36	<100	<1	<1	<1	3	<1	-	-		-
		11/15/06	_	37.62	_	317.99	550	5.1	<1	<1	<3	-	_		-	-
		02/20/07	_	26.45		329.16	<100	<1	<1	<1	<3	_	_			-
		05/24/07	_	28.20	_	327.41	<100	<1	<1	<1	<3	_	_			-
		08/02/07	-	30.72	-	324.89	<100	<1	<1	<1	<3			-		-
		02/13/08	-	27.82	_	327.79	<100	<1	<1	<1	<3	_	-	-	-	-
		03/04/10		26.55	_	329.06	<100	<1	<1	<1 <1	<3	<1				-
TOC:	358.56	03/05/12	-	-	_	-	<100	17			Wellhead in		<1	<1	-	-
roc.	558.50	06/06/12	-	27.07		331.49	<100	<1	<1	<1	<3			1	1	
		09/11/12	_	29.55	_	329.01	<100	<1	<1	<1 <1	<3	_		-		-
		12/04/12	_	28.20	_	330.36	<100	<1	<1	<1 <1	<3	_			-	-
MW23		10/29/04	_	Dry	_	-	<100	-	-	-	-				-	-
TOC:	356.61	03/09/05	_	Dry	_	_	_				_	_	_		-	-
100.	550.01	09/26/05	-	39.12	_	317.49					ed; insufficient wa				-	-
		12/22/05	_	Dry	_	-	-	_	-		eu, insurncient wa	ter to mi sample	Containers	1	1	T
		02/22/06	_	38.05	_	318.56	1,100	4.9	<1	65	7.8			-	-	-
		06/01/06		38.79		317.82	760	3	2.1	18	22	<1	-	-	-	-
		08/22/06	_	39.12		317.82	760	3	2.1			-		-	-	-
		11/14/06		39.38		317.23					ed; insufficient wa					
		02/21/07	_				-100	-4	1	1 1	ed; insufficient wa	ter to fill sample	containers	r		
		05/24/07	_	38.12 38.88		318.49	<100	<1	<1	<1	<3	_	-	-	-	-
						317.73	330	1	<1	<1	<3	-	-	-	-	-
		07/31/07		39.10		317.51				1 1	ed; insufficient wa		1	1		
		02/11/08	-	38.55	-	318.06	<100	<1	<1	<1	<3	-		-	-	-
TOC	057.40	03/04/10	-	38.46		318.15	<100	<1	<1	<1	<3	<1	<1	<1	-	-
TOC:	357.13	03/05/12	-	38.88	-	318.25				Not sample	ed; insufficient wa		containers			
		06/04/12	-	38.64		318.49					Not sampled;					
		09/10/12	-	39.15	-	317.98					Not sampled;					
		12/03/12	-	39.11	-	318.02					Not sampled;	just gauged				
MTCA M	ethod A Clear	nup Levels for Gro	undwater				1,000/800 ^b	5	1,000	700	1,000	20	0.01	5	15	NE



w	/ell ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴
MW24 ^a		10/29/04	-	26.61	_	332.64	45,000	440	2,300	570	7,800	-	-	
TOC:	359.25	03/09/05	-	15.85	-	343.40	19,000	74.0	210	98.0	2,700	<30.0	-	-
100.	555.25	09/27/05		Unable to gauge; p			478	<1.00	1.08	4.19	82.9	<5.00	-	-
				1	1	348.24							<1.00	<1.00
		12/22/05	-	11.01	-		<100	<1	<1	1.0	11.8	<1	-	-
		02/22/06	-	8.91	-	350.34	<100	<1	<1	<1	4.8	<1	-	-
		06/01/06	-	9.98	-	349.27	<100	<1	<1	<1	6	_	-	-
		08/23/06	-	20.21	-	339.04	8,400	<1	32	98	1,930	<1	-	-
1		11/15/06	-	36.05	-	323.20	16,000	77	250	240	2,870	-	-	-
		02/21/07	_	14.24	-	345.01	460	<1	2	6	78	-	-	-
		05/22/07	-	16.73	-	342.52	5,700	2	29	41	1,000	-	-	-
		08/01/07	-	25.59	-	333.66	9,000	39	140	97	2,400		-	-
		02/12/08	-	19.68	-	339.57	1,800	<1	4	4	140		-	
		02/04/09	-	21.94	-	337.31	11,000	27	190	180	2,290	<1		
							-			-				-
		07/30/09	26.82	26.82	0.00	332.43	15,000	130	230 ve	<1	3,400	<1	<1	<1
		03/04/10	-	13.43	0.00	345.82	<100	<1	<1	<1	<3	<1	<1	<1
TOC:	361.85	03/09/12	-	21.01	-	340.84	4,400	7.3	39	39	770	-	-	-
		06/04/12	-	14.18	-	347.67					Not sampled	; just gauged		
TOC:	362.00	09/10/12	-	25.34	-	336.66					Not sampled	; just gauged		
		12/03/12	-	24.60	-	337.40					Not sampled	; just gauged		
MW25 ^a		10/29/04	-	29.40	-	326.91	57,000	860	6,700	810	8,700	-	-	-
TOC:	356.31	03/09/05	-	27.61	-	328.70	38,000	670	2,700	750	6,500	<150	-	-
100.	330.31			-					-	-			-	-
1		09/27/05		Unable to gauge; p		1	20,800	378	1,070	106	4,390	<5.00	<1.00	<1.00
		12/21/05	-	28.20	-	328.11	25,000	670	2,600	830	6,700	<1	<1	<5
		02/22/06	-	23.68	-	332.63	24,000	420	2,300	510	5,400	<1	-	-
		06/01/06	-	25.56	-	330.75	25,000	390	2,100	750	6,300	-	-	-
		08/24/06	-	28.97	-	327.34	21,000	320	840	890	7,300	<1	-	-
1		11/15/06	-	36.08	-	320.23	32,000	66	<50	<50	6,800	-	200	_
		02/22/07	_	26.41	-	329.90	27,000	370	2,100	730	6,500	-	-	-
1		05/23/07	-	27.94	-	328.37	26,000	220	1,400	630	5,800	-	_	-
		08/02/07	-	29.75	-	326.56	24,000	280	770	730	5,200	-	-	-
		02/12/08	_	27.80	-	328.51	22,000	260	1,400	380	4,500	-	-	
			_			1	1	30						-
TOC	250.01	03/04/10	_	26.11	-	330.20	7,600	30	310	90	1,700	<1	<1	<1
TOC:	359.01	03/05/12		-	-	-					Wellhead in			
		06/04/12	-	18.99	-	340.02					Not sampled			
		09/10/12	-	28.28	-	330.73					Not sampled	; just gauged		
		12/03/12	-	30.40	-	328.61					Not sampled	; just gauged		
MW26		12/21/05	-	50.15	-	311.25	120	1.5	38	1.0	5.5	<1	<1	<1
TOC:	361.40	02/22/06	-	47.67	-	313.73	<100	<1	<1	<1	<3	<1	-	-
		06/01/06	-	45.62	_	315.78	<100	<1	<1	<1	<3	-	-	-
		08/24/06	-	47.37	-	314.03	<100	<1	<1	<1	<3	<1	-	_
		11/16/06	-	49.43		311.97	<50		<1	<1	<3			
				1	-		-	<1				-	-	-
		02/21/07	-	46.69	-	314.71	<100	<1	<1	<1	<3	-	-	-
		05/24/07	-	45.76	-	315.64	<100	<1	<1	<1	<3	-	-	-
		08/03/07	-	47.19	-	314.21	<100	<1	<1	<1	<3	-	-	-
1		02/11/08	-	47.87	-	313.53	<100	<1	<1	<1	<3	-	-	-
		03/04/10	-	45.00	-	316.40	<100	<1	<1	<1	<3	<1	<1	<1
TOC:	363.86	03/07/12	-	47.48	-	316.38	<100	<1	<1	<1	<3	-	-	-
		06/04/12	-	45.24	-	318.62					Not sampled	just gauged		
		09/10/12	-	46.99	-	316.87					Not sampled			
		12/03/12		48.14		315.72					Not sampled			
							24 000							
MW27		12/21/05	-	20.23		336.08	34,000	15	190	2,300	13,600	<1	<1	<1
TOC:	360.59	02/22/06	-	15.18	-	345.41	48,000	18	430	2,400	12,600	<1	-	-
		06/01/06	-	17.00	-	343.59	41,000	30	580	1,900	11,000	-	-	-
		08/22/06	21.81	21.82	0.00	338.77					LNA	PL		
		11/14/06	25.55	25.55	0.00	335.04					LNAPL; absorbe	nt socks in well		
1		02/20/07	_	17.49	-	343.10					LNAPL; absorbe			
		05/22/07	19.86	19.86		340.73					LNAPL; absorber			
					0.00									
1		08/01/07	-	22.38	-	338.21				N	ot sampled; absor		241	
1		02/11/08	18.93	19.00	0.07	341.59					LNAPL; absorbe			
		03/04/10	-	16.06	-	344.53	26,000	<10	290	870	4,800	<1	<1	<1
TOC:	362.40	03/09/12		19.16	-	343.24	23,000	8.5	94	620	3,900	-	-	-
		06/05/12	-	17.02	-	345.38	23,000	7.3	110	720	4,600	-	-	-
TOC:	362.64	09/10/12	-	-	_	_				-	pled; insufficient			
		12/05/12	-	19.14	-	343.50	11,000	5.8	69	220	2,800	-	_ 1	- 1
MICAN	athed to Ch			10.14		545.50								
MICA M	ethod A Cléa	nup Levels for Gro	unuwater				1,000/800	5	1,000	700	1,000	20	0.01	5

P:\0440 TOC Holdings Co\01-176 Mountlake Terrace\Technical\Tables\2012\2012Q4\QGW\D1-176_2012Q4_GD_F.xlsxTable 2 GD

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	Fig. J.S.L. A.
Total Lead ³	Dissolved Lead ⁵
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w	ell ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	
MW28		12/20/05	-	27.11	-	330.91	20,000	5.7	98	670	6,500	<1	<1	<1	T
TOC:	358.02	02/22/06	-	23.40	-	334.62	14,000	3.1	13	390	2,380	<1	_	-	T
		06/01/06	24.57	24.60	0.03	333.44	8,100	4	17	160	1,300	-	-	-	Τ
		08/22/06	-	-	-	-					LNA				
		11/14/06	28.54	28.54	0.00	329.48					LNAPL; absorbe				_
		02/20/07	-	-	-	-					LNAPL; absorbe				
		05/22/07	26.91	26.91	0.00	331.11					LNAPL; absorber LNAPL; absorber				_
		08/01/07	-	27.79	-	330.23 331.16					LNAPL; absorbe				
		02/11/08	26.85	26.86	0.01	332.46	7,900	<5	<5	300	970	<1	<1	<1	Т
TOC:	358.42	03/04/10 03/05/12		25.56	_	-	7,900			300	Wellhead in			<1	L
IUC:	358.42	06/04/12	_	26.66	_	331.76					Not sampled;				
		09/10/12	_	27.70	_	330.72					Not sampled;				
		12/03/12	-	27.86	-	330.56					Not sampled;				
MW29		12/20/05	18.40	18.61	0.21	335.65					LNA				-
TOC:	354.09	02/23/06	-	9.35	_	344.74	1,400	<1	<1	19	82	<1	<1	<1	Т
IUC:	354.09	06/02/06		10.11	_	343.98	320	<1	2	3	7	-	-	-	t
							320		2	3			-	-	L
		08/22/06	17.81	18.18	0.37	336.21					LNA				
		11/14/06	22.27	22.27	0.00	331.82					LNAPL; absorber				_
		02/20/07	12.14	12.15	0.01	341.95				1	LNA	PL			
		05/22/07	-	14.67	-	339.42	8,100	<1	3	250	760	-	-	-	
		08/01/07	-	18.29	-	335.80	20,000	260	16	820	3,100	-	-	-	
		02/12/08	-	15.85	-	338.24	11,000	81	<10	310	1,200	-	-	-	Γ
		03/04/10	-	12.00	-	342.09	550	<1	<1	7	9	<1	<1	<1	Τ
TOC:	358.89	03/09/12	_	13.68	-	345.21	6,700	1.5	2.7	220	840	-	-	-	t
0.000		06/04/12	-	12.39	-	346.50					Not sampled;	iust gauged			-
TOC:	359.02	09/10/12	_	18.35	-	340.67					Not sampled;				_
100.	555.02	12/03/12	-	13.85	-	345.17	1				Not sampled;				
		12/05/12	_	43.66	_	310.46	350	6.9	13	15	96	<1	-		Т
MW30						313.87	<100	<1	<1	<1	<3	<1		-	+
TOC:	354.12	02/22/06	-	40.25	-		-		1	-			-	-	+
		05/31/06	-	38.43	-	315.69	<100	<1	<1	<1	<3	-	-	-	⊢
		08/24/06	-	41.59	-	312.53	<100	<1	<1	<1	<3	<1	-	-	1
		11/14/06	-	43.41	-	310.71	<50	<1	<1	<1	<3	_	-	-	
		02/22/07	-	39.19	-	314.93	<100	<1	<1	<1	<3	-	-	-	
		05/23/07	-	39.69	_	314.43	<100	<1	<1	<1	<3	-	-	-	
		08/02/07	-	41.16	-	312.96	<100	<1	<1	<1	<3	-	-	-	
		02/14/08	-	41.29	-	312.83	<100	<1	<1	<1	<3	-	-	_	1
		05/14/08	_	39.86	_	314.26					Not sampled;	just gauged			1
		03/03/10	_	38.71	_	315.41	<100	<1	<1	<1	<3	<1	<1	<1	Г
									<1	<1	<3	~1			+
TOC:	356.51	03/07/12	-	41.15	-	315.36	<100	<1	<1	<1		-	-	-	1
		06/04/12	-	38.85	-	317.66					Not sampled;				_
		09/10/12	-	40.73	-	315.78					Not sampled;				
		12/03/12	-	41.53	-	314.98					Not sampled;	just gauged			_
MTCA M	ethod A Clea	nup Levels for Gro	oundwater ⁶				1,000/800 ^b	5	1,000	700	1,000	20	0.01	5	-

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Total Lead ⁵	Dissolved Lead ⁵
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	ell ID		Depth to	Depth to Groundwater ¹	LNAPL Thickness	Groundwater Elevation ²	GRPH ³	Benzene ⁴	Toluene ⁴	Filed barrend	Total Xylenes ⁴	MTBE ⁴				
MW31		Sample Date 12/15/05	(feet)	(feet) 31.04	(feet)	(feet) 324.18	51,000	420	260	1,200	7,200	<20	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
	255.22			29.92		325.30	18,000	160	88	440	2.930	<1	-	-	-	-
TOC:	355.22	02/22/06	-	29.92	_	325.46	16,000	180	160	580	3,700	-	-	-	-	-
		05/31/06	-	30.63		324.59	22,000	240	170	500	3,470	<1	-	-	3.51	-
		08/24/06	-	30.63	-	316.74	22,000	240	170				-	-	6.39	-
		11/14/06	-	-		325.04	15 000	270	100	1	ed; insufficient wa		1	1	1	1
		02/21/07	-	30.18	-	324.54	15,000	270	130	490	2,800	-		-	9.65	-
		05/22/07	-	30.68			20,000	210	100	500	3,400		-	-	9.48	
		08/03/07	-	34.76	-	320.46	30,000	390	160	810	6,600	-	-	-	14.4	13.9
		02/13/08	-	34.73	-	320.49	30,000	100	92	730	5,500		-	-	44.4	39.9
		05/14/08	-	33.88	-	321.34			1	1	Not sampled			1	1	1
		07/29/09	-	35.01	-	320.21	1,900	45	1.6	7.9	440 ^{ve}	<1	<1	1.7		-
		03/03/10		32.76	-	322.46	15,000	160	68	160	2,800	<1	<1	<1	15.1	15.1
TOC:	357.52	03/07/12	-	36.78	-	320.74	2,800	7.2	5.2	23	400	<1		<1	26.5	24.6
		06/05/12	-	34.88	-	322.64	8,200	19	7.7	17	880	-	-	-	-	-
TOC:	357.25	09/10/12	-	-	-	-					npled; insufficient					
		12/03/12	-	32.87	-	-				-	pled; insufficient		-			
MW32		12/20/05	-	23.05	-	334.98	40,000	270	8,000	1,000	9,500	<1	<1	<1	17.5	-
TOC:	358.05	02/23/06	-	19.93	-	338.12	24,000	67	1,700	580	5,000	<1	-	-	-	-
		05/31/06	20.98	21.07	0.09	337.05					LNA	APL				
		08/22/06	24.40	24.42	0.02	333.65					LNA	APL .				
		11/14/06	27.15	27.15	0.00	330.90					LNAPL; absorbe	nt socks in well				
		02/20/07	-	21.56	-	336.49					LNAPL; absorbe	nt socks in well				
		05/22/07	-	23.29	-	334.76					LNAPL; absorbe	nt socks in well				
		07/31/07	-	24.86	-	333.19				N	lot sampled; abso	rbent socks in w	ell		-	
		02/12/08	-	22.42	-	335.63	20,000	59	870	410	4,600	-	-	-	-	-
		03/04/10	_	20.71	_	337.34	14,000	16	270	320	2,400	<1	<1	<1	-	-
TOC:	359.87	03/09/12	-	22.71	-	337.16	120	3.1	11	1.1	16	-	-	-	-	-
		06/06/12	-	21.58	_	338.29	4,300	14	160	87	650	-	-	-	-	-
TOC:	359.98	09/11/12	-	24.12	-	335.86	16,000	170	330	470	3,000	-	-	-	-	-
		12/05/12	-	24.33	-	335.65	33,000	29	790	920	6,900	-	-	-	-	-
MW33		12/20/05		Dry	-	-	-	. —	-	-	-	-	-	-	-	-
TOC:	355.42	02/10/06	-	32.73	-	322.69	14,000	190	140	670	3,220	<1	<1	<1	7.44	-
		05/31/06		33.78	-	321.64				Not sampl	ed; insufficient wa	ter to fill sample	containers			
		08/22/06	-	34.24	-	321.18				Not sampl	ed; insufficient wa	ter to fill sample	containers			
		11/14/06	-	Dry	-	-				Not sampl	ed; insufficient wa	ter to fill sample	containers			
		02/20/07	-	-	-	-					LNAPL; absorbe	nt socks in well				
		05/22/07	-	34.24	-	321.18					LNAPL; absorbe	nt socks in well				
		07/31/07	-	34.33	-	321.09				N	lot sampled; absor	rbent socks in w	ell			
		02/14/08	-	32.45	-	322.97	17,000	81	23	210	2,800	-	-	-	-	-
		03/04/10	-	32.50	-	322.92	11,000	18	14	300	1,300	<1	<1	<1	-	-
TOC:	358.29	03/05/12	_	34.35	_	323.94				Not sampl	ed; insufficient wa	ter to fill sample	containers	•		
		06/04/12	-	34.27	-	324.02					ed; insufficient wa					
		09/10/12	_	34.49	_	323.80					ed; insufficient wa					
		12/03/12	_	34.43	-	323.86					ed; insufficient wa					
ATCAN	all and A Class	nup Levels for Gro	undwator ⁶	04,40		220.00	1,000/800 ^b	5	1.000	700	1.000	20	0.01	5	15	NE



			Depth to	Depth to Groundwater ¹	LNAPL Thickness	Groundwater Elevation ²	GRPH ³		Toluene ⁴							19
	Vell ID	Sample Date	(feet)	(feet)	(feet)	(feet)		Benzene ⁴		Ethyl-benzene ⁴		MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
MW34		01/27/06	-	7.05		348.54	2,500	<1	<1	22	90	<1	<1	<1	23.7	-
TOC:	355.59	02/10/06	-	4.22	-	351.37		1	1	1	uarter sample col		, 2006	1	-	1
		06/02/06	-	10.06		345.53	1,400	<1	3	21	29	-	-	-	4.17	-
		08/23/06	-	13.96	-	341.63	260	<1	3	<1	<3	<1	-	-	NA ⁷	NA ⁷
		11/14/06	-	Dry	-	-				Not sampl	ed; insufficient wa	ter to fill sample	containers			-
		02/20/07	-	10.22	-	345.37	<100	<1	<1	<1	<3	-	-	-	<1	<1
		05/22/07	-	12.40	-	343.19	<100	<1	<1	<1	<3	-	-	-	<1	<1
		07/31/07	-	14.95	-	340.64				Not sample	ed; insufficient wa	ter to fill sample	containers			
		02/13/08	-	10.79	-	344.80	<100	<1	<1	<1	<3	-	-	-	-	-
		03/04/10	-	9.83	-	345.76	<100	<1	<1	<1	<3	<1	<1	<1		-
		07/08/10	_	12.00	-	343.59					Not sampled;	just gauged				
TOC:	357.95	03/09/12	-	12.39	-	345.56	<100	<1	<1	<1	<3	-	-	-	-	-
		06/04/12	-	11.55		346.40					Not sampled;	just gauged				
		09/10/12	-	15.52	-	342.43					Not sampled;	just gauged				
		12/03/12	_	8.94		349.01					Not sampled;	just gauged				
MW35		01/27/06	-	38.18	-	317.97	<100	<1	<1	<1	<3	<1	<1	<1	59.6	_
TOC:	356.15	02/22/06	_	38.54	-	317.61				First C	uarter sample coll	ected January 27	, 2006			
		05/31/06	-	39.62	-	316.53				Not sample	ed; insufficient wa	ter to fill sample	containers			
		08/22/06	_	39.64	_	316.51				Not sample	ed; insufficient wa	ter to fill sample	containers			
		11/14/06	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		02/20/07	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		05/22/07	-	Dry	_	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		07/31/07	-	Dry	_	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		02/11/08	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		03/04/10	-	38.86	-	317.29				Not sar	mpled; well did no	t recharge after p	urging			
TOC:	358.51	03/05/12	-	Dry	-	-					Dr					
		06/04/12	-	Dry	_	-					Dr					
		09/10/12	-	Dry	-	-					Dr					
		12/03/12	_	39.32	-	319.19					Not sampled;					
MTCAM	ethod A Clas	nup Levels for Gro	undwater ⁶				1,000/800 ^b	5	1,000	700	1.000	20	0.01	E	15	NE



 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

MATCA NA				TOC:									TOC:	MW38				TOC:									TOC:	MW37				TOC:										TOC:	MW36	W	
othod A Clas				364.49									362.03					358.96									356.58					358.02										355.65		Well ID	
MTCA Mathod A Cleanin Levels for Groundwater	12/03/12	09/10/12	06/04/12	03/08/12	03/04/10	02/13/08	08/01/07	05/22/07	02/22/07	11/14/06	08/23/06	05/31/06	02/22/06	01/27/06	12/03/12	09/10/12	06/04/12	03/08/12	03/04/10	02/13/08	08/02/07	05/23/07	02/21/07	11/15/06	08/24/06	06/02/06	02/22/06	01/27/06	12/03/12	09/10/12	06/04/12	03/08/12	03/04/10	03/04/10	02/14/08	08/02/07	05/23/07	02/20/07	11/14/06	08/24/06	06/02/06	02/22/06	01/27/06	Sample Date	
6	I	I	1	1	1	I	1	1	1	1	1	1	ı	I	1	.1	1	1	1	1	1	1	1	1	I	1	1	1	1	1	ı	ı	1	ı	1	1	1	1	1	1	1	1	1	(feet)	Depth to
	21.41	22.78	17.61	19.32	14.80	18.14	22.84	19.74	16.43	26.36	23.08	16.85	13.52	14.69	22.27	23.99	16.90	19.40	13.93	16.45	24.79	18.69	16.56	34.32	22.29	15.62	17.34	14.70	42.49	42.83	41.54	41.64	41.79	41.16	41.35	42.58	41.35	41.15	43.05	41.58	41.13	40.92	40.10	(feet)	Depth to Groundwater ¹
	r	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	L	1	1	1	ı	ı	r	I	t	1	1	1	ı	1	1	1	1	(feet)	LNAPL
	343.08	341.71	346.88	345.17	347.23	343.89	339.19	342.29	345.60	335.67	338.95	345.18	348.51	347.34	336.69	334.97	342.06	339.56	342.65	340.13	331.79	337.89	340.02	322.26	334.29	340.96	339.24	341.88	315.53	315.19	316.48	316.38	313.86	314.49	314.30	313.07	314.30	314.50	312.60	314.07	314.52	314.73	318.19	(feet)	Groundwater Elevation ²
a non innab				<100	<100	<100	<100	<100	<100	<50	<100	<100		<100				<100	<100	<100	<100	<100	<100	<50	<100	<100		<100				<100		<100	<100	<100	<100	<100		<100	<100		<100	GRPH ³	
				<1	4	4	4	4	<1	4	4	<1		<1				<1	4	4	4	4	4	4	<1	4		4				4		4	4	4	4	4		<1	1		~1	Benzene ⁴	
				4	4	4	4	4	4	4	4	4		4				4	4	4	Δ	۵	4	Δ	Δ	Δ		4				4		4	4	4	<1	4		-1	4		4	Toluene ⁴	
				4	Δ	4	4	4	4	4	4	<1	First (4				4	4	Δ	Δ	4	4	Δ	4	4	First (4				4		4	4	Δ	4	4	Not samp	<1	4	First	4	Ethyl-benzene ⁴	
	Not sampled	Not sampled	Not sampled	۵	۵	۵	۵	۵	۵	۵	۵	۵	First Quarter sample collected January 27, 2006	۵	Not sampled	Not sampled	Not sampled	۵	\$	۵	۵	۵	۵	۵	۵	۵	First Quarter sample collected January 27, 2006	۵	Not sampled	Not sampled	Not sampled	\$	Not sampled	۵	۵	۵	۵	\$	Not sampled; insufficient water to fill sample containers	۵	۵	First Quarter sample collected January 27, 2006	\$	Total Xylenes ⁴	and the second
	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	T	4	I	T	1	1	ı	4	T	lected January 27	4	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	1	۵	1	1	ı	ı	ı	۵	t	lected January 2	4	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	1	Not sampled; just gauged	4	1	1	1	L	ater to fill sample	4	1	lected January 2	4	MTBE4	
				I	4	1	I	1	I	I	1	I	, 2006	4				1	۵	1	1	I	I	I	I	t	7, 2006	4				1		4	1	1	1	I	containers	1	1	7, 2006	4	EDB4	
				1	4	1	I	ı	I	I	ï	1		4				1	4	t	t	I	ſ	t.	I	t		4				1		<1	1	1	1	1		1	1		4	EDC4	
				1	1	1	1	1	1	1	ì	1		Δ				1	1	i.	E.	1	1	E	1	T		Δ				T		2.78	r	,	1	1		NA7	193		43.4	Tota: Lead ⁵	
				1	1	1	1	I	I	I	I	1		1				1	r	I	I	1	I	I	I	1		I				I		4	1	1	1	1	1	NA7	1		1	Dissolved Lead ⁵	

P:\0440 TOC H

QGW\01-176_2012Q4_GD_F.xbxTable 2 GD



v	Veli ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
MW39		02/02/06	-	41.41	-	312.15	<100	<1	<1	<1	<3	<1	<1	<1	<3.55	-
TOC:	353.56	02/22/06	-	40.18	-	313.38				First C	uarter sample col	lected February 2			1 0.05	1
		05/31/06	-	39.52	-	314.04	<100	<1	<1	<1	<3	-	-	-	-	-
		08/24/06	-	40.56	-	313.00	<100	<1	<1	<1	<3	<1	-	-	-	-
		11/15/06	-	43.40	-	310.16	<100	<1	<1	<1	<3	-	_	-	-	-
		02/22/07	-	39.26	-	314.30	<100	<1	<1	<1	<3	-	-	-	-	-
		05/23/07	-	39.80	-	313.76	<100	<1	<1	<1	<3	-		-	-	
		08/03/07	-	41.22	-	312.34	<100	<1	<1	<1	<3	-		-	-	-
		02/14/08	-	41.22	-	312.34	<100	<1	<1	<1	<3	-	_	-	-	-
		02/03/09	_	42.11	-	311.45	100		1 4		Not sampled					-
		03/03/10	-	38.76	-	314.80	<100	<1	<1	<1	<3	<1 <1			-	1
TOC:	355.94	03/07/12	-	41.14	-	314.80	<100	<1	<1	<1	<3	<1	<1	<1	-	-
100.	555.54	06/04/12	-	39.14	-	316.80	<100					-	-	-	-	-
		09/10/12	-	40.86	_	315.08					Not sampled					
		12/03/12	_	40.86	_						Not sampled					
MW40		02/03/06		41.45	_	314.49	.100				Not sampled			1	1	1
TOC:	353.99	02/03/08	-	40.29	_	312.28 313.70	<100	<1	<1	<1	<3	<1	-	-	123	-
IUC.	555.55	02/22/06	-	39.46	_	313.70				1	uarter sample col	lected February 3	1	1	1	1
		08/24/06					<100	<1	<1	<1	<3		-	-	<1	-
			-	41.55	-	312.44	<100	<1	<1	<1	<3	<1	-	-		-
		11/14/06	-	43.45	-	310.54	<100	<1	<1	<1	<3	-	-	-	<1	-
		02/21/07	-	39.22	-	314.77	<100	<1	<1	<1	<3	-	-	-	-	-
		05/24/07	-	38.75		315.24	<100	<1	<1	<1	<3	-	-	-	-	-
		08/03/07	-	41.21		312.78	<100	<1	<1	<1	<3	-	-	-	<1	<1
		02/14/08	-	41.30	_	312.69	<100	<1	<1	<1	<3	-	-	-	<1	<1
		03/03/10	-	38.77	-	315.22	<100	<1	<1	<1	<3	<1	<1	<1	-	-
TOC:	356.37	03/07/12	-	41.21	-	315.16	<100	<1	<1	<1	<3	-	-	-	-	-
		06/04/12	-	39.11	-	317.26					Not sampled					
		09/10/12	-	40.78	-	315.59					Not sampled					
		12/03/12		41.57	-	314.80					Not sampled					
MW41		02/04/06	-	Dry	-	-					ed; insufficient wa					
TOC:	354.02	02/22/06	-	40.35	-	313.67					ed; insufficient wa					
		05/31/06	-	40.22	_	313.80					ed; insufficient wa					
		08/22/06	-	40.22	-	313.80					ed; insufficient wa	100001				
		11/14/06		40.22	-	313.80					ed; insufficient wa					
		02/20/07	-	40.23	-	313.79					ed; insufficient wa					
		05/22/07	-	Dry	-	-					ed; insufficient wa					
		07/31/07	-	Dry	-	-					ed; insufficient wa					
		02/11/08	-	Dry		-					ed; insufficient wa					
		03/04/10	-	Dry	-	-				Not sample	ed; insufficient wa		containers			
TOC:	356.02	03/05/12	-	39.89	-	316.13					Dr					
TOC	256.40	06/04/12	-	39.78	-	316.24					Not sampled;					
TOC:	356.18	09/10/12	-	Dry	-	-					Not sampled;					
		12/03/12	-	34.54	-	321.64					Not sampled;					
MW42		02/04/06	-	Dry		-					ed; insufficient wa					
TOC:	354.08	02/22/06	-	39.75	-	314.33					ed; insufficient wa					
		05/31/06	-	39.63	-	314.45					ed; insufficient wa	1				
		08/22/06	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		11/14/06	-	39.71	-	314.37					ed; insufficient wa	the second se				
		02/20/07	-	39.67	-	314.41				Not sample	ed; insufficient wa	ter to fill sample	containers			
		05/22/07	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
		03/04/10	-	Dry	-	-				Not sample	ed; insufficient wa	ter to fill sample	containers			
TOC:	356.42	03/05/12	-	Dry	-	-					Dr	γ				
		06/04/12	-	Dry	-	-					Dr	У				
		09/10/12	-	39.84	-	316.58					Not sampled;	just gauged.				
		12/03/12	-	Dry	-	-					Dr	Y				
ATCA NA	athod A Class	nup Levels for Gro	oundwater ⁶				1,000/800 ^b	5	1,000	700	1,000	20	0.01	5	15	NE



w	ell ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
MW43		05/31/06	-	37.43	-	319.15				Not samp	led; insufficient w	ater to fill sample	containers			
TOC:	356.58	08/22/06	-	Dry	_	-					ed; insufficient w					
		11/14/06	-	Dry	-	-					ed; insufficient w					
		02/20/07	-	Dry	_	-					ed; insufficient w					
		05/22/07	-	Dry	_	-					ed; insufficient w					
		07/31/07	-	Dry	_	-					ed; insufficient w					
		03/04/10	-	Dry	_	-					led; insufficient w					
TOC:	358.89	03/05/12	_		_	_					ed; insufficient w					
IUC:	338.89			Dry						Not samp			containers			
		06/04/12	-	Dry		-						ry				
		09/10/12	-	Dry	-	-						lrγ				
		12/03/12	-	Dry	-	-						iry				
MW44		05/31/06	-	38.56	-	314.08					ed; insufficient w					
TOC:	352.64	08/22/06	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	e containers			
		11/14/06	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	e containers			
		02/20/07	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	e containers			
		05/22/07	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	e containers			
		07/31/07	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	containers			
		03/04/10	-	Dry	-	-				Not samp	ed; insufficient w	ater to fill sample	containers			
TOC:	354.96	03/05/12	_	Dry	_	-				Not samp	ed; insufficient w	ater to fill sample	containers			
		06/04/12	-	Dry	_	_						iry				
		09/10/12	-	Dry	_	-						ry				
		12/03/12	-	Dry	_	-						iry				
MW45		05/31/06	-	Dry	_	-	-		-					-	-	-
TOC:	354.24	08/24/06	_	37.86	-	316.38	57,000	920	180	1,900	13,700	<1	_	-		
100.	554.24						57,000	920	180				1	-	-	-
		11/14/06	-	Dry	-	-		1	1	1	ed; insufficient w		1	1	1	1
		02/21/07	-	37.22	-	317.02	39,000	700	150	870	10,000	-	-	-	-	-
		05/24/07	-	37.59	-	316.65	39,000	470	120	760	9,800	-	-	-	-	-
		08/02/07	-	38.25	-	315.99	40,000	430	67	270	11,000	-	-	-	-	-
		02/11/08	-	37.90	-	316.34	45,000	76	36	430	8,900	-	-	-	-	-
		05/14/08	-	37.82	-	316.42					Not sampled	; just gauged				
		07/29/09	-	38.06	-	316.18					Not sampled	; just gauged				
		03/02/10	-	37.16	-	317.08	23,000	54	23	310	3,700	<1	<1	<1	-	-
TOC:	357.06	03/05/12	-	38.59	-	318.47				Not sampl	ed; insufficient w	ater to fill sample	containers			
		06/06/12	-	37.00	-	320.06	6,900	33	7.6	95	1,300	-	-	-		-
		09/11/12	-	38.01	-	319.05	4,700	10	5.7	<1	540	-	-	-	-	-
		12/03/12	-	39.37	-	317.69				Not sampl	ed; insufficient w	ater to fill sample	containers		•	
MW46		12/13/06	-	Dry	-	-				Not sampl	ed; insufficient w	ater to fill sample	containers			
TOC:	354.64	02/21/07	-	39.98	-	314.66	1,100	14	7	13	23	-	-	-	-	-
		05/24/07	-	40.60	-	314.04	120	<1	<1	<1	4	-	-	-	-	-
		07/31/07	-	Dry	-	-		1		1	ed; insufficient w	ater to fill sample	containers	1		
		02/11/08	-	Dry	-	-					ed; insufficient w					
		03/03/10	-	40.31	-	314.33	<100	<1	<1	<1	<3	<1	<1	<1	1	-
TOC:	256 54	03/05/10					100			1			1		-	
TOC:	356.54			42.42	-	314.12				Not sampl	ed; insufficient w		containers			
		06/04/12	-	40.40		316.14						; just gauged				
		09/10/12	-	41.49	-	315.05						; just gauged				
		12/03/12	-	41.88	-	314.66						; just gauged				
MW47		12/13/06	-	Dry	-	-					ed; insufficient w					
TOC:	352.96	02/20/07	-	41.50	-	311.46					ed; insufficient w					
		05/22/07	-	Dry	-	-					ed; insufficient w ed; insufficient w					
		07/31/07 02/11/08	_	Dry		-					ed; insufficient w ed; insufficient w					
		02/11/08		Dry 41.00	_	311.96	<100	<1	<1	<1	ed; insufficient w	1	<1 <1	<1	-	-
TOC:	355.51	03/04/10	-	41.00 Dry		-	<100	1 11	1 <1		ed; insufficient w	<1	1	1 <1		
	000.01	06/04/12		41.17		314.34				Not sampl		; just gauged	containers			
		09/10/12	-	Dry	-	-						; just gauged				
		00/10/12		City	-						not sampled	, Jast Banken				
		12/03/12	-	Dry	_	-					Not sampler	; just gauged				



			Depth to	Depth to Groundwater ¹	LNAPL Thickness	Groundwater Elevation ²										
Well ID	D	Sample Date	(feet)	(feet)	(feet)	(feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lea
MW48		12/13/06	45.28	46.61	1.33	307.42					LN/					
TOC: 352	2.97	02/20/07	40.61	41.98	1.37	312.09					LNA					
	1	05/22/07	40.75	42.39	1.64	311.89					LNA					
		07/31/07	42.42	43.88	1.46	310.26					LNA					
		02/11/08	42.98	43.97	0.99	309.79					LN/					
		05/06/08	41.21	41.97	0.76	311.61					ampled; just gaug					
		05/08/08	40.98	41.00	0.02	311.99					ampled; just gaug					
		08/19/08	42.60	43.41	0.81	310.21					ampled; just gaug					
		09/12/08	42.98	43.41	0.43	309.90					ampled; just gaug					
		09/18/08	43.34	43.85	0.51	309.53					ampled; just gaug					
		10/03/08	43.63	43.81	0.18	309.30					ampled; just gaug					
		10/09/08	-	43.91	-	309.06					ampled; just gaug					
		11/07/08	44.25	45.46	1.21	308.48					ampled; just gaug					
		11/21/08	44.39	45.48	1.09	308.36					ampled; just gaug					
	-	12/10/08	44.66	45.73 45.65	1.07 0.91	308.10					ampled; just gaug					
	ł	12/16/08 12/28/08	44.74	45.55	0.91	308.05 308.01					ampled; just gaug ampled; just gaug					
	ł	12/28/08	44.82	45.23	0.35	308.01					ampled; just gaug ampled; just gaug					
		01/23/09	44.88	45.29	0.96	308.02					ampled; just gaug ampled; just gaug					
	ł	01/30/09	44.55	43.29	0.57	308.74					ampled; just gaug					
		02/10/09	44.01	44.09	0.29	308.90					ampled; just gaug					
	ł	02/24/09	43.85	44.04	0.19	309.08					ampled; just gaug					
		03/10/09	43.69	44.00	0.31	309.22					ampled; just gaug					
	ł	03/11/09	43.78	43.81	0.03	309.18					ampled; just gaug					
		03/12/09	43.70	43.71	0.01	309.27					ampled; just gaug					
		03/13/09	43.50	43.51	0.01	309.47					ampled; just gaug					
		04/10/09	43.20	43.21	0.01	309.77					ampled; just gaug					
		04/30/09	-	43.44	-	309.53					ampled; just gaug					
		06/12/09	42.57	42.58	0.01	310.40				Nots	ampled; just gaug	ed for LNAPL rec	overy			
		08/25/09	43.77	44.09	0.32	309.14				Nots	ampled; just gaug	ed for LNAPL rec	overy			
		09/29/09	44.48	45.11	0.63	308.36				Not	ampled; just gaug	ed for LNAPL rec	overy			
	[10/15/09	44.90	45.59	0.69	307.93				Not s	ampled; just gaug	ed for LNAPL rec	overy			
	[11/24/09	44.48	44.68	0.20	308.45				Not	ampled; just gaug	ed for LNAPL rec	overy			
	[01/18/10	42.35	42.45	0.10	310.60				Not s	ampled; just gaug	ed for LNAPL rec	overy			
	[02/26/10	40.50	40.63	0.13	312.44				Nots	ampled; just gaug	ged for LNAPL rec	overy			
	[03/01/10	40.43	40.56	0.13	312.51				Nots	ampled; just gaug	ged for LNAPL rec	overy			
		04/12/10	39.69	39.80	0.11	313.26				Not	ampled; just gaug	ged for LNAPL rec	overy			
		05/07/10	39.72	39.83	0.11	313.23					ampled; just gaug					
	1	06/21/10	40.33	40.64	0.31	312.58					ampled; just gaug					
		07/02/10	-	-	0.04	-					ampled; just gaug					
		08/30/10	42.01	42.30	0.29	310.90					ampled; just gaug					
		09/10/10	42.28	42.42	0.14	310.66					ampled; just gaug					
		10/11/10	43.00	43.30	0.30	309.91					ampled; just gaug					
		11/11/10	43.52	43.87	0.35	309.38					ampled; just gaug					
		12/06/10	43.73	44.00	0.27	309.19				Not s	ampled; just gaug		overy			
		12/15/10	-	-	-	-					Pilot test perfor					
		03/18/11	-	39.04	-	313.93					ampled; just gaug					
		05/02/11	-	37.91	-	315.06				1	ampled; just gaug		1	1	1	1
TOC: 35	55.45	03/08/12	-	43.59	-	311.86	37,000	220	140	770	5,400 ^{ve}	-	-	-	-	-
		06/05/12	-	40.85	-	314.60	14,000	<5	13	210	1,900	-	-	-		-
		09/11/12	-	42.51	-	312.94	24,000	300	130	550	4,300	-	-	-	-	-
		12/04/12 hup Levels for Gro	-	42.80	-	312.65	21,000 1,000/800 ^b	<u>62</u> 5	<40 1.000	390 700	3,000 1,000	20	0.01	5	15	NE

SoundEarth Strategies

 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

MTCA N				TOC:	-			TOC	MWSA		-	TOC:		TOC:	MW53				TOC:		MW52				TOC:					MWSI				TOC:	100	MW50				TOC:						TOC-		
Anthod A Clas				357.99				355.57				359.88		357.47					355.65	000.20	353 30				352.71				350.34					362.11	11.600	3E0 71				357.06					10.400	354 05	Well ID	
	12/03/12	09/10/12	06/04/12	03/07/12	07/08/10	03/03/10	05/14/08	02/12/08	12/14/12	21/11/60	06/05/12	03/07/12	03/03/10	02/12/08	08/03/07	12/03/12	09/10/12	06/06/12	03/05/12	01/00/20	01/10/20/80	12/04/12	09/11/12	06/05/12	03/08/12	10/12/10	03/02/10	02/05/09	02/13/08	10/50/80	12/03/12	09/11/12	06/05/12	03/08/12	03/02/10	00/20/80	12/04/12	09/11/12	06/05/12	03/08/12	03/04/10	02/05/09	02/14/08	08/03/07	05/24/07	12/20/06	Sample Date	
	1	1	1	1	I	I	I	1		1	I	t	Ē	I	1		Ū.	1	I	()	1	1	1	1	1	1	1		1	1	1	I	ï	I	1 1	1	I	ı	Î	I	I	t	L	E	I		(teet)	Depth to
	13.00	13.67	11.45	12.74	11.36	10.25	12.41	11 80	13 01	43.10	41.15	43.58	41.10	43.60	43.32	43.04	43.16	41.48	Dry	A1 21	Dry	41.15	41.35	39.86	41.82	41.60	39.73	40.07	41.78	41.58	Dry	35.66	33.05	35.03	32.23	36.22	43.25	43.10	41.38	44.05	41.23	43.90	43.90	43.32	41.01	45.72	(teet)	Depth to Groundwater ¹
	1	I	I	1	I	L	Ū	I		1	I	ľ	1	1	1	1	I	1	1		1	1	T	1	1	1	I	1 1	1	1	1	1	I	I	L I	1	I	r	r	t	I.	I	L	I			(teet)	LNAPL
	344.99	344.32	346.54	345.25	344.21	345.32	343.16	242 77	315.72	316.78	318.73	316.30	316.37	313.87	314.15	312.61	312.49	314.17	-	211 07	1	311.56	311.36	312.85	310.89	308.74	310.61	307.87	308.56	308.76	I	326.45	329.06	327.08	327.48	323.49	313.81	313.96	315.68	313.01	312.82	310.15	310.15	310.73	212 20	308.33	(feet)	Groundwater Elevation ²
				<100		<100	001-	<100	001>	<100	<100	<100	<100	<100	<100			<100	001-	100		<100	<100	<100	<100	<100	<100		<100	<100		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100		160	12,000	21 000	2,200	GRPH	
				4		4		2 4		4	4	4	4	4	4			Δ	4	7		4	4	Δ	4	<0.35	4		4	Δ		4	4	Δ -	<u>م</u>	Δ	4	1.2	۵	<1	Δ		۵	360	440	24	Benzene	
				4		Δ	4	2 4		Δ	Δ	4	Δ	Δ	4			Δ	1	7		4	Δ	4	Δ	A 4	4		4	. 4		Δ	Δ	Δ.	A 4	Δ	4	4	Δ	Δ	Δ	-	Δ	29	5 8	20	Toluene	
				4		4	ł	2 4			4	4	4	Δ	4	Not sample	Not sample	4	Not sample	INOL Sellipi	Not sample	4	4	<1	4	A 4	4		4	. 4		4	4	Δ.	4	4	4	<1	4	<1	<1		4	580	770	46	Ethyl-benzene	
	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	۵	Not sampled; just gauged	۵	Not sampled; just gauged	2 6	2	۵ ۵	۵	\$	۵	۵	۵	Not sampled; insufficient water to fill sample containers	Not sampled; insufficient water to fill sample containers	۵	Not sampled: insufficient water to fill sample containers	Not sampled, insufficient water to his sample containers	Not sampled; insufficient water to fill sample containers	۵	۵	ŝ	ŝ	2	2	Not sampled: just gauged	<3	۵		۵	۵	۵ (۵۵	۵	\$	۵	۵	<3	۵	Not sampled	7	1,300	2,100	250	Total Xylenes	
	; just gauged	; just gauged	; just gauged	1	; just gauged	4	; just gauged		1	1	t	1	4	I	1	iter to fill sample	iter to fill sample	1	ter to fill sample		ater to fill sample	1	I	1	1		() and and and	Not sampled: just gauged	1	I	Dry	t	I	1	2 I	I	1	I	I	I	Δ	Not sampled; just gauged	I	I		1	MTBE	
				t		4		1	1	1	1	1	Δ	I	1	containers	containers	1	containers	CONTRAINERS	containers	1	1	ţ	1		2		t	ť		1	I	1	2 1	I	t	1	I	1	4	-	1	1. 1		1	EDB"	
				,Ľ		Δ			1	1	1	1	Δ	1	ı			1	4	7		1	1	1	I.	A 4	7		t	1		1	I	1	2 1	1	1	ı	T	1	4		I		1	1	EDC*	
1				-	ł	-	-	+	+	+	+	-	-		-			-	-	-		H	-	$\left \right $	-	-	-		-	+		H	-	-	-	-	+	-		-	-	+	-	+	+	+	-	ALC D

TOC Holdings Co\01-176 Moundake Terrace\Technical\Tables\2011\2012Q4\Q6W\01-176_2012Q4_GD_F.sbsTable 2 GD

Terraral Terboicall Tables (2012)(2012)(4)(

15		T	г	4	4	1	1	1	1	I	1	5.02		1	1		1	1	i	1	Δ	1		1	<1	1	1	1	1	11.6	1	1	1	1	1	1	8.38	1	1	1	Total Lead ⁵	
NE		ī	1	4	Δ	1	1	1	1	1	1	4		1	1		1	1	I	l	4	1		1	1	1	1	1	,	NA		1	1	1	I	1	1	1	I	1	Dissolved Lead ⁵	

P10440T0CHoldings Co101-176 Mountiate Terrace\Technical\Tables12012Q310GV401-176_201204_GD_Extsatable 2 GD

				TOC:		TOC:	MW60				TOC:				TOC:	MW59			TOC:				TOC:	MW58		TOC:		TOC:				MW57				TOC:			TOC:	MW56			TOC:		TOC:	MW55	V	
				358.61		356.21					356.56				354.13				355.43				353.01			356.43		356.34			304.30	201				357.55			355.12				356.58		354.17		Well ID	
	12/05/12	09/12/12	06/06/12	03/08/12	03/04/10	02/14/08	08/03/07	12/05/12	09/12/12	06/06/12	03/06/12	03/03/10	02/03/09	05/14/08	02/14/08	08/02/07	71/12/CL	06/06/12	03/07/12	10/12/10	03/03/10	05/14/08	02/13/08	08/02/07	12/03/12	09/10/12	06/04/12	03/07/12	10/12/10	01/20/20 20/ 1 1/20	20/c1/20	08/03/07	12/05/12	09/12/12	06/06/12	03/06/12	02/03/09	05/14/08	02/14/08	08/03/07	12/05/12	09/12/12	05/08/12	03/04/10	02/13/08	08/03/07	Sample Date	
	Ĩ	1	1	1	1	1	t	I	I	I.	I.	1	ı	ţ	1	ſ		1	1	1	1	1	1	1	I	1	I	I	1		1	T	1	I	t		1	t	t	t	ņ	1		I	t	I	(feet)	Depth to
	44.07	43.19	41.78	44.03	41.64	43.88	43.52	43.28	42.90	41.33	43.70	40.85	45.51	42.01	43.66	43.26	42.09	41.33	43.74	43.52	40.88	41.93	43.55	43.25	43.34	43.60	41.88	44.38	44.50	41.80	44.59	44.16	44.24	43.82	42.25	41.00	45.40	43.00	44.52	44.19	43.78	43.10	44.18	40.62	44.02	43.55	(feet)	Depth to Groundwater ¹
	I	1	1	1	ı	Ũ	I	ſ	1	1	1	1	1	I	I	1	1 1	1	1	1	I	1	1	I	I	I	I	I	I	1 1	1	I	1	I	r		1	1	I	1	1	1 1	1	1	T	1	(feet)	LNAPL
	314.54	315.42	316.83	314.58	314.57	312.33	312.69	313.28	313.66	315.23	312.86	313.28	308.62	312.12	310.47	310.87	212.34	314.10	311.69	309.49	312.13	311.08	309.46	309.76	313.09	312.83	314.46	311.96	309.85	317 55	309.76	310.19	313.31	313.73	315.30	312.92	309.72	312.12	310.60	310.93	312.80	313.48	312,40	313.55	310.15	310.62	(feet)	Groundwater Elevation ²
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	140	001>	001>	<100		<100		360	<100				2,100		14.000	10,000	18,000	<100	<100	<100	<100	<100		<100	<100	<100	<100	<100	<100	<100	<100	GRPH ³	
	4	4	4	4	۵	4	4	4	4	Δ	4	4	Δ		Δ	Δ	2 4		4		4		5	2				9.7		240	OCT	360	4	<1	4	A 4			۵	4	4			4	4	<1	Benzene ⁴	
	Δ	4	4	4	Δ	Δ	4	4	4	Δ	4	۵	4		۵	Δ .	2 4	Δ	Δ		4		1	Δ				2.3	-	51	17	37	4	<1	Δ	A 4			4	<1	<1	<u>م</u>		4	4	Δ	Toluene*	
	4	4	<1	4	4	4	4	4	4	4	Δ	4	4		4	Δ.	2 4	Δ	4		4		13	4				87		610	3/0	320	<1	Δ	Δ.	A 2	Δ		4	<1	<1	<u>م</u>		. 4	4	4	Ethyl-benzene ⁴	
	۵	\$	\$	\$	۵	\$	S	۵	۵	۵	\$	۵	2	Not sampled; just gauged	۵	۵	2 6	۵ ۵	۵	Not sampled; just gauged	۵	Not sampled; just gauged	12	з	Not sampled; just gauged	Not sampled; just gauged	Not sampled; just gauged	160	Not sampled; just gauged	3.600 <1	1,/00	3,900	<3	۵	۵	۵ ۵	2	Not sampled; just gauged	<3	\$	۵	۵ ۵	۵ ۵	۵	\$	۵	Total Xylenes ⁴	
	t	I	t	r	Δ	1	1	1	1	1	ı	4	Δ	just gauged	1	1		1	1	just gauged	4	just gauged	1	1	just gauged	just gauged	just gauged	1 0	just gauged	; Just gauged	1	1	1	I	T	1 4	Δ	just gauged	1	1	1		1	4	1	1	MTBE ⁴	
	1	1	1	1	Δ	1	1	1	1	1	1	Δ	1		1	I		1	1		4		ı	1				I		2	1	1	1	I	T	1	. 1		1	1	1		1	4	1	1	EDB4	
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1																				1		1							T									1						1		T		199.85



 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

15	1	1	1	Δ	ı	Δ	20.5	1	1	1	1	1	1	1	3.04	1	1	1	1	1	1	1.37		1	i	I	3.17	1	1	1	1	T	1	1	Δ	1	1	1	1	1	1	2.99	Total Lead ⁵	
NE	1	1	I.	4	I	4	1.94	1	T	I	1	1	1	1	Δ	1	1	1	1	I	1	<1		1	1	1	3.33	1	1	1	1	1	I	1	4	I	I	I	1	1	I	4		

SoundEarthy Strategies

Table 2 Summary of Historical Groundwater Analytical Results June 1992 through December 2012 TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Matrix Matrix<	NATCA MAD				TOC:		TOC:	MW66			100.	TOC-			IOC:	MW65				TOC:					TOC:	MWGA			TOC:					TOC:	MWR3			TOC:		TOC:	MW62				TOC:		TOC:	MW61	We	
1113 1113 <th< th=""><th>thad A Class</th><th></th><th></th><th></th><th>355.82</th><th></th><th>353.42</th><th></th><th></th><th></th><th>343.44</th><th>353 10</th><th></th><th></th><th>350./4</th><th></th><th></th><th></th><th></th><th>355.22</th><th></th><th></th><th></th><th></th><th>352.82</th><th></th><th></th><th></th><th>355.14</th><th></th><th></th><th></th><th></th><th>352.73</th><th></th><th></th><th></th><th>360.55</th><th></th><th>358.12</th><th></th><th></th><th></th><th></th><th>357.24</th><th></th><th>354.83</th><th></th><th>Well ID</th><th></th></th<>	thad A Class				355.82		353.42				343.44	353 10			350./4					355.22					352.82				355.14					352.73				360.55		358.12					357.24		354.83		Well ID	
1113 1113 <th< th=""><th>num levels for Gro</th><th>12/04/12</th><th>09/11/12</th><th>06/05/12</th><th>03/07/12</th><th>07/08/10</th><th>03/03/10</th><th>05/14/08</th><th>12/05/12</th><th>09/11/12</th><th>06/05/12</th><th>01/17/10</th><th>10/12/10</th><th>07/08/10</th><th>01/00/20</th><th>05/14/08</th><th>12/03/12</th><th>09/10/12</th><th>06/04/12</th><th>03/08/12</th><th>10/12/10</th><th>03/02/10</th><th>02/03/09</th><th>05/14/08</th><th>02/13/08</th><th>12/04/12 08/02/07</th><th>71/11/60</th><th>06/05/12</th><th>03/08/12</th><th>10/12/10</th><th>03/02/10</th><th>02/03/09</th><th>05/14/08</th><th>02/13/08</th><th>70/20/20</th><th>12/03/12</th><th>06/04/12</th><th>03/08/12</th><th>03/03/10</th><th>02/12/08</th><th>08/03/07</th><th>12/03/12</th><th>09/10/12</th><th>06/04/12</th><th>03/08/12</th><th>03/04/10</th><th>02/12/08</th><th>08/03/07</th><th>Sample Date</th><th>Charles and</th></th<>	num levels for Gro	12/04/12	09/11/12	06/05/12	03/07/12	07/08/10	03/03/10	05/14/08	12/05/12	09/11/12	06/05/12	01/17/10	10/12/10	07/08/10	01/00/20	05/14/08	12/03/12	09/10/12	06/04/12	03/08/12	10/12/10	03/02/10	02/03/09	05/14/08	02/13/08	12/04/12 08/02/07	71/11/60	06/05/12	03/08/12	10/12/10	03/02/10	02/03/09	05/14/08	02/13/08	70/20/20	12/03/12	06/04/12	03/08/12	03/03/10	02/12/08	08/03/07	12/03/12	09/10/12	06/04/12	03/08/12	03/04/10	02/12/08	08/03/07	Sample Date	Charles and
Number Numbr Numbr Numbr <td>. 6</td> <td>Í</td> <td>I</td> <td>ī</td> <td>Î</td> <td>I</td> <td>Ĩ</td> <td>ī</td> <td>1</td> <td>1</td> <td>ı</td> <td>1</td> <td>I</td> <td>ı</td> <td></td> <td>I</td> <td>1</td> <td>1</td> <td>1</td> <td>-</td> <td>I</td> <td>ſ</td> <td>ſ</td> <td>ī</td> <td>1</td> <td>. 1</td> <td>1</td> <td>1</td> <td>1</td> <td>F</td> <td>i</td> <td>I</td> <td>I</td> <td>Ē</td> <td>Ē</td> <td>1</td> <td>I</td> <td>1</td> <td>ì</td> <td>1</td> <td>ì</td> <td>1</td> <td>i.</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>LNAPL¹ (feet)</td> <td>Depth to</td>	. 6	Í	I	ī	Î	I	Ĩ	ī	1	1	ı	1	I	ı		I	1	1	1	-	I	ſ	ſ	ī	1	. 1	1	1	1	F	i	I	I	Ē	Ē	1	I	1	ì	1	ì	1	i.	1	1	1	1	1	LNAPL ¹ (feet)	Depth to
Marko Marko <t< td=""><td></td><td>42.52</td><td>42.16</td><td>40.61</td><td>42.97</td><td>40.50</td><td>40.16</td><td>41.27</td><td>41.00</td><td>41 63</td><td>39.76</td><td>42 14</td><td>41.92</td><td>39.65</td><td>42.89</td><td>40.37</td><td>40.89</td><td>40.20</td><td>38.48</td><td>40.59</td><td>40.76</td><td>38.09</td><td>41.59</td><td>39.34</td><td>40.39</td><td>42.93</td><td>42.59</td><td>40.93</td><td>43.34</td><td>43.14</td><td>40.51</td><td>44.13</td><td>41.56</td><td>43.11</td><td>42.82</td><td>9.73</td><td>10.82</td><td>12.05</td><td>8.64</td><td>10.19</td><td>14.47</td><td>7.97</td><td>12.11</td><td>10.06</td><td>10.56</td><td>8.21</td><td>9.65</td><td>13.18</td><td>Groundwater¹ (feet)</td><td>Depth to</td></t<>		42.52	42.16	40.61	42.97	40.50	40.16	41.27	41.00	41 63	39.76	42 14	41.92	39.65	42.89	40.37	40.89	40.20	38.48	40.59	40.76	38.09	41.59	39.34	40.39	42.93	42.59	40.93	43.34	43.14	40.51	44.13	41.56	43.11	42.82	9.73	10.82	12.05	8.64	10.19	14.47	7.97	12.11	10.06	10.56	8.21	9.65	13.18	Groundwater ¹ (feet)	Depth to
1 1		I	1	I	I	I	I	L	I	ı	1		ı	ı		I	I	1	I	1	1	1	1	1	I		1	1	1	I	I	I	1	1	1	1 1	I	1	1	I	1	1	1	1	I	1	1	1	Thickness (feet)	LNAPL
Image: constraint of constraints of constra	00100	313.30	313.66	315.21	312.85	312.92	313.26	312.15	312.12	311 49	313.36	310 02	308.82	311.09	307.85	310.37	314.33	315.02	316.74	314.63	312.06	314.73	311.23	313.48	312.43	312.21	312.55	314.21	311.80	309.59	312.22	308.60	311.17	309.62	30 905	345.96	349.73	348.50	349.48	347.93	343.65	349.27	345.13	347.18	346.68	346.62	345.18	341.65	Elevation ² (feet)	Groundwater
Image: constraint of the stampled biast gauged Image: constraint gauged <thimage: constraint="" gauged<="" td="" th<=""><td></td><td><100</td><td><100</td><td><100</td><td><100</td><td></td><td><100</td><td><100</td><td><100</td><td><100</td><td><100</td><td>100</td><td></td><td></td><td><100</td><td><100</td><td></td><td></td><td></td><td><100</td><td></td><td><100</td><td></td><td></td><td><100</td><td><100</td><td>001></td><td><100</td><td><100</td><td></td><td><100</td><td></td><td></td><td>240</td><td>190</td><td></td><td></td><td><100</td><td><100</td><td><100</td><td><100</td><td></td><td></td><td></td><td><100</td><td><100</td><td><100</td><td><100</td><td>GRPH³</td><td></td></thimage:>		<100	<100	<100	<100		<100	<100	<100	<100	<100	100			<100	<100				<100		<100			<100	<100	001>	<100	<100		<100			240	190			<100	<100	<100	<100				<100	<100	<100	<100	GRPH ³	
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Interview Milec Milec Eto ····································		4	4	Δ	1		Δ	Δ	<u>م</u>	2	A 4	7			л <u>∩</u>	Δ				4		Δ			A 1			. △	Δ		4			Δ /	2			Δ	4	۵	۵				Δ	Δ	Δ	Δ	Toluene4	OLA RUCE
Interview Milec Milec Eto ····································		4	4	4	4		Δ	4	A 4	2 4	A 4	7		,	- 4	4				4		4		,	A 4	2 0	. 0	4	4		4			9	10			4	4	4	4				Δ	Δ	Δ	<1	Ethyl-benzene ⁴	
		۵	۵	۵	\$	Not sampled	۵	۵	۵ (۵ (۵ ۵	incr sempicu	Not sampled	Not sampled	۵ م	۵	Not sampled	Not sampled	Not sampled	3	Not sampled	<3	Not sampled	Not sampled	۵	20	۵	۵	\$	Not sampled	۵	Not sampled	Not sampled	11	14	Not sampled	Not sampled	۵	۵	\$	۵	Not sampled	Not sampled	Not sampled	۵	\$	\$		Total Xylenes ⁴	
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\01-176 Mountlake Terrace\Technical\Tables\2012\2012Q4\QGW\01-176_2012Q4_GD_ExisxTable 2 GD

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						351.74	349.36		354.84	352.43		345.62			345.03		10.640	245 07		345.60			354.19		353.84			352.36			353.78	353.62				351.96				355.14		352.77				355.76		353.37		Well ID
75 100 175	12/03/12	09/10/12	06/04/12	03/06/12	10/12/10	07/08/10	03/01/10	02/03/09	03/07/12	03/02/10	11/07/08	03/01/10	10/09/08	03/01/10	07/29/09	10/09/08	03/01/10	10/09/08	03/01/10	07/29/09	10/09/08	12/04/12	09/12/12	06/05/12	03/06/12	10/12/10	03/02/10	02/03/09	05/14/08	12/04/12	09/12/12	05/05/12	03/02/10	07/30/09	02/05/09	02/03/09	12/03/12	09/10/12	06/04/12	03/06/12	07/08/10	03/01/10	05/14/08	12/03/12	06/04/12	03/06/12	07/08/10	03/01/10	05/14/08	Sample Date
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	39.63	39.80	37.89	40.24	40.43	37.75	37.28	40.18	43.47	40.44	44.64	36.91	39.35	36.57	39.28	39.88	13.03	17.90	10.91	15.34	15.32	41.83	42.01	40.18	42.47	43.23	40.62	44.22	41.70	41.69	41.77	42.74	40.56	43.25	44.01	44.20	14.90	14.91	12.31	14.10	12.60	11.29	12.54	15.42	12.64	14.43	12.88	11.71	12.79	Depth to Groundwater ¹ (feet)
	I	I	1	I	I	I	1	1	1	1	I	I	1	I	1	I	1	r r	0.49	1.36	I	ſ	I	I	1	1	1 1	1	1	1	1	1	1	I	1	1		1	1	1	I	I	I	1 1	1	1	ı	I	1	LNAPL Thickness (feet)
	312.11	311.94	313.85	311.50	311.31	313.99	312.08	309.18	311.37	311.99	307.79	308.71	306.27	308.46	305.75	305.15	332.04	327.17	335.08	331.35	330.28	312.36	312.18	313.66	311.37	309.13	311./4	308.14	310.66	312.09	312.01	310.88	311.40	308.71	307.95	307.76	340.24	340.23	342.83	341.04	340.17	341.48	340.23	340.34	343.12	341.33	340.49	341.66	340.58	Groundwater Elevation ² (feet)
				<100			<100	<100	<100	<100	<100	75,000		79,000	83,000	64,000	520	160,000			240,000	<100	<100	<100	280		001>	068	160	200	7,900	5,400	8,200	6,800		19,000	15 000			<100		<100	<100			<100		<100	<100	GRPH ³
				Δ			4	4	Δ	4	Δ	26,000		20,000	18,000 ^{we}	12,000	22	13,000			38,000	1.5	2.1	2.3	7.6		1	20	9.9	1.5	7.2	1.5	11	6.7		9.4	14			Δ		<1	Δ			4		4	4	Benzene
				4			4	<1	4	4	4	3,500		7,400	8,300	5,900	45	34,000			52,000	4	4	<1	4		4	4	4	<1	13	15	12	1.2		1.5	12			4		4	4			4		Δ	Δ	Toluene4
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increasible	Not sampled	Not sample	Not sample	\$	Not sample	Not sample	۵	<2	۵	۵	2	3,800	Not sampled; insufficient water to	6,900	3,800	6,400	37	18,600		IN	16,800	۵	۵	۵	4.1	Not sample	Not sampled	15	۵	2.8	750	900	1,100	579	Not sampled	2,000	1 078	Not sample	Not sampler	۵	Not sample	\$	\$	Not sampled	Not sample	\$	Not sampled	۵	_	Total Xylenes ⁴
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SoundEarth Strategies

 Table 2

 Summary of Historical Groundwater Analytical Results

 June 1992 through December 2012

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington



W	Vell ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyl-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	
MW77		02/03/09	-	40.09	-	307.53	<100	<1	<1	<1	<2	<1	-	-	
TOC:	347.62	03/01/10	-	36.51	-	311.11	<100	<1	<1	<1	<3	<1	<1	<1	
TOC:	349.98	07/08/10	-	36.91	-	313.07					Not sampled	; just gauged			-
		10/12/10	-	39.22	-	310.76	<100	<1	<1	<1	<2	<1	<1	<1	T
		03/06/12	_	39.20	-	310.78	<100	<1	<1	<1	<3	<1	-	<1	
		06/05/12	-	37.04	-	312.94	<100	<1	<1	<1	<3	<1	-	-	T
		09/11/12	-	38.65	-	311.33	<100	<1	<1	<1	<3	<1	-	-	
		12/04/12	-	37.33	-	312.65	<100	<0.35	<1	<1	<3	<1	-	<1	
MW78		02/03/09	-	37.32	-	310.26	<100	<1	<1	<1	<2	<1	-	_	
TOC:	347.58	03/01/10	-	34.57	-	313.01	<100	<1	<1	<1	<3	<1	<1	<1	
TOC:	349.97	10/12/10	-	37.30	-	312.67					Not sampled	; just gauged			
		03/06/12	-	36.88	-	313.09	<100	<1	<1	<1	<3	<1	-	<1	T
		06/04/12	-	35.06	-	314.91					Not sampled	; just gauged			
		09/10/12	-	36.73	-	313.24					Not sampled	; just gauged			
		12/03/12	-	37.06	-	312.91					Not sampled	; just gauged			
MW79		07/08/10	-	13.41	-	340.62	<100	<0.35	<1	<1	<2	<1	<1	<1	T
TOC:	354.03	03/07/12	-	13.39	-	340.64	<100	<1	<1	<1	<3	-	-	-	
		06/04/12	-	12.78	-	341.25		•			Not sampled	; just gauged			
		09/10/12	_	16.91	-	337.12					Not sampled	; just gauged			
		12/03/12	_	14.10	-	339.93					Not sampled				
MW80		07/08/10	-	14.22	-	339.66	<100	< 0.35	<1	<1	<2	<1	<1	<1	T
TOC:	353.88	10/12/10	_	18.69	_	335.19					Not sampled	; just gauged			
		03/07/12	-	14.30	-	339.58	<100	<1	<1	<1	<3	_	_	<u></u>	T
		06/04/12	-	13.42	-	340.46		•		•	Not sampled	; just gauged			
		09/10/12	-	17.28	-	336.60					Not sampled	; just gauged			
		12/03/12	-	15.41	-	338.47					Not sampled	; just gauged			
MW81		07/08/10	-	40.78	-	314.88	<100	<0.35	<1	<1	<2	<1	<1	<1	
TOC:	355.66	10/12/10	-	43.02	-	312.64					Not sampled	; just gauged	•		
		03/06/12	-	43.22		312.44	<100	<1	<1	<1	<3	-	_	_	T
		06/04/12	-	40.73	-	314.93					Not sampled	; just gauged			
		09/10/12	-	42.49	-	313.17					Not sampled	; just gauged			
		12/03/12	_	42.67	-	312.99					Not sampled	; just gauged			-
MW82		07/08/10	-	26.74	-	328.91	<100	<0.35	<1	<1	<2	<1	<1	<1	
TOC:	355.65	10/12/10	_	29.64	-	326.01					Not sampled	; just gauged			
		03/07/12	-	28.58	-	327.07	<100	<1	<1	<1	<3	-	-	-	T
		06/04/12	-	28.99	-	326.66					Not sampled	; just gauged			
		09/10/12	-	29.63	-	326.02					Not sampled	; just gauged			
		12/03/12	-	29.51	-	326.14					Not sampled	; just gauged			
MW83		07/08/10	-	19.56	-	334.02	<100	<0.35	<1	<1	<2	<1	<1	<1	
TOC:	353.58	10/12/10	-	28.74	-	324.84				•	Not sampled	; just gauged			
		11/21/11						DECOMMISSI	ONED (REP	LACED WITH	MW100)				
MW84		10/12/10	-	44.29	-	309.38	1,900	0.71	<1	17	48	<1	<1	<1	
TOC:	353.67	03/07/12	-	42.66	_	311.01	680	<1	1.6	5	14	<1	_	<1	1
		06/05/12	-	40.78	-	312.89	990	<1	2.5	11	28	<1	-	-	
TOC:	353.78	09/12/12	-	42.09	_	311.69	1,200	2.0	2.9	8.5	28	<1	-	-	1
		12/05/12	-	42.02	-	311.76	1,000	0.45	<1	17	41	<1	-	<1	1
MW85		10/11/10					-			, REPAIRED					-
TOC:	351.34	03/06/12	-	40.48	-	310.86	<100	3.1	<1	<1	<3	<1		<1	T
		06/05/12	_	38.25	-	313.09	<100	1.8	<1	<1	<3	<1	-	-	1
		09/11/12	-	39.83	-	311.51	<100	1.4	<1	<1	<3	<1	-	_	1
		12/04/12	_	39.73	-	311.61	<100	<0.35	<1	<1	<3	<1	_	<1	\vdash
			undwater ⁶				1,000/800 ^b	5	1,000	700	1,000	-			+

	192
Total Lead ⁵ 5.21	
	<1 _
-	
<1	<1
-	-
-	-
-	-
2.61	-
-	<1
-	-
<1	<1
<1	<1
-	-
50	
<1	<1
1	
-	-
	1
<1	<1
-	
15.1	<1
<1	<1
_	_
-	-
-	-
<1	<1
-	-
-	-
-	-
15	NE

		Depth to LNAPL ¹	Depth to Groundwater ¹	LNAPL Thickness	Groundwater Elevation ²										
Well ID	Sample Date	(feet)	(feet)	(feet)	(feet)	GRPH ³	Benzene	Toluene*	Ethyl-benzene ⁴	Total	MTBE	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead ⁵
9	01/71/01	1	41.89	I	310.89	1,100	1.9	7	7	7	12	7	4	4	4
10C: 352./8	03/06/12	I	42.02	I	310.75	140	3.8	Ţ,	1>	33	₽.	1	4	1	1
	06/05/12	ı	39.74	ţ	311 54	130	1.1	1	Ţ ⁶	4F	√ 1	1	1	1	1
	21/11/00	r ı	CF FA		311 66	260	0.7	0.0	1.0	0.4 A A	7 7	I	1 3	1	1
MW87	10/12/10	1	39.03	I	310.75	<100	<0.35	7 7	17	4.0	7 7	14	7 7	1	
TOC: 349.78	03/06/12	í	38.89	1	310.89	<100	₽	12	4	Ø	4	1	4	1	' '
	06/04/12	1	36.92	1	312.86					Not sampled; just gauged	just gauged		-		
	09/10/12	1	38.53	1	311.25					Not sampled; just gauged	just gauged				
	12/03/12	1	38.46	I	311.32					Not sampled; just gauged	just gauged				
MW88	10/12/10	1	22.11	1	329.56	<100	<0.35	4	4	2	4	4	4	4	41
TOC: 351.67	03/06/12	1	14.91	1	336.76	<100	4	<1	<1	3	1	I	1	L	1
	06/04/12	ï	15.13	1	336.54					Not sampled; just gauged	just gauged				
	09/10/12	I	20.05	1	331.62					Not sampled; just gauged	just gauged				
	12/03/12	Ĩ	19.04	1	332.63					Not sampled; just gauged	just gauged				
MW89	10/12/10	1	42.66	I	311.23	<100	<0.35	1>	<1	<2	¢	4	4	4	41
TOC: 353.89	03/06/12	1	42.89	1	311.00	<100	A	<1	41	3	41	1	4	I	1
	06/05/12	1	40.51	1	313.38	<100	4	41	4	Ø	4	1	1	I	1
	09/11/12	1	42.08	1	311.81	<100	4	4	1	Ø	<1	I	1	t	1
	12/04/12	1	42.12	1	311.77	<100	<0.35	<1	4	3	4	Ţ	4	1	1
0	03/05/12	24.66	24.75	60.0	338.03					INAPL	PL				
	06/04/12	22.19	22.33	0.14	340.49					LNAPL	Ы				
TOC: 362.90	09/10/12	24.80	25.18	0.38	338.02					LNAPL	PL				
	12/03/12	Î	28.69	1	334.21		2			Not sampled, just gauged	just gauged			2.47	
1	03/08/12	01 50	24.87	1 00	1/./2	12,000	99	56	410	3,100	1	1	1	15.9	4
TOC: 362.28	06/04/12	26.29	26.48	0.19	336.40					INAPL	PI PI				
	12/03/12	1	26.64	1	336.09					Not sampled, just gauged	iust gauged				
MW92	03/06/12	ī	45.45	1	312.87	<100	4	4	4	8		1	I	4.19	4
TOC: 358.32	06/04/12	I	42.95	1	315.37					Not sampled; just gauged	just gauged				
TOC: 357.93	09/10/12	I	41.12	1	317.20					Not sampled; just gauged	just gauged				
	12/03/12	ï	44.61	1	313.32					Not sampled; just gauged	just gauged				
MW93	03/06/12	1	43.00	1	312.73	<100	4	41	4	3	1	I	1	5.60	1
TOC: 355.73	06/04/12	1	40.64	1	315.09					Not sampled; just gauged	just gauged				
TOC: 356.05	09/10/12	1	Dry	1	I					Not sampled; just gauged	just gauged				
	12/03/12	î.	41.83	1	314.22					Not sampled; just gauged	just gauged				
4	03/06/12	1	45.13	1	313.11	<100	4	4	₽	Ø	1	I	1	4	4
TOC: 358.24	06/04/12	1	43.22 Dru	1	315.02					Not sampled; just gauged	just gauged				
	C1/01/50	1	30.83	1	318 18					Not sampled: just gauged	just gauged				
MW95	03/07/12	1	42.95	1	311.47	<100	Þ	12	Þ	<pre></pre>	Just Baugeu	1	Þ	2.74	2
TOC: 354.42	06/04/12	1	40.56	1	313.86					Not sampled: just gauged	iust gauged				
	09/10/12	î	42.70	1	312.03					Not sampled; just gauged	just gauged				
	12/03/12	1	42.42	-	312.31					Not sampled; just gauged	just gauged				
MW96	03/07/12	Ì	44.01	1	311.82	<100	4	4	4	\$	<1	I	<1	11.4	4
	06/04/12	Ì	41.44	1	314.39					Not sampled; just gauged	just gauged				
TOC: 356.06	09/10/12	I	45.50	1	310.56					Not sampled; just gauged	just gauged				
	12/03/12	1	42.19	1	313.87					Not sampled; just gauged	just gauged				
2	03/07/12	ì	43.18	1	311.46	420	9.4	4	41	3.4	4	1	4	2.07	7
	06/04/12	1	40.79	1	313.85 21 7 F					Not sampled; just gauged	just gauged				
10°.4°C	C1/D1/60	1	41.00	1	212.48					Not sampled; just gauged	Just gauged				
	C I I C C I I C C C C C C C C C C C C C														



V,0040 TOC Holdings Co/01-176 Mountiake Terrare\Technical\Tables\2012\2012\2012Q4\C6W01-176_2012Q4_60_frain_able 2.60



и	/eli ID	Sample Date	Depth to LNAPL ¹ (feet)	Depth to Groundwater ¹ (feet)	LNAPL Thickness (feet)	Groundwater Elevation ² (feet)	GRPH ³	Benzene ⁴	Toluene ⁴	Ethyi-benzene ⁴	Total Xylenes ⁴	MTBE ⁴	EDB ⁴	EDC ⁴	Total Lead ⁵	Dissolved Lead
MW98		03/08/11	-	43.04	-	311.45	3,800	13	4.6	56	130	<1	-	<1	1.87	<1
TOC:	354.49	06/04/12	-	40.73	-	313.76					Not sampled	; just gauged				
TOC:	354.75	09/10/12	-	43.30	-	311.45					Not sampled	; just gauged				
		12/03/12	-	42.27	-	312.48					Not sampled	; just gauged				
MW99		03/06/12	-	42.47	-	310.95	<100	2.1	<1	<1	<3	<1		<1	1.08	<1
TOC:	353.42	06/04/12	-	40.45	-	312.97					Not sampled	; just gauged				
TOC:	353.65	09/10/12		Dry	-	-					Not sampled	; just gauged				
		12/03/12	-	38.04	-	315.61					Not sampled	; just gauged				
MW100		03/06/12	-	15.73	-	340.08	<100	<1	<1	<1	<3	-	-	-	50.6	1.15
TOC:	355.81	06/04/12	-	15.61	-	340.20		·			Not sampled	; just gauged				
		09/10/12	-	19.18		336.63					Not sampled	; just gauged				
		12/03/12	_	17.48	-	338.33					Not sampled	; just gauged				
MW101		03/06/12	-	40.90	-	311.02	<100	<1	<1	<1	<3	<1	-	<1	22.6	<1
TOC:	351.92	06/04/12	-	38.99	-	312.93					Not sampled	; just gauged				
TOC:	352.12	09/10/12	-	40.54	-	311.58					Not sampled	; just gauged				
		12/03/12		43.95	_	308.17						; just gauged				
MTCA M	ethod A Clea	anup Levels for Gro	undwater ⁶				1,000/800 ^b	5	1.000	700	1,000	20	0.01	5	15	NE

NOTES:

Results measured in µg/L.

Red denotes concentration exceeds MTCA Method A cleanup level.

Data collected since December 2005 analyzed by Friedman & Bruya, Inc. of Seattle, Washington. Data collected from September through December 2005 analyzed by North Creek Analytical, Inc., of Bothell, Washington. Data collected prior to 7/8/05 provided by previous consultants.

¹Depth to water and LNAPL as measured from a fixed spot on the well casing rim.

²Groundwater elevation measured relative to a temporary benchmark (data from previous consultants). Since July 2005, groundwater elevations corrected for LNAPL thickness, assuming specific gravities of 0.80 for a mixture of gasoline and diesel, and 1.0 for groundwater.

³Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁴Analyzed by EPA Method 8260B, 8021B, or 8260C.

⁵Analyzed by EPA Method 200.8.

⁶MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

⁷Insufficient recharge to fill specified sample container.

*Monitoring well converted to a remediation well; TOC elevation change presented where appropriate.

 b 1,000 $\mu g/L$ when benzene is not present and 800 $\mu g/L$ when benzene is present.

LABORATORY NOTES:

*The pattern of peaks present is not indicative of diesel. The result is due to overlap from the gasoline range.

^{ve}Estimated concentration calculated for an analyte response above the valid instrument calibration range. A The result is below normal reporting limits. The value reported is an estimate.

Dry = groundwater not encountered in well EDB = 1,2-dibromoethane EDC = 1,2-dichloroethane EPA = U.S. Environmental Protection Agency GRPH = gasoline-range petroleum hydrocarbons

< = not detected at concentration exceeding the laboratory reporting limit

LNAPL = light non-aqueous phase liquid

- = not measured/not applicable

µg/L = micrograms per liter

ABBREVIATIONS:

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

NA = not applicable per referenced footnote number

NE = Cleanup level not established for indicated compound

Sheen = iridescence on water surface indicative of LNAPL

TOC = top of casing (elevations for monitoring wells MW01 through MW25 from previous consultants)

Trace = less than 0.01 of measurable LNAPL

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MW11 J MW12 R MW13 R MW13 R MW13 R MW14 TOC/Fa MW15 J MW15 J MW15 J MW19 J MW19 J																										T OLWM				L 60MW			MW08 R	-	MW07 TOC/Fa		MW06		MW05 R	_		MW04 R		_	MW03			ZOMAIAI				NW01		-	Location 0		
TOC/Farmasonis TOC ROW TOC/Farmasonis TOC TOC TOC	armasonis TOC OW armasonis TOC TOC	armasonis TOC OW armasonis TOC TOC	armasonis TOC oW armasonis TOC	armasonis TOC iOW armasonis TOC	armasonis TOC IOW armasonis TOC	armasonis FOC IOW armasonis	armasonis FOC IOW armasonis	armasonis FOC IOW armasonis	armasonis FOC IOW	armasonis FOC	armasonis			ROW		-	ROW				TOC					TOC				TOC			ROW		TOC/Farmasonis		TOC		ROW			ROW			TOC				TOP			TOC			Owner	anorty	
02/23/06	02/23/06	and a second a second a	12/20/05	03/04/10	00/24/00	20/22/00	02/24/06	03/04/10		03/02/10	03/01/10		03/04/10	02/02/06	03/02/10	08/23/06	02/23/06	09/26/05	03/04/10	08/23/06	02/22/06	12/21/05	09/27/05	03/04/10	08/24/06	02/24/06	12/20/05	09/26/05	03/04/10	02/23/06	09/27/05	03/02/10	08/23/06	02/22/06	and a last	03/04/10	02/26/05	03/02/10	02/22/06	09/27/05	03/02/10	08/23/06	01/04/10	08/23/06	02/22/06	09/27/05	03/04/10	08/23/06	02/23/06	12/21/05	08/24/06	02/24/06	12/20/05	09/26/05	Date	Comolo	
<1.000	in the second se	<1,000	<1,000	<1,000	, LOON	1 000	<1,000	<1,000		<1,000			<1,000	<1,000	<1,000	<1,000	<1,000	<150	<1,000	<1,000	<1,000	<1,000	<150	<1,000	<1,000	<1,000	<1,000	<150	<1 000	<1,000	<150	<1,000	<1,000	<1,000		<1.000	<1 000	<1,000	<1,000	<150	<1,000	<1,000	<1,000	<1,000	<1,000	<150	<1,000	<1,000	<1,000	<1.000	<1,000	<1,000	<1,000	<150	Ethanol ³		
	<50	<50	<200	<50	100	100	<50	<50		<50			<50	<50	<50	<50	<50	<50.0	<50	<50	<50	<200	<50.0	<50	<50	<50	<200	<50.0	<50	<50	<50.0	<50	<50			<50	<50.0	<50	<50	<50.0	<50	<50	<50	<50	<50	<50.0	<50	<50	<50	<200	<50	<50	<200	<50.0	TBA ¹		
	<1	4	4	<1	1	1	4	4	DECOM	4		DECOM	4	4	4	<1	<1	<5.00	<1	<1	<1	<1	<5.00	<1	4	4	4	<5.00	2 2		<5.00	<1	<1	4	DECOM	4	<5.00	4	4	<5.00	4	A 4	4	4	<1	<5.00	4	4	4	^ (c	n 2	4	<1	<5.00	MTBE1	Oxyg	
	<1	4	4	4	4	1	4	4	MISS	-1	LN	MISS	4	4	4	<1	<1	<1.00	<1	<1	4	4	<1.00	4	Δ	4	4	<1.00	4		<1.00	<1	4	4	Z	4	<1.00	4	۵	<1.00	4	A 4	4	4	<1	<1.00	4	4	4	<1 M	4	4	4	<1.00	ETBE	Oxygenates	
	1>	4	~1	4	4	7	4	Δ	IONE	4	LNAPL	I O N E	4	4	<1	<1	<1	<1.00	-1	4	<1	<1	<1.00	4	4	4	4	<1.00	4	4	<1.00	<1	Δ	- 1	I O N E	Δ.	<1.00	4	4	<1.00	4		4	Δ	<1	<1.00	<1	Δ	4		4	4	4	<1.00	TAME ¹	a subscription	
	4	4	4	4	4	1	Δ	Δ	D	4		D	4	4	4	<1	<1	<1.00	<1	<1	<1	<1	<1.00	<1	4	4	4	<1.00	4		<1.00	<1	Δ			4	<1.00	4	4	<1.00	4		4	Δ	<1	<1.00	4	4	4	4	4	4	<1	<1.00	DIPE1		
	1>	I	4	<1			i	۵		<1			<1	4	<1	I	1	<1.00	<1	1	I	<1	<1.00	Δ	1	1	4	<1.00	<u> 1</u>	I	<1.00	<1	ı	1		4	<1.00	4	1	<1.00	4	1 1	<1	. 1	1	<1.00	4	1	1	4	I	ı	<1	<1.00	ED8 ¹	Lead Sc	
	\$	1	Δ	4	-		Ļ	Δ		4			4	3.5	4	1	1	<1.00	Δ	1	1	Δ	<1.00	4	1	1	4	<1.00	2 1	1	<1.00	4	I	1		2	<1.00	4	1	<1.00	4		<1	. 1	1	<1.00	4	1	1	^	1	1	4	<1.00	EDC	Lead Scavengers	

SoundEarth Strategies

Table 3 Summary of Groundwater Analytical Results Eight Common Fuel Additives TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

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P\0440 TOC Holdings Co\01-176 Mountlake Terrace\TechnicaNTables\2012\2012Q4\Q6VW\01-176_2012Q4_G0_F.xbx

Location MW21	Owner	Date 09/26/05 12/20/05 02/23/06 08/23/06	Ethanol ¹ <150 <1,000 <1,000 <1,000	TBA¹ <50.0 <200 <50 <50	MTBE ¹ <5.00 <1 <1	ETBE¹ <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	E ¹ ETBE ¹ TAME ¹ 0 <1.00 <1.00 <1 <1 <1 <1 <1 <1 <1 <1 <1	TBE ¹ TAME ¹ D 11.00 <1.00 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
MW21	TOC	02/23/06 08/23/06	<1,000	\$0				
		09/26/05	<150	<50.0	<5.00	<1.00	_	<1.00
MW22	TOC	02/24/06 08/24/06 03/04/10	<1,000	<50	A A A			
MW23	TOC	02/23/06 03/04/10	<1,000	<50	۵ ۵			-
		09/27/05	<150	<50.0	<5.00	<1.00		<1.00
MW24	TOC	08/23/06	<1,000	- 50	۵ A I			I A (
i) L		07/30/09	1 1	<50	2 4	2 4		2 4
		09/27/05	<150	<50.0	<5.00	<1.00		<1.00
MW25	TOC	12/21/05 02/23/06	<1,000	<200	۵ ۵			
		08/24/06	<1,000	<50	۵ ۵			۵ ۵
MW26	TOC	12/21/05 02/23/06	<1,000	<200	۵ ۵			
		08/24/06	<1,000	<50	۵ ۵	۵ ۵		۵ ۵
MW27	TOC	12/20/05	<1,000	<200	7 4	2 4		
		03/04/10	<1,000	<50	4	4		Δ.
MW28	TOC	12/20/05	<1,000	<200	2 4	2 4		2 4
		03/04/10	<1,000	<50	A 2	4		A 4
MW29	TOC	02/23/06	<1,000	<50	2 4	2 4		<u>م</u>
		12/15/05	<1,000	<200	7 4	2 4		
MW30	IUC/Farmasonis	08/24/06	<1,000	<50	Δ	4		Δ
		12/15/05	<20,000	<4,000	<20	<20		<20
MW31 T	TOC/Farmasonis	02/23/06	<1,000	<50	<u>م</u>			
		07/29/09	1	<50	4	4		4
		17/20/05	<1,000	<>00				+
MW32	TOC	02/23/06	<1,000	-50	Δ.			Δ.
EEMM	TOC	02/10/06	<1,000	<50	2	4		Δ
	100	03/04/10	<1,000	<50	4	<1	4	Δ
MW34	TOC	01/27/06	<1,000	<50	۵ ۵	۵ ۵		
4		03/04/10	<1,000	<50				+
MW35	TOC	03/04/10	1	I	1	T		1
MW36	TOC	01/27/06	<1,000	<50	۵ ۵			
		03/04/10	<1,000	<50	3	4		+

SoundEarth Strategies

Table 3 Summary of Groundwater Analytical Results Eight Common Fuel Additives TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

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SoundEarth Strategies

 Table 3

 Summary of Groundwater Analytical Results

 Eight Common Fuel Additives

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

MTCA Method A ²				MW69				MW68	MW67	MW66				MW65			MW64	MW63	MW62	NUM/E1	MMIED	MW59	MW28	MW57	MW56	CCANIAI	MW54	MW53	MW52	MW51	MW50	MW49	MW48	MW47	MW46	MW45	MW44	MW43	MW42	MW41	MW40		MW39			MW38		MW37		Location	Sample
IA ²			1	Drake				Drake	Drake	TOC/Farmasonis			e i e i e	Drake		1011	ROW	BOW	ROW	ROW	000	TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis	ROM	TOC/Farmasonis	ROW	BOW	ROW	ROW	ROW	TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis		TOC/Farmasonis			TOC		TOC	4000	Owner	Property						
	12/04/12	09/12/12	06/05/12	03/06/12	03/02/10	07/30/09	02/03/09	03/01/10	03/01/10	03/03/10	12/05/12	09/11/12	06/05/12	03/07/12	03/02/10	02/03/09	01/20/20	01/00/20	01/20/20	02/04/10	01/20/20	02/03/09	03/03/10	03/03/10	03/03/10	03/04/10	03/03/10	03/03/10	03/02/10	10/12/10	03/02/10	03/04/10	03/01/10	03/04/10	03/02/10	08/24/06	03/04/10	03/04/10	03/04/10	03/04/10	08/24/06	03/03/10	08/24/06	02/02/06	03/04/10	08/23/06	03/04/10	08/24/06	01/27/06	Date	Sample
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3 of 5

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			68MW				MW88	MW87				MW86						MW85					MW84				MW83	MW82	MW81	08MW	MW79		MW78					11177				MW76		C/ MINI	MINTE	MW74		MW73		7 / 44141	111177		MW71			MW /U			Location	Sample	
		CIENC	Drake			Clark	Drake	Drake				Drake					Clanc	Drake					Drake				TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis	TOC/Farmasonis		Drake				Clarc	7				Drake		ROW	DOW	Shin/Choi		Shin/Choi		Shint/ Chief	chin/choi		Shin/Choi			Drake			Owner	Property	C. B. C. L. C.
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SoundEarth Strategies

 Table 3

 Summary of Groundwater Analytical Results

 Eight Common Fuel Additives

 TOC Holdings Co. Facility No. 01-176

 24205 56th Avenue West

 Mountlake Terrace, Washington

4 of 5



Table 3 Summary of Groundwater Analytical Results **Eight Common Fuel Additives** TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Sample	Property	Sample		a line an	Охуде	enates		a dian	Lead Sc	avengers
Location	Owner	Date	Ethanol ¹	TBA1	MTBE ¹	ETBE ¹	TAME	DIPE	EDB ¹	EDC ¹
MW95	Drake	03/07/12		-	<1	-	-	-	-	<1
MW96	Drake	03/07/12	-	-	<1	-	-	-	-	<1
MW97	Drake	03/07/12	-	_	<1	-	-	-	-	<1
MW98	Drake	03/08/12	-	-	<1	-	- 1.6	-	-	<1
MW99	Drake	03/06/12	-	-	<1	-	-	-	-	<1
MW101	Drake	03/06/12	-	-	<1	-	-	-	-	<1
TCA Method	A ²		NE	NE	20	NE	NE	NE	0.01	5

NOTES:

Results measured in µg/L.

Red denotes concentration exceeds MTCA Method A cleanup level.

Samples analyzed by North Creek Analytical, Inc., of Bothell, Washington. Data collected prior to 7/8/05 provided by previous consultants. Data collected since December 2005 analyzed by Friedman & Bruya of Seattle, Washington. ¹Analyzed by U.S. Environmental Protection Agency Method 8260C.

²MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

- = not sampled/not analyzed

< = not detected at concentration exceeding the laboratory reporting limit

DIPE = diisopropyl ether

Drake = Property at 24309 56th Avenue West Dry = groundwater not encountered in well

EDB = 1,2-dibromoethane

FDC = 1.2-dichloroethane

ETBE = ethyl tertiary-butyl ether

LNAPL = light non-aqueous phase liquid

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

NE = cleanup level not established

ROW = right-of-way

Shin/Choi = Property at 24325 56th Avenue West

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

TOC = Property at 24205 56th Avenue West (TOC Holdings Co. Facility No. 01-176)

TOC/Farmasonis = Property at 24225 56th Avenue West



Table 4 Summary of Quality Assurance/Quality Control Analytical Results Fourth Quarter 2012 TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Well ID / Type of Blank Sample	Sample ID	Property Identification	Sample Date	Sample Method	GRPH ¹	Benzene ²	Toluene ²	Ethyl- benzene ²	Total Xylenes ²	MTBE ³	EDB ³	EDC ³
MW09	MW09-20121204-BL	TOC	12/04/12	Bladder Pump	5,500	28	25	73	720			
MW09	MW09-20121205-PE	TOC	12/05/12	Peristaltic Pump	3,100	16	11	18	390			
MW09	MW999-20121205-PE	TOC	12/05/12	Peristaltic Pump	3,000	15	10	18	380			
MW09	MW09-20121205-BA	TOC	12/05/12	Bailer	2,100	11	5.1	8.4	110		100 Jan 1955	
MW32	MW32-20121205-PN	TOC	12/05/12	Pneumatic Pump	33,000	30	800	930	6,700		-	
MW32	MW32-20121205-PN2	TOC	12/05/12	Pneumatic Pump	33,000	29	790	920	6,900	- 199		-
MW86	MW86-20121204-BL	Drake	12/04/12	Bladder Pump	860	0.77	<1	1.7	4.6	<1		<1
MW86	MW86-20121204-BL2	Drake	12/04/12	Bladder Pump	850	0.65	<1	1.5	4.2	<1	105-00	<1
Rinsate Blank	01176-20121203-R1	NA	12/03/12	NA	<100	< 0.35	<1	<1	<3	<1		<1
Trip Blank	Trip Blank	TOC	11/30/12	NA	<100	<1	<1	<1	<3	2		10. 10 <u>an</u> 10-
Trip Blank	Trip Blank	TOC/Farmasonis	11/30/12	NA	- 11	-						
Trip Blank	Trip Blank	ROW	11/30/12	NA			-	1940 G 000 M				- S.S.
Trip Blank	Trip Blank	Drake	11/30/12	NA	<100	< 0.35	<1	<1	<3	<1		<1
MTCA Method A	Cleanup Level ⁴				1,000/800 ^a	5	1,000	700	1,000	20	0.01	5

NOTES:

Results measured in µg/L.

Red denotes concentration exceeds MTCA Method A Cleanup Levels for groundwater.

Gray shading signifies QA/QC sample and results.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

¹Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

²Analyzed by EPA Method 8021B or 8260C.

³Analyzed by EPA Method 8260C.

⁴MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

 $^{a}\text{1,000}\ \mu\text{g/L}$ when benzene is not present and 800 $\mu\text{g/L}$ when benzene is present.

- = not sampled/not analyzed

< = not detected at concentration exceeding the value of the laboratory reporting limit

µg/L = micrograms per liter

Drake = Property at 24309 56th Avenue West

- EDB = 1,2-dibromoethane
- EDC = 1,2-Dichloroethane
- EPA = U.S. Environmental Protection Agency
- GRPH = gasoline-range petroleum hydrocarbons
- ID = identification

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

- NA = not applicable
- ROW = right-of-way
- TOC = Property at 24205 56th Avenue West (TOC Holdings Co. Facility No. 01-176)

TOC/Farmasonis = Property at 24225 56th Avenue West

ATTACHMENT A PREPARATION OF GRPH AND BENZENE DISTRIBUTION FIGURES
Attachment A PREPARATION OF GRPH AND BENZENE DISTRIBUTION FIGURES

PREPARATION OF GRPH AND BENZENE DISTRIBUTION FIGURES

SoundEarth prepared Figures 5.1 and 5.2 using RockWare, Inc. Surfer software (version 8.2) to illustrate subsurface conditions according to the methods described below:

- The base map for Figures 5.1 and 5.2 is based on a professional survey of the TOC Property, the TOC/Farmasonis Property, the Drake Property, and adjoining rights-of-way by Axis Survey & Mapping of Kirkland, Washington (Axis 2012) and supplemented by drawings by others (Time Oil Co. 1975, Reisdorff 1985, and K&S 2001). The property boundaries shown south of the Drake Property are approximate and are based on the parcel layout shown on county tax lot maps (Snohomish County Assessor's Office 2010). The backdrop photograph used for Figures 5.1 and 5.2 is an aerial photograph (USGS 2002), which has been scaled approximately to align with the base map in a manner that relates subsurface interpretations to surface features. Minor discrepancies between the survey and the aerial photograph are the result of photographic lens distortion.
- The GRPH and benzene distributions shown on Figures 5.1 and 5.2 were prepared using an inverse distance-weighted algorithm on the natural log value of the GRPH or benzene concentration. The natural log value was used because of the large variation in magnitude of the concentrations. This minimized the bias on the high concentration zones, "hot spots", by distributing the contours and color ramp on a logarithmic scale rather than a linear scale where there would be no contours on the lower side and all values would be biased high. The inverse distance-weighted algorithm scales concentration values proportional to the distance between data points. In other words, influence of values decreases with distance. The weighting can be increased or decreased by adjusting the power value in the equation. The higher the power, the more value is placed on close data points. SoundEarth used a low power value (power of 2) to leverage the effect of data at greater distances, especially between the two apparently separate plumes. Therefore, the shapes of the plumes are derivative of the configuration of the monitoring well network, the distances between individual monitoring wells, and interpolation of concentrations between data points. SoundEarth applied a linear drift of 90 degrees to preferentially connect data points in the north-south direction, rather than the default eastwest setting, consistent with the overall direction of groundwater flow at the Interim Remedial Action Work Area. The linear drift algorithm interpolates data using an anisotropic ratio of 2 to limit the search neighborhood ellipse setting, such that concentrations appear to attenuate across shorter distances along the east-west axis than along the north-south axis between each pair of data points.
- In cases where LNAPL conditions were encountered, SoundEarth assigned values of 50,000 µg/L for GRPH and 500 µg/L for benzene concentrations, compared to a maximum dissolved GRPH concentration at the Interim Remedial Action Work Area of 37,000 µg/L (monitoring well MW48) and a maximum dissolved benzene concentration at the Interim Remedial Action Project Area of 220 µg/L (monitoring well MW48).

- In cases where concentrations of GRPH were not detected above the standard laboratory reporting limit of 100 µg/L, SoundEarth assigned a value of 0.00001 µg/L to each data point.
- In cases where concentrations of benzene were not detected above the standard laboratory reporting limit of 1 µg/L, SoundEarth assigned a value of 0.00001 µg/L to each data point. In the case where the benzene reporting limit was elevated due to sample dilution, SoundEarth assigned a value equal to one-half the elevated detection limit, 2.5 µg/L for monitoring well MW48.

Actual concentrations may vary from those illustrated on Figures 5.1 and 5.2 due to lithology, stratigraphy, well screen interval depths, and/or spacing between individual monitoring wells.

ATTACHMENT B LABORATORY ANALYTICAL REPORTS

Friedman & Bruya, Inc. #212098

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

December 14, 2012

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on December 6, 2012 from the TOC_01-176_20121206 WORFDB6, F&BI 212098 project. There are 5 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: Suzy Stumpf SOU1214R.DOC

ENVIRONMENTAL CHEMISTS

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CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20121206 WORFDB6, F&BI 212098 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
212098-01	MW09-20121205-PE
212098-02	MW09-20121204-BL
212098-03	MW09-20121205-BA
212098-04	MW10-20121205-BA
212098-05	MW15-20121205-PN
212098-06	MW20-20121205-BA
212098-07	MW22-20121204-PE
212098-08	MW27-20121205-PN
212098-09	MW32-20121205-PN
212098-10	MW32-20121205-PN2
212098-11	MW999-20121205-PE
212098-12	Trip Blank-

All quality control requirements were acceptable.

1

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212098 Date Extracted: 12/07/12 Date Analyzed: 12/07/12 and 12/11/12

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
MW09-20121205-PE 212098-01 1/5	16	11	18	390	3,100	94
MW09-20121204-BL 212098-02 1/5	28	25	73	720	5,500	97
MW09-20121205-BA 212098-03	. 11	5.1	8.4	110	2,100	103
MW10-20121205-BA 212098-04	4.6	<1	19	63	4,900	120
MW15-20121205-PN 212098-05	<1	1.8	<1	9.7	300	95
MW20-20121205-BA 212098-06	<1	2.5	5.9	14	840	100
MW22-20121204-PE 212098-07	<1	<1	<1	<3	<100	98
MW27-20121205-PN 212098-08	5.8	69	220	2,800	11,000	102
MW32-20121205-PN 212098-09 1/20	30	800	930	6,700	33,000	103
MW32-20121205-PN 212098-10 1/20	2 29	790	920	6,900	33,000	103
MW999-20121205-P 212098-11 1/5	E 15	10	18	380	3,000	94

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212098 Date Extracted: 12/07/12 Date Analyzed: 12/07/12 and 12/11/12

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
Trip Blank 212098-12	<1	<1	<1	<3	<100	96
Method Blank 02-2256 MB	<1	<1	<1	<3	<100	95

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212098

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: 212098-07 (Duplicate)

1

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	88	65-118
Toluene	ug/L (ppb)	50	95	72 - 122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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·····				+	·		<u> </u>				ANA	YSE	S RE	QUES	STED	
Sample ID	Sample Location	Depth	ID	Date Sampled	Tim e Sam pled	Matrix	# of jars	XQ-H4TWN	NWTPH-Gx	BTEX by 8021B	VOC's by \$260	SVOCs by \$270	RCRA-8 Mctals			Notes
20121205- PE	mwoq	31	015	12/05/12	1538	Water-	3		/						╞╾╌┠╌╴	
20121204-BL MW04-	mwoq	19	02	12/04/12	1647	Water-	3		:-					<u> </u>	╞╌┠╌	
201212-05-BA ANIO-	mwoq	-	03	12/05/12	1720	Water	3		,/	~				[- <u>-</u>
2012-12-05- BA. nwis-	MWIU		64 .	12/05/12	1430	Water	3.		~	$\overline{}$		[┟╌╴╏╶╴	·
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20121203-BA MW22-	MID 20	-	06	12/05/12	1437	Water	3		~	~					 	<u></u>
2012-1204-PE MW27-	MWZZ	31	07	12/04/12	1543	water	3		/	~					┝╾╌╂╌ᅳ	
20121205- PN MN32-		· · · · ·	08	12/05/12	1700	water	3		1	~						
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Friedman & Bruya, Inc. #212099

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

December 12, 2012

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on December 6, 2012 from the TOC_01-176_20121206 WORFDB6, F&BI 212099 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: Audrey Hackett, Beau Johnson, Suzy Stumpf SOU1212R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20121206 WORFDB6, F&BI 212099 project. Samples were logged in under the laboratory ID's listed below.

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<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
212099-01	MW56-20121205-BL
212099-02	MW58-20121205-BL
212099-03	MW59-20121205-BL
212099-04	MW66-20121204-BA
212099-05	Trip Blank

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/12/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212099 Date Extracted: 12/07/12 Date Analyzed: 12/07/12

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
MW56-20121205-BL 212099-01	<1	<1	<1	<3	<100	96
MW58-20121205-BL 212099-02	<1	<1	<1	<3	<100	98
MW59-20121205-BL 212099-03	<1	<1	<1	<3	<100	97
MW66-20121204-BA 212099-04	<1	<1	<1	<3	<100	94
Method Blank 02-2256 MB	<1	<1	<1	<3	<100	95

ENVIRONMENTAL CHEMISTS

Date of Report: 12/12/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212099

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: 212098-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	88	65-118
Toluene	ug/L (ppb)	50	95	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

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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.

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Sample ID	Sample Location	Sample Depth	İD	Sampled	Tim e Sam ple		# of jars	NWTPH-D _x	NWTPH-Gx	BTEX by 8021B	VOC's by \$260	SVOCs by \$270	RCRA-8 Motals				Notes
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20121205-84 MW66- 2012-12-04-BA	mwsq	47	3	12/05/12	1140	Water	3	· · ·	~	-					<u>+</u>	<u> </u>	
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Friedman & Bruya, Inc. #212100

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

December 14, 2012

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on December 6, 2012 from the TOC_01-176_20121206 WORFDB6, F&BI 212100 project. There are 7 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: Audrey Hackett, Beau Johnson, Suzy Stumpf SOU1214R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20121206 WORFDB6, F&BI 212100 project. Samples were logged in under the laboratory ID's listed below.

Laboratory	ID
212100-01	

SoundEarth Strategies 01176-20121203-R1

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212100 Date Extracted: 12/10/12 Date Analyzed: 12/10/12

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	<u>Gasoline Range</u>	Surrogate (<u>% Recovery)</u> (Limit 51-134)				
01176-20121203-R1 212100-01	<100	99				
Method Blank 02-2258 MB	<100	100				

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ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	01176-2012 12/06/12 12/10/12 12/10/12 Water ug/L (ppb)	1203-R1	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212100-01 121008.D GCMS4 JS
Surrogates: 1,2-Dichloroethane-	44	% Recovery: 97	Lower Limit: 57	Upper Limit: 121
Toluene-d8	u4	99	63	121
4-Bromofluorobenze	ene	101	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene	(MD)	<1		
1,2-Dichloroethane	(EDC)	<1		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Bla NA 12/10/12 12/10/12 Water ug/L (ppb)	nk	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 02-2243 mb 121007.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	101	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	101	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
Benzene	、	<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		
1,2-Dichloroethane	(EDC)	<1		

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ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212100

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

Laboratory Code: 212125-04 (Duplicate) **Relative Percent** Reporting Sample Duplicate Difference Analyte Units Result Result (Limit 20) <100 <100 Gasoline ug/L (ppb) nm Laboratory Code: Laboratory Control Sample Percent Spike Acceptance Reporting Recovery LCS Analyte Units Level Criteria 1,000 99 69-134 Gasoline ug/L (ppb)

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212100

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

Laboratory Code: 212125-01 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	94	74-127
Benzene	ug/L (ppb)	50	<0.35	101	76-125
Toluene	ug/L (ppb)	50	<1	96	76-122
Ethylbenzene	ug/L (ppb)	50	<1	97	69-135
m,p-Xylene	ug/L (ppb)	100	3.6	100	69-135
o-Xylene	ug/L (ppb)	50	<1	97	68-137
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	69-133

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	100	99	64-147	1
Benzene	ug/L (ppb)	50	97	97	69-134	0
Toluene	ug/L (ppb)	50	96	96	72-122	0
Ethylbenzene	ug/L (ppb)	50	98	97	77-124	1
m,p-Xylene	ug/L (ppb)	100	96	96	83-125	0
o-Xylene	ug/L (ppb)	50	96	97	86-121	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	101	73-132	1

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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

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Friedman & Bruya, Inc. #212101

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

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Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures c: Audrey Hackett, Beau Johnson, Suzy Stumpf SOU1212R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20121206 WORFDB6, F&BI 212101 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
212101-01	MW48-20121204-BA
212101-02	MW49-20121204-BA
212101-03	MW51-20121204-BA
212101-04	MW53-20121204-BA
212101-05	MW55-20121205-BL
212101-06	MW60-20121205-BL
212101-07	MW63-20121204-BL
212101-08	Trip Blank

All quality control requirements were acceptable.

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ENVIRONMENTAL CHEMISTS

Date of Report: 12/12/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212101 Date Extracted: 12/07/12 Date Analyzed: 12/07/12

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
MW48-20121204-E 212101-01 1/40	SA 62	<40	390	3,000	21,000	102
MW49-20121204-E 212101-02	SA <1	<1	<1	<3	<100	101
MW51-20121204-E 212101-03	SA <1	<1	<1	<3	<100	92
MW53-20121204-E 212101-04	SA <1	<1	<1	<3	<100	93
MW55-20121205-E 212101-05	SL <1	<1	<1	<3	<100	90
MW60-20121205-E 212101-06	SL <1	<1	<1	<3	<100	80
MW63-20121204-E 212101-07	SL <1	<1	<1	<3	<100	86
Method Blank 02-2255 MB	<1	<1	<1	<3	<100	96

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Date of Report: 12/12/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212101

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: 212075-01 (Duplicate)

Analyte	Reporting Units	Sample . Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	98	65-118
Toluene	ug/L (ppb)	50	96	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. The value reported is an estimate.

 ${\bf J}$ - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated is likely due to laboratory contamination.

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

 $\rm nm$ - 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 in a container not approved by the method. The value reported should be considered an estimate.

pr-The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

21210/ Send Report To Dec Gardner/Suzy Stumpf Company Sound Earth Strategies Address 2811 Fairview Ayenne East, Suite 2000					L. Nav PROJ TCC	SAMPLERS (Signature) L.Namba W. Campredon, T. Zandi, D. PROJECT NAME/NO. TOC Holdings- Mountlate Terrace 0440-030-18 01-176 REMARKS Trip Blank supplied by						6 #		V2 TURNAROUND TIME Standard (2 Weeks) RUSH Rush charges authorized by:			
City, State, 21 Phone #_206	•	•			[aborc	IRKS Trip BI	ank s	upphi	<u>а</u> _{Бу}		EMS N		·]	🗹 Disp 🗆 Retu	SAMPL pose aft irn sam call wit	er 30 o iples	POSAL lays ructions
											ANAI	YSES	SRE	QUES	TED		
Sample ID	Sam ple Location	Sample Depth	ID	Date Sampled	Tim e Sam pled	Matrix	# of jars	XQ-H4TWN	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOCs by \$270	RCRA-8 Mctals			_	Notes
MW48-20121204-81	MW48		01 8-	12/04/12	1255	Water	3		1	~							••••
10121204-BA	_mw49			12/04/12	1533	Water	3		~	~							~
mw51- 201212-04-BA	mw51		03	12/04/12	1456	water	3		~	1						•	
MW53- 20121204-BA MW55-	mws3		oy	12/04/12	1510	Water	3			-		·					
20121205-BL	MUSS		05	12/05/12	1426	Water	.3		~	~			_				
MW60- 20121205-BL	MW60		96	12/05/12	1551	Water	3		\checkmark	-							
MW63 20121204-BL	MW 63		07	12/04/12	1547	Water	3		~	~				·			
Trip Blank	TB	· · · · · ·	CN B	11/30/12		Water	2		~	~						Hol	d
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Friedman & Br 3012 16th Ave		Relinquish		NATURE		PR	INT NA	1				COMI SES	PANY			TE	TIME
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Fax (206) 283-	5044	Received b	r														

Friedman & Bruya, Inc. #212102
ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

December 14, 2012

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on December 6, 2012 from the TOC_01-176_20121206 WORFDB6, F&BI 212102 project. There are 16 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: Audrey Hackett, Beau Johnson, Suzy Stumpf SOU1214R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20121206 WORFDB6, F&BI 212102 project. Samples were logged in under the laboratory ID's listed below.

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SoundEarth Strategies
MW65-20121205-BL
MW69-20121204-PN
MW70-20121204-PN
MW77-20121204-BA
MW84-20121205-PN
MW85-20121204-BL
MW86-20121204-BL
MW86-20121204-BL2
MW89-20121204-BL
Trip Blank

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212102 Date Extracted: 12/10/12 Date Analyzed: 12/10/12

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

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (<u>% Recovery)</u> (Limit 51-134)
MW65-20121205-BL 212102-01	<100	99
MW69-20121204-PN 212102-02	200	100
MW70-20121204-PN 212102-03	<100	100
MW77-20121204-BA 212102-04	<100	102
MW84-20121205-PN 212102-05	1,000	93
MW85-20121204-BL 212102-06	<100	101
MW86-20121204-BL 212102-07	860	105
MW86-20121204-BL2 212102-08	850	105
MW89-20121204-BL 212102-09	<100	98
Trip Blank 212102-10	<100	99
Method Blank 02-2258 MB	<100	100

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Analysis For Volatile Compounds By EPA Method 8260C

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Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW65-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	1205-BL	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-01 120716.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	98	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ne	99	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ether	(MTBE)	<1		
1,2-Dichloroethane		<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW69-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	21204-PN	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-02 120725.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	99	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	102	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
1,2-Dichloroethane		<1		
Benzene		1.5		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		2.8		
o-Xylene		<1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW70-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	21204-PN	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-03 120717.D GCMS4 JS
-			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	102	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	100	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
1,2-Dichloroethane	•	<1		
Benzene	()	1.5		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW77-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	1204-BA	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-04 120718.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	99	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	101	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
1,2-Dichloroethane	(EDC)	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW84-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	21205-PN	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-05 120719.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 98 100 100	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe 1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene	• •	<1 <1 0.45 <1 17 40 1.3		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW85-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	81204-BL	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-06 120720.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	99	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	100	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
1,2-Dichloroethane	(EDC)	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW86-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	21204-BL	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-07 120721.D GCMS4 JS
Surrogates: 1,2-Dichloroethane- Toluene-d8 4-Bromofluorobenze		% Recovery: 99 101 101	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ether 1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene	• •	<1 <1 0.77 <1 1.7 4.6 <1		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW86-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	21204-BL2	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-08 120722.D GCMS4 JS
Surrogates: 1,2-Dichloroethane Toluene-d8 4-Bromofluorobenze		% Recovery: 96 100 101	Lower Limit: 57 63 60	Upper Limit: 121 127 133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe 1,2-Dichloroethane Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene	• •	<1 <1 0.65 <1 1.5 4.2 <1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW89-2012 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)	1204-BL	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-09 120723.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	102	57	121
Toluene-d8		101	63	127
4-Bromofluorobenze	ne	100	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Methyl t-butyl ether	r (MTBE)	<1		
1,2-Dichloroethane	(EDC)	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

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Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Trip Blank 12/06/12 12/07/12 12/07/12 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 212102-10 120724.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	98	57	121
Toluene-d8		100	63	127
4-Bromofluorobenze	ene	101	60	133
Compounds:		Concentration ug/L (ppb)		
Methyl t-butyl ethe	r (MTBE)	<1		
1,2-Dichloroethane	· ·	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blan NA 12/07/12 12/07/12 Water ug/L (ppb)	nk	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies TOC_01-176_20121206 WORFDB6 02-2242 mb 120706.D GCMS4 JS
			Lower	Upper
Surrogates:		% Recovery:	Limit:	Limit:
1,2-Dichloroethane-	d4	100	57	121
Toluene-d8		99	63	127
4-Bromofluorobenze	ene	100	60	133
		Concentration		
Compounds:		ug/L (ppb)		
Methyl t-butyl ether	r (MTBE)	<1		
1,2-Dichloroethane	(EDC)	<1		
Benzene		<0.35		
Toluene		<1		
Ethylbenzene		<1		
m,p-Xylene		<2		
o-Xylene		<1		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212102

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

Laboratory Code: 212	125-04 (Duplica	te)				
·					Relative Percent	
	Reporting	Samp	ole Duj	plicate	Difference	
Analyte	Units	Resu	dt R	esult	(Limit 20)	
Gasoline	ug/L (ppb)	<10	:100	nm		
Laboratory Code: Lab	ooratory Control	Sample				
			Percent			
	Reporting	Spike	Recovery	Acceptance	e	
Analyte	Units	Level	LCS	Criteria		
Gasoline	ug/L (ppb)	1,000	99	69-134		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/14/12 Date Received: 12/06/12 Project: TOC_01-176_20121206 WORFDB6, F&BI 212102

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

Laboratory Code: 212092-01 (Matrix Spike)

	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	94	74-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-13 3
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Toluene	ug/L (ppb)	50	<1	95	76-122
Ethylbenzene	ug/L (ppb)	50	<1	95	69-1 35
m,p-Xylene	ug/L (ppb)	100	<2	95	69-135
o-Xylene	ug/L (ppb)	50	<1	94	68-137

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	95	85	64-147	11
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	89	73-132	5
Benzene	ug/L (ppb)	50	93	88	69-134	6
Toluene	ug/L (ppb)	50	95	89	72-122	7
Ethylbenzene	ug/L (ppb)	50	95	90	77-124	5
m,p-Xylene	ug/L (ppb)	100	95	90	83-125	5
o-Xylene	ug/L (ppb)	50	94	88	86-121	7

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j - The result is below normal reporting limits. The value reported is an estimate.

 ${\bf J}$ - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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TOC Facility No 01 176/ 517 4.10.1



SoundEarth Strategies, Inc. 2811 Fairview Avenue East, Suite 2000 Seattle, Washington 98102

OPERATION AND MAINTENANCE REPORT

FIRST QUARTER 2013



Property:

TOC Holdings Co. Facility No. 01-176 24205 56th Avenue West Mountlake Terrace, Washington

Report Date: June 27, 2013

Prepared for: TOC Holdings Co. 2737 West Commodore Way Seattle, Washington

DRAFT - ISSUED FOR ECOLOGY REVIEW

Operation and Maintenance Report, First Quarter 2013

Prepared for:

TOC Holdings Co. 2737 West Commodore Way Seattle, Washington 98199

TOC Holdings Co. 24205 56th Avenue West Mountlake Terrace, Washington 98043

Project No.: 0440-030

Prepared by:

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Timothy S. Murphy, PE Principal Engineer

Reviewed by:

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Deborah H. Gardner, LG, LHG, LEG Project Manager

June 27, 2013



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ACRONYMS AND ABBREVIATIONS

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lb/day	pounds per day
mg/m³	milligrams per cubic meter
μg/L	micrograms per liter
Agreed Order	Agreed Order No. DE 8661
AWS	air/water separator
втех	benzene, toluene, ethylbenzene, and total xylenes
DMR	Discharge Monitoring Report
Drake Property	24309 56 TH Avenue West in Mountlake Terrace, Washington
Ecology	Washington State Department of Ecology
former DPE system	a dual-phase extraction remediation system installed at the TOC Property in 1996 and operated until October 2004
GAC	granular-activated carbon
gallons/day	gallons per day
GRPH	gasoline-range petroleum hydrocarbons
LNAPL	light nonaqueous-phase liquid
LNAPL , MPE	light nonaqueous-phase liquid multi-phase extraction
•	
, MPE	multi-phase extraction
, MPE NOC	multi-phase extraction Notice of Construction
, MPE NOC O&M	multi-phase extraction Notice of Construction operation and maintenance
, MPE NOC O&M OWS	multi-phase extraction Notice of Construction operation and maintenance oil/water separator
, MPE NOC O&M OWS PCC	multi-phase extraction Notice of Construction operation and maintenance oil/water separator pump cycle counter
, MPE NOC O&M OWS PCC ppmv	multi-phase extraction Notice of Construction operation and maintenance oil/water separator pump cycle counter parts per million vapor

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SVE	soil vapor extraction
тос	TOC Holdings Co.
TOC Property	24205 56 th Avenue West in Mountlake Terrace, Washington
TOC/Farmasonis Property	24225 56 th Avenue West in Mountlake Terrace, Washington
TPH-G	total petroleum hydrocarbons – gasoline

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EXECUTIVE SUMMARY

This report documents the First Quarter 2013 operation and maintenance activities associated with interim remedial action implemented at TOC Holdings Co. Facility No. 01-176 located at 24205 56th Avenue West in Mountlake Terrace, Washington (TOC Property). Interim remedial actions have been implemented at the Interim Remedial Action Project Area, which encompasses the TOC Property, the property located at 24225 56th Avenue West (TOC/Farmasonis Property), the property located at 24309 56th Avenue West (Drake Property), and portions of the 56th Avenue West right-of-way, as defined in Agreed Order No. DE 8661.

Three multi-phase extraction systems have been installed at the Interim Remedial Action Project Area. This report includes a description of the multi-phase extraction systems, permit compliance, performance, and optimization efforts. A summary of First Quarter 2013 multi-phase extraction system performance is provided below:

- A combined total of 55.9 pounds of vapor-phase hydrocarbons was removed during this reporting period, and a cumulative total of 1,481.7 pounds since startup. In addition, a volume of 56,683 gallons groundwater was extracted, treated, and discharged during this period. The total volume of water processed since system startup is approximately 175,910 gallons.
- System optimization activities during this reporting period focused on investigating the back
 pressures observed at the granular-activated carbon canisters. Evaluation of the installation of
 bag filters to minimize back pressure issues is underway. The back pressure causes the oil/water
 separator to high level and this shuts down the systems.
- The air compressor at the TOC Property has been having issues with a motor starter tripping. Investigation as to the cause of the compressor issue is currently underway.
- Installation of pump cycle counters continued during this quarter. The pump cycle counters will
 provide data used to balance the systems and monitor the performance of the pumps.
- Installation of flow meters required by the City of Mountlake Terrace (the City) to monitor the volume of water discharged to the sewer. These meters were equipped with telemetry compatible with the City's remote meter monitoring system.
- The granular-activated carbon canisters with pin hole leaks were replaced, and the new canisters were placed on drum platforms to eliminate electrolysis/corrosion which was assumed to be the cause of the leaks. All process water was contained in secondary containment (spill pans) and then processed through the system.

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1.0 INTRODUCTION

This report documents the First Quarter 2013 operation and maintenance (O&M) activities associated with interim remedial action implemented at TOC Holdings Co. (TOC) Facility No. 01-176 located at 24205 56th Avenue West in Mountlake Terrace, Washington (TOC Property). Interim remedial actions have been implemented at the Interim Remedial Action Project Area, which encompasses the TOC Property, the property located at 24225 56th Avenue West (TOC/Farmasonis Property), the property located at 24309 56th Avenue West (Drake Property), and portions of the 56th Avenue West right-of-way (ROW), as defined in Agreed Order No. DE 8661 (Agreed Order).

This report includes descriptions of the remediation systems, permit compliance, system performance, and system optimization efforts.

2.0 SYSTEM DESCRIPTION

The following is a brief description of the remedial system history, current system configurations, and a description of system modifications.

2.1 SYSTEM BACKGROUND

Time Oil Co. (currently TOC Holdings Co.) formerly operated a retail gasoline station on the TOC Property, which is currently vacant. One 8,000-gallon and two 6,000-gallon underground storage tanks were removed from the TOC Property in 1991. A dual-phase extraction remediation system (former DPE system) was installed at the TOC Property in 1996 and operated until October 2004. Since August 2005, SoundEarth Strategies Inc. (SoundEarth) has conducted groundwater monitoring and resumed remedial investigations to the south and west of the TOC Property. In 2006, SoundEarth confirmed the gasoline contamination extends off the TOC Property to the south and west. The former DPE system was removed and three multi-phase extraction (MPE) systems were installed between November 2011 and August 2012. The three MPE systems began operating in October 2012.

MPE is an insitu remedial technology that simultaneously extracts multiple fluid phases from remediation wells. The phases generally include vapor-phase, dissolved-phase, and light nonaqueous-phase petroleum hydrocarbons (LNAPL).

2.2 CURRENT SYSTEM

Each MPE system consists of a self-contained, aboveground equipment enclosure. The MPE system for the TOC Property is located within a fenced enclosure on the TOC Property. The MPE systems for the TOC/Farmasonis and Drake Properties are co-located together within a fenced enclosure located on the eastern half of the TOC/Farmasonis Property. The three MPE systems are basically identical to each other, with the exception of their orientation, mirror-image layouts, and the number of remediation wells serving each MPE system. A total of 24 remediation wells serve the three MPE systems: 9 wells at the TOC Property, 6 wells at the TOC/Farmasonis Property, and 9 wells at the Drake Property (Figure 1). The individual MPE equipment enclosures were custom fabricated in accordance with the Washington State Department of Labor and Industry requirements for factory assembled structures. Each of the remediation wells is equipped with a down-hole pneumatic pump to extract petroleumimpacted groundwater (dissolved-phase petroleum hydrocarbons) and recoverable LNAPL. In addition, each MPE system is equipped with a soil vapor extraction (SVE) blower. The SVE blowers are intended to extract soil vapors (vapor-phase petroleum hydrocarbons) from the remediation wells. Process piping is utilized to convey recovered fluids (groundwater, LNAPL, and vapor) from the remediation wells to the MPE system enclosures. The piping and instrumentation diagram presented on Figure 2 illustrates the process flow and major mechanical equipment associated with treatment systems.

Extracted groundwater is conveyed to each MPE system for phase separation, treatment, and permitted discharge to sanitary sewer in accordance with Washington State Department of Ecology (Ecology), State Waste Discharge Permit No. ST0007384. The extracted groundwater is processed through an oil/water separator (OWS) which is designed to process up to 10 gallons per minute. The effluent from the OWS is pumped through three 55-gallon granular-activated carbon (GAC) canisters to remove dissolved-phase volatile organic compounds prior to being discharged to the sanitary sewer. LNAPL recovered with the OWS will be temporarily stored in a 55-gallon product drum prior to disposal or recycling.

The SVE blower(s) creates the vacuum pressure necessary to extract soil vapors from the remediation wells. The extracted soil vapors are processed through an air/water separator (AWS) and a catalytic oxidizer. The AWS removes particulate and liquids from the air stream to prevent damage to the SVE blower and ancillary equipment. The vapors are thermally treated by the catalytic oxidizer prior to being discharged to the atmosphere, in accordance with the Puget Sound Clean Air Agency (PSCCA) Notice of Construction (NOC) No. 10384.

2.3 SYSTEM MODIFICATIONS

Totalizing flow meters and modifications to the GAC spill pan were performed during the First Quarter of 2013.

The City of Mountlake Terrace (the City) required the installation of flow meters to monitor volume of water discharged to the sewer. These meters were equipped with telemetry compatible with the City's remote meter monitoring system. The flow meters were installed on the exterior of the remedial system enclosures. Heat trace and insulation were added to the piping and meter to provide freeze protection.

The GAC spill pans were modified to lift the GAC canisters above the floor of the spill pan to prevent electrolysis, which was assumed to be causing pin hole leaks in the canisters. This will be an ongoing modification to the spill pans until all GAC canisters are lifted and placed on a non-conductive, nonmetal drum platform.

3.0 PERMITS

State, regional, and local permit requirements apply to the interim remedial action. Pursuant to the Revised Code of Washington 70.105D.090(1), TOC's interim remedial actions under the Agreed Order are exempt from the procedural requirements of any laws requiring or authorizing local government permits or approvals; however, TOC must comply with the substantive requirements of such permits or approvals.

Local requirements for clearing, grading, and erosion control activities were addressed through review under the State Environmental Policy Act, which included public comment period through September 26, 2011. State and regional permit requirements beyond the jurisdiction of the Agreed Order are discussed in Sections 3.1 (State Waste Discharge Permit), 3.2 (PSCAA Order of Approval), and 3.3 (Special Use Permit).

3.1 STATE WASTE DISCHARGE PERMIT

State Waste Discharge Permit ST0007384 authorizes and regulates operation of and discharges from the three MPE systems on the premises, effective July 2, 2012, through June 19, 2017. The three MPE systems discharge to one of two outfalls on the premises. The MPE system situated at the TOC Property discharges to Outfall 001, and the two MPE systems situated at the TOC/Farmasonis Property discharge to Outfall 002. Ecology's Water Quality Program administers the wastewater discharge permit, wastewater compliance sampling, record-keeping, and submittal schedule. Discharge Monitoring Reports (DMRs) are submitted to Ecology monthly. The DMR is a summary report which presents the monitoring data obtained during the reporting period. A summary of the maximum daily effluent limits established by the permit are summarized below:

- The maximum daily volumes of water to be discharged to Outfalls 001 and 002 are 7,000 and 14,000 gallons per day (gallons/day), respectively.
- pH shall be between 6 and 10 standard units.
- Benzene concentrations shall not exceed 5 micrograms per liter (μg/L).
- Benzene, toluene, ethylbenzene, and total xylene (BTEX) cumulative concentration shall not exceed 100 μg/L.
- Total petroleum hydrocarbons, gasoline range (TPH-G) shall not exceed 1,000 μg/L.
- Total lead shall not exceed 1,090 μg/L.

3.2 PSCAA ORDER OF APPROVAL

PSCAA issued an Order of Approval for NOC 10384 on May 13, 2012, which establishes the conditions and restrictions for the operation of the catalytic oxidizers. The key conditions and restrictions are summarized below:

- All emissions from each of the three SVE blowers shall be routed through their associated catalytic oxidizer.
- The flow through each catalectic oxidizer shall not exceed 350 standard cubic feet per minute. The flow rate shall be monitored monthly.
- The temperature of the vapor entering the catalytic bed shall be at least 240 degrees Celsius (464 degrees Fahrenheit), and the temperature of the vapor exiting the oxidizer bed shall not exceed 620 degrees Celsius (1148 degrees Fahrenheit).
- The destruction and removal efficiency of the TPH-G flowing into and out of the catalytic oxidizer shall be 95 percent unless the concentration of TPH-G in the vapor exiting the catalytic oxidizer does not exceed 50 parts per million vapor (ppmv).

The catalytic oxidizers may be removed and SVE emissions can be vented directly to the atmosphere through a stack provided the benzene and TPH-G concentrations remain below 0.5 and 50 ppmv, respectively, for a period of 3 consecutive months. The catalytic oxidizer shall be reactivated if concentrations of benzene or TPH-G exceed 0.5 or 50 ppmv, respectively.

3.3 SPECIAL USE PERMIT

The Special Use Permit executed between TOC and the City addresses interim remedial activities that extend into city ROWs. Specifically, the Special Use Permit (1) allows the discharge of treated wastewater to the City sanitary sewer network for conveyance to the City of Edmonds publicly owned treatment works under the State Waste Discharge Permit and (2) retroactively administers the installation, maintenance, repair and/or decommissioning of Interim Remedial Action Project Area monitoring wells that are located in city ROWs.

4.0 SYSTEM PERFORMANCE

Prior to system startup, concentrations of BTEX and/or gasoline-range petroleum hydrocarbons (GRPH) in groundwater exceeded their respective Washington State Model Toxics Control Act Method A cleanup levels in 17 out of 68 Intermediate Zone wells (including Intermediate Zone wells that intersect Shallow Zone conditions) situated within the Interim Remedial Action Project Area, including 13 of the 24 Intermediate Zone wells that are connected to one of the three remediation systems.

4.1 TOC PROPERTY

The following is a summary of the First Quarter 2013 system O&M at the TOC Property:

- The MPE run time this quarter was approximately 40 percent (Table 1A). System down time is attributed to installation of a new flow meter, a GAC canister fouling and taking the canister offline to clean it out, oil/water separator high level alarms, and shutdowns from the air compressor motor starter.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 42.1 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 1 pound for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 963.3 pounds (Tables 1A, 2A, and 3A).
- The volume of groundwater extracted during this reporting period was 7,655.9 gallons (Table 1A and 3A). The average flow rate of groundwater recovery was 86.0 gallons/day (Table 1A and 3A).
- The SVE cumulative mass removed increased at a fairly low rate during the quarter. The daily mass removal rate ranged from 0.46 to 1.3 (lb/day) during this quarter (Table 2A).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 milligrams per cubic meter (mg/m³; 2.329 ppmv; Table 4A).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (Tables 4A and 5A).

4.2 TOC/FARMASONIS PROPERTY

The following is a summary of the First Quarter 2013 system O&M at the TOC/Farmasonis Property:

- The MPE run time this quarter was approximately 59 percent (Table 1B). System down time is attributed to maintenance on the GAC canisters due to fouling, replacement of two out of three GAC canisters due to leaks, and installation of a new flow meter.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 9.1 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was less than 0.01 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 486.5 pounds (Tables 1B, 2B, and 3B).
- The volume of groundwater extracted during this reporting period was approximately 18,758 gallons (Table 1B and 3B). The average flow rate of groundwater recovery was 211 gallons/day (Table 1B and 3B).
- The daily vapor mass removal rate ranged from 0.07 to 0.19 lb/day during this quarter (Table 2B).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 mg/m³ (2.329 ppmv; Table 4B).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (Tables 4B and 5B).

4.3 DRAKE PROPERTY

The following is a summary of the First Quarter 2013 system O&M at the Drake Property:

- The MPE run time this quarter was approximately 82 percent (Table 1C). System down time was attributed to installation of flow meters and GAC canister maintenance due to fouling.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 4.7 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 0.26 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 35.6 pounds (Tables 1C, 2C, and 3C).
- The volume of groundwater extracted during this reporting period was approximately 30,268.8 gallons (Table 1C and 3C). The average flow rate of groundwater recovery was 340 gallons/day (Table 1C and 3C).
- The SVE cumulative mass removed has been slowly increasing since the system was started. The average daily vapor mass removal rate was 0.1 lb/day during this quarter (Table 2C).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 mg/m³ (2.329 ppmv; Table 4C).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (Tables 4C and 5C).

5.0 SYSTEM OPTIMIZATION AND FUTURE RECOMENDATIONS

The following is a summary of the First Quarter 2013 system optimization and future recommendations for each of the MPE systems.

The MPE remediation systems will continue to operate until the terms and conditions of the Agreed Order have been satisfied in accordance with Section IX (Satisfaction of Order), or until the work to be performed has been amended in accordance with Section VIII.L (Amendment of Order). Specifically, "the provisions of [the] Order shall be deemed satisfied upon TOC's receipt of written notification from Ecology that TOC has completed the remedial activity required by [the] Order, as amended by any modifications, and that TOC has complied with all other provisions of [the Agreed] Order."

System optimization activities during this reporting period focused on observing full-scale operational conditions and investigating increasing back pressure at the GAC canisters. Additional optimization activities consisted of removing condensate liquids (water) from the SVE process piping, adjusting vacuum pressures on some of the wells to enhance vapor recovery, and continuing the installation of pump cycle counters (PCC) at each well. These activities are described in more detail below.

Condensate liquids are generated during SVE activities. The moist soil vapor air typically condenses in the below-ground process pipes and collects at the lowest point in the piping (SVE manifold). The condensate liquids typically restrict the volume of air extracted from the wells by slowly choking off the pipe. A double diaphragm pneumatic pump was used to extract condensate liquids from each of the SVE process pipes at the SVE Manifold. The extracted liquids were processed through the OWS and GAC canisters prior to discharge to the sanitary sewer. Between 1 and 5 gallons of condensate were removed from each manifold during maintenance activities.

The installation of PCCs continued during this quarter. The PCCs will provide information on the relative volume of water recovered from each well. This information will be used in the future to balance the system and monitor the performance of the pumps.

Some minor leaks and back pressure issues associated with the GAC canisters were encountered during this quarter. The leaking canisters were replaced. The new GAC canisters were placed upon drum platforms to prevent electrolysis/corrosion, which was assumed to be the cause of the pin hole leaks. Possible cause of the back pressure may be siltation within the lead GAC canister. The back pressure on the GAC canisters restricts the wastewater discharge flow rate resulting in water accumulating in the OWS and shutting down the system due to high level alarms. The installation of bag filters prior to the GAC canisters is currently being evaluated.

The City required the installation of a City-approved flow meter to record the amount of water discharged to the City's sanitary sewers. The City flow meters were installed on the exterior of the remedial system enclosure.

6.0 LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services

were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

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FIGURES





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TABLES


Table 1A Summary of System Performance TOC Holdings Co. Facility No. 01-176 24205 56th Ave West Mountlake Terrace, Washington Draft - Issued for Ecology Review

Reporting	Period							
Start Date 10/02/12 12/05/12 Average	End Date	Duration of Reporting Period (days)	System Run Time (days)	System Run Time (%)	Volume of Treated Groundwater Discharged (gallons)	Average Groundwater Recovered Flow Rate (gallons/day)	GRPH Aqueous- Phase Removal (lb)	GRPH Vapor Phase Removal (lb)
10/02/12	12/05/12	64	30	46%	35,204.9	550.1	2.522	917.8
12/05/12	03/04/13	89	36	40%	7,655.9	86.0	0.918	42.1
Average				43%				
Totals	C. S. Starter	153	65		42,860.8	Maria Maria	3.439	959.9

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)



Table 1B Summary of System Performance TOC Holdings Co. Facility No. 01-176 24225 56th Ave West Mountlake Terrace, Washington

Reporting Period Average Groundwater **GRPH Vapor-**Volume of Groundwater **Duration of** System Run System Run Recovered **GRPH Aqueous-**Phase **Phase Removal Reporting Period** Time Time Discharged Flow Rate Removal (lb) (gallons) (gallons/day) (lb) Start Date End Date (days) (days) (%) 10/03/12 12/05/12 63.0 51.7 82% 12,858 204 0.005 477.4 59% 12/05/12 03/04/13 89.0 52.5 18,758 211 0.002 9.1 69% Average 152 104 31,616.4 0.01 486.5 Totals

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

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Table 1C Summary of System Performance TOC Holdings Co. Facility No. 01-176 24309 56th Ave West Mountlake Terrace, Washington Draft - Issued for Ecology Review

Reporting	Period							
Reporting Start Date 10/02/12 12/05/12 Average Totals	End Date	Duration of Reporting Period (days)	System Run Time (days)	System Run Time (%)	Volume of Groundwater Discharged (gallons)	Average Groundwater Recovered Flow Rate (gallons/day)	GRPH Aqueous- Phase Removal (lb)	GRPH Vapor Phase Removal (lb)
10/02/12	12/05/12	64.0	58.6	92%	71,160	1,112	0.029	30.7
12/05/12	03/04/13	89.0	73.3	82%	30,268.8	340	0.258	4.7
Average	S. P. C. S. S. P.			86%				S
Totals		153	132	March Haller	101,429.0		0.288	35.3

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)



Table 2A Vapor Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24205 56th Ave West Mountlake Terrace, Washington

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Site Visit	Run T	ime	SVE Par	ameters	Catalytic (Oxidizer		GRPH Removal	
	SVE Hour Meter	Total Time in Operation	SVE Pre-Filter Vacuum	Air Flow Rate ⁽¹⁾	Catalyst Entrance Temp.	Catalyst Exit Temp.	Influent Concentration ⁽²⁾	Daily Mass Recovery Rate ^{(3) (4)}	Cumulative Recovered ⁽⁵⁾
Date	(hours)	(days)	(iow)	(scfm)	(°C)	(°C)	(mg/m³)	(lb/day)	(lb)
10/02/12	5.0	0.21	70.0	146.8	330	380	1,600	21.1	0.000
10/10/12	70.2	2.93	69.0	149.2	330	419	2,600	27.9	75.906
10/17/12	237.7	9.90	69.0	149.2	330	410	3,400	40.2	356.743
10/24/12	406.9	16.95	68.0	144.4	330	385	2,400	38.3	626.562
11/07/12	638.2	26.59	73.0	140.7	330	384	1,700	26.3	879.751
12/05/12	714.2	29.76	67.0	148.0	330	344	150	12.0	917.763
01/08/13	1,482.9	61.79	65.0	153.8	330	342	35	1.3	957.955
01/17/13	1,533.7	63.90	76.0	153.0	330	350			
02/05/13	1,537.6	64.07	64.0	148.6	330	342	53	0.6	959.318
03/04/13	1,569.4	65.39	27.0	173.0	330	342	<10	0.4	959.873
A NOC-10384	Restrictions and Condit	ions		max. 350	min. 240	max. 620			

NOTES:

⁽¹⁾Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

⁽²⁾Influent vapor-phase samples collected from SVE sample port prior to air treatment.

⁽³⁾Daily removal rate (lb/day) = average concentration (mg/m³) x average flow rate (scfm) x conversion (8.99x10⁵ lb-m³-min/mg-ft³-day).

⁽⁴⁾Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

(5)Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

-- not analyzed, measured, or calculated

° C = degrees Celsius

GRPH = gasoline-range petroleum hydrocarbons

ft = feet

iow = inches of water

lb = pounds

lb/day = pounds per day m³ = cubic meter

max. = maximum

mg = milligrams

min. = minimum

NOC = Notice of Construction

PSCAA = Puget Sound Clean Air Agency

scfm = standard cubic feet per meter

SVE = soil vapor extraction

Temp. = temperature



Table 2B Vapor Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24225 56th Ave West Mountlake Terrace, Washington

GRPH Removal Site Visit **Run Time SVE Parameters Catalytic Oxidizer** Influent **Daily Mass** Cumulative **Total Time in SVE Pre-Filter Catalyst Entrance** Catalyst Recovery Rate^{(3) (4)} Concentration⁽²⁾ Air Flow Rate⁽¹⁾ Recovered⁽⁵⁾ **SVE Hour Meter** Operation Vacuum Temp. Exit Temp. (°C) (lb) Date (hours) (days) (iow) (scfm) (°C) (mg/m^3) (lb/day) 10/03/12 15.6 0.7 68 149.1 330 350 340 4.56 0.00 10/10/12 73.7 3.1 86 134.1 330 363 1.300 10.44 25.26 135.86 10/17/12 242.0 10.1 76 135.8 330 376 1,300 15.77 10/24/12 410.7 17.1 72 137.2 330 355 1.100 14.73 239.37 10/25/12 434.7 18.1 73 139.2 330 354 -------11/06/12 722.8 30.1 74 137.8 330 358 ---------11/07/12 748.2 31.2 74 138.6 330 352 660 10.91 392.78 477.40 1,257.4 52.4 74 124.3 330 338 15 3.99 12/05/12 52.8 75 135.6 12/06/12 1.266.4 -------------01/08/13 1,989.7 82.9 27 164.7 330 344 15 0.19 483.35 01/09/13 2,012.1 83.8 32 163.5 330 336 ---------01/17/13 2.037.9 84.9 27 166.5 331 336 ---------33 330 486.39 02/05/13 2.490.2 103.8 159.5 335 <10 0.15 02/06/13 2,514.5 104.8 38 157.5 330 335 ---------03/04/13 2,517.2 104.9 31 162.9 330 335 <10 0.07 486.47 PSCAA NOC-10384 Restrictions and Conditions max. 350 min. 240 max. 620

NOTES:

⁽¹⁾Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

⁽²⁾Influent vapor-phase samples collected from SVE sample port prior to air treatment.

 $^{(3)}$ Daily removal rate (lb/day) = average concentration (mg/m³) x average flow rate (scfm) x conversion (8.99x10⁵ lb-m³-min/mg-ft³-day).

⁽⁴⁾Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

⁽⁵⁾Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

° C = degrees Celsius

ft = feet

GRPH = gasoline-range petroleum hydrocarbons

iow = inches of water

- lb = pounds
- lb/day = pounds per day
- m³ = cubic meter
- max. = maximum
- mg = milligrams
- min. = minimum
- NOC = Notice of Construction
- PSCAA = Puget Sound Clean Air Agency
- scfm = standard cubic feet per meter
- SVE = soil vapor extraction
- Temp. = temperature

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Table 2C Vapor Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24309 56th Ave West Mountlake Terrace, Washington

Draft - Issued for Ecology Review

Site Visit	Run	Time	SVE Par	ameters	Catalytic	Oxidizer	A LARGE TO HE	GRPH Removal	
	SVE Hour Meter	Total Time in Operation	SVE Pre-Filter Vacuum	Air Flow Rate ⁽¹⁾	Catalyst Entrance Temp.	Catalyst Exit Temp.	Influent Concentration ⁽²⁾	Daily Mass Recovery Rate ^{(3) (4)}	Cumulative Recovered ⁽⁵⁾
Date	(hours)	(days)	(iow)	(scfm)	(°C)	(°C)	(mg/m ³)	(lb/day)	(lb)
10/02/12	11.2	0.47	70.0	143.8	330	340	13.0	0.2	0.00
10/10/12	75.7	3.15	73.0	140.4	330	338	12.0	0.2	0.43
10/17/12	243.7	10.15	74.0	141.7	330	337	<10	0.1	1.18
10/24/12	411.9	17.16	74.0	139.9	330	338	<10	0.1	1.63
10/25/12	436.7	18.20	74.0	142.8	330	338			
11/06/12	724.8	30.20	77.0	137.6	330	337			
11/07/12	750.3	31.3	76	139.1	330	338	<10	0.1	1.69
12/05/12	1,417.6	59.1	76	141.9	330	340	160.0	1.0	30.67
01/08/13	2,231.8	93.0	83	137.3	330	337	<10	0.1	32.80
02/05/13	2,731.0	113.8	70	144.2	330	337	<10	0.1	34.11
03/04/13	3,177.5	132.4	71	144.6	330	338	<10	0.1	35.32
CAA NOC-10384	Restrictions and Condi	tions		max. 350	min. 240	max. 620			

NOTES:

⁽¹⁾Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

⁽²⁾Influent vapor-phase samples collected from SVE sample port prior to air treatment.

 $^{(3)}$ Daily removal rate (lb/day) = average concentration (mg/m³) x average flow rate (scfm) x conversion (8.99x10⁵ lb-m³-min/mg-ft³-day).

⁽⁴⁾Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

⁽⁵⁾Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

< = not detected at a concentration exceeding the laboratory reporting limit

-- = not analyzed/not tested

° C = degrees Celsius

ft = feet

GRPH = gasoline-range petroleum hydrocarbons

iow = inches of water

lb = pounds

lb/day = pounds per day

m³ = cubic meter

max. = maximum

mg = milligrams

min. = minimum

NOC = Notice of Construction

PSCAA = Puget Sound Clean Air Agency

scfm = standard cubic feet per meter

SVE = soil vapor extraction

Temp. = temperature



Table 3A Liquid Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24205 56th Ave West Mountlake Terrace, Washington

Site Visit	Ext	racted Groun	dwater	Hydrocarb	on Recovery - Aque	ous-Phase
	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed ^{(1) (2) (3)}	Cumulative GRPH Removed ^{(3) (4)}
Date	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(lb)
10/02/12	636.3	0	0			
10/10/12	5,761.0	5,124.7	641	18,000	0.770	0.770
10/17/12	14,898.1	9,137.1	1,305			
10/24/12	21,888.4	6,990.3	999			
11/07/12	31,361.8	9,473.4	677	6,100	1.303	2.073
12/05/12	35,204.9	3,843.1	137	14,000	0.449	2.522
01/08/13	38,076.5	2,871.6	84	19,000	0.455	2.977
01/17/13	40,712.0	2,635.5	293			
02/05/13	41,363.4	651.4	34	8,200	0.225	3.202
03/04/13	42,860.8	1,497.4	55	19,000	0.237	3.439
	charge Permit Num imum Daily Limits	ber	7,000	(3)		

NOTES:

⁽¹⁾Influent samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

 $^{(2)}$ Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

⁽³⁾Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

⁽⁴⁾Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

µg/L = micrograms per liter

µg-gallon = micrograms - gallon conversion

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

lb-L = pounds - liter conversion



Table 3B Liquid Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24225 56th Ave West Mountlake Terrace, Washington

Site Visit	Ext	tracted Groun	dwater	Hydrocarb	on Recovery - Aque	ous-Phase
	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed ^{(1) (2) (3)}	Cumulative GRPH Removed ^{(3) (4)}
Date	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(lb)
10/03/12	397.8	0	0		Contraction of the second	
10/10/12	562.6	164.8	24	<100	0.000	0.000
10/17/12	5,392.6	4,830.0	690			
10/24/12	8,170.9	2,778.3	397		-	
10/25/12	8,580.4	409.5	410	**	-	
11/06/12	10,624.2	2,043.8	170	122		
11/07/12	10,630.5	6.3	6	<100	0.004	0.004
12/05/12	12,858.4	2,227.9	80	<100	0.001	0.005
12/06/12	14,221.5	1,363.1	1,363			
01/08/13	18,643.2	4,421.7	134	<100	0.002	0.008
01/09/13	18,651.6	8.4	8			
01/17/13	18,753.9	102.3	13			
02/05/13	18,753.9	0.0	0	<100	0.000	0.008
03/13/13	18,758.0	4.1	0	1,100	0.000	0.008
ate Waste Dis	scharge Permit Num		7,000			

NOTES:

 $^{\rm (1)} {\sf Effluent}$ samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

 $^{(2)}$ Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

^[3]Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

⁽⁴⁾Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

< = not detected at concentration exceeding the laboratory lower reporting limit

µg/L = micrograms per liter

 μ g-gallon = micrograms - gallon conversion

GRPH = gasoline-range petroleum hydrocarbons

gallons/day = gallons per day

lb = pound(s)

Ib-L = pounds - liter conversion



Table 3C Liquid Stream - System Performance Monitoring Data TOC Holdings Co. Facility No. 01-176 24309 56th Ave West Mountlake Terrace, Washington

10/24/12 10/25/12 11/06/12 11/07/12 12/05/12	Ext	tracted Groun	dwater	Hydrocarb	on Recovery - Aque	ous-Phase
	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed ^{(1) (2) (3)}	Cumulative GRPH Removed ^{(3) (4)}
Date	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(lb)
10/02/12	1,178.0					
10/10/12	5,075.9	3,897.9	487	<100	0.002	0.002
10/17/12	15,755.8	10,679.9	1,526		-	
10/24/12	27,288.0	11,532.2	1,647			
10/25/12	28,809.6	1,521.6	1,522			
11/06/12	36,398.8	7,589.2	632			
11/07/12	38,565.1	2,166.3	2,166	<100	0.014	0.016
12/05/12	71,160.2	32,595.1	1,164	<100	0.014	0.029
01/08/13	71,627.1	466.9	14	<100	0.000	0.029
02/06/13	84,429.4	12,802.4	441	160	0.017	0.046
03/04/13	101,429.0	16,999.6	654	1,700	0.241	0.288
	charge Permit Num timum Daily Limits	ber	7,000			

NOTES:

⁽¹⁾Effluent samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

⁽²⁾ Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

⁽³⁾Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics*.

⁽⁴⁾Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

- = not analyzed, measured, or calculated

< = not detected at concentration exceeding the laboratory lower reporting limit

µg/L = micrograms per liter

µg-gallon = micrograms - gallon conversion

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

lb-L = pounds - liter conversion



Table 4A Vapor Stream Analytical Results TOC Holdings Co. Facility No. 01-176 24205 56th Ave West Mountlake Terrace, Washington

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534 y			and the second		Analy	tical Results (mg	:/m³)			State In the	
		Influ	uent Vapor Sam	ples ⁽¹⁾	A CONTRACTOR OF THE OWNER	- Carl	Efflu	lent Vapor Sam	ples ⁽²⁾	ALL STREET	GRPH
	GRPH ⁽³⁾	Benzene ⁽⁴⁾	Toluene ⁽⁴⁾	Ethylbenzene ⁽⁴⁾	Total Xylenes ⁽⁴⁾	GRPH ⁽³⁾	Benzene ⁽⁴⁾	Toluene ⁽⁴⁾	Ethylbenzene ⁽⁴⁾	Total Xylenes ⁽⁴⁾	DRE ⁽⁵⁾
Sample Date	(mg/m ³)	(mg/m ³)	$(\mu g/m^3)$	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(µg/m ³)	(mg/m ³)	(mg/m ³)	%
10/02/12	1,600	2.0	10	5.5	26	<10	<0.1	<0.1	<0.1	<0.3	99.7
10/10/12	2,600	2.3	13	8.7	37	<10	<0.1	0.20	<0.1	<0.3	99.8
10/17/12	3,400	3.0	9.4	11	42	<10	<0.1	<0.1	<0.1	<0.3	99.9
10/24/12	2,400	1.5	7.0	9.4	39	<10	<0.1	<0.1	<0.1	<0.3	99.8
11/07/12	1,700	<0.5	7.0	7.3	37	<10	<0.1	<0.1	<0.1	<0.3	99.7
12/05/12	150	<0.1	0.23	<0.1	3.5	<10	<0.1	<0.1	<0.1	<0.3	96.7
01/08/13	35	<0.1	0.19	0.18	0.86	<10	<0.1	0.16	<0.1	<0.3	85.7
02/05/13	53	<0.1	0.30	0.13	0.78	<10	<0.1	<0.1	<0.1	<0.3	90.6
03/04/13	<10	<0.1	0.10	0.10	0.69	<10	<0.1	<0.1	<0.1	<0.3	0.0
CAA NOC-10384 R	estrictions and C	Conditions				min. 214.7 ⁽⁵⁾	an tak manak		5.007 (1983)		95% (5) (6)

NOTES:

⁽¹⁾Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

⁽²⁾Effluent vapor-phase samples collected from sample port on the effluent stack.

⁽³⁾Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁽⁴⁾Analyzed by U.S. Environmental Protection Agency Method 8021B.

 $^{(3)}$ DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m³ assuming a molecular weight of 105).

⁽⁶⁾DRE = (1-(GRPH_{influent}/GRPH_{effluent})) x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *italics*. µg/m³ = micrograms per cubic meter

< = not detected at concentration above the laboratory's lower reporting limit

% = percent

DRE = destruction and removal efficiency

GRPH = gasoline-range petroleum hydrocarbons

mg/m³ = milligrams per cubic meter

min. = minimum

- NOC = Notice of Construction
- ppmv = part per million volume
- PSCAA = Puget Sound Clean Air Agency

SVE = soil vapor extraction



Table 4B Vapor Stream Analytical Results TOC Holdings Co. Facility No. 01-176 24225 56th Ave West Mountlake Terrace, Washington

Analytical Results (mg/m³) Influent Vapor Samples⁽¹⁾ Effluent Vapor Samples⁽²⁾ GRPH Ethylbenzene⁽⁴⁾ Total Xylenes⁽⁴⁾ Toluene⁽⁴⁾ DRE⁽⁵⁾ GRPH⁽³⁾ Benzene⁽⁴ GRPH⁽³⁾ Benzene⁽⁴⁾ Toluene⁽⁴⁾ Ethylbenzene⁽⁴⁾ Total Xylenes⁽⁴⁾ Sample Date (mg/m^3) (mg/m^3) (mg/m^3) (mg/m^3) $(\mu g/m^3)$ (mg/m^3) (mg/m^3) (mg/m^3) (mg/m^3) $(\mu g/m^3)$ % 10/03/12 340 0.96 <0.1 0.17 < 0.3 98.5 0.44 1.6 1.7 <10 <0.1 10/10/12 1.300 0.77 < 0.5 4.0 9.6 <10 <0.1 0.21 <0.1 < 0.3 99.6 10/17/12 1.300 0.55 <0.5 3.7 7.9 <10 <0.1 < 0.1 <0.1 < 0.3 99.6 10/24/12 1,100 0.50 3.1 <0.1 11 <10 < 0.1 <0.1 < 0.3 99.5 <0.1 11/07/12 660 <0.1 2.7 <0.1 7.1 <10 <0.1 <0.1 <0.1 < 0.3 99.2 12/05/12 15 <0.1 <0.1 <0.1 < 0.3 <10 <0.1 < 0.1 <0.1 < 0.3 66.7 01/08/13 <0.1 <0.1 <0.1 <10 0.10 <0.1 < 0.3 66.7 15 < 0.3 <0.1 02/05/13 <0.1 <0.1 <10 <0.1 < 0.3 0.0 <10 <0.1 < 0.3 <0.1 < 0.1 03/04/13 <10 <0.1 <0.1 <0.1 < 0.3 <10 <0.1 <0.1 <0.1 < 0.3 0.0 PSCAA NOC-10384 Restrictions and Conditions min. 214.7 (5) 95% (5) (6)

NOTES:

⁽¹⁾Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

⁽²⁾Effluent vapor-phase samples collected from sample port on the effluent stack.

⁽³⁾Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁽⁴⁾Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁽⁵⁾DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m³ assuming a molecular weight of 105).

⁽⁶⁾DRE = (1-(GRPH_{influent}/GRPH_{effluent}) x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *Italics*.

< = not detected at concentration above the laboratory's lower reporting limit

- µg/m³ = micrograms per cubic meter
- DRE = destruction and removal efficiency
- GRPH = gasoline-range petroleum hydrocarbons
- mg/m³ = milligrams per cubic meter
- min. = minimum
- NOC = Notice of Construction
- ppmv = part per million volume
- PSCAA = Puget Sound Clean Air Agency

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Table 4C Vapor Stream Analytical Results TOC Holdings Co. Facility No. 01-176 24309 56th Ave West Mountlake Terrace, Washington

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	States and states and	Sugar 1 - July 1		The state of the	Anal	tical Results (mg	/m ³)	and the second second	121 121 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Sec. 1
		Influ	uent Vapor Sam	ples	19 - Sec. 19 - 19 - 19 - 19 - 19 - 19 - 19 - 19	Sider Paral	Effl	uent Vapor Sam	nples ²	and the second	GRPH
	GRPH ⁽³⁾	Benzene ⁽⁴⁾	Toluene ⁽⁴⁾	Ethylbenzene ⁽⁴⁾	Total Xylenes ⁽⁴⁾	GRPH ⁽³⁾	Benzene ⁽⁴⁾	Toluene ⁽⁴⁾	Ethylbenzene ⁽⁴⁾	Total Xylenes ⁽⁴⁾	DRE (5)
Sample Date	(mg/m^3)	(mg/m ³)	(µg/m ³)	(mg/m ³)	(mg/m ³)	(mg/m^3)	(mg/m ³)	(µg/m ³)	(mg/m ³)	(mg/m^3)	%
10/02/12	13	<0.1	0.13	0.12	0.35	<10	<0.1	<0.1	<0.1	<0.3	61.5
10/10/12	12	<0.1	0.10	<0.1	<0.3	<10	<0.1	0.18	<0.1	<0.3	58.3
10/17/12	<10	<0.1	0.17	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	0.0
10/24/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	0.0
11/07/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	0.0
12/05/12	160	<0.1	<0.1	1.50	0.99	<10	<0.1	<0.1	<0.1	<0.3	96.9
01/08/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	0.12	<0.1	<0.3	0.0
02/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	0.0
03/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	0.0
A NOC-10384 Res	trictions and Cond	litions				min. 214.7 ⁽⁵⁾		1220122	ALL VALUE		95% (5) (1

NOTES:

⁽¹⁾Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

⁽²⁾Effluent vapor-phase samples collected from sample port on the effluent stack.

⁽³⁾Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

(4) Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁽⁵⁾DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m³ assuming a molecular weight of 105).

⁽⁶⁾DRE = (1-(GRPH_{influent}/GRPH_{effluent})) x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *italics*.

µg/m³ = micrograms per cubic meter

< = not detected at concentration above the laboratory's lower reporting limit

DRE = destruction and removal efficiency

GRPH = gasoline-range petroleum hydrocarbons

mg/m³ = milligrams per cubic meter

min. = minimum

NOC = Notice of Construction

- ppmv = part per million volume
- PSCAA = Puget Sound Clean Air Agency

SVE = soil vapor extraction



Table 5A Liquid Stream Analytical Results TOC Holdings Co. Facility No. 01-176 24205 56th Ave West Mountlake Terrace, Washington

Draft - issued for Ecology Review

areas and		Groundwater	Influent - F	Pre GAC Treatmen	nt		Groundwater	Influent - N	Aid GAC Treatme	nt	12		Ground	water Effluent - P	ost GAC Tre	atment		
	1.1.1		(µg/L)			1.5.5		(µg/L)		15-5 12	1.14-01	· · · · · · · · · · · · · · · · · · ·		(µg/L)				
		GAC	1 Influent	Sample ⁽¹⁾			GAC	-2 Influent	Sample ⁽²⁾	and they		a strange have		Effluent Discharg	e Sample ⁽³⁾			
Sample Date	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	1000	Ethylbenzene ⁽⁵⁾	Total Xylenes ⁽⁵⁾	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	Ethylbenzene ⁽⁵⁾	Total Xylenes ⁽⁵⁾	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	Ethylbenzene ⁽⁵⁾	Total Xylenes ⁽⁵⁾	BTEX	Total Lead ⁽⁶⁾	рН ⁽⁷⁾
10/10/12	18,000	25	370	280	4,500	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	-	7.59
11/07/12	6,100	8.4	99	24	1,200	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.61
12/05/12	14,000	12	250	200	2,700	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	19.4	7.19
01/08/13	19,000	60	400	520	3,600	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.71
02/05/13	8,200	11	83	61	1,200	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	-	6.86
03/04/13	19,000	20	200	460	3,900	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.88
State Waste I	Discharge I	Permit Numbe	er ST00073	84 Effluent Limits							1,000	5			Sec. Sec.	100	1,090	6 to 10

NOTES:

⁽¹⁾Inffluent samples collected prior to first GAC canister.

⁽²⁾Inffluent samples collected prior to second GAC canister.

⁽³⁾Effluent samples collected prior to sewer discharge.

(4) Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁽⁵⁾Analyzed by EPA Method 8021B.

⁽⁶⁾Analyzed by EPA Method 200.8.

⁽⁷⁾Field measured.

< = not detected at a concentration exceeding the laboratory reporting limit

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular activated carbon

GRPH = gasoline-range petroleum hydrocarbons



Table 5B Liquid Stream Analytical Results TOC Holdings Co. Facility No. 01-176 24225 56th Ave West Mountlake Terrace, Washington

Draft - Issued for Ecology Review

		Groundwater	Influent - F (µg/L)	Pre GAC Treatmen	nt	Groundwater Influent - Mid GAC Treatment (µg/L) GAC-2 Influent Sample ⁽²⁾					Groundwater Effluent - Post GAC Treatment (µg/L)							
1	to let	GAC	-1 Influent	Sample ⁽¹⁾			GAC-	2 Influent Sa	mple ⁽²⁾		-		and the state	ffluent Discharg	e Sample ⁽³⁾	1		
Sample Date	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁵	Ethylbenzene ^(S)	Total Xylenes ⁽⁵⁾	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	thylbenzene	Total Xylenes ⁽⁵⁾	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	Ethylbenzene ⁽⁵	Total Xylenes ⁽⁵⁾	BTEX	Total Lead ⁽⁶⁾	pH ⁽⁷⁾
10/10/12	<100	<1	<1	<1	3.1	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.59
11/07/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	- ·	7.71
12/05/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	76.5	8.05
01/08/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.29
02/05/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.31
03/13/13	1,100	2.9	<1	14	27						<100	<1	<1	<1	<3	<6		7.59
State Waste	Discharge	Permit Numb	er ST00073	84 Effluent Limit	s						1,000	5	10 - 21 - S. S. S.		AL SAME	100	1,090	6 to 10

NOTES:

⁽¹⁾Inffluent samples collected prior to first GAC canister.

⁽²⁾Inffluent samples collected prior to second GAC canister.

⁽³⁾Effluent samples collected prior to sewer discharge.

⁽⁴⁾Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁽⁵⁾Analyzed by EPA Method 8021B.

⁽⁶⁾Analyzed by EPA Method 200.8.

⁽⁷⁾Field measured.

< = not detected at a concentration exceeding the laboratory reporting limit

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular activated carbon

GRPH = gasoline-range petroleum hydrocarbons



Table 5C Liquid Stream Influent Analytical Results TOC Holdings Co. Facility No. 01-176 24309 56th Ave West Mountlake Terrace, Washington

Draft - Issued for Ecology Review

	((µg/L	Pre GAC Treatme) Sample ⁽¹⁾	nt	Groundwater Influent - Mid GAC Treatment (μg/L) GAC-2 Influent Sample ⁽²⁾						Groundwater Effluent - Post GAC Treatment (µg/L) Effluent Discharge Sample ⁽³⁾							
Sample Date	e Date GRPH ⁽⁴⁾ Benzene ⁽⁵⁾ Toluene ⁵ Ethylbenzene ⁽⁵⁾ Xylene						Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	Ethylbenzene ⁽⁵⁾	Total Xylenes ⁽⁵⁾	GRPH ⁽⁴⁾	Benzene ⁽⁵⁾	Toluene ⁽⁵⁾	Ethylbenzene ⁽⁵⁾	Total Xylenes ⁽⁵⁾	BTEX	Total Lead ⁽⁶⁾	рН ⁽⁷⁾	
10/10/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.87	
11/07/12	<100	1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.83	
12/05/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	4.05	7.84	
01/08/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6		7.06	
02/05/13	160	<1	<1	1.8	5.8	<100 <1 <1 <1 <3						<1	<1	<1	<3	<6		7.02	
03/04/13	1,700	<1	1.4	24	160	<100 <1 <1 <1 <3						<1	<1	<1	<3	<6		7.64	
State Waste	tate Waste Discharge Permit Number ST0007384 Effluent Limits										1,000	5				100	1,090	6 to 10	

NOTES:

⁽¹⁾Inffluent samples collected prior to first GAC canister.

⁽²⁾Inffluent samples collected prior to second GAC canister.

⁽³⁾Effluent samples collected prior to sewer discharge.

⁽⁴⁾Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

⁽⁵⁾Analyzed by EPA Method 8021B.

(6)Analyzed by EPA Method 200.8.

⁽⁷⁾Field measured.

< = not detected at a concentration exceeding the laboratory reporting limit

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular activated carbon

GRPH = gasoline-range petroleum hydrocarbons

Draft – Issued for Ecology Review

LABORATORY ANALYTICAL REPORTS

Draft - Issued for Ecology Review

LABORATORY ANALYTICAL REPORTS FOR VAPOR

Friedman & Bruya, Inc. #301077 Friedman & Bruya, Inc. #301078 Friedman & Bruya, Inc. #301079 Friedman & Bruya, Inc. #302045 Friedman & Bruya, Inc. #302046 Friedman & Bruya, Inc. #302047 Friedman & Bruya, Inc. #303034 Friedman & Bruya, Inc. #303035 Friedman & Bruya, Inc. #303036

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 14, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301077 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: Audrey Hackett, Beau Johnson SOU0114R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301077 project. Samples were logged in under the laboratory ID's listed below.

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Laboratory ID 301077-01 301077-02 <u>SoundEarth Strategies</u> Ve-24309-20130108 Vi-24309-20130108

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301077 Date Extracted: 01/10/13 Date Analyzed: 01/10/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED EPA METHOD 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Ve-24309-20130108 301077-01	<0.1	0.12	<0.1	<0.3	<10	96
Vi-24309-20130108 301077-02	<0.1	<0.1	<0.1	<0.3	<10	97
Method Blank 03-0040 MB	<0.1	<0.1	<0.1	<0.3	<10	97

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301077

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

1

Laboratory Code: 301077-01 (Duplicate)

				Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	Result	\mathbf{Result}	(Limit 20)
Benzene	mg/m ³	<0.1	<0.1	nm
Toluene	mg/m³	0.12	0.12	3
Ethylbenzene	mg/m ³	< 0.1	<0.1	nm
Xylenes	mg/m³	<0.3	<0.3	nm
Gasoline	mg/m³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	\mathbf{Units}	Level	LCS	Criteria
Benzene	mg/m³	5.0	95	70-130
Toluene	mg/m³	5.0	95	70-130
Ethylbenzene	mg/m³	5.0	97	70-130
Xylenes	mg/m³	15	97	70-130
Gasoline	mg/m³	100	94	70-130

3

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j-The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

Send Report To	Dee Gar	dner	<u></u>		SAMPLERS (s	ignature)	by	N	~	<u>ME</u>	<u>1997 (89)</u> 177 (89)				# 10f1 TURNAROUND TIME
Company <u>Sou</u> Address <u>2811 Fa</u>	ndEarth Str rview Ave E		2000		PROJECT NAME/NO. PO # TOC Holdings # 01-176 24309		O #		Standard (2 Weeks) [X RUSH Rush charges authorized						
City, State, ZIP <u>S</u>			06.306.1907		REMARKS	•••					GEMS Y / N Dispose after Return sam		SAMPLE DISPOSAL spose after 30 days [X] sturn samples [] [] call with instructions []		
	· · · · · · · · · · · · · · · · · · ·			1	· · ·		-				AN	ALYS	ES REC	QUEST	D
Sample ID	Sample Locatio n	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Gx	BTEX by 8021B							Notes
Ve-24309-20130/8	GAF Iver +	OIAS	2+P8-13	11 = 20	AIR	2	X	X							······································
VI-24309-2013 408		02AB	01-07-13	11:20	AIR	2.	X	X							· · · · · · · · · · · · · · · · · · ·
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

1

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 14, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301078 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: Audrey Hackett, Beau Johnson SOU0114R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301078 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 301078-01 301078-02 <u>SoundEarth Strategies</u> Ve-24205-20130108 Vi-24205-20130108

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301078 Date Extracted: 01/10/13 Date Analyzed: 01/10/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED EPA METHOD 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Ve-24205-20130108 301078-01	<0.1	0.16	<0.1	<0.3	<10	82
Vi-24205-20130108 301078-02	<0.1	0.19	0.18	0.86	35	78
Method Blank 03-0040 MB	<0.1	<0.1	<0.1	<0.3	<10	97

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301078

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

Laboratory Code: 301077-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m³	<0.1	<0.1	nm
Toluene	mg/m ³	0.12	0.12	3
Ethylbenzene	mg/m³	<0.1	<0.1	nm
Xylenes	mg/m ³	< 0.3	<0.3	nm
Gasoline	mg/m ³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

	Percent							
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	mg/m ³	5.0	95	70-130				
Toluene	mg/m³	5.0	9 5	70-130				
Ethylbenzene	mg/m ³	5.0	97	70-130				
Xylenes	mg/m³	15	97	70-130				
Gasoline	mg/m³	100	94	70-130				

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dy - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

11

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

301078 Send Report To Dee Gardner Company SoundEarth Strategies Address 2811 Fairview Ave East, Suite 2000 City, State, ZIP Seattle, WA 98102 Phone # 206.306.1900 Fax # 206.306.1907		PROJECT NA	ME/NO. TOC H					PO #		RU	TURNAROUND TIME andard (2 Weeks) [X] JSH	
Company SoundEarth Strategies Address 2811 Fairview Ave East, Suite 2000 City, State, ZIP Seattle, WA 98102 Phone #_206.306.1900 Fax #_206.306.1907 Sample Lab			TOC H			· · ·		PO #		RU	andard (2 Weeks) [X] JSH	
City, State, ZIP <u>Seattle, WA 98102</u> Phone #_206.306.1900_Fax #_206.306.1907_		REMARKS								1.	Standard (2 Weeks) [X] RUSH ush charges authorized by:	
			<u> </u>	BIO2 GEMS Y			MS Y / N	4	SAMPLE DISPOSAL Dispose after 30 days [X] Return samples [] Will call with instructions []			
	ANALYSES REQUESTED						A	NALYS	ES REC	QUEST	ED	
Sample ID Locatio ID Sampled	Time Samp le d	e Matrix	# of samples	NWTPH-Gx	BIEX by 8021B						Notes	
Ve-24205-2-51301 37 Efficient 01 AB 1-8-13	H4104	s AIR	2	X ·	X	· .						
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by	Johiey Killiot	SoundEarth Strategies	11413	1410
Seattle, WA 98119-2029	Received by:	Ethan Maits	585	1-8-13	1910
Ph. (206) 285-8282	Relinquished by	Ethan Marks	SES	1-8-13	1640
Fax (206) 283-5044	Received by:	HONGE NGWIEN	FBI	1	16:50
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Samples received at _____ °C

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 14, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301079 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: Audrey Hackett, Beau Johnson SOU0114R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301079 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 301079-01 301079-02 <u>SoundEarth Strategies</u> Ve-24225-20130108 Vi-24225-20130108

All quality control requirements were acceptable.

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ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301079 Date Extracted: 01/10/13 Date Analyzed: 01/10/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED EPA METHOD 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Ve-24225-20130108 301079-01	<0.1	0.10	<0.1	<0.3	<10	94
Vi-24225-20130108 301079-02	<0.1	<0.1	<0.1	<0.3	15	76
Method Blank 03-0040 MB	<0.1	<0.1	<0.1	<0.3	<10	97

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301079

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

Laboratory Code: 301077-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m ³	<0.1	<0.1	nm
Toluene	mg/m^3	0.12	0.12	3
Ethylbenzene	mg/m ³	<0.1	<0.1	nm
Xylenes	mg/m ³	<0.3	<0.3	nm
Gasoline	mg/m ³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/m ³	5.0	95	70-130
Toluene	mg/m ³	5.0	95	70-130
Ethylbenzene	mg/m ³	5.0	97	70-130
Xylenes	mg/m³	15	97	70-130
Gasoline	mg/m ³	100	94	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 - More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j-The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Company <u>Sou</u> Address <u>2811 Fal</u> i	ndEarth Stra	•	2000		PROJECT NA	ME/NO. TOC H # 01-17				F	°O #		RI	andard (2 Weeks) [X] JSH n charges authorized by:
City, State, ZIP <u>se</u> Phone # <u>206.306.19</u>			06.306.1907		REMARKS		· · · ·			GEA	AS Y / 1	N	Re	SAMPLE DISPOSAL ispose after 30 days [X] atum samples [] ill call with instructions []
· · · · · · · · · · · · · · · · · · ·										A	ALYS	ES REG	QUEST	ED
Sample ID	Sample Locatio n	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Gx	BTEX by 8021B						Notes
Ve-24225- 2013 01 07	GHINA	OLAB	1-13-13	1105	AIR	2	. X	x			<u> </u>			
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TIME	DATE	COMPANY	PRINT NAME	SIGNATURE	Friedman & Bruya, Inc.
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	1-8-13	11 17	= Ethan Marts	Received by:	Seattle, WA 98119-2029
13 6640	1-8-13	11 -11	Athan Martis	Relinquished by	Ph. (206) 285-8282
16:57	1/	FBS	HONG NGMEN	Received by	Fax (206) 283-5044
<u> </u>	14	I Flog	HONG DEAUEN	- All	

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Samples received at _18_ •C

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176F_20130206 WORFDB7, F&BI 302045 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: Audrey Hackett, Beau Johnson SOU0208R.DOC
ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130206 WORFDB7, F&BI 302045 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 302045 -01 302045 -02

Τ

<u>SoundEarth Strategies</u> Vi_24225_20130205 Ve_24225_20130205

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176F_20130206 WORFDB7, F&BI 302045 Date Extracted: 02/06/13 Date Analyzed: 02/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi_24225_20130205 302045-01	<0.1	<0.1	<0.1	<0.3	<10	97
Ve_24225_20130205 302045-02	<0.1	<0.1	<0.1	<0.3	<10	98
Method Blank 03-0224 MB	<0.1	<0.1	<0.1	<0.3	<10	98

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176F_20130206 WORFDB7, F&BI 302045

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

Laboratory Code: 302045-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m³	<0.1	<0.1	nm
Toluene	mg/m³	<0.1	<0.1	nm
Ethylbenzene	mg/m³	<0.1	<0.1	nm
Xylenes	mg/m ³	<0.3	<0.3	nm
Gasoline	mg/m ³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

	Percent							
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	mg/m ³	5.0	99	70-130				
Toluene	mg/m ³	5.0	99	70-130				
Ethylbenzene	mg/m ³	5.0	105	70-130				
Xylenes	mg/m ³	15	104	70-130				
Gasoline	mg/m ³	100	105	70-130				

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j - The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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.

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 $\mathbf{pr}-\mathbf{The}$ sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Send Report To____Dee Gardner___

Company__SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP_Seattle, WA 98102

SAMPLE CHAIN OF CUSTODY	ME 02/	06/13 -
SAMPLERS/signofure1 PROJECT NAME/NO. JOC Holdings 01-176F 24225 Property	/ PO #	1of1 TURNAROUND TIME (x) Standard (2 Weeks) () RUSH Rush charges authorized by:
REMARKS	GEMS Y / N	SAMPLE DISPOSAL (x) Dispose after 30 days () Return samples () Will call with instructions

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·	·								ANALYSES REQUESTED							
Sample ID	Sample Location	Sampie Depth	lab ID	Dałe Sampied	Time Sampled	Matrix	# af samples	NWTPH-DX	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
VI_24225_20130	205		DIAB	21513	1125	Air	2		x	x						•
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE T	TIME
3012 16th Avenue West	Relinguished of Cl	Ashley Elliot	SES	2613 03	340
Seattle, WA 98119-2029	Received by:	Nhan Phan	FeBT	2/6/13 02	840
Ph. (206) 285-8282	Relinquished by:				<u> </u>
Fax (206) 283-5044	Received by:	· · · · · · · · · · · · · · · · · · ·			

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Samples received at <u>17</u>°C

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176T_20130206 WORFDB7, F&BI 302046 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: Audrey Hackett, Beau Johnson SOU0208R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130206 WORFDB7, F&BI 302046 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 302046 -01 302046 -02 <u>SoundEarth Strategies</u> Vi_24205_20130205 Ve_24205_20130205

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176T_20130206 WORFDB7, F&BI 302046 Date Extracted: 02/06/13 Date Analyzed: 02/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi_24205_20130205 302046-01	<0.1	0.30	0.13	0.78	53	101
Ve_24205_20130205 302046-02	<0.1	<0.1	<0.1	<0.3	<10	102
Method Blank 03-0224 MB	<0.1	<0.1	<0.1	<0.3	<10	98

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176T_20130206 WORFDB7, F&BI 302046 Da

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

Laboratory Code: 302045-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m ³	<0.1	<0.1	nm
Toluene	mg/m ³	<0.1	<0.1	$\mathbf{n}\mathbf{m}$
Ethylbenzene	mg/m ³	<0.1	<0.1	nm
Xylenes	mg/m³	< 0.3	<0.3	nm
Gasoline	mg/m ³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/m³	5.0	99	70-130
Toluene	mg/m³	5.0	99	70-130
Ethylbenzene	mg/m³	5.0	105	70-130
Xylenes	mg/m³	15	104	70-130
Gasoline	mg/m ³	100	105	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

3020 Send Report	To <u>Dee Gar</u>	dner			SAMPLER® (sig	poliure)	1		НĒ					<u>e # _</u> TIRI		
	npany <u>SoundEarth Strategies Inc.</u> dress <u>2811 Fairview Ave East, Suite 2000</u>			PROJECT NAME/NO. / PO #					TURNAROUND TIME (x) Standard (2 Weeks) () RUSH Rush charges authorized by:							
				REMARKS							SAMPLE DISPOSAL (x) Dispose after 30 days () Return samples () Will call with instructions					
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Sample ID	Samp ia Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of sampl e s	NWTPH-Dx	NWTPH-Gx	BTEX by 80218	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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Seattle, WA 981 19-2029	Rogging Thy lun	Whan Alan	ILB T	2/2/12	oxa
Ph. (206) 285-8282	Relinquished by:	Note Plat-	110-		0070
Fax (206) 283-5044	Received by:	· · · · · · · · · · · · · · · · · · ·		·	
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Samples received at 17 °C

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176D_20130206 WORFDB7, F&BI 302047 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: Audrey Hackett, Beau Johnson SOU0208R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130206 WORFDB7, F&BI 302047 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 302047 -01 302047 -02 <u>SoundEarth Strategies</u> Vi_24309_20130205 Ve_24309_20130205

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176D_20130206 WORFDB7, F&BI 302047 Date Extracted: 02/06/13 Date Analyzed: 02/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi_24309_20130205 302047-01	<0.1	<0.1	<0.1	<0.3	<10	101
Ve_24309_20130205 302047-02	<0.1	<0.1	<0.1	<0.3	<10	98
Method Blank 03-0224 MB	<0.1	<0.1	<0.1	<0.3	<10	98

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176D_20130206 WORFDB7, F&BI 302047

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

Laboratory Code: 302045-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m³	<0.1	<0.1	nm
Toluene	mg/m ³	<0.1	<0.1	nm
Ethylbenzene	mg/m ³	<0.1	<0.1	nm
Xylenes	mg/m ³	<0.3	<0.3	nm
Gasoline	mg/m ³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

	Percent								
	Reporting	Spike	Recovery	Acceptance					
Analyte	Units	Level	LCS	Criteria					
Benzene	mg/m ³	5.0	99	70-130					
Toluene	mg/m ³	5.0	99	70-130					
Ethylbenzene	mg/m³	5.0	105	70-130					
Xylenes	mg/m ³	15	104	70-130					
Gasoline	mg/m ³	100	105	70-130					

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. The value reported is an estimate.

 ${\bf J}$ - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Company	d Report To <u>Dee Gardner</u> npany <u>SoundEarth Strategies Inc.</u> Iress <u>2811 Fairview Ave East. Suite 2000</u> , State, ZIP <u>Seattle, WA 98102</u> ne # <u>206.306.1900</u> Fax # <u>206.306.1907</u>				PROJECT NAME/NO. TOC Holdings 01-176D 24309 Property					PC) #		TURNAROUND TIME (x) Standard (2 Weeks) () RUSH Rush charges authorized by:			
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Sampie ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
1_24309_20130	205		OIA-B	2/5/13	1140	Air	2		x	x						
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 4, 2013 from the TOC_01-176F_20130304 WORFDB7, F&BI 303034 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: Audrey Hackett, Beau Johnson SOU0308R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130304 WORFDB7, F&BI 303034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 303034-01 303034-02 <u>SoundEarth Strategies</u> Vi-24225-20130304 Ve-24225-20130304

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176F_20130304 WORFDB7, F&BI 303034 Date Extracted: 03/06/13 Date Analyzed: 03/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi-24225-20130304 303034-01	<0.1	<0.1	<0.1	<0.3	<10	90
Ve-24225-20130304 303034-02	<0.1	<0.1	<0.1	<0.3	<10	88
Method Blank 03-0375 MB	<0.1	<0.1	<0.1	<0.3	<10	88

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176F_20130304 WORFDB7, F&BI 303034

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

Laboratory Code: 303034-02 (Duplicate)

				Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	\mathbf{Result}	Result	(Limit 20)
Benzene	mg/m ³	<0.1	<0.1	nm
Toluene	mg/m ³	<0.1	<0.1	nm
Ethylbenzene	mg/m ³	<0.1	<0.1	nm
Xylenes	mg/m ³	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/m³	5.0		70-130
Toluene	mg/m³	5.0	87	70-130
Ethylbenzene	mg/m³	5.0	90	70-130
Xylenes	mg/m³	15	90	70-130
Gasoline	mg/m³	100	106	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

 $\mathrm{pr}-\mathrm{The}$ sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOCs by 8270	RCRA-8 Metals				Notes
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 4, 2013 from the TOC_01-176D_20130304 WORFDB7, F&BI 303035 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: Audrey Hackett, Beau Johnson SOU0308R.DOC

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130304 WORFDB7, F&BI 303035 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 303035-01 303035-02 <u>SoundEarth Strategies</u> Vi-24309-20130304 Ve-24309-20130304

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176D_20130304 WORFDB7, F&BI 303035 Date Extracted: 03/06/13 Date Analyzed: 03/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi-24309-20130304 303035-01	<0.1	<0.1	<0.1	<0.3	<10	91
Ve-24309-20130304 303035-02	<0.1	<0.1	<0.1	<0.3	<10	92
Method Blank 03-0375 MB	<0.1	<0.1	<0.1	<0.3	<10	88

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ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176D_20130304 WORFDB7, F&BI 303035

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

Laboratory Code: 303034-02 (Duplicate)

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				Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	Result	Result	(Limit 20)
Benzene	mg/m³	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m³	<0.1	<0.1	nm
Xylenes	mg/m ³	<0.3	<0.3	nm
Gasoline	mg/m³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/m³	5.0	89	70-130
Toluene	mg/m ³	5.0	87	70-130
Ethylbenzene	mg/m³	5.0	90	70-130
Xylenes	mg/m ³	15	90	70-130
Gasoline	mg/m ³	100	106	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j-The result is below normal reporting limits. The value reported is an estimate.

 ${\bf J}$ - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated is likely due to laboratory contamination.

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

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

 $\rm pc-The\ sample\ was\ received\ in\ a\ container\ not\ approved\ by\ the\ method.$ The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Company <u>SoundEarth Strategies Inc.</u> Address 2811 Fairing Ave East, Site 2000 City, State, ZIP <u>Scattle</u> , WA 98102 Phone # 206 306 1900 Fax # 206 306.1907					- 01.	PROJECT NAME/NO. O1-176D REMARKS					PO# GEMSY/ N		11	TURNAROUND TIME IX Standard (2 Weeks) II RUSH Rush charges authorized by:			
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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals				Notes
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 4, 2013 from the TOC_01-176T_20130304 WORFDB7, F&BI 303036 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: Audrey Hackett, Beau Johnson SOU0308R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130304 WORFDB7, F&BI 303036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 303036-01 303036-02 <u>SoundEarth Strategies</u> Vi-24205-20130304 Ve-24205-20130304

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176T_20130304 WORFDB7, F&BI 303036 Date Extracted: 03/06/13 Date Analyzed: 03/06/13

RESULTS FROM THE ANALYSIS OF VAPOR SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING MODIFIED METHODS 8021B AND NWTPH-Gx Results Reported as mg/m³

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
Vi-24205-20130304 303036-01	<0.1	0.10	0.10	0.69	<10	88
Ve-24205-20130304 303036-02	<0.1	<0.1	<0.1	<0.3	<10	89
Method Blank 03-0375 MB	<0.1	<0.1	<0.1	<0.3	<10	88

ENVIRONMENTAL CHEMISTS

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Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176T_20130304 WORFDB7, F&BI 303036

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

Laboratory Code: 303034-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/m³	<0.1	<0.1	nm
Toluene	mg/m³	<0.1	<0.1	nm
Ethylbenzene	mg/m³	<0.1	<0.1	nm
Xylenes	mg/m³	<0.3	<0.3	nm
Gasoline	mg/m³	<10	<10	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/m³	5.0	89	70-130
Toluene	mg/m ³	5.0	87	70-130
Ethylbenzene	mg/m³	5.0	90	70-130
Xylenes	mg/m³	15	90	70-130
Gasoline	mg/m ³	100	106	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 - More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j-The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr-The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

Send Report	SAMPLER (signature)						مينه									
Company <u>SoundEarth Strategies Inc.</u> Address <u>2811 Fairview Ave East Suite 2000</u> City, State, ZIP <u>Seattle, WA 98102</u> Phone # <u>206.306.1900</u> Fax # <u>206.306.1907</u>					PROJECT NAME/NO. TOC Holdings 01-176T REMARKS					PO # GEMS Y / N			TURNAROUND TIME (x) Standard (2 Weeks) () RUSH Rush charges authorized by: SAMPLE DISPOSAL (x) Dispose after 30 days () Return samples () Will call with instructions SES REQUESTED			
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Mahix	# of samples	NWTPH-DX	NWTPH-Gx							
VI-24203-201	30304		0100	3/4/13	14:25	AIR	2	· · ·	x	X	• •		<u> </u>		┼──┢	<u> </u>
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Seattle, WA 98		Received b	to day ?	nh -	· Li		_ _				Ser				- 7-1]	1242
Ph. <u>(</u> 206) 285-8	3282	Relinquishe	d by: ス	M	Li	2 Horb				ç	;et	•	•	· -	-4-13	1630
.Fax (206) 283-	5044	Received b	Y. Art	1.4-5	2-7	5 At	This .	F.			Th	r.		5	Me	1630

Draft – Issued for Ecology Review

LABORATORY ANALYTICAL REPORTS FOR WATER

Friedman & Bruya, Inc. #303080 Friedman & Bruya, Inc. #302048 Friedman & Bruya, Inc. #303037 Friedman & Bruya, Inc. #301082 Friedman & Bruya, Inc. #302050 Friedman & Bruya, Inc. #303184 Friedman & Bruya, Inc. #301081 Friedman & Bruya, Inc. #302049 Friedman & Bruya, Inc. #303039
ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 14, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301080 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: Audrey Hackett, Beau Johnson SOU0114R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

5

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301080 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
301080-01	We - 24205 - 20130108
301080-02	GAC1i-24205-20130108
301080-03	GAC2i-24205-20130108

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301080 Date Extracted: 01/09/13 Date Analyzed: 01/09/13 and 01/10/13

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We-24205-20130108 301080-01	<1	<1	<1	<3	<100	99
GAC1i-24205-201303 301080-02 1/20	108 60	400	520	3,600	19,000	98
GAC2i-24205-20130 301080-03	108 <1	<1	<1	<3	<100	97
Method Blank 03-0039 MB	<1	<1	<1	<3	<100	91

ENVIRONMENTAL CHEMISTS

Date of Report: 01/14/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301080

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: 301076-01 (Duplicate)

	Reporting	Sample	Duplicate	Relative Percent Difference
Analyte	Units	Result	Result	(Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	1.2	1.0	16
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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	93	72-119
Toluene	ug/L (ppb)	50	92	71-113
Ethylbenzene	ug/L (ppb)	50	93	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	96	70-119

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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	City, State, ZIPSeattle, WA_98102 REMARKS GEMS Y / N Phone #_206.306.1900 Fax #_206.306.1907 ANALYCEE											SAMPLE DISPOSAL Dispose after 30 days [X] Return samples [] Will call with instructions []				
ANALYSES REQUESTED																
	Sample ID	Sample Location	Lab ID	Date Sampled	Time Samp led	Matrix	# of jars		NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
	We-24205- 20130101	Effluent	O AC	Dr-08-13		WATER	3	<u> </u>	x	x	_#					· · · ·
	GAC11-24205-20130/07	Influent	oz I	01-08-13		WATER	3		x	X						
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	EthanMake	SoundEarth Strategies	1-8-13	1640
Seattle, WA 98119-2029	Received by: Adur	HONG NZWEN	Fm	V	16:45
Ph. (206) 285-8282	Relinquished by:			¥	10/15
Fax (206) 283-5044	Received by:				

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Samples received at <u>12</u>°C

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 12, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176T_20130206 WORFDB7, F&BI 302048 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: Audrey Hackett, Beau Johnson SOU0212R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130206 WORFDB7, F&BI 302048 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
302048 -01	$We_{24205_{20130205}}$
302048 -02	GAC1i_24205_20130205
302048 -03	GAC2i_24205_20130205

All quality control requirements were acceptable.

1

ENVIRONMENTAL CHEMISTS

Date of Report: 02/12/13 Date Received: 02/06/13 Project: TOC_01-176T_20130206 WORFDB7, F&BI 302048 Date Extracted: 02/06/13 Date Analyzed: 02/06/13 and 02/07/13

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We_24205_20130205 302048-01	i <1	<1	<1	<3	<100	99
GAC1i_24205_20130 302048-02 1/5	205 11	83	61	1,200	8,200	113
GAC2i_24205_20130 302048-03	205 <1	<1	<1	<3	<100	102
Method Blank 03-0225 MB	<1	<1	<1	<3	<100	100

ENVIRONMENTAL CHEMISTS

Date of Report: 02/12/13 Date Received: 02/06/13 Project: TOC_01-176T_20130206 WORFDB7, F&BI 302048

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

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Laboratory Code: 302049-01 (Duplicate)

				Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	Result	Result	(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	\mathbf{nm}
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	96	72 - 122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	103	69-134

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated is likely due to laboratory contamination.

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

 $\rm nm$ - 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.



Send Report To___Dee Gardner

Company__SoundEarth Strategies Inc.

Address____2811 Fairview Ave East, Suite 2000

City, State, ZIP_Seattle, WA 98102

Phone #_206.306.1900 Fax #_ 206.306.1907

SAMPLE CHAIN OF CUSTODY	ME 02/06/	13 V/
SAMPLERS idenature		TURNAROUND TIME
PROJECT NAME/NO. TOC Holdings 01-176T 24205 Property	PO #	(x) Standard (2 Weeks) () RUSH Rush charges authorized by:
REMARKS	GEMS Y / N	SAMPLE DISPOSAL (x) Dispose after 30 days () Return samples () Will call with instructions

N= 12/06/13

								ANALYSES REQUESTED								
Sampie ID	Sample Location	Samp le Depth	iab iD	D ale Sampled	Time Sampled	Matrix	# of samples	NWTPH-Dx	NWTPH-Gx	BTEX by BO21B	Total Lead by 6020/200.8					Notes
We_24205_20131	205		or A <	2/5/13	1310	Water	3		×	x					·	
GACI 24205 201			OZAC	2/5/13	1720	Water	3		X	X		· ·	1			
GAC21_24205_264	30205		0314	2/5/13	1325	Water	3		x	x						
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Friedman & Bruya, Inc.		PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by MCM	Ashley Elliott	SES	2/1/3	0840
Seattle, WA 981 19-2029	Received by: m/M/hm-	Nhan Phan	FEBT	2/6/13	0840
Ph. (206) 285-8282	Relinquished by:	α ¹ τους β αμβλα τ α πότο που μεταγοριστικό πολιτικό βάτβαι που του ματρογραφικό του ματρογραφικό που ματρογραφικό π			
Fax (206) 283-5044	Received by:				-**

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Samples received at 5 °C

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 4, 2013 from the TOC_01-176_20130304 WORFDB7, F&BI 303037 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: Audrey Hackett, Beau Johnson SOU0308R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130304 WORFDB7, F&BI 303037 project. Samples were logged in under the laboratory ID's listed below.

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<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
303037-01	We-24205-20130304
303037-02	GAC1i-24205-20130304
303037-03	GAC2i-24205-20130304

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176_20130304 WORFDB7, F&BI 303037 Date Extracted: 03/05/13 Date Analyzed: 03/05/13

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	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
We-24205- 20130304 ³⁰³⁰³⁷⁻⁰¹	<1	<1	<1	<3	<100	89
GAC1i-24205- 20130304 303037-02 1/20	20	200	460	3,900	19,000	91
GAC2i-24205- 20130304 303037-03	<1	<1	<1	<3	<100	90
Method Blank 03-0372 MB	<1	<1	<1	<3	<100	87

2

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176_20130304 WORFDB7, F&BI 303037

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

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Laboratory Code: 303030-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

	Percent								
	Reporting	Spike	Recovery	Acceptance					
Analyte	Units	Level	LCS	Criteria					
Benzene	ug/L (ppb)	50	94	72-119					
Toluene	ug/L (ppb)	50	93	71-113					
Ethylbenzene	ug/L (ppb)	50	95	72-114					
Xylenes	ug/L (ppb)	150	· 93	72-113					
Gasoline	ug/L (ppb)	1,000	98	70-119					

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 - More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j - The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

 $\operatorname{pr}-\operatorname{The}$ sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 11, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301082 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: Audrey Hackett, Beau Johnson SOU0111R.DOC

ENVIRONMENTAL CHEMISTS

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CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301082 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
301082-01	We - 24225 - 20130108
301082-02	GAC1i-24225-20130108
301082-03	GAC2i-24225-20130108

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/11/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301082 Date Extracted: 01/09/13 Date Analyzed: 01/09/13

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We-24225-20130108 301082-01	<1	<1	<1	<3	<100	97
GAC1i-24225-201301 301082-02	08 <1	<1	<1	<3	<100	96
GAC2i-24225-201301 301082-03	08 <1	<1	<1	<3	<100	100
Method Blank 03-0039 MB	<1	<1	<1	<3	<100	91

ENVIRONMENTAL CHEMISTS

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Date of Report: 01/11/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301082

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: 301076-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	1.2	1.0	16
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

		Percent						
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	ug/L (ppb)	50	9 3	72-119				
Toluene	ug/L (ppb)	50	92	71-113				
Ethylbenzene	ug/L (ppb)	50	93	72-114				
Xylenes	ug/L (ppb)	150	90	72-113				
Gasoline	ug/L (ppb)	1,000	96	70-119				

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr-The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Samples received at 12°C

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176F_20130206 WORFDB7, F&BI 302050 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: Audrey Hackett, Beau Johnson SOU0208R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130206 WORFDB7, F&BI 302050 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>						
302050 -01	$We_{24225_{20130205}}$						
302050 -02	GAC1i_24225_20130205						
302050 -03	GAC2i_24225_20130205						

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176F_20130206 WORFDB7, F&BI 302050 Date Extracted: 02/06/13 Date Analyzed: 02/06/13

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We_24225_2013020 302050-01	5 <1	<1	<1	<3	<100	100
GAC1i_24225_2013 302050-02	0205 <1	<1	<1	<3	<100	98
GAC2i_24225_2013 302050-03	0205 <1	<1	<1	<3	<100	102
Method Blank 03-0225 MB	<1	<1	<1	<3	<100	100

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176F_20130206 WORFDB7, F&BI 302050

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: 302049-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	96	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	103	69-134

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ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dy - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j-The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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, , , , , , , , , , , , , , , , , , , ,	Company <u>SoundEarth Strategies Inc.</u> Address <u>2811 Fairview Ave East, Suite 2000</u>					1E7NO. C Holdings (24225 Prop				PC) # 	_	ζή RH	SH charge		norized by:
City, State, Zl Phone # <u>206</u>	P <u>Seattle, WA (</u> .306.1900 F	98102	06.1907		REMARKS GEMS Y / N					Y / N (x) Dispose after 30 days () Return samples () Will call with instructions						
ANALYSES REQUESTED																
Sampi e ID	Sample Location	Sample Depth	lab ID	Da le Sampled	Time Sampled	Matrix	# of samples	NWTPH-Dx	NWTPH-Gx	STEX by 8021B	Total Lead by 6020/200.8					Notes
We_24225_20134	1		DIA -	215/13	1350	Water	3	1	X	X						
GAC11_24225-2.04		<u> </u>	OZAL		1355	Water	3	1	X	X						
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relipsuisted by	Ashicy Ellist	JES	216/13	0840
Seattle, WA 981 19-2029	Received by:	Nhan Phan	Febr	2/6/13	0840
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:		-		

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Samples received at _5 °C

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 19, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 13, 2013 from the TOC_01-176_20130313 WORFDB7, F&BI 303184 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: Audrey Hackett, Beau Johnson SOU0319R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 13, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130313 WORFDB7, F&BI 303184 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>						
303184 -01	We-24225-20130313						
303184 -02	GAC1i-24225-20130313						

All quality control requirements were acceptable.

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ENVIRONMENTAL CHEMISTS

Date of Report: 03/19/13 Date Received: 03/13/13 Project: TOC_01-176_20130313 WORFDB7, F&BI 303184 Date Extracted: 03/14/13 Date Analyzed: 03/14/13

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	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
We-24225-2013031 303184-01	3 <1	<1	<1	<3	<100	100
GAC1i-24225 -20130313 303184-02	2.9	<1	14	27	1,100	98
Method Blank 03-0434 MB	<1	<1	<1	<3	<100	99

ENVIRONMENTAL CHEMISTS

Date of Report: 03/19/13 Date Received: 03/13/13 Project: TOC_01-176_20130313 WORFDB7, F&BI 303184

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: 303184-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	94	72-119
Toluene	ug/L (ppb)	50	97	71-113
Ethylbenzene	ug/L (ppb)	50	97	72-114
Xylenes	ug/L (ppb)	150	92	72-113
Gasoline	ug/L (ppb)	1,000	90	70-119

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

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City, State, ZIP <u>Seattle</u>	<u>e, WA 98102</u>		<u>.</u>							GEMS	Y/N				ifter 30 days [X]	ł
Phone #_206.306.1900_	Fax #_	_206.306.1	907							•					mples [] ith instructions [1
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Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	- Matrix	# of jars		NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes	
We-24225- 20130313	Effluent	OIA-C	3/13/13	1415	WATER	3	1	x	X					<u>├</u>		
GAC11-24225-20130313	Influent	OZAC		1420	WATER	3		X	X				<u> </u>			
SAC21-24225	Mid C1			i.	WATER			X	X							
GAC3I-24225-	Mid C2		· · ·	00	WATER											
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Samples received at 4

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Friedman & Bruya, Inc.	SIGNATURE	PRINTNAME	COMPANY	DATE TIME
3012 16th Avenue West	Relinguished by:	Ashley ENIOT	SoundEarth Strategies	13/13/13 1445
Seattle, WA 98119-2029	Received by:	- Ethan Marks	505	3/13/13 14.45
Ph. (206) 285-8282	Relinquished by:	Ethan Mars	585	3/13/13 1702
Fax (206) 283-5044	Received by:	Sen Shilmon	PBT	3/13/13 07:02
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

January 11, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on January 8, 2013 from the TOC_01-176_20130108 WORFDB7, F&BI 301081 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: Audrey Hackett, Beau Johnson SOU0111R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130108 WORFDB7, F&BI 301081 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	<u>SoundEarth Strategies</u>
301081-01	We-24309-20130108
301081-02	GAC1i-24309-20130108
301081-03	GAC2i-24309-20130108

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/11/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301081 Date Extracted: 01/09/13 Date Analyzed: 01/09/13

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

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We-24309-20130108 301081-01	<1	<1	<1	<3	<100	94
GAC1i-24309-201303 301081-02	108 <1	<1	<1	<3	<100	96
GAC2i-24309-201301 301081-03	108 <1	<1	<1	<3	<100	92
Method Blank 03-0039 MB	<1	<1	<1	<3	<100	91

ENVIRONMENTAL CHEMISTS

Date of Report: 01/11/13 Date Received: 01/08/13 Project: TOC_01-176_20130108 WORFDB7, F&BI 301081

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: 301076-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	1.2	1.0	16
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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	93	72-119
Toluene	ug/L (ppb)	50	92	71-113
Ethylbenzene	ug/L (ppb)	50	93	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	96	70-119

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

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

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jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated is likely due to laboratory contamination.

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

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pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

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Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars		NWTPH-Gx	BTEX by 80218	Total Lead by 6020/200.8					Notes	
Effluent	DIAL	0-07-13	1210	WATER	3	<u>+</u>	x	x		.	<u> </u>			<u> </u>	
Influent		C1-80-10	1120	WATER	3	· · · ·	·	x	 				<u>.</u>	·	
Mid C1	03 4	01-57-13	1205	WATER	3	1	X	X	- i	in		<u>├</u>			—
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,	WA 98102 Fax #_ Sample Location	WA 98102 Fax #206.306. Sample Lab Location ID Effluent 01A C Influent 02 Mid C1 03	WA 98102	WA 98102 REMARK Fax #_206.306.1907 REMARK Sample Lab Date Time Location Lab Date Sampled Effluent 01A C 91-07-13 120 Influent 02 01-08-13 113 co Mid C1 03 91-03-13 120 5	WA 98102 REMARKS Fax #_206.306.1907 REMARKS Sample Lab Date Time Location Lab Date Sampled Matrix Effluent 01A C 91-07-13 (21/3) WATER Mid C1 03 91-07-13 11.2 m WATER	REMARKSWA 98102Fax #_206.306.1907Fax #_206.306.1907Time SampledMatrix# of JarsSample LocationLab IDDate SampledTime SampledMatrix# of JarsEffluent Influent $01A \subset$ $01 \circ 7 - 13$ $01 - 07 - 13$ $(7 \circ 13)$ $11 \circ 5$ WATER 3 Mid C1 03 $01 - 07 - 13$ $12 \circ 5$ $12 \circ 5$ WATER 3	REMARKSWA 98102Fax # 206.306.1907Fax # 206.306.1907Time SampleMatrix# of JarsSample LocationLab IDDate SampledTime SampledMatrix# of JarsEffluent Influent $0!A \subset$ $0! \circ 7 - 13$ $0! \circ 7 - 13$ Time SampledMatrix# of JarsEffluent Influent $0!A \subset$ $0! \circ 7 - 13$ $0! \circ 7 - 13$ $(2 \cdot 13)$ $1! 3 \odot$ WATER3Mid C1O3 $0! \circ 3 - 13$ $12 \circ 5$ WATER3	REMARKSWA 98102Fax # 206.306.1907Fax # 206.306.1907TimeSample LocationLab IDDate SampledTime SampledMatrix# of JarsŠ H H LocationEffluent Influent $01A \subset$ $01 \circ 7 - 13$ $01 - 07 - 13$ Time SampledMatrix# of JarsŠ H L XEffluent Influent $01A \subset$ $01 \circ 7 - 13$ $01 - 07 - 13$ $(7 \cdot 13)$ $11 \circ 5$ WATER WATER3X XMid C1 $03 \cdot 4$ $01 - 07 - 13$ $12 \circ 5$ $12 \circ 5$ WATER 3 X X	WA 98102 Fax #_206,306.1907 REMARKS Fax #_206,306.1907 Time Matrix # of Sample Sample Lab Date Time Matrix # of Sample Sample Location ID Date Sampled Time Matrix # of Sample Sample Effluent 01A C of of of of of (2/10) WATER 3 X X Influent 02 01 - 08 - 12 11 3 m WATER 3 X X Mid C1 03 01 - 38 - 13 120 r WATER 3 X X	WA 98102 Fax #_206.306.1907 REMARKS GEM:	REMARKSWA 98102Fax # 206.306.1907GEMS Y / NFax # 206.306.1907TimeMatrix# ofSome fieldSample LocationDate IDDate SampledTime SampledMatrix# ofSome fieldInfluent Mid C101A C01-07-13 01-02-13Ture 1205Water3XXMid C10301-02-13 01-02-13Ture 1205Water3XX44	REMARKS GEMS Y / N Fax #_206.306.1907 GEMS Y / N Sample Lab Date Time Matrix # of ANALYSES RI Sample Lab Date Time Matrix # of X X Dots Pool Pool	REMARKSGEMS Y / NGEMS Y / NGEMS Y / NSampleLab LocationDate SampledTime SampledMatrix# of JarsS T MA C P P P PA Ref P <br< td=""><td>REMARKSSAM Dispose or Return sci Will coll wFax #_206.306.1907REMARKSGEMS Y / NSAM Dispose or Return sci Will coll wSample LocationLab IDDate SampledTime SampledMatrix Matrix# of JursSam $\frac{1}{2}$Sam $\frac{1}{2}$SAM Dispose or Return sci $\frac{1}{2}$Effluent Influent $01A \subseteq$01-07-10 $01-07-12$Time 12.0Matrix WATER# of 3X X XX X44Influent $02 \leq$01-07-12$112.0$WATER 3X X XX X44Wid C1 $03 \leq$01-07-13$12.0$WATER 3X X XX X44</td><td>WA 98102 Fox # 206.306.1907 REMARKS GEMS Y / N SAMPLE DISPOSAL Dispose after 30 days [] Refum samples [] Will call with instructions Sample Location Lab ID Date Sampled Time Sampled Matrix # of Jars $\frac{1}{2}$ $\frac{1}{$</td></br<>	REMARKSSAM Dispose or Return sci Will coll wFax #_206.306.1907REMARKSGEMS Y / NSAM Dispose or Return sci Will coll wSample LocationLab IDDate SampledTime SampledMatrix Matrix# of JursSam $\frac{1}{2}$ Sam $\frac{1}{2}$ SAM Dispose or Return sci $\frac{1}{2}$ Effluent Influent $01A \subseteq$ 01-07-10 $01-07-12$ Time 12.0 Matrix WATER# of 3 X X XX X 44Influent $02 \leq$ 01-07-12 112.0 WATER 3 X X XX X 44Wid C1 $03 \leq$ 01-07-13 12.0 WATER 3 X X XX X 44	WA 98102 Fox # 206.306.1907 REMARKS GEMS Y / N SAMPLE DISPOSAL Dispose after 30 days [] Refum samples [] Will call with instructions Sample Location Lab ID Date Sampled Time Sampled Matrix # of Jars $\frac{1}{2}$ $\frac{1}{$

			Samples rece	erved at <u>14</u>	<u>_~C</u>
Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	-Liz Karb	SoundEarth Strategies	1.8-13	1715
Seattle, WA 981 19-2029	Received by:	- Ethan Marts	1, 11	1-0 12	1415
Ph. (206) 285-8282	Relinquished by			1 0-13	740
		to han wary	. 61 17	1-8-131	670
Fax (206) 283-5044	Received by	HONZ NEWEN	FBA	1/8/13 1	6:45
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

February 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on February 6, 2013 from the TOC_01-176D_20130206 WORFDB7, F&BI 302049 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: Audrey Hackett, Beau Johnson SOU0208R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130206 WORFDB7, F&BI 302049 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
302049 -01
302049 -02
302049 -03

<u>SoundEarth Strategies</u> We_24309_20130205 GAC1i_24309_20130205 GAC2i_24309_20130205

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176D_20130206 WORFDB7, F&BI 302049 Date Extracted: 02/06/13 Date Analyzed: 02/06/13

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	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 52-124)
We_24309_20130205 302049-01	<1	<1	<1 ,	<3	<100	101
GAC1i_24309_20130 302049-02	205 <1	<1	1.8	5.8	160	101
GAC2i_24309_20130 302049-03	205 <1	<1	<1	<3	<100	98
Method Blank 03-0225 MB	<1	<1	<1	<3	<100	100

ENVIRONMENTAL CHEMISTS

Date of Report: 02/08/13 Date Received: 02/06/13 Project: TOC_01-176D_20130206 WORFDB7, F&BI 302049

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: 302049-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	96	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	1 50	98	74-118
Gasoline	ug/L (ppb)	1,000	103	69 -134

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dy - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

i – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

 $\rm pr-The\ sample\ was\ received\ with\ incorrect\ preservation.$ The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.



SAMPLE CHAIN OF CUSTODY

ME 02/06/13

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Send Report To___<u>Dee Gardner</u>

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP_Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

A	110 0-1-01	
SAMPLERS (stanoture)		TURNAROUND TIME
PROJECT NAME/NO. TOC Holdings 01-176D 24309 Property	PO #	(x) Standard (2 Weeks) () RUSH Rush charges authorized by:
REMARKS	GEMS Y / N	SAMPLE DISPOSAL (x) Dispose after 30 days () Return samples () Will call with instructions

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								ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Dx	NWTPH-Gx	BTEX by 80215	Total Lead by 6020/200.8					Notes
We_24309_2013	2.05		6 A .<	2/5/13	1210	Water	З		x	x						
GAC1_24309_20	BARNS		CRA-	2/5/13	1215	Water	3		X	X						
GAC2_24309_20	20202		03A .<	2/5/13	1200	Water	3		x	X			[
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Friedman & Bruya, Inc.	/ SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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Seattle, WA 98119-2029	Received by: manafaur	Nhan Phan	Febi	2/0/13	0840
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:			···	
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 e-mail: fbi@isomedia.com

March 8, 2013

Dee Gardner, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on March 4, 2013 from the TOC_01-176_20130304 WORFDB7, F&BI 303039 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: Audrey Hackett, Beau Johnson SOU0308R.DOC

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130304 WORFDB7, F&BI 303039 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
303039-01	We-24309-20130304
303039-02	GAC1i-24309-20130304
303039-03	GAC2i-24309-20130304

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176_20130304 WORFDB7, F&BI 303039 Date Extracted: 03/05/13 Date Analyzed: 03/05/13

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (<u>% Recovery</u>) (Limit 50-150)
We-24309- 20130304 303039-01	<1	<1	<1	<3	<100	89
GAC1i-24309- 20130304 303039-02	<1	1.4	24	160	1,700	99
GAC2i-24309- 20130304 303039-03	<1	<1	<1	<3	<100	86
Method Blank 03-0372 MB	<1	<1	<1	<3	<100	87

ENVIRONMENTAL CHEMISTS

Date of Report: 03/08/13 Date Received: 03/04/13 Project: TOC_01-176_20130304 WORFDB7, F&BI 303039

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

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Laboratory Code: 303030-07 (Duplicate)

				Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	Result	Result	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/L (ppb)	50	94	72-119
Toluene	ug/L (ppb)	50	93	71-113
Ethylbenzene	ug/L (ppb)	50	95	72-114
Xylenes	ug/L (ppb)	150	93	72-113
Gasoline	ug/L (ppb)	1,000	9 8	70-119

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

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Send Report To Dee Gardner				' UNITAL LL	ing tailauloutor	" hy:	14			_			<u></u> #. TU	JRNAROUND TIME
Company <u>SoundEarth Strateates</u> Address <u>2811 Fairylew Ave East, Suite 2000</u> City, State, ZIP <u>Seattle, WA 98102</u> Phone # <u>206,306.1900</u> Fax # <u>206,306.1907</u>				PROJECT NAME/NO. PO # TOC Holdings # 01-176 24309			Standard (2 Weeks) [X] RUSH Rush charges authorized by:							
			907	REMARKS GEMS Y / 1				Y/N	SAMPLE DISPOSAL Dispose after 30 days [X Return samples [] Will call with instructions					
			-							A	NALYS	ES REQ	JESTED	· · · · · · · · · · · · · · · · · · ·
Sample ID	Sample Location	Leb ID	Date Sampled	Time Sampled	, Matrix	# of jars -		NWTPH-Gx	BTEX by 80215	Total Lead by 6020/200.8	-			Notes
-24309-20130304	Effluent	01 A_4		1420	WATER	3		x	x					
C11-24309- 2 270301	Influent	02 1	3-4-13	1350	WATER	3		X	X					
C2i-24309-13130304	Mid C1	03 4	3-1-13	13 3 5	WATER	3		x	X					
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Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME	
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