

Kinder Morgan Liquids Terminals (KMLT), LLC

SECOND SEMIANNUAL 2015 GROUNDWATER MONITORING REPORT

Harbor Island Terminal

November 19, 2015

A large orange geometric graphic consisting of a triangle and a rectangle. The triangle is on the right side, pointing upwards, and the rectangle is on the left side, extending from the bottom to the top. A thin white line runs horizontally across the middle of the graphic, and another thin white line runs diagonally from the bottom-left corner to the top-right corner of the triangle.


**SECOND SEMIANNUAL
2015 GROUNDWATER
MONITORING REPORT**



Mark Ullery
Staff Environmental Scientist

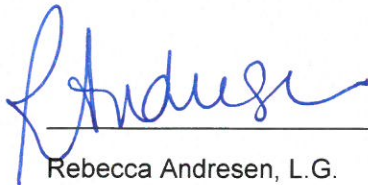
Kinder Morgan Harbor Island Terminal

Prepared for:
Kinder Morgan Liquids Terminals
(KMLT), LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington



Matt Annis
Principal Environmental Scientist

Prepared by:
Arcadis U.S., Inc.
1100 Olive Way
Suite 800
Seattle
Washington 98101
Tel 206 325 5254
Fax 206 325 8218



Rebecca Andresen, L.G.
Associate Vice President



Rebecca K. Andresen

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B	Groundwater Monitoring Field Data Sheets
C	Laboratory Reports and Chain-of-Custody Documentation

1 INTRODUCTION

Arcadis U.S., Inc. (Arcadis) has prepared this report to present the findings of the second semiannual 2015 groundwater and remedial performance monitoring and sampling event and the September 2015 supplemental sulfate application at the Kinder Morgan Liquids Terminals (KMLT), LLC Harbor Island Terminal located in Seattle, Washington (site). A site location map is included as **Figure 1**.

Compliance groundwater monitoring and sampling was performed between September 28 and October 2, 2015 in accordance with the *Revised Site Groundwater Monitoring Plan* (Revised Monitoring Plan [Arcadis 2014]). Additionally, low-flow groundwater sampling techniques were used in accordance with the *Technical Revision Request* (Delta 2008), presented in **Attachment A**.

In September 2015, Arcadis conducted a supplemental sulfate application. The objective of this supplemental application is to continue to support the focused enhanced anaerobic biological oxidation (ABOx) initiated during the June 2013 initial sulfate application (Arcadis 2013). The results of the previous performance monitoring events have been summarized in prior reports and the analytical data are presented in the attached tables.

1.1 Site Description

The site is currently a 14-acre bulk petroleum storage facility located east of 13th Avenue Southwest on Harbor Island in Seattle, King County, Washington and has operated as a bulk petroleum storage terminal since 1944. The site vicinity is primarily occupied by heavy industry. The site is situated at an elevation of approximately 9 to 16 feet above mean sea level (amsl) and the topography of the site vicinity is flat. A site plan is included as **Figure 2**.

The site consists of five yards (A, B, C, D, and E). Site features include aboveground storage tanks (ASTs) containing refined petroleum products in the B and C yards. The A Yard, located at the southern end of the site, consists of the terminal office, a truck loading rack, and other support structures. The B Yard, located north of A Yard and south of D Yard, contains 15 ASTs and associated piping and is surrounded by a 15-foot high concrete wall. The D Yard, located north of B Yard, is comprised of a driveway and a maintenance building and is the primary corridor for on-site utilities. The C Yard, located north of D Yard and south of E Yard, contains six ASTs and associated piping and is surrounded by a 15-foot high concrete wall. The E Yard, located at the north end of the site, is leased to other parties and consists of an office building and vehicle storage facilities.

1.2 Regulatory Background

Groundwater cleanup levels for the site were determined by the Washington Department of Ecology (Ecology) to meet surface water standards that are protective of aquatic organisms in Elliott Bay and were also determined based on no current or future use of the groundwater for drinking water purposes. Due to the fact that surface water standards have not been established for total petroleum hydrocarbons (TPH), the groundwater cleanup levels for gasoline-range organics (GRO), diesel-range organics (DRO), and heavy oil (HO) were selected as the site cleanup levels. The approved *Site-Wide Groundwater Compliance Monitoring Plan - Proposed Reduced Monitoring* (Reduced Monitoring Plan [Delta 2007]) outlines site-specific contaminants of concern (COCs) and applicable cleanup levels. These site-specific COCs and their cleanup levels are as follows:

Constituent	Cleanup Level
Benzene	0.071 mg/L
Ethylbenzene	29.0 mg/L
Lead	0.0058 mg/L
Toluene	200 mg/L
GRO	1.0 mg/L
DRO	10 mg/L
HO	10 mg/L
Product	No sheen

mg/L = milligrams per liter

2 SCOPE OF WORK

This section summarizes the scope of work for the compliance monitoring and remedial performance monitoring program, as well as the supplemental land application of sulfate.

2.1 Compliance Monitoring

The second semiannual 2015 compliance groundwater monitoring and sampling activities were performed in accordance with the *Revised Monitoring Plan* (Arcadis 2014). As part of the *Revised Monitoring Plan*, natural attenuation parameters are collected semiannually at the same time as compliance monitoring. The scope of work for the second semiannual 2015 sampling event included:

- Measuring depth to water and separate phase hydrocarbons (SPH) in 45 monitoring wells
- Collecting field parameters, including dissolved oxygen (DO), oxygen reduction potential (ORP), pH, temperature, and specific conductivity from 33 compliance monitoring wells
- Purging compliance monitoring wells using low-flow sampling methods
- Collecting groundwater samples from compliance monitoring wells
- Submitting groundwater samples to ESC Lab Sciences (ESC) of Mount Juliet, Tennessee for laboratory analyses.

Groundwater samples were collected in accordance with the *Reduced Monitoring Plan* (Delta 2007) from 33 compliance monitoring wells between September 28 and October 2, 2015.

Monitoring wells were purged using a low-flow peristaltic pump and dedicated tubing. Groundwater quality field parameters were measured using a YSI DSS Pro multi-parameter meter and flow cells. Monitoring wells were sampled after depth to water, pH, specific conductivity, and temperature had stabilized in accordance with the *Technical Revision Request – Low-Flow Groundwater Sampling* (Delta 2008).

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Groundwater elevation data are presented in **Table 1** and groundwater monitoring field data sheets are included as **Attachment B**.

Groundwater samples were collected in laboratory-provided bottles and placed in coolers with ice. Groundwater samples were submitted to ESC under standard chain-of-custody protocol. Groundwater samples were analyzed for all or for a subset of the following COCs:

- GRO by Northwest Method NWTPH-Gx
- DRO by Northwest Method NWTPH-Dx
- HO by Northwest Method NWTPH-Dx
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX collectively) by United States Environmental Protection Agency (EPA) Method 8260B
- Total and dissolved lead by EPA Method 6020
- Methane by EPA Method RSK-175
- Ferrous iron by Standard Method 3500-Fe B
- Sulfate and nitrate by EPA Method 300.0
- Sulfide by Standard Method 4500-S D.

Blind duplicate samples were collected from groundwater monitoring wells A-5 and MW-24. Groundwater analytical results are presented in **Table 2**. Dissolved oxygen field measurements and natural attenuation parameters are presented in **Table 3**. Laboratory analytical reports and chain-of-custody documentation are included as **Attachment C**.

2.2 Remedial Performance Monitoring

Performance groundwater monitoring and sampling activities were performed in accordance with the *Revised Monitoring Plan* (Arcadis 2014). The second semiannual 2015 performance monitoring event was conducted in conjunction with compliance monitoring between September 28 and October 2, 2015 and included:

- Measuring depth to water and SPH in 7 performance monitoring wells
- Collecting field parameters, including DO, oxygen reduction potential ORP, pH, temperature, and specific conductivity from 7 performance monitoring wells
- Purging performance monitoring wells, using low-flow sampling methods
- Collecting groundwater samples from performance monitoring wells
- Submittal of groundwater samples to ESC for laboratory analyses.

Groundwater samples were collected from 7 wells (TMW-1 through TMW-6 and 11) between September 28 and October 2, 2015 as part of the second semiannual 2015 performance monitoring event in accordance with the *Revised Monitoring Plan* (Arcadis 2014).

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Performance monitoring wells were purged and samples were collected using low flow methods described in section 2.2. Groundwater monitoring field data sheets are included as **Attachment B**. Groundwater samples were analyzed for the following COCs and biogeochemical parameters:

- GRO by Northwest Method NWTPH-Gx
- BTEX by EPA Method 8260B
- Methane by EPA Method RSK-175
- Ferrous iron by Standard Method 3500-Fe B
- Sulfate and nitrate by EPA Method 300.0
- Sulfide by Standard Method 4500-S D.

Groundwater analytical results from performance monitoring wells are presented in **Table 2 and Table 4**, respectively. Field measurements and biogeochemical parameters are presented in **Table 4**. Laboratory analytical reports and chain-of-custody documentation are included as **Attachment C**.

2.3 Supplemental Sulfate Application

Supplemental sulfate application activities within the B, C, and D Yards were conducted in accordance with the design basis outlined in the *Engineering Design Report* (EDR; Arcadis 2012). The proposed scope of work for supplemental sulfate application activities was approved by Ecology in an email dated June 11, 2015 (Ecology 2015).

The design basis in the EDR called for the land application of Epsom salt and gypsum to supply readily soluble sulfate that would dissolve and provide a terminal electron acceptor to support ABO_x of site COCs in areas where groundwater impacts are present in the B, C and D yards. Epsom salt rapidly solubilizes and mobilizes sulfate to the subsurface, while gypsum solubilizes more slowly providing sulfate more consistently over time. Supplemental sulfate application is necessary to maintain sulfate concentrations, and therefore ABO_x, in targeted areas within the original application area where previous analytical results indicate the potential for residual mass. The additional treatment capacity added through the supplemental sulfate application is designed to continue groundwater restoration and meet the cleanup goals in the B, C and D yards where groundwater COC concentrations exceed the site CULs.

Based on field observations, sufficient gypsum remains in the application area. Therefore, Epsom salt was reapplied in order to generate a more rapid influx of sulfate to the subsurface and support continued ABO_x. A target application density of 0.8 pounds per square foot (lb/ft²) of Epsom salt was established based on a design period of 6-8 months of sulfate concentrations above the approximate target threshold for ABO_x of 900 mg/L. The scope of work for the supplemental sulfate application included the mobilization of materials and equipment to the site, laying out application area grids for consistent application, installation of an irrigation system within the C Yard, and the application of 16,000 pounds of Epsom salt within the B, C, and D Yards. The supplemental sulfate application work was completed with hand tools and no heavy equipment was required.

3 SUMMARY OF RESULTS

This section summarizes the analytical results of the compliance monitoring and sulfate performance monitoring programs.

3.1 Water Level Measurements

Water levels for the semiannual compliance monitoring event were measured on September 28 and 29, 2015 using an electronic oil-water interface probe. Measurable SPH was observed in A-6 (0.05 feet) and A-16 (0.17 feet). Absorbent socks were placed in both wells in accordance with the *Revised Monitoring Plan* (Arcadis 2014).

Groundwater elevations were calculated using depth-to-water measurements and wellhead survey elevations obtained in July 2003. Groundwater elevations during this sampling event ranged between 5.06 feet amsl (A-6) and 7.77 feet amsl (MW-20). Groundwater direction is generally to the south from D yard towards A yard, with some mounding between C and D yards. This is consistent with previous monitoring events and the mounding is likely influenced by irrigation in the D yard. The groundwater elevation data are included in **Table 1** and a groundwater elevation contour map is presented as **Figure 4**.

3.1.1 Passive SPH Recovery

Measurable SPH or sheen has been observed historically in nine wells (12, A-4, A-6, A-16, MW-7, MW-9, MW-21, MW-23, and MW-24). Passive SPH recovery (absorbent sock placement) was performed at these wells until the third quarter 2013 when absorbent socks were removed after a period of approximately 12 months (4 monitoring events) with no measurable SPH.

Following absorbent sock removal, measurable SPH was observed during the fourth quarter 2013 event on October 2, 2013 in well A-6, at a thickness of 0.04 foot. A new absorbent sock was replaced quarterly in A-6 following the fourth quarter 2013 event. During the second quarter 2014 event, absorbent socks were added to wells 12 and MW-19 that had observable sheen. Measurable SPH or sheen were not observed in any well during the third quarter 2014 event and absorbent socks were removed from wells A-6, 12, and MW-19. During the first semiannual 2015 event, SPH was observed in well A-6 at a thickness of 0.10 foot. An absorbent sock was placed in the well. In accordance with the *Revised Monitoring Plan* (Arcadis 2014) and the associated approval correspondences from Ecology (Ecology 2014), A-6 was gauged and the sock was replaced quarterly following the observation of SPH. On June 8, 2015, the absorbent sock was replaced in A-6 and the well was gauged. No SPH was observed on the sock or in the well. On September 14, 2015, the absorbent sock was removed from A-6 in order to monitor for SPH rebound. During the second semiannual groundwater monitoring event, SPH was observed in well A-6 at a thickness of 0.05 foot and in well A-16 at a thickness of 0.17 foot. Absorbent socks were placed in both wells and they will be replaced and gauged quarterly. Measurable SPH was last observed in well A-16 on August 29, 2011 at a thickness of 0.1 foot. The SPH thicknesses observed in A-6 and A-16 during the second 2015 semiannual monitoring event are consistent with historical observations.

3.2 Groundwater Analytical Results - Compliance Monitoring Wells

During the second semiannual 2015 monitoring event, groundwater samples collected from compliance monitoring wells contained the following constituents of concern:

- GRO concentrations ranging from less than the laboratory method reporting limit (MRL) (<0.1 mg/L) to 14.5 mg/L in the duplicate sample collected from MW-24;
- DRO concentrations ranging from less than the MRL (<0.1 mg/L) to 9.85 mg/L in the sample collected from well 12
- HO concentrations ranging from less than the MRL (<0.25 mg/L) to 2.07 mg/L in the sample collected from MW-8
- Benzene concentrations ranging from less than the MRL (<0.001 mg/L) to 0.641 mg/L in the sample collected from MW-24
- Toluene concentrations ranging from less than the MRL (<0.005 mg/L) to 0.0264 mg/L in the duplicate sample collected from MW-24
- Ethylbenzene concentrations ranging from less than the MRL (<0.001 mg/L) to 1.13 mg/L in the sample collected from MW-24
- Total xylenes concentrations ranging from less than the MRL (<0.003 mg/L) to 1.8 mg/L in the sample collected from monitoring well MW-24
- Total lead concentrations ranging from less than the MRL (<0.002) to 0.0508 mg/L in the sample collected from monitoring well 12
- Dissolved lead concentrations ranging from less than the MRL (<0.002) to 0.00402 mg/L in the sample collected from monitoring well A-21.

Groundwater samples collected from wells A-14R, MW-2, MW-16, and MW-18 did not exhibit COC concentrations at or above the MRLs. Samples collected from nine wells contained COC concentrations that were above the site specific CULs, with eight samples exceeding the GRO CUL (MW-7, MW-8, MW-19, MW-23, MW-24, TMW-B1, A-27, A-28R, 12), two samples exceeding the benzene CUL (MW-23, MW-24), and three samples exceeding the total lead CUL (MW-7, MW-8, 12). During the first 2015 semi-annual event, COC concentrations above site CULs were observed in seven wells (MW-7, MW-19, MW-23, MW-24, A-27, A-28R, 12). MW-8 and TMW-B1 were not sampled during the previous event, but COC concentrations are consistent with samples collected during previous events.

Groundwater analytical results are included in **Table 2** and presented on **Figure 5**. Historical groundwater monitoring and natural attenuation parameter results are presented in **Table 3**. Laboratory analytical reports and chain-of-custody documentation are included as **Attachment C**.

3.3 Performance Monitoring Results

3.3.1 Second Semiannual Analytical Results

During the second semiannual 2015 monitoring event, groundwater samples collected from performance monitoring wells contained the following constituents of concern:

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- GRO concentrations ranging from less than the MRL (<0.1 mg/L) in samples collected from monitoring wells 11, TMW-2, and MW-9 to 5.09 mg/L in the sample collected from TMW-6
- Benzene concentrations ranging from less than the MRL (<0.001 mg/L) in monitoring wells 11, MW-9, TMW-1, TMW-2 and TMW-3 to 0.107 mg/L in monitoring well TMW-4
- Sulfate concentrations ranging from less than the MRL (<5 mg/L) in monitoring well MW-19 to 1,810 mg/L in monitoring well TMW-2
- Sulfide concentrations ranging from less than the MRL (<0.05 mg/L) to 6.72 mg/L in TMW-5.

Groundwater analytical results for performance monitoring wells are included in **Table 4** and presented as **Figure 6**. Laboratory analytical reports and chain-of-custody documentation are included as **Attachment C**.

The sulfate application irrigation system operated between April 15 and October 2, 2015 in order to increase dissolution and infiltration of sulfate to groundwater during the dry summer months.

3.4 Data Validation Results

Groundwater samples collected during the second semiannual 2015 compliance and performance monitoring event between September 28 and October 2, 2015 were processed within their specified hold times with the following exceptions:

- Ferrous iron by Method 3500Fe B-2011 was prepared and/or analyzed past the recommended holding time of 15 minutes for samples A-23R, 12, MW-2, MW-12R, SH-02R, 11, A-27, MW-19, TMW-1, TMW-3, TMW-4, TMW-5, TMW-6, A-28R, MW-6, MW-7, MW-9, MW-21, A-21, MW-23, MW-24, TMW-2, MW-07R, and MW-14
- Nitrate by Method 9056 was prepared and/or analyzed past the recommended holding time of 48-hours for samples A-23R, MW-12R, SH-02R, and MW-19.

According to a representative of ESC, ferrous iron is considered out of hold as received at the lab in accordance with the method, but the results are minimally impacted. Reported concentrations of these analytes should be considered minimum values.

The MRLs reported by ESC were less than the site-specific cleanup levels for all analytes. ESC reported the following quality control qualifiers:

- Low matrix spike (MS) and matrix spike duplicate (MSD) value for sulfide with the batches associated with samples from TMW-5, MW-6, MW-7, MW-9, MW-21, A-21, MW-23, MW-24, TMW-2
- High MSD recovery value that was outside the established quality control parameters for precision for GRO in the batch associated with samples from MW-4, MW-22, MW-8, A-28R, MW-6, MW-7, MW-9, and MW-21
- Low MS and MSD value for benzene, toluene and total xylene and low surrogate recovery value for dibromofluoromethane in the batch associated with samples from MW-07R, MW-14

- Laboratory control sample duplicate (LCSD) value that was outside the established quality control range for precision for GRO in the batch associated with the sample from A-23R.

Duplicate samples were collected from A-5 and MW-24 during the second semiannual 2015 compliance monitoring and analyzed for GRO and BTEX. The duplicate sample from MW-24 was also analyzed for total and dissolved lead.

4 SUPPLEMENTAL SULFATE APPLICATION

The supplemental application of sulfate was conducted between September 14 and 16, 2015. During this event, 16,000 pounds of sulfate, in the form of 50 pound bags of Epsom salt, was delivered and staged in the D yard. Grids of approximately 150 square feet (ft²) were marked out in the application areas in the B, C and D yards and were used to ensure that the design application density was uniformly met. Bags of Epsom were distributed, spread with hand tools across the application area, and raked or brushed into the soil and gravel. The application surface areas were approximately 15,000 ft² in the B yard, 3,300 ft² in the C yard and 1,350 ft² in the D yard. Based on the total area of 19,650 ft² and the total Epsom weight of 16,000 pounds, the average Epsom application density was 0.81 lb/ft², which is consistent with the target density of 0.8 lb/ft². The 2013 application area and the 2015 supplemental application area are depicted on **Figure 3**.

In addition to the Epsom application, two damaged sprinkler heads were replaced in the B yard and the irrigation system was expanded to include a new line and sprinkler head in the C yard.

5 CONCLUSIONS

The concentrations of COCs observed during the second semiannual 2015 compliance monitoring event are generally consistent, compared with concentrations encountered during previous groundwater monitoring events. GRO concentrations are generally consistent or decreasing relative to previous sampling events, with the exception of samples from monitoring wells 12 and TMW-1. GRO concentrations that exceed the site-specific cleanup level were observed at nine compliance monitoring wells, which is consistent with the previous monitoring event. DRO and HO concentrations were observed to be higher than previous events in monitoring wells MW-1, MW-12R, MW-07R, MW-21, MW-5, MW-23, MW-25, SH-02R, and SH-05R, although neither DRO or HO were observed at concentrations that exceed site-specific cleanup levels.

Benzene concentrations exceeded the site-specific cleanup level in three wells (MW-23, MW-24, and TMW-4), which was consistent with historical events. Overall, benzene concentrations appeared to be either consistent with or lower than previously observed concentrations at these wells.

Total lead concentrations exceeded the site-specific cleanup levels in three wells (12, MW-7 and MW-8), which is consistent with historical events in two wells (MW-7 and MW-8). Monitoring well 12 had not previously been sampled for lead. Dissolved lead concentrations were below site-specific cleanup levels in all wells that were sampled.

Sulfate concentrations remain elevated (>100 mg/L) in nine of the twelve performance monitoring wells as a result of the sulfate land application. An average sulfate concentration of 583 mg/L was calculated from the second semiannual 2015 sampling results. This average decreased relative to the first semiannual 2015 average of 657 mg/L. Sulfate concentrations are anticipated to increase in subsequent performance

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monitoring events as the additional Epsom from the September 2015 supplemental sulfate application dissolves and infiltrates into groundwater. Conductivity measurements in the performance wells will also be used to evaluate the effectiveness of the supplemental sulfate application. Constituent trend graphs for monitoring wells 11, 12, MW-7, MW-19, and TMW-1 through TMW-6 are presented on **Graphs 1 through Graphs 10**, respectively.

GRO and benzene concentrations subsequent to this initial trend have exhibited a decreasing or stable trend in eight performance monitoring wells (11, 12, A-27, MW-7, MW-9, TMW-2, TMW-3, TMW-6). GRO concentrations were below the site specific cleanup levels in wells 11, MW-9, TMW-2, and TMW-3 during the second semiannual 2015 event. GRO was observed above cleanup levels in samples collected from MW-19, TMW-1, TMW-4, and TMW-5, but concentrations are stable or decreasing compared to data from previous monitoring events. The concentration of GRO observed in TMW-1 is comparable to upgradient monitoring well MW-19 and is likely indicative of residual source mass in the area.

Since the baseline monitoring event in June 2013, benzene concentrations have been below the site-specific cleanup level in nine performance monitoring wells (11, 12, MW-7, MW-9, MW-19, TMW-1, TMW-2, TMW-3, and TMW-6). Wells A-27, TMW-4, and TMW-5 have been monitored with benzene concentrations greater than the site-specific cleanup level since the baseline monitoring event but are relatively stable or decreasing.

Changes in analyte detection frequency and concentration are likely attributed to the low groundwater elevations observed over much of the site. The remedial action discussed in Section 4 was designed to enhance natural biodegradation in areas of the site where concentrations of COCs in groundwater exceed site-specific cleanup levels.

Measurable SPH, which was observed in well A-6 and A-16 during the second semiannual 2015 sampling event, will be gauged quarterly with concurrent passive SPH removal for four consecutive quarters following the observation of SPH in accordance with the *Revised Monitoring Plan* (Arcadis 2014).

6 REFERENCES

Arcadis U.S., Inc, 2012. B and D Yards Groundwater Remediation – Engineering Design Report. October 12.

Arcadis U.S., Inc. 2013. Remedial Action Report – B and D Yards. August.

Arcadis U.S., Inc. 2014. 2014 Revised Site Groundwater Monitoring Plan, Kinder Morgan Liquid Terminals. April 30.

Delta Environmental Consulting. 2007. Site-Wide Groundwater Compliance Monitoring Plan – Proposed Reduced Monitoring. June 21.

Delta Environmental Consulting. 2008. Technical Revision Request – Low-Flow Groundwater Sampling. September 4.

Washington State Department of Ecology, 2014, Email Approval of Revised Site Groundwater Monitoring Plan, Received August 13, 2014.

Washington State Department of Ecology, 2015, Email Approval of Supplemental Sulfate Land Application, Received June 11, 2015.

TABLES



Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-1	02/11/02	10.93	7.47	--	3.46	
A-1	05/20/02	10.93	9.99	--	0.94	
A-1	08/27/02	10.93	4.72	--	6.21	
A-1	11/04/02	10.93	8.95	--	1.98	
A-1	02/18/03	10.93	7.92	--	3.01	
A-1	06/09/03	10.93	8.47	--	2.46	
A-1	09/15/03	14.64	8.83	--	5.81	
A-1	11/18/03	14.64	8.45	--	6.19	
A-1	02/24/04	14.64	7.89	--	6.75	
A-1	05/10/04	14.64	8.53	--	6.11	
A-1	08/24/04	14.64	8.73	--	5.91	
A-1	12/13/04	14.64	8.45	--	6.19	
A-1	03/08/05	14.64	8.59	--	6.05	
A-1	06/06/05	14.64	8.41	--	6.23	
A-1	09/19/05	14.64	8.87	--	5.77	
A-1	12/12/05	14.64	8.63	--	6.01	
A-1	03/13/06	14.64	7.95	--	6.69	
A-1	06/05/06	14.64	8.37	--	6.27	
A-1	09/11/06	14.64	8.81	--	5.83	
A-1	12/11/06	14.64	7.95	--	6.69	
A-2	02/11/02	10.85	7.41	--	3.44	
A-2	05/20/02	10.85	9.28	--	1.57	
A-2	08/27/02	10.85	4.66	--	6.19	
A-2	11/04/02	10.85	8.90	--	1.95	
A-2	02/18/03	10.85	7.98	--	2.87	
A-2	06/09/03	10.85	8.41	--	2.44	
A-2	09/15/03	14.66	8.77	--	5.89	
A-2	11/18/03	14.66	8.35	--	6.31	
A-2	02/24/04	14.66	7.80	--	6.86	
A-2	05/10/04	14.66	8.51	--	6.15	
A-2	08/24/04	14.66	8.55	--	6.11	
A-2	12/13/04	14.66	8.38	--	6.28	
A-2	03/08/05	14.66	8.77	--	5.89	
A-2	06/06/05	14.66	8.45	--	6.21	
A-2	09/19/05	14.66	8.79	--	5.87	
A-2	12/12/05	14.66	8.58	--	6.08	
A-2	03/13/06	14.66	7.81	--	6.85	
A-2	06/05/06	14.66	8.29	--	6.37	
A-2	09/11/06	14.66	8.76	--	5.90	
A-2	12/11/06	14.66	7.96	--	6.70	
A-3	02/11/02	10.50	7.30	<0.01	3.20*	
A-3	05/20/02	10.50	9.03	--	1.47	
A-3	08/27/02	10.50	8.43	--	2.07	
A-3	11/04/02	10.50	8.64	--	1.86	
A-3	02/18/03	10.50	7.61	--	2.89	
A-3	06/09/03	10.50	8.19	--	2.31	
A-3	09/15/03	14.32	8.50	--	5.82	
A-3	11/18/03	14.32	7.56	--	6.76	
A-3	02/24/04	14.32	7.56	--	6.76	
A-3	05/10/04	14.32	8.12	--	6.20	
A-3	08/24/04	14.32	8.23	--	6.09	
A-3	12/13/04	14.32	7.85	--	6.47	
A-3	03/08/05	14.32	8.20	--	6.12	
A-3	06/06/05	14.32	8.03	--	6.29	
A-3	09/19/05	14.32	8.50	--	5.82	
A-3	12/12/05	14.32	8.32	--	6.00	
A-3	03/13/06	14.32	7.51	--	6.81	
A-3	06/05/06	14.32	7.96	--	6.36	
A-3	09/11/06	14.32	8.46	--	5.86	
A-3	12/11/06	14.32	7.56	--	6.76	
A-4	02/11/02	10.74	7.38	0.14	3.47*	
A-4	05/20/02	10.74	8.20	0.02	2.56*	
A-4	08/27/02	10.74	7.62	0.04	3.15*	
A-4	11/04/02	10.74	7.92	Sheen	2.82	Product recovery pump in well
A-4	02/18/03	10.74	7.84	Sheen	2.90	Product recovery pump in well
A-4	06/09/03	10.74	6.40	0.10	4.42*	Product recovery pump in well
A-4	09/15/03	13.22	8.38	0.10	4.92*	Product recovery pump in well
A-4	11/18/03	13.22	6.65	0.01	6.58*	Product recovery pump in well
A-4	02/24/04	13.22	7.00	--	6.22	Product recovery pump in well
A-4	05/10/04	13.22	6.79	--	6.43	Product recovery pump in well
A-4	08/24/04	13.22	7.76	--	5.46	Product recovery pump in well

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-4	12/13/04	13.22	6.10	Sheen	7.12	
A-4	03/08/05	13.22	7.21	Sheen	6.01	
A-4	06/06/05	13.22	7.23	Sheen	5.99	
A-4	09/19/05	13.22	7.78	--	5.44	
A-4	12/12/05	13.22	7.77	--	5.45	
A-4	03/13/06	13.22	6.85	--	6.37	
A-4	06/05/06	13.22	7.30	Sheen	5.92	
A-4	09/11/06	13.22	8.02	0.01	5.21*	
A-4	12/11/06	13.22	7.04	--	6.18	
A-4	03/26/07	13.22	6.90	--	6.32	
A-4	06/18/07	13.22	7.29	--	5.93	
A-4	09/24/07	13.22	7.48	Sheen	5.74	
A-4	12/10/07	13.22	6.83	--	6.39	
A-4	03/03/08	13.22	7.11	0.01	6.12*	
A-4	06/02/08	13.22	7.52	Sheen	5.70	
A-4	09/04/08	13.22	7.57	Sheen	5.65	
A-4	12/04/08	13.22	7.44	--	5.78	
A-4	03/04/09	13.22	7.09	--	6.13	
A-4	06/01/09	13.22	7.32	Sheen	5.90	
A-4	09/21/09	13.22	7.61	Sheen	5.61	
A-4	11/16/09	13.22	6.97	Sheen	6.25	
A-4	03/08/10	13.22	6.54	--	6.68	
A-4	06/07/10	13.22	6.92	Sheen	6.30	
A-4	09/09/10	13.22	7.59	--	5.63	
A-4	11/16/10	13.22	7.11	--	6.11	
A-4	03/01/11	13.22	6.66	--	6.56	
A-4	05/23/11	13.22	6.84	Sheen	6.38	
A-4	08/29/11	13.22	7.50	--	5.72	
A-4	12/01/11	13.22	7.16	--	6.06	
A-4	03/01/12	13.22	--	--	--	Not Measured
A-4	05/30/12	13.22	6.88	--	6.34	
A-4	08/25/12	13.22	7.17	--	6.05	
A-4	11/07/12	13.22	6.77	--	6.45	
A-4	02/28/13	13.22	6.69	--	6.53	
A-4	04/08/13	13.22	6.83	--	6.39	
A-4	07/29/13	13.22	7.23	--	5.99	
A-4	10/02/13	13.22	5.10	--	8.12	
A-4	01/21/14	13.22	7.12	--	6.10	
A-4	04/22/14	13.22	6.71	--	6.51	
A-4	07/15/14	13.22	7.09	--	6.13	
A-4	03/17/15	13.22	3.74	--	9.48	
A-4	09/29/15	13.22	--	--	--	Not Measured
A-5	02/11/02	10.42	7.00	--	3.42	
A-5	05/20/02	10.42	8.89	--	1.53	
A-5	08/27/02	10.42	8.25	--	2.17	
A-5	11/04/02	10.42	8.43	--	1.99	
A-5	02/18/03	10.42	7.35	--	3.07	
A-5	06/09/03	10.42	7.99	--	2.43	
A-5	09/15/03	14.13	8.33	Sheen	5.80	
A-5	11/18/03	14.13	7.82	--	6.31	
A-5	02/24/04	14.13	6.45	--	7.68	
A-5	05/10/04	14.13	8.04	--	6.09	
A-5	08/24/04	14.13	8.02	--	6.11	
A-5	12/13/04	14.13	7.88	--	6.25	
A-5	03/08/05	14.13	8.00	--	6.13	
A-5	06/06/05	14.13	7.89	--	6.24	
A-5	09/19/05	14.13	8.37	--	5.76	
A-5	12/12/05	14.13	8.15	--	5.98	
A-5	03/13/06	14.13	7.39	--	6.74	
A-5	06/05/06	14.13	7.82	--	6.31	
A-5	09/11/06	14.13	8.34	--	5.79	
A-5	12/11/06	14.13	7.41	--	6.72	
A-5	03/26/07	14.13	7.41	--	6.72	
A-5	06/18/07	14.13	8.32	--	5.81	
A-5	09/24/07	14.13	8.32	--	5.81	
A-5	12/10/07	14.13	7.66	--	6.47	
A-5	03/03/08	14.13	7.78	--	6.35	
A-5	06/02/08	14.13	8.21	--	5.92	
A-5	09/04/08	14.13	8.10	--	6.03	
A-5	12/04/08	14.13	8.15	--	5.98	
A-5	03/04/09	14.13	7.76	--	6.37	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-5	06/01/09	14.13	8.03	--	6.10	
A-5	09/21/09	14.13	8.35	--	5.78	
A-5	11/16/09	14.13	7.70	--	6.43	
A-5	03/08/10	14.13	7.21	--	6.92	
A-5	06/07/10	14.13	7.74	--	6.39	
A-5	09/09/10	14.13	8.26	--	5.87	
A-5	11/15/10	14.13	7.85	--	6.28	
A-5	03/01/11	14.13	7.47	--	6.66	
A-5	05/23/11	14.13	7.58	--	6.55	
A-5	08/29/11	14.13	8.17	--	5.96	
A-5	12/01/11	14.13	7.89	--	6.24	
A-5	03/01/12	14.13	7.62	--	6.51	
A-5	05/30/12	14.13	7.67	--	6.46	
A-5	08/25/12	14.13	7.91	--	6.22	
A-5	11/07/12	14.13	7.54	--	6.59	
A-5	02/27/13	14.13	7.59	--	6.54	
A-5	04/08/13	14.13	7.56	--	6.57	
A-5	07/29/13	14.13	7.88	--	6.25	
A-5	10/02/13	14.13	7.64	--	6.49	
A-5	01/21/14	14.13	7.92	--	6.21	
A-5	04/22/14	14.13	7.50	--	6.63	
A-5	07/15/14	14.13	7.85	--	6.28	
A-5	03/17/15	14.13	7.45	--	6.68	
A-5	09/29/15	14.13	7.80	--	6.33	
A-6	02/11/02	--	6.40	0.13	--	Not Measured-Casing Broken
A-6	05/20/02	--	8.13	0.14	--	Not Measured-Casing Broken
A-6	08/27/02	--	7.80	0.45	--	Not Measured-Casing Broken
A-6	11/04/02	--	7.33	0.01	--	Not Measured-Product recovery pump in well, Casing Broken
A-6	02/18/03	--	8.50	Sheen	--	Not Measured-Product recovery pump in well, Casing Broken
A-6	06/09/03	--	7.45	0.01	--	Not Measured-Re-cut TOC; repaired
A-6	09/15/03	12.81	7.77	0.01	5.05*	Product recovery pump in well
A-6	11/18/03	12.81	7.46	0.54	5.78*	Product recovery pump in well
A-6	02/24/04	12.81	6.65	0.40	6.48*	Product recovery pump in well
A-6	05/10/04	12.81	6.95	0.10	5.94*	Product recovery pump in well
A-6	08/24/04	12.81	7.21	0.21	5.77*	Product recovery pump in well
A-6	12/13/04	12.81	6.80	0.14	6.12*	
A-6	03/08/05	12.81	6.98	0.32	6.09*	
A-6	06/06/05	12.81	6.81	0.04	6.03*	
A-6	09/19/05	12.81	7.81	0.59	5.47*	
A-6	10/12/05	12.81	7.95	0.50	5.26*	
A-6	12/12/05	12.81	8.20	0.95	5.37*	
A-6	03/13/06	12.81	6.68	0.08	6.19*	
A-6	06/05/06	12.81	7.10	0.13	5.81*	
A-6	09/11/06	12.81	7.82	0.27	5.21*	
A-6	12/11/06	12.81	6.58	0.02	6.25*	
A-6	03/26/07	12.81	6.51	--	6.30	
A-6	06/18/07	12.81	7.00	--	5.81	
A-6	09/24/07	12.81	7.20	Sheen	5.61	
A-6	12/10/07	12.81	6.58	--	6.23	
A-6	03/03/08	12.81	6.59	--	6.22	
A-6	06/02/08	12.81	7.05	Sheen	5.76	
A-6	09/04/08	12.81	7.19	Sheen	5.62	
A-6	12/04/08	12.81	7.15	Sheen	5.66	
A-6	03/04/09	12.81	6.51	Sheen	6.30	
A-6	06/01/09	12.81	7.00	Sheen	5.81	
A-6	09/21/09	12.81	7.24	Sheen	5.57	
A-6	11/16/09	12.81	6.50	Sheen	6.31	
A-6	03/08/10	12.81	6.14	--	6.67	
A-6	06/07/10	12.81	6.71	Sheen	6.10	
A-6	09/09/10	12.81	7.12	--	5.69	
A-6	11/15/10	12.81	6.79	Sheen	6.02	
A-6	03/01/11	12.81	6.38	Sheen	6.43	
A-6	05/23/11	12.81	6.52	Sheen	6.29	
A-6	08/29/11	12.81	7.04	0.03	5.79*	
A-6	12/01/11	12.81	6.95	Sheen	5.86	
A-6	03/01/12	12.81	6.60	--	6.21	
A-6	05/30/12	12.81	6.58	--	6.23	
A-6	08/25/12	12.81	7.18	--	5.63	
A-6	11/07/12	12.81	6.61	--	6.20	
A-6	02/27/13	12.81	6.54	--	6.27	
A-6	04/08/13	12.81	6.46	--	6.35	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-6	07/29/13	12.81	6.83	--	5.98	
A-6	10/02/13	12.81	6.66	Sheen	6.15	0.04 ft of SPH observed. Absorbent sock placed in well.
A-6	01/21/14	12.81	6.80	--	6.01	
A-6	04/22/14	12.81	6.32	--	6.49	
A-6	07/15/14	12.81	6.69	--	6.12	
A-6	03/17/15	12.81	6.30	0.10	6.59	Absorbent sock placed in well
A-6	06/08/15	12.81	6.70	--	6.11	
A-6	09/29/15	12.81	7.79	0.05	5.06	Absorbent sock placed in well
A-7	02/11/02	9.50	6.25	--	3.25	
A-7	05/20/02	9.50	8.10	--	1.40	
A-7	08/27/02	9.50	7.40	--	2.10	
A-7	11/04/02	9.50	7.55	--	1.95	
A-7	02/18/03	9.50	7.53	--	1.97	
A-7	06/09/03	9.50	7.12	--	2.38	
A-7	09/15/03	13.43	7.45	--	5.98	
A-7	11/18/03	13.43	6.78	--	6.65	
A-7	02/24/04	13.43	6.89	--	6.54	
A-7	05/10/04	13.43	6.66	--	6.77	
A-7	08/24/04	13.43	7.67	--	5.76	
A-7	12/13/04	13.43	6.88	--	6.55	
A-7	03/08/05	13.43	4.45	--	8.98	
A-7	06/06/05	13.43	6.84	--	6.59	
A-7	09/19/05	13.43	7.47	--	5.96	
A-7	12/12/05	13.43	7.22	--	6.21	
A-7	03/13/06	13.43	6.41	--	7.02	
A-7	06/05/06	13.43	6.90	--	6.53	
A-7	09/11/06	13.43	7.53	--	5.90	
A-7	12/11/06	13.43	6.69	--	6.74	
A-8	02/11/02	10.46	6.98	--	3.48	
A-8	05/20/02	10.46	8.87	--	1.59	
A-8	08/27/02	10.46	7.26	--	3.20	
A-8	11/04/02	10.46	8.51	--	1.95	
A-8	02/18/03	10.46	4.83	--	5.63	
A-8	06/09/03	10.46	8.11	--	2.35	
A-8	09/15/03	14.61	8.38	--	6.23	
A-8	11/18/03	14.61	7.87	Sheen	6.74	
A-8	02/24/04	14.61	7.43	--	7.18	
A-8	05/10/04	14.61	8.04	--	6.57	
A-8	08/24/04	14.61	8.18	--	6.43	
A-8	12/13/04	14.61	7.90	--	6.71	
A-8	03/08/05	14.61	8.11	--	6.50	
A-8	06/06/05	14.61	7.98	--	6.63	
A-8	09/19/05	14.61	8.44	--	6.17	
A-8	12/12/05	14.61	8.22	--	6.39	
A-8	03/13/06	14.61	7.49	--	7.12	
A-8	06/05/06	14.61	7.89	--	6.72	
A-8	09/11/06	14.61	8.45	--	6.16	
A-8	12/11/06	14.61	7.66	--	6.95	
A-8	03/26/07	14.61	7.71	--	6.90	
A-8	06/18/07	14.61	8.27	--	6.34	
A-8	09/24/07	14.61	8.50	--	6.11	
A-8	12/10/07	14.61	7.44	--	7.17	
A-8	03/03/08	14.61	7.83	--	6.78	
A-8	06/02/08	14.61	8.20	--	6.41	
A-8	09/04/08	14.61	--	--	--	Inaccessible
A-8	12/04/08	14.61	8.20	--	6.41	
A-8	03/04/09	14.61	7.70	--	6.91	
A-8	06/01/09	14.61	8.11	--	6.50	
A-8	09/21/09	14.61	8.37	--	6.24	
A-8	11/16/09	14.61	7.70	--	6.91	
A-8	03/08/10	14.61	7.31	--	7.30	
A-8	06/07/10	14.61	7.85	--	6.76	
A-8	09/09/10	14.61	8.28	--	6.33	
A-8	11/15/10	14.61	7.94	--	6.67	
A-8	03/01/11	14.61	7.56	--	7.05	
A-8	05/23/11	14.61	7.70	--	6.91	
A-8	08/29/11	14.61	8.21	--	6.40	
A-8	12/01/11	14.61	8.06	--	6.55	
A-8	03/01/12	14.61	7.74	--	6.87	
A-8	05/30/12	14.61	7.87	--	6.74	
A-8	08/25/12	14.61	7.97	--	6.64	

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Groundwater Elevation Data

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 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-8	11/07/12	14.61	7.63	--	6.98	
A-8	02/27/13	14.61	8.71	--	5.90	
A-8	04/08/13	14.61	7.67	--	6.94	
A-8	07/29/13	14.61	7.98	--	6.63	
A-8	10/02/13	14.61	7.75	--	6.86	
A-8	01/21/14	14.61	7.98	--	6.63	
A-8	04/22/14	14.61	7.52	--	7.09	
A-8	07/15/14	14.61	7.89	--	6.72	
A-8	03/17/15	14.61	7.41	--	7.2	
A-8	09/29/15	14.61	7.92	--	6.69	
A-9	02/11/02	10.35	7.20	0.01	3.16*	
A-9	05/20/02	10.35	8.86	--	1.49	
A-9	08/27/02	10.35	8.27	Sheen	2.08	
A-9	11/04/02	10.35	8.39	0.01	1.97*	
A-9	02/18/03	10.35	7.45	--	2.90	
A-9	06/09/03	10.35	8.06	--	2.29	
A-9	09/15/03	14.42	8.03	--	6.39	
A-9	11/18/03	14.42	7.62	--	6.80	
A-9	02/24/04	14.42	7.21	--	7.21	
A-9	05/10/04	14.42	8.00	--	6.42	
A-9	08/24/04	14.42	8.18	--	6.24	
A-9	12/13/04	14.42	7.73	--	6.69	
A-9	03/08/05	14.42	8.00	--	6.42	
A-9	06/06/05	14.42	7.89	--	6.53	
A-9	09/19/05	14.42	8.28	--	6.14	
A-9	12/12/05	14.42	8.04	--	6.38	
A-9	03/13/06	14.42	7.37	--	7.05	
A-9	06/05/06	14.42	7.79	--	6.63	
A-9	09/11/06	14.42	8.36	--	6.06	
A-9	12/11/06	14.42	7.46	--	6.96	
A-10	02/11/02	9.48	6.15	--	3.33	
A-10	05/20/02	9.48	7.98	--	1.50	
A-10	08/27/02	9.48	7.34	Sheen	2.14	
A-10	11/04/02	9.48	7.54	Sheen	1.94	
A-10	02/18/03	9.48	6.57	--	2.91	
A-10	06/09/03	9.48	7.15	--	2.33	
A-10	09/15/03	13.51	7.45	Sheen	6.06	
A-10	11/18/03	13.51	6.95	Sheen	6.56	
A-10	02/24/04	13.51	6.50	Sheen	7.01	
A-10	05/10/04	13.51	7.15	Sheen	6.36	
A-10	08/24/04	13.51	7.31	--	6.20	
A-10	12/13/04	13.51	6.95	--	6.56	
A-10	03/08/05	13.51	7.17	--	6.34	
A-10	06/06/05	13.51	7.01	--	6.50	
A-10	09/19/05	13.51	7.54	--	5.97	
A-10	12/12/05	13.51	7.25	--	6.26	
A-10	03/13/06	13.51	6.58	--	6.93	
A-10	06/05/06	13.51	6.92	--	6.59	
A-10	09/11/06	13.51	7.43	--	6.08	
A-10	12/11/06	13.51	6.59	--	6.92	
A-10	03/26/07	13.51	6.83	--	6.68	
A-10	06/18/07	13.51	7.29	--	6.22	
A-10	09/24/07	13.51	7.44	--	6.07	
A-10	12/10/07	13.51	6.79	--	6.72	
A-10	03/03/08	13.51	7.83	--	5.68	
A-10	06/02/08	13.51	7.31	--	6.20	
A-10	09/04/08	13.51	7.23	--	6.28	
A-10	12/04/08	13.51	6.87	--	6.64	
A-10	03/04/09	13.51	6.90	--	6.61	
A-10	06/01/09	13.51	7.18	--	6.33	
A-10	09/21/09	13.51	7.39	--	6.12	
A-10	11/16/09	13.51	6.84	--	6.67	
A-10	03/08/10	13.51	6.34	--	7.17	
A-10	06/07/10	13.51	6.84	--	6.67	
A-10	09/09/10	13.51	7.34	--	6.17	
A-10	11/15/10	13.51	6.93	--	6.58	
A-10	03/01/11	13.51	6.60	--	6.91	
A-10	05/23/11	13.51	6.68	--	6.83	
A-10	08/29/11	13.51	7.25	--	6.26	
A-10	12/01/11	13.51	6.96	--	6.55	
A-10	03/01/12	13.51	6.72	--	6.79	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-10	05/30/12	13.51	6.72	--	6.79	
A-10	08/25/12	13.51	7.30	--	6.21	
A-10	11/07/12	13.51	7.08	--	6.43	
A-10	02/27/13	13.51	6.64	--	6.87	
A-10	04/08/13	13.51	6.61	--	6.90	
A-10	07/29/13	13.51	6.95	--	6.56	
A-10	10/02/13	13.51	6.46	--	7.05	
A-10	01/21/14	13.51	7.05	--	6.46	
A-10	04/22/14	13.51	6.65	--	6.86	
A-10	07/15/14	13.51	7.50	--	6.01	
A-10	03/17/15	13.51	6.48	--	7.03	
A-10	09/29/15	13.51	6.97	--	6.54	
A-11	02/11/02	10.36	7.01	--	3.35	
A-11	05/20/02	10.36	8.83	--	1.53	
A-11	08/27/02	10.36	8.21	--	2.15	
A-11	11/04/02	10.36	8.73	--	1.63	
A-11	02/18/03	10.36	5.42	--	4.94	
A-11	06/09/03	10.36	8.01	--	2.35	
A-11	09/15/03	14.40	8.32	--	6.08	
A-11	11/18/03	14.40	6.71	--	7.69	
A-11	02/24/04	14.40	7.35	--	7.05	
A-11	05/10/04	14.40	8.10	--	6.30	
A-11	08/24/04	14.40	8.17	--	6.23	
A-11	12/13/04	14.40	7.85	--	6.55	
A-11	03/08/05	14.40	7.90	--	6.50	
A-11	06/06/05	14.40	7.88	--	6.52	
A-11	09/19/05	14.40	8.34	0.01	6.07*	
A-11	10/12/05	14.40	8.24	--	6.16	
A-11	12/12/05	14.40	8.10	--	6.30	
A-11	03/13/06	14.40	7.40	--	7.00	
A-11	06/05/06	14.40	7.80	--	6.60	
A-11	09/11/06	14.40	8.32	--	6.08	
A-11	12/11/06	14.40	7.42	--	6.98	
A-11	12/10/07	14.40	7.64	--	6.76	
A-11	03/03/08	14.40	7.39	--	7.01	
A-11	03/04/09	14.40	7.70	--	6.70	
A-11	06/01/09	14.40	8.00	--	6.40	
A-11	09/21/09	14.40	8.26	--	6.14	
A-11	11/16/09	14.40	7.65	--	6.75	
A-11	03/08/10	14.40	7.20	--	7.20	
A-11	06/07/10	14.40	7.69	--	6.71	
A-11	09/09/10	14.40	8.20	--	6.20	
A-11	11/15/10	14.40	7.78	--	6.62	
A-11	03/01/11	14.40	7.43	--	6.97	
A-11	05/23/11	14.40	7.52	--	6.88	
A-11	08/29/11	14.40	8.09	--	6.31	
A-11	12/01/11	14.40	7.82	--	6.58	
A-11	03/01/12	14.40	7.55	--	6.85	
A-11	05/30/12	14.40	7.42	--	6.98	
A-11	08/25/12	14.40	7.63	--	6.77	
A-11	11/07/12	14.40	7.41	--	6.99	
A-11	02/27/13	14.40	7.42	--	6.98	
A-11	04/08/13	14.40	7.42	--	6.98	
A-11	07/29/13	14.40	7.75	--	6.65	
A-11	10/02/13	14.40	7.66	--	6.74	
A-11	01/21/14	14.40	7.93	--	6.47	
A-11	04/22/14	14.40	7.56	--	6.84	
A-11	07/15/14	14.40	7.91	--	6.49	
A-11	03/17/15	14.40	7.35	--	7.05	
A-11	09/29/15	14.40	7.89	--	6.51	
A-12	02/11/02	9.10	5.80	--	3.30	
A-12	05/20/02	9.10	8.68	--	0.42	
A-12	08/27/02	9.10	7.04	--	2.06	
A-12	11/04/02	9.10	7.23	--	1.87	
A-12	02/18/03	9.10	6.38	--	2.72	
A-12	06/09/03	9.10	6.83	--	2.27	
A-12	09/15/03	12.92	7.15	--	5.77	
A-12	11/18/03	12.92	6.60	--	6.32	
A-12	02/24/04	12.92	6.12	--	6.80	
A-12	05/10/04	12.92	6.74	--	6.18	
A-12	08/24/04	12.92	6.95	--	5.97	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-12	12/13/04	12.92	6.57	--	6.35	
A-12	03/08/05	12.92	6.75	Sheen	6.17	
A-12	06/06/05	12.95	6.39	--	6.56	
A-12	09/19/05	12.95	7.09	--	5.86	
A-12	12/12/05	12.95	6.89	--	6.06	
A-12	03/13/06	12.95	6.23	--	6.72	
A-12	06/05/06	12.95	6.60	--	6.35	
A-12	09/11/06	12.95	7.14	--	5.81	
A-12	12/11/06	12.95	6.28	--	6.67	
A-12	12/10/07	12.95	6.43	--	6.52	
A-12	03/03/08	12.95	6.50	--	6.45	
A-12	03/04/09	12.95	6.39	--	6.56	
A-12	06/01/09	12.95	6.86	--	6.09	
A-12	09/21/09	12.95	7.02	--	5.93	
A-12	11/16/09	12.95	6.38	--	6.57	
A-12	03/08/10	12.95	6.00	--	6.95	
A-12	06/07/10	12.95	6.54	--	6.41	
A-12	09/09/10	12.95	6.95	--	6.00	
A-12	11/15/10	12.95	6.60	--	6.35	
A-12	03/01/11	12.95	6.24	--	6.71	
A-12	05/23/11	12.95	6.34	--	6.61	
A-12	08/29/11	12.95	6.87	--	6.08	
A-12	12/01/11	12.95	6.66	--	6.29	
A-12	03/01/12	12.95	6.46	--	6.49	
A-12	05/30/12	12.95	6.35	--	6.60	
A-12	08/25/12	12.95	6.57	--	6.38	
A-12	11/07/12	12.95	6.27	--	6.68	
A-12	02/27/13	12.95	6.32	--	6.63	
A-12	04/08/13	12.95	6.28	--	6.67	
A-12	07/29/13	12.95	6.58	--	6.37	
A-12	10/02/13	12.95	6.41	--	6.54	
A-12	01/21/14	12.95	6.67	--	6.28	
A-12	04/22/14	12.95	6.29	--	6.66	
A-12	07/15/14	12.95	6.62	--	6.33	
A-12	03/17/15	12.95	6.13	--	6.82	
A-12	09/29/15	12.95	6.62	--	6.33	
A-13	03/27/01	--	--	--	--	
A-13	Destroyed during construction activities					
A-14	03/27/01	--	--	--	--	
A-14	Destroyed during construction activities					
A-14R	02/11/02	12.62	6.90	--	5.72	
A-14R	05/20/02	12.62	9.77	--	2.85	
A-14R	08/27/02	12.62	8.10	--	4.52	
A-14R	11/04/02	12.62	8.30	--	4.32	
A-14R	02/18/03	10.17	7.31	--	2.86	
A-14R	06/09/03	10.17	4.82	--	5.35	
A-14R	09/15/03	14.21	8.20	--	6.01	
A-14R	11/18/03	14.21	6.10	Sheen	8.11	
A-14R	02/24/04	14.21	7.23	--	6.98	
A-14R	05/10/04	14.21	7.89	--	6.32	
A-14R	08/24/04	14.21	8.01	--	6.20	
A-14R	12/13/04	14.21	7.75	--	6.46	
A-14R	03/08/05	14.21	7.87	--	6.34	
A-14R	06/06/05	14.21	7.71	--	6.50	
A-14R	09/19/05	14.21	8.16	0.15	6.17*	
A-14R	10/12/05	14.21	8.01	--	6.20	
A-14R	12/12/05	14.21	7.95	--	6.26	
A-14R	03/13/06	14.21	7.26	--	6.95	
A-14R	06/05/06	14.21	7.64	--	6.57	
A-14R	09/11/06	14.21	8.15	--	6.06	
A-14R	12/11/06	14.21	7.30	--	6.91	
A-14R	03/26/07	14.21	7.51	--	6.70	
A-14R	06/18/07	14.21	7.98	--	6.23	
A-14R	09/24/07	14.21	8.18	--	6.03	
A-14R	12/10/07	14.21	7.51	--	6.70	
A-14R	03/03/08	14.21	7.56	--	6.65	
A-14R	06/02/08	14.21	8.02	--	6.19	
A-14R	09/04/08	14.21	7.71	--	6.50	
A-14R	12/04/08	14.21	7.92	--	6.29	
A-14R	03/04/09	14.21	7.62	--	6.59	
A-14R	06/01/09	14.21	7.91	--	6.30	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-14R	09/21/09	14.21	8.08	--	6.13	
A-14R	11/16/09	14.21	7.57	--	6.64	
A-14R	03/08/10	14.21	7.05	--	7.16	
A-14R	06/07/10	14.21	7.56	--	6.65	
A-14R	09/09/10	14.21	8.05	--	6.16	
A-14R	11/15/10	14.21	7.63	--	6.58	
A-14R	03/01/11	14.21	7.31	--	6.90	
A-14R	05/23/11	14.21	7.40	--	6.81	
A-14R	08/29/11	14.21	7.97	--	6.24	
A-14R	12/01/11	14.21	7.68	--	6.53	
A-14R	03/01/12	14.21	7.42	--	6.79	
A-14R	05/30/12	14.21	7.44	--	6.77	
A-14R	08/25/12	14.21	7.59	--	6.62	
A-14R	11/07/12	14.21	7.33	--	6.88	
A-14R	02/27/13	14.21	7.38	--	6.83	
A-14R	04/08/13	14.21	7.34	--	6.87	
A-14R	07/29/13	14.21	7.67	--	6.54	
A-14R	10/02/13	14.21	7.51	--	6.70	
A-14R	01/21/14	14.21	7.76	--	6.45	
A-14R	04/22/14	14.21	7.36	--	6.85	
A-14R	07/15/14	14.21	7.76	--	6.45	
A-14R	03/17/15	14.21	7.22	--	6.99	
A-14R	09/29/15	14.21	7.74	--	6.47	
A-15	03/27/01	--	--	--	--	
A-15	Destroyed during construction activities					
A-16	02/11/02	10.49	7.23	0.01	3.27*	
A-16	05/20/02	10.49	9.03	--	1.46	
A-16	08/27/02	10.49	8.41	0.04	2.11*	
A-16	11/04/02	10.49	8.81	0.28	1.90*	
A-16	02/18/03	10.49	7.51	Sheen	2.98	
A-16	06/09/03	10.49	8.16	--	2.33	
A-16	09/15/03	14.39	8.80	0.01	5.60*	
A-16	11/18/03	14.39	7.74	--	6.65	
A-16	02/24/04	14.39	7.54	--	6.85	
A-16	05/10/04	14.39	8.50	0.31	6.14*	
A-16	08/24/04	14.39	9.03	0.82	6.02*	
A-16	12/13/04	14.39	8.08	Sheen	6.31	
A-16	03/08/05	14.39	7.90	Sheen	6.49	
A-16	06/06/05	14.39	8.05	Sheen	6.34	
A-16	09/19/05	14.39	9.24	0.90	5.87*	
A-16	10/12/05	14.39	9.38	1.20	5.97*	
A-16	12/12/05	14.39	8.22	--	6.17	
A-16	03/13/06	14.39	7.75	--	6.64	
A-16	06/05/06	14.39	7.98	--	6.41	
A-16	09/11/06	14.39	9.20	0.90	5.91*	
A-16	12/11/06	14.39	7.69	Sheen	6.70	
A-16	03/26/07	14.39	7.78	Sheen	6.61	
A-16	06/18/07	14.39	8.45	0.34	6.21*	
A-16	09/24/07	14.39	8.45	0.02	5.96*	
A-16	12/10/07	14.39	7.65	0.01	6.75*	
A-16	03/03/08	14.39	7.88	Sheen	6.51	
A-16	06/02/08	14.39	8.77	0.04	5.65*	
A-16	09/04/08	14.39	7.38	0.04	7.04*	
A-16	12/04/08	14.39	8.27	--	6.12	
A-16	03/04/09	14.39	7.95	--	6.44	
A-16	06/01/09	14.39	8.50	Sheen	5.89	
A-16	09/21/09	14.39	8.80	0.35	5.87*	
A-16	11/16/09	14.39	7.95	Sheen	6.44	
A-16	03/08/10	14.39	7.40	--	6.99	
A-16	06/07/10	14.39	7.91	Sheen	6.48	
A-16	09/09/10	14.39	8.92	0.09	5.54*	
A-16	11/15/10	14.39	8.21	Sheen	6.18	
A-16	03/01/11	14.39	7.65	--	6.74	
A-16	05/23/11	14.39	7.79	--	6.60	
A-16	08/29/11	14.39	8.52	0.10	5.95*	
A-16	12/01/11	14.39	8.24	Sheen	6.15	
A-16	03/01/12	14.39	7.94	Sheen	6.45	
A-16	05/30/12	14.39	7.67	--	6.72	
A-16	08/25/12	14.39	7.79	--	6.60	
A-16	11/07/12	14.39	7.56	--	6.83	
A-16	02/27/13	14.39	7.66	--	6.73	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-16	04/08/13	14.39	7.56	--	6.83	
A-16	07/29/13	14.39	7.88	--	6.51	
A-16	10/02/13	14.39	7.46	--	6.93	
A-16	01/21/14	14.39	8.05	--	6.34	
A-16	04/22/14	14.39	7.66	--	6.73	
A-16	07/15/14	14.39	8.04	--	6.35	
A-16	03/17/15	14.39	7.55	--	6.84	
A-16	09/29/15	14.39	8.19	0.17	6.34	Absorbent sock placed in well
A-17	02/11/02	9.51	6.09	--	3.42	
A-17	05/20/02	9.51	7.92	--	1.59	
A-17	08/27/02	9.51	7.33	--	2.18	
A-17	11/04/02	9.51	8.52	--	0.99	
A-17	02/18/03	9.51	6.51	--	3.00	
A-17	06/09/03	9.51	7.19	--	2.32	
A-17	09/15/03	13.41	7.43	--	5.98	
A-17	11/18/03	13.41	7.85	--	5.56	
A-17	02/24/04	13.41	6.47	--	6.94	
A-17	05/10/04	13.41	7.11	--	6.30	
A-17	08/24/04	13.41	7.12	--	6.29	
A-17	12/13/04	13.41	6.90	--	6.51	
A-17	03/08/05	13.41	7.15	--	6.26	
A-17	06/06/05	13.41	6.89	--	6.52	
A-17	09/19/05	13.41	7.55	--	5.86	
A-17	12/12/05	13.41	7.24	--	6.17	
A-17	03/13/06	13.41	6.50	--	6.91	
A-17	06/05/06	13.41	6.94	--	6.47	
A-17	09/11/06	13.41	8.34	--	5.07	
A-17	12/11/06	13.41	6.79	--	6.62	
A-18	02/11/02	10.72	7.42	--	3.30	
A-18	05/20/02	10.72	9.22	--	1.50	
A-18	08/27/02	10.72	8.59	--	2.13	
A-18	11/04/02	10.72	9.80	--	0.92	
A-18	02/18/03	10.72	8.36	--	2.36	
A-18	06/09/03	10.72	8.36	--	2.36	
A-18	09/15/03	14.74	8.65	--	6.09	
A-18	11/18/03	14.74	8.22	--	6.52	
A-18	02/24/04	14.74	7.06	--	7.68	
A-18	05/10/04	14.74	8.50	--	6.24	
A-18	08/24/04	14.74	8.56	--	6.18	
A-18	12/13/04	14.74	8.23	--	6.51	
A-18	03/08/05	14.74	8.33	--	6.41	
A-18	06/06/05	14.74	8.21	--	6.53	
A-18	09/19/05	14.74	8.67	0.02	6.09*	
A-18	10/12/05	14.74	8.55	--	6.19	
A-18	12/12/05	14.74	8.42	--	6.32	
A-18	03/13/06	14.74	7.74	--	7.00	
A-18	06/05/06	14.74	8.14	--	6.60	
A-18	09/11/06	14.74	8.63	--	6.11	
A-18	12/11/06	14.74	7.78	--	6.96	
A-18	12/10/07	14.74	7.81	--	6.93	
A-18	03/03/08	14.74	8.03	--	6.71	
A-18	03/04/09	14.74	8.07	--	6.67	
A-18	06/01/09	14.74	8.34	--	6.40	
A-18	09/21/09	14.74	8.57	--	6.17	
A-18	11/16/09	14.74	8.07	--	6.67	
A-18	03/08/10	14.74	7.54	--	7.20	
A-18	06/07/10	14.74	8.00	--	6.74	
A-18	09/09/10	14.74	8.53	--	6.21	
A-18	11/15/10	14.74	8.11	--	6.63	
A-18	03/01/11	14.74	7.75	--	6.99	
A-18	05/23/11	14.74	7.85	--	6.89	
A-18	08/29/11	14.74	8.44	--	6.30	
A-18	12/01/11	14.74	8.11	--	6.63	
A-18	03/01/12	14.74	7.83	--	6.91	
A-18	05/30/12	14.74	7.75	--	6.99	
A-18	08/25/12	14.74	7.89	--	6.85	
A-18	11/07/12	14.74	7.68	--	7.06	
A-18	02/27/13	14.74	7.72	--	7.02	
A-18	04/08/13	14.74	7.05	--	7.69	
A-18	07/29/13	14.74	7.99	--	6.75	
A-18	10/02/13	14.74	7.93	--	6.81	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-18	01/21/14	14.74	8.27	--	6.47	
A-18	04/22/14	14.74	7.84	--	6.90	
A-18	07/15/14	14.74	8.21	--	6.53	
A-18	03/17/15	14.74	7.7	--	7.04	
A-18	09/29/15	14.74	8.24	--	6.50	
A-19	02/11/02	10.76	7.52	0.07	3.30*	
A-19	05/20/02	10.76	9.19	--	1.57	
A-19	08/27/02	10.76	7.61	Sheen	3.15	
A-19	11/04/02	10.76	8.79	0.01	1.98*	
A-19	02/18/03	10.76	7.70	Sheen	3.06	
A-19	06/09/03	10.76	8.35	0.01	2.42*	
A-19	09/15/03	14.57	8.71	0.01	5.87*	
A-19	11/18/03	14.57	7.69	0.01	6.89*	
A-19	02/24/04	14.57	7.81	Sheen	6.76	
A-19	05/10/04	14.57	8.35	Sheen	6.22	
A-19	08/24/04	14.57	8.68	Sheen	5.89	
A-19	12/13/04	14.57	7.98	Sheen	6.59	
A-19	03/08/05	14.57	8.28	--	6.29	
A-19	06/06/05	14.57	7.26	--	7.31	
A-19	09/19/05	14.57	8.66	0.03	5.93*	
A-19	10/12/05	14.57	8.55	0.02	6.04*	
A-19	12/12/05	14.57	8.46	0.06	6.16*	
A-19	03/13/06	14.57	7.65	--	6.92	
A-19	06/05/06	14.57	8.10	--	6.47	
A-19	09/11/06	14.57	8.63	0.03	5.96*	
A-19	12/11/06	14.57	7.65	--	6.92	
A-19	03/26/07	14.57	7.89	--	6.68	
A-19	06/18/07	14.57	8.36	--	6.21	
A-19	09/25/07	14.57	8.64	--	5.93	
A-19	12/10/07	14.57	7.82	--	6.75	
A-19	03/03/08	14.57	7.95	--	6.62	
A-19	06/02/08	14.57	9.84	--	4.73	
A-19	09/04/08	14.57	8.30	--	6.27	
A-19	12/04/08	14.57	8.99	--	5.58	
A-19	03/04/09	14.57	7.89	--	6.68	
A-19	06/01/09	14.57	10.47	--	4.10	
A-19	09/21/09	14.57	8.53	--	6.04	
A-19	11/16/09	14.57	7.87	--	6.70	
A-19	03/08/10	14.57	7.45	--	7.12	
A-19	06/07/10	14.57	7.19	--	7.38	
A-19	09/09/10	14.57	8.41	--	6.16	
A-19	11/15/10	14.57	7.94	--	6.63	
A-19	03/01/11	14.57	7.72	--	6.85	
A-19	05/23/11	14.57	7.82	--	6.75	
A-19	08/29/11	14.57	8.39	--	6.18	
A-19	12/01/11	14.57	8.14	--	6.43	
A-19	03/01/12	14.57	7.82	--	6.75	
A-19	05/30/12	14.57	7.75	--	6.82	
A-19	08/25/12	14.57	7.88	--	6.69	
A-19	11/07/12	14.57	7.22	--	7.35	
A-19	02/27/13	14.57	7.68	--	6.89	
A-19	04/08/13	14.57	7.68	--	6.89	
A-19	07/29/13	14.57	7.93	--	6.64	
A-19	10/02/13	14.57	7.78	--	6.79	
A-19	01/21/14	14.57	8.86	--	5.71	
A-19	04/22/14	14.57	7.72	--	6.85	
A-19	07/15/14	14.57	8.01	--	6.56	
A-19	03/17/15	14.57	7.61	--	6.96	
A-19	09/28/15	14.57	8.16	--	6.41	
A-20	02/11/02	10.30	7.16	--	3.14	
A-20	05/20/02	10.30	9.76	--	0.54	
A-20	08/27/02	10.30	5.19	--	5.11	
A-20	11/04/02	10.30	8.39	--	1.91	
A-20	02/18/03	10.30	7.38	--	2.92	
A-20	06/09/03	10.30	7.95	--	2.35	
A-20	09/15/03	14.19	8.25	--	5.94	
A-20	11/18/03	14.19	7.70	--	6.49	
A-20	02/24/04	14.19	7.29	0.02	6.92*	
A-20	05/10/04	14.19	7.99	--	6.20	
A-20	08/24/04	14.19	8.18	--	6.01	
A-20	12/13/04	14.19	7.65	--	6.54	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-20	03/08/05	14.19	7.89	--	6.30	
A-20	06/06/05	14.19	7.81	--	6.38	
A-20	09/19/05	14.19	8.25	0.01	5.95*	
A-20	10/12/05	14.19	8.12	--	6.07	
A-20	12/12/05	14.19	8.00	--	6.19	
A-20	03/13/06	14.19	7.25	--	6.94	
A-20	06/05/06	14.19	7.72	--	6.47	
A-20	09/11/06	14.19	8.22	--	5.97	
A-20	12/11/06	14.19	7.28	--	6.91	
A-20	03/26/07	14.19	7.51	--	6.68	
A-20	06/18/07	14.19	7.98	--	6.21	
A-20	09/25/07	14.19	8.19	--	6.00	
A-20	12/10/07	14.19	7.45	--	6.74	
A-20	03/03/08	14.19	7.55	--	6.64	
A-20	06/02/08	14.19	8.48	--	5.71	
A-20	09/04/08	14.19	7.92	--	6.27	
A-20	12/04/08	14.19	7.99	--	6.20	
A-20	03/04/09	14.19	7.19	--	7.00	
A-20	06/01/09	14.19	8.38	--	5.81	
A-20	09/21/09	14.19	8.11	--	6.08	
A-20	11/16/09	14.19	7.43	--	6.76	
A-20	03/08/10	14.19	7.15	--	7.04	
A-20	06/07/10	14.19	7.54	--	6.65	
A-20	09/09/10	14.19	8.03	--	6.16	
A-20	11/15/10	14.19	7.51	--	6.68	
A-20	03/01/11	14.19	7.34	--	6.85	
A-20	05/23/11	14.19	7.45	--	6.74	
A-20	08/29/11	14.19	8.03	--	6.16	
A-20	12/01/11	14.19	7.70	--	6.49	
A-20	03/01/12	14.19	7.41	--	6.78	
A-20	05/30/12	14.19	7.30	--	6.89	
A-20	08/25/12	14.19	7.46	--	6.73	
A-20	11/07/12	14.19	6.61	--	7.58	
A-20	02/27/13	14.19	7.21	--	6.98	
A-20	04/08/13	14.19	6.96	--	7.23	
A-20	07/29/13	14.19	7.46	--	6.73	
A-20	10/02/13	14.19	7.40	--	6.79	
A-20	01/21/14	14.19	7.77	--	6.42	
A-20	04/22/14	14.19	7.38	--	6.81	
A-20	07/15/14	14.19	7.66	--	6.53	
A-20	03/17/15	14.19	7.27	--	6.92	
A-20	09/28/15	14.19	7.81	--	6.38	
A-21	02/11/02	10.40	7.18	--	3.22	
A-21	05/20/02	10.40	9.88	Sheen	0.52	
A-21	08/27/02	10.40	8.28	--	2.12	
A-21	11/04/02	10.40	8.50	--	1.90	
A-21	02/18/03	10.40	7.47	--	2.93	
A-21	06/09/03	10.40	8.01	--	2.39	
A-21	09/15/03	14.35	8.65	--	5.70	
A-21	11/18/03	14.35	7.86	--	6.49	
A-21	02/24/04	14.35	7.43	--	6.92	
A-21	05/10/04	14.35	8.10	--	6.25	
A-21	08/24/04	14.35	8.29	--	6.06	
A-21	12/13/04	14.35	7.75	--	6.60	
A-21	03/08/05	14.35	8.00	--	6.35	
A-21	06/06/05	14.35	7.90	--	6.45	
A-21	09/19/05	14.35	8.24	--	6.11	
A-21	12/12/05	14.35	8.15	--	6.20	
A-21	03/13/06	14.35	7.38	--	6.97	
A-21	06/05/06	14.35	7.21	--	7.14	
A-21	09/11/06	14.35	8.31	--	6.04	
A-21	12/11/06	14.35	7.44	--	6.91	
A-21	03/26/07	14.35	7.64	--	6.71	
A-21	06/18/07	14.35	8.15	--	6.20	
A-21	09/25/07	14.35	8.30	--	6.05	
A-21	12/10/07	14.35	7.62	--	6.73	
A-21	03/03/08	14.35	7.67	--	6.68	
A-21	06/02/08	14.35	8.18	--	6.17	
A-21	09/04/08	14.35	8.09	--	6.26	
A-21	12/04/08	14.35	8.07	--	6.28	
A-21	03/04/09	14.35	7.51	--	6.84	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-21	06/01/09	14.35	8.03	--	6.32	
A-21	09/21/09	14.35	8.27	--	6.08	
A-21	11/16/09	14.35	7.68	--	6.67	
A-21	03/08/10	14.35	7.26	--	7.09	
A-21	06/07/10	14.35	7.66	--	6.69	
A-21	09/09/10	14.35	8.19	--	6.16	
A-21	11/15/10	14.35	7.73	--	6.62	
A-21	03/01/11	14.35	7.42	--	6.93	
A-21	05/23/11	14.35	7.56	--	6.79	
A-21	08/29/11	14.35	8.11	--	6.24	
A-21	12/01/11	14.35	7.81	--	6.54	
A-21	03/01/12	14.35	7.53	--	6.82	
A-21	05/30/12	14.35	7.37	--	6.98	
A-21	08/25/12	14.35	7.49	--	6.86	
A-21	11/07/12	14.35	7.04	--	7.31	
A-21	02/27/13	14.35	7.32	--	7.03	
A-21	04/08/13	14.35	7.23	--	7.12	
A-21	07/29/13	14.35	7.59	--	6.76	
A-21	10/02/13	14.35	7.57	--	6.78	
A-21	01/21/14	14.35	8.71	--	5.64	
A-21	04/22/14	14.35	7.59	--	6.76	
A-21	07/15/14	14.35	7.82	--	6.53	
A-21	03/17/15	14.35	7.4	--	6.95	
A-21	09/28/15	14.35	7.91	--	6.44	
A-22	09/21/01	10.69	--	--	--	
A-22	Destroyed					
A-22R	02/11/02	10.22	7.10	0.13	3.22*	
A-22R	05/20/02	10.22	9.72	0.08	0.56*	
A-22R	08/27/02	10.22	8.20	0.16	2.15*	
A-22R	11/04/02	10.22	8.30	0.15	2.04*	
A-22R	02/18/03	10.22	7.14	0.02	3.10*	
A-22R	06/09/03	10.22	7.82	--	2.40	
A-22R	09/15/03	14.11	8.40	0.01	5.72*	
A-22R	11/18/03	14.11	7.70	0.05	6.45*	
A-22R	02/24/04	14.11	7.01	Sheen	7.10	
A-22R	05/10/04	14.11	7.68	<0.01	6.43*	
A-22R	08/24/04	14.11	7.90	0.18	6.35*	
A-22R	12/13/04	14.11	7.40	Sheen	6.71	
A-22R	03/08/05	14.11	7.08	--	7.03	
A-22R	06/06/05	14.11	7.21	--	6.90	
A-22R	09/19/05	14.11	8.11	0.01	6.01*	
A-22R	10/12/05	14.11	8.22	0.20	6.05*	
A-22R	12/12/05	14.11	7.87	--	6.24	
A-22R	03/13/06	14.11	7.15	--	6.96	
A-22R	06/05/06	14.11	7.75	--	6.36	
A-22R	09/11/06	14.11	8.16	--	5.95	
A-22R	12/11/06	14.11	7.14	--	6.97	
A-22R	03/26/07	14.11	7.34	--	6.77	
A-22R	06/18/07	14.11	7.86	--	6.25	
A-22R	12/10/07	14.11	7.38	--	6.73	
A-22R	03/03/08	14.11	7.47	--	6.64	
A-22R	06/02/08	14.11	8.90	--	5.21	
A-22R	09/04/08	14.11	--	--	--	Not Measured-Sock in well
A-22R	12/04/08	14.11	--	--	--	Not Measured-Sock in well
A-22R	03/04/09	14.11	--	--	--	Not Measured-Sock in well
A-22R	06/01/09	14.11	--	--	--	Not Measured-Sock in well
A-22R	09/21/09	14.11	--	--	--	Not Measured-Sock in well
A-22R	11/16/09	14.11	7.36	--	6.75	
A-22R	03/08/10	14.11	6.95	--	7.16	
A-22R	06/07/10	14.11	7.52	--	6.59	
A-22R	09/09/10	14.11	7.94	--	6.17	
A-22R	11/15/10	14.11	7.92	--	6.19	
A-22R	03/01/11	14.11	7.21	--	6.90	
A-22R	05/23/11	14.11	7.35	--	6.76	
A-22R	08/29/11	14.11	7.87	--	6.24	
A-22R	12/01/11	14.11	7.75	--	6.36	
A-22R	03/01/12	14.11	7.37	--	6.74	
A-22R	05/30/12	14.11	7.48	--	6.63	
A-22R	08/25/12	14.11	7.62	--	6.49	
A-22R	11/07/12	14.11	7.18	--	6.93	
A-22R	02/27/13	14.11	7.38	--	6.73	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-22R	04/08/13	14.11	7.31	--	6.80	
A-22R	07/29/13	14.11	7.64	--	6.47	
A-22R	10/02/13	14.11	7.01	--	7.10	
A-22R	01/21/14	14.11	7.63	--	6.48	
A-22R	04/22/14	14.11	7.11	--	7.00	
A-22R	07/15/14	14.11	7.46	--	6.65	
A-22R	03/17/15	14.11	7.04	--	7.07	
A-22R	09/28/15	14.11	7.52	--	6.59	
A-23	06/14/01	--	--	--	--	
A-23	Destroyed during construction activities					
A-23R	02/11/02	11.73	8.53	--	3.20	
A-23R	05/20/02	11.73	10.23	--	1.50	
A-23R	08/27/02	11.73	6.63	--	5.10	
A-23R	11/04/02	11.73	9.81	--	1.92	
A-23R	02/18/03	11.73	8.75	--	2.98	
A-23R	06/09/03	11.73	9.35	--	2.38	
A-23R	09/15/03	15.57	10.03	--	5.54	
A-23R	11/18/03	15.57	7.85	--	7.72	
A-23R	02/24/04	15.57	8.05	--	7.52	
A-23R	05/10/04	15.57	8.69	--	6.88	
A-23R	08/24/04	15.57	7.69	--	7.88	
A-23R	12/13/04	15.57	9.22	--	6.35	
A-23R	03/08/05	15.57	9.38	--	6.19	
A-23R	06/07/05	15.57	9.35	--	6.22	
A-23R	09/20/05	15.57	9.68	--	5.89	
A-23R	12/12/05	15.57	9.20	--	6.37	
A-23R	03/13/06	15.57	8.69	--	6.88	
A-23R	06/08/06	15.57	9.13	--	6.44	
A-23R	09/11/06	15.57	10.03	--	5.54	
A-23R	12/11/06	15.57	8.72	--	6.85	
A-23R	03/26/07	15.57	8.94	--	6.63	
A-23R	06/18/07	15.57	9.37	--	6.20	
A-23R	09/25/07	--	--	--	--	Not Measured-Inaccessible
A-23R	12/10/07	15.57	8.91	--	6.66	
A-23R	03/03/08	15.57	9.00	--	6.57	
A-23R	06/02/08	15.57	9.22	--	6.35	
A-23R	09/04/08	15.57	--	--	--	Not Measured-Inaccessible
A-23R	12/04/08	15.57	9.34	--	6.23	
A-23R	03/04/09	15.57	9.81	--	5.76	
A-23R	06/01/09	15.57	9.26	--	6.31	
A-23R	09/21/09	15.57	9.51	--	6.06	
A-23R	11/16/09	15.57	8.94	--	6.63	
A-23R	03/08/10	15.57	8.48	--	7.09	
A-23R	06/07/10	15.57	8.95	--	6.62	
A-23R	09/09/10	15.57	9.45	--	6.12	
A-23R	11/16/10	15.57	9.01	--	6.56	
A-23R	03/01/11	15.57	8.68	--	6.89	
A-23R	05/24/11	15.57	8.85	--	6.72	
A-23R	08/29/11	15.57	9.41	--	6.16	
A-23R	12/01/11	15.57	9.09	--	6.48	
A-23R	03/01/12	15.57	8.79	--	6.78	
A-23R	05/30/12	15.57	8.73	--	6.84	
A-23R	08/25/12	15.57	--	--	--	Inaccessible due to site access issues
A-23R	11/07/12	15.57	8.52	--	7.05	
A-23R	02/27/13	15.57	8.45	--	7.12	
A-23R	04/08/13	15.57	8.63	--	6.94	
A-23R	07/29/13	15.57	8.92	--	6.65	
A-23R	10/02/13	15.57	8.81	--	6.76	
A-23R	01/21/14	15.57	9.16	--	6.41	
A-23R	04/22/14	15.57	5.74	--	9.83	
A-23R	07/15/14	15.57	9.11	--	6.46	
A-23R	03/17/15	15.57	6.33	--	9.24	
A-23R	09/28/15	15.57	9.19	--	6.38	
A-24	10/06/00	--	--	--	--	
A-24	Destroyed during construction activities					
A-25	02/11/02	10.12	6.78	--	3.34	
A-25	05/20/02	10.12	8.56	--	1.56	
A-25	08/27/02	10.12	7.99	--	2.13	
A-25	11/04/02	10.12	8.18	--	1.94	
A-25	02/18/03	10.12	7.08	--	3.04	
A-25	06/09/03	10.12	8.71	--	1.41	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-25	09/15/03	13.90	8.05	--	5.85	
A-25	11/18/03	13.90	7.50	Sheen	6.40	
A-25	02/24/04	13.90	7.00	--	6.90	
A-25	05/10/04	13.90	7.75	--	6.15	
A-25	08/24/04	13.90	7.82	--	6.08	
A-25	12/13/04	13.90	7.46	--	6.44	
A-25	03/08/05	13.90	7.70	--	6.20	
A-25	06/06/05	13.90	7.53	--	6.37	
A-25	09/19/05	13.90	8.07	0.01	5.84*	
A-25	10/12/05	13.90	7.95	--	5.95	
A-25	12/12/05	13.90	7.79	--	6.11	
A-25	03/13/06	13.90	6.98	--	6.92	
A-25	06/05/06	13.90	7.43	--	6.47	
A-25	09/11/06	13.90	8.10	--	5.80	
A-25	12/11/06	13.90	7.05	--	6.85	
A-25	12/10/07	13.90	7.23	--	6.67	
A-25	03/03/08	13.90	7.36	--	6.54	
A-25	03/04/09	13.90	7.37	--	6.53	
A-25	06/01/09	13.90	7.81	--	6.09	
A-25	09/21/09	13.90	8.00	--	5.90	
A-25	11/16/09	13.90	7.16	--	6.74	
A-25	03/08/10	13.90	6.83	--	7.07	
A-25	06/07/10	13.90	7.36	--	6.54	
A-25	09/09/10	13.90	7.97	--	5.93	
A-25	11/15/10	13.90	7.44	Sheen	6.46	
A-25	03/01/11	13.90	7.04	--	6.86	
A-25	05/23/11	13.90	7.18	--	6.72	
A-25	08/29/11	13.90	7.81	--	6.09	
A-25	12/01/11	13.90	7.52	--	6.38	
A-25	03/01/12	13.90	7.75	--	6.15	
A-25	05/30/12	13.90	7.30	--	6.60	
A-25	08/25/12	13.90	7.56	--	6.34	
A-25	11/07/12	13.90	7.11	--	6.79	
A-25	02/27/13	13.90	7.18	--	6.72	
A-25	04/08/13	13.90	7.08	--	6.82	
A-25	07/29/13	13.90	7.52	--	6.38	
A-25	10/02/13	13.90	7.23	--	6.67	
A-25	01/21/14	13.90	7.51	--	6.39	
A-25	04/22/14	13.90	7.03	--	6.87	
A-25	07/15/14	13.90	7.51	--	6.39	
A-25	03/17/15	13.90	6.87	--	7.03	
A-25	09/29/15	13.90	7.55	--	6.35	
A-26	03/27/01	--	--	--	--	
A-26	Destroyed during construction activities of utility trench					
A-26R	02/11/02	10.39	7.13	0.02	3.28*	
A-26R	05/20/02	10.39	9.79	--	0.60	
A-26R	08/27/02	10.39	8.23	0.02	2.18*	
A-26R	11/04/02	10.39	8.41	0.04	2.01*	
A-26R	02/18/03	10.39	7.29	--	3.10	
A-26R	06/09/03	10.39	7.92	--	2.47	
A-26R	09/15/03	14.19	8.31	--	5.88	
A-26R	11/18/03	14.19	7.64	Sheen	6.55	
A-26R	02/24/04	14.19	7.17	--	7.02	
A-26R	05/10/04	14.19	7.93	--	6.26	
A-26R	08/24/04	14.19	8.10	--	6.09	
A-26R	12/13/04	14.19	7.55	--	6.64	
A-26R	03/08/05	14.19	7.80	--	6.39	
A-26R	06/06/05	14.19	7.18	--	7.01	
A-26R	09/19/05	14.19	8.25	0.01	5.95*	
A-26R	10/12/05	14.19	8.20	--	5.99	
A-26R	12/12/05	14.19	7.98	--	6.21	
A-26R	03/13/06	14.19	7.21	--	6.98	
A-26R	06/05/06	14.19	7.66	--	6.53	
A-26R	09/11/06	14.19	8.25	--	5.94	
A-26R	12/11/06	14.19	7.22	--	6.97	
A-26R	12/10/07	14.19	7.48	--	6.71	
A-26R	03/03/08	14.19	7.58	--	6.61	
A-26R	03/04/09	14.19	7.56	--	6.63	
A-26R	06/01/09	14.19	--	--	--	Not Measured-Inaccessible
A-26R	09/21/09	14.19	8.21	--	5.98	
A-26R	11/16/09	14.19	7.48	--	6.71	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-26R	03/08/10	14.19	7.04	--	7.15	
A-26R	06/07/10	14.19	7.57	--	6.62	
A-26R	09/09/10	14.19	8.17	--	6.02	
A-26R	11/15/10	14.19	7.69	--	6.50	
A-26R	03/01/11	14.19	7.28	--	6.91	
A-26R	05/23/11	14.19	7.40	--	6.79	
A-26R	08/29/11	14.19	7.99	--	6.20	
A-26R	12/01/11	14.19	7.81	--	6.38	
A-26R	03/01/12	14.19	7.47	--	6.72	
A-26R	05/30/12	14.19	7.55	--	6.64	
A-26R	08/25/12	14.19	7.73	--	6.46	
A-26R	11/07/12	14.19	7.37	--	6.82	
A-26R	02/27/13	14.19	7.42	--	6.77	
A-26R	04/08/13	14.19	7.34	--	6.85	
A-26R	07/29/13	14.19	7.69	--	6.50	
A-26R	10/02/13	14.19	7.41	--	6.78	
A-26R	01/21/14	14.19	7.69	--	6.50	
A-26R	04/22/14	14.19	7.23	--	6.96	
A-26R	07/15/14	14.19	7.71	--	6.48	
A-26R	03/17/15	14.19	7.09	--	7.1	
A-26R	09/28/15	14.19	7.62	--	6.57	
A-27	02/11/02	13.45	10.05	--	3.40	
A-27	05/20/02	13.45	12.84	--	0.61	
A-27	08/27/02	13.45	11.31	--	2.14	
A-27	11/04/02	13.45	11.46	--	1.99	
A-27	02/18/03	13.45	10.32	--	3.13	
A-27	06/09/03	13.45	10.97	--	2.48	
A-27	09/15/03	17.22	11.38	--	5.84	
A-27	11/18/03	17.22	10.75	--	6.47	
A-27	02/24/04	17.22	10.15	--	7.07	
A-27	05/10/04	17.22	8.00	--	9.22	
A-27	08/24/04	17.22	11.15	--	6.07	
A-27	12/13/04	17.22	7.80	--	9.42	
A-27	03/08/05	17.22	10.83	--	6.39	
A-27	06/06/05	17.22	10.80	--	6.42	
A-27	09/19/05	17.22	11.32	--	5.90	
A-27	12/12/05	17.22	11.01	--	6.21	
A-27	03/13/06	17.22	10.17	--	7.05	
A-27	06/05/06	17.22	10.69	--	6.53	
A-27	09/11/06	17.22	11.30	--	5.92	
A-27	12/11/06	17.22	10.16	--	7.06	
A-27	03/26/07	17.22	10.41	--	6.81	
A-27	06/18/07	17.22	11.00	--	6.22	
A-27	09/24/07	17.22	11.20	--	6.02	
A-27	12/10/07	17.22	10.41	--	6.81	
A-27	03/03/08	17.22	10.54	--	6.68	
A-27	06/02/08	17.22	11.06	--	6.16	
A-27	09/04/08	17.22	11.50	--	5.72	
A-27	12/04/08	17.22	11.05	--	6.17	
A-27	03/04/09	17.22	10.64	--	6.58	
A-27	06/01/09	17.22	10.87	--	6.35	
A-27	09/21/09	17.22	11.25	--	5.97	
A-27	11/16/09	17.22	10.50	--	6.72	
A-27	03/08/10	17.22	10.01	--	7.21	
A-27	06/07/10	17.22	10.54	--	6.68	
A-27	09/09/10	17.22	11.19	--	6.03	
A-27	11/15/10	17.22	10.61	--	6.61	
A-27	03/01/11	17.22	10.20	--	7.02	
A-27	05/23/11	17.22	10.30	--	6.92	
A-27	08/29/11	17.22	11.03	--	6.19	
A-27	12/01/11	17.22	10.72	--	6.50	
A-27	03/01/12	17.22	10.44	--	6.78	
A-27	05/30/12	17.22	10.47	--	6.75	
A-27	08/25/12	17.22	10.78	--	6.44	
A-27	11/07/12	17.22	10.33	--	6.89	
A-27	02/27/13	17.22	10.28	--	6.94	
A-27	04/08/13	17.22	10.24	--	6.98	
A-27	06/21/13	17.22	10.68	--	6.54	Baseline monitoring event
A-27	07/29/13	17.22	10.69	--	6.53	
A-27	08/26/13	17.22	10.71	--	6.51	Two-month monitoring event
A-27	10/02/13	17.22	10.40	--	6.82	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
A-27	01/21/14	17.22	10.63	--	6.59	
A-27	04/22/14	17.22	10.11	--	7.11	
A-27	07/15/14	17.22	10.68	--	6.54	
A-27	03/17/15	17.22	9.96	--	7.26	
A-27	09/28/15	17.22	10.68	--	6.54	
A-28	06/14/01	--	--	--	--	
A-28	Destroyed during construction activities					
A-28R	02/11/02	11.19	7.72	--	3.47	
A-28R	05/20/02	11.19	9.51	--	1.68	
A-28R	08/27/02	11.19	8.97	--	2.22	
A-28R	11/04/02	11.19	9.20	--	1.99	
A-28R	02/18/03	11.19	8.20	--	2.99	
A-28R	06/09/03	11.19	8.67	--	2.52	
A-28R	09/15/03	14.93	9.05	--	5.88	
A-28R	11/18/03	14.93	8.45	--	6.48	
A-28R	02/24/04	14.93	7.91	--	7.02	
A-28R	05/10/04	14.93	8.66	--	6.27	
A-28R	08/24/04	14.93	7.90	--	7.03	
A-28R	12/13/04	14.93	8.58	--	6.35	
A-28R	03/08/05	14.93	8.67	--	6.26	
A-28R	06/06/05	14.93	8.47	--	6.46	
A-28R	09/19/05	14.93	8.99	--	5.94	
A-28R	12/12/05	14.93	7.71	--	7.22	
A-28R	03/13/06	14.93	7.79	--	7.14	
A-28R	06/05/06	14.93	9.13	--	5.80	
A-28R	09/11/06	14.93	9.00	--	5.93	
A-28R	12/11/06	14.93	7.89	--	7.04	
A-28R	03/26/07	14.93	8.05	--	6.88	
A-28R	06/18/07	14.93	8.64	--	6.29	
A-28R	09/24/07	14.93	8.81	--	6.12	
A-28R	12/10/07	14.93	8.01	--	6.92	
A-28R	03/03/08	14.93	8.17	--	6.76	
A-28R	06/02/08	14.93	8.64	--	6.29	
A-28R	09/04/08	14.93	8.73	--	6.20	
A-28R	12/04/08	14.93	8.69	--	6.24	
A-28R	03/04/09	14.93	8.29	--	6.64	
A-28R	06/01/09	14.93	8.51	--	6.42	
A-28R	09/21/09	14.93	8.92	--	6.01	
A-28R	11/16/09	14.93	8.21	--	6.72	
A-28R	03/08/10	14.93	7.61	--	7.32	
A-28R	06/07/10	14.93	8.14	--	6.79	
A-28R	09/09/10	14.93	8.73	--	6.20	
A-28R	11/15/10	14.93	8.22	--	6.71	
A-28R	03/01/11	14.93	7.80	--	7.13	
A-28R	05/23/11	14.93	7.89	--	7.04	
A-28R	08/29/11	14.93	8.70	--	6.23	
A-28R	12/01/11	14.93	8.32	--	6.61	
A-28R	03/01/12	14.93	7.95	--	6.98	
A-28R	05/30/12	14.93	8.04	--	6.89	
A-28R	08/25/12	14.93	8.35	--	6.58	
A-28R	11/07/12	14.93	7.89	--	7.04	
A-28R	02/27/13	14.93	7.78	--	7.15	
A-28R	04/08/13	14.93	7.67	--	7.26	
A-28R	07/29/13	14.93	8.20	--	6.73	
A-28R	10/02/13	14.93	7.88	--	7.05	
A-28R	01/21/14	14.93	8.20	--	6.73	
A-28R	04/22/14	14.93	7.59	--	7.34	
A-28R	07/15/14	14.93	8.35	--	6.58	
A-28R	03/17/15	14.93	7.26	--	7.67	
A-28R	09/28/15	14.93	8.33	--	6.60	
A-29	03/27/01	--	--	--	--	
A-29	Destroyed during construction activities of utility trench					
A-29R	02/11/02	10.12	6.78	--	3.34	
A-29R	05/20/02	10.12	8.53	--	1.59	
A-29R	08/27/02	10.12	7.92	--	2.20	
A-29R	11/04/02	10.12	8.09	--	2.03	
A-29R	02/18/03	10.12	7.05	--	3.07	
A-29R	02/19/03	10.12	7.05	--	3.07	
A-29R	06/09/03	10.12	7.61	--	2.51	
A-29R	09/15/03	13.85	8.00	--	5.85	
A-29R	11/18/03	13.85	7.50	--	6.35	

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Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation^A feet AMSL	Comments
A-29R	02/24/04	13.85	6.97	--	6.88	
A-29R	05/10/04	13.85	7.66	--	6.19	
A-29R	08/24/04	13.85	7.43	--	6.42	
A-29R	12/13/04	13.85	7.46	--	6.39	
A-29R	03/08/05	13.85	7.65	--	6.20	
A-29R	06/06/05	13.85	7.51	--	6.34	
A-29R	09/19/05	13.85	8.02	--	5.83	
A-29R	12/12/05	13.85	7.75	--	6.10	
A-29R	03/13/06	13.85	--	--	--	Not Measured-Inaccessible
A-29R	06/05/06	13.85	7.44	--	6.41	
A-29R	09/11/06	13.85	8.00	--	5.85	
A-29R	12/11/06	13.85	7.07	--	6.78	
A-29R	03/26/07	13.85	7.25	--	6.60	
A-29R	06/18/07	13.85	7.58	--	6.27	
A-29R	09/24/07	13.85	8.03	--	5.82	
A-29R	12/10/07	13.85	7.21	--	6.64	
A-29R	06/02/08	13.85	8.46	--	5.39	
A-29R	09/04/08	13.85	7.82	--	6.03	
A-29R	12/04/08	13.85	7.78	--	6.07	
A-29R	05/23/11	13.85	7.22	--	6.63	
3	02/11/02	9.78	5.71	--	4.07	Casing Damaged
3	05/20/02	9.78	7.97	--	1.81	Casing Damaged
3	08/27/02	9.78	7.57	--	2.21	Casing Damaged
3	11/04/02	9.78	7.82	--	1.96	Casing Damaged
3	02/18/03	9.78	6.02	--	3.76	Casing Damaged
3	06/09/03	9.78	7.16	--	2.62	Casing Damaged
3	06/11/03	--	--	--	--	
3	Abandoned					
4	02/11/02	7.97	3.86	--	4.11	
4	05/20/02	7.97	6.07	--	1.90	
4	08/27/02	7.97	5.17	--	2.80	
4	11/04/02	7.97	5.40	--	2.57	
4	02/18/03	7.97	3.78	--	4.19	
4	02/19/03	7.97	3.78	--	4.19	
4	06/09/03	7.97	4.75	--	3.22	
4	09/15/03	11.01	5.37	--	5.64	Casing Broken
4	11/18/03	11.01	4.33	--	6.68	Casing Broken
4	02/24/04	11.01	3.91	--	7.10	Casing Broken
4	05/10/04	11.01	4.75	--	6.26	Casing Broken
4	08/24/04	11.01	4.94	--	6.07	Casing Broken
4	12/13/04	11.01	4.17	--	6.84	Casing Broken
4	03/08/05	11.01	3.80	--	7.21	Casing Broken
4	06/06/05	11.01	4.63	--	6.38	Casing Broken
4	09/19/05	11.01	--	--	--	Not Measured-Casing Broken
4	12/12/05	11.01	4.76	--	6.25	Casing Broken
4	03/13/06	11.01	3.82	--	7.19	Casing Broken
4	06/05/06	11.01	--	--	--	Not Measured-Casing Broken
4	09/11/06	11.01	--	--	--	Not Measured-Casing Broken
4	12/11/06	11.01	--	--	--	Not Measured-Casing Broken
5	02/11/02	8.30	3.73	--	4.57	Casing Damaged
5	05/20/02	8.30	5.89	--	2.41	Casing Damaged
5	08/27/02	8.30	5.40	--	2.90	Casing Damaged
5	11/04/02	8.30	5.74	--	2.56	Casing Damaged
5	02/18/03	8.30	4.20	--	4.10	Casing Damaged
5	06/11/03	--	--	--	--	
5	Abandoned					
6	02/11/02	9.15	4.50	--	4.65	
6	05/20/02	9.15	6.88	--	2.27	
6	08/27/02	9.15	6.65	--	2.50	
6	11/04/02	9.15	6.99	--	2.16	
6	02/18/03	9.15	5.14	--	4.01	
6	06/09/03	9.15	6.24	--	2.91	
6	09/15/03	12.76	6.95	--	5.81	
6	11/18/03	12.76	5.56	--	7.20	
6	02/24/04	12.76	5.31	--	7.45	
6	05/10/04	12.76	6.24	--	6.52	
6	08/24/04	12.76	6.41	--	6.35	
6	12/13/04	12.76	4.28	--	8.48	
6	03/08/05	12.76	6.28	--	6.48	
6	06/06/05	12.76	5.94	--	6.82	
6	09/19/05	12.76	6.87	--	5.89	

Table 1

Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation^A feet AMSL	Comments
6	12/12/05	12.76	6.13	--	6.63	
6	03/13/06	12.76	5.13	--	7.63	
6	06/05/06	12.76	5.68	--	7.08	
6	09/11/06	12.76	6.78	--	5.98	
6	12/11/06	12.76	5.52	--	7.24	
7	01/13/97	9.09	3.90	--	5.19	
7	10/06/00	9.09	6.80	--	2.29	
7	12/18/00	9.09	6.02	--	3.07	
7	03/27/01	9.09	6.44	--	2.65	
7	06/14/01	9.09	6.49	--	2.60	
7	09/21/01	9.09	6.91	--	2.18	
7	02/11/02	9.09	5.23	--	3.86	
7	05/20/02	9.09	7.31	--	1.78	
7	08/27/02	9.09	6.85	--	2.24	
7	11/04/02	9.09	7.07	--	2.02	
7	02/18/03	9.09	7.74	--	1.35	
7	06/09/03	9.09	6.45	--	2.64	
7	09/15/03	12.72	7.04	--	5.68	
7	11/18/03	12.72	6.11	--	6.61	
7	02/24/04	12.72	5.96	--	6.76	
7	05/10/04	12.72	6.62	--	6.10	
7	08/24/04	12.72	6.56	--	6.16	
7	12/13/04	12.72	6.00	--	6.72	
7	03/08/05	12.72	5.66	--	7.06	
7	06/06/05	12.72	6.45	--	6.27	
7	09/19/05	12.72	7.04	--	5.68	
7	12/12/05	12.72	6.69	--	6.03	
7	03/13/06	12.72	5.07	--	7.65	
7	06/05/06	12.72	7.40	--	5.32	
7	09/11/06	12.72	6.98	--	5.74	
7	12/11/06	12.72	5.62	--	7.10	
8	02/11/02	9.42	5.20	--	4.22	
8	05/20/02	9.42	7.52	--	1.90	Casing Tilted
8	08/27/02	9.42	7.12	--	2.30	Casing Tilted
8	11/04/02	9.42	7.25	--	2.17	Casing Tilted
8	02/18/03	9.42	5.79	--	3.63	Casing Tilted
8	06/11/03	--	--	--	--	
8	Abandoned					
9	02/11/02	9.36	4.26	--	5.10	
9	05/20/02	9.36	6.76	--	2.60	
9	08/27/02	9.36	6.38	--	2.98	
9	11/04/02	9.36	7.00	--	2.36	
9	02/18/03	9.36	4.94	--	4.42	
9	06/09/03	9.36	6.11	--	3.25	
9	09/15/03	12.89	6.96	--	5.93	
9	11/18/03	12.89	5.51	--	7.38	
9	02/24/04	12.89	5.19	--	7.70	
9	05/10/04	12.89	6.18	--	6.71	
9	08/24/04	12.89	3.46	--	9.43	
9	12/13/04	12.89	5.48	--	7.41	
9	03/08/05	12.89	6.36	--	6.53	
9	06/06/05	12.89	5.82	--	7.07	
9	09/19/05	12.89	6.87	--	6.02	
9	12/12/05	12.89	6.15	--	6.74	
9	03/13/06	12.89	5.02	--	7.87	
9	06/05/06	12.89	5.51	--	7.38	
9	09/11/06	12.89	6.80	--	6.09	
9	12/11/06	12.89	4.79	--	8.10	
10	02/11/02	9.57	4.39	--	5.18	
10	05/20/02	9.57	6.98	--	2.59	
10	08/27/02	9.57	6.95	--	2.62	
10	11/04/02	9.57	7.29	--	2.28	
10	02/18/03	9.57	5.05	--	4.52	
10	06/09/03	9.57	6.34	--	3.23	
10	09/15/03	13.20	7.21	--	5.99	
10	11/18/03	13.20	5.62	--	7.58	
10	02/24/04	13.20	5.21	--	7.99	
10	05/10/04	13.20	6.47	--	6.73	
10	08/24/04	13.20	6.61	--	6.59	
10	12/13/04	13.20	5.48	--	7.72	
10	03/08/05	13.20	6.41	--	6.79	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
10	06/06/05	13.20	6.09	--	7.11	
10	09/19/05	13.20	7.17	--	6.03	
10	12/12/05	13.20	6.29	--	6.91	
10	03/13/06	13.20	5.15	--	8.05	
10	06/05/06	13.20	5.70	--	7.50	
10	09/11/06	13.20	7.06	--	6.14	
10	12/11/06	13.20	4.88	--	8.32	
11	02/11/02	8.57	3.01	--	5.56	
11	05/20/02	8.57	5.61	--	2.96	
11	08/27/02	8.57	5.76	--	2.81	
11	11/04/02	8.57	6.03	--	2.54	
11	02/18/03	8.57	3.57	--	5.00	
11	06/09/03	8.57	4.98	--	3.59	
11	09/15/03	12.08	6.00	--	6.08	
11	11/18/03	12.08	2.38	--	9.70	
11	02/24/04	12.08	3.70	--	8.38	
11	05/10/04	12.08	5.07	--	7.01	
11	08/24/04	12.08	5.02	--	7.06	
11	12/13/04	12.08	4.12	--	7.96	
11	03/08/05	12.08	4.99	--	7.09	
11	06/06/05	12.08	4.74	--	7.34	
11	09/19/05	12.08	5.93	--	6.15	
11	12/12/05	12.08	4.95	--	7.13	
11	03/13/06	12.08	3.64	--	8.44	
11	06/05/06	12.08	4.32	--	7.76	
11	09/11/06	12.08	5.82	--	6.26	
11	12/11/06	12.08	3.91	--	8.17	
11	06/21/13	12.08	4.57	--	7.51	Baseline monitoring event
11	07/29/13	12.08	4.99	--	7.09	
11	08/26/13	12.08	4.99	--	7.09	Two-month monitoring event
11	10/02/13	12.08	3.96	--	8.12	
11	01/21/14	12.08	4.60	--	7.48	
11	04/22/14	12.08	3.29	--	8.79	
11	07/15/14	12.08	4.90	--	7.18	
11	03/17/15	12.08	2.41	--	9.67	
11	09/28/15	12.08	5.15	--	6.93	
12	02/11/02	9.06	3.57	0.04	5.52*	
12	05/20/02	9.06	6.14	0.04	2.95*	Casing Damaged
12	08/27/02	9.06	3.41	0.01	5.66*	Casing Damaged
12	11/04/02	9.06	3.80	0.01	5.27*	Casing Damaged
12	02/18/03	9.06	0.80	Sheen	8.26	Casing Damaged
12	06/09/03	9.06	2.99	Sheen	6.07	Casing Damaged
12	09/15/03	9.79	--	--	--	Not Measured-Not Located
12	11/18/03	9.79	--	--	--	Not Measured-surface water covering well
12	02/24/04	9.79	1.20	0.03	8.61*	
12	05/10/04	9.79	2.80	--	6.99	
12	08/24/04	9.79	2.51	Sheen	7.28	
12	12/13/04	9.79	1.12	--	8.67	
12	03/08/05	9.79	2.87	--	6.92	
12	06/06/05	9.79	5.16	--	4.63	
12	09/19/05	9.79	3.49	0.01	6.31*	
12	12/12/05	9.79	2.40	--	7.39	
12	03/13/06	9.79	1.00	--	8.79	
12	06/05/06	9.79	1.27	--	8.52	
12	09/11/06	9.79	3.63	--	6.16	
12	12/11/06	9.79	1.31	--	8.48	
12	03/26/07	9.79	1.40	--	8.39	
12	06/18/07	9.79	2.74	--	7.05	
12	09/24/07	9.79	3.43	--	6.36	
12	12/10/07	9.79	1.88	Sheen	7.91	
12	03/03/08	9.79	2.04	Sheen	7.75	
12	06/02/08	9.79	2.98	--	6.81	
12	09/04/08	9.79	3.74	--	6.05	
12	12/04/08	9.79	2.79	Sheen	7.00	
12	03/04/09	9.79	2.25	Sheen	7.54	
12	06/01/09	9.79	2.31	Sheen	7.48	
12	09/21/09	9.79	3.30	Sheen	6.49	
12	11/16/09	9.79	1.62	Sheen	8.17	
12	03/08/10	9.79	1.34	Sheen	8.45	
12	06/07/10	9.79	1.62	Sheen	8.17	
12	09/09/10	9.79	3.28	Sheen	6.51	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
12	11/15/10	9.79	1.92	--	7.87	
12	03/01/11	9.79	1.35	Sheen	8.44	
12	05/23/11	9.79	2.15	Sheen	7.64	
12	08/29/11	9.79	3.03	0.03	6.78*	
12	12/01/11	9.79	2.13	--	7.66	
12	03/01/12	9.79	1.65	Sheen	8.14	
12	05/30/12	9.79	1.63	Sheen	8.16	
12	08/25/12	9.79	2.89	--	6.90	
12	11/07/12	9.79	1.46	--	8.33	
12	02/27/13	9.79	1.43	--	8.36	
12	04/08/13	9.79	0.24	--	9.55	
12	06/21/13	9.79	2.84	--	6.95	Baseline monitoring event
12	07/29/13	9.79	3.95	--	5.84	
12	08/26/13	9.79	1.91	--	7.88	Two-month monitoring event
12	10/02/13	9.79	1.14	--	8.65	
12	01/21/14	9.79	2.11	--	7.68	
12	04/22/14	9.79	0.88	Sheen	8.91	
12	07/15/14	9.79	2.61	--	7.18	
12	03/17/15	9.79	0.07	--	9.72	
12	09/28/15	9.79	2.55	--	7.24	
13	02/11/02	9.77	5.06	--	4.71	
13	05/20/02	9.77	7.30	--	2.47	
13	08/27/02	9.77	7.15	--	2.62	
13	11/04/02	--	--	--	--	Not Measured-Recently destroyed
13	06/11/03	--	--	--	--	
13	Abandoned					
14	06/11/03	--	--	--	--	
14	Abandoned					
15	02/11/02	8.69	3.45	--	5.24	Casing Damaged
15	05/20/02	8.69	6.12	--	2.57	Casing Broken
15	08/27/02	8.69	5.94	--	2.75	Casing Broken
15	11/04/02	8.69	6.25	--	2.44	Casing Broken
15	02/18/03	8.69	3.71	--	4.98	Casing Broken
15	06/11/03	--	--	--	--	
15	Abandoned					
16	02/11/02	9.73	4.50	--	5.23	
16	05/20/02	9.73	7.12	--	2.61	
16	08/27/02	9.73	7.14	--	2.59	
16	11/04/02	9.73	7.46	--	2.27	
16	02/18/03	9.73	5.12	--	4.61	
16	06/09/03	9.73	6.51	--	3.22	
16	09/15/03	13.29	7.37	--	5.92	
16	11/18/03	13.29	5.60	--	7.69	
16	02/24/04	13.29	5.46	--	7.83	
16	05/10/04	13.29	6.42	--	6.87	
16	08/24/04	13.29	6.81	--	6.48	
16	12/13/04	13.29	5.94	--	7.35	
16	03/08/05	13.29	6.51	--	6.78	
16	06/06/05	13.29	6.24	--	7.05	
16	09/19/05	13.29	7.30	--	5.99	
16	12/12/05	13.29	6.46	--	6.83	
16	03/13/06	13.29	5.20	--	8.09	
16	06/05/06	13.29	5.76	--	7.53	
16	09/11/06	13.29	7.21	--	6.08	
16	12/11/06	13.29	4.88	--	8.41	
17	02/11/02	11.48	6.39	--	5.09	
17	05/20/02	11.48	8.61	--	2.87	
17	08/27/02	11.48	8.68	--	2.80	
17	11/04/02	11.48	9.06	--	2.42	
17	02/18/03	11.48	6.92	--	4.56	
17	06/09/03	11.48	7.95	--	3.53	
17	09/15/03	15.06	8.89	--	6.17	
17	11/18/03	15.06	8.51	--	6.55	
17	02/24/04	15.06	6.45	--	8.61	
17	05/10/04	15.06	7.90	--	7.16	
17	08/24/04	15.06	8.45	--	6.61	
17	12/13/04	15.06	7.83	--	7.23	
17	03/08/05	15.06	7.81	--	7.25	
17	06/06/05	15.06	7.73	--	7.33	
17	09/19/05	15.06	8.75	--	6.31	
17	12/12/05	15.06	8.03	--	7.03	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
17	03/13/06	15.06	6.57	--	8.49	
17	06/05/06	15.06	6.22	--	8.84	
17	09/11/06	15.06	8.68	--	6.38	
17	12/11/06	15.06	6.53	--	8.53	
19	02/11/02	9.13	3.75	--	5.38	
19	05/20/02	9.13	6.10	--	3.03	
19	08/27/02	9.13	6.28	--	2.85	
19	11/04/02	9.13	6.66	--	2.47	
19	02/18/03	9.13	4.33	--	4.80	
19	06/09/03	9.13	5.41	--	3.72	
19	09/15/03	12.74	6.51	--	6.23	
19	11/18/03	12.74	3.67	--	9.07	
19	02/24/04	12.74	4.25	--	8.49	
19	05/10/04	12.74	5.48	--	7.26	
19	08/24/04	12.74	5.87	--	6.87	
19	12/13/04	12.74	5.15	--	7.59	
19	03/08/05	12.74	5.45	--	7.29	
19	06/06/05	12.74	5.24	--	7.50	
19	09/19/05	12.74	6.36	--	6.38	
19	12/12/05	12.74	5.60	--	7.14	
19	03/13/06	12.74	4.02	--	8.72	
19	06/05/06	12.74	4.89	--	7.85	
19	09/11/06	12.74	6.31	--	6.43	
19	12/11/06	12.74	3.78	--	8.96	
20	02/11/02	8.88	3.15	--	5.73	
20	05/20/02	8.88	5.67	--	3.21	
20	08/27/02	8.88	5.91	--	2.97	
20	11/04/02	8.88	6.32	--	2.56	
20	02/18/03	8.88	3.77	--	5.11	
20	06/09/03	8.88	5.04	--	3.84	
20	09/15/03	12.49	6.16	--	6.33	
20	11/18/03	12.49	5.10	--	7.39	
20	02/24/04	12.49	3.81	--	8.68	
20	05/10/04	12.49	5.12	--	7.37	
20	08/24/04	12.49	5.45	--	7.04	
20	12/13/04	12.49	4.64	--	7.85	
20	03/08/05	12.49	5.11	--	7.38	
20	06/06/05	12.49	4.90	--	7.59	
20	09/19/05	12.49	6.08	--	6.41	
20	12/12/05	12.49	5.32	--	7.17	
20	03/13/06	12.49	3.64	--	8.85	
20	06/05/06	12.49	4.44	--	8.05	
20	09/11/06	12.49	5.98	--	6.51	
20	12/11/06	12.49	3.47	--	9.02	
21	02/11/02	9.42	3.58	--	5.84	
21	05/20/02	9.42	6.18	--	3.24	
21	08/27/02	9.42	6.43	--	2.99	
21	11/04/02	9.42	6.81	--	2.61	
21	02/18/03	9.42	4.18	--	5.24	
21	06/09/03	9.42	5.56	--	3.86	
21	09/15/03	13.04	6.68	--	6.36	
21	11/18/03	13.04	5.03	--	8.01	
21	02/24/04	13.04	4.30	--	8.74	
21	05/10/04	13.04	6.56	--	6.48	
21	08/24/04	13.04	6.04	--	7.00	
21	12/13/04	13.04	5.02	--	8.02	
21	03/08/05	13.04	5.62	--	7.42	
21	06/06/05	13.04	5.43	--	7.61	
21	09/19/05	13.04	6.63	--	6.41	
21	12/12/05	13.04	5.70	--	7.34	
21	03/13/06	13.04	4.19	--	8.85	
21	06/05/06	13.04	4.96	--	8.08	
21	09/11/06	13.04	6.50	--	6.54	
21	12/11/06	13.04	3.99	--	9.05	
22	02/11/02	9.57	3.72	--	5.85	
22	05/20/02	9.57	6.21	--	3.36	
22	08/27/02	9.57	6.55	--	3.02	
22	11/04/02	9.57	6.89	--	2.68	
22	02/18/03	9.57	4.27	--	5.30	
22	06/09/03	9.57	5.60	--	3.97	
22	09/15/03	13.19	6.75	--	6.44	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
22	11/18/03	13.19	5.07	--	8.12	
22	02/24/04	13.19	4.39	--	8.80	
22	05/10/04	13.19	5.75	--	7.44	
22	08/24/04	13.19	6.23	--	6.96	
22	12/13/04	13.19	5.04	--	8.15	
22	03/08/05	13.19	5.77	--	7.42	
22	06/06/05	13.19	5.55	--	7.64	
22	09/19/05	13.19	6.75	--	6.44	
22	12/12/05	13.19	5.80	--	7.39	
22	03/13/06	13.19	4.35	--	8.84	
22	06/05/06	13.19	5.04	--	8.15	
22	09/11/06	13.19	6.66	--	6.53	
22	12/11/06	13.19	4.11	--	9.08	
23	02/11/02	8.94	3.51	--	5.43	
23	05/20/02	8.94	5.93	--	3.01	
23	08/27/02	8.94	5.93	--	3.01	
23	11/04/02	8.94	6.29	--	2.65	
23	02/18/03	8.94	4.04	--	4.90	
23	06/09/03	8.94	5.26	--	3.68	
23	09/15/03	12.55	6.19	--	6.36	
23	11/18/03	12.55	6.11	--	6.44	
23	02/24/04	12.55	4.20	--	8.35	
23	05/10/04	12.55	5.35	--	7.20	
23	08/24/04	12.55	5.78	--	6.77	
23	12/13/04	12.55	4.73	--	7.82	
23	03/08/05	12.55	5.37	--	7.18	
23	06/06/05	12.55	5.16	--	7.39	
23	09/19/05	12.55	6.46	--	6.09	
23	12/12/05	12.55	5.40	--	7.15	
23	03/13/06	12.55	4.03	--	8.52	
23	06/05/06	12.55	4.79	--	7.76	
23	09/11/06	12.55	6.13	--	6.42	
23	12/11/06	12.55	4.01	--	8.54	
24	06/11/03	--	--	--	--	
24	Abandoned					
25	02/11/02	9.48	3.76	--	5.72	
25	05/20/02	9.48	6.19	--	3.29	
25	08/27/02	9.48	6.33	--	3.15	
25	11/04/02	9.48	6.74	--	2.74	Casing Tilted
25	02/18/03	9.48	4.13	--	5.35	Casing Tilted
25	06/11/03	--	--	--	--	
25	Abandoned					
26	02/11/02	9.43	3.70	--	5.73	
26	05/20/02	9.43	--	--	--	Not Measured-Dry
26	08/27/02	9.43	6.02	--	3.41	
26	11/04/02	9.43	5.97	--	3.46	
26	02/18/03	9.43	5.11	--	4.32	
26	06/09/03	9.43	6.02	--	3.41	
26	09/15/03	13.87	6.01	--	7.86	
26	11/18/03	13.87	4.32	--	9.55	
26	02/24/04	13.87	5.14	--	8.73	
26	05/10/04	13.87	6.05	--	7.82	
26	08/24/04	13.87	5.19	--	8.68	
26	12/13/04	13.87	5.99	--	7.88	
26	03/08/05	13.87	6.02	--	7.85	
26	06/06/05	13.87	6.02	--	7.85	
26	09/19/05	13.87	4.51	--	9.36	
26	12/12/05	13.87	6.05	--	7.82	
26	03/13/06	13.87	5.00	--	8.87	
26	06/05/06	13.87	5.78	--	8.09	
26	09/11/06	13.87	7.01	--	6.86	
26	12/11/06	13.87	4.81	--	9.06	
27	02/11/02	9.20	3.57	--	5.63	
27	05/20/02	9.20	6.00	--	3.20	
27	08/27/02	9.20	6.21	--	2.99	
27	11/04/02	9.20	6.63	--	2.57	
27	02/18/03	9.20	4.03	--	5.17	
27	06/09/03	9.01	5.22	--	3.79	
27	09/15/03	12.65	6.36	--	6.29	
27	11/18/03	12.65	5.84	--	6.81	
27	02/24/04	12.65	4.04	--	8.61	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
27	05/10/04	12.65	5.31	--	7.34	
27	08/24/04	12.65	5.71	--	6.94	
27	12/13/04	12.65	4.91	--	7.74	
27	03/08/05	12.65	5.28	--	7.37	
27	06/06/05	12.65	5.13	--	7.52	
27	09/19/05	12.65	6.22	--	6.43	
27	12/12/05	12.65	5.40	--	7.25	
27	03/13/06	12.65	3.82	--	8.83	
27	06/05/06	12.65	4.66	--	7.99	
27	09/11/06	12.65	6.16	--	6.49	
27	12/11/06	12.65	3.60	--	9.05	
MW-1	02/11/02	9.37	4.60	--	4.77	
MW-1	05/20/02	9.37	6.75	--	2.62	
MW-1	08/27/02	9.37	6.51	--	2.86	
MW-1	11/04/02	9.37	6.90	--	2.47	
MW-1	02/18/03	9.37	5.10	--	4.27	
MW-1	06/09/03	9.37	5.94	--	3.43	
MW-1	09/15/03	13.21	6.72	--	6.49	
MW-1	11/18/03	13.21	5.91	--	7.30	
MW-1	02/24/04	13.21	5.05	--	8.16	
MW-1	05/10/04	13.21	6.06	--	7.15	
MW-1	08/24/04	13.21	6.45	--	6.76	
MW-1	12/13/04	13.21	5.63	--	7.58	
MW-1	03/08/05	13.21	6.09	--	7.12	
MW-1	06/06/05	13.21	6.93	--	6.28	
MW-1	09/19/05	13.21	6.74	--	6.47	
MW-1	12/12/05	13.21	6.16	--	7.05	
MW-1	03/13/06	13.21	4.96	--	8.25	
MW-1	06/05/06	13.21	5.72	--	7.49	
MW-1	09/11/06	13.21	6.72	--	6.49	
MW-1	12/11/06	13.21	5.20	--	8.01	
MW-1	03/26/07	13.21	5.24	--	7.97	
MW-1	06/18/07	13.21	5.98	--	7.23	
MW-1	09/25/07	13.21	6.72	--	6.49	
MW-1	12/10/07	13.21	5.34	--	7.87	
MW-1	03/03/08	13.21	5.70	--	7.51	
MW-1	06/02/08	13.21	6.30	--	6.91	
MW-1	09/04/08	13.21	6.48	--	6.73	
MW-1	12/04/08	13.21	6.33	--	6.88	
MW-1	03/04/09	13.21	--	--	--	Not Measured-Inaccessible
MW-1	06/01/09	13.21	6.00	--	7.21	
MW-1	09/21/09	13.21	6.75	--	6.46	
MW-1	11/16/09	13.21	5.62	--	7.59	
MW-1	03/08/10	13.21	5.05	--	8.16	
MW-1	06/07/10	13.21	5.48	--	7.73	
MW-1	09/09/10	13.21	6.55	--	6.66	
MW-1	11/15/10	13.21	5.71	--	7.50	
MW-1	03/01/11	13.21	4.97	--	8.24	
MW-1	05/23/11	13.21	5.04	--	8.17	
MW-1	08/29/11	13.21	6.35	--	6.86	
MW-1	12/01/11	13.21	5.80	--	7.41	
MW-1	03/01/12	13.21	5.59	--	7.62	
MW-1	05/30/12	13.21	5.55	--	7.66	
MW-1	08/25/12	13.21	6.25	--	6.96	
MW-1	11/07/12	13.21	5.58	--	7.63	
MW-1	02/27/13	13.21	5.24	--	7.97	
MW-1	04/08/13	13.21	5.12	--	8.09	
MW-1	07/29/13	13.21	6.19	--	7.02	
MW-1	10/02/13	13.21	5.83	--	7.38	
MW-1	01/21/14	13.21	5.96	--	7.25	
MW-1	04/22/14	13.21	5.05	--	8.16	
MW-1	07/15/14	13.21	5.90	--	7.31	
MW-1	03/17/15	13.21	4.73	--	8.48	
MW-1	09/28/15	13.21	6.30	--	6.91	
MW-2	02/11/02	11.33	6.13	--	5.20	
MW-2	05/20/02	11.33	8.40	--	2.93	
MW-2	08/27/02	11.33	8.50	--	2.83	
MW-2	11/04/02	11.33	8.85	--	2.48	
MW-2	02/18/03	11.33	6.10	--	5.23	
MW-2	06/09/03	11.33	7.68	--	3.65	
MW-2	09/15/03	15.22	8.71	--	6.51	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-2	11/18/03	15.22	7.60	--	7.62	
MW-2	02/24/04	15.22	6.56	--	8.66	
MW-2	05/10/04	15.22	7.78	--	7.44	
MW-2	08/24/04	15.22	8.33	--	6.89	
MW-2	12/13/04	15.22	7.69	--	7.53	
MW-2	03/08/05	15.22	7.72	--	7.50	
MW-2	06/06/05	15.22	7.61	--	7.61	
MW-2	09/19/05	15.22	8.58	--	6.64	
MW-2	12/12/05	15.22	7.86	--	7.36	
MW-2	03/13/06	15.22	6.38	--	8.84	
MW-2	06/05/06	15.22	7.39	--	7.83	
MW-2	09/11/06	15.22	8.50	--	6.72	
MW-2	12/11/06	15.22	6.37	--	8.85	
MW-2	03/26/07	15.22	6.71	--	8.51	
MW-2	06/18/07	15.22	7.68	--	7.54	
MW-2	09/24/07	15.22	8.84	--	6.38	
MW-2	12/10/07	15.22	6.85	--	8.37	
MW-2	03/03/08	15.22	7.14	--	8.08	
MW-2	06/02/08	15.22	7.91	--	7.31	
MW-2	09/04/08	15.22	8.33	--	6.89	
MW-2	12/04/08	15.22	8.01	--	7.21	
MW-2	03/04/09	15.22	7.43	--	7.79	
MW-2	06/01/09	15.22	7.54	--	7.68	
MW-2	09/21/09	15.22	8.52	--	6.70	
MW-2	11/16/09	15.22	7.28	--	7.94	
MW-2	03/08/10	15.22	6.42	--	8.80	
MW-2	06/07/10	15.22	7.00	--	8.22	
MW-2	09/09/10	15.22	8.26	--	6.96	
MW-2	11/15/10	15.22	7.21	--	8.01	
MW-2	03/01/11	15.22	6.26	--	8.96	
MW-2	05/23/11	15.22	6.39	--	8.83	
MW-2	08/29/11	15.22	8.01	--	7.21	
MW-2	12/01/11	15.22	7.56	--	7.66	
MW-2	03/01/12	15.22	7.03	--	8.19	
MW-2	05/30/12	15.22	6.97	--	8.25	
MW-2	08/25/12	15.22	7.88	--	7.34	
MW-2	11/07/12	15.22	7.34	--	7.88	
MW-2	02/27/13	15.22	6.59	--	8.63	
MW-2	04/08/13	15.22	6.36	--	8.86	
MW-2	07/29/13	15.22	7.82	--	7.40	
MW-2	10/02/13	15.22	7.44	--	7.78	
MW-2	01/21/14	15.22	7.55	--	7.67	
MW-2	04/22/14	15.22	6.21	--	9.01	
MW-2	07/15/14	15.22	7.47	--	7.75	
MW-2	03/17/15	15.22	5.35	--	9.87	
MW-2	09/28/15	15.22	7.99	--	7.23	
MW-3	02/11/02	7.49	1.82	--	5.67	
MW-3	05/20/02	7.49	4.27	--	3.22	
MW-3	08/27/02	7.49	4.50	--	2.99	
MW-3	11/04/02	7.49	4.92	--	2.57	
MW-3	02/18/03	7.49	2.38	--	5.11	
MW-3	06/09/03	7.49	3.67	--	3.82	
MW-3	09/15/03	11.39	4.81	--	6.58	
MW-3	11/18/03	11.39	2.97	--	8.42	
MW-3	02/24/04	11.39	2.45	--	8.94	
MW-3	05/10/04	11.39	3.64	--	7.75	
MW-3	08/24/04	11.39	4.14	--	7.25	
MW-3	12/13/04	11.39	3.22	--	8.17	
MW-3	03/08/05	11.39	3.70	--	7.69	
MW-3	06/06/05	11.39	3.51	--	7.88	
MW-3	09/19/05	11.39	4.65	--	6.74	
MW-3	12/12/05	11.39	3.81	--	7.58	
MW-3	03/13/06	11.39	2.43	--	8.96	
MW-3	06/05/06	11.39	3.05	--	8.34	
MW-3	09/11/06	11.39	4.58	--	6.81	
MW-3	12/11/06	11.39	2.00	--	9.39	
MW-3	03/26/07	11.39	2.46	--	8.93	
MW-3	06/18/07	11.39	3.81	--	7.58	
MW-3	09/24/07	11.39	4.58	--	6.81	
MW-3	12/10/07	11.39	2.53	--	8.86	
MW-3	03/03/08	11.39	3.10	--	8.29	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-3	06/02/08	11.39	3.88	--	7.51	
MW-3	09/04/08	11.39	4.27	--	7.12	
MW-3	12/04/08	11.39	3.99	--	7.40	
MW-3	03/04/09	11.39	3.28	--	8.11	
MW-3	06/01/09	11.39	3.48	--	7.91	
MW-3	09/21/09	11.39	4.51	--	6.88	
MW-3	11/16/09	11.39	2.97	--	8.42	
MW-3	03/08/10	11.39	2.32	--	9.07	
MW-3	06/07/10	11.39	2.86	--	8.53	
MW-3	09/09/10	11.39	4.23	--	7.16	
MW-3	11/15/10	11.39	2.99	--	8.40	
MW-3	03/01/11	11.39	1.86	--	9.53	
MW-3	05/23/11	11.39	2.03	--	9.36	
MW-3	08/29/11	11.39	4.02	--	7.37	
MW-3	12/01/11	11.39	3.27	--	8.12	
MW-3	03/01/12	11.39	2.99	--	8.40	
MW-3	05/30/12	11.39	2.93	--	8.46	
MW-3	08/25/12	11.39	3.90	--	7.49	
MW-3	11/07/12	11.39	3.10	--	8.29	
MW-3	02/27/13	11.39	2.23	--	9.16	
MW-3	04/08/13	11.39	2.04	--	9.35	
MW-3	07/29/13	11.39	3.78	--	7.61	
MW-3	10/02/13	11.39	3.06	--	8.33	
MW-3	01/21/14	11.39	3.43	--	7.96	
MW-3	04/22/14	11.39	2.06	--	9.33	
MW-3	07/15/14	11.39	3.51	--	7.88	
MW-3	03/17/15	11.39	1.30	--	10.09	
MW-3	09/28/15	11.39	4.02	--	7.37	
MW-4	02/11/02	10.44	5.24	--	5.20	
MW-4	05/20/02	10.44	7.60	--	2.84	
MW-4	08/27/02	10.44	7.40	--	3.04	
MW-4	11/04/02	10.44	7.90	0.15	2.66*	
MW-4	02/18/03	10.44	5.79	--	4.65	
MW-4	06/09/03	10.44	6.81	--	3.63	
MW-4	09/15/03	14.69	7.70	0.01	7.00*	
MW-4	11/18/03	14.69	6.71	Sheen	7.98	
MW-4	02/24/04	14.69	5.82	Sheen	8.87	
MW-4	05/10/04	14.69	6.93	Sheen	7.76	
MW-4	08/24/04	14.69	7.24	--	7.45	
MW-4	12/13/04	14.69	6.45	Sheen	8.24	
MW-4	03/08/05	14.69	6.94	--	7.75	
MW-4	06/06/05	14.69	6.71	--	7.98	
MW-4	09/19/05	14.69	7.67	--	7.02	
MW-4	12/12/05	14.69	6.97	--	7.72	
MW-4	03/13/06	14.69	5.77	--	8.92	
MW-4	06/05/06	14.69	6.42	--	8.27	
MW-4	09/11/06	14.69	7.61	--	7.08	
MW-4	12/11/06	14.69	5.81	--	8.88	
MW-4	03/26/07	14.69	5.96	--	8.73	
MW-4	06/18/07	14.69	6.99	--	7.70	
MW-4	09/25/07	14.69	7.46	--	7.23	
MW-4	12/10/07	14.69	5.93	--	8.76	
MW-4	03/03/08	14.69	6.44	--	8.25	
MW-4	06/02/08	14.69	7.37	--	7.32	
MW-4	09/04/08	14.69	7.20	--	7.49	
MW-4	12/04/08	14.69	7.77	--	6.92	
MW-4	03/04/09	14.69	6.68	--	8.01	
MW-4	06/01/09	14.69	6.78	--	7.91	
MW-4	09/21/09	14.69	7.56	--	7.13	
MW-4	11/16/09	14.69	6.34	--	8.35	
MW-4	03/08/10	14.69	5.86	--	8.83	
MW-4	06/07/10	14.69	6.27	--	8.42	
MW-4	09/09/10	14.69	7.40	--	7.29	
MW-4	11/15/10	14.69	6.39	--	8.30	
MW-4	03/01/11	14.69	5.70	--	8.99	
MW-4	05/23/11	14.69	5.74	--	8.95	
MW-4	08/29/11	14.69	7.25	--	7.44	
MW-4	12/01/11	14.69	6.52	--	8.17	
MW-4	03/01/12	14.69	6.38	--	8.31	
MW-4	05/30/12	14.69	6.33	--	8.36	
MW-4	08/25/12	14.69	7.05	--	7.64	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-4	11/07/12	14.69	6.31	--	8.38	
MW-4	02/27/13	14.69	6.02	--	8.67	
MW-4	04/08/13	14.69	5.74	--	8.95	
MW-4	07/29/13	14.69	7.02	--	7.67	
MW-4	10/02/13	14.69	6.53	--	8.16	
MW-4	01/21/14	14.69	6.75	--	7.94	
MW-4	04/22/14	14.69	5.84	--	8.85	
MW-4	07/15/14	14.69	6.85	--	7.84	
MW-4	03/17/15	14.69	5.21	--	9.48	
MW-4	09/28/15	14.69	7.05	--	7.64	
MW-5	02/11/02	7.10	1.50	--	5.60	
MW-5	05/20/02	7.10	4.06	--	3.04	
MW-5	08/27/02	7.10	4.23	--	2.87	
MW-5	11/04/02	7.10	4.63	--	2.47	
MW-5	02/18/03	7.10	1.98	--	5.12	
MW-5	06/09/03	7.10	3.47	--	3.63	
MW-5	09/15/03	11.13	4.49	--	6.64	
MW-5	11/18/03	11.13	2.81	--	8.32	
MW-5	02/24/04	11.13	2.11	--	9.02	
MW-5	05/10/04	11.13	3.50	--	7.63	
MW-5	08/24/04	11.13	3.71	--	7.42	
MW-5	12/13/04	11.13	2.75	--	8.38	
MW-5	03/08/05	11.13	3.53	--	7.60	
MW-5	06/06/05	11.13	3.22	--	7.91	
MW-5	09/19/05	11.13	4.33	--	6.80	
MW-5	12/12/05	11.13	3.43	--	7.70	
MW-5	03/13/06	11.13	2.10	--	9.03	
MW-5	06/05/06	11.13	2.59	--	8.54	
MW-5	09/11/06	11.13	4.33	--	6.80	
MW-5	12/11/06	11.13	1.70	--	9.43	
MW-5	03/26/07	11.13	2.22	--	8.91	
MW-5	06/18/07	11.13	--	--	--	Not Measured-No Access due to construction
MW-5	09/24/07	11.13	4.28	--	6.85	
MW-5	12/10/07	11.13	2.06	--	9.07	
MW-5	03/03/08	11.13	2.81	--	8.32	
MW-5	06/02/08	11.13	3.36	--	7.77	
MW-5	09/04/08	11.13	3.91	--	7.22	
MW-5	12/04/08	11.13	3.64	--	7.49	
MW-5	03/04/09	11.13	2.98	--	8.15	
MW-5	06/01/09	11.13	3.21	--	7.92	
MW-5	09/21/09	11.13	4.23	--	6.90	
MW-5	11/16/09	11.13	2.50	--	8.63	
MW-5	03/08/10	11.13	2.11	--	9.02	
MW-5	06/07/10	11.13	2.55	--	8.58	
MW-5	09/09/10	11.13	3.93	--	7.20	
MW-5	11/15/10	11.13	2.55	--	8.58	
MW-5	03/01/11	11.13	1.63	--	9.50	
MW-5	05/23/11	11.13	2.00	--	9.13	
MW-5	08/29/11	11.13	3.82	--	7.31	
MW-5	12/01/11	11.13	2.80	--	8.33	
MW-5	03/01/12	11.13	2.66	--	8.47	
MW-5	05/30/12	11.13	2.73	--	8.40	
MW-5	08/25/12	11.13	3.54	--	7.59	
MW-5	11/07/12	11.13	2.56	--	8.57	
MW-5	02/27/13	11.13	2.20	--	8.93	
MW-5	04/08/13	11.13	1.69	--	9.44	
MW-5	07/29/13	11.13	3.41	--	7.72	
MW-5	10/02/13	11.13	2.51	--	8.62	
MW-5	01/21/14	11.13	3.11	--	8.02	
MW-5	04/22/14	11.13	1.79	--	9.34	
MW-5	07/15/14	11.13	3.29	--	7.84	
MW-5	03/17/15	11.13	1.04	--	10.09	
MW-5	09/28/15	11.13	3.65	--	7.48	
MW-6	02/11/02	11.15	6.35	--	4.80	
MW-6	05/20/02	11.15	8.48	--	2.67	
MW-6	08/27/02	11.15	8.45	--	2.70	
MW-6	11/04/02	11.15	8.80	--	2.35	
MW-6	02/18/03	11.15	6.85	--	4.30	
MW-6	06/09/03	11.15	7.74	--	3.41	
MW-6	09/15/03	15.17	8.65	--	6.52	
MW-6	11/18/03	15.17	7.60	--	7.57	

Table 1

Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-6	02/24/04	15.17	6.61	--	8.56	
MW-6	05/10/04	15.17	7.76	--	7.41	
MW-6	08/24/04	15.17	8.28	--	6.89	
MW-6	12/13/04	15.17	7.67	--	7.50	
MW-6	03/08/05	15.17	7.70	--	7.47	
MW-6	06/06/05	15.17	7.55	--	7.62	
MW-6	09/19/05	15.17	8.48	--	6.69	
MW-6	12/12/05	15.17	7.89	--	7.28	
MW-6	03/13/06	15.17	6.46	--	8.71	
MW-6	06/05/06	15.17	7.25	--	7.92	
MW-6	09/11/06	15.17	8.43	--	6.74	
MW-6	12/11/06	15.17	6.50	--	8.67	
MW-6	03/26/07	15.17	6.61	--	8.56	
MW-6	06/18/07	15.17	7.76	--	7.41	
MW-6	09/24/07	15.17	8.43	--	6.74	
MW-6	12/10/07	15.17	6.93	--	8.24	
MW-6	03/03/08	15.17	7.09	--	8.08	
MW-6	06/02/08	15.17	7.88	--	7.29	
MW-6	09/04/08	15.17	8.19	--	6.98	
MW-6	12/04/08	15.17	7.95	--	7.22	
MW-6	03/04/09	15.17	7.41	--	7.76	
MW-6	06/01/09	15.17	7.54	--	7.63	
MW-6	09/21/09	15.17	8.42	--	6.75	
MW-6	11/16/09	15.17	7.30	--	7.87	
MW-6	03/08/10	15.17	6.45	--	8.72	
MW-6	06/07/10	15.17	7.09	--	8.08	
MW-6	09/09/10	15.17	8.10	--	7.07	
MW-6	11/15/10	15.17	7.21	--	7.96	
MW-6	03/01/11	15.17	6.24	--	8.93	
MW-6	05/23/11	15.17	6.42	--	8.75	
MW-6	08/29/11	15.17	7.92	--	7.25	
MW-6	12/01/11	15.17	7.45	--	7.72	
MW-6	03/01/12	15.17	6.97	--	8.20	
MW-6	05/30/12	15.17	6.91	--	8.26	
MW-6	08/25/12	15.17	7.09	--	8.08	
MW-6	11/07/12	15.17	7.12	--	8.05	
MW-6	02/27/13	15.17	6.59	--	8.58	
MW-6	04/08/13	15.17	6.22	--	8.95	
MW-6	07/29/13	15.17	7.34	--	7.83	
MW-6	10/02/13	15.17	6.98	--	8.19	
MW-6	01/21/14	15.17	7.21	--	7.96	
MW-6	04/22/14	15.17	6.71	--	8.46	
MW-6	07/15/14	15.17	7.39	--	7.78	
MW-6	03/17/15	15.17	5.72	--	9.45	
MW-6	09/28/15	15.17	7.68	--	7.49	
MW-7	02/11/02	6.78	1.49	--	5.29	
MW-7	05/20/02	6.78	3.91	--	2.87	
MW-7	08/27/02	6.78	4.03	--	2.75	
MW-7	11/04/02	6.78	4.44	--	2.34	
MW-7	02/18/03	6.78	1.82	Sheen	4.96	
MW-7	06/09/03	6.78	3.29	--	3.49	
MW-7	09/15/03	10.62	4.30	--	6.32	
MW-7	11/18/03	10.62	2.83	--	7.79	
MW-7	02/24/04	10.62	2.16	--	8.46	
MW-7	05/10/04	10.62	3.32	--	7.30	
MW-7	08/24/04	10.62	3.31	--	7.31	
MW-7	12/13/04	10.62	2.27	--	8.35	
MW-7	03/08/05	10.62	3.23	--	7.39	
MW-7	06/06/05	10.62	3.03	--	7.59	
MW-7	09/19/05	10.62	4.16	Sheen	6.46	
MW-7	12/12/05	10.62	3.17	--	7.45	
MW-7	03/13/06	10.62	1.88	--	8.74	
MW-7	06/05/06	10.62	2.34	--	8.28	
MW-7	09/11/06	10.62	4.10	--	6.52	
MW-7	12/11/06	10.62	1.72	--	8.90	
MW-7	03/26/07	10.62	2.00	--	8.62	
MW-7	06/18/07	10.62	3.34	--	7.28	
MW-7	09/24/07	10.62	4.00	--	6.62	
MW-7	12/10/07	10.62	1.12	Sheen	9.50	
MW-7	03/03/08	10.62	2.49	Sheen	8.13	
MW-7	06/02/08	10.62	3.41	Sheen	7.21	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-7	09/04/08	10.62	3.60	--	7.02	
MW-7	12/04/08	10.62	3.36	--	7.26	
MW-7	03/04/09	10.62	2.90	--	7.72	
MW-7	06/01/09	10.62	3.08	Sheen	7.54	
MW-7	09/21/09	10.62	1.91	--	8.71	
MW-7	11/16/09	10.62	2.54	Sheen	8.08	
MW-7	03/08/10	10.62	2.31	--	8.31	
MW-7	06/07/10	10.62	2.67	--	7.95	
MW-7	09/09/10	10.62	3.79	--	6.83	
MW-7	11/15/10	10.62	2.58	--	8.04	
MW-7	03/01/11	10.62	2.51	--	8.11	
MW-7	05/23/11	10.62	2.24	--	8.38	
MW-7	08/29/11	10.62	3.87	--	6.75	
MW-7	12/01/11	10.62	2.67	--	7.95	
MW-7	03/01/12	10.62	2.80	--	7.82	
MW-7	05/30/12	10.62	2.82	--	7.80	
MW-7	08/25/12	10.62	3.35	--	7.27	
MW-7	11/07/12	10.62	2.23	--	8.39	
MW-7	02/27/13	10.62	2.33	--	8.29	
MW-7	04/08/13	10.62	1.88	--	8.74	
MW-7	06/21/13	10.62	3.10	--	7.52	Baseline monitoring event
MW-7	07/29/13	10.62	3.16	--	7.46	
MW-7	08/26/13	10.62	2.82	--	7.80	Two-month monitoring event
MW-7	10/02/13	10.62	2.08	--	8.54	
MW-7	01/21/14	10.62	2.78	--	7.84	
MW-7	04/22/14	10.62	1.45	--	9.17	
MW-7	07/15/14	10.62	3.02	--	7.60	
MW-7	03/17/15	10.62	0.76	--	9.86	
MW-7	09/28/15	10.62	3.59	--	7.03	
MW-8	02/11/02	6.42	1.38	--	5.04	
MW-8	05/20/02	6.42	3.87	0.01	2.56*	
MW-8	08/27/02	6.42	5.83	--	0.59	
MW-8	11/04/02	6.42	4.23	--	2.19	
MW-8	02/18/03	6.42	1.37	--	5.05	
MW-8	06/09/03	6.42	3.33	--	3.09	
MW-8	09/15/03	10.63	4.10	--	6.53	
MW-8	11/18/03	10.63	2.25	--	8.38	
MW-8	02/24/04	10.63	2.15	--	8.48	
MW-8	05/10/04	10.63	3.37	--	7.26	
MW-8	08/24/04	10.63	3.51	--	7.12	
MW-8	12/13/04	10.63	2.40	--	8.23	
MW-8	03/08/05	10.63	3.25	--	7.38	
MW-8	06/06/05	10.63	3.01	--	7.62	
MW-8	09/19/05	10.63	4.05	--	6.58	
MW-8	12/12/05	10.63	3.20	--	7.43	
MW-8	03/13/06	10.63	2.22	--	8.41	
MW-8	06/05/06	10.63	2.59	--	8.04	
MW-8	09/11/06	10.63	3.96	--	6.67	
MW-8	12/11/06	10.63	1.81	--	8.82	
MW-8	03/26/07	10.63	4.01	--	6.62	
MW-8	06/18/07	10.63	4.55	--	6.08	
MW-8	09/24/07	10.63	5.05	--	5.58	
MW-8	12/10/07	10.63	4.18	--	6.45	
MW-8	03/03/08	10.63	4.25	--	6.38	
MW-8	06/02/08	10.63	4.65	--	5.98	
MW-8	09/04/08	10.63	4.69	--	5.94	
MW-8	12/04/08	10.63	--	--	--	Not Measured-Inaccessible
MW-8	03/04/09	10.63	3.36	--	7.27	
MW-8	06/01/09	10.63	3.67	--	6.96	
MW-8	09/21/09	10.63	4.42	--	6.21	
MW-8	11/16/09	10.63	2.85	--	7.78	
MW-8	03/08/10	10.63	2.65	--	7.98	
MW-8	06/07/10	10.63	3.10	--	7.53	
MW-8	09/09/10	10.63	4.29	--	6.34	
MW-8	11/15/10	10.63	3.12	--	7.51	
MW-8	03/01/11	10.63	2.22	--	8.41	
MW-8	05/23/11	10.63	2.76	--	7.87	
MW-8	08/29/11	10.63	4.22	--	6.41	
MW-8	12/01/11	10.63	3.11	--	7.52	
MW-8	03/01/12	10.63	3.18	--	7.45	
MW-8	05/30/12	10.63	3.27	--	7.36	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-8	08/25/12	10.63	4.02	--	6.61	
MW-8	11/07/12	10.63	2.93	--	7.70	
MW-8	02/27/13	10.63	2.98	--	7.65	
MW-8	04/08/13	10.63	2.41	--	8.22	
MW-8	07/29/13	10.63	3.98	--	6.65	
MW-8	10/02/13	10.63	2.86	--	7.77	
MW-8	01/21/14	10.63	3.56	--	7.07	
MW-8	04/22/14	10.63	2.68	--	7.95	
MW-8	07/15/14	10.63	3.83	--	6.80	
MW-8	03/17/15	10.63	1.62	--	9.01	
MW-8	09/28/15	10.63	3.99	--	6.64	
MW-9	02/11/02	6.14	2.03	0.02	4.13*	
MW-9	05/20/02	6.14	4.16	0.01	1.99*	
MW-9	08/27/02	6.14	5.85	0.01	0.30*	
MW-9	11/04/02	6.14	4.07	0.01	2.08*	
MW-9	02/18/03	6.14	2.35	0.01	3.80*	
MW-9	06/09/03	6.14	3.53	--	2.61	
MW-9	09/15/03	9.75	3.99	Sheen	5.76	
MW-9	11/18/03	9.75	2.95	Sheen	6.80	
MW-9	02/24/04	9.75	2.41	Sheen	7.34	
MW-9	05/10/04	9.75	3.36	--	6.39	
MW-9	08/24/04	9.75	3.46	--	6.29	
MW-9	12/13/04	9.75	2.73	--	7.02	
MW-9	03/08/05	9.75	3.24	--	6.51	
MW-9	06/06/05	9.75	3.13	--	6.62	
MW-9	09/19/05	9.75	3.91	--	5.84	
MW-9	12/12/05	9.75	3.27	--	6.48	
MW-9	03/13/06	9.75	2.30	--	7.45	
MW-9	06/05/06	9.75	2.74	--	7.01	
MW-9	09/11/06	9.75	3.85	--	5.90	
MW-9	12/11/06	9.75	2.09	--	7.66	
MW-9	03/26/07	9.75	2.44	--	7.31	
MW-9	06/18/07	9.75	2.44	--	7.31	
MW-9	09/24/07	9.75	3.88	--	5.87	
MW-9	12/10/07	9.75	2.24	Sheen	7.51	
MW-9	03/03/08	9.75	2.82	Sheen	6.93	
MW-9	06/02/08	9.75	3.52	--	6.23	
MW-9	09/04/08	9.75	3.54	--	6.21	
MW-9	12/04/08	9.75	3.34	--	6.41	
MW-9	03/04/09	9.75	2.89	--	6.86	
MW-9	06/01/09	9.75	3.19	--	6.56	
MW-9	09/21/09	9.75	3.76	Sheen	5.99	
MW-9	11/16/09	9.75	2.63	--	7.12	
MW-9	03/08/10	9.75	2.31	Sheen	7.44	
MW-9	06/07/10	9.75	2.72	Sheen	7.03	
MW-9	09/09/10	9.75	3.69	Sheen	6.06	
MW-9	11/15/10	9.75	2.71	Sheen	7.04	
MW-9	03/01/11	9.75	2.39	Sheen	7.36	
MW-9	05/23/11	9.75	2.58	Sheen	7.17	
MW-9	08/29/11	9.75	3.57	--	6.18	
MW-9	12/01/11	9.75	2.90	--	6.85	
MW-9	03/01/12	9.75	2.96	--	6.79	
MW-9	05/30/12	9.75	2.66	--	7.09	
MW-9	08/25/12	9.75	3.28	--	6.47	
MW-9	11/07/12	9.75	2.49	--	7.26	
MW-9	02/27/13	9.75	2.71	--	7.04	
MW-9	04/08/13	9.75	2.02	--	7.73	
MW-9	06/21/13	9.75	3.01	--	6.74	Baseline monitoring event
MW-9	07/29/13	9.75	3.19	--	6.56	
MW-9	08/26/13	9.75	3.11	--	6.64	Two-month monitoring event
MW-9	10/02/13	9.75	2.40	--	7.35	
MW-9	01/21/14	9.75	2.85	--	6.90	
MW-9	04/22/14	9.75	2.07	--	7.68	
MW-9	07/15/14	9.75	3.06	--	6.69	
MW-9	03/17/15	9.75	0.87	--	8.88	
MW-9	09/28/15	9.75	3.20	--	6.55	
MW-10D	03/27/01	--	--	--	--	Not Measured-Damaged
MW-10D	09/24/07	9.75	3.88	--	5.87	
MW-10D	Destroyed during construction activities in 2000					
MW-11D	02/11/02	6.81	3.75	--	3.06	
MW-11D	05/20/02	6.81	5.27	0.02	1.56*	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-11D	08/27/02	6.81	4.70	0.01	2.12*	
MW-11D	11/04/02	6.81	4.93	--	1.88	
MW-11D	02/18/03	6.81	3.59	--	3.22	
MW-11D	06/09/03	6.81	4.55	--	2.26	
MW-11D	09/15/03	10.78	4.91	--	5.87	
MW-11D	11/18/03	10.78	4.28	--	6.50	
MW-11D	02/24/04	10.78	3.71	--	7.07	
MW-11D	05/10/04	10.78	4.35	--	6.43	
MW-11D	08/24/04	10.78	4.13	--	6.65	
MW-11D	12/13/04	10.78	4.26	--	6.52	
MW-11D	03/08/05	10.78	4.58	--	6.20	
MW-11D	06/06/05	10.78	4.43	--	6.35	
MW-11D	09/19/05	10.78	4.89	--	5.89	
MW-11D	12/12/05	10.78	4.64	--	6.14	
MW-11D	03/13/06	10.78	3.84	--	6.94	
MW-11D	06/05/06	10.78	4.31	--	6.47	
MW-11D	09/11/06	10.78	4.91	--	5.87	
MW-11D	12/11/06	10.78	3.63	--	7.15	
MW-12	02/11/02	--	--	--	--	
Destroyed during construction activities						
MW-12R	02/11/02	11.15	6.12	--	5.03	
MW-12R	05/20/02	11.15	8.36	--	2.79	
MW-12R	08/27/02	11.15	8.19	--	2.96	
MW-12R	11/04/02	11.15	8.56	--	2.59	
MW-12R	02/18/03	11.15	7.85	--	3.30	
MW-12R	06/09/03	11.15	7.67	--	3.48	
MW-12R	09/15/03	15.47	8.45	--	7.02	
MW-12R	11/18/03	15.47	7.87	--	7.60	
MW-12R	02/24/04	15.47	6.98	--	8.49	
MW-12R	05/10/04	15.47	7.79	--	7.68	
MW-12R	08/24/04	15.47	8.11	--	7.36	
MW-12R	12/13/04	15.47	7.54	--	7.93	
MW-12R	03/08/05	15.47	7.93	--	7.54	
MW-12R	06/06/05	15.47	6.41	--	9.06	
MW-12R	09/19/05	15.47	8.41	--	7.06	
MW-12R	12/12/05	15.47	7.92	--	7.55	
MW-12R	03/13/06	15.47	6.85	--	8.62	
MW-12R	06/05/06	15.47	7.43	--	8.04	
MW-12R	09/11/06	15.47	8.39	--	7.08	
MW-12R	12/11/06	15.47	6.95	--	8.52	
MW-12R	03/26/07	15.47	7.02	--	8.45	
MW-12R	06/18/07	15.47	7.84	--	7.63	
MW-12R	09/25/07	15.47	8.38	--	7.09	
MW-12R	12/10/07	15.47	7.02	--	8.45	
MW-12R	03/03/08	15.47	7.11	--	8.36	
MW-12R	06/02/08	15.47	7.98	--	7.49	
MW-12R	09/04/08	15.47	8.13	--	7.34	
MW-12R	12/04/08	15.47	7.98	--	7.49	
MW-12R	03/04/09	15.47	7.54	--	7.93	
MW-12R	06/01/09	15.47	7.71	--	7.76	
MW-12R	09/21/09	15.47	8.39	--	7.08	
MW-12R	11/16/09	15.47	7.40	--	8.07	
MW-12R	03/08/10	15.47	6.86	--	8.61	
MW-12R	06/07/10	15.47	7.23	--	8.24	
MW-12R	09/09/10	15.47	8.22	--	7.25	
MW-12R	11/15/10	15.47	7.40	--	8.07	
MW-12R	03/01/11	15.47	6.76	--	8.71	
MW-12R	05/23/11	15.47	6.87	--	8.60	
MW-12R	08/29/11	15.47	8.07	--	7.40	
MW-12R	12/01/11	15.47	7.51	--	7.96	
MW-12R	03/01/12	15.47	7.31	--	8.16	
MW-12R	05/30/12	15.47	7.30	--	8.17	
MW-12R	08/25/12	15.47	7.89	--	7.58	
MW-12R	11/07/12	15.47	7.34	--	8.13	
MW-12R	02/27/13	15.47	7.02	--	8.45	
MW-12R	04/08/13	15.47	6.88	--	8.59	
MW-12R	07/29/13	15.47	7.84	--	7.63	
MW-12R	10/02/13	15.47	7.42	--	8.05	
MW-12R	01/21/14	15.47	7.70	--	7.77	
MW-12R	04/22/14	15.47	6.90	--	8.57	
MW-12R	07/15/14	15.47	7.73	--	7.74	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-12R	03/17/15	15.47	6.49	--	8.98	
MW-12R	09/28/15	15.47	7.96	--	7.51	
MW-13	02/11/02	--	--	--	--	
MW-13	Destroyed during construction activities					
MW-13R	02/11/02	10.99	5.95	--	5.04	
MW-13R	05/20/02	10.99	8.08	--	2.91	
MW-13R	08/27/02	10.99	7.93	--	3.06	
MW-13R	11/04/02	10.99	8.30	--	2.69	
MW-13R	02/18/03	10.99	6.55	--	4.44	
MW-13R	06/09/03	10.99	7.37	--	3.62	
MW-13R	09/15/03	15.15	8.19	--	6.96	
MW-13R	11/18/03	15.15	7.56	--	7.59	
MW-13R	02/24/04	15.15	6.50	--	8.65	
MW-13R	05/10/04	15.15	7.45	--	7.70	
MW-13R	08/24/04	15.15	8.13	--	7.02	
MW-13R	12/13/04	15.15	7.10	--	8.05	
MW-13R	03/08/05	15.15	7.62	--	7.53	
MW-13R	06/06/05	15.15	7.37	--	7.78	
MW-13R	09/19/05	15.15	8.22	--	6.93	
MW-13R	12/12/05	15.15	7.61	--	7.54	
MW-13R	03/13/06	15.15	6.50	--	8.65	
MW-13R	06/05/06	15.15	7.03	--	8.12	
MW-13R	09/11/06	15.15	8.13	--	7.02	
MW-13R	12/11/06	15.15	6.60	--	8.55	
MW-13R	03/26/07	15.15	6.60	--	8.55	
MW-13R	06/18/07	15.15	7.53	--	7.62	
MW-13R	09/25/07	15.15	8.10	--	7.05	
MW-13R	12/10/07	15.15	6.74	--	8.41	
MW-13R	03/03/08	15.15	7.45	--	7.70	
MW-13R	06/02/08	15.15	7.70	--	7.45	
MW-13R	09/04/08	15.15	7.86	--	7.29	
MW-13R	12/04/08	15.15	7.72	--	7.43	
MW-13R	03/04/09	15.15	7.30	--	7.85	
MW-13R	06/01/09	15.15	7.43	--	7.72	
MW-13R	09/21/09	15.15	8.12	--	7.03	
MW-13R	11/16/09	15.15	7.07	--	8.08	
MW-13R	03/08/10	15.15	6.57	--	8.58	
MW-13R	06/07/10	15.15	6.95	--	8.20	
MW-13R	09/09/10	15.15	7.94	--	7.21	
MW-13R	11/15/10	15.15	7.12	--	8.03	
MW-13R	03/01/11	15.15	6.42	--	8.73	
MW-13R	05/23/11	15.15	6.52	--	8.63	
MW-13R	08/29/11	15.15	7.79	--	7.36	
MW-13R	12/01/11	15.15	7.21	--	7.94	
MW-13R	03/01/12	15.15	6.99	--	8.16	
MW-13R	05/25/12	--	--	--	--	
MW-13R	Abandoned on 5/25/2012					
MW-14	02/11/02	7.55	1.65	--	5.90	
MW-14	05/20/02	7.55	4.46	--	3.09	
MW-14	08/27/02	7.55	4.58	--	2.97	
MW-14	11/04/02	7.55	5.95	--	1.60	
MW-14	02/18/03	7.55	2.60	--	4.95	
MW-14	06/09/03	7.55	3.86	--	3.69	
MW-14	09/15/03	11.44	5.11	--	6.33	
MW-14	11/18/03	11.44	3.30	--	8.14	
MW-14	02/24/04	11.44	2.55	--	8.89	
MW-14	05/10/04	11.44	3.92	--	7.52	
MW-14	08/24/04	11.44	4.23	--	7.21	
MW-14	12/13/04	11.44	3.28	--	8.16	
MW-14	03/08/05	11.44	3.71	--	7.73	
MW-14	06/06/05	11.44	3.37	--	8.07	
MW-14	09/19/05	11.44	4.79	--	6.65	
MW-14	12/12/05	11.44	3.72	--	7.72	
MW-14	03/13/06	11.44	2.40	--	9.04	
MW-14	06/05/06	11.44	3.07	--	8.37	
MW-14	09/11/06	11.44	4.90	--	6.54	
MW-14	12/11/06	11.44	2.02	--	9.42	
MW-14	03/26/07	11.44	2.61	--	8.83	
MW-14	06/18/07	11.44	3.91	--	7.53	
MW-14	09/24/07	11.44	4.64	--	6.80	
MW-14	12/10/07	11.44	2.44	--	9.00	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-14	03/03/08	11.44	3.19	--	8.25	
MW-14	06/02/08	11.44	3.82	--	7.62	
MW-14	09/04/08	11.44	4.22	--	7.22	
MW-14	12/04/08	11.44	4.04	--	7.40	
MW-14	03/04/09	11.44	3.37	--	8.07	
MW-14	06/01/09	11.44	3.61	--	7.83	
MW-14	09/21/09	11.44	4.59	--	6.85	
MW-14	11/16/09	11.44	2.82	--	8.62	
MW-14	03/08/10	11.44	2.48	--	8.96	
MW-14	06/07/10	11.44	2.99	--	8.45	
MW-14	09/09/10	11.44	4.33	--	7.11	
MW-14	11/15/10	11.44	3.01	--	8.43	
MW-14	03/01/11	11.44	2.03	--	9.41	
MW-14	05/23/11	11.44	2.36	--	9.08	
MW-14	08/29/11	11.44	4.20	--	7.24	
MW-14	12/01/11	11.44	3.17	--	8.27	
MW-14	03/01/12	11.44	3.05	--	8.39	
MW-14	05/30/12	11.44	3.09	--	8.35	
MW-14	08/25/12	11.44	4.04	--	7.40	
MW-14	11/07/12	11.44	2.92	--	8.52	
MW-14	02/27/13	11.44	2.66	--	8.78	
MW-14	04/08/13	11.44	2.18	--	9.26	
MW-14	07/29/13	11.44	3.90	--	7.54	
MW-14	10/02/13	11.44	3.08	--	8.36	
MW-14	01/21/14	11.44	5.59	--	5.85	
MW-14	04/22/14	11.44	2.19	--	9.25	
MW-14	07/15/14	11.44	3.71	--	7.73	
MW-14	03/17/15	11.44	1.47	--	9.97	
MW-14	09/28/15	11.44	4.06	--	7.38	
MW-15	02/11/02	9.03	3.94	--	5.09	
MW-15	05/20/02	9.03	6.18	--	2.85	
MW-15	08/27/02	9.03	6.10	--	2.93	
MW-15	11/04/02	9.03	6.48	--	2.55	
MW-15	02/18/03	9.03	4.50	--	4.53	
MW-15	06/09/03	9.03	5.49	--	3.54	
MW-15	09/15/03	12.86	6.35	--	6.51	
MW-15	11/18/03	12.86	5.49	--	7.37	
MW-15	02/24/04	12.86	4.67	--	8.19	
MW-15	05/10/04	12.86	5.56	Sheen	7.30	
MW-15	08/24/04	12.86	6.10	--	6.76	
MW-15	12/13/04	12.86	4.34	--	8.52	
MW-15	03/08/05	12.86	5.58	--	7.28	
MW-15	06/06/05	12.86	5.42	--	7.44	
MW-15	09/19/05	12.86	6.34	--	6.52	
MW-15	12/12/05	12.86	5.63	--	7.23	
MW-15	03/13/06	12.86	4.33	--	8.53	
MW-15	06/05/06	12.86	5.15	--	7.71	
MW-15	09/11/06	12.86	6.30	--	6.56	
MW-15	12/11/06	12.86	4.43	--	8.43	
MW-15	03/26/07	12.86	4.60	--	8.26	
MW-15	06/18/07	12.86	5.61	--	7.25	
MW-15	06/02/08	12.86	5.80	--	7.06	
MW-15	09/04/08	12.86	6.02	--	6.84	
MW-15	12/04/08	12.86	5.82	--	7.04	
MW-16	02/11/02	11.19	6.19	--	5.00	
MW-16	05/20/02	11.19	8.23	--	2.96	
MW-16	08/27/02	11.19	8.32	--	2.87	
MW-16	11/04/02	11.19	8.72	--	2.47	
MW-16	02/18/03	11.19	7.65	--	3.54	
MW-16	06/09/03	11.19	7.46	--	3.73	
MW-16	09/15/03	15.23	8.55	--	6.68	
MW-16	11/18/03	15.23	7.69	--	7.54	
MW-16	02/24/04	15.23	6.40	--	8.83	
MW-16	05/10/04	15.23	7.60	--	7.63	
MW-16	08/24/04	15.23	8.21	--	7.02	
MW-16	12/13/04	15.23	7.80	--	7.43	
MW-16	03/08/05	15.23	7.55	--	7.68	
MW-16	06/06/05	15.23	7.38	--	7.85	
MW-16	09/19/05	15.23	8.40	--	6.83	
MW-16	12/12/05	15.23	7.69	--	7.54	
MW-16	03/13/06	15.23	6.16	--	9.07	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-16	06/05/06	15.23	7.22	--	8.01	
MW-16	09/11/06	15.23	8.32	--	6.91	
MW-16	12/11/06	15.23	6.40	--	8.83	
MW-16	03/26/07	15.23	6.53	--	8.70	
MW-16	06/18/07	15.23	7.60	--	7.63	
MW-16	09/24/07	15.23	8.36	--	6.87	
MW-16	12/10/07	15.23	6.85	--	8.38	
MW-16	03/03/08	15.23	6.95	--	8.28	
MW-16	06/02/08	15.23	7.62	--	7.61	
MW-16	09/04/08	15.23	8.07	--	7.16	
MW-16	12/04/08	15.23	7.82	--	7.41	
MW-16	03/04/09	15.23	7.47	--	7.76	
MW-16	06/01/09	15.23	7.37	--	7.86	
MW-16	09/21/09	15.23	8.33	--	6.90	
MW-16	11/16/09	15.23	7.30	--	7.93	
MW-16	03/08/10	15.23	6.34	--	8.89	
MW-16	06/07/10	15.23	6.87	--	8.36	
MW-16	09/09/10	15.23	8.04	--	7.19	
MW-16	11/15/10	15.23	7.14	--	8.09	
MW-16	03/01/11	15.23	6.12	--	9.11	
MW-16	05/23/11	15.23	6.22	--	9.01	
MW-16	08/29/11	15.23	7.97	--	7.26	
MW-16	12/01/11	15.23	7.45	--	7.78	
MW-16	03/01/12	15.23	6.81	--	8.42	
MW-16	05/30/12	15.23	6.71	--	8.52	
MW-16	08/25/12	15.23	7.57	--	7.66	
MW-16	11/07/12	15.23	7.20	--	8.03	
MW-16	02/27/13	15.23	6.18	--	9.05	
MW-16	04/08/13	15.23	6.28	--	8.95	
MW-16	07/29/13	15.23	7.31	--	7.92	
MW-16	10/02/13	15.23	7.21	--	8.02	
MW-16	01/21/14	15.23	7.19	--	8.04	
MW-16	04/22/14	15.23	6.12	--	9.11	
MW-16	07/15/14	15.23	7.22	--	8.01	
MW-16	03/17/15	15.23	5.78	--	9.45	
MW-16	09/28/15	15.23	7.71	--	7.52	
MW-17	02/11/02	11.43	6.13	--	5.30	
MW-17	05/20/02	11.43	8.38	--	3.05	
MW-17	08/27/02	11.43	8.50	--	2.93	
MW-17	11/04/02	11.43	8.91	--	2.52	
MW-17	02/18/03	11.43	6.70	--	4.73	
MW-17	06/09/03	11.43	7.71	--	3.72	
MW-17	09/15/03	15.38	8.71	--	6.67	
MW-17	11/18/03	15.38	11.83	--	3.55	
MW-17	02/24/04	15.38	7.20	--	8.18	
MW-17	05/10/04	15.38	7.77	--	7.61	
MW-17	08/24/04	15.38	8.36	--	7.02	
MW-17	12/13/04	15.38	7.85	--	7.53	
MW-17	03/08/05	15.38	7.65	--	7.73	
MW-17	06/06/05	15.38	7.55	--	7.83	
MW-17	09/19/05	15.38	8.56	--	6.82	
MW-17	12/12/05	15.38	7.85	--	7.53	
MW-17	03/13/06	15.38	6.30	--	9.08	
MW-17	06/05/06	15.38	7.44	--	7.94	
MW-17	09/11/06	15.38	8.52	--	6.86	
MW-17	12/11/06	15.38	6.49	--	8.89	
MW-17	05/23/11	15.38	6.30	--	9.08	
MW-17	08/29/11	15.38	6.30	--	9.08	
MW-18	02/11/02	11.29	5.97	--	5.32	
MW-18	05/20/02	11.29	8.20	--	3.09	
MW-18	08/27/02	11.29	7.34	--	3.95	
MW-18	11/04/02	11.29	8.73	--	2.56	
MW-18	02/18/03	11.29	6.45	--	4.84	
MW-18	06/09/03	11.29	7.59	--	3.70	
MW-18	09/15/03	15.49	8.65	--	6.84	
MW-18	11/18/03	15.49	7.68	--	7.81	
MW-18	02/24/04	15.49	6.38	--	9.11	
MW-18	05/10/04	15.49	7.65	--	7.84	
MW-18	08/24/04	15.49	8.17	--	7.32	
MW-18	12/13/04	15.49	7.61	--	7.88	
MW-18	03/08/05	15.49	7.47	--	8.02	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-18	06/06/05	15.49	7.41	--	8.08	
MW-18	09/19/05	15.49	8.43	--	7.06	
MW-18	12/12/05	15.49	7.70	--	7.79	
MW-18	03/13/06	15.49	6.23	--	9.26	
MW-18	06/05/06	15.49	7.31	--	8.18	
MW-18	09/11/06	15.49	8.34	--	7.15	
MW-18	12/11/06	15.49	6.34	--	9.15	
MW-18	03/26/07	15.49	6.59	--	8.90	
MW-18	06/18/07	15.49	7.66	--	7.83	
MW-18	09/24/07	15.49	8.40	--	7.09	
MW-18	12/10/07	15.49	6.68	--	8.81	
MW-18	03/03/08	15.49	6.98	--	8.51	
MW-18	06/02/08	15.49	7.70	--	7.79	
MW-18	09/04/08	15.49	8.11	--	7.38	
MW-18	12/04/08	15.49	7.84	--	7.65	
MW-18	03/04/09	15.49	7.34	--	8.15	
MW-18	06/01/09	15.49	7.36	--	8.13	
MW-18	09/21/09	15.49	8.40	--	7.09	
MW-18	11/16/09	15.49	7.18	--	8.31	
MW-18	03/08/10	15.49	6.23	--	9.26	
MW-18	06/07/10	15.49	6.89	--	8.60	
MW-18	09/09/10	15.49	8.11	--	7.38	
MW-18	11/15/10	15.49	7.12	--	8.37	
MW-18	03/01/11	15.49	6.11	--	9.38	
MW-18	05/23/11	15.49	6.25	--	9.24	
MW-18	08/29/11	15.49	7.87	--	7.62	
MW-18	12/01/11	15.49	7.38	--	8.11	
MW-18	03/01/12	15.49	6.88	--	8.61	
MW-18	05/30/12	15.49	6.75	--	8.74	
MW-18	08/25/12	15.49	--	--	--	Inaccessible due to truck parked on top
MW-18	11/07/12	15.49	7.21	--	8.28	
MW-18	02/27/13	15.49	6.43	--	9.06	
MW-18	04/08/13	15.49	6.39	--	9.10	
MW-18	07/29/13	15.49	7.63	--	7.86	
MW-18	10/02/13	15.49	7.39	--	8.10	
MW-18	01/21/14	15.49	7.35	--	8.14	
MW-18	04/22/14	15.49	0.20	--	15.29	
MW-18	07/15/14	15.49	7.31	--	8.18	
MW-18	03/17/15	15.49	5.62	--	9.87	
MW-18	09/28/15	15.49	7.84	--	7.65	
MW-19	02/11/02	7.16	1.63	--	5.53	
MW-19	05/20/02	7.16	4.08	Sheen	3.08	
MW-19	08/27/02	7.16	4.25	--	2.91	
MW-19	11/04/02	7.16	4.65	--	2.51	
MW-19	02/18/03	7.16	2.14	--	5.02	
MW-19	06/09/03	7.16	3.45	--	3.71	
MW-19	09/15/03	11.39	4.50	--	6.89	
MW-19	11/18/03	11.39	2.51	--	8.88	
MW-19	02/24/04	11.39	2.36	--	9.03	
MW-19	05/10/04	11.39	3.41	--	7.98	
MW-19	08/24/04	11.39	8.13	--	3.26	
MW-19	12/13/04	11.39	2.98	--	8.41	
MW-19	03/08/05	11.39	3.40	--	7.99	
MW-19	06/06/05	11.39	3.24	--	8.15	
MW-19	09/19/05	11.39	--	--	--	Not Measured-Inaccessible, under pipe stockpile
MW-19	12/12/05	11.39	--	--	--	Not Measured-Inaccessible, under pipe stockpile
MW-19	03/13/06	11.39	--	--	--	Not Measured-Inaccessible, under pipe stockpile
MW-19	06/05/06	11.39	2.91	--	8.48	
MW-19	09/11/06	11.39	4.72	--	6.67	
MW-19	12/11/06	11.39	2.00	--	9.39	
MW-19	03/26/07	11.39	2.22	--	9.17	
MW-19	06/18/07	11.39	3.56	--	7.83	
MW-19	09/24/07	11.39	4.31	--	7.08	
MW-19	12/10/07	11.39	2.38	--	9.01	
MW-19	03/03/08	11.39	2.98	--	8.41	
MW-19	06/02/08	11.39	3.67	--	7.72	
MW-19	09/04/08	11.39	3.98	--	7.41	
MW-19	12/04/08	11.39	3.68	--	7.71	
MW-19	03/04/09	11.39	3.03	--	8.36	
MW-19	06/01/09	11.39	3.23	--	8.16	
MW-19	09/21/09	11.39	4.23	--	7.16	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-19	11/16/09	11.39	2.85	--	8.54	
MW-19	03/08/10	11.39	2.25	--	9.14	
MW-19	06/07/10	11.39	2.67	--	8.72	
MW-19	09/09/10	11.39	3.97	--	7.42	
MW-19	11/15/10	11.39	2.75	--	8.64	
MW-19	03/01/11	11.39	1.82	--	9.57	
MW-19	05/23/11	11.39	2.02	--	9.37	
MW-19	08/29/11	11.39	3.77	--	7.62	
MW-19	12/01/11	11.39	3.03	--	8.36	
MW-19	03/01/12	11.39	2.82	--	8.57	
MW-19	05/30/12	11.39	2.79	--	8.60	
MW-19	08/25/12	11.39	3.62	--	7.77	
MW-19	11/07/12	11.39	2.77	--	8.62	
MW-19	02/27/13	11.39	2.18	--	9.21	
MW-19	04/08/13	11.39	1.82	--	9.57	
MW-19	06/21/13	11.39	3.05	--	8.34	Baseline monitoring event
MW-19	07/29/13	11.39	3.56	--	7.83	
MW-19	08/26/13	11.39	3.45	--	7.94	Two-month monitoring event
MW-19	10/02/13	11.39	2.72	--	8.67	
MW-19	01/21/14	11.39	3.12	--	8.27	
MW-19	04/22/14	11.39	1.81	--	9.58	
MW-19	07/15/14	11.39	3.30	--	8.09	
MW-19	03/17/15	11.39	1.11	--	10.28	
MW-19	09/28/15	11.39	3.69	--	7.70	
MW-20	02/11/02	7.37	1.73	--	5.64	
MW-20	05/20/02	7.37	4.25	--	3.12	
MW-20	08/27/02	7.37	4.31	--	3.06	
MW-20	11/04/02	7.37	4.04	--	3.33	
MW-20	02/18/03	7.37	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	06/09/03	7.37	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	09/15/03	11.72	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	11/18/03	11.72	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	02/24/04	11.72	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	05/10/04	11.72	--	--	--	Not Measured-Overflowed when well cap removed
MW-20	08/24/04	11.72	4.04	--	7.68	
MW-20	12/13/04	11.72	2.29	--	9.43	
MW-20	03/08/05	11.72	3.64	--	8.08	
MW-20	06/06/05	11.72	3.43	--	8.29	
MW-20	09/19/05	11.72	4.55	--	7.17	
MW-20	12/12/05	11.72	3.67	--	8.05	
MW-20	03/13/06	11.72	2.21	--	9.51	
MW-20	06/05/06	11.72	3.00	--	8.72	
MW-20	09/11/06	11.72	4.49	--	7.23	
MW-20	12/11/06	11.72	2.36	--	9.36	
MW-20	03/26/07	11.72	2.49	--	9.23	
MW-20	06/18/07	11.72	4.44	--	7.28	
MW-20	09/24/07	11.72	4.61	--	7.11	
MW-20	12/10/07	11.72	2.56	--	9.16	
MW-20	03/03/08	11.72	2.97	--	8.75	
MW-20	06/02/08	11.72	3.90	--	7.82	
MW-20	09/04/08	11.72	4.14	--	7.58	
MW-20	12/04/08	11.72	3.89	--	7.83	
MW-20	03/04/09	11.72	4.99	--	6.73	
MW-20	06/01/09	11.72	3.46	--	8.26	
MW-20	09/21/09	11.72	4.42	--	7.30	
MW-20	11/16/09	11.72	2.91	--	8.81	
MW-20	03/08/10	11.72	2.40	--	9.32	
MW-20	06/07/10	11.72	2.76	--	8.96	
MW-20	09/09/10	11.72	4.22	--	7.50	
MW-20	11/15/10	11.72	3.03	--	8.69	
MW-20	03/01/11	11.72	2.18	--	9.54	
MW-20	05/23/11	11.72	2.11	--	9.61	
MW-20	08/29/11	11.72	4.05	--	7.67	
MW-20	12/01/11	11.72	3.08	--	8.64	
MW-20	03/01/12	11.72	3.09	--	8.63	
MW-20	05/30/12	11.72	2.89	--	8.83	
MW-20	08/25/12	11.72	3.88	--	7.84	
MW-20	11/07/12	11.72	2.98	--	8.74	
MW-20	02/27/13	11.72	2.60	--	9.12	
MW-20	04/08/13	11.72	2.23	--	9.49	
MW-20	07/29/13	11.72	4.93	--	6.79	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-20	10/02/13	11.72	4.64	--	7.08	
MW-20	01/21/14	11.72	3.44	--	8.28	
MW-20	04/22/14	11.72	2.33	--	9.39	
MW-20	07/15/14	11.72	3.51	--	8.21	
MW-20	03/17/15	11.72	1.49	--	10.23	
MW-20	09/28/15	11.72	3.95	--	7.77	
MW-21	02/11/02	10.53	3.80	0.46	7.10*	
MW-21	05/20/02	10.53	5.98	0.43	4.89*	
MW-21	08/27/02	10.53	3.95	0.43	6.92*	
MW-21	11/04/02	10.53	4.95	0.01	5.59*	Product recovery pump in well
MW-21	02/18/03	10.53	3.59	0.01	6.95*	Product recovery pump in well
MW-21	06/09/03	10.53	3.53	Sheen	7.00	Product recovery pump in well
MW-21	09/15/03	9.41	3.98	0.01	5.44*	Product recovery pump in well
MW-21	11/18/03	9.41	3.08	Sheen	6.33	Product recovery pump in well
MW-21	02/24/04	9.41	2.47	Sheen	6.94	Product recovery pump in well
MW-21	05/10/04	9.41	3.65	Sheen	5.76	Product recovery pump in well
MW-21	08/24/04	9.41	3.81	Sheen	5.60	Product recovery pump in well
MW-21	12/13/04	9.41	3.24	Sheen	6.17	
MW-21	03/08/05	9.41	3.72	--	5.69	
MW-21	06/06/05	9.41	3.58	Sheen	5.83	
MW-21	09/19/05	9.41	4.19	--	5.22	
MW-21	12/12/05	9.41	4.04	--	5.37	
MW-21	03/13/06	9.41	2.48	--	6.93	
MW-21	06/05/06	9.41	3.27	--	6.14	
MW-21	09/11/06	9.41	3.90	0.08	5.57*	
MW-21	12/11/06	9.41	2.34	0.04	7.10*	
MW-21	03/26/07	9.41	2.87	--	6.54	
MW-21	06/18/07	9.41	3.75	--	5.66	
MW-21	09/24/07	9.41	3.81	Sheen	5.60	
MW-21	12/10/07	9.41	2.14	--	7.27	
MW-21	03/03/08	9.41	3.18	--	6.23	
MW-21	06/02/08	9.41	3.63	Sheen	5.78	
MW-21	09/04/08	9.41	3.60	--	5.81	
MW-21	12/04/08	9.41	3.48	Sheen	5.93	
MW-21	03/04/09	9.41	2.84	Sheen	6.57	
MW-21	06/01/09	9.41	3.34	--	6.07	
MW-21	09/21/09	9.41	3.74	Sheen	5.67	
MW-21	11/16/09	9.41	2.59	--	6.82	
MW-21	03/08/10	9.41	2.23	--	7.18	
MW-21	06/07/10	9.41	--	--	--	Not Measured
MW-21	09/09/10	9.41	3.66	--	5.75	
MW-21	11/15/10	9.41	2.79	--	6.62	
MW-21	03/01/11	9.41	2.21	--	7.20	
MW-21	05/23/11	9.41	2.47	--	6.94	
MW-21	08/29/11	9.41	3.53	--	5.88	
MW-21	12/01/11	9.41	2.77	Sheen	6.64	
MW-21	03/01/12	9.41	2.27	Sheen	7.14	
MW-21	05/30/12	9.41	2.86	--	6.55	
MW-21	08/25/12	9.41	3.20	--	6.21	
MW-21	11/07/12	9.41	2.53	--	6.88	
MW-21	02/27/13	9.41	2.61	--	6.80	
MW-21	04/08/13	9.41	1.99	--	7.42	
MW-21	07/29/13	9.41	3.31	--	6.10	
MW-21	10/02/13	9.41	2.49	--	6.92	
MW-21	01/21/14	9.41	3.02	--	6.39	
MW-21	04/22/14	9.41	2.37	--	7.04	
MW-21	07/15/14	9.41	3.12	--	6.29	
MW-21	03/17/15	9.41	1.74	--	7.67	
MW-21	09/28/15	9.41	3.23	--	6.18	
MW-22	02/11/02	12.39	7.18	--	5.21	
MW-22	05/20/02	12.39	9.44	--	2.95	
MW-22	08/27/02	12.39	9.55	--	2.84	
MW-22	11/04/02	12.39	9.91	--	2.48	
MW-22	02/18/03	12.39	7.75	--	4.64	
MW-22	06/09/03	12.39	8.71	--	3.68	
MW-22	09/15/03	16.32	9.75	--	6.57	
MW-22	11/18/03	16.32	8.55	--	7.77	
MW-22	02/24/04	16.32	7.56	--	8.76	
MW-22	05/10/04	16.32	8.76	--	7.56	
MW-22	08/24/04	16.32	9.25	--	7.07	
MW-22	12/13/04	16.32	8.70	--	7.62	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-22	03/08/05	16.32	8.72	--	7.60	
MW-22	06/06/05	16.32	8.58	--	7.74	
MW-22	09/19/05	16.32	9.61	--	6.71	
MW-22	12/12/05	16.32	8.90	--	7.42	
MW-22	03/13/06	16.32	4.37	--	11.95	
MW-22	06/05/06	16.32	8.31	--	8.01	
MW-22	09/11/06	16.32	9.54	--	6.78	
MW-22	12/11/06	16.32	7.44	--	8.88	
MW-22	03/26/07	16.32	7.68	--	8.64	
MW-22	06/18/07	16.32	8.78	--	7.54	
MW-22	09/24/07	16.32	9.55	--	6.77	
MW-22	12/10/07	16.32	7.84	--	8.48	
MW-22	03/03/08	16.32	8.12	--	8.20	
MW-22	06/02/08	16.32	8.85	--	7.47	
MW-22	09/04/08	16.32	9.22	--	7.10	
MW-22	12/04/08	16.32	9.00	--	7.32	
MW-22	03/04/09	16.32	8.43	--	7.89	
MW-22	06/01/09	16.32	8.56	--	7.76	
MW-22	09/21/09	16.32	9.51	--	6.81	
MW-22	11/16/09	16.32	8.31	--	8.01	
MW-22	03/08/10	16.32	7.40	--	8.92	
MW-22	06/07/10	16.32	8.00	--	8.32	
MW-22	09/09/10	16.32	9.22	--	7.10	
MW-22	11/15/10	16.32	8.20	--	8.12	
MW-22	03/01/11	16.32	7.18	--	9.14	
MW-22	05/23/11	16.32	7.35	--	8.97	
MW-22	08/29/11	16.32	9.01	--	7.31	
MW-22	12/01/11	16.32	8.48	--	7.84	
MW-22	03/01/12	16.32	7.98	--	8.34	
MW-22	05/30/12	16.32	7.92	--	8.40	
MW-22	08/25/12	16.32	8.79	--	7.53	
MW-22	11/07/12	16.32	8.24	--	8.08	
MW-22	02/27/13	16.32	7.42	--	8.90	
MW-22	04/08/13	16.32	7.28	--	9.04	
MW-22	07/29/13	16.32	8.59	--	7.73	
MW-22	10/02/13	16.32	8.29	--	8.03	
MW-22	01/21/14	16.32	8.39	--	7.93	
MW-22	04/22/14	16.32	7.22	--	9.10	
MW-22	07/15/14	16.32	8.45	--	7.87	
MW-22	03/17/15	16.32	6.65	--	9.67	
MW-22	09/28/15	16.32	8.88	--	7.44	
MW-23	11/18/03	14.15	7.66	Sheen	6.49	
MW-23	02/24/04	14.15	7.18	Sheen	6.97	
MW-23	05/10/04	14.15	7.89	<0.01	6.26*	
MW-23	08/24/04	14.15	8.89	--	5.26	
MW-23	12/13/04	14.15	7.49	Sheen	6.66	
MW-23	03/08/05	14.15	7.57	Sheen	6.58	
MW-23	06/06/05	14.15	7.72	Sheen	6.43	
MW-23	09/19/05	14.15	8.17	0.17	6.12*	
MW-23	10/12/05	14.15	8.10	Sheen	6.05	
MW-23	12/12/05	14.15	7.93	--	6.22	
MW-23	03/13/06	14.15	7.17	--	6.98	
MW-23	06/05/06	14.15	7.62	--	6.53	
MW-23	09/11/06	14.15	8.22	0.02	5.95*	
MW-23	12/11/06	14.15	7.17	--	6.98	
MW-23	03/26/07	14.15	7.41	--	6.74	
MW-23	06/18/07	14.15	7.90	--	6.25	
MW-23	09/25/07	14.15	8.14	Sheen	6.01	
MW-23	12/10/07	14.15	7.38	Sheen	6.77	
MW-23	03/03/08	14.15	7.49	Sheen	6.66	
MW-23	06/02/08	14.15	8.71	Sheen	5.44	
MW-23	09/04/08	14.15	8.04	--	6.11	
MW-23	12/04/08	14.15	8.05	--	6.10	
MW-23	03/04/09	14.15	7.48	--	6.67	
MW-23	06/01/09	14.15	7.98	--	6.17	
MW-23	09/21/09	14.15	8.13	--	6.02	
MW-23	11/16/09	14.15	7.50	Sheen	6.65	
MW-23	03/08/10	14.15	7.01	--	7.14	
MW-23	06/07/10	14.15	7.49	Sheen	6.66	
MW-23	09/09/10	14.15	8.02	Sheen	6.13	
MW-23	11/15/10	14.15	7.60	--	6.55	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-23	03/01/11	14.15	7.26	Sheen	6.89	
MW-23	05/23/11	14.15	7.38	Sheen	6.77	
MW-23	08/29/11	14.15	7.91	Sheen	6.24	
MW-23	12/01/11	14.15	7.58	--	6.57	
MW-23	03/01/12	14.15	7.35	--	6.80	
MW-23	05/30/12	14.15	7.29	--	6.86	
MW-23	08/25/12	14.15	7.41	--	6.74	
MW-23	11/07/12	14.15	7.19	--	6.96	
MW-23	02/27/13	14.15	7.23	--	6.92	
MW-23	04/08/13	14.15	7.15	--	7.00	
MW-23	07/29/13	14.15	7.47	--	6.68	
MW-23	10/02/13	14.15	7.34	--	6.81	
MW-23	01/21/14	14.15	7.72	--	6.43	
MW-23	04/22/14	14.15	7.25	--	6.90	
MW-23	07/15/14	14.15	7.60	--	6.55	
MW-23	03/17/15	14.15	7.11	--	7.04	
MW-23	09/29/15	14.15	7.65	--	6.50	
MW-24	11/18/03	14.34	7.65	Sheen	6.69	
MW-24	02/24/04	14.34	7.07	Sheen	7.27	
MW-24	05/10/04	14.34	7.73	0.02	6.63*	
MW-24	08/24/04	14.34	7.90	0.10	6.52*	
MW-24	12/13/04	14.34	7.47	Sheen	6.87	
MW-24	03/08/05	14.34	7.57	Sheen	6.77	
MW-24	06/06/05	14.34	7.24	0.02	7.12*	
MW-24	09/19/05	14.34	8.39	0.29	6.18*	
MW-24	10/12/05	14.34	8.45	0.47	6.27*	
MW-24	12/12/05	14.34	8.01	0.11	6.42*	
MW-24	03/13/06	14.34	7.19	--	7.15	
MW-24	06/05/06	14.34	7.59	--	6.75	
MW-24	09/11/06	14.34	8.31	0.20	6.19*	
MW-24	12/11/06	14.34	7.37	--	6.97	
MW-24	03/26/07	14.34	7.42	--	6.92	
MW-24	06/18/07	14.34	7.89	--	6.45	
MW-24	09/25/07	14.34	8.00	Sheen	6.34	
MW-24	12/10/07	14.34	7.42	--	6.92	
MW-24	03/03/08	14.34	7.51	Sheen	6.83	
MW-24	06/02/08	14.34	8.92	--	5.42	
MW-24	09/04/08	14.34	7.99	--	6.35	
MW-24	12/04/08	14.34	7.96	--	6.38	
MW-24	03/04/09	14.34	7.51	--	6.83	
MW-24	06/01/09	14.34	7.87	Sheen	6.47	
MW-24	09/21/09	14.34	8.09	--	6.25	
MW-24	11/16/09	14.34	7.46	Sheen	6.88	
MW-24	03/08/10	14.34	7.03	--	7.31	
MW-24	06/07/10	14.34	7.51	Sheen	6.83	
MW-24	09/09/10	14.34	8.01	Sheen	6.33	
MW-24	11/15/10	14.34	7.61	Sheen	6.73	
MW-24	03/01/11	14.34	7.26	Sheen	7.08	
MW-24	05/23/11	14.34	7.37	--	6.97	
MW-24	08/29/11	14.34	7.92	Sheen	6.42	
MW-24	12/01/11	14.34	7.73	--	6.61	
MW-24	03/01/12	14.34	7.39	--	6.95	
MW-24	05/30/12	14.34	7.41	--	6.93	
MW-24	08/25/12	14.34	7.59	--	6.75	
MW-24	11/07/12	14.34	7.26	--	7.08	
MW-24	02/27/13	14.34	7.34	--	7.00	
MW-24	04/08/13	14.34	7.27	--	7.07	
MW-24	07/29/13	14.34	7.58	--	6.76	
MW-24	10/02/13	14.34	7.34	--	7.00	
MW-24	01/21/14	14.34	7.66	--	6.68	
MW-24	04/22/14	14.34	7.20	--	7.14	
MW-24	07/15/14	14.34	7.59	--	6.75	
MW-24	03/17/15	14.34	7.06	--	7.28	
MW-24	09/29/15	14.34	7.65	--	6.69	
MW-25	11/18/03	13.05	7.50	Sheen	5.55	
MW-25	02/24/04	13.05	6.48	Sheen	6.57	
MW-25	05/10/04	13.05	7.61	--	5.44	
MW-25	08/24/04	13.05	7.11	--	5.94	
MW-25	12/13/04	13.05	7.49	--	5.56	
MW-25	03/08/05	13.05	7.61	--	5.44	
MW-25	06/06/05	13.05	7.47	--	5.58	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-25	09/19/05	13.05	7.93	--	5.12	
MW-25	12/12/05	13.05	7.71	--	5.34	
MW-25	03/13/06	13.05	7.02	--	6.03	
MW-25	06/05/06	13.05	7.38	--	5.67	
MW-25	09/11/06	13.05	7.88	--	5.17	
MW-25	12/11/06	13.05	7.03	--	6.02	
MW-25	06/18/07	13.05	6.77	--	6.28	
MW-25	03/03/08	13.05	7.28	--	5.77	
MW-25	06/02/08	13.05	7.71	--	5.34	
MW-25	09/04/08	13.05	7.33	--	5.72	
MW-25	12/04/08	13.05	--	--	--	Not Measured
MW-25	06/01/09	13.05	7.60	--	5.45	
MW-25	06/07/10	13.05	7.31	--	5.74	
MW-25	05/23/11	13.05	7.13	--	5.92	
MW-25	04/22/14	13.05	7.09	--	5.96	
MW-25	03/17/15	13.05	6.92	--	6.13	
MW-25	09/29/15	13.05	7.49	--	5.56	
E-1	02/11/02	9.04	3.65	--	5.39	
E-1	05/20/02	9.04	4.59	--	4.45	
E-1	08/27/02	9.04	--	--	--	Not Measured-Dry
E-1	11/04/02	--	--	--	--	Not Measured-Dry/Damaged
E-1	06/11/03	--	--	--	--	Not Measured-Damaged
E-1	05/30/12	13.05	7.12	--	5.93	
E-1	Abandoned					
SF-01	12/18/00	--	--	--	--	
SF-01	Abandoned					
SF-01R	02/11/02	10.68	7.11	--	3.57	
SF-01R	05/20/02	10.68	9.07	Sheen	1.61	
SF-01R	08/27/02	10.68	8.44	0.01	2.25*	
SF-01R	11/04/02	10.68	9.63	--	1.05	
SF-01R	02/18/03	10.68	7.72	--	2.96	
SF-01R	06/09/03	10.68	8.30	--	2.38	
SF-01R	09/15/03	14.74	8.60	--	6.14	
SF-01R	11/18/03	14.74	7.45	--	7.29	
SF-01R	02/24/04	14.74	7.76	--	6.98	
SF-01R	05/10/04	14.74	8.11	--	6.63	
SF-01R	08/24/04	14.74	8.49	--	6.25	
SF-01R	12/13/04	14.74	--	--	--	Inaccessible, under construction trailer
SF-01R	03/08/05	14.74	8.16	--	6.58	
SF-01R	06/06/05	14.74	8.16	--	6.58	
SF-01R	09/19/05	14.74	--	--	--	Inaccessible, under construction trailer
SF-01R	12/12/05	14.74	8.39	--	6.35	
SF-01R	03/13/06	14.74	7.70	--	7.04	
SF-01R	06/05/06	14.74	8.09	--	6.65	
SF-01R	09/11/06	14.74	8.60	--	6.14	
SF-01R	12/11/06	14.74	7.73	--	7.01	
SH-02	02/11/02	--	--	--	--	Destroyed during construction activities
SH-02	Destroyed during construction activities					
SH-02R	02/11/02	9.35	5.45	--	3.90	
SH-02R	05/20/02	9.35	6.49	--	2.86	
SH-02R	08/27/02	9.35	6.27	--	3.08	
SH-02R	11/04/02	9.35	6.62	--	2.73	
SH-02R	02/18/03	9.35	4.85	--	4.50	
SH-02R	06/09/03	9.35	4.75	--	4.60	
SH-02R	09/15/03	13.40	6.50	--	6.90	
SH-02R	11/18/03	13.40	6.03	--	7.37	
SH-02R	02/24/04	13.40	4.62	--	8.78	
SH-02R	05/10/04	13.40	5.88	--	7.52	
SH-02R	08/24/04	13.40	6.21	--	7.19	
SH-02R	12/13/04	13.40	5.14	--	8.26	
SH-02R	03/08/05	13.40	5.90	--	7.50	
SH-02R	06/06/05	13.40	5.72	--	7.68	
SH-02R	09/19/05	13.40	6.56	--	6.84	
SH-02R	12/12/05	13.40	5.94	--	7.46	
SH-02R	03/13/06	13.40	4.80	--	8.60	
SH-02R	06/05/06	13.40	5.41	--	7.99	
SH-02R	09/11/06	13.40	6.54	--	6.86	
SH-02R	12/11/06	13.40	4.82	--	8.58	
SH-02R	03/26/07	13.40	4.98	--	8.42	
SH-02R	06/18/07	13.40	5.94	--	7.46	
SH-02R	09/25/07	13.40	6.54	--	6.86	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
SH-02R	12/10/07	13.40	5.13	--	8.27	
SH-02R	03/03/08	13.40	5.45	--	7.95	
SH-02R	06/02/08	13.40	6.10	--	7.30	
SH-02R	09/04/08	13.40	6.19	--	7.21	
SH-02R	12/04/08	13.40	6.08	--	7.32	
SH-02R	03/04/09	13.40	5.63	--	7.77	
SH-02R	06/01/09	13.40	5.79	--	7.61	
SH-02R	09/21/09	13.40	6.49	--	6.91	
SH-02R	11/16/09	13.40	5.37	--	8.03	
SH-02R	03/08/10	13.40	4.88	--	8.52	
SH-02R	06/07/10	13.40	5.25	--	8.15	
SH-02R	09/09/10	13.40	6.31	--	7.09	
SH-02R	11/15/10	13.40	5.42	--	7.98	
SH-02R	03/01/11	13.40	4.71	--	8.69	
SH-02R	05/23/11	13.40	4.78	--	8.62	
SH-02R	08/29/11	13.40	6.16	--	7.24	
SH-02R	12/01/11	13.40	5.50	--	7.90	
SH-02R	03/01/12	13.40	5.34	--	8.06	
SH-02R	05/30/12	13.40	5.32	--	8.08	
SH-02R	08/25/12	13.40	6.03	--	7.37	
SH-02R	11/07/12	13.40	5.37	--	8.03	
SH-02R	02/27/13	13.40	5.01	--	8.39	
SH-02R	04/08/13	13.40	4.77	--	8.63	
SH-02R	07/29/13	13.40	5.98	--	7.42	
SH-02R	10/02/13	13.40	5.54	--	7.86	
SH-02R	01/21/14	13.40	5.76	--	7.64	
SH-02R	04/22/14	13.40	4.76	--	8.64	
SH-02R	07/15/14	13.40	5.78	--	7.62	
SH-02R	03/17/15	13.40	4.43	--	8.97	
SH-02R	09/28/15	13.40	6.00	--	7.40	
SH-04	02/11/02	13.45	9.40	--	4.05	
SH-04	05/20/02	13.45	11.24	--	2.21	
SH-04	08/27/02	13.45	11.02	--	2.43	
SH-04	11/04/02	13.45	9.31	--	4.14	
SH-04	02/18/03	13.45	9.80	--	3.65	
SH-04	06/09/03	13.45	10.41	--	3.04	
SH-04	09/15/03	17.41	11.15	--	6.26	
SH-04	11/18/03	17.41	7.61	--	9.80	
SH-04	02/24/04	17.41	6.62	--	10.79	
SH-04	05/10/04	17.41	11.40	--	6.01	
SH-04	08/24/04	17.41	10.88	--	6.53	
SH-04	12/13/04	17.41	10.68	--	6.73	
SH-04	03/08/05	17.41	10.33	--	7.08	
SH-04	06/06/05	17.41	10.23	--	7.18	
SH-04	09/19/05	17.41	11.03	--	6.38	
SH-04	12/12/05	17.41	10.53	--	6.88	
SH-04	03/13/06	17.41	9.22	--	8.19	
SH-04	06/05/06	17.41	10.05	--	7.36	
SH-04	09/11/06	17.41	11.00	--	6.41	
SH-04	12/11/06	17.41	9.50	--	7.91	
SH-05R	05/20/02	9.83	8.07	Sheen	1.76	
SH-05R	08/27/02	9.83	7.59	--	2.24	
SH-05R	11/04/02	9.83	7.81	Sheen	2.02	
SH-05R	02/18/03	9.83	7.60	--	2.23	
SH-05R	06/09/03	9.83	7.29	--	2.54	
SH-05R	09/15/03	13.89	7.42	Sheen	6.47	
SH-05R	11/18/03	13.89	7.21	Sheen	6.68	
SH-05R	02/24/04	13.89	6.41	--	7.48	
SH-05R	05/10/04	13.89	7.33	--	6.56	
SH-05R	08/24/04	13.89	7.60	--	6.29	
SH-05R	12/13/04	13.89	7.15	--	6.74	
SH-05R	03/08/05	13.89	7.62	--	6.27	
SH-05R	06/06/05	13.89	7.24	--	6.65	
SH-05R	09/19/05	13.89	7.80	--	6.09	
SH-05R	12/12/05	13.89	7.49	--	6.40	
SH-05R	03/13/06	13.89	6.38	--	7.51	
SH-05R	06/05/06	13.89	7.10	--	6.79	
SH-05R	09/11/06	13.89	7.72	--	6.17	
SH-05R	12/11/06	13.89	6.61	--	7.28	
SH-05R	03/26/07	13.89	6.82	--	7.07	
SH-05R	06/18/07	13.89	7.43	--	6.46	

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Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
SH-05R	09/25/07	13.89	7.72	--	6.17	
SH-05R	12/10/07	13.89	6.70	--	7.19	
SH-05R	03/03/08	13.89	7.01	--	6.88	
SH-05R	06/02/08	13.89	7.50	--	6.39	
SH-05R	09/04/08	13.89	7.55	--	6.34	
SH-05R	12/04/08	13.89	7.12	--	6.77	
SH-05R	03/04/09	13.89	7.02	--	6.87	
SH-05R	06/01/09	13.89	7.36	--	6.53	
SH-05R	09/21/09	13.89	7.73	--	6.16	
SH-05R	11/16/09	13.89	6.93	--	6.96	
SH-05R	03/08/10	13.89	6.47	--	7.42	
SH-05R	06/07/10	13.89	6.63	--	7.26	
SH-05R	09/09/10	13.89	7.58	--	6.31	
SH-05R	11/16/10	13.89	7.04	--	6.85	
SH-05R	03/01/11	13.89	6.58	--	7.31	
SH-05R	05/23/11	13.89	6.74	--	7.15	
SH-05R	08/29/11	13.89	7.52	--	6.37	
SH-05R	12/01/11	13.89	7.09	--	6.80	
SH-05R	03/01/12	13.89	6.89	--	7.00	
SH-05R	05/30/12	13.89	6.91	--	6.98	
SH-05R	08/25/12	13.89	7.29	--	6.60	
SH-05R	11/07/12	13.89	6.79	--	7.10	
SH-05R	02/27/13	13.89	6.77	--	7.12	
SH-05R	04/08/13	13.89	5.59	--	8.30	
SH-05R	07/29/13	13.89	7.25	--	6.64	
SH-05R	10/02/13	13.89	6.82	--	7.07	
SH-05R	01/21/14	13.89	7.18	--	6.71	
SH-05R	04/22/14	13.89	6.59	--	7.30	
SH-05R	07/15/14	13.89	7.17	--	6.72	
SH-05R	03/17/15	13.89	6.30	--	7.59	
SH-05R	09/28/15	13.89	7.23	--	6.66	
MW-07	01/13/97	7.66	--	--	--	
MW-07	Destroyed during construction activities					
MW-07R	02/11/02	9.93	4.95	--	4.98	
MW-07R	05/20/02	9.93	7.29	--	2.64	
MW-07R	08/27/02	9.93	7.17	--	2.76	
MW-07R	11/04/02	9.93	7.53	--	2.40	
MW-07R	02/18/03	--	--	--	--	Not Measured-Inaccessible; covered with asphalt
MW-07R	06/09/03	--	--	--	--	Not Measured-Inaccessible; covered with asphalt
MW-07R	06/11/03	--	--	--	--	Not Measured-Located & cleaned out
MW-07R	09/15/03	13.92	8.40	--	5.52	
MW-07R	11/18/03	13.92	8.17	--	5.75	
MW-07R	02/24/04	13.92	5.64	--	8.28	
MW-07R	05/10/04	13.92	6.70	--	7.22	
MW-07R	08/24/04	13.92	6.95	--	6.97	
MW-07R	12/13/04	13.92	6.43	--	7.49	
MW-07R	03/08/05	13.92	6.67	--	7.25	
MW-07R	06/06/05	13.92	6.48	--	7.44	
MW-07R	09/19/05	13.92	7.35	--	6.57	
MW-07R	12/12/05	13.92	6.71	--	7.21	
MW-07R	03/13/06	13.92	5.59	--	8.33	
MW-07R	06/05/06	13.92	7.20	--	6.72	
MW-07R	09/11/06	13.92	7.30	--	6.62	
MW-07R	12/11/06	13.92	5.50	--	8.42	
MW-07R	03/26/07	13.92	5.84	--	8.08	
MW-07R	06/18/07	13.92	6.80	--	7.12	
MW-07R	09/25/07	13.92	7.27	--	6.65	
MW-07R	12/10/07	13.92	5.60	--	8.32	
MW-07R	03/03/08	13.92	6.20	--	7.72	
MW-07R	06/02/08	13.92	6.88	--	7.04	
MW-07R	09/04/08	13.92	6.94	--	6.98	
MW-07R	12/04/08	13.92	7.84	--	6.08	
MW-07R	03/04/09	13.92	6.30	--	7.62	
MW-07R	06/01/09	13.92	6.57	--	7.35	
MW-07R	09/21/09	13.92	7.24	--	6.68	
MW-07R	11/16/09	13.92	6.04	--	7.88	
MW-07R	03/08/10	13.92	5.63	--	8.29	
MW-07R	06/07/10	13.92	6.04	--	7.88	
MW-07R	09/09/10	13.92	7.05	--	6.87	
MW-07R	11/15/10	13.92	6.11	--	7.81	
MW-07R	03/01/11	13.92	5.43	--	8.49	

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
MW-07R	05/23/11	13.92	5.66	--	8.26	
MW-07R	08/29/11	13.92	6.97	--	6.95	
MW-07R	12/01/11	13.92	6.24	--	7.68	
MW-07R	03/01/12	13.92	6.10	--	7.82	
MW-07R	05/30/12	13.92	6.12	--	7.80	
MW-07R	08/25/12	13.92	--	--	--	Not Measured
MW-07R	11/07/12	13.92	6.02	--	7.90	
MW-07R	02/27/13	13.92	5.84	--	8.08	
MW-07R	04/08/13	13.92	5.49	--	8.43	
MW-07R	07/29/13	13.92	6.70	--	7.22	
MW-07R	10/02/13	13.92	6.06	--	7.86	
MW-07R	01/21/14	13.92	6.49	--	7.43	
MW-07R	04/22/14	13.92	5.56	--	8.36	
MW-07R	07/15/14	13.92	6.60	--	7.32	
MW-07R	03/17/15	13.92	5.06	--	8.86	
MW-07R	09/28/15	13.92	6.73	--	7.19	
TMW-B1	09/09/10	--	--	--	--	Not Measured-SPH recovery unit in well
TMW-B1	05/23/11	--	7.37	--	--	Not Measured-SPH recovery unit in well
TMW-B1	12/01/11	--	8.17	--	--	Not Measured-SPH recovery unit in well
TMW-B1	03/01/12	--	7.75	--	--	Not Measured-SPH recovery unit in well
TMW-B1	08/25/12	--	8.37	--	--	Not Measured
TMW-B1	07/29/13	--	7.80	--	--	
TMW-B1	10/02/13	--	7.47	--	--	
TMW-B1	01/21/14	--	7.78	--	--	
TMW-B1	04/22/14	--	6.99	--	--	
TMW-B1	07/15/14	--	--	--	--	See SW/KH notes
TMW-B1	03/17/15	--	6.57	--	--	
TMW-B1	09/28/15	--	8.26	--	--	
TMW-1	06/21/13	--	3.44	--	--	Baseline monitoring event
TMW-1	07/29/13	--	3.72	--	--	
TMW-1	08/26/13	--	3.74	--	--	Two-month monitoring event
TMW-1	10/02/13	--	2.97	--	--	
TMW-1	01/21/14	--	3.48	--	--	
TMW-1	04/22/14	--	2.09	--	--	
TMW-1	07/15/14	--	--	--	--	Not done due to no TOC elev datum
TMW-1	03/17/15	--	1.65	--	--	
TMW-1	09/29/15	--	4.06	--	--	
TMW-2	06/21/13	--	3.83	--	--	Baseline monitoring event
TMW-2	07/29/13	--	3.94	--	--	
TMW-2	08/26/13	--	3.91	--	--	Two-month monitoring event
TMW-2	10/02/13	--	3.15	--	--	
TMW-2	01/21/14	--	3.63	--	--	
TMW-2	04/22/14	--	2.36	--	--	
TMW-2	07/15/14	--	--	--	--	Not done due to no TOC elev datum
TMW-2	03/17/15	--	1.68	--	--	
TMW-2	10/01/15	--	4.16	--	--	
TMW-3	06/21/13	--	3.81	--	--	Baseline monitoring event
TMW-3	07/29/13	--	3.91	--	--	
TMW-3	08/26/13	--	3.88	--	--	Two-month monitoring event
TMW-3	10/02/13	--	3.14	--	--	
TMW-3	01/21/14	--	3.76	--	--	
TMW-3	04/22/14	--	2.41	--	--	
TMW-3	07/15/14	--	--	--	--	Not done due to no TOC elev datum
TMW-3	03/17/15	--	1.67	--	--	
TMW-3	09/30/15	--	4.21	--	--	
TMW-4	06/21/13	--	3.50	--	--	Baseline monitoring event
TMW-4	07/29/13	--	3.75	--	--	
TMW-4	08/26/13	--	3.80	--	--	Two-month monitoring event
TMW-4	10/02/13	--	2.99	--	--	
TMW-4	01/21/14	--	3.45	--	--	
TMW-4	04/22/14	--	2.20	--	--	
TMW-4	07/15/14	--	--	--	--	Not done due to no TOC elev datum
TMW-4	03/17/15	--	1.3	--	--	
TMW-4	09/30/15	--	3.89	--	--	
TMW-5	06/21/13	--	3.24	--	--	Baseline monitoring event
TMW-5	07/29/13	--	3.31	--	--	
TMW-5	08/26/13	--	3.39	--	--	Two-month monitoring event
TMW-5	10/02/13	--	2.80	--	--	
TMW-5	01/21/14	--	3.22	--	--	
TMW-5	04/22/14	--	2.42	--	--	
TMW-5	07/15/14	--	--	--	--	Not done due to no TOC elev datum

Table 1
Groundwater Elevation Data

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Measured	Casing Elevation feet	Depth to Groundwater feet BTOC	Separate-Phase Hydrocarbons feet	Groundwater Elevation ^A feet AMSL	Comments
TMW-5	03/17/15	--	1.84	--	--	
TMW-5	09/30/15	--	3.71	--	--	
TMW-6	06/21/13	--	2.93	--	--	Baseline monitoring event
TMW-6	07/29/13	--	2.91	--	--	
TMW-6	08/26/13	--	2.92	--	--	Two-month monitoring event
TMW-6	10/02/13	--	2.12	--	--	
TMW-6	01/21/14	--	2.74	--	--	
TMW-6	04/22/14	--	1.72	--	--	
TMW-6	07/15/14	--	--	--	--	Not done due to no TOC elev datum
TMW-6	03/17/15	--	1.48	--	--	
TMW-6	09/30/15	--	3.21	--	--	

Notes:

Highlighted = data from most recent monitoring event

BTOC = below top of casing; depth to groundwater measured from TOC

AMSL = above mean sea level

SPH = separate phase hydrocarbons

Wells MW-10D and MW-11D were deep wells, screened from 30 to 35 feet below grade

^A Prior to September 2003 monitoring event, top of casing elevation relative to N.G.V.D. 1929 TIDAL 2 vertical datum (survey benchmark elev=10.617). All TOC elevations were re-surveyed in July 2003, relative to N.A.V.D. 1988 vertical datum with modified benchmark elevations to account for shifts from February 2001 earthquake.

* Groundwater elevation corrected for separate-phase hydrocarbon thickness using the specific gravity of diesel (0.8)

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO mg/l	DRO mg/l	DRO, SGC mg/l	HO mg/l	HO, SGC mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l	Total Lead mg/l	Dissolved Lead mg/l	Comments
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-5	02/14/02	<0.25	2.3	--	<0.5	--	0.00055	0.0017	<0.0005	<0.0005	--	--	
A-5	05/22/02	<0.25	2.0	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-5	08/29/02	<0.25	1.2	--	<0.5	--	0.0017	0.00062	<0.0005	0.00099	--	--	
A-5	11/06/02	<0.25	1.2	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-5	02/20/03	<0.25	<0.25	--	<0.5	--	0.00086	0.0019	<0.0005	0.001	--	--	
A-5	06/10/03	0.26	0.40	--	<0.25	--	<0.0005	0.00067	<0.0005	0.0007	--	--	
A-5	09/17/03	<0.25	0.60	--	<0.50	--	0.0042	<0.0005	<0.0005	<0.0005	--	--	
A-5	11/20/03	<0.25	0.53	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-5	02/26/04	<0.25	3.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-5	05/12/04	0.27	0.43	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00057	--	--	
A-5	08/25/04	<0.25	1.1	--	<0.50	--	0.0029	<0.0005	<0.0005	<0.0005	--	--	
A-5	12/14/04	<0.25	0.43	--	<0.50	--	0.021	<0.001	<0.001	<0.001	--	--	
A-5	03/10/05	0.43	5.2	--	<0.50	--	0.12	0.0025	<0.001	0.0012	--	--	
A-5	06/07/05	0.54	2.4	--	1.7	--	0.12	0.0028	<0.001	0.0013	--	--	
A-5	09/20/05	0.37	1.2	--	<0.50	--	0.037	0.0017	<0.001	0.0011	--	--	
A-5	12/13/05	0.44	0.31	--	<0.50	--	0.049	0.0021	<0.0005	0.0013	--	--	
A-5	03/15/06	0.36	0.45	--	<0.50	--	0.052	0.0017	<0.001	0.0017	--	--	
A-5	06/08/06	0.91	0.55	--	<0.50	--	0.099	0.0036	0.00076	0.0034	--	--	
A-5	09/12/06	0.46	0.43	--	<0.50	--	0.031	0.0016	<0.001	0.0014	--	--	
A-5	12/12/06	0.7	0.53	--	<0.50	--	0.079	0.0028	<0.001	0.0025	--	--	
A-5	03/27/07	1.4	--	--	--	--	0.19	0.0045	0.0014	0.0050	--	--	
A-5	06/19/07	1.1	1.9	--	<0.50	--	0.09	0.0027	0.00072	0.0039	--	--	
A-5	09/24/07	0.72	--	--	--	--	0.039	0.0019	<0.0005	0.0018	--	--	
A-5	12/11/07	0.31	--	--	--	--	0.017	0.00096	<0.0005	0.00088	--	--	
A-5	03/04/08	1.4	--	--	--	--	0.12	0.0040	<0.0010	0.0040	--	--	
A-5	06/03/08	0.85	--	--	--	--	0.048	<0.0015	<0.0015	0.0029	--	--	
A-5	09/08/08	1.5	--	--	--	--	0.15	0.0032	0.0031	0.0076	--	--	
A-5	12/05/08	0.64	--	--	--	--	0.089	<0.0010	<0.0010	0.0038	--	--	
A-5	03/04/09	<0.25	--	--	--	--	0.0011	<0.0010	0.002	0.0071	--	--	
A-5	06/03/09	0.45	--	--	--	--	0.022	<0.0010	<0.0010	0.0027	--	--	
A-5	09/22/09	0.75	--	--	--	--	0.063	0.0012	0.0041	0.021	--	--	
A-5	11/17/09	0.43	--	--	--	--	0.011	<0.0010	<0.0010	0.0038	--	--	
A-5	03/08/10	0.34	--	--	--	--	0.0059	<0.0010	0.0012	0.0051	--	--	
A-5	06/09/10	<0.25	--	--	--	--	0.0063	<0.0010	<0.0010	0.0019	--	--	
A-5	09/10/10	0.80	--	--	--	--	0.031	0.0017	0.0047	0.025	--	--	
A-5	11/16/10	0.35	--	--	--	--	0.0025	<0.0010	0.0011	0.0086	--	--	
A-5	03/02/11	0.34	--	--	--	--	0.0042	<0.0010	<0.0010	0.0019	--	--	
A-5	05/25/11	0.39	--	--	--	--	0.0078	0.00057	<0.0005	0.0014	--	--	
A-5	08/30/11	0.47	--	--	--	--	0.0027	0.00070	<0.0005	0.0013	--	--	
A-5	12/02/11	0.29	--	--	--	--	0.0017	<0.0010	<0.0010	<0.0020	--	--	
A-5	03/02/12	<0.25	--	--	--	--	0.00094	<0.0005	<0.0005	<0.0005	--	--	
A-5	06/01/12	<0.25	--	--	--	--	0.012	<0.0010	<0.0010	0.0010	--	--	
A-5 (DUP)	06/01/12	<0.25	--	--	--	--	0.011	<0.0010	<0.0010	0.0010	--	--	Duplicate of A-5
A-5	08/25/12	0.57	--	--	--	--	0.02	0.0012	<0.0010	0.0014	--	--	
A-5	11/08/12	0.27	--	--	--	--	0.028	<0.001	<0.001	0.0011	--	--	
A-5	02/28/13	0.66	--	--	--	--	0.062	0.0017	<0.0005	0.0013	--	--	
A-5	04/10/13	0.46	--	--	--	--	0.014	<0.001	<0.001	<0.001	--	--	
A-5	07/29/13	0.54	--	--	--	--	0.033	0.0022	<0.0005	0.0022	--	--	
A-5	10/03/13	0.47	--	--	--	--	0.049	0.0014	<0.001	0.0016	--	--	

Table 2

Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO mg/l	DRO mg/l	DRO, SGC mg/l	HO mg/l	HO, SGC mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l	Total Lead mg/l	Dissolved Lead mg/l	Comments
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-5	01/21/14	0.51	--	--	--	--	0.051	0.0012	<0.001	<0.001	--	--	
A-5	04/23/14	0.60	--	--	--	--	0.025	0.0015	<0.0005	0.0011	--	--	
A-5	07/15/14	0.61	--	--	--	--	0.017	0.0011	<0.0005	0.00095	--	--	
A-5	03/18/15	0.40	--	--	--	--	0.0045	0.0013	<0.0005	0.0012	--	--	
A-5	10/02/15	0.495	--	--	--	--	0.00161	<0.005	<0.001	<0.003	--	--	
A-5 (DUP)	10/02/15	0.553	--	--	--	--	0.00168	<0.005	<0.001	<0.003	--	--	Duplicate of A-5
A-8	02/14/02	<0.25	1.6	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	05/22/02	<0.25	0.51	--	<0.5	--	<0.0005	0.00058	<0.0005	<0.0005	--	--	
A-8	08/28/02	<0.25	<0.5	--	<0.5	--	<0.0005	0.0014	<0.0005	0.00066	--	--	
A-8	11/06/02	<0.25	0.43	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	02/20/03	<0.25	<0.25	--	<0.5	--	<0.0005	0.00083	<0.0005	<0.0005	--	--	
A-8	06/10/03	<0.25	<0.25	--	<0.25	--	<0.0005	0.00056	<0.0005	<0.0005	--	--	
A-8	09/17/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	11/20/03	<0.25	1.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	02/26/04	0.35	1.0000	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	05/12/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	08/25/04	<0.25	4.9	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-8	12/14/04	<0.25	1.7	--	<0.50	--	0.00056	0.00052	<0.0005	0.00094	--	--	
A-8	03/10/05	<0.25	2.1	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00055	--	--	
A-8	06/07/05	<0.25	1.2	--	1.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-8	09/20/05	<0.25	3.5	--	0.83	--	0.0012	<0.001	<0.001	0.0012	--	--	
A-8	12/13/05	<0.25	0.54	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.0011	--	--	
A-8	03/15/06	<0.25	0.55	--	<0.50	--	<0.0010	<0.0010	<0.0010	0.0010	--	--	
A-8	06/08/06	<0.25	0.47	--	<0.50	--	<0.0010	<0.0010	<0.0010	0.0010	--	--	
A-8	09/12/06	<0.25	0.76	--	<0.50	--	<0.0010	<0.0010	<0.0010	0.0011	--	--	
A-8	12/12/06	0.27	0.87	--	<0.50	--	<0.0010	0.0011	<0.0010	0.0015	--	--	
A-8	06/19/07	<0.25	2.4	--	0.58	--	<0.0010	<0.0010	<0.0010	0.0010	--	--	
A-8	06/03/08	<0.30	0.46	--	<0.50	--	<0.0015	<0.0015	<0.0015	<0.0015	--	--	
A-8	06/03/09	<0.25	1.6	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
A-8	06/09/10	<0.25	0.45	--	<0.50	--	0.0054	<0.0010	<0.0010	<0.0010	--	--	
A-8	05/25/11	<0.25	1.2	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
A-8	06/01/12	<0.50	0.90	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
A-8	04/10/13	0.25	--	<0.25	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-8	04/23/14	<0.25	1.5	<0.25	<0.50	<0.50	<0.0005	0.00061	<0.0005	<0.0005	--	--	
A-8	10/02/15	0.382	4.97	--	0.475	--	<0.001	<0.005	<0.001	<0.003	--	--	
A-10	02/14/02	<0.25	9.2	--	<0.5	--	<0.0005	0.00062	<0.0005	<0.0005	--	--	
A-10	05/22/02	0.31	8.8	--	<0.5	--	<0.0005	0.00086	<0.0005	<0.0005	--	--	
A-10	08/28/02	0.30	15	--	<0.5	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-10	11/06/02	0.37	13	--	<0.50	--	<0.0005	0.00057	<0.0005	<0.0005	--	--	
A-10	02/20/03	<0.25	6.0	--	<0.5	--	0.0013	<0.0005	<0.0005	0.00055	--	--	
A-10	06/10/03	0.45	19	--	<0.25	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-10	09/17/03	0.68	30	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	11/20/03	1.1	89	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	02/26/04	<0.25	35	--	0.74	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	05/12/04	<0.25	3.5	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	08/25/04	<0.25	5.1	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	12/14/04	<0.25	1.1	--	<0.50	--	0.0030	<0.001	<0.001	<0.001	--	--	
A-10	03/10/05	<0.25	4.6	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	06/07/05	0.30	68	--	2.1	--	0.00069	<0.0005	<0.0005	<0.0005	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-10	09/20/05	0.60	1.5	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	12/13/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	03/15/06	<0.25	1.7	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00050	--	--	
A-10	06/08/06	<0.25	0.66	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00050	--	--	
A-10	09/12/06	<0.25	0.65	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00050	--	--	
A-10	12/12/06	<0.25	0.98	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	06/19/07	<0.25	1.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	06/03/09	<0.25	2.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	06/09/10	<0.25	0.56	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	05/25/11	<0.25	0.80	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	06/01/12	<0.25	0.62	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	04/10/13	<0.25	--	0.36	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	04/23/14	<0.25	0.27	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-10	10/02/15	<0.1	0.723	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	--	--	
A-12	12/12/06	<0.25	0.98	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-12	06/03/08	<0.25	0.63	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-12	05/25/11	<0.025	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-14R	02/14/02	<0.25	<0.25	--	<0.5	--	0.00061	0.0021	<0.0005	<0.0005	0.005*	--	
A-14R	05/22/02	<0.25	<0.5	--	<0.5	--	0.00053	0.0021	<0.0005	0.00054	0.02*	--	
A-14R	08/28/02	<0.25	<0.5	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
A-14R	11/06/02	<0.25	<0.25	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
A-14R	02/20/03	<0.25	<0.25	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
A-14R	06/10/03	<0.25	<0.25	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	0.02	--	
A-14R	09/17/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.025*	--	
A-14R	11/20/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.032*	--	
A-14R	02/26/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.018*	--	
A-14R	05/12/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	08/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	12/14/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0072*	--	
A-14R	03/10/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	06/07/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
A-14R	12/13/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	03/15/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	06/08/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	09/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	12/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-14R	06/19/07	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	06/03/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	06/03/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	06/09/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	05/25/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	06/01/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	04/10/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	04/23/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-14R	10/01/15	<0.1	<0.1	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
A-18	05/25/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-19	05/25/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-20	05/25/11	2.5	--	--	--	--	<0.0010	<0.0010	0.037	0.013	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO mg/l	DRO mg/l	DRO, SGC mg/l	HO mg/l	HO, SGC mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l	Total Lead mg/l	Dissolved Lead mg/l	Comments
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-21	02/14/02	<0.25	<0.25	--	<0.5	--	<0.0005	0.0010	<0.0005	<0.0005	<0.005*	--	
A-21	05/22/02	<0.25	<0.5	--	<0.5	--	0.00061	0.0017	<0.0005	0.00057	<0.005*	--	
A-21	08/29/02	<0.25	0.76	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
A-21	11/06/02	<0.25	0.37	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
A-21	02/19/03	<0.25	<0.5	--	<0.5	--	0.0013	0.0018	<0.0005	0.00061	<0.005*	--	
A-21	06/10/03	0.25	<0.25	--	<0.25	--	0.0082	0.00058	<0.0005	<0.0005	0.062*	--	
A-21	09/16/03	<0.25	<0.25	--	<0.50	--	0.0034	<0.0005	<0.0005	<0.0005	0.0085*	--	
A-21	11/19/03	0.47	<0.25	--	<0.50	--	0.061	0.0019	<0.0005	0.0029	0.0067*	--	
A-21	02/25/04	0.63	<0.50	--	<0.50	--	0.013	0.00066	0.045	0.0016	<0.0050*	--	
A-21	05/12/04	0.50	<0.25	--	<0.50	--	0.0019	<0.0005	0.0042	0.00072	<0.0050*	--	
A-21	08/25/04	0.26	<0.25	--	<0.50	--	0.0015	<0.0005	<0.0005	0.0015	<0.0050*	--	
A-21	12/14/04	0.99	<0.25	--	<0.50	--	0.061	0.0025	0.022	0.0083	<0.0050*	--	
A-21	03/10/05	1.5	0.26	--	<0.50	--	0.024	0.0021	0.0025	0.011	0.020*	--	
A-21	06/07/05	1.2	0.35	--	<0.50	--	0.0076	0.00084	0.00077	0.0043	<0.0050*	--	
A-21	09/20/05	1.3	<0.25	--	<0.50	--	0.011	0.0012	0.00066	0.0048	<0.0050*	--	
A-21	12/13/05	1.6	<0.25	--	<0.50	--	0.017	0.0016	0.0015	0.0052	<0.0050*	--	
A-21	03/15/06	0.97	<0.25	--	<0.50	--	0.0098	0.00097	0.0023	0.0033	<0.0050*	--	
A-21	06/08/06	0.82	<0.25	--	<0.50	--	0.0023	0.00059	<0.0005	0.0019	<0.0050*	--	
A-21	09/12/06	0.85	<0.25	--	<0.50	--	0.0019	<0.0005	<0.0005	0.0016	<0.0050*	--	
A-21	12/12/06	0.85	<0.25	--	<0.50	--	0.0071	<0.0005	0.0021	0.0014	<0.0050*	--	
A-21	03/27/07	0.28	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	06/19/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-21	09/25/07	<0.25	--	--	--	--	0.0040	<0.0005	<0.0005	<0.0005	--	--	
A-21	12/11/07	0.51	--	--	--	--	0.0062	<0.0005	0.026	0.0020	--	--	
A-21	03/04/08	<0.25	--	--	--	--	<0.0005	<0.0005	0.0051	<0.0005	--	--	
A-21	06/04/08	<0.25	--	--	--	--	<0.0005	<0.0005	0.00075	<0.0005	<0.0050	--	
A-21	09/08/08	0.41	--	--	--	--	<0.0005	0.00074	0.0018	0.00053	--	--	
A-21	12/04/08	0.96	--	--	--	--	<0.0010	<0.0010	0.15	<0.0010	--	--	
A-21	03/04/09	0.48	--	--	--	--	0.0075	<0.0005	0.0068	0.021	--	--	
A-21	06/02/09	0.46	--	--	--	--	0.0027	<0.00050	0.0023	0.0059	0.0087	--	
A-21	09/22/09	0.27	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	11/17/09	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	03/08/10	<0.25	--	--	--	--	0.0026	<0.0005	0.0019	0.0046	--	--	
A-21	06/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-21	09/10/10	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
A-21	11/16/10	0.82	--	--	--	--	<0.0010	<0.0010	0.056	0.011	--	--	
A-21	03/02/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	05/24/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-21	08/30/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	12/02/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0010	--	--	
A-21	03/02/12	1.7	--	--	--	--	<0.0010	<0.0010	0.16	0.026	--	--	
A-21	05/30/12	1.5	--	--	--	--	<0.0010	<0.0010	0.027	<0.0010	<0.0050	--	
A-21	08/25/12	1.6	--	--	--	--	<0.0010	<0.0010	0.024	<0.0010	--	--	
A-21	11/08/12	0.53	--	--	--	--	<0.0005	<0.0005	0.0011	0.0015	--	--	
A-21	02/28/13	0.44	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	04/10/13	0.58	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-21	07/29/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	10/03/13	<0.25	--	--	--	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-21	01/21/14	<0.25	--	--	--	--	<0.001	<0.001	<0.001	<0.001	--	--	

Table 2

Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-21	04/23/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-21	07/15/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	03/18/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-21	10/01/15	<0.1	--	--	--	--	<0.001	<0.005	<0.001	<0.003	0.00526	0.00402	
A-22R	05/25/11	27	--	--	--	--	3.4	0.086	3.0	1.7	--	--	
A-23R	02/14/02	0.26	2.1	--	<0.5	--	0.060	0.0010	0.0099	0.0072	0.72*a	--	
A-23R	05/20/02	0.74	6.9	--	<0.5	--	0.15	<0.001	0.088	0.0067	0.095*a	--	
A-23R	08/28/02	0.62	2.1	--	<0.5	--	0.20	0.0035	0.021	0.0075	0.23*	--	
A-23R	11/05/02	0.74	1.7	--	<0.5	--	0.22	<0.0015	0.0059	0.014	0.18*	--	
A-23R	02/19/03	0.71	2.3	--	<0.5	--	0.26	0.0033	0.0054	0.0059	0.049*	--	
A-23R	06/10/03	<0.25	1.8	--	<0.25	--	0.0073	<0.001	0.0028	<0.001	<0.005*	--	
A-23R	09/16/03	0.70	1.3	--	<0.50	--	0.043	0.0029	0.057	0.0018	0.38*	--	
A-23R	11/19/03	1.0	0.78	--	<0.50	--	0.08	0.0037	0.069	0.0035	0.13*	--	
A-23R	02/25/04	1.6	0.78	--	<0.50	--	0.26	0.0072	0.061	0.015	0.081*	--	
A-23R	05/12/04	0.28	0.45	--	<0.50	--	0.020	0.00075	0.0022	0.00082	<0.0050*	--	
A-23R	08/25/04	2.3	0.35	--	<0.50	--	0.46	0.012	0.074	0.020	0.012*	--	
A-23R	12/14/04	2	0.65	--	<0.50	--	0.37	0.0084	0.041	0.013	0.018*	--	
A-23R	03/10/05	0.60	0.31	--	<0.50	--	0.035	0.0011	0.0045	0.0014	0.035*	--	
A-23R	06/07/05	0.33	<0.25	--	<0.50	--	0.0080	<0.0005	0.0012	<0.0005	0.013*	--	
A-23R	09/20/05	<0.25	<0.25	--	<0.50	--	0.00060	<0.0005	<0.0005	<0.0005	0.0096*a	--	
A-23R	12/14/05	0.37	<0.25	--	<0.50	--	0.019	0.00056	0.00065	0.00058	0.032*	--	
A-23R	03/15/06	1.1	<0.25	--	<0.50	--	0.34	0.0033	<0.0025	0.0051	<0.0050*	--	
A-23R	06/08/06	0.34	<0.25	--	<0.50	--	0.033	<0.0005	<0.0005	0.031	0.0081*	--	
A-23R	09/12/06	0.42	<0.25	--	<0.50	--	0.010	<0.0005	0.032	0.0013	0.035*	--	
A-23R	12/12/06	2.1	<0.25	--	<0.50	--	0.52	0.0066	0.053	0.021	<0.0050*	--	
A-23R	03/27/07	0.86	--	--	--	--	0.17	0.0019	0.0019	0.0045	--	--	
A-23R	06/19/07	0.44	--	--	--	--	0.021	0.00058	0.010	0.0013	0.0076*	--	
A-23R	09/24/07	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
A-23R	12/11/07	0.79	--	--	--	--	0.095	0.0025	0.0050	0.0026	--	--	
A-23R	03/04/08	<0.25	--	--	--	--	0.00097	<0.0005	<0.0005	<0.0005	--	--	
A-23R	06/05/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
A-23R	12/05/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	03/04/09	<0.25	--	--	--	--	0.00073	<0.0005	0.0022	0.013	--	--	
A-23R	06/02/09	<0.25	--	--	--	--	0.0013	<0.00050	0.0021	0.0059	<0.0050*	--	
A-23R	09/21/09	<0.25	--	--	--	--	<0.00050	<0.00050	<0.00050	<0.00050	--	--	
A-23R	11/16/09	<0.25	--	--	--	--	<0.0005	<0.0005	0.001	<0.0005	--	--	
A-23R	03/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	06/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
A-23R	09/09/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	11/16/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	03/01/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	05/24/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050**	--	
A-23R	08/29/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	12/01/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0010	--	--	
A-23R	03/01/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	05/30/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050**	--	
A-23R	11/07/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	02/27/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	04/08/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	<0.0050	

Table 2

Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-23R	07/29/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	10/02/13	<0.25	--	--	--	--	<0.001	<0.001	<0.001	<0.001	--	--	
A-23R	01/21/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
A-23R	04/22/14	<0.25	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.0050	<0.0050	
A-23R	07/15/14	<0.25	--	--	--	--	0.00092	<0.0005	<0.0005	<0.0005	--	--	
A-23R	09/28/15	<0.1	--	--	--	--	0.00109	<0.005	<0.001	<0.003	--	--	
A-25	06/16/11	4.1	--	--	--	--	0.27	0.038	0.28	0.19	--	--	
A-26R	05/25/11	22	--	--	--	--	4	0.095	1.6	0.75	--	--	
A-27	02/14/02	2.9	11	--	<0.5	--	0.13	0.014	0.096	0.25	--	--	
A-27	05/22/02	3.3	8.2	--	<0.5	--	0.20	0.016	0.14	0.38	--	--	
A-27	08/29/02	3.8	8.1	--	<0.5	--	0.24	0.016	0.14	0.29	--	--	
A-27	11/06/02	3.2	8.000	--	<0.5	--	0.16	0.016	0.065	0.14	--	--	
A-27	02/19/03	3.1	6.8	--	<0.5	--	0.17	0.017	0.052	0.13	--	--	
A-27	06/10/03	3.7	4.5	--	<0.25	--	0.14	0.013	0.11	0.23	--	--	
A-27	09/16/03	4.5	5.6	--	<0.50	--	0.27	0.02	0.18	0.38	--	--	
A-27	11/19/03	5.9	5.3	--	<0.50	--	0.25	0.023	0.13	0.33	--	--	
A-27	02/25/04	4.4	16	--	<0.50	--	0.15	0.016	0.18	0.30	--	--	
A-27	05/11/04	4.6	5.2	--	<0.50	--	0.16	0.017	0.23	0.38	--	--	
A-27	08/25/04	4.7	2.5	--	<0.50	--	0.25	0.018	0.17	0.24	--	--	
A-27	12/14/04	4.5	4.4	--	<0.50	--	0.11	0.012	0.099	0.14	--	--	
A-27	03/10/05	5.8	4.7	--	<0.50	--	0.14	0.015	0.16	0.22	--	--	
A-27	06/07/05	4.5	7.8	--	<0.50	--	0.17	0.014	0.24	0.34	--	--	
A-27	09/20/05	6.3	2.3	--	<0.50	--	0.25	0.019	0.18	0.22	--	--	
A-27	12/13/05	3.7	0.83	--	<0.50	--	0.13	0.012	0.083	0.095	--	--	
A-27	03/15/06	4.4	1.3	--	<0.50	--	0.13	0.017	0.19	0.24	--	--	
A-27	06/08/06	4.5	1.1	--	<0.50	--	0.19	0.016	0.23	0.28	--	--	
A-27	09/12/06	3.4	0.82	--	<0.50	--	0.17	0.011	0.12	0.12	--	--	
A-27	12/12/06	3.7	0.90	--	<0.50	--	0.11	0.0096	0.10	0.12	--	--	
A-27	03/27/07	3.2	--	--	--	--	0.063	0.0078	0.047	0.050	--	--	
A-27	06/19/07	2.6	--	--	--	--	0.073	0.0064	0.047	0.053	--	--	
A-27	09/24/07	2.7	--	--	--	--	0.10	0.0072	0.035	0.040	--	--	
A-27	12/11/07	4.7	--	--	--	--	0.16	0.011	0.17	0.13	--	--	
A-27	03/04/08	4.0	--	--	--	--	0.10	0.011	0.14	0.11	--	--	
A-27	06/04/08	2.5	--	--	--	--	0.093	0.0063	0.022	0.041	--	--	
A-27	09/08/08	3.5	--	--	--	--	0.16	0.0091	0.067	0.047	--	--	
A-27	12/04/08	3.1	--	--	--	--	0.13	0.0075	0.091	0.046	--	--	
A-27	03/04/09	2.5	--	--	--	--	0.098	0.0080	0.07	0.043	--	--	
A-27	06/02/09	3.1	--	--	--	--	0.048	0.0065	0.11	0.05	--	--	
A-27	09/22/09	2.9	--	--	--	--	0.054	0.0064	0.099	0.037	--	--	
A-27	11/16/09	3.0	--	--	--	--	0.035	0.0051	0.0921	0.035	--	--	
A-27	03/09/10	2.4	--	--	--	--	0.024	0.0043	0.089	0.036	--	--	
A-27	06/08/10	2.5	--	--	--	--	0.021	0.0041	0.088	0.031	--	--	
A-27	09/09/10	3.4	--	--	--	--	0.035	0.0054	0.12	0.034	--	--	
A-27	11/16/10	2.1	--	--	--	--	0.014	0.0034	0.070	0.022	--	--	
A-27	03/02/11	2.3	--	--	--	--	0.014	0.0024	0.051	0.016	--	--	
A-27	05/24/11	1.7	--	--	--	--	0.0092	0.0017	0.023	0.0096	--	--	
A-27	08/30/11	2.1	--	--	--	--	0.026	0.0021	0.022	0.011	--	--	
A-27	12/02/11	2.2	--	--	--	--	0.016	0.0026	0.030	0.0094	--	--	
A-27	03/01/12	1.4	--	--	--	--	0.012	0.0018	0.035	0.0077	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-27	05/30/12	1.6	--	--	--	--	0.015	0.0016	0.038	0.0066	--	--	
A-27	08/25/12	1.5	--	--	--	--	0.029	0.0018	0.0027	0.0048	--	--	
A-27	11/08/12	1.2	--	--	--	--	0.025	0.0022	0.0093	0.0068	--	--	
A-27	02/28/13	1.6	--	--	--	--	0.038	0.0019	0.057	0.0078	--	--	
A-27	04/10/13	1.3	--	--	--	--	0.035	0.0018	0.041	0.0053	--	--	
A-27	06/21/13	1.0	0.40 K	--	--	--	0.053	0.0024	0.043	0.0083	--	--	Baseline monitoring event
A-27	07/30/13	1.8	--	--	--	--	0.073	0.0039	0.051	0.017	--	--	
A-27 (DUP)	07/30/13	1.5	--	--	--	--	0.058	0.0033	0.040	0.015	--	--	Duplicate of A-27
A-27	08/26/13	1.9	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
A-27	08/26/13	2.1	--	--	--	--	--	--	--	--	--	--	Duplicate of A-27
A-27	10/02/13	1.9	--	--	--	--	0.066	0.0041	0.038	0.021	--	--	
A-27	01/22/14	2.6	--	--	--	--	0.078	0.0042	0.061	0.062	--	--	
A-27	04/22/14	2.9	--	--	--	--	0.062	0.0023	0.074	0.078	--	--	
A-27	07/15/14	1.8	--	--	--	--	0.051	0.0021	0.012	0.016	--	--	
A-27	03/18/15	2.3	--	--	--	--	0.072	0.0019	0.072	0.010	--	--	Surrogate recovery above lab limits
A-27	09/29/15	1.68	--	--	--	--	0.0609	<0.005	0.00988	0.00742	--	--	
A-28R	02/14/02	5.3	2.7	--	<0.5	--	0.66	0.027	0.42	0.20	0.035*	--	
A-28R	05/22/02	3.1	6.7	--	<0.5	--	0.14	0.010	0.20	0.092	0.05*	--	
A-28R	08/29/02	4.0	6.0	--	<0.5	--	0.15	0.019	0.23	0.078	0.032*	--	
A-28R	11/06/02	3.4	1.8	--	<0.5	--	0.47	0.015	0.053	0.050	0.028*	--	
A-28R	02/19/03	3.5	4.6	--	<0.5	--	0.46	0.015	0.051	0.050	0.013*	--	
A-28R	06/10/03	3.7	2.9	--	<0.25	--	0.31	0.0081	0.085	0.051	0.064*	--	
A-28R	09/16/03	3.8	2.0	--	<0.50	--	1.0	0.013	0.075	0.048	0.17*	--	
A-28R	11/19/03	4.9	<0.25	--	<0.50	--	0.58	0.012	0.059	0.064	0.11*	--	
A-28R	02/25/04	5.1	1.7	--	<0.50	--	0.63	0.0093	0.19	0.076	0.0080*	--	
A-28R	05/12/04	6.5	2.6	--	<0.50	--	0.96	0.012	0.20	0.058	<0.0050*	--	
A-28R	08/25/04	5.9	0.88	--	<0.50	--	2.1	0.018	0.050	0.053	0.043*	--	
A-28R	12/14/04	7.6	3.0	--	<0.50	--	1.4	0.015	0.073	0.062	0.025*	--	
A-28R	03/10/05	10	0.76	--	<0.50	--	1.9	0.019	0.077	0.064	0.0078*	--	
A-28R	06/07/05	6.4	1.2	--	<0.50	--	2.1	0.015	0.069	0.048	0.0068*	--	
A-28R	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
A-28R	12/13/05	5.4	<0.25	--	<0.50	--	0.93	0.011	0.033	0.036	0.012*	--	
A-28R	03/15/06	4.6	<0.25	--	<0.50	--	0.80	0.012	0.11	0.035	<0.0050*	--	
A-28R	06/08/06	4.2	0.49	--	0.73	--	0.87	0.013	0.070	0.035	0.019*	--	
A-28R	09/12/06	5.2	<0.25	--	<0.50	--	1.0	0.015	0.048	0.036	0.016*	--	
A-28R	12/12/06	4.0	0.57	--	<0.50	--	0.3	0.0095	0.027	0.028	<0.0050*	--	
A-28R	03/27/07	5.5	--	--	--	--	0.71	0.014	0.062	0.022	--	--	
A-28R	06/19/07	5.3	--	--	--	--	0.59	0.018	0.058	0.041	<0.0050	--	
A-28R	09/24/07	3.9	--	--	--	--	0.53	0.015	0.041	0.035	--	--	
A-28R	12/11/07	2.1	--	--	--	--	0.088	0.0044	0.013	0.015	--	--	
A-28R	03/04/08	3.6	--	--	--	--	0.27	0.0087	0.044	0.022	--	--	
A-28R	06/04/08	2.2	--	--	--	--	0.095	0.0049	0.0060	0.012	<0.0050	--	
A-28R	12/04/08	1.4	--	--	--	--	0.026	0.0022	0.011	0.0075	--	--	
A-28R	03/04/09	1.4	--	--	--	--	0.12	0.0060	0.057	0.029	--	--	
A-28R	06/02/09	2.1	--	--	--	--	0.055	0.0020	0.016	0.0069	<0.0050	--	
A-28R	09/22/09	2.3	--	--	--	--	0.1	0.0026	0.038	0.016	--	--	
A-28R	11/16/09	1.7	--	--	--	--	0.080	0.002	0.039	0.017	--	--	
A-28R	03/09/10	7.3	--	--	--	--	0.65	0.0079	0.32	0.092	--	--	
A-28R	06/08/10	2.2	--	--	--	--	0.14	0.0018	0.045	0.013	<0.0050	--	

Table 2

Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
A-28R	09/10/10	2.4	--	--	--	--	0.12	0.0020	0.041	0.011	--	--	
A-28R	11/16/10	1.8	--	--	--	--	0.077	0.0017	0.047	0.013	--	--	
A-28R	03/02/11	2.8	--	--	--	--	0.15	0.0029	0.083	0.016	--	--	
A-28R	05/24/11	3.5	--	--	--	--	0.21	0.0029	0.091	0.015	<0.0050	--	
A-28R	08/30/11	3.7	--	--	--	--	0.14	0.0026	0.061	0.011	--	--	
A-28R	12/02/11	3.6	--	--	--	--	0.074	0.0022	0.056	0.0092	--	--	
A-28R	03/02/12	2.6	--	--	--	--	0.086	0.0022	0.075	0.012	--	--	
A-28R	05/30/12	2.7	--	--	--	--	0.065	0.0017	0.050	0.0085	<0.0050	--	
A-28R	08/25/12	1.8	--	--	--	--	0.030	0.00089	0.010	0.0031	--	--	
A-28R	11/08/12	0.81	--	--	--	--	0.015	<0.0005	0.0066	0.0013	--	--	
A-28R	02/28/13	2.6	--	--	--	--	0.062	<0.0025	0.044	0.0059	--	--	
A-28R	04/10/13	3.2	--	--	--	--	0.035	0.0013	0.030	0.0042	<0.0050	--	
A-28R	07/29/13	2.5	--	--	--	--	0.043	0.0018	0.019	0.0034	--	--	
A-28R	10/02/13	1.4	--	--	--	--	0.015	<0.001	0.0043	0.0026	--	--	
A-28R	01/22/14	1.4	--	--	--	--	0.17	0.0027	0.0060	0.0033	--	--	
A-28R	04/22/14	2.2	--	--	--	--	0.062	0.0022	0.016	0.0025	<0.0050	--	
A-28R	07/15/14	1.7	--	--	--	--	0.043	0.0016	0.0062	0.0020	--	--	
A-28R	03/18/15	3.0	--	--	--	--	0.042	0.0035	0.016	0.0055	--	--	Surrogate recovery above lab limits
A-28R	09/29/15	1.85	--	--	--	--	0.0205	<0.005	0.00431	<0.003	--	--	
A-29R	05/25/11	5.6	--	--	--	--	2.3	0.018	<0.015	0.024	--	--	
11	06/24/13	<0.25	0.30	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	Baseline monitoring event
11	07/30/13	<0.25	--	--	--	--	--	--	--	--	--	--	
11	08/26/15	<0.25	--	--	--	--	--	--	--	--	--	--	
11	10/03/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
11	01/22/14	0.75	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
11	04/21/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
11	07/14/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
11	03/18/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
11	09/29/15	<0.1	--	--	--	--	<0.001	<0.005	<0.001	<0.003	--	--	
12	06/24/13	4.1	5.3 K	--	--	--	0.037	0.045	0.13	0.53	--	--	Baseline monitoring event
12	08/26/15	9.3	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
12	10/03/13	2.7	--	--	--	--	0.0020	0.0057	0.043	0.18	--	--	
12	01/22/14	4.2	--	--	--	--	0.0067	0.015	0.027	0.34	--	--	
12	04/21/14	2.6	--	--	--	--	0.015	0.014	0.088	0.15	--	--	
12	07/14/14	4.7	--	--	--	--	0.019	0.026	0.17	0.22	--	--	
12	03/18/15	1.8	--	--	--	--	0.0059	0.0012	0.003	0.024	--	--	
12	09/29/15	3.32	9.85	--	0.732	--	0.0435	0.0217	0.191	0.0609	0.0508	0.00280	
MW-1	02/13/02	<0.25	2.0	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-1	05/21/02	<0.25	1.9	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-1	08/28/02	<0.25	1.0	--	<0.5	--	0.0013	0.0067	0.00052	0.0016	<0.005*	--	
MW-1	11/05/02	<0.25	0.87	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.021*	--	
MW-1	02/19/03	<0.25	1.9	--	<0.5	--	<0.0005	0.00058	<0.0005	<0.0005	<0.005*	--	
MW-1	06/10/03	<0.25	1.1	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-1	09/16/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	11/19/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	02/25/04	<0.25	1.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	05/11/04	<0.25	0.87	--	<0.50	--	<0.0005	0.00068	<0.0005	<0.0005	<0.0050*	--	
MW-1	08/25/04	0.83	0.40	--	<0.50	--	<0.0005	<0.0005	0.00065	<0.0005	<0.0050*	--	
MW-1	12/15/04	<0.25	0.38	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-1	03/09/05	<0.25	0.63	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	06/08/05	<0.25	0.80	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	09/21/05	<0.25	0.40	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	12/14/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	03/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	06/07/06	<0.25	0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0052*	--	
MW-1	12/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-1	06/20/07	<0.25	0.75	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	06/05/08	<0.25	0.32	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.0013	<0.0050	--	
MW-1	06/01/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	06/01/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	04/23/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-1	10/01/15	<0.1	1.38	--	0.708	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-2	02/13/02	<0.25	0.71	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-2	05/21/02	<0.25	0.66	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-2	08/29/02	<0.25	0.91	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-2	11/05/02	<0.25	0.73	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-2	02/19/03	<0.25	0.74	--	<0.5	--	<0.0005	0.00062	<0.0005	<0.0005	0.028*	--	
MW-2	06/10/03	<0.25	0.61	--	<0.25	--	<0.0005	0.00071	<0.0005	<0.0005	0.026*a	--	
MW-2	09/16/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.062*	--	
MW-2	11/19/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.021*	--	
MW-2	02/25/04	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.030*	--	
MW-2	05/11/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	08/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	12/14/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	03/10/05	<0.25	0.29	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	06/07/05	<0.25	0.91	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.036*	--	
MW-2	09/20/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	12/13/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.024*	--	
MW-2	03/15/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	06/08/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0063*	--	
MW-2	09/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	12/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-2	06/19/07	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	06/04/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	06/03/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.063	--	
MW-2	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	04/22/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-2	09/30/15	<0.1	<0.1	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-3	02/13/02	<0.25	1.8	--	<0.5	--	0.011	0.0015	0.0045	0.011	<0.005*	--	
MW-3	05/20/02	0.38	1.9	--	<0.5	--	0.052	0.0028	0.025	0.020	0.01*	--	
MW-3	08/28/02	0.62	2.5	--	<0.5	--	0.11	0.0071	0.021	0.030	<0.005*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-3	11/06/02	0.63	1.1	--	<0.5	--	0.14	0.0053	0.021	0.015	0.006*	--	
MW-3	02/19/03	<0.25	1.8	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.014*	--	
MW-3	06/11/03	<0.25	1.3	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	0.019*	--	
MW-3	09/17/03	<0.25	1.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.042*	--	
MW-3	11/20/03	<0.25	2.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0063*	--	
MW-3	02/25/04	<0.25	1.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.025*	--	
MW-3	05/11/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	08/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0051*	--	
MW-3	12/15/04	<0.25	0.33	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.018*	--	
MW-3	03/09/05	<0.25	<0.25	--	<0.50	--	0.0010	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	06/08/05	<0.25	<0.25	--	<0.50	--	0.0011	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	09/21/05	<0.25	<0.25	--	<0.50	--	0.00094	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	12/14/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	03/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	06/07/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	12/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-3	06/20/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	06/05/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	06/01/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	06/09/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	0.0011	0.0053	<0.0050	--	
MW-3	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	04/22/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-3	10/01/15	<0.1	0.143	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-4	02/14/02	0.78	280	--	<50	--	0.30	0.0072	0.0023	0.0082	--	--	
MW-4	05/21/02	1.5	8.6	--	<0.5	--	0.43	0.023	0.034	0.13	--	--	
MW-4	08/28/02	3.3	30	--	2.6	--	1.1	0.016	0.016	0.024	--	--	
MW-4	11/05/02	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-4	02/19/03	3.1	31	--	<0.5	--	0.056	0.0017	0.014	0.020	--	--	
MW-4	06/10/03	0.39	12	--	<0.25	--	0.031	0.0012	0.0091	0.0096	--	--	
MW-4	09/16/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-4	11/19/03	0.25	19	--	<0.50	--	0.033	<0.001	0.0042	0.0069	--	--	
MW-4	02/25/04	0.36	15	--	<0.50	--	0.035	0.0014	0.0056	0.0094	--	--	
MW-4	05/12/04	0.33	7.4	--	<0.50	--	0.012	<0.001	0.0048	0.0058	--	--	
MW-4	08/26/04	<0.50	5.1	--	<0.50	--	0.014	<0.0025	0.0039	0.0069	--	--	
MW-4	12/15/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-4	03/09/05	<2.0	11	--	<0.50	--	<0.01	<0.01	<0.01	0.013	--	--	
MW-4	06/08/05	<1.0	16	--	1.1	--	<0.005	<0.005	<0.005	<0.005	<0.0050	--	
MW-4	09/21/05	<2.0	19	--	2.1	--	<0.010	<0.010	<0.010	<0.010	--	--	
MW-4	12/14/05	<0.50	6.2	--	0.81	--	0.012	<0.0025	0.0032	0.0084	--	--	
MW-4	03/14/06	<0.40	3.9	--	0.69	--	0.0063	<0.0020	0.0020	0.0062	--	--	
MW-4	06/07/06	<0.50	4.5	--	<0.50	--	0.0037	<0.0025	<0.0025	<0.0025	--	--	
MW-4	09/13/06	<0.50	2.7	--	<0.50	--	0.0034	<0.0025	<0.0025	0.0029	--	--	
MW-4	12/13/06	<0.25	3.7	--	0.62	--	0.0012	<0.0005	<0.0005	0.0023	--	--	
MW-4	06/20/07	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-4	06/05/08	<0.25	1.2	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-4	06/01/09	<0.25	2.1	--	0.61	--	<0.0005	<0.0005	<0.0005	0.00080	--	--	

Table 2
Groundwater Analytical Results
 Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-4	06/08/10	<0.25	0.86	--	<0.50	--	<0.0005	0.00057	<0.0005	0.0018	--	--	
MW-4	05/23/11	<0.25	1.6	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-4	06/01/12	<0.50	2.0	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-4	04/09/13	<0.50 O	--	0.92	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-4	04/23/14	<0.25	5.3	1.7	0.90	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-4	09/30/15	<0.1	5.02	--	0.916	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-5	02/13/02	<0.25	<0.25	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-5	05/21/02	<0.25	<0.5	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.01*	--	
MW-5	08/29/02	<0.25	1.2	--	<0.5	--	<0.0005	0.0018	<0.0005	0.00063	<0.005*	--	
MW-5	11/05/02	<0.25	1.6	--	<0.5	--	0.0055	0.0016	<0.0005	0.00056	<0.005*	--	
MW-5	02/20/03	<0.25	<0.25	--	<0.5	--	<0.0005	0.00066	<0.0005	<0.0005	<0.005*	--	
MW-5	06/11/03	<0.25	0.36	--	<0.25	--	<0.0005	0.00079	<0.0005	<0.0005	<0.005*	--	
MW-5	09/16/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.011*	--	
MW-5	11/20/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0086*	--	
MW-5	02/24/04	<0.25	<0.50	--	<0.50	--	<0.0005	0.0014	<0.0005	<0.0005	<0.0050*	--	
MW-5	05/11/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	08/26/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	12/15/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	03/09/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.11*	--	
MW-5	06/08/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	09/21/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	12/14/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-5	03/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.012*	--	
MW-5	06/07/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0099*	--	
MW-5	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.013*	--	
MW-5	12/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0088*	--	
MW-5	06/20/07	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-5	06/04/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0094	--	
MW-5	06/02/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00078	<0.0050	--	
MW-5	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-5	05/24/11	<0.25	<0.25	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	--	
MW-5	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-5	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0073	--	
MW-5	04/21/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-5	10/01/15	<0.1	0.371	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-6	02/13/02	0.97	1.1	--	<0.5	--	0.014	0.0007	<0.0005	0.00065	<0.005*	--	
MW-6	05/22/02	1.1	2.5	--	<0.5	--	0.035	0.0012	0.0024	0.00072	<0.005*	--	
MW-6	08/29/02	0.58	6.4	--	<0.5	--	0.0014	<0.001	<0.001	<0.001	<0.005*	--	
MW-6	11/05/02	0.59	7.3	--	<0.5	--	0.064	<0.001	<0.001	0.0016	0.02*	--	
MW-6	02/19/03	0.54	1.7	--	<0.5	--	0.0062	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-6	06/10/03	0.70	1.9	--	<0.25	--	0.025	0.0011	0.00052	0.00051	<0.005*	--	
MW-6	09/16/03	0.68	<0.50	--	<0.50	--	<0.0005	<0.0005	0.00053	<0.0005	0.019*	--	
MW-6	11/19/03	0.44	1.6	--	<0.50	--	0.0095	0.00067	<0.0005	0.00051	<0.0050*	--	
MW-6	02/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	05/11/04	1.0	0.67	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	08/25/04	<0.25	0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	12/14/04	0.82	0.81	--	<0.50	--	0.0080	<0.0005	<0.0005	<0.0005	0.011*	--	
MW-6	03/10/05	1.0	0.42	--	<0.50	--	0.0011	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	06/07/05	0.92	<0.25	--	<0.50	--	0.0014	<0.0005	<0.0005	<0.0005	<0.0050*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-6	09/20/05	0.91	<0.25	--	<0.50	--	<0.0005	<0.0005	0.00062	<0.0005	<0.0050*	--	
MW-6	12/13/05	1.2	0.38	--	<0.50	--	0.0032	<0.0005	0.00050	<0.0005	<0.0050*	--	
MW-6	03/15/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	06/08/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-6	09/12/06	0.71	<0.25	--	<0.50	--	<0.0005	0.00055	<0.0005	<0.0005	<0.0050*	--	
MW-6	12/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	0.00055	<0.0005	<0.0005	<0.0050*	--	
MW-6	03/27/07	0.81	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	06/19/07	0.73	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	09/24/07	0.55	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-6	12/11/07	0.54	--	--	--	--	0.0014	<0.0005	<0.0005	<0.0005	--	--	
MW-6	03/04/08	0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	06/04/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	09/08/08	0.51	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	12/04/08	0.43	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	03/04/09	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	06/02/09	0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.0025	<0.0050	--	
MW-6	09/21/09	0.33	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	11/17/09	0.31	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	03/09/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.00095	--	--	
MW-6	06/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	09/09/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	11/15/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	03/02/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	05/24/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	08/30/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	12/01/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0010	--	--	
MW-6	03/01/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	05/31/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	08/25/12	0.27	--	--	--	--	<0.00050	<0.00050	<0.00050	<0.00050	--	--	
MW-6	11/08/12	0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	02/28/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	04/09/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	07/29/13	0.30	--	--	--	--	<0.0005	<0.0005	<0.0005	0.00059	--	--	
MW-6	10/02/13	0.69	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	01/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	04/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-6	07/15/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-6	09/29/15	0.259	--	--	--	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-7	02/14/02	13	7.5	--	<0.5	--	0.20	0.24	0.57	1.8	0.035*	--	
MW-7	05/21/02	6.6	11	--	<0.5	--	0.16	0.089	0.43	0.66	0.04*	--	
MW-7	08/29/02	2.9	5.7	--	<0.5	--	0.12	0.042	0.24	0.11	0.047*	--	
MW-7	11/05/02	0.90	5.9	--	<0.5	--	0.021	0.0022	0.004	0.0066	0.041*	--	
MW-7	02/20/03	9.7	11	--	<0.5	--	0.12	0.13	0.33	1.4	0.11*a	--	
MW-7	06/11/03	5.7	8.7	--	<0.25	--	0.13	0.092	0.26	0.52	0.081*a	--	
MW-7	09/17/03	1.4	12	--	<0.50	--	0.078	0.031	0.15	0.089	0.11*a	--	
MW-7	11/20/03	0.26	0.79	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.035	0.019*a	--	
MW-7	02/26/04	15	21	--	<0.50	--	0.11	0.34	0.63	3.8	0.034*a	--	
MW-7	05/11/04	6.3	11	--	<0.50	--	0.059	0.15	0.31	1.3	0.0083*a	--	
MW-7	08/26/04	7.1	20	--	<0.50	--	0.054	0.22	0.34	1.7	0.067*a	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-7	12/15/04	18	4.4	--	<0.50	--	0.14	0.37	0.53	3.0	0.19*a	--	
MW-7	03/09/05	3.5	2.1	--	<0.50	--	0.045	0.034	0.090	0.27	0.079*a	--	
MW-7	06/08/05	2.9	2.3	--	<0.50	--	0.054	0.050	0.11	0.44	0.069*a	--	
MW-7	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-7	09/21/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-7	12/14/05	8.8	0.59	--	<0.50	--	0.16	0.19	0.31	1.5	0.042*a	--	
MW-7	03/14/06	15	0.50	--	<0.50	--	0.12	0.26	0.50	3.6	0.026*	--	
MW-7	06/07/06	17	0.85	--	<0.50	--	0.12	0.35	0.69	4.5	0.023*	--	
MW-7	09/13/06	2.4	0.32	--	<0.50	--	0.050	0.055	0.19	0.39	0.021*a	--	
MW-7	12/13/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-7	03/27/07	13	--	--	--	--	0.091	0.22	0.60	2.5	--	--	
MW-7	06/20/07	6.6	--	--	--	--	0.027	0.06	0.19	1.1	0.030*	--	
MW-7	09/24/07	6.6	--	--	--	--	0.023	0.094	0.27	2.0	--	--	
MW-7	12/11/07	27	--	--	--	--	0.031	0.33	0.87	6.6	--	--	
MW-7	03/04/08	19	--	--	--	--	0.032	0.19	0.66	3.8	--	--	
MW-7	06/04/08	6.4	--	--	--	--	<0.01	0.088	0.30	0.77	0.019***	--	
MW-7	09/08/08	15	--	--	--	--	0.015	0.064	0.35	2.6	--	--	
MW-7	12/05/08	8.7	--	--	--	--	0.019	0.046	0.33	1.5	--	--	
MW-7	03/04/09	5.7	--	--	--	--	0.014	0.073	0.25	1.4	--	--	
MW-7	06/02/09	5.5	--	--	--	--	0.014	0.029	0.15	0.89	0.0072*	--	
MW-7	09/21/09	6.1	--	--	--	--	0.0072	0.03	0.18	1.1	--	--	
MW-7	11/17/09	18	--	--	--	--	<0.020	0.16	0.54	4.3	--	--	
MW-7	03/09/10	5.8	--	--	--	--	0.013	0.047	0.20	0.9	--	--	
MW-7	06/09/10	4.9	--	--	--	--	0.0075	0.058	0.25	1.2	0.0064*	--	
MW-7	09/09/10	1.9	<0.25	--	<0.50	--	0.0036	0.0082	0.041	0.23	--	--	
MW-7	11/15/10	8.8	--	--	--	--	0.012	0.10	0.34	2.1	--	--	
MW-7	03/01/11	4.9	--	--	--	--	0.0051	0.055	0.11	0.77	--	--	
MW-7	05/24/11	5.0	--	--	--	--	0.0062	0.050	0.14	0.66	0.0082***	--	
MW-7	08/29/11	2.3	--	--	--	--	0.0022	0.0055	0.026	0.16	--	--	
MW-7	12/01/11	5.2	--	--	--	--	<0.0005	0.026	0.036	0.83	--	--	
MW-7	03/01/12	6.0	<0.25	--	<0.50	--	0.011	0.0987	0.24	0.90	--	--	
MW-7	05/31/12	8.8	--	--	--	--	0.02	0.14	0.36	1.9	0.0063***	--	
MW-7	08/25/12	1.8	--	--	--	--	0.0024	0.0062	0.030	0.16	--	--	
MW-7	11/08/12	2.4	--	--	--	--	0.0028	0.028	0.072	0.55	--	--	
MW-7	02/28/13	1.3	--	--	--	--	<0.0015	0.0070	0.0070	0.19	--	--	
MW-7	04/09/13	8.1	--	--	--	--	<0.005	0.070	0.25	1.4	0.0097	0.0097	
MW-7	04/09/13	5.7	--	--	--	--	0.0071	0.072	0.24	1.2	--	--	
MW-7	06/21/13	4.0	0.27 K	--	--	--	0.0059	0.064	0.28	1.1	--	--	Baseline monitoring event
MW-7	07/30/13	7.2	--	--	--	--	0.016	0.11	0.29	1.6	--	--	
MW-7	08/26/13	7.1	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
MW-7	10/03/13	2.8	--	--	--	--	0.016	0.033	0.15	0.54	--	--	
MW-7	01/22/14	2.1	--	--	--	--	0.014	0.010	0.13	0.17	--	--	
MW-7	04/21/14	1.9	--	--	--	--	0.013	0.0093	0.11	0.2	<0.0050	<0.0050	
MW-7 (DUP)	04/21/14	2.4	--	--	--	--	0.015	0.012	0.13	0.25	--	--	Duplicate of MW-7
MW-7	07/14/14	1.5	--	--	--	--	0.012	0.0012	0.073	0.021	--	--	
MW-7	03/17/15	1.6	--	--	--	--	0.0043	0.0061	0.050	0.13	--	--	
MW-7 (DUP)	03/17/15	2.1	--	--	--	--	0.0059	0.0078	0.068	0.17	--	--	Duplicate of MW-7
MW-7	09/30/15	1.02	--	--	--	--	0.00844	<0.005	0.0328	0.0335	0.00580	0.00381	
MW-8	02/14/02	<0.25	8.1	--	<5.0	--	<0.0005	0.00086	<0.0005	<0.0005	0.03*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-8	08/29/02	<0.25	7.5	--	<0.5	--	<0.0005	0.00082	<0.0005	<0.0005	0.017*	--	
MW-8	11/05/02	<0.25	1.7	--	1.2	--	<0.0005	<0.0005	<0.0005	<0.0005	0.012*	--	
MW-8	02/20/03	<0.25	6.6	--	<0.5	--	<0.0005	0.00055	<0.0005	0.0024	0.029*	--	
MW-8	06/11/03	<0.25	3.8	--	<0.25	--	0.0013	<0.001	<0.001	<0.001	0.012*	--	
MW-8	09/17/03	<0.25	3.3	--	0.77	--	<0.0005	<0.0005	<0.0005	<0.0005	0.030*	--	
MW-8	11/20/03	<0.25	2.5	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050*	--	
MW-8	02/26/04	<0.25	2.7	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.016*	--	
MW-8	05/11/04	<0.25	1.5	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-8	08/26/04	<0.25	1.0	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-8	12/15/04	<0.25	1.5	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	0.0071*	--	
MW-8	03/09/05	<0.25	1.6	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0094*	--	
MW-8	06/08/05	<0.25	1.8	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.014*	--	
MW-8	09/21/05	<0.25	0.97	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.011*	--	
MW-8	12/14/05	<0.25	1.1	--	0.58	--	<0.001	<0.001	<0.001	0.0013	0.0060*	--	
MW-8	03/14/06	<0.25	0.54	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.011*	--	
MW-8	06/07/06	<0.25	0.88	--	0.61	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0093*	--	
MW-8	09/13/06	<0.25	0.35	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.012*	--	
MW-8	12/13/06	<0.25	0.82	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0060*	--	
MW-8	06/20/07	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.029	--	
MW-8	06/04/08	<0.25	0.37	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	0.064	--	
MW-8	06/02/09	<0.25	0.52	--	<0.50	--	<0.00050	<0.00050	<0.00050	<0.00050	0.020	--	
MW-8	06/09/10	<0.25	0.82	--	0.65	--	<0.0005	<0.0005	<0.0005	<0.0005	0.013	--	
MW-8	05/24/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.020	--	
MW-8	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	0.032	--	
MW-8	04/10/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.046	--	
MW-8	04/24/14	<0.25	0.49	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.027	--	
MW-8	09/29/15	<0.1	1.75	--	2.07	--	<0.001	<0.005	<0.001	<0.003	0.00676	<0.002	
MW-9	06/11/03	6.0	13	--	<0.50	--	0.0031	0.036	0.076	0.60	0.022*	--	
MW-9	09/17/03	5.3	39	--	0.72	--	0.026	0.027	0.09	0.45	0.0095*	--	
MW-9	11/20/03	8.5	19	--	<0.50	--	<0.005	0.018	0.14	1.1	0.0096*	--	
MW-9	02/26/04	4.1	28	--	<0.50	--	0.022	0.0072	0.025	0.47	0.0083*	--	
MW-9	05/11/04	4.1	5.8	--	<0.50	--	0.0023	0.0093	0.081	0.44	<0.0050*	--	
MW-9	08/26/04	4.2	6.2	--	<0.50	--	0.0066	0.025	0.13	0.43	0.0099*	--	
MW-9	12/15/04	5.4	7.6	--	<0.50	--	<0.0025	0.011	0.12	0.39	0.0094*	--	
MW-9	03/09/05	4.5	3.5	--	<0.50	--	0.0037	0.0047	0.042	0.18	0.021*	--	
MW-9	06/08/05	3.2	3.9	--	<0.50	--	0.0035	0.0087	0.069	0.17	0.0076*	--	
MW-9	09/21/05	2.3	2.6	--	<0.50	--	0.007	0.0077	0.033	0.12	0.0076*	--	
MW-9	12/14/05	4.7	1.2	--	<0.50	--	0.0078	0.010	0.12	0.38	0.0095*	--	
MW-9	03/14/06	2.4	1.4	--	<0.50	--	0.0024	0.0034	0.018	0.12	0.013*	--	
MW-9	06/07/06	<0.25	1.0	--	<0.50	--	0.0011	0.023	0.049	0.21	0.021*	--	
MW-9	09/13/06	1.8	0.46	--	<0.50	--	0.0044	0.016	0.063	0.064	0.010*	--	
MW-9	12/13/06	2.6	3.8	--	<0.50	--	<0.0025	<0.0025	0.024	0.19	0.025*	--	
MW-9	03/27/07	1.5	--	--	--	--	0.16	0.0013	0.0051	0.026	--	--	
MW-9	06/20/07	2.0	--	--	--	--	0.066	0.015	0.051	0.12	0.017	--	
MW-9	09/24/07	1.7	--	--	--	--	0.0036	0.0072	0.029	0.093	--	--	
MW-9	12/11/07	2.9	--	--	--	--	<0.0025	<0.0025	0.057	0.55	--	--	
MW-9	03/04/08	3.0	--	--	--	--	0.0096	<0.0015	0.016	0.15	--	--	
MW-9	06/04/08	2.0	--	--	--	--	0.0019	0.0073	0.039	0.089	0.0088	--	
MW-9	09/08/08	2.4	--	--	--	--	0.0022	0.020	0.077	0.16	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-9	12/05/08	0.93	--	--	--	--	<0.0015	<0.0015	<0.0015	0.052	--	--	
MW-9	03/04/09	0.42	--	--	--	--	<0.0010	<0.0010	0.0040	0.031	--	--	
MW-9	06/02/09	1.2	--	--	--	--	<0.00050	<0.00050	0.0041	0.032	0.0099	--	
MW-9	09/22/09	1.2	--	--	--	--	0.0060	0.0018	0.0068	0.033	--	--	
MW-9	11/17/09	<0.25	--	--	--	--	<0.0005	0.00050	<0.0005	0.0043	--	--	
MW-9	03/09/10	<0.25	--	--	--	--	0.00092	0.00050	0.00055	0.00071	--	--	
MW-9	06/09/10	0.3	--	--	--	--	0.0014	<0.0005	0.00081	0.0058	<0.0050	--	
MW-9	09/09/10	0.48	--	--	--	--	0.0058	0.0014	0.0061	0.025	--	--	
MW-9	11/15/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.00085	--	--	
MW-9	03/01/11	<0.25	--	--	--	--	0.014	<0.0005	<0.0005	0.00085	--	--	
MW-9	05/24/11	<0.25	--	--	--	--	0.0043	<0.0005	<0.0005	0.00085	0.0093	--	
MW-9	08/29/11	0.28	--	--	--	--	0.0067	<0.0005	0.00078	0.0038	--	--	
MW-9	12/01/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.0024	--	--	
MW-9	03/01/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-9	05/31/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	0.012	--	
MW-9	08/25/12	0.67	--	--	--	--	<0.00050	<0.00050	0.00062	0.0057	--	--	
MW-9	11/08/12	<0.25	--	--	--	--	<0.001	<0.001	<0.001	0.0029	--	--	
MW-9	02/28/13	<0.25	--	--	--	--	0.0012	<0.0005	<0.0005	<0.0005	--	--	
MW-9	04/10/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-9	06/24/13	0.33	0.37	--	--	--	0.014	<0.0005	<0.0005	0.0035	--	--	Baseline monitoring event
MW-9	07/30/13	0.27	--	--	--	--	0.0017	<0.0005	0.00071	0.006	--	--	
MW-9	08/26/15	0.42	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
MW-9	10/03/13	0.3	--	--	--	--	0.0056	<0.0005	<0.0005	0.0092	--	--	
MW-9	01/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.0013	--	--	
MW-9	04/21/14	<0.25	--	--	--	--	0.017	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-9	07/14/14	<0.25	--	--	--	--	0.010	<0.0005	<0.0005	0.00072	--	--	
MW-9	03/18/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-9	09/30/15	<0.1	--	--	--	--	<0.001	<0.005	<0.001	<0.003	0.00323	<0.002	
MW-12	06/19/01	<0.05	1.6	--	<0.5	--	<0.001	<0.001	<0.001	<0.003	<0.004	--	
MW-12	06/20/01	<0.06	1.7	--	<0.5	--	<0.001	<0.001	<0.001	<0.003	<0.004	--	
MW-12	Destroyed during construction activities												
MW-12R	02/14/02	<0.25	1.4	--	<0.5	--	0.014	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-12R	05/21/02	<0.25	2.5	--	<0.5	--	0.08	0.0013	<0.0005	0.00066	<0.005*	--	
MW-12R	08/28/02	<0.25	2.1	--	<0.5	--	0.028	0.0059	<0.0005	0.0015	<0.005*	--	
MW-12R	11/05/02	<0.25	1.3	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-12R	02/19/03	0.26	2.5	--	<0.5	--	0.19	0.0012	<0.001	<0.001	<0.005*	--	
MW-12R	06/10/03	0.41	1.3	--	<0.25	--	0.11	0.00055	<0.0005	<0.0005	<0.005*	--	
MW-12R	09/16/03	<0.25	0.67	--	<0.50	--	0.0021	<0.0005	<0.0005	<0.0005	0.013*	--	
MW-12R	11/19/03	0.42	<0.25	--	<0.50	--	0.26	<0.001	<0.001	<0.001	0.0078	--	
MW-12R	02/25/04	0.26	1.8	--	<0.50	--	0.099	0.00050	<0.0005	0.00076	0.010*	--	
MW-12R	05/12/04	0.56	0.74	--	<0.50	--	0.20	<0.001	<0.001	<0.001	<0.0050*	--	
MW-12R	08/26/04	0.35	0.50	--	<0.50	--	0.089	<0.001	<0.001	<0.001	<0.0050*	--	
MW-12R	12/15/04	<0.25	0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	03/09/05	<0.25	0.39	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	06/08/05	<0.25	0.39	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-12R	09/21/05	0.26	0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	03/14/06	<0.25	<0.25	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050*	--	
MW-12R	06/07/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-12R	12/13/06	<0.25	0.27	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	12/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-12R	06/20/07	<0.25	--	--	--	--	<0.0005	0.0010	<0.0005	<0.0005	<0.0050	--	
MW-12R	06/05/08	<0.25	0.78	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	--	
MW-12R	06/01/09	<0.25	0.32	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-12R	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-12R	05/23/11	<0.25	0.41	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	--	
MW-12R	06/01/12	<0.25	<0.25	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	--	
MW-12R	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-12R	04/23/14	<0.25	0.49	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-12R	09/30/15	<0.1	2.41	--	1.07	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
MW-13	06/19/01	<0.05	1.3	--	<0.5	--	<0.001	<0.001	<0.001	<0.003	<0.004	--	
MW-13	Destroyed during construction activities												
MW-13R	02/14/02	<0.25	3.2	--	<0.5	--	0.056	<0.0005	<0.0005	0.00075	<0.005*	--	
MW-13R	05/21/02	<0.25	3.5	--	<0.5	--	0.0025	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-13R	08/28/02	<0.25	2.4	--	<0.5	--	<0.0005	0.0019	<0.0005	0.00070	<0.005*	--	
MW-13R	11/05/02	<0.25	2.0	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-13R	02/19/03	<0.25	1.7	--	<0.5	--	0.00078	0.0032	<0.0005	0.00083	<0.005*	--	
MW-13R	06/10/03	<0.25	0.76	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-13R	09/16/03	<0.25	1.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0078*	--	
MW-13R	11/19/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0066	--	
MW-13R	02/25/04	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.012*	--	
MW-13R	05/12/04	<0.25	0.61	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	08/26/04	<0.25	0.49	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	12/15/04	<0.25	0.91	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	03/09/05	<0.25	0.35	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	06/08/05	<0.25	0.49	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-13R	09/21/05	<0.25	0.39	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	03/14/06	<0.25	<0.25	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050*	--	
MW-13R	06/07/06	<0.25	<0.25	--	<0.50	--	<0.005	<0.005	<0.005	<0.005	<0.0050*	--	
MW-13R	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	12/13/06	<0.25	0.33	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0077*	--	
MW-13R	12/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-13R	06/20/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-13R	06/05/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-13R	06/01/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-13R	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-13R	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-13R	Abandoned on 5/25/2012												
MW-14	02/13/02	2.5	37	--	<5.0	--	0.010	0.0085	0.18	0.22	--	--	
MW-14	05/21/02	2.9	23	--	1.0	--	0.0093	0.0057	0.18	0.15	--	--	
MW-14	08/29/02	2.9	28	--	<0.5	--	0.017	0.0073	0.21	0.14	--	--	
MW-14	11/05/02	2.0	28	--	0.91	--	0.060	0.0059	0.12	0.076	--	--	
MW-14	02/20/03	3.4	18	--	<0.5	--	0.056	0.0062	0.14	0.11	--	--	
MW-14	06/11/03	3.1	28	--	<0.5	--	0.059	0.0098	0.23	0.13	--	--	
MW-14	09/16/03	<1.0	15	--	<0.50	--	0.13	<0.005	0.019	0.022	--	--	
MW-14	11/20/03	<2.0	29	--	0.7	--	0.12	<0.01	0.020	0.031	--	--	
MW-14	02/24/04	2.4	21	--	<0.50	--	0.061	0.014	0.25	0.20	--	--	
MW-14	05/11/04	2.7	27	--	<0.50	--	0.053	0.0092	0.21	0.16	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO mg/l	DRO mg/l	DRO, SGC mg/l	HO mg/l	HO, SGC mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l	Total Lead mg/l	Dissolved Lead mg/l	Comments
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-14	08/26/04	2.3	11	--	0.53	--	0.024	<0.0025	0.16	0.19	--	--	
MW-14	12/15/04	1.2	9.6	--	<0.50	--	0.0084	<0.005	0.010	0.0055	--	--	
MW-14	03/09/05	4.2	7.7	--	<0.50	--	0.0053	0.0094	0.18	0.099	--	--	
MW-14	06/08/05	3.1	8.8	--	<0.50	--	0.0043	0.0069	0.17	0.11	--	--	
MW-14	09/21/05	1.6	10	--	1.1	--	0.012	0.0048	0.077	0.068	--	--	
MW-14	12/14/05	3.1	2.0	--	<0.50	--	0.0059	0.0075	0.12	0.068	--	--	
MW-14	03/14/06	0.79	2.1	--	<0.50	--	<0.0025	<0.0025	0.023	0.030	--	--	
MW-14	06/07/06	0.84	3.0	--	<0.50	--	<0.0025	<0.0025	0.061	0.033	--	--	
MW-14	09/13/06	2.4	1.8	--	<0.50	--	<0.0025	0.0060	0.1	0.056	--	--	
MW-14	12/13/06	1.1	1.4	--	<0.50	--	<0.0025	<0.0025	0.044	0.029	--	--	
MW-14	03/27/07	1.3	--	--	--	--	0.0057	<0.0025	0.049	0.024	--	--	
MW-14	06/20/07	1.5	--	--	--	--	<0.0025	0.0039	0.087	0.046	--	--	
MW-14	09/24/07	2.5	--	--	--	--	0.0024	0.0077	0.15	0.13	--	--	
MW-14	12/11/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	03/04/08	0.43	--	--	--	--	<0.0015	<0.0015	0.019	0.0073	--	--	
MW-14	06/04/08	<0.30	--	--	--	--	<0.0015	<0.0015	<0.015	<0.015	--	--	
MW-14	09/08/08	2.5	--	--	--	--	0.0024	0.0070	0.17	0.075	--	--	
MW-14	12/05/08	<0.50	--	--	--	--	<0.0025	<0.0025	0.0047	0.0036	--	--	
MW-14	03/04/09	<0.25	--	--	--	--	0.0011	<0.0010	0.0011	0.0038	--	--	
MW-14	06/02/09	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	0.0018	--	--	
MW-14	09/21/09	0.56	--	--	--	--	<0.0025	<0.0025	0.044	0.013	--	--	
MW-14	11/17/09	<0.50	--	--	--	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-14	03/08/10	<0.25	--	--	--	--	0.0010	<0.0010	0.0010	0.0021	--	--	
MW-14	06/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	0.0011	0.0014	--	--	
MW-14	09/09/10	0.5	--	--	--	--	0.0013	0.0018	0.031	0.036	--	--	
MW-14	11/15/10	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-14	03/01/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	05/24/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	08/29/11	0.41	--	--	--	--	<0.0010	0.0011	0.019	0.026	--	--	
MW-14	12/01/11	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	0.0032	--	--	
MW-14	03/01/12	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-14	05/31/12	<0.25	--	--	--	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-14	08/25/12	<0.25	--	--	--	--	<0.00050	<0.00050	0.0028	0.0017	--	--	
MW-14	11/08/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.0041	--	--	
MW-14	02/28/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	04/09/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-14	07/30/13	<0.25	--	--	--	--	<0.0005	0.00058	0.011	0.0092	--	--	
MW-14	10/03/13	<0.25	--	--	--	--	<0.001	<0.001	0.0034	0.022	--	--	
MW-14	01/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	04/21/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	07/15/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-14	10/01/15	0.299	--	--	--	--	<0.001	<0.005	0.00106	0.0192	--	--	
MW-16	02/13/02	<0.25	<0.25	--	<0.5	--	0.0013	0.0037	<0.0005	0.0011	--	--	
MW-16	05/21/02	<0.25	<0.5	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	08/29/02	<0.25	<0.5	--	<0.5	--	<0.0005	0.0022	<0.0005	0.00069	--	--	
MW-16	11/05/02	<0.25	0.29	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	02/19/03	<0.25	<0.25	--	<0.5	--	<0.0005	0.0018	<0.0005	<0.0005	--	--	
MW-16	06/10/03	<0.25	<0.25	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	09/16/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-16	11/19/03	<0.25	<0.25	--	<0.50	--	<0.0005	0.0013	<0.0005	0.00062	--	--	
MW-16	02/25/04	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	05/11/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	08/26/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	12/15/04	<0.25	<0.25	--	<0.50	--	0.029	<0.0005	<0.0005	<0.0005	--	--	
MW-16	03/10/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	06/07/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	09/20/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	12/13/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	03/15/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	06/08/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	09/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	0.00062	0.0012	<0.0005	--	--	
MW-16	12/12/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	06/19/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	06/04/08	0.39	0.43	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-16	06/03/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	06/09/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.0012	--	--	
MW-16	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	04/22/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-16	09/30/15	<0.1	<0.1	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-17	05/23/11	0.3	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	02/13/02	7.6	0.77	--	<0.5	--	1.8	0.067	0.29	0.34	--	--	
MW-18	05/21/02	1.2	0.30	--	<0.5	--	0.25	0.016	0.068	0.068	--	--	
MW-18	08/29/02	1.6	<0.5	--	<0.5	--	0.45	0.014	0.032	0.044	--	--	
MW-18	11/05/02	1.1	<0.25	--	<0.5	--	<0.3	0.010	0.011	0.031	--	--	
MW-18	02/19/03	<0.25	<0.25	--	<0.5	--	0.0035	0.0047	<0.0005	0.0016	--	--	
MW-18	06/10/03	<0.25	<0.25	--	<0.25	--	0.022	0.0016	<0.0005	0.0040	--	--	
MW-18	09/16/03	<0.25	<0.50	--	<0.50	--	0.036	0.0019	<0.0005	0.0075	--	--	
MW-18	11/19/03	<0.25	<0.25	--	<0.50	--	0.0042	<0.0005	<0.0005	0.0015	--	--	
MW-18	02/25/04	0.58	<0.25	--	<0.50	--	0.11	0.0048	0.00087	0.026	--	--	
MW-18	05/11/04	1.1	<0.25	--	<0.50	--	0.25	0.0073	0.0016	0.037	--	--	
MW-18	08/26/04	<0.25	<0.25	--	<0.50	--	0.003	<0.0005	<0.0005	<0.0005	--	--	
MW-18	12/15/04	0.84	<0.25	--	<0.50	--	0.14	0.0060	0.0019	0.029	--	--	
MW-18	03/10/05	0.84	<0.25	--	<0.50	--	0.25	0.0049	0.0020	0.021	--	--	
MW-18	06/07/05	0.68	<0.25	--	<0.50	--	0.17	0.0039	0.0019	0.0098	--	--	
MW-18	09/20/05	4.0	<0.25	--	<0.50	--	0.74	0.021	0.0091	0.090	--	--	
MW-18	12/13/05	2.3	<0.25	--	<0.50	--	0.45	0.015	0.0067	0.033	--	--	
MW-18	03/15/06	4.9	<0.25	--	<0.50	--	1.2	0.035	0.025	0.12	--	--	
MW-18	06/08/06	1.2	<0.25	--	<0.50	--	0.15	0.011	0.011	0.034	--	--	
MW-18	09/12/06	0.35	<0.25	--	<0.50	--	0.023	0.0021	0.0022	0.0047	--	--	
MW-18	12/12/06	0.28	<0.25	--	<0.50	--	0.023	0.0018	0.0019	0.0060	--	--	
MW-18	03/27/07	0.78	--	--	--	--	0.022	0.0029	0.0051	0.012	--	--	
MW-18	06/19/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	09/24/07	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	12/11/07	<0.25	--	--	--	--	0.011	0.00075	<0.0005	0.0032	--	--	
MW-18	03/04/08	0.29	--	--	--	--	0.0090	0.0016	0.00050	0.00088	--	--	
MW-18	06/04/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-18	09/08/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	12/04/08	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	03/04/09	<0.25	--	--	--	--	0.00080	<0.0005	<0.0005	<0.0005	--	--	
MW-18	06/03/09	<0.25	--	--	--	--	0.00061	<0.0005	<0.0005	<0.0005	--	--	
MW-18	09/22/09	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	11/17/09	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	03/09/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	0.0011	--	--	
MW-18	06/08/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	09/10/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	11/16/10	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	03/02/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	05/23/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	08/30/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	12/02/11	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0010	--	--	
MW-18	03/02/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	05/31/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	11/08/12	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	02/28/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	04/09/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	07/29/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	10/02/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	01/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	04/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	07/15/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	03/18/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-18	03/18/15	<0.1	--	--	--	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-19	02/13/02	29	6.8	--	<2.5	--	0.057	0.73	0.58	6.5	--	--	
MW-19	05/21/02	30	7.7	--	<0.5	--	0.049	0.65	0.53	6.5	--	--	
MW-19	08/29/02	13	11	--	<0.5	--	0.14	0.29	0.20	2.1	--	--	
MW-19	11/05/02	8.2	3.0	--	<0.5	--	0.21	0.37	0.16	1.7	--	--	
MW-19	02/20/03	38	19	--	<0.5	--	0.091	1.2	0.80	8.0	--	--	
MW-19	06/11/03	32	15	--	<1.0	--	0.042	0.38	0.80	6.7	--	--	
MW-19	09/16/03	4.2	12	--	<0.50	--	0.19	0.043	0.19	1.1	--	--	
MW-19	11/20/03	22	10	--	<0.50	--	0.11	0.67	0.75	6.1	--	--	
MW-19	02/24/04	19	14	--	<0.50	--	<0.015	0.49	0.63	4.7	--	--	
MW-19	05/11/04	27	13	--	<0.50	--	<0.025	0.22	0.87	7.2	--	--	
MW-19	08/26/04	22	0.72	--	<0.50	--	0.042	0.26	0.64	4.6	--	--	
MW-19	12/15/04	15	7.6	--	<0.50	--	0.039	0.12	0.37	2.7	--	--	
MW-19	03/09/05	27	9.1	--	<0.50	--	0.073	0.18	0.56	3.4	--	--	
MW-19	06/08/05	17	6.3	--	<0.50	--	0.071	0.17	0.61	2.8	--	--	
MW-19	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-19	12/14/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-19	03/14/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-19	06/07/06	14	1.4	--	<0.50	--	<0.010	0.043	0.29	1.4	--	--	
MW-19	09/13/06	11	0.50	--	<0.50	--	0.032	0.047	0.41	1.1	--	--	
MW-19	12/13/06	8.0	1.4	--	<0.50	--	0.016	0.052	0.3	1.4	--	--	
MW-19	03/27/07	13	--	--	--	--	<0.010	0.047	0.35	1.8	--	--	
MW-19	06/20/07	12	--	--	--	--	0.05	0.092	0.29	1.2	--	--	
MW-19	09/24/07	10	--	--	--	--	0.13	0.11	0.42	1.3	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-19	12/11/07	12	--	--	--	--	0.11	0.14	0.40	1.9	--	--	
MW-19	03/04/08	17	--	--	--	--	0.15	0.28	0.52	2.4	--	--	
MW-19	06/04/08	11	--	--	--	--	0.070	0.023	0.45	1.0	--	--	
MW-19	09/08/08	5.3	--	--	--	--	0.078	0.0063	0.12	0.29	--	--	
MW-19	12/05/08	7.8	--	--	--	--	0.071	0.047	0.38	0.73	--	--	
MW-19	03/04/09	9.4	--	--	--	--	0.076	0.13	0.43	1.4	--	--	
MW-19	06/02/09	13	--	--	--	--	0.071	0.13	0.43	1.6	--	--	
MW-19	09/21/09	8.4	--	--	--	--	0.052	0.0097	0.32	0.29	--	--	
MW-19	11/17/09	7.4	--	--	--	--	0.023	0.049	0.34	1.2	--	--	
MW-19	03/08/10	10	--	--	--	--	0.017	0.11	0.46	1.8	--	--	
MW-19	06/08/10	12	--	--	--	--	0.042	0.17	0.55	1.6	--	--	
MW-19	09/09/10	7.3	0.71	--	<0.50	--	0.039	0.020	0.42	0.18	--	--	
MW-19	11/15/10	4.5	--	--	--	--	0.039	0.18	0.44	0.13	--	--	
MW-19	03/01/11	9.6	--	--	--	--	0.039	0.13	0.34	0.88	--	--	
MW-19	05/24/11	7.4	--	--	--	--	0.0028	0.011	0.17	0.38	--	--	
MW-19	08/29/11	7.0	--	--	--	--	0.012	0.015	0.15	0.066	--	--	
MW-19	12/01/11	7.5	--	--	--	--	0.059	0.034	0.22	0.30	--	--	
MW-19	03/01/12	6.4	--	--	--	--	0.15	0.064	0.34	0.44	--	--	
MW-19	05/31/12	8.3	--	--	--	--	0.079	0.073	0.48	0.81	--	--	
MW-19	08/25/12	5.2	--	--	--	--	0.054	0.0076	0.27	0.089	--	--	
MW-19	11/08/12	4.7	--	--	--	--	0.042	0.0096	0.28	0.18	--	--	
MW-19	02/28/13	8.1	--	--	--	--	0.045	0.13	0.44	0.77	--	--	
MW-19	04/09/13	6.9	--	--	--	--	0.029	0.15	0.32	0.57	--	--	
MW-19	06/21/13	2.8	1.1 K	--	--	--	0.019	0.017	0.31	0.081	--	--	Baseline monitoring event
MW-19	07/30/13	4.4	--	--	--	--	0.0086	0.0051	0.16	0.013	--	--	
MW-19	08/26/15	2.3	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
MW-19	10/03/13	3.2	--	--	--	--	0.0076	0.0023	0.046	0.0020	--	--	
MW-19	01/22/14	2.2	--	--	--	--	0.021	0.00065	0.029	<0.0005	--	--	
MW-19	04/21/14	2.1	--	--	--	--	0.0066	0.0039	0.16	0.0064	--	--	
MW-19	07/15/14	4.2	--	--	--	--	0.0059	0.010	0.21	0.15	--	--	
MW-19 (DUP)	07/15/14	4.4	--	--	--	--	0.0052	0.0097	0.20	0.15	--	--	Duplicate of MW-19
MW-19	03/18/15	4.3	--	--	--	--	0.0049	0.014	0.14	0.18	--	--	
MW-19	09/30/15	2.02	--	--	--	--	0.00341	<0.005	0.0157	<0.003	--	--	
MW-20	02/13/02	<0.25	0.64	--	<0.5	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-20	05/20/02	<0.25	1.3	--	<0.5	--	0.018	0.0012	0.0048	0.014	--	--	
MW-20	08/29/02	0.6	1.1	--	<0.5	--	0.057	0.0065	0.021	0.084	--	--	
MW-20	11/06/02	<0.25	0.81	--	<0.5	--	0.0023	0.00053	<0.0005	<0.0005	--	--	
MW-20	02/19/03	<0.25	<0.25	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/11/03	<0.25	0.68	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	09/17/03	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	11/20/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00072	--	--	
MW-20	02/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	05/11/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	08/26/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	12/15/04	<0.25	0.30	--	<0.50	--	0.0013	<0.0005	<0.0005	<0.0005	--	--	
MW-20	03/09/05	<0.25	<0.25	--	<0.50	--	0.00074	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/08/05	<0.25	0.55	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	09/21/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	12/14/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-20	03/14/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/07/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	12/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/20/07	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/05/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/01/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	06/09/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	0.00054	0.0028	--	--	
MW-20	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	05/31/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	04/22/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-20	10/01/15	<0.1	0.378	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-21	06/10/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	06/11/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	09/17/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	11/20/03	0.97	19	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	02/26/04	2.3	35	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	05/11/04	1.2	29	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	08/26/04	4.3	33	--	<0.50	--	<0.001	<0.001	0.0013	0.0014	--	--	
MW-21	12/15/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	03/09/05	2.4	140	--	<5.0	--	<0.0015	<0.0015	0.0016	<0.0015	--	--	
MW-21	06/08/05	1.8	31	--	0.50	--	<0.002	<0.002	0.0026	<0.002	--	--	
MW-21	09/21/05	1.7	46	--	3.3	--	<0.0010	<0.0010	0.0013	<0.0010	--	--	
MW-21	12/14/05	1.0	6.1	--	0.54	--	<0.002	<0.002	0.0027	<0.002	--	--	
MW-21	03/14/06	<0.25	33	--	3.1	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	06/07/06	0.77	18	--	1.2	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	09/13/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	12/13/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-21	03/27/07	<0.50	9.6	--	0.75	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	06/20/07	<0.50	8.5	--	0.66	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	09/24/07	0.36	4.3	--	0.52	--	<0.0015	<0.0015	0.0018	<0.0015	--	--	
MW-21	12/11/07	<0.25	34	--	2.5	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-21	03/04/08	<0.50	12	--	0.92	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	06/04/08	<0.30	4.7	--	<0.50	--	<0.0015	<0.0015	<0.015	<0.0015	--	--	
MW-21	09/08/08	0.98	3.8	--	<0.50	--	<0.0015	0.0015	0.0049	0.0028	--	--	
MW-21	12/05/08	<1.0	4.8	--	<0.50	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	
MW-21	03/04/09	<0.50	6.4	--	0.89	--	<0.0025	<0.0025	<0.0025	0.0034	--	--	
MW-21	06/02/09	0.7	2.9	--	0.68	--	<0.0010	<0.0010	0.0016	<0.0010	--	--	
MW-21	09/22/09	1.7	4.7	--	<0.50	--	<0.0025	<0.0025	0.0029	<0.0025	--	--	
MW-21	11/17/09	<0.25	0.87	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	03/09/10	<0.25	1.1	--	<0.50	--	0.0014	<0.0010	<0.0010	<0.0005	--	--	
MW-21	09/10/10	0.6	3.7	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-21	11/15/10	<0.25	0.49	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	03/01/11	<0.25	1.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	05/23/11	<0.25	1.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	08/29/11	0.35	3.7	--	0.98	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-21	12/01/11	<0.25	1.7	--	--	--	<0.0010	<0.0010	<0.0010	<0.0020	--	--	
MW-21	03/01/12	<0.25	0.51	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	

Table 2
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 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-21	05/31/12	<0.25	6.1	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-21	08/25/12	0.56	1.8	--	0.59	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-21	11/08/12	<0.25	--	0.29	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-21	02/28/13	<0.25	--	0.90	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	04/10/13	<0.25	--	0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	07/30/13	0.32	2.9	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	10/03/13	<0.25	--	0.62	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	01/22/14	<0.25	2.3	--	0.77	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	04/24/14	<0.25	0.74	0.28	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	07/14/14	<0.25	1.4	0.58	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	03/18/15	<0.25	--	<0.25	--	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-21	09/30/15	<0.1	3.12	--	1.59	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-22	02/13/02	0.96	9.2	--	<0.5	--	0.012	0.0053	0.017	0.0097	--	--	
MW-22	05/21/02	1.1	7.7	--	<0.5	--	0.16	0.049	0.023	0.030	--	--	
MW-22	08/29/02	1.4	2.4	--	<0.5	--	0.50	0.0093	0.044	0.0066	--	--	
MW-22	11/05/02	0.49	1.7	--	<0.5	--	0.14	0.0031	0.025	<0.001	--	--	
MW-22	02/19/03	<0.25	9.1	--	<0.5	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	06/10/03	<0.25	7.4	--	0.87a	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	09/16/03	<0.25	2.7	--	<0.50	--	0.0018	<0.0005	<0.0005	<0.0005	--	--	
MW-22	11/19/03	<0.50	8.4	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	--	--	
MW-22	02/25/04	<0.25	6.4	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	05/11/04	<0.25	2.0	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	08/25/04	<0.25	0.61	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	12/14/04	<0.25	1.1	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	03/10/05	<0.25	2.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	06/07/05	<0.25	3.0	--	<0.50	--	0.0049	<0.001	<0.001	<0.001	--	--	
MW-22	09/20/05	0.40	2.9	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	12/13/05	<0.25	0.71	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	03/15/06	<0.25	2.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	06/08/06	<0.25	0.89	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	09/12/06	<0.25	0.45	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	12/12/06	<0.25	1.4	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	06/19/07	<0.25	1.1	--	<0.50	--	0.0094	<0.0005	<0.0005	<0.0005	--	--	
MW-22	06/04/08	<0.25	0.77	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	06/03/09	<0.25	1.8	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-22	06/09/10	<0.25	1.2	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.0011	--	--	
MW-22	05/23/11	<0.25	2.7	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	--	--	
MW-22	05/31/12	<1.0	2.1	--	0.73	--	<0.0050	<0.0050	<0.0050	<0.0050	--	--	
MW-22	04/09/13	<0.25	--	0.97	<0.50	--	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	04/22/14	<0.25	2.9	0.38	<0.50	<0.50	<0.001	<0.001	<0.001	<0.001	--	--	
MW-22	09/30/15	<0.1	0.911	--	<0.25	--	<0.001	<0.005	<0.001	<0.003	--	--	
MW-23	11/19/03	5.3	1.4	--	<0.50	--	0.87	0.016	0.098	0.23	--	--	
MW-23	02/25/04	3.3	0.85	--	<0.50	--	0.91	0.011	0.046	0.030	0.0052*	--	
MW-23	05/12/04	4.2	1.3	--	<0.50	--	1.1	0.013	0.046	0.048	<0.0050*	--	
MW-23	08/26/04	5.3	0.72	--	<0.50	--	1.1	0.023	0.20	0.17	0.014*	--	
MW-23	12/14/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-23	03/08/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-23	06/07/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-23	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-23	12/13/05	6.3	<0.25	--	<0.50	--	1.3	0.014	0.048	0.044	<0.0050*	--	
MW-23	03/15/06	7.0	0.28	--	<0.50	--	1.4	0.015	0.19	0.21	<0.0050*	--	
MW-23	06/08/06	5.2	1.3	--	<0.50	--	1.4	0.014	0.11	0.11	<0.0050*	--	
MW-23	09/12/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-23	12/12/06	8.1	<0.25	--	<0.50	--	1.8	0.02	0.11	0.16	<0.0050*	--	
MW-23	03/27/07	8.4	--	--	--	--	1.8	0.019	0.16	0.16	--	--	
MW-23	06/19/07	8.7	--	--	--	--	1.8	0.021	0.23	0.23	<0.0050	--	
MW-23	09/25/07	6.9	--	--	--	--	1.5	0.021	0.085	0.11	--	--	
MW-23	12/11/07	9.1	--	--	--	--	1.3	0.022	0.053	0.097	--	--	
MW-23	03/04/08	7.8	--	--	--	--	1.5	0.018	0.089	0.10	--	--	
MW-23	06/04/08	19	--	--	--	--	2.4	0.061	0.59	3.2	<0.0050	--	
MW-23	09/08/08	6.4	--	--	--	--	0.79	0.014	0.07	0.038	--	--	
MW-23	12/04/08	5.4	--	--	--	--	0.52	0.0088	0.091	0.063	--	--	
MW-23	03/04/09	4.8	--	--	--	--	0.81	0.012	0.27	0.11	--	--	
MW-23	06/02/09	5.7	--	--	--	--	0.21	0.0061	0.17	0.054	<0.0050	--	
MW-23	09/21/09	5.9	--	--	--	--	0.64	0.013	0.26	0.025	--	--	
MW-23	11/16/09	6.2	--	--	--	--	0.80	0.017	0.45	0.036	--	--	
MW-23	03/08/10	4.8	--	--	--	--	0.25	0.0077	0.19	0.031	--	--	
MW-23	06/08/10	5.5	--	--	--	--	0.39	0.0082	0.17	0.025	<0.0050	--	
MW-23	09/10/10	4.9	--	--	--	--	0.21	0.0044	0.11	0.019	--	--	
MW-23	11/16/10	4.5	--	--	--	--	0.37	0.010	0.23	0.02	--	--	
MW-23	03/02/11	5.0	--	--	--	--	0.21	0.0060	0.15	0.023	--	--	
MW-23	05/24/11	6.0	--	--	--	--	0.32	0.0053	0.16	0.027	<0.0050	--	
MW-23	08/30/11	6.0	--	--	--	--	0.15	0.0030	0.093	0.015	--	--	
MW-23	12/02/11	5.3	--	--	--	--	0.29	0.0076	0.13	0.017	--	--	
MW-23	03/02/12	4.0	--	--	--	--	0.12	0.0029	0.13	0.027	--	--	
MW-23	05/30/12	4.5	--	--	--	--	0.087	<0.0025	0.14	0.022	<0.0050	--	
MW-23	08/25/12	2.6	--	--	--	--	0.050	<0.0025	0.059	0.0046	--	--	
MW-23	11/08/12	2.3	--	--	--	--	0.021	<0.001	0.065	0.0038	--	--	
MW-23	02/28/13	2.6	--	--	--	--	0.034	<0.0025	0.16	0.010	--	--	
MW-23	04/10/13	0.54	--	--	--	--	0.015	<0.001	0.015	0.0013	<0.0050	--	
MW-23	07/29/13	1.7	--	--	--	--	0.0097	<0.001	0.025	0.0011	--	--	
MW-23	10/02/13	0.39	--	--	--	--	0.015	<0.001	0.0019	<0.001	--	--	
MW-23	01/21/14	0.27	--	--	--	--	0.011	<0.001	<0.001	<0.001	--	--	
MW-23	04/23/14	1.7	--	--	--	--	0.039	<0.001	<0.001	0.0026	<0.0050	--	
MW-23	07/15/14	2.5	--	--	--	--	0.11	0.0020	0.063	0.0071	--	--	
MW-23	03/18/15	2.1	--	--	--	--	0.056	0.0013	0.028	0.0039	--	--	Surrogate recovery above lab limits
MW-23 (DUP)	03/18/15	1.4	--	--	--	--	0.045	0.0011	0.024	0.0029	--	--	
MW-23	10/01/15	1.68	--	--	--	--	0.0873	<0.005	0.00684	0.00331	--	--	
MW-24	11/19/03	34	6.4	--	0.54	--	2.8	0.54	1.4	6.0	--	--	
MW-24	02/25/04	26	3.0	--	<0.50	--	4.3	0.085	1.0	3.3	<0.0050*	--	
MW-24	05/12/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	08/26/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	12/14/04	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	03/08/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	06/07/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	09/20/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	12/13/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	12/14/05	--	--	--	--	--	--	--	--	--	--	--	Not Sampled

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-24	03/15/06	26	0.34	--	<0.50	--	4.4	0.064	0.88	4.2	0.0069	--	
MW-24	06/08/06	21	<0.25	--	<0.50	--	1.5	0.039	0.86	4.9	0.0068	--	
MW-24	09/12/06	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-24	12/12/06	20	1.1	--	<0.50	--	1.5	0.037	0.69	3.2	0.0078*	--	
MW-24	03/27/07	27	--	--	--	--	3.4	0.062	1.3	4.6	--	--	
MW-24	06/19/07	31	--	--	--	--	3.0	0.063	1.0	5.7	0.022	--	
MW-24	09/25/07	16	--	--	--	--	2.0	0.036	0.79	2.3	--	--	
MW-24	12/11/07	40	--	--	--	--	1.5	0.066	1.8	9.2	--	--	
MW-24	03/04/08	41	--	--	--	--	1.8	0.052	1.4	7.7	--	--	
MW-24	06/04/08	5.5	--	--	--	--	1.2	0.013	0.027	0.027	<0.0050	--	
MW-24	09/08/08	46	--	--	--	--	3.5	0.081	1.9	7.3	--	--	
MW-24	12/05/08	32	--	--	--	--	2.4	0.061	1.6	4.3	--	--	
MW-24	03/04/09	26	--	--	--	--	2.3	0.056	1.5	5.3	--	--	
MW-24	06/02/09	37	--	--	--	--	2.5	0.064	1.7	4.4	0.0062	--	
MW-24	09/21/09	28	--	--	--	--	1.6	0.042	1.3	4.2	--	--	
MW-24	11/16/09	20	--	--	--	--	1.1	0.027	0.94	2.7	--	--	
MW-24	03/08/10	31	--	--	--	--	2.5	0.058	1.6	5.1	--	--	
MW-24	06/08/10	37	--	--	--	--	3.1	0.084	2.2	7.1	0.019	--	
MW-24	09/10/10	28	--	--	--	--	2.4	0.066	1.8	4.3	--	--	
MW-24	11/16/10	26	--	--	--	--	1.3	0.051	1.5	5.8	--	--	
MW-24	03/02/11	26	--	--	--	--	2.2	0.057	1.3	4.8	--	--	
MW-24	05/24/11	11	--	--	--	--	1.2	0.028	0.51	1.3	<0.0050	--	
MW-24	08/30/11	30	--	--	--	--	2	0.057	1.4	4.2	--	--	
MW-24	12/02/11	18	--	--	--	--	0.37	0.016	0.42	2.56	--	--	
MW-24	03/02/12	8.7	--	--	--	--	0.53	0.014	0.25	1.1	--	--	
MW-24	05/30/12	7.3	--	--	--	--	0.39	0.013	0.3	0.88	<0.0050	--	
MW-24	08/25/12	11	--	--	--	--	0.56	<0.020 V	0.41	1.4	--	--	
MW-24 (DUP)	08/25/12	8.0	--	--	--	--	0.41	<0.015 V	0.30	1.1	--	--	Duplicate of MW-24
MW-24	11/08/12	20	--	--	--	--	1.7	0.057	1.4	4.1	--	--	
MW-24	11/08/12	19	--	--	--	--	1.7	0.057	1.4	4.2	--	--	
MW-24	02/28/13	6.6	--	--	--	--	0.29	<0.01	0.39	0.84	--	--	
MW-24	02/28/13	9.0	--	--	--	--	0.48	0.016	0.59	1.3	--	--	
MW-24	04/10/13	20	--	--	--	--	1.1	0.048	0.22	3.8	--	--	
MW-24	04/10/13	23	--	--	--	--	1.2	0.061	1.7	4.1	0.01	--	
MW-24	07/29/13	27	--	--	--	--	1.1	0.059	2.1	4.7	--	--	
MW-24	10/02/13	33	--	--	--	--	1.1	0.072	2.6	6.3	--	--	
MW-24 (DUP)	10/02/13	29	--	--	--	--	1.4	0.076	2.5	5.6	--	--	Duplicate of MW-24
MW-24	01/22/14	3.1	--	--	--	--	0.088	0.0034	0.18	0.33	--	--	
MW-24 (DUP)	01/22/14	2.2	--	--	--	--	0.056	0.0026	0.12	0.2	--	--	Duplicate of MW-24
MW-24	04/23/14	23	--	--	--	--	1.0	0.051	1.7	3.6	0.0085	--	
MW-24 (DUP)	04/23/14	24	--	--	--	--	1.0	0.048	1.7	3.7	--	--	Duplicate of MW-24
MW-24	07/15/14	24	--	--	--	--	1.1	0.055	1.7	3.7	--	--	
MW-24 (DUP)	07/15/14	22	--	--	--	--	1.1	0.05	1.7	3.6	--	--	Duplicate of MW-24
MW-24	03/18/15	28	--	--	--	--	1.4	0.066	1.8	2.6	--	--	
MW-24	10/01/15	13.6	--	--	--	--	0.641	<0.1	1.13	1.80	0.00282	<0.002	
MW-24 (DUP)	10/01/15	14.5	--	--	--	--	0.637	0.0264	0.934	1.51	0.00249	<0.002	Duplicate of MW-24
MW-25	11/20/03	<0.25	1.3	--	<0.50	--	0.0061	<0.0005	<0.0005	<0.0005	--	--	
MW-25	02/26/04	0.38	8.9	--	<0.50	--	0.0011	<0.0005	0.0027	<0.0005	0.012*	--	
MW-25	05/12/04	<0.25	1.6	--	<0.50	--	<0.0005	<0.0005	0.0034	<0.0005	<0.0050*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-25	08/26/04	<0.25	0.27	--	<0.50	--	0.013	<0.0005	<0.0005	<0.0005	0.034*a	--	
MW-25	12/14/04	<0.25	1.4	--	<0.50	--	0.0035	<0.001	<0.001	<0.001	<0.0050*	--	
MW-25	03/10/05	0.31	3.7	--	<0.50	--	0.0014	<0.0005	0.00064	<0.0005	<0.0050*	--	
MW-25	06/07/05	0.40	3.2	--	<0.50	--	<0.001	<0.001	0.0014	<0.001	<0.0050*	--	
MW-25	09/20/05	0.30	1.4	--	<0.50	--	0.0016	<0.0005	<0.0005	<0.0005	0.059*a	--	
MW-25	12/13/05	<0.25	1.2	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050*	--	
MW-25	03/15/06	<0.25	1.0	--	<0.50	--	0.0019	<0.001	<0.001	<0.001	<0.0050*	--	
MW-25	06/08/06	<0.25	1.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-25	09/12/06	<0.25	0.31	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-25	12/12/06	<0.25	0.86	--	<0.50	--	0.0052	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-25	06/19/07	<0.50	1.6	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	--	
MW-25	06/04/08	<0.25	0.26	--	<0.50	--	0.0020	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-25	06/03/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-25	06/09/10	<0.25	0.32	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050	--	
MW-25	05/25/11	<0.50	1.4	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	--	
MW-25	06/01/12	<0.25	<0.25	--	<0.50	--	0.0011	<0.0010	<0.0010	<0.0010	<0.0050	--	
MW-25	04/10/13	<0.25	--	<0.25	<0.50	--	0.0013	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-25	04/23/14	<0.25	0.65	0.25	<0.50	<0.50	0.0014	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-25	10/02/15	<0.1	1.19	--	1.19	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
SH-02	12/20/00	0.078	<0.25	--	<0.5	--	0.001	<0.001	<0.001	<0.003	0.015**	--	
SH-02	Destroyed during construction activities												
SH-02R	02/13/02	<0.25	0.56	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
SH-02R	05/21/02	<0.25	2.4	--	<0.5	--	0.037	<0.0005	<0.0005	<0.0005	0.005*	--	
SH-02R	08/28/02	<0.25	4.3	--	<0.5	--	0.087	0.0038	0.00061	0.0023	0.006*	--	
SH-02R	11/05/02	<0.25	1.1	--	<0.5	--	0.016	<0.0005	<0.0005	<0.0005	0.005*	--	
SH-02R	02/19/03	<0.25	<0.5	--	<0.5	--	<0.0005	0.00086	<0.0005	<0.0005	<0.005*	--	
SH-02R	06/10/03	<0.25	0.97	--	<0.25	--	<0.0005	0.00051	<0.0005	<0.0005	0.0059*	--	
SH-02R	09/16/03	<0.25	3.0	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.010*	--	
SH-02R	11/19/03	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	02/25/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	05/12/04	<0.25	0.74	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	08/26/04	<0.25	0.58	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	12/15/04	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	03/09/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	06/08/05	<0.25	0.31	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	09/21/05	<0.25	0.58	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	12/14/05	<0.25	0.30	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0078*	--	
SH-02R	03/14/06	<0.25	0.30	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0072*	--	
SH-02R	06/07/06	<0.25	0.59	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050*	--	
SH-02R	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050*	--	
SH-02R	12/13/06	<0.25	0.49	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-02R	06/20/07	<0.25	0.77	--	<0.50	--	<0.0010	<0.0010	<0.0010	0.0016	<0.0050	--	
SH-02R	06/05/08	<0.25	0.28	--	<0.50	--	<0.0005	<0.0005	<0.0005	0.00073	<0.0050	--	
SH-02R	06/01/09	<0.25	0.37	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
SH-02R	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
SH-02R	05/23/11	<0.25	0.29	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	--	
SH-02R	06/01/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
SH-02R	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
SH-02R	04/23/14	<0.25	0.28	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
SH-02R	09/30/15	<0.1	1.00	--	0.298	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
SH-05	12/20/00	<0.05	1.0	--	<0.5	--	<0.001	<0.001	<0.003	<0.001	0.017**	--	
SH-05R	05/21/02	0.71	11	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
SH-05R	08/28/02	0.77	10	--	<0.5	--	<0.0005	0.0015	<0.0005	<0.0005	0.006*	--	
SH-05R	11/05/02	1.4	7.1	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.008*	--	
SH-05R	02/19/03	0.8	6.8	--	<0.5	--	<0.001	0.0016	<0.001	<0.001	<0.005*	--	
SH-05R	06/10/03	1.1	45	--	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005	0.04*	--	
SH-05R	09/16/03	<0.25	23	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.074*	--	
SH-05R	11/19/03	0.62	19	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.075*	--	
SH-05R	02/25/04	<0.25	5.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	05/12/04	0.43	4.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	08/26/04	0.63	3.0	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	12/15/04	0.30	10	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0056*	--	
SH-05R	03/09/05	0.78	4.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	06/08/05	0.32	4.0	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	09/21/05	0.61	2.8	--	1.0	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	12/14/05	0.78	1.3	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	03/14/06	<0.25	1.4	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0074*	--	
SH-05R	06/07/06	<0.25	1.4	--	<0.50	--	<0.001	<0.001	<0.001	<0.001	<0.0050*	--	
SH-05R	09/13/06	0.34	0.56	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	12/13/06	<0.50	1.9	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050*	--	
SH-05R	06/20/07	0.59	1.8	--	<0.50	--	<0.0005	0.00058	<0.0005	<0.0005	<0.0050*	--	
SH-05R	06/05/08	<0.25	1.7	--	<0.50	--	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050*	--	
SH-05R	06/01/09	0.36	0.99	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	06/08/10	<0.25	0.28	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
SH-05R	05/23/11	<0.25	1.4	--	<0.50	--	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050*	--	
SH-05R	10/01/15	<0.1	1.80	--	0.320	--	<0.001	<0.005	<0.001	0.003	<0.002	<0.002	
MW-07R	02/13/02	<0.25	1.2	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.035*	--	
MW-07R	05/21/02	<0.25	2.1	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	0.005*	--	
MW-07R	08/28/02	<0.25	2.4	--	<0.5	--	<0.0005	0.0028	<0.0005	0.0012	0.006*	--	
MW-07R	11/05/02	<0.25	3.7	--	<0.5	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*	--	
MW-07R	02/19/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-07R	06/10/03	--	--	--	--	--	--	--	--	--	--	--	Not Sampled
MW-07R	09/16/03	<0.25	1.9	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.045*	--	
MW-07R	11/19/03	<0.25	2.1	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.020*	--	
MW-07R	02/25/04	<0.25	<0.50	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	05/12/04	<0.25	0.48	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	08/26/04	<0.25	0.42	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-07R	12/15/04	<0.25	0.85	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0076*	--	
MW-07R	03/09/05	<0.25	0.54	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	06/08/05	<0.25	0.46	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	09/21/05	<0.25	0.70	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	12/14/05	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	03/14/06	<0.25	0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	06/07/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	09/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0065	--	
MW-07R	12/13/06	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	06/20/07	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	
MW-07R	06/05/08	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	--	

Table 2
Groundwater Analytical Results

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
MW-07R	06/01/09	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	06/08/10	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	05/23/11	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	06/01/12	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	04/09/13	<0.25	--	<0.25	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	04/23/14	<0.25	<0.25	--	<0.50	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050	--	
MW-07R	10/01/15	<0.1	2.61	--	0.373	--	<0.001	<0.005	<0.001	<0.003	<0.002	<0.002	
TMW-B1	10/29/09	5.7	<0.25	--	<0.50	--	0.12	0.007	0.058	0.15	--	--	
TMW-B1	05/25/11	9.1	--	--	--	--	0.024	<0.0050	0.24	0.56	--	--	
TMW-B1	12/02/11	6.6	--	--	--	--	0.091	<0.0050	0.15	0.26	--	--	
TMW-B1	03/01/12	8.0	--	--	--	--	0.079	<0.0025	0.28	0.55	--	--	
TMW-B1	11/08/12	3.7	--	--	--	--	0.16	0.010	0.019	0.036	--	--	
TMW-B1	02/28/13	14	--	--	--	--	0.026	<0.01	0.50	0.87	--	--	
TMW-B1	10/02/13	5.8	--	--	--	--	0.039	<0.005	0.16	0.24	--	--	
TMW-B1	09/29/15	7.22	--	--	--	--	0.0355	<0.01	0.213	0.106	--	--	
TMW-1	06/21/13	<0.25	<0.25	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	Baseline monitoring event
TMW-1	07/30/13	<0.25	--	--	--	--	--	--	--	--	--	--	
TMW-1	08/26/15	<0.25	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-1	10/03/13	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-1	01/22/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-1	04/21/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-1	07/14/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-1	03/17/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-1	09/29/15	2.03	--	--	--	--	<0.001	<0.005	<0.001	<0.003	--	--	
TMW-2	06/21/13	0.25	0.28	--	--	--	0.0075	0.00097	<0.0005	0.00068	--	--	Baseline monitoring event
TMW-2	07/30/13	0.26	--	--	--	--	--	--	--	--	--	--	
TMW-2	08/26/15	0.64	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-2	10/03/13	0.50	--	--	--	--	0.013	0.00074	<0.0005	0.0024	--	--	
TMW-2	01/22/14	0.28	--	--	--	--	0.011	<0.0005	<0.0005	<0.0005	--	--	
TMW-2	04/21/14	<0.25	--	--	--	--	<0.001	<0.001	<0.001	<0.001	--	--	
TMW-2	07/14/14	<0.25	--	--	--	--	0.0028	<0.0005	<0.0005	<0.0005	--	--	
TMW-2	03/17/15	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-2	10/01/15	<0.1	--	--	--	--	<0.001	<0.005	<0.001	<0.003	--	--	
TMW-3	06/24/13	0.86	0.85	--	--	--	<0.0005	0.00052	<0.0005	0.00087	--	--	Baseline monitoring event
TMW-3	07/30/13	0.98	--	--	--	--	--	--	--	--	--	--	
TMW-3	08/26/15	1.2	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-3	10/03/13	0.92	--	--	--	--	0.00057	0.0018	0.0076	0.0072	--	--	
TMW-3	01/22/14	0.75	--	--	--	--	<0.001	0.0022	<0.001	<0.001	--	--	
TMW-3	04/24/14	0.51	--	--	--	--	<0.0005	0.0046	0.0011	<0.0005	--	--	
TMW-3	07/14/14	<0.25	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-3	03/18/15	0.62	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
TMW-3	09/30/15	0.358	--	--	--	--	<0.001	<0.005	<0.001	<0.003	--	--	
TMW-4	06/24/13	4.9	2.5 Z	--	--	--	0.17	0.084	0.23	0.95	--	--	Baseline monitoring event
TMW-4	07/30/13	5.1	--	--	--	--	--	--	--	--	--	--	
TMW-4	08/26/15	9.2	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-4	10/03/13	4.7	--	--	--	--	0.13	0.12	0.29	1.3	--	--	
TMW-4	01/22/14	6.0	--	--	--	--	0.21	0.070	0.40	0.99	--	--	
TMW-4	04/24/14	4.0	--	--	--	--	0.16	0.044	0.39	0.84	--	--	
TMW-4	07/14/14	5.6	--	--	--	--	0.19	0.016	0.38	0.35	--	--	

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Seattle, Washington

Well ID	Date Sampled	GRO	DRO	DRO, SGC	HO	HO, SGC	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	Dissolved Lead	Comments
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
Site Specific Cleanup Levels:		1.0	10	10	10	10	0.071	200	29.0	NA	0.0058		
TMW-4	03/18/15	7.5	--	--	--	--	0.21	0.019	0.53	0.38	--	--	
TMW-4	09/30/15	3.49	--	--	--	--	0.107	<0.125	0.455	<0.075	--	--	
TMW-5	06/21/13	1.3	0.65 K	--	--	--	0.10	0.0097	0.022	0.02	--	--	Baseline monitoring event
TMW-5	07/30/13	4.3	--	--	--	--	--	--	--	--	--	--	
TMW-5	08/26/15	4.2	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-5	10/03/13	1.9	--	--	--	--	0.044	0.0063	0.0038	0.0088	--	--	
TMW-5	01/22/14	1.9	--	--	--	--	0.0039	0.0031	0.0012	0.0023	--	--	
TMW-5	04/24/14	1.4	--	--	--	--	<0.0015	0.0026	0.0017	0.0021	--	--	
TMW-5	07/14/14	1.4	--	--	--	--	0.01	0.0016	<0.0005	0.00062	--	--	
TMW-5	03/18/15	3.0	--	--	--	--	0.046	0.0069	0.016	0.016	--	--	
TMW-5	09/30/15	1.20	--	--	--	--	0.00943	<0.005	<0.001	<0.003	--	--	
TMW-6	06/24/13	4.9	1.8 Z	--	--	--	0.067	0.0099	0.15	0.55	--	--	Baseline monitoring event
TMW-6	07/30/13	7.8	--	--	--	--	--	--	--	--	--	--	
TMW-6	08/26/15	8.5	--	--	--	--	--	--	--	--	--	--	Two month monitoring event
TMW-6	10/03/13	5.4	--	--	--	--	0.028	0.010	0.18	0.42	--	--	
TMW-6	01/22/14	7.0	--	--	--	--	0.06	0.010	0.28	0.53	--	--	
TMW-6	04/24/14	5.1	--	--	--	--	0.015	0.0036	0.19	0.37	--	--	
TMW-6	07/14/14	3.9	--	--	--	--	0.064	0.0047	0.16	0.21	--	--	
TMW-6	03/18/15	5.0	--	--	--	--	0.003	0.0028	0.15	0.12	--	--	
TMW-6	09/30/15	5.09	--	--	--	--	0.00287	<0.005	0.133	0.189	--	--	

Notes:

Highlighted = data from most recent monitoring event

< = Denotes compound was not detected at designated detection limit.

Bold = Concentration detected above the Site Specific Cleanup Level

mg/l = milligrams per liter (parts per million)

-- = Sample not analyzed for this parameter

* = Also tested for Dissolved Lead (EPA-200.8), results are below detection limit of 0.0050 ppm.

*a = Also tested for Dissolved Lead (EPA-200.8), results are at or above detection limit of 0.0050 ppm.

** = Also tested for Dissolved Lead (EPA-7421), results are below detection limit of 0.004 ppm.

*** = Also tested for Dissolved Lead (EPA-SW6020), results are below detection limit of 0.0050 ppm.

a = Insulating oil range hydrocarbons were reported for MW-22 at concentration of 0.87 ppm.

o = Reporting Limits were increase due to sample foaming.

V = Reporting Limits were increased due to high concentration of target analytes.

K = DRO concentration may include contributions from lighter-end hydrocarbons that elute in the DRO range

SGC = A silica gel wash as performed on the solvent extract before analysis. Silica gell cleanup run for samples with TPH-DRO and TPH-HO detections above the method reporting limit.

Total Petroleum Hydrocarbons as gasoline-range organics (GRO) - Analysis by Washington Method WTPH-G prior to 5/20/98; analysis by Northwest Method NWTPH-Gx from 5/20/98 through present.

Total Petroleum Hydrocarbons as diesel-range organics (DRO) and heavy oil-range organics (HO) - Analysis by Washington Method WTPH-D+ extended prior to 5/20/98; analysis by Northwest Method NWTPH-Dx from 5/20/98 through present.

BTEX Compounds - Analysis by EPA Method 8020 prior to 5/20/98; analysis by EPA Method 8260B from 5/20/98 through present

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-5	03/27/07	0.80	--	--	--	--	--	--	--	
A-5	09/24/07	2.70	--	--	--	--	--	--	--	
A-5	12/11/07	1.46	--	--	--	--	--	--	--	
A-5	03/04/08	0.10	--	--	--	--	--	--	--	
A-5	06/03/08	1.90	--	--	--	--	--	--	--	
A-5	09/08/08	1.13	--	--	--	--	--	--	--	
A-5	12/05/08	0.41	--	--	--	--	--	--	--	
A-5	03/04/09	0.41	--	--	--	--	--	--	--	
A-5	06/02/09	0.61	--	--	--	--	--	--	--	
A-5	09/22/09	0.69	--	--	--	--	--	--	--	
A-5	11/17/09	0.24	--	--	--	--	--	--	--	
A-5	03/08/10	0.61	--	--	--	--	--	--	--	
A-5	06/09/10	0.00	--	--	--	--	--	--	--	
A-5	09/10/10	3.32	--	--	--	--	--	--	--	
A-5	11/16/10	0.30	--	--	--	--	--	--	--	
A-5	03/02/11	0.00	--	--	--	--	--	--	--	
A-5	05/25/11	1.28	--	--	--	--	--	--	--	
A-5	08/30/11	0.58	--	--	--	--	--	--	--	
A-5	12/02/11	1.41	--	--	--	--	--	--	--	
A-5	03/02/12	0.37	--	--	--	--	--	--	--	
A-5	06/01/12	0.00	--	--	--	--	--	--	--	
A-5	10/03/13	0.00	--	--	--	--	--	--	--	
A-5	01/21/14	6.00	--	--	--	--	--	--	--	
A-5	07/15/14	0.37	--	--	--	--	--	--	--	
A-5	10/02/15	0.10	--	--	--	--	--	--	--	
A-8	06/02/09	0.55	--	--	--	--	--	--	--	
A-8	06/09/10	0.00	--	--	--	--	--	--	--	
A-8	05/25/11	1.32	--	--	--	--	--	--	--	
A-8	06/01/12	0.00	--	--	--	--	--	--	--	
A-8	10/02/15	0.37	--	--	--	--	--	--	--	
A-10	08/28/02	1.40	5.7	--	--	16	<0.25	30.00	0.6	
A-10	11/06/02	2.00	5.9	--	--	15	<0.25	10.00	0.3	
A-10	02/20/03	2.70	1.0	--	--	22	6.1	86	<0.1	
A-10	06/10/03	1.40	1.60	--	--	17.00	0.54	63.00	0.1	
A-10	09/17/03	1.70	3.20	--	--	47.00	<0.25a	12.00	0.6	
A-10	11/20/03	1.40	0.10	--	--	4.90	<0.25a	3.70	0.3	
A-10	02/26/04	1.50	0.24	--	--	5.10	<0.25b	61.00	0.2	
A-10	05/12/04	0.60	--*a	--	--	30.00	<0.25	10.00	<0.10	
A-10	08/25/04	1.65	0.75	--	--	6.20	<0.25	57.00	0.12	
A-10	12/14/04	2.50	0.093	--	--	<0.050	<0.25	8.80	<0.10	
A-10	03/10/05	2.58	6.60	--	--	12.00	<0.25	260.00	<0.10	
A-10	06/07/05	1.51	1.00	--	--	3.40	<0.25	480.00	16	
A-10	09/20/05	2.10	2.40	--	--	5.60	<0.25	320.00	0.23	
A-10	12/13/05	2.20	0.067	--	--	<0.050	14.00	56.00	<0.10	
A-10	03/15/06	2.20	2.50	--	--	42.00	<0.25	60.00	0.18	
A-10	06/08/06	1.00	1.60	--	--	7.80	<0.25	4.30	0.22	
A-10	09/12/06	1.60	1.40	--	--	15.00	<0.25	140.00	0.18	
A-10	12/12/06	2.00	0.088	--	--	2.00	<0.25	7.90	<0.10	
A-10	06/19/07	2.70	--	--	--	--	--	--	--	
A-10	06/03/08	2.40	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-10	06/02/09	0.45	--	--	--	--	--	--	--	
A-10	06/09/10	0.00	--	--	--	--	--	--	--	
A-10	05/25/11	0.97	--	--	--	--	--	--	--	
A-10	06/01/12	0.00	--	--	--	--	--	--	--	
A-10	10/02/15	0.43	--	--	--	--	--	--	--	
A-14R	08/28/02	1.50	0.034	--	--	0.7	9.5	290.00	<0.1	
A-14R	11/06/02	2.30	0.054	--	--	0.4	5.7	290.00	0.1	
A-14R	02/20/03	2.90	0.26	--	--	<0.2	2.4	300	<0.1	
A-14R	06/10/03	2.00	0.21	--	--	2.20	6.00	220.00	0.3	
A-14R	09/17/03	1.90	2.40	--	--	3.40	0.86a	240.00	0.2	
A-14R	11/20/03	1.80	0.45	--	--	2.40	0.63a	250.00	<0.1	
A-14R	02/26/04	1.40	3.30	--	--	0.31	0.69b	190.00	0.1	
A-14R	05/12/04	2.30	1.40	--	--	<0.050	3.00	130.00	<0.10	
A-14R	08/25/04	3.22	4.30	--	--	0.66	0.42	200.00	<0.10	
A-14R	12/14/04	3.00	3.50	--	--	1.00	<0.25	230.00	<0.10	
A-14R	03/10/05	2.15	1.30	--	--	2.40	<0.25	290.00	<0.10	
A-14R	06/07/05	1.00	0.28	--	--	0.16	0.36	220.00	<0.2	
A-14R	12/13/05	1.10	1.60	--	--	3.70	<0.25	150.00	<0.10	
A-14R	03/15/06	1.10	0.82	--	--	0.14	<0.25	80.00	<0.10	
A-14R	06/08/06	2.40	1.50	--	--	0.53	<0.25	38.00	<0.10	
A-14R	09/12/06	2.00	0.19	--	--	0.80	<0.25	110.00	<0.10	
A-14R	06/19/07	1.90	--	--	--	--	--	--	--	
A-14R	12/12/07	2.90	1.2	--	--	0.76	<0.25	99.00	<0.10	
A-14R	06/03/08	1.90	--	--	--	--	--	--	--	
A-14R	06/02/09	1.00	--	--	--	--	--	--	--	
A-14R	06/09/10	0.00	--	--	--	--	--	--	--	
A-14R	05/25/11	1.05	--	--	--	--	--	--	--	
A-14R	06/01/12	0.00	--	--	--	--	--	--	--	
A-14R	10/01/15	0.35	--	--	--	--	--	--	--	
A-21	08/29/02	2.10	0.31	--	--	33.00	<0.25	41.00	0.3	
A-21	11/06/02	1.60	0.64	--	--	32.00	<0.25	32.00	<0.1	
A-21	02/19/03	1.90	1.60	--	--	28.00	<0.25	2.90	0.1	
A-21	06/10/03	1.30	2.80	--	--	31.00	<0.25	0.30	0.2	
A-21	09/16/03	1.60	4.10	--	--	33.00	<0.25b	5.30	0.7	
A-21	11/19/03	1.70	5.60	--	--	26.00	<0.25b	16.00	0.2	
A-21	02/25/04	2.10	2.60	--	--	31.00	<0.25b	1.20	0.4	
A-21	05/12/04	0.80	1.80	--	--	33.00	<0.25	0.79	<0.10	
A-21	08/25/04	1.44	5.80	--	--	16.00	<0.25	2.40	0.11	
A-21	12/14/04	2.72	11.00	--	--	4.60	<0.25	0.74	0.12	
A-21	03/10/05	1.50	8.50	--	--	19.00	<0.25	0.79	<0.10	
A-21	06/07/05	1.50	3.80	--	--	3.30	<0.25	<0.50	0.7	
A-21	09/20/05	2.60	6.10	--	--	27.00	<0.25	<0.50	<0.10	
A-21	12/13/05	2.50	7.50	--	--	30.00	<0.25	<0.50	<0.10	
A-21	03/15/06	2.50	3.20	--	--	32.00	<0.25	<0.50	<0.10	
A-21	06/08/06	2.80	2.20	--	--	33.00	<0.25	<0.50	<0.10	
A-21	09/12/06	2.60	2.90	--	--	31.00	<0.25	<0.50	<0.10	
A-21	12/12/06	3.10	3.20	--	--	46.00	<0.25	130.00	0.11	
A-21	03/27/07	3.80	--	--	--	--	--	--	--	
A-21	06/19/07	2.10	0.19	--	--	24	<0.25	120	0.13	
A-21	09/25/07	3.00	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-21	12/11/07	1.70	--	--	--	--	--	--	--	
A-21	03/04/08	0.30	--	--	--	--	--	--	--	
A-21	06/04/08	1.60	0.11	--	--	20.00	0.27	150.00	0.14	
A-21	09/08/08	1.71	--	--	--	--	--	--	--	
A-21	12/04/08	0.72	--	--	--	--	--	--	--	
A-21	03/04/09	0.37	--	--	--	--	--	--	--	
A-21	06/02/09	0.20	0.028	--	--	8.00	<0.25	320.00	<0.10	
A-21	09/22/09	0.56	--	--	--	--	--	--	--	
A-21	11/17/09	0.39	--	--	--	--	--	--	--	
A-21	03/08/10	0.85	--	--	--	--	--	--	--	
A-21	06/08/10	0.33	0.015	--	--	0.72	0.28	85.00	<0.10	
A-21	09/10/10	3.49	--	--	--	--	--	--	--	
A-21	11/16/10	0.33	--	--	--	--	--	--	--	
A-21	03/02/11	1.50	--	--	--	--	--	--	--	
A-21	05/24/11	1.54	0.038	--	--	0.19	0.50	25.00	0.10	
A-21	08/30/11	0.38	--	--	--	--	--	--	--	
A-21	12/02/11	0.70	--	--	--	--	--	--	--	
A-21	03/02/12	0.29	--	--	--	--	--	--	--	
A-21	05/30/12	0.00	<0.010	--	--	9.60	<0.25	940.00	0.15	
A-21	04/10/13	--	<0.010	--	--	--	<0.25	920	<0.10	
A-21	10/03/13	0.00	--	--	--	--	--	--	--	
A-21	01/21/14	3.53	--	--	--	--	--	--	--	
A-21	04/23/14	--	0.013	--	--	0.62	<0.25	250	<0.10	
A-21	07/15/14	0.39	--	--	--	--	--	--	--	
A-21	03/18/15	0.03	0.050	--	--	4.2	<2.5	1,500	<0.10	
A-21	10/01/15	0.30	0.0590	--	--	73.9	<0.1	41.0	0.0780	
A-23R	08/28/02	2.40	4.10	--	--	13.00	<0.25	270.00	0.20	
A-23R	11/05/02	2.40	3.60	--	--	11.00	<0.25	200.00	1.60	
A-23R	02/19/03	3.00	6.10	--	--	12.00	<0.25	120.00	<0.1	
A-23R	06/10/03	1.80	1.80	--	--	30.00	<0.25	300.00	0.20	
A-23R	09/16/03	1.40	7.60	--	--	12.00	<0.25b	100.00	0.90	
A-23R	11/19/03	1.50	8.70	--	--	7.80	<0.25b	26.00	0.80	
A-23R	02/25/04	1.70	13.00	--	--	14.00	<0.25b	17.00	0.70	
A-23R	05/12/04	4.70	5.30	--	--	23.00	<0.25	80.00	<1.0	
A-23R	08/25/04	1.80	10.00	--	--	11.00	<0.25	31.00	0.34	
A-23R	12/14/04	2.20	12.00	--	--	9.80	<0.25	6.40	0.25	
A-23R	03/10/05	1.10	7.30	--	--	30.00	<0.25	220.00	0.20	
A-23R	06/07/05	1.50	5.60	--	--	28.00	<0.25	200.00	1.90	
A-23R	09/20/05	1.50	2.60	--	--	34.00	<0.25	270.00	<0.10	
A-23R	12/14/05	0.80	5.30	--	--	25.00	<0.25	50.00	0.17	
A-23R	03/15/06	0.80	13.00	--	--	27.00	<0.25	21.00	0.28	
A-23R	06/08/06	0.70	4.00	--	--	38.00	<0.25	150.00	0.19	
A-23R	09/12/06	1.40	3.60	--	--	33.00	<0.25	100.00	<0.10	
A-23R	12/12/06	2.80	16.00	--	--	24.00	<0.25	4.20	0.31	
A-23R	03/27/07	1.10	--	--	--	--	--	--	--	
A-23R	06/19/07	1.40	3.00	--	--	32.00	<0.25	180.00	0.11	
A-23R	12/11/07	2.73	--	--	--	--	--	--	--	
A-23R	03/04/08	3.20	--	--	--	--	--	--	--	
A-23R	06/05/08	2.40	2.60	--	--	44.00	<0.25	440.00	<0.10	
A-23R	12/05/08	0.33	--	--	--	--	--	--	--	

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 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-23R	03/04/09	0.35	--	--	--	--	--	--	--	
A-23R	06/02/09	0.60	2.10	--	--	22.00	<0.25	290.00	<0.10	
A-23R	09/21/09	0.77	--	--	--	--	--	--	--	
A-23R	11/16/09	1.29	--	--	--	--	--	--	--	
A-23R	03/08/10	0.86	--	--	--	--	--	--	--	
A-23R	06/08/10	0.89	1.10	--	--	39.00	<0.25	450.00	<0.10	
A-23R	09/09/10	0.54	--	--	--	--	--	--	--	
A-23R	11/16/10	0.96	--	--	--	--	--	--	--	
A-23R	03/01/11	0.00	--	--	--	--	--	--	--	
A-23R	05/24/11	0.59	1.00	--	--	44.00	<0.25	450.00	0.10	
A-23R	08/29/11	0.55	--	--	--	--	--	--	--	
A-23R	12/02/11	1.15	--	--	--	--	--	--	--	
A-23R	03/01/12	1.47	--	--	--	--	--	--	--	
A-23R	05/30/12	0.00	<0.010	--	--	86.00	<0.25	470.00	<0.10	
A-23R	04/08/13	--	<0.010	--	--	11	<0.25 *	1,000	<0.10	
A-23R	10/02/13	0.00	--	--	--	--	--	--	--	
A-23R	01/21/14	4.28	--	--	--	--	--	--	--	
A-23R	04/22/14	--	0.018	--	--	18	<0.25	1,900	<0.10	
A-23R	07/15/14	0.88	--	--	--	--	--	--	--	
A-23R	09/28/15	0.12	3.55	--	--	4.87 T8	<0.1 T8	23.7	<0.05	
A-27	08/29/02	2.30	7.50	--	--	24.00	<0.25	0.29	0.20	
A-27	11/06/02	0.70	5.20	--	--	26.00	<0.25	<0.25	0.20	
A-27	02/19/03	3.20	6.60	--	--	19.00	<0.25	<0.25	<0.1	
A-27	06/10/03	1.20	10.00	--	--	19.00	<0.25	0.77	0.10	
A-27	09/16/03	1.00	8.60	--	--	51.00	<0.25b	0.59	0.70	
A-27	11/19/03	1.10	8.90	--	--	19.00	<0.25b	0.33	<0.1	
A-27	02/25/04	1.90	12.00	--	--	27.00	<0.25b	<0.25	0.30	
A-27	05/11/04	0.70	8.40	--	--	25.00	<0.25	<0.50	<0.10	
A-27	08/25/04	1.68	12.00	--	--	22.00	<0.25	<0.50	0.13	
A-27	12/14/04	1.32	12.00	--	--	10.00	<0.25	<0.50	0.12	
A-27	03/10/05	1.62	12.00	--	--	18.00	<0.25	0.78	<0.10	
A-27	06/07/05	1.00	7.00	--	--	19.00	<0.25	<0.50	0.30	
A-27	09/20/05	3.10	10.00	--	--	29.00	<0.25	0.84	0.16	
A-27	12/13/05	2.30	16.00	--	--	24.00	<0.25	<0.50	<0.10	
A-27	03/15/06	2.30	15.00	--	--	14.00	<0.25	<0.50	0.16	
A-27	06/08/06	1.20	13.00	--	--	25.00	<0.25	0.51	0.15	
A-27	09/12/06	1.90	12.00	--	--	19.00	<0.25	<0.50	0.23	
A-27	12/12/06	1.00	13.00	--	--	24.00	<0.25	<0.50	<0.10	
A-27	03/27/07	1.40	--	--	--	--	--	--	--	
A-27	06/19/07	2.40	11.00	--	--	7.50	<0.25	<1.0	0.10	
A-27	09/24/07	1.50	--	--	--	--	--	--	--	
A-27	12/11/07	1.50	--	--	--	--	--	--	--	
A-27	03/04/08	1.80	--	--	--	--	--	--	--	
A-27	06/04/08	2.00	9.90	--	--	10.00	<0.25	<0.50	0.13	
A-27	09/08/08	1.85	--	--	--	--	--	--	--	
A-27	12/05/08	0.39	--	--	--	--	--	--	--	
A-27	03/04/09	0.39	--	--	--	--	--	--	--	
A-27	06/02/09	0.63	6.5	--	--	13	<0.25	1.2	<0.10	
A-27	09/22/09	0.45	--	--	--	--	--	--	--	
A-27	11/16/09	0.46	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-27	03/09/10	1.32	--	--	--	--	--	--	--	
A-27	06/08/10	0.00	3.90	--	--	12.00	<0.25	2.10	<0.10	
A-27	09/09/10	0.47	--	--	--	--	--	<0.50	--	
A-27	11/16/10	0.34	--	--	--	--	--	--	--	
A-27	03/02/11	0.00	--	--	--	--	--	--	--	
A-27	05/24/11	0.27	3.30	--	--	8.80	<0.25	2.20	0.10	
A-27	08/30/11	0.36	--	--	--	--	--	--	--	
A-27	12/02/11	0.77	--	--	--	--	--	--	--	
A-27	03/01/12	0.32	--	--	--	--	--	--	--	
A-27	05/30/12	0.00	2.60	--	--	21.00	<0.25	1.10	<0.10	
A-27	04/10/13	--	3.9	--	--	21	<0.25 *	3.3	<0.10	
A-27	06/21/13	--	--	--	--	--	<0.25 *	2.7	<0.10	Baseline monitoring event
A-27	07/30/13	--	6.2	16	3.6	--	16	<0.50	<0.10	
A-27	10/02/13	0.00	7.4	14	3.6	--	<0.50 *	<0.50	<0.10	
A-27	01/22/14	7.32	--	--	--	--	--	<0.50	<0.10	
A-27	04/22/14	--	2.9	--	--	2.4	<0.25	4.2	<0.10	
A-27	07/15/14	0.36	5.7	18	16	--	--	0.34 J	<0.10	
A-27	03/17/15	0.33	6.7	--	--	17	<0.25	3.1	<0.10	
A-27	09/29/15	0.29	3.86	--	--	22.8 T8	<0.1	9.30	<0.05	
A-28R	08/29/02	3.60	6.20	--	--	45.00	<0.25	0.73	0.30	
A-28R	11/06/02	2.20	5.90	--	--	46.00	<0.25	0.57	<0.1	
A-28R	02/19/03	3.00	6.30	--	--	48.00	<0.25	0.56	<0.1	
A-28R	06/10/03	1.20	6.10	--	--	42.00	<0.25	<0.25	<0.1	
A-28R	09/16/03	0.90	10b	--	--	58.00	<0.25b	0.41	0.50	
A-28R	11/19/03	1.20	9.90	--	--	47.00	<0.25b	0.25	<0.1	
A-28R	02/25/04	1.80	9.60	--	--	46.00	<0.25b	<0.25	1.40	
A-28R	05/12/04	1.90	11.00	--	--	47.00	<0.25	<0.50	<0.10	
A-28R	08/25/04	0.50	12.00	--	--	38.00	<0.25	--*b	--*b	
A-28R	12/14/04	1.72	12.00	--	--	22.00	<0.25	<0.50	0.12	
A-28R	03/10/05	3.32	14.00	--	--	42.00	<0.25	<0.50	<0.10	
A-28R	06/07/05	1.00	13.00	--	--	35.00	<0.25	<0.50	0.70	
A-28R	12/13/05	0.89	15.00	--	--	28.00	<0.25	<0.50	0.13	
A-28R	03/15/06	0.89	15.00	--	--	45.00	<0.25	1.30	<0.10	
A-28R	06/08/06	0.80	13.00	--	--	34.00	<0.25	<0.50	--	
A-28R	09/12/06	1.10	16.00	--	--	35.00	<0.25	<0.50	<0.10	
A-28R	12/12/06	1.70	13.00	--	--	25.00	<0.25	<0.50	<0.10	
A-28R	03/27/07	3.20	--	--	--	--	--	--	--	
A-28R	06/19/07	3.20	12.00	--	--	32.00	<0.25	2.50	<0.10	
A-28R	09/24/07	2.90	--	--	--	--	--	--	--	
A-28R	12/11/07	2.60	--	--	--	--	--	--	--	
A-28R	03/04/08	0.80	--	--	--	--	--	--	--	
A-28R	06/04/08	2.30	7.00	--	--	18.00	<0.25	<0.50	<0.10	
A-28R	12/04/08	0.36	--	--	--	--	--	--	--	
A-28R	03/04/09	0.44	--	--	--	--	--	--	--	
A-28R	06/02/09	0.46	2.30	--	--	15.00	<0.25	2.80	0.18	
A-28R	09/22/09	0.55	--	--	--	--	--	--	--	
A-28R	11/16/09	0.52	--	--	--	--	--	--	--	
A-28R	03/09/10	0.50	--	--	--	--	--	--	--	
A-28R	06/08/10	0.00	2.40	--	--	31.00	<0.25	18.00	0.29	
A-28R	09/10/10	3.81	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
A-28R	11/16/10	0.79	--	--	--	--	--	--	--	
A-28R	03/02/11	0.00	--	--	--	--	--	--	--	
A-28R	05/24/11	0.00	3.60	--	--	39.00	<0.25	1.60	0.13	
A-28R	08/30/11	0.31	--	--	--	--	--	--	--	
A-28R	12/02/11	0.30	--	--	--	--	--	--	--	
A-28R	03/02/12	2.47	--	--	--	--	--	--	--	
A-28R	05/30/12	0.00	2.00	--	--	42.00	<0.25	<0.50	0.11	
A-28R	04/10/13	--	2.5	--	--	37	<0.25 *	7.9	<0.10	
A-28R	10/02/13	0.00	--	--	--	--	--	--	--	
A-28R	01/22/14	5.55	--	--	--	--	--	--	--	
A-28R	04/22/14	--	4.3	--	--	47	0.45	2.2	<0.10	
A-28R	07/15/14	0.20	--	--	--	--	--	--	--	
A-28R	03/18/15	0.22	7.5	--	--	44	<0.25	4.4	<0.10	
A-28R	09/29/15	0.30	4.15	--	--	71.3 T8	<0.1	<5	<0.05	
11	06/24/13	--	--	--	--	--	<0.25	2.5	<0.10	Baseline monitoring event
11	07/30/13	--	0.42	1.0	<0.30	--	<0.25	0.88	<0.10	
11	10/03/13	0.69	0.046	5.2	0.78	--	1.2 *	560	<0.10	
11	01/22/14	9.20	--	--	--	--	--	120	<0.10	
11	04/21/14	--	--	--	--	--	1.1	580	<0.10	
11	07/14/14	1.07	0.47	1.6	0.55	--	--	200	<0.10	
11	03/18/15	10.87	<0.010	--	--	<0.050	0.43	450	<0.10	
11	09/29/15	3.59	0.0747	--	--	0.518	0.438	310	<0.05	
12	06/24/13	--	--	--	--	--	<0.25	<0.50	<0.10	Baseline monitoring event
12	10/03/13	0.00	2.2	39	35	--	1.1 *	5,500	<0.10	
12	01/22/14	3.42	--	--	--	--	--	3,000	<0.10	
12	04/21/14	--	--	--	--	--	<0.25	1,700	0.22	
12	07/14/14	0.20	11	31	38	--	--	1,100	<0.10	
12	03/18/15	0.23	2.2	--	--	5.5	<0.25	940	<0.10	
12	09/29/15	0.14	3.01	--	--	1.34 T8	<0.1	550	0.499	
MW-1	08/28/02	3.20	4.00	--	--	12.00	<0.25	1.20	0.20	
MW-1	11/05/02	1.90	3.60	--	--	85.00	<0.25	0.99	1.30	
MW-1	02/19/03	3.60	4.90	--	--	16.00	<0.25	11.00	0.10	
MW-1	06/10/03	1.30	7.60	--	--	28.00	<0.25	6.40	<0.1	
MW-1	09/16/03	2.40	5.60	--	--	25.00	<0.25b	5.20	<0.1	
MW-1	11/19/03	1.90	3.80	--	--	15.00	<0.25b	0.50	<0.1	
MW-1	02/25/04	2.20	2.60	--	--	21.00	<0.25b	17.00	0.20	
MW-1	05/11/04	1.80	1.60	--	--	27.00	<0.25	11.00	<0.10	
MW-1	08/25/04	2.38	1.60	--	--	18.00	<0.25	2.80	<0.10	
MW-1	12/15/04	3.20	1.40	--	--	4.30	0.72	26.00	<0.10	
MW-1	03/09/05	3.40	1.50	--	--	19.00	<0.25	9.80	<0.10	
MW-1	06/08/05	3.00	0.82	--	--	11.00	<0.25	15.00	<0.2	
MW-1	09/21/05	3.50	0.68	--	--	51.00	<0.25	52.00	<0.10	
MW-1	12/14/05	2.20	1.10	--	--	18.00	<0.25	21.00	<0.10	
MW-1	03/14/06	1.10	0.16	--	--	20.00	<0.25	21.00	<0.10	
MW-1	06/07/06	1.80	0.14	--	--	23.00	<0.25	86.00	<0.10	
MW-1	09/13/06	2.20	2.50	--	--	24.00	<0.25	15.00	<0.10	
MW-1	12/13/06	2.60	0.22	--	--	6.60	1.00	49.00	<0.10	
MW-1	06/20/07	3.40	--	--	--	--	--	--	--	
MW-1	03/04/08	1.20	--	--	--	--	--	26.00	--	
MW-1	06/05/08	2.70	--	--	--	--	<0.25	41.00	--	

Table 3

Groundwater Natural Attenuation Parameters

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 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-1	06/02/09	0.68	--	--	--	--	--	--	--	
MW-1	06/08/10	0.00	--	--	--	--	--	--	--	
MW-1	05/24/11	0.12	--	--	--	--	--	--	--	
MW-1	05/31/12	0.00	--	--	--	--	--	--	--	
MW-1	10/01/15	0.19	--	--	--	--	--	--	--	
MW-2	08/29/02	2.10	0.69	--	--	1.60	<0.25	9.80	<0.1	
MW-2	11/05/02	1.90	1.20	--	--	5.10	<0.25	9.60	<0.1	
MW-2	02/19/03	2.10	0.031	--	--	1.60	<0.25	55.00	<0.1	
MW-2	06/10/03	1.40	0.059	--	--	1.60	<0.25	25.00	0.30	
MW-2	09/16/03	1.40	1.10	--	--	12.00	<0.25b	21.00	0.60	
MW-2	11/19/03	6.40	0.13	--	--	0.40	<0.25b	8.30	<0.1	
MW-2	02/25/04	4.30	0.079	--	--	0.75	0.67b	17.00	0.20	
MW-2	05/11/04	2.70	0.24	--	--	0.18	0.64	25.00	<0.10	
MW-2	08/25/04	2.02	0.11	--	--	0.063	<0.25	21.00	<0.10	
MW-2	12/14/04	2.72	0.093	--	--	<0.050	<0.25	11.00	<0.10	
MW-2	03/10/05	1.00	0.23	--	--	0.32	0.34	31.00	<0.10	
MW-2	06/07/05	1.00	0.44	--	--	0.059	0.26	21.00	<0.2	
MW-2	09/20/05	1.70	0.033	--	--	<0.050	<0.25	25.00	<0.10	
MW-2	12/13/05	3.00	0.71	--	--	1.60	<0.25	4.50	<0.10	
MW-2	03/15/06	1.80	<0.010	--	--	<0.050	0.54	17.00	<0.10	
MW-2	06/08/06	1.20	0.013	--	--	<0.050	0.35	10.00	<0.10	
MW-2	09/12/06	1.50	0.49	--	--	<0.050	<0.25	13.00	<0.10	
MW-2	12/12/06	1.20	0.018	--	--	0.068	0.91	14.00	<0.10	
MW-2	06/19/07	1.80	--	--	--	--	--	--	--	
MW-2	03/04/08	3.20	--	--	--	--	--	19.00	--	
MW-2	06/04/08	1.90	--	--	--	--	0.97	12.00	--	
MW-2	06/02/09	4.27	--	--	--	--	--	--	--	
MW-2	06/08/10	1.71	--	--	--	--	--	--	--	
MW-2	05/23/11	3.30	--	--	--	--	--	--	0.0050	
MW-2	05/31/12	1.83	--	--	--	--	--	--	0.0050	
MW-2	04/09/13	--	--	--	--	--	--	--	<0.10	
MW-2	04/22/14	--	--	--	--	--	--	--	<0.10	
MW-2	09/30/15	1.02	0.276	--	--	0.115 T8	<0.1	6.98	<0.05	
MW-3	08/28/02	2.60	4.60	--	--	11.00	<0.25	19.00	0.20	
MW-3	11/06/02	2.90	0.88	--	--	0.80	<0.25	9.20	0.20	
MW-3	02/19/03	8.60	0.017	--	--	0.20	6.10	84.00	0.20	
MW-3	06/11/03	6.54	0.022	--	--	0.40	8.50	130.00	0.20	
MW-3	09/17/03	6.50	0.028	--	--	0.80	8.20	160.00	<0.1	
MW-3	11/20/03	7.80	<0.01	--	--	<0.2	17.00	66.00	0.20	
MW-3	02/25/04	2.80	<0.01	--	--	<0.050	6.70	35.00	0.20	
MW-3	05/11/04	8.40	<0.010	--	--	<0.050	7.70	59.00	<0.10	
MW-3	08/25/04	1.80	<0.010	--	--	<0.050	7.00	66.00	<0.10	
MW-3	12/15/04	7.60	0.059	--	--	<0.050	6.50	50.00	<0.10	
MW-3	03/09/05	4.43	1.80	--	--	<0.050	3.50	51.00	<0.10	
MW-3	06/08/05	1.98	3.30	--	--	<0.050	4.20	37.00	<0.2	
MW-3	09/21/05	2.90	4.30	--	--	0.064	3.40	47.00	<0.10	
MW-3	12/14/05	1.80	0.80	--	--	<0.050	1.60	72.00	<0.10	
MW-3	03/14/06	3.10	0.23	--	--	<0.050	7.50	22.00	<0.10	
MW-3	06/07/06	1.80	0.30	--	--	<0.050	4.60	21.00	<0.10	
MW-3	09/13/06	2.60	2.40	--	--	<0.050	0.40	30.00	<0.10	

Table 3

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 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-3	12/13/06	0.80	0.25	--	--	0.064	2.80	28.00	<0.10	
MW-3	06/20/07	2.20	--	--	--	--	--	--	--	
MW-3	06/05/08	2.00	--	--	--	--	3.40	15.00	--	
MW-3	06/02/09	4.84	--	--	--	--	--	--	--	
MW-3	06/09/10	3.24	--	--	--	--	--	--	--	
MW-3	05/23/11	5.29	--	--	--	--	--	--	--	
MW-3	05/31/12	0.34	--	--	--	--	--	--	--	
MW-3	10/01/15	2.76	--	--	--	--	--	--	--	
MW-4	08/28/02	1.00	5.10	--	--	86.00	<0.25	2.90	--**	
MW-4	02/19/03	2.00	1.80	--	--	120.00	<0.25	270.00	--**	
MW-4	06/10/03	0.90	4.90	--	--	36.00	<0.25	8.40	0.60	
MW-4	11/19/03	1.40	1.90	--	--	31.00	0.25b	49.00	0.60	
MW-4	02/25/04	2.20	1.20	--	--	32.00	<0.25b	1.00	0.30	
MW-4	05/12/04	0.89	4.90	--	--	37.00	<0.25	5.30	<0.10	
MW-4	08/26/04	2.32	1.40	--	--	26.00	<0.25	6.40	0.42	
MW-4	03/09/05	1.37	1.00	--	--	31.00	<0.25	110.00	0.33	
MW-4	06/08/05	1.50	1.60	--	--	46.00	<0.25	11.00	0.50	
MW-4	09/21/05	1.30	7.00	--	--	54.00	<0.25	0.52	23.00	
MW-4	12/14/05	2.40	6.60	--	--	19.00	<0.25	33.00	0.38	
MW-4	03/14/06	2.40	4.20	--	--	11.00	<0.25	1.90	0.53	
MW-4	06/07/06	3.20	7.10	--	--	8.30	<0.25	<0.50	0.54	
MW-4	09/13/06	2.80	7.60	--	--	15.00	<0.25	<0.50	0.85	
MW-4	12/13/06	2.90	2.30	--	--	8.70	<0.25	31.00	<0.10	
MW-4	06/20/07	1.80	--	--	--	--	--	--	--	
MW-4	06/05/08	2.60	--	--	--	--	--	--	--	
MW-4	06/02/09	0.26	--	--	--	--	--	--	--	
MW-4	06/08/10	0.00	--	--	--	--	--	--	--	
MW-4	05/24/11	0.25	--	--	--	--	--	--	--	
MW-4	06/01/12	0.00	--	--	--	--	--	--	--	
MW-4	09/30/15	0.41	--	--	--	--	--	--	--	
MW-5	08/29/02	1.40	0.17	--	--	0.30	<0.25	11.00	0.20	
MW-5	11/05/02	4.10	6.40	--	--	13.00	1.10	250.00	0.30	
MW-5	02/20/03	2.00	0.073	--	--	<0.2	<0.25	6.20	<0.1	
MW-5	06/11/03	1.60	2.50	--	--	0.60	<0.25	8.20	0.10	
MW-5	09/16/03	1.20	4.70	--	--	3.10	<0.25b	5.60	0.10	
MW-5	11/20/03	4.90	<0.01	--	--	0.30	<0.25a	4.70	0.20	
MW-5	02/24/04	3.10	0.33	--	--	0.062	<0.25b	5.80	0.10	
MW-5	05/11/04	1.90	0.61	--	--	1.50	0.27	3.00	<0.10	
MW-5	08/26/04	1.22	<0.010	--	--	<0.050	1.80	7.60	<0.10	
MW-5	12/15/04	12.19	<0.010	--	--	<0.050	0.27	4.30	<0.10	
MW-5	03/09/05	6.22	0.020	--	--	<0.050	<0.25	15.00	<0.10	
MW-5	06/08/05	2.50	<0.010	--	--	<0.050	<0.25	11.00	<0.2	
MW-5	09/21/05	1.90	0.080	--	--	0.077	<0.25	8.90	<0.10	
MW-5	12/14/05	2.20	<0.010	--	--	<0.050	<0.25	9.80	--*a	
MW-5	03/14/06	2.20	<0.010	--	--	<0.050	0.55	3.20	<0.10	
MW-5	06/07/06	2.00	<0.010	--	--	<0.050	1.10	4.50	<0.10	
MW-5	09/13/06	2.10	0.34	--	--	<0.050	<0.25	6.60	<0.10	
MW-5	12/13/06	2.30	<0.010	--	--	<0.050	0.30	3.80	<0.10	
MW-5	06/04/08	2.40	--	--	--	--	--	--	--	
MW-5	06/02/09	4.34	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-5	06/08/10	1.84	--	--	--	--	--	--	--	
MW-5	05/24/11	5.26	--	--	--	--	--	--	--	
MW-5	05/31/12	2.33	--	--	--	--	--	--	--	
MW-5	10/01/15	0.45	--	--	--	--	--	--	--	
MW-6	08/29/02	1.20	0.72	--	--	4.10	<0.25	11.00	0.10	
MW-6	11/05/02	1.70	1.70	--	--	10.00	<0.25	5.60	0.70	
MW-6	02/19/03	3.30	1.20	--	--	7.30	<0.25	62.00	0.10	
MW-6	06/10/03	2.00	0.87	--	--	5.90	<0.25	17.00	0.20	
MW-6	09/16/03	2.30	1.60	--	--	41.00	<0.25b	2.90	1.00	
MW-6	11/19/03	5.10	1.70	--	--	5.40	<0.25b	19.00	<0.1	
MW-6	02/25/04	2.40	<0.01	--	--	0.49	2.8b	24.00	<0.1	
MW-6	05/11/04	1.20	0.39	--	--	5.10	<0.25	12.00	<0.10	
MW-6	08/25/04	2.26	0.59	--	--	4.90	<0.25	8.70	0.18	
MW-6	12/14/04	1.45	2.80	--	--	2.50	<0.25	9.90	<0.10	
MW-6	03/10/05	0.70	0.85	--	--	1.90	<0.25	20.00	0.15	
MW-6	06/07/05	3.80	0.38	--	--	0.86	0.56	19.00	0.20	
MW-6	09/20/05	0.90	1.50	--	--	2.50	<0.25	6.00	0.18	
MW-6	12/13/05	1.00	1.90	--	--	2.60	<0.25	10.00	0.26	
MW-6	03/15/06	1.00	0.057	--	--	0.30	<0.25	17.00	<0.10	
MW-6	06/08/06	1.90	0.22	--	--	5.90	<0.25	7.30	0.39	
MW-6	09/12/06	1.60	0.98	--	--	2.50	<0.25	3.10	0.33	
MW-6	12/12/06	2.00	0.032	--	--	1.60	0.91	49.00	<0.10	
MW-6	03/27/07	2.30	--	--	--	--	--	--	--	
MW-6	06/19/07	1.40	0.40	--	--	4.40	<0.25	15.00	0.21	
MW-6	09/24/07	3.40	--	--	--	--	--	--	--	
MW-6	12/11/07	3.16	--	--	--	--	--	--	--	
MW-6	03/04/08	1.50	--	--	--	--	--	--	--	
MW-6	06/04/08	2.90	0.38	--	--	0.70	<0.25	11.00	0.13	
MW-6	09/08/08	0.89	--	--	--	--	--	--	--	
MW-6	12/04/08	0.33	--	--	--	--	--	--	--	
MW-6	03/04/09	0.57	--	--	--	--	--	--	--	
MW-6	06/02/09	1.37	0.096	--	--	0.30	3.30	24.00	<0.10	
MW-6	09/21/09	0.28	--	--	--	--	--	--	--	
MW-6	11/17/09	0.46	--	--	--	--	--	--	--	
MW-6	03/09/10	1.33	--	--	--	--	--	--	--	
MW-6	06/08/10	0.080	0.036	--	--	0.22	0.41	11.00	<0.10	
MW-6	09/09/10	0.40	--	--	--	--	--	4.80	--	
MW-6	11/15/10	0.42	--	--	--	--	--	--	--	
MW-6	03/02/11	1.20	--	--	--	--	--	--	--	
MW-6	05/23/11	1.86	0.010	--	--	<0.050	0.68	10.00	0.10	
MW-6	08/30/11	0.32	--	--	--	--	--	--	--	
MW-6	12/02/11	0.90	--	--	--	--	--	--	--	
MW-6	03/01/12	1.69	--	--	--	--	--	--	--	
MW-6	05/31/12	0.00	<0.010	--	--	<0.050	2.10	18.00	<0.10	
MW-6	04/09/13	--	<0.010	--	--	<0.050	0.92 *	15	<0.10	
MW-6	10/02/13	10.68	--	--	--	--	--	--	--	
MW-6	01/22/14	8.95	--	--	--	--	--	--	--	
MW-6	04/22/14	--	<0.010	--	--	<0.050	1.6	23	<0.10	
MW-6	07/15/14	0.51	--	--	--	--	--	--	--	
MW-6	09/29/15	0.36	0.123	--	--	0.203 T8	<0.1	9.64	<0.05	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-7	08/29/02	1.40	14.00	--	--	9.80	<0.25	20.00	0.40	
MW-7	11/05/02	3.00	14.00	--	--	8.90	<0.25	7.00	0.50	
MW-7	02/20/03	2.50	13.00	--	--	13.00	<0.25	21.00	1.10	
MW-7	06/11/03	2.00	17.00	--	--	12.00	<0.25	1.10	0.50	
MW-7	09/17/03	1.10	14.00	--	--	2.70	<0.25a	3.00	1.10	
MW-7	11/20/03	2.40	0.98	--	--	0.90	1.3a	19.00	<0.1	
MW-7	02/26/04	6.20	18.00	--	--	27.00	<0.25b	59.00	0.90	
MW-7	05/11/04	1.00	14.00	--	--	16.00	<0.25	12.00	0.15	
MW-7	08/26/04	3.80	15.00	--	--	13.00	<0.25	9.20	0.47	
MW-7	12/15/04	1.30	10.00	--	--	20.00	3.20	68.00	0.19	
MW-7	03/09/05	1.45	18.00	--	--	9.30	<0.25	4.50	0.45	
MW-7	06/08/05	10.50	17.00	--	--	8.70	<0.25	1.40	0.40	
MW-7	12/14/05	1.70	22.00	--	--	19.00	<0.25	75.00	0.16	
MW-7	03/14/06	1.70	18.00	--	--	9.70	<0.25	19.00	0.36	
MW-7	06/07/06	1.60	19.00	--	--	2.70	<0.25	17.00	0.43	
MW-7	09/13/06	2.00	17.00	--	--	1.80	<0.25	2.10	0.17	
MW-7	03/27/07	1.90	--	--	--	--	--	--	--	
MW-7	06/20/07	1.00	23.00	--	--	2.90	<0.25	8.30	0.45	
MW-7	09/24/07	2.60	--	--	--	--	--	--	--	
MW-7	12/11/07	3.22	--	--	--	--	--	--	--	
MW-7	03/04/08	1.30	--	--	--	--	--	13.00	--	
MW-7	06/04/08	1.30	19.00	--	--	0.15	<0.25	2.30	0.63	
MW-7	09/08/08	0.73	--	--	--	--	--	--	--	
MW-7	12/05/08	0.40	--	--	--	--	--	--	--	
MW-7	03/04/09	0.70	--	--	--	--	--	--	--	
MW-7	06/02/09	0.37	25.00	--	--	2.80	<0.25	21.00	0.42	
MW-7	09/22/09	0.54	--	--	--	--	--	--	--	
MW-7	11/17/09	0.64	--	--	--	--	--	--	--	
MW-7	03/09/10	0.18	--	--	--	--	--	--	--	
MW-7	06/09/10	0.00	27.00	--	--	1.10	1.60	1.60	0.44	
MW-7	09/09/10	0.25	--	--	--	--	<0.25	3.60	--	
MW-7	11/15/10	0.47	--	--	--	--	--	--	--	
MW-7	03/01/11	0.00	--	--	--	--	--	--	--	
MW-7	05/24/11	0.00	3.50	--	--	1.80	0.46	5.10	0.55	
MW-7	08/29/11	0.44	--	--	--	--	--	--	--	
MW-7	12/01/11	0.42	--	--	--	--	--	--	--	
MW-7	03/01/12	0.25	--	--	--	--	--	--	--	
MW-7	05/31/12	0.00	14.00	--	--	1.50	<0.25	2.40	0.70	
MW-7	04/09/13	--	3.7	--	--	3.3	<0.25 *	4.7	0.054 J	
MW-7	06/21/13	--	--	--	--	--	<0.25 *	3.2	<0.10	Baseline monitoring event
MW-7	07/30/13	--	20	4.6	<0.30	--	<0.25	4.1	<0.10	
MW-7	10/03/13	0.00	20	170	140	--	0.81 *	3,100	<0.10	
MW-7	01/22/14	5.11	--	--	--	--	--	2,100	0.23	
MW-7	04/21/14	--	7.9	--	--	15	0.29	1,200	0.18	
MW-7	07/14/14	1.80	24	3.7	5.8	--	--	1,000	<0.10	
MW-7	03/17/15	0.10	3.3	--	--	3.6	<0.25	750	0.16	
MW-7	09/30/15	0.21	12.1	--	--	19.7 T8	<0.1	932	<0.05	
MW-8	08/29/02	6.20	0.90	--	--	2.30	<0.25	3.70	0.20	
MW-8	11/05/02	2.10	5.50	--	--	3.40	<0.25	7.50	0.10	
MW-8	02/20/03	2.90	0.56	--	--	0.50	0.69	7.60	0.30	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-8	06/11/03	1.56	18.00	--	--	0.30	<0.25	<0.25	0.40	
MW-8	09/17/03	2.50	11.00	--	--	6.10	<0.25a	6.70	0.40	
MW-8	11/20/03	1.70	<0.010	--	--	<0.2	2.4a	11.00	0.10	
MW-8	02/26/04	2.30	<0.01	--	--	0.57	1.2b	4.40	0.20	
MW-8	05/11/04	3.10	0.19	--	--	0.12	<0.25	5.30	<0.10	
MW-8	08/26/04	3.32	0.36	--	--	<0.050	2.20	11.00	<0.10	
MW-8	12/15/04	2.30	<0.010	--	--	<0.050	5.80	15.00	<0.10	
MW-8	03/09/05	2.22	<0.010	--	--	<0.050	1.20	7.30	<0.10	
MW-8	06/08/05	6.50	0.018	--	--	<0.050	2.30	7.40	<0.2	
MW-8	09/21/05	2.10	4.40	--	--	0.51	<0.25	11.00	<0.10	
MW-8	12/14/05	2.50	4.00	--	--	<0.050	2.20	11.00	<0.10	
MW-8	03/14/06	2.50	<0.010	--	--	<0.050	1.60	6.40	<0.10	
MW-8	06/07/06	1.30	0.53	--	--	<0.050	1.10	6.00	<0.10	
MW-8	09/13/06	1.60	7.10	--	--	0.068	<0.25	5.00	<0.10	
MW-8	12/13/06	3.10	<0.010	--	--	<0.050	7.30	41.00	<0.10	
MW-8	06/20/07	2.20	--	--	--	--	--	--	--	
MW-8	06/04/08	2.50	--	--	--	--	--	--	--	
MW-8	06/02/09	1.52	--	--	--	--	--	--	--	
MW-8	06/09/10	1.55	--	--	--	--	--	--	--	
MW-8	05/23/11	0.85	--	--	--	--	--	--	--	
MW-8	05/31/12	0.79	--	--	--	--	--	--	--	
MW-8	09/29/15	2.06	--	--	--	--	--	--	--	
MW-9	06/11/03	2.10	6.60	--	--	15.00	<0.25	2.00	0.70	
MW-9	09/17/03	2.10	9.80	--	--	19.00	<0.25a	1.50	0.70	
MW-9	11/20/03	1.60	2.20	--	--	14.00	<0.25a	66.00	0.30	
MW-9	02/26/04	1.10	15.00	--	--	12.00	<0.25b	8.10	0.80	
MW-9	05/11/04	0.90	4.10	--	--	0.25	<0.25	0.62	0.12	
MW-9	08/26/04	1.80	8.20	--	--	15.00	<0.25	1.00	0.41	
MW-9	12/15/04	1.76	5.30	--	--	29.00	10.00	180.00	<0.10	
MW-9	03/09/05	4.70	4.30	--	--	7.20	<0.25	4.40	0.30	
MW-9	06/08/05	4.50	6.50	--	--	8.40	<0.25	6.10	0.30	
MW-9	09/21/05	1.70	11.00	--	--	14.00	<0.25	1.90	0.21	
MW-9	12/14/05	3.30	10.00	--	--	9.10	<0.25	17.00	0.11	
MW-9	03/14/06	3.30	12.00	--	--	3.40	<0.25	1.40	0.51	
MW-9	06/07/06	0.90	4.60	--	--	5.60	<0.25	0.94	0.13	
MW-9	09/13/06	1.90	7.40	--	--	7.50	<0.25	<0.50	<0.10	
MW-9	12/13/06	2.40	0.72	--	--	3.60	0.27	12.00	0.19	
MW-9	03/27/07	2.90	--	--	--	--	--	--	--	
MW-9	06/20/07	2.90	3.50	--	--	6.00	<0.25	<0.50	0.42	
MW-9	09/24/07	2.50	--	--	--	--	--	--	--	
MW-9	12/11/07	1.76	--	--	--	--	--	--	--	
MW-9	03/04/08	1.50	--	--	--	--	--	--	--	
MW-9	06/04/08	1.80	3.50	--	--	7.90	<0.25	0.80	0.40	
MW-9	09/08/08	1.25	--	--	--	--	--	--	--	
MW-9	12/05/08	0.47	--	--	--	--	--	--	--	
MW-9	03/04/09	0.32	--	--	--	--	--	--	--	
MW-9	06/02/09	0.51	0.57	--	--	1.50	<0.25	10.00	<0.10	
MW-9	09/22/09	1.16	--	--	--	--	--	--	--	
MW-9	11/17/09	0.48	--	--	--	--	--	--	--	
MW-9	03/09/10	0.48	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-9	06/09/10	0.00	7.50	--	--	2.90	<0.25	4.80	0.49	
MW-9	09/09/10	0.37	--	--	--	--	--	2.00	--	
MW-9	11/15/10	0.39	--	--	--	--	--	--	--	
MW-9	03/01/11	0.00	--	--	--	--	--	--	--	
MW-9	05/24/11	0.00	18.00	--	--	<0.050	<0.25	3.60	0.10	
MW-9	08/29/11	0.27	--	--	--	--	--	--	--	
MW-9	12/01/11	0.66	--	--	--	--	--	--	--	
MW-9	03/01/12	1.35	--	--	--	--	--	--	--	
MW-9	05/31/12	0.00	0.13	--	--	<0.050	0.38	5.30	<0.10	
MW-9	04/10/13	--	6.1	--	--	<0.050	0.88 *	3.2	<0.10	
MW-9	06/24/13	--	--	--	--	--	<0.25	5.3	0.11	Baseline monitoring event
MW-9	07/30/13	--	14	2.0	<0.30	--	<0.25	72	0.077 J	
MW-9	10/03/13	0.00	18	3.8	1.5	--	<0.50 *	8.6	<0.10	
MW-9	01/22/14	9.46	--	--	--	--	--	26	<0.10	
MW-9	04/21/14	--	24	--	--	0.45	<0.25	300	<0.10	
MW-9	07/14/14	0.24	21	1.5	1.2	--	--	99	<0.10	
MW-9	03/18/15	1.99	2.9	--	--	<0.050	0.57	190	<0.10	
MW-9	09/30/15	0.09	5.40	--	--	0.207 T8	<0.1	27.8	<0.05	
MW-12R	06/01/09	0.36	--	--	--	--	--	--	--	
MW-12R	06/08/10	0.19	--	--	--	--	--	--	--	
MW-12R	05/23/11	0.55	--	--	--	--	--	--	0.0050	
MW-12R	06/01/12	0.00	--	--	--	--	--	--	0.0050	
MW-12R	04/09/13	--	--	--	--	--	--	--	<0.10	
MW-12R	04/23/14	--	--	--	--	--	--	--	<0.10	
MW-12R	09/30/15	0.41	4.05	--	--	2.1 T8	<0.1	5.55	<0.05	
MW-13R	06/01/09	0.49	--	--	--	--	--	--	--	
MW-13R	06/08/10	0.00	--	--	--	--	--	--	--	
MW-13R	05/23/11	0.18	--	--	--	--	--	--	0.0050	
MW-13R	Abandoned on 5/25/2012									
MW-14	08/29/02	2.20	5.90	--	--	20.00	<0.25	52.00	0.70	
MW-14	11/05/02	2.40	11.00	--	--	23.00	<0.25	39.00	0.80	
MW-14	02/20/03	1.90	3.50	--	--	20.00	<0.25	35.00	0.80	
MW-14	06/11/03	1.50	2.90	--	--	19.00	<0.25	4.30	0.40	
MW-14	09/16/03	1.30	0.86	--	--	15.00	<0.25b	0.89	0.50	
MW-14	11/20/03	3.70	0.57	--	--	4.90	0.57a	31.00	<0.1	
MW-14	02/24/04	4.30	2.40	--	--	19.00	<0.25b	0.60	0.60	
MW-14	05/11/04	0.10	2.30	--	--	19.00	<0.25	<0.50	<0.10	
MW-14	08/26/04	1.01	2.90	--	--	13.00	<0.25	47.00	0.38	
MW-14	12/15/04	2.88	4.50	--	--	0.13	4.80	110.00	<0.10	
MW-14	03/09/05	2.99	6.80	--	--	12.00	0.62	41.00	0.30	
MW-14	06/08/05	2.00	4.30	--	--	15.00	<0.25	18.00	0.40	
MW-14	09/21/05	2.00	7.60	--	--	19.00	<0.25	8.20	0.36	
MW-14	12/14/05	2.10	8.90	--	--	9.50	<0.25	21.00	<0.10	
MW-14	03/14/06	2.10	1.50	--	--	7.90	<0.25	33.00	0.12	
MW-14	06/07/06	1.50	1.50	--	--	11.00	<0.25	16.00	1.10	
MW-14	09/13/06	1.80	6.80	--	--	14.00	<0.25	1.70	0.22	
MW-14	12/13/06	2.20	2.20	--	--	5.80	0.36	25.00	<0.10	
MW-14	03/27/07	2.70	--	--	--	--	--	--	--	
MW-14	06/20/07	3.40	2.90	--	--	7.50	<0.25	4.90	0.79	
MW-14	09/24/07	3.10	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-14	12/11/07	1.76	--	--	--	--	--	--	--	
MW-14	03/04/08	1.10	--	--	--	--	--	--	--	
MW-14	06/04/08	2.70	2.00	--	--	3.40	<0.25	8.90	0.58	
MW-14	09/08/08	0.69	--	--	--	--	--	--	--	
MW-14	12/05/08	0.45	--	--	--	--	--	--	--	
MW-14	03/04/09	0.81	--	--	--	--	--	--	--	
MW-14	06/02/09	0.89	0.15	--	--	0.12	2.50	34.00	<0.10	
MW-14	09/21/09	0.92	--	--	--	--	--	--	--	
MW-14	11/17/09	1.01	--	--	--	--	--	--	--	
MW-14	03/08/10	0.32	--	--	--	--	--	--	--	
MW-14	06/08/10	0.25	0.72	--	--	0.18	<0.25	8.50	<0.10	
MW-14	09/10/10	0.32	--	--	--	--	--	--	--	
MW-14	11/15/10	0.35	--	--	--	--	--	--	--	
MW-14	03/01/11	0.020	--	--	--	--	--	--	--	
MW-14	05/24/11	0.00	0.18	--	--	0.10	0.25	14.00	0.10	
MW-14	08/29/11	0.19	--	--	--	--	--	--	--	
MW-14	12/01/11	0.31	--	--	--	--	--	--	--	
MW-14	03/01/12	1.10	--	--	--	--	--	--	--	
MW-14	05/31/12	0.00	0.086	--	--	<0.050	<0.25	10.00	<0.10	
MW-14	04/09/13	--	0.25	--	--	<0.050	0.46 *	9.2	<0.10	
MW-14	10/03/13	0.00	--	--	--	--	--	--	--	
MW-14	01/22/14	5.98	--	--	--	--	--	--	--	
MW-14	04/21/14	--	0.23	--	--	<0.050	<0.25	8.8	<0.10	
MW-14	07/15/14	0.37	--	--	--	--	--	--	--	
MW-14	10/01/15	0.81	3.47	--	--	8.61 T8	<0.1	<5	<0.05	
MW-16	06/02/09	1.48	--	--	--	--	--	--	--	
MW-16	06/09/10	1.11	--	--	--	--	--	--	--	
MW-16	05/23/11	1.34	--	--	--	--	--	--	--	
MW-16	05/31/12	0.020	--	--	--	--	--	--	--	
MW-16	09/30/15	0.48	--	--	--	--	--	--	--	
MW-18	03/27/07	3.20	--	--	--	--	--	--	--	
MW-18	09/24/07	3.20	--	--	--	--	--	--	--	
MW-18	12/11/07	3.40	--	--	--	--	--	--	--	
MW-18	03/04/08	1.50	--	--	--	--	--	--	--	
MW-18	06/04/08	3.10	--	--	--	--	--	--	--	
MW-18	09/08/08	1.26	--	--	--	--	--	--	--	
MW-18	12/04/08	0.21	--	--	--	--	--	--	--	
MW-18	03/04/09	0.94	--	--	--	--	--	--	--	
MW-18	06/02/09	0.47	--	--	--	--	--	--	--	
MW-18	09/22/09	0.63	--	--	--	--	--	--	--	
MW-18	11/17/09	8.07	--	--	--	--	--	--	--	
MW-18	03/09/10	0.90	--	--	--	--	--	--	--	
MW-18	06/08/10	0.00	--	--	--	--	--	--	--	
MW-18	09/10/10	3.84	--	--	--	--	--	--	--	
MW-18	11/16/10	0.59	--	--	--	--	--	--	--	
MW-18	03/02/11	0.030	--	--	--	--	--	--	--	
MW-18	05/23/11	0.00	--	--	--	--	--	--	--	
MW-18	08/30/11	0.28	--	--	--	--	--	--	--	
MW-18	12/02/11	0.57	--	--	--	--	--	--	--	
MW-18	03/02/12	0.57	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-18	05/31/12	0.00	--	--	--	--	--	--	--	
MW-18	10/02/13	0.00	--	--	--	--	--	--	--	
MW-18	01/22/14	5.50	--	--	--	--	--	--	--	
MW-18	07/15/14	0.15	--	--	--	--	--	--	--	
MW-18	03/18/15	0.23	--	--	--	--	--	--	--	
MW-18	09/30/15	0.47	--	--	--	--	--	--	--	
MW-19	08/29/02	0.90	13.00	--	--	19.00	<0.25	<0.25	0.60	
MW-19	11/05/02	2.70	10.00	--	--	19.00	<0.25	<0.25	0.40	
MW-19	02/20/03	3.20	13.00	--	--	43.00	<0.25	23.00	0.50	
MW-19	06/11/03	0.50	16.00	--	--	37.00	<0.25	11.00	0.40	
MW-19	09/16/03	1.40	18.00	--	--	30.00	<0.25b	5.20	0.70	
MW-19	11/20/03	4.80	18.00	--	--	49.00	<0.25a	10.00	0.50	
MW-19	02/24/04	2.10	20.00	--	--	39.00	<0.25b	1.80	0.60	
MW-19	05/11/04	0.60	17.00	--	--	30.00	<0.25	0.98	0.24	
MW-19	08/26/04	2.83	15.00	--	--	15.00	<0.25	<0.50	0.20	
MW-19	12/15/04	3.89	21.00	--	--	44.00	<0.25	31.00	0.22	
MW-19	03/09/05	3.42	22.00	--	--	25.00	<0.25	5.30	0.26	
MW-19	06/08/05	0.89	15.00	--	--	18.00	<0.25	12.00	0.60	
MW-19	06/07/06	1.70	18.00	--	--	7.90	<0.25	<0.50	0.55	
MW-19	09/13/06	2.10	19.00	--	--	10.00	<0.25	<0.50	1.30	
MW-19	12/13/06	3.90	19.00	--	--	30.00	<0.25	16.00	0.43	
MW-19	03/27/07	2.50	--	--	--	--	--	--	--	
MW-19	06/20/07	1.90	23.00	--	--	9.30	<0.25	<0.50	0.19	
MW-19	09/24/07	3.70	--	--	--	--	--	--	--	
MW-19	12/11/07	2.13	--	--	--	--	--	--	--	
MW-19	03/04/08	1.90	--	--	--	--	--	--	--	
MW-19	06/04/08	3.40	21.00	--	--	7.00	<0.25	0.86	0.46	
MW-19	09/08/08	1.02	--	--	--	--	--	--	--	
MW-19	12/05/08	0.27	--	--	--	--	--	--	--	
MW-19	03/04/09	0.52	--	--	--	--	--	--	--	
MW-19	06/02/09	0.37	28.00	--	--	6.30	<0.25	<0.50	0.18	
MW-19	09/21/09	0.35	--	--	--	--	--	--	--	
MW-19	11/17/09	0.86	--	--	--	--	--	--	--	
MW-19	03/08/10	0.69	--	--	--	--	--	--	--	
MW-19	06/08/10	0.00	27.00	--	--	10.00	<0.25	<0.50	<0.10	
MW-19	09/09/10	0.41	--	--	--	--	<0.25	39.00	--	
MW-19	11/15/10	0.35	--	--	--	--	--	--	--	
MW-19	03/01/11	0.00	--	--	--	--	--	--	--	
MW-19	05/24/11	0.69	28.00	--	--	1.70	<0.25	3.80	0.11	
MW-19	08/29/11	0.21	--	--	--	--	--	--	--	
MW-19	12/01/11	0.41	--	--	--	--	--	--	--	
MW-19	03/01/12	0.26	--	--	--	--	--	--	--	
MW-19	05/31/12	0.00	13.00	--	--	10.00	<0.25	<0.50	0.21	
MW-19	04/09/13	--	27	--	--	7.5	<0.25 *	<0.50	<0.10	
MW-19	06/21/13	--	--	--	--	--	<0.25 *	<0.50	0.13	Baseline monitoring event
MW-19	10/03/13	0.00	--	--	--	--	--	--	--	
MW-19	01/22/14	7.20	--	--	--	--	--	620	<0.10	
MW-19	04/21/14	--	28	--	--	30	<0.25	190	0.23	
MW-19	07/15/14	0.46	30	8.3	7.6	--	--	<0.50	<0.10	
MW-19	03/17/15	0.05	30	--	--	8.7	<0.25	1.9	<0.10	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-19	09/30/15	0.20	7.96	--	--	11.0 T8	<0.1	<5	<0.05	
MW-20	08/29/02	2.60	12	--	--	5.4	<0.25	7.90	0.3	
MW-20	11/06/02	5.70	0.10	--	--	4.2	<0.25	610.00	0.3	
MW-20	06/11/03	15.00	<0.01	--	--	7.30	<0.25	2200.00	0.2	
MW-20	09/17/03	14.00	<0.010	--	--	2.00	<0.25a	1800.00	0.5	
MW-20	11/20/03	13.00	0.15	--	--	1.70	<0.25a	1900.00	<0.1	
MW-20	02/25/04	14.00	0.026	--	--	0.34	<0.25b	2100.00	--**	
MW-20	05/11/04	7.50	0.048	--	--	0.29	<0.25	2100.00	<0.10	
MW-20	08/26/04	2.00	16.00	--	--	140.00	<0.25	970.00	<0.10	
MW-20	12/15/04	3.34	0.71	--	--	27.00	<0.25	550.00	0.28	
MW-20	03/09/05	2.82	0.25	--	--	18.00	<0.25	470.00	<0.10	
MW-20	06/08/05	2.50	10.00	--	--	18.00	<0.25	480.00	0.20	
MW-20	12/14/05	3.20	0.28	--	--	15.00	<0.25	250.00	0.21	
MW-20	03/14/06	3.20	0.98	--	--	5.50	<0.25	56.00	<0.10	
MW-20	06/07/06	1.00	15.00	--	--	7.40	<0.25	68.00	<0.10	
MW-20	09/13/06	2.50	23.00	--	--	17.00	<0.25	110.00	<0.10	
MW-20	12/13/06	2.30	3.3	--	--	2.30	<0.25	69.00	<0.10	
MW-20	06/20/07	4.10	--	--	--	--	--	--	--	
MW-20	06/05/08	2.30	--	--	--	--	--	--	--	
MW-20	06/02/09	0.40	--	--	--	--	--	--	--	
MW-20	06/09/10	0.00	--	--	--	--	--	--	--	
MW-20	05/23/11	0.00	--	--	--	--	--	--	--	
MW-20	05/31/12	0.00	--	--	--	--	--	--	--	
MW-20	10/01/15	0.22	--	--	--	--	--	--	--	
MW-21	02/19/03	6.90	0.061	--	--	1.9	<0.25	1400	<0.1	
MW-21	11/20/03	0.90	0.013	--	--	2.80	<0.25a	17.00	0.5	
MW-21	02/26/04	1.00	12.00	--	--	17.00	<0.25b	12.00	0.9	
MW-21	05/11/04	1.80	4.70	--	--	12.00	<0.25	0.92	<0.10	
MW-21	08/26/04	2.80	2.00	--	--	1.80	<0.25	<0.50	0.13	
MW-21	03/09/05	0.99	4.30	--	--	9.80	<0.25	<0.50	<0.10	
MW-21	06/08/05	3.50	1.80	--	--	11.00	<0.25	1.20	0.5	
MW-21	09/21/05	2.40	15.00	--	--	7.20	<0.25	<0.50	0.14	
MW-21	12/14/05	1.20	18.00	--	--	0.19	<0.25	5.30	0.18	
MW-21	03/14/06	1.20	<0.010	--	--	0.10	<0.25	3.20	<0.10	
MW-21	06/07/06	1.20	1.70	--	--	9.90	<0.25	2.30	0.37	
MW-21	03/27/07	0.90	--	--	--	--	--	--	--	
MW-21	06/20/07	2.10	9.10	--	--	4.20	<0.25	<0.50	<0.10	
MW-21	09/24/07	2.50	--	--	--	--	--	--	--	
MW-21	12/11/07	2.60	--	--	--	--	--	--	--	
MW-21	03/04/08	2.50	--	--	--	--	--	--	--	
MW-21	06/04/08	2.80	14.00	--	--	7.40	<0.25	<0.50	0.13	
MW-21	09/08/08	0.77	--	--	--	--	--	--	--	
MW-21	12/05/08	1.24	--	--	--	--	--	--	--	
MW-21	03/04/09	0.84	--	--	--	--	--	--	--	
MW-21	06/02/09	1.29	7.10	--	--	4.00	<0.25	3.90	0.23	
MW-21	09/22/09	0.79	--	--	--	--	--	--	--	
MW-21	11/17/09	2.17	--	--	--	--	--	--	--	
MW-21	03/09/10	1.03	--	--	--	--	--	--	--	
MW-21	11/15/10	0.72	--	--	--	--	--	--	--	
MW-21	03/01/11	0.11	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-21	05/24/11	0.41	0.85	--	--	0.11	ND	4.30	0.10	
MW-21	08/29/11	0.55	--	--	--	--	--	--	--	
MW-21	12/01/11	1.16	--	--	--	--	--	--	--	
MW-21	03/01/12	0.79	--	--	--	--	--	--	--	
MW-21	05/31/12	0.00	0.24	--	--	0.092	<0.25	5.70	0.22	
MW-21	04/10/13	--	0.62	--	--	<0.050	0.70 *	4.2	<0.10	
MW-21	10/03/13	0.00	--	--	--	--	--	--	--	
MW-21	01/22/14	8.32	--	--	--	--	--	--	--	
MW-21	04/24/14	--	0.20	--	--	<0.050	<0.25	7.8	<0.10	
MW-21	07/15/14	0.29	--	--	--	--	--	--	--	
MW-21	03/18/15	4.6	0.55	--	--	<0.050	0.28	2.0	<0.10	
MW-21	09/30/15	0.28	2.51	--	--	4.36 T8	0.107	<5	0.081	
MW-22	08/29/02	0.70	2.4	--	--	9.1	<0.25	2.20	0.2	
MW-22	11/05/02	1.60	1.1	--	--	5.6	<0.25	99.00	0.2	
MW-22	02/19/03	2.10	<0.01	--	--	4.7	<0.25	120	0.1	
MW-22	06/10/03	1.30	0.087	--	--	5.00	0.64	110.00	0.5	
MW-22	09/16/03	2.40	2.0	--	--	55.00	<0.25b	230.00	1.6	
MW-22	11/19/03	6.60	0.056	--	--	2.30	<0.25b	100.00	0.4	
MW-22	02/25/04	8.20	<0.01	--	--	2.40	0.38b	43.00	0.4	
MW-22	05/11/04	5.10	<0.010	--	--	0.48	0.87	36.00	<0.10	
MW-22	08/25/04	2.72	1.4	--	--	2.70	0.33	59.00	--*b	
MW-22	12/14/04	1.35	3.2	--	--	5.50	1.20	65.00	<0.10	
MW-22	03/10/05	1.40	0.38	--	--	9.20	0.49	23.00	0.61	
MW-22	06/07/05	4.20	0.53	--	--	6.30	<0.25	25.00	0.7	
MW-22	09/20/05	3.70	0.86	--	--	27.00	<0.25	24.00	0.16	
MW-22	12/13/05	2.10	3.8	--	--	12.00	<0.25	25.00	3.0	
MW-22	03/15/06	2.10	0.033	--	--	4.40	<0.25	14.00	<0.10	
MW-22	06/08/06	2.60	0.62	--	--	4.50	<0.25	17.00	0.19	
MW-22	09/12/06	2.60	2.2	--	--	4.50	<0.25	19.00	0.11	
MW-22	12/12/06	0.90	0.010	--	--	2.20	<0.25	7.3	<0.10	
MW-22	06/19/07	1.80	--	--	--	--	--	--	--	
MW-22	06/04/08	2.60	--	--	--	--	--	--	--	
MW-22	06/02/09	0.50	--	--	--	--	--	--	--	
MW-22	06/09/10	0.00	--	--	--	--	--	--	--	
MW-22	09/09/10	0.36	--	--	--	--	--	<0.50	--	
MW-22	05/23/11	0.00	--	--	--	--	--	--	--	
MW-22	05/31/12	0.00	--	--	--	--	--	--	--	
MW-22	09/30/15	0.36	--	--	--	--	--	--	--	
MW-23	02/25/04	1.60	12	--	--	15	<0.25b	13.00	0.4	
MW-23	05/12/04	1.80	13	--	--	19	<0.25	3.60	0.16	
MW-23	08/26/04	1.41	10	--	--	14	<0.25	21.00	0.11	
MW-23	12/13/05	2.30	16	--	--	1.2	<0.25	<0.50	0.25	
MW-23	03/15/06	2.30	17	--	--	20	<0.25	<0.50	0.23	
MW-23	06/08/06	1.10	18	--	--	18	<0.25	<0.50	0.20	
MW-23	12/12/06	1.90	27	--	--	27	<0.25	<0.50	0.24	
MW-23	03/27/07	2.40	--	--	--	--	--	--	--	
MW-23	06/19/07	1.20	13	--	--	18	<0.25	<1.0	0.19	
MW-23	09/25/07	2.90	--	--	--	--	--	--	--	
MW-23	12/11/07	2.77	--	--	--	--	--	--	--	
MW-23	03/04/08	2.40	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington



Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-23	06/04/08	1.70	12	--	--	63	<0.25	1.0	0.48	
MW-23	12/04/08	0.53	--	--	--	--	--	--	--	
MW-23	03/04/09	0.80	--	--	--	--	--	--	--	
MW-23	06/02/09	0.42	9.5	--	--	17	<0.25	57	0.92	
MW-23	09/21/09	0.60	--	--	--	--	--	--	--	
MW-23	11/16/09	0.43	--	--	--	--	--	--	--	
MW-23	03/08/10	0.26	--	--	--	--	--	--	--	
MW-23	06/08/10	0.15	11.00	--	--	22.00	<0.25	4.20	0.52	
MW-23	09/10/10	3.49	--	--	--	--	--	--	--	
MW-23	11/16/10	0.46	--	--	--	--	--	--	--	
MW-23	03/02/11	0.00	--	--	--	--	--	--	--	
MW-23	05/24/11	0.33	14.00	--	--	31.00	<0.25	0.80	0.10	
MW-23	08/30/11	1.10	--	--	--	--	--	--	--	
MW-23	12/02/11	0.89	--	--	--	--	--	--	--	
MW-23	03/02/12	0.65	--	--	--	--	--	--	--	
MW-23	05/30/12	0.00	5.50	--	--	41.00	<0.25	74.00	0.38	
MW-23	04/10/13	--	1.9	--	--	92	<0.25	1,000	<0.10	
MW-23	10/02/13	0.00	--	--	--	--	--	--	--	
MW-23	01/21/14	5.42	--	--	--	--	--	--	--	
MW-23	04/23/14	--	3.1	--	--	23	<0.25	470	<0.10	
MW-23	07/15/14	0.30	--	--	--	--	--	--	--	
MW-23	03/18/15	0.07	6.5	--	--	9.5	<0.25	260	0.15	
MW-23	10/01/15	0.19	6.03	--	--	6.48 T8	<0.1	58.3	<0.05	
MW-24	02/25/04	1.70	15	--	--	22	<0.25b	6.40	0.3	
MW-24	03/15/06	--	25	--	--	46	<0.25	<0.50	0.23	
MW-24	06/08/06	1.60	7.6	--	--	9.1	<0.25	<0.50	0.42	
MW-24	12/12/06	2.30	16	--	--	3.2	<0.25	<0.50	0.31	
MW-24	03/27/07	2.20	--	--	--	--	--	--	--	
MW-24	06/19/07	1.40	15	--	--	68	<0.25	<0.50	1.7	
MW-24	09/25/07	2.30	--	--	--	--	--	--	--	
MW-24	12/11/07	1.19	--	--	--	--	--	--	--	
MW-24	03/04/08	2.20	--	--	--	--	--	--	--	
MW-24	06/04/08	2.10	15	--	--	17	<0.25	7.4	0.85	
MW-24	09/08/08	1.38	--	--	--	--	--	--	--	
MW-24	12/05/08	0.33	--	--	--	--	--	--	--	
MW-24	03/04/09	0.83	--	--	--	--	--	--	--	
MW-24	06/02/09	0.46	12	--	--	37	<0.25	<0.50	<0.10	
MW-24	09/21/09	0.77	--	--	--	--	--	--	--	
MW-24	11/16/09	0.78	--	--	--	--	--	--	--	
MW-24	03/08/10	0.29	--	--	--	--	--	--	--	
MW-24	06/08/10	0.00	12.00	--	--	35.00	<0.25	<0.50	0.23	
MW-24	09/10/10	3.70	--	--	--	--	--	--	--	
MW-24	11/16/10	0.47	--	--	--	--	--	--	--	
MW-24	03/02/11	0.00	--	--	--	--	--	--	--	
MW-24	05/24/11	0.53	12.00	--	--	26.00	<0.25	0.78	0.11	
MW-24	08/30/11	0.39	--	--	--	--	--	--	--	
MW-24	12/02/11	0.48	--	--	--	--	--	--	--	
MW-24	03/02/12	1.52	--	--	--	--	--	--	--	
MW-24	05/30/12	0.00	7.50	--	--	31.00	<0.25	2.40	0.15	
MW-24	04/10/13	--	19	--	--	35	<0.25	1.0	<0.10	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
MW-24	10/02/13	0.00	--	--	--	--	--	--	--	
MW-24 (DUP-1)	01/22/14	0.00	--	--	--	--	--	--	--	Duplicate of MW-24
MW-24	04/23/14	--	13	--	--	52	0.95	2.3	<0.10	
MW-24	07/15/14	0.20	--	--	--	--	--	--	--	
MW-24	03/18/15	0.18	23	--	--	40	<0.25	1.2	<0.10	
MW-24	10/01/15	0.29	10.4	--	--	31.3 T8	<0.1	<5	<0.05	
MW-25	02/26/04	1.30	1.5	--	--	27	<0.25b	120.00	0.9	
MW-25	05/12/04	1.90	2.0	--	--	12	<0.25	140.00	0.10	
MW-25	08/26/04	1.78	1.7	--	--	5.4	<0.25	380.00	0.13	
MW-25	12/14/04	2.10	0.40	--	--	2.7	<0.25	370.00	<0.10	
MW-25	03/10/05	2.10	2.0	--	--	3.5	<0.25	180.00	0.21	
MW-25	06/07/05	1.75	2.2	--	--	4.7	<0.25	160.00	0.7	
MW-25	09/20/05	1.30	0.91	--	--	1.8	<0.25	270.00	0.12	
MW-25	12/13/05	2.50	1.8	--	--	1.8	<0.25	140.00	0.23	
MW-25	03/15/06	2.50	0.92	--	--	4.6	<0.25	210.00	0.38	
MW-25	06/08/06	1.20	1.9	--	--	6.5	<0.25	120.00	0.13	
MW-25	09/12/06	1.80	0.84	--	--	5.9	<0.25	250.00	<0.10	
MW-25	12/12/06	2.10	1.6	--	--	15	<0.25	400.00	<0.10	
MW-25	06/19/07	2.10	--	--	--	--	--	--	--	
MW-25	06/04/08	2.40	--	--	--	--	--	--	--	
MW-25	06/02/09	0.62	--	--	--	--	--	--	--	
MW-25	06/09/10	0.00	--	--	--	--	--	--	--	
MW-25	05/25/11	1.17	--	--	--	--	--	--	--	
MW-25	06/01/12	0.00	--	--	--	--	--	--	--	
MW-25	10/02/15	0.19	--	--	--	--	--	--	--	
SH-02	12/20/00	--	5.40	--	--	0.86	0.040	14.00	0.32	
SH-02	Destroyed during construction activities									
SH-02R	08/28/02	1.50	4.90	--	--	17.00	<0.25	3.80	<0.1	
SH-02R	11/05/02	2.10	6.10	--	--	20.00	<0.25	13.00	<0.1	
SH-02R	02/19/03	2.50	0.29	--	--	2.40	0.33	10.00	0.60	
SH-02R	06/10/03	1.30	1.40	--	--	5.10	<0.25	6.80	0.30	
SH-02R	09/16/03	1.90	5.20	--	--	19.00	<0.25b	5.10	0.40	
SH-02R	11/19/03	1.10	1.50	--	--	4.60	0.34b	7.10	0.20	
SH-02R	02/25/04	3.40	5.00	--	--	14.00	0.46b	5.20	0.40	
SH-02R	05/12/04	2.00	3.20	--	--	7.40	<0.25	4.40	<0.10	
SH-02R	08/26/04	2.24	2.10	--	--	3.80	<0.25	5.80	<0.10	
SH-02R	12/15/04	1.98	0.092	--	--	0.055	0.44	100.00	<0.10	
SH-02R	03/09/05	1.59	0.38	--	--	1.50	<0.25	380.00	<0.10	
SH-02R	06/08/05	1.00	1.20	--	--	0.11	<0.25	110.00	<0.2	
SH-02R	09/21/05	1.50	4.40	--	--	0.72	<0.25	31.00	<0.10	
SH-02R	12/14/05	0.70	2.20	--	--	0.28	<0.25	11.00	<0.10	
SH-02R	03/14/06	0.70	0.42	--	--	1.40	<0.25	25.00	<0.10	
SH-02R	06/07/06	0.90	3.10	--	--	4.40	<0.25	20.00	<0.10	
SH-02R	09/13/06	1.70	3.90	--	--	5.50	<0.25	24.00	<0.10	
SH-02R	12/13/06	0.90	0.38	--	--	1.30	0.34	10.00	<0.10	
SH-02R	06/20/07	2.00	--	--	--	--	--	--	--	
SH-02R	06/05/08	3.10	--	--	--	--	--	--	--	
SH-02R	06/02/09	0.25	--	--	--	--	--	--	--	
SH-02R	06/08/10	0.24	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen	Methane (Head Space)	Total Iron	Dissolved Iron	Ferrous Iron	Nitrate	Sulfate	Sulfide	Comments
		mg/L								
SH-02R	05/23/11	0.41	--	--	--	--	--	--	0.0050	
SH-02R	06/01/12	0.00	--	--	--	--	--	--	0.0050	
SH-02R	04/09/13	--	--	--	--	--	--	--	<0.10	
SH-02R	04/23/14	--	--	--	--	--	--	--	<0.10	
SH-02R	09/30/15	0.38	4.26	--	--	3.88	<0.1	<5	<0.05	
SH-05	12/20/00	--	0.010	--	--	1.80	0.14	6.00	<0.01	
SH-05R	08/28/02	1.40	1.00	--	--	11.00	<0.25	1.40	0.50	
SH-05R	11/05/02	1.50	1.20	--	--	17.00	<0.25	6.30	<0.1	
SH-05R	02/19/03	2.60	2.90	--	--	32.00	<0.25	28.00	<0.1	
SH-05R	06/10/03	1.40	1.50	--	--	33.00	<0.25	2.80	0.60	
SH-05R	09/16/03	1.20	1.60	--	--	41.00	<0.25b	0.46	0.90	
SH-05R	11/19/03	3.10	1.60	--	--	36.00	<0.25b	71.00	0.50	
SH-05R	02/25/04	2.50	0.56	--	--	0.087	0.76b	120.00	0.20	
SH-05R	05/12/04	1.12	2.10	--	--	16.00	<0.25	4.60	<0.10	
SH-05R	08/26/04	1.96	2.00	--	--	6.40	<0.25	0.63	<0.10	
SH-05R	12/15/04	2.80	3.70	--	--	26.00	<0.25	26.00	<0.10	
SH-05R	03/09/05	2.56	3.40	--	--	2.00	<0.25	7.50	<0.10	
SH-05R	06/08/05	2.50	3.80	--	--	19.00	<0.25	30.00	<0.2	
SH-05R	09/21/05	0.80	3.10	--	--	9.10	<0.25	<0.50	<0.10	
SH-05R	12/14/05	2.30	5.40	--	--	23.00	<0.25	16.00	<0.10	
SH-05R	03/14/06	2.30	0.11	--	--	0.087	<0.25	35.00	<0.10	
SH-05R	06/07/06	1.20	1.90	--	--	8.40	0.34	21.00	<0.10	
SH-05R	09/13/06	1.40	2.20	--	--	7.40	<0.25	<0.50	<0.10	
SH-05R	12/13/06	2.70	0.14	--	--	0.11	2.10	100.00	<0.10	
SH-05R	06/20/07	0.90	--	--	--	--	--	--	--	
SH-05R	06/05/08	2.90	--	--	--	--	--	--	--	
SH-05R	06/02/09	1.01	--	--	--	--	--	--	--	
SH-05R	06/08/10	0.00	--	--	--	--	--	--	--	
SH-05R	05/23/11	1.39	--	--	--	--	--	--	0.0050	
SH-05R	10/01/15	0.42	--	--	--	--	--	--	--	
MW-07R	08/28/02	1.60	0.17	--	--	6.90	<0.25	9.00	0.10	
MW-07R	11/05/02	1.60	0.16	--	--	12.00	<0.25	2.70	<0.1	
MW-07R	09/16/03	1.40	0.26	--	--	26.00	<0.25b	9.10	1.60	
MW-07R	11/19/03	2.20	0.017	--	--	4.90	0.77b	14.00	0.30	
MW-07R	02/25/04	2.10	<0.01	--	--	1.80	0.42b	5.70	0.30	
MW-07R	05/12/04	2.49	<0.010	--	--	2.20	0.74	3.40	<0.10	
MW-07R	08/26/04	2.05	0.011	--	--	0.12	<0.25	12.00	<0.10	
MW-07R	12/15/04	2.00	0.034	--	--	1.40	0.36	10.00	<0.10	
MW-07R	03/09/05	2.15	0.030	--	--	4.20	<0.25	120.00	<0.10	
MW-07R	06/08/05	1.98	<0.010	--	--	0.25	0.89	5.70	<0.2	
MW-07R	09/21/05	2.80	0.13	--	--	<0.050	<0.25	15.00	<0.10	
MW-07R	12/14/05	1.50	<0.010	--	--	<0.050	0.29	5.70	<0.10	
MW-07R	03/14/06	1.50	0.23	--	--	2.30	0.51	8.90	<0.10	
MW-07R	06/07/06	2.20	<0.010	--	--	0.28	2.40	3.90	<0.10	
MW-07R	09/13/06	1.20	0.26	--	--	3.40	<0.25	8.50	<0.10	
MW-07R	12/13/06	1.90	<0.010	--	--	<0.050	1.90	23.00	<0.10	
MW-07R	06/20/07	1.70	--	--	--	--	--	--	--	
MW-07R	06/05/08	1.90	--	--	--	--	--	--	--	
MW-07R	06/02/09	1.29	--	--	--	--	--	--	--	
MW-07R	06/08/10	1.11	--	--	--	--	--	--	--	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen	Methane (Head Space)	Total Iron	Dissolved Iron	Ferrous Iron	Nitrate	Sulfate	Sulfide	Comments
		mg/L								
MW-07R	05/23/11	3.20	--	--	--	--	--	--	0.0050	
MW-07R	06/01/12	1.03	--	--	--	--	--	--	0.0050	
MW-07R	04/09/13	--	--	--	--	--	--	--	<0.10	
MW-07R	04/23/14	--	--	--	--	--	--	--	<0.10	
MW-07R	10/01/15	0.37	1.54	--	--	11.8 T8	<0.1	<5	<0.05	
TMW-B1	06/09/10	1.06	--	--	--	--	--	3.60	--	
TMW-B1	09/09/10	0.25	--	--	--	--	--	<0.50	--	
TMW-B1	05/25/11	1.51	--	--	--	--	--	--	--	
TMW-B1	12/02/11	0.33	--	--	--	--	--	--	--	
TMW-B1	03/01/12	0.30	--	--	--	--	--	--	--	
TMW-B1	10/02/13	0.00	--	--	--	--	--	--	--	
TMW-B1	09/29/15	0.33	--	--	--	--	--	--	--	
TMW-1	06/21/13	--	--	--	--	--	0.41 *	11	<0.10	Baseline monitoring event
TMW-1	07/30/13	--	0.075	10	<0.30	--	0.28	1,900	<0.10	
TMW-1	10/03/13	2.92	0.081	13	5.2	--	<0.50 *	980	<0.10	
TMW-1	01/22/14	9.27	--	--	--	--	--	450	<0.10	
TMW-1	04/21/14	--	--	--	--	--	<0.25	670	<0.10	
TMW-1	07/14/14	0.87	<0.010	4.0	3.1	--	--	650	<0.10	
TMW-1	03/17/15	5.42	0.040	--	--	0.65	0.32	640	<0.10	
TMW-1	09/29/15	1.80	<0.01	--	--	1.40 T8	0.571	1,090	<0.05	
TMW-2	06/21/13	--	--	--	--	--	<0.25 *	0.83	<0.10	Baseline monitoring event
TMW-2	07/30/13	--	17	29	1.2	--	<0.25	6.4	<0.10	
TMW-2	10/03/13	0.00	15	160	110	--	<0.50 *	2,000	<0.10	
TMW-2	01/22/14	6.12	--	--	--	--	--	3,000	<0.10	
TMW-2	04/21/14	--	--	--	--	--	<0.25	2,600	<0.10	
TMW-2	07/14/14	0.10	7.1	68	67	--	--	2,700	<0.10	
TMW-2	03/17/15	0.24	2.7	--	--	16	<0.25	1,500	<0.10	
TMW-2	10/01/15	0.34	0.0843	--	--	34.8 T8	<0.1	1,810	<0.05	
TMW-3	06/24/13	--	--	--	--	--	<0.25	4.4	<0.10	Baseline monitoring event
TMW-3	07/30/13	--	2.6	10	<0.30	--	<0.25	3.1	<0.10	
TMW-3	10/03/13	0.00	3.8	43	18	--	<0.50 *	1,100	<0.10	
TMW-3	01/22/14	0.00	--	--	--	--	--	3,800	<0.10	
TMW-3	04/24/14	--	--	--	--	--	<0.25	2,500	<0.10	
TMW-3	07/14/14	0.27	1.3	19	17	--	--	3,100	<0.10	
TMW-3	03/18/15	0.07	1.3	--	--	9.3	<0.25	1,300	<0.10	
TMW-3	09/30/15	0.17	0.890	--	--	13.4 T8	<0.1	984	<0.05	
TMW-4	06/24/13	--	--	--	--	--	<0.25	32	0.11	Baseline monitoring event
TMW-4	07/30/13	--	13	24	5.0	--	0.48	1.4	0.11	
TMW-4	10/03/13	0.00	16	410	17	--	0.36 J*	2,800	<0.10	
TMW-4	01/22/14	0.00	--	--	--	--	--	2,800	<0.10	
TMW-4	04/24/14	--	--	--	--	--	<0.25	1,400	<0.10	
TMW-4	07/14/14	0.12	7.9	130	130	--	--	940	<0.10	
TMW-4	03/18/15	0.08	7.5	--	--	30	<0.25	410	<0.10	
TMW-4	09/30/15	0.12	1.12	--	--	43.4 T8	<0.1	374	<0.05	
TMW-5	06/21/13	--	--	--	--	--	<0.25 *	4.3	<0.10	Baseline monitoring event
TMW-5	07/30/13	--	7.6	11	<0.30	--	<0.25	0.67	0.25	
TMW-5	10/03/13	0.00	5.6	39	16	--	<0.50 *	2,500	0.10	
TMW-5	01/22/14	7.18	--	--	--	--	--	2,600	0.10	
TMW-5	04/24/14	--	--	--	--	--	<0.25	4,000	<0.10	

Table 3

Groundwater Natural Attenuation Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Well ID	Date Sampled	Dissolved Oxygen mg/L	Methane (Head Space) mg/L	Total Iron mg/L	Dissolved Iron mg/L	Ferrous Iron mg/L	Nitrate mg/L	Sulfate mg/L	Sulfide mg/L	Comments
TMW-5	07/14/14	0.09	2.4	8.0	0.82	--	--	1,300	<0.10	
TMW-5	03/18/15	0.04	8.9	--	--	0.069	<0.25	700	0.20	
TMW-5	09/30/15	0.09	2.00	--	--	43.1 T8	<0.1	734	6.72	
TMW-6	06/24/13	--	--	--	--	--	<0.25	16	0.14	Baseline monitoring event
TMW-6	07/30/13	--	5.4	13	2.4	--	<0.25	5.0	0.14	
TMW-6	10/03/13	0.00	5.6	290	250	--	<0.50 *	1,700	<0.10	
TMW-6	01/22/14	3.60	--	--	--	--	--	2,300	<0.10	
TMW-6	04/24/14	--	--	--	--	--	<0.25	1,800	<0.10	
TMW-6	07/14/14	0.22	6.5	100	98	--	--	1,600	<0.10	
TMW-6	03/18/15	0.09	0.54	--	--	2.0	<0.25	1,000	<0.10	
TMW-6	09/30/15	0.19	1.15	--	--	41.7 T8	<0.1	1,400	<0.05	

Notes:

Highlighted = data from most recent monitoring event

< = Denotes compound was not detected above the designated detection limit.

mg/l = milligrams per liter (parts per million)

-- = Sample not analyzed for this parameter

** = Analysis could not be run due to excess particulate matter.

*a = Lab received broken VOA, not able to run analysis

*b = Lab did not receive sample container to run analysis

a = The lab analyzed these samples for nitrate and sulfate together, using non-preserved samples (submitted for sulfate analysis). Holding time for non-preserved samples for nitrate analysis is 48 hours and for sulfate analysis is 28 days. These samples were received within the 48-hour holding time.

b = The lab analyzed these samples for nitrate only, using sulfuric acid preserved samples (submitted for nitrate analysis). Holding time for preserved samples for nitrate analysis is 28 days. The lab analyzed these for nitrate because non-preserved samples were received outside of 48 hours.

Table 4
Performance Monitoring Parameters
 Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Sample ID	Date	Dissolved Oxygen mg/l	Methane (Head Space) mg/l	Total Iron mg/l	Dissolved Iron mg/l	Nitrate mg/l	Sulfate mg/l	Sulfide mg/l	GRO mg/l	DRO mg/l	HO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l
Site Specific Cleanup Levels:			N/A	N/A	N/A	N/A	N/A	N/A	1	10	10	0.071	200	29	N/A
11	06/24/13	0.50	--	--	--	<0.25	2.5	<0.10	<0.25	0.30	--	<0.0005	<0.0005	<0.0005	<0.0005
11	07/30/13	1.70	0.42	1.0	<0.30	<0.25	0.88	<0.10	<0.25	--	--	--	--	--	--
11	08/26/13	--	--	--	--	--	0.71	--	<0.25	--	--	--	--	--	--
11	10/03/13	0.69	0.046	5.2	0.78	1.2 *	560	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
11	01/22/14	0.69	--	--	--	--	120	<0.10	0.75	--	--	<0.0005	<0.0005	<0.0005	<0.0005
11	04/21/14	0.69	--	--	--	1.1	580	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
11	07/14/14	--	0.47	1.6	0.55	--	200	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
11	03/18/15	10.87	<0.010	--	--	0.43	450	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
11	09/29/15	3.59	0.0747	--	--	0.438	310	<0.05	<0.1	--	--	<0.001	<0.005	<0.001	<0.003
12	06/24/13	0.48	--	--	--	<0.25	<0.50	<0.10	4.1	5.3	--	0.037	0.045	0.130	0.530
12	07/30/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12	08/26/13	--	--	--	--	--	1,900	--	9.3	--	--	--	--	--	--
12	10/03/13	0	2.2	39	35	1.1 *	5,500	<0.10	2.7	--	--	0.0020	0.0057	0.043	0.180
12	01/22/14	0.00	--	--	--	--	3,000	<0.10	4.2	--	--	0.0067	0.015	0.027	0.340
12	04/21/14	0.00	--	--	--	<0.25	1,700	0.22	2.6	--	--	0.015	0.014	0.088	0.150
12	07/14/14	--	11	31	38	--	1,100	<0.10	4.7	--	--	0.019	0.026	0.17	0.220
12	03/18/15	0.23	2.2	--	--	<0.25	940	<0.10	1.8	--	--	0.0059	0.0012	0.0030	0.024
12	09/29/15	0.14	3.01	--	--	<0.1	550	0.499	3.32	9.85	0.732	0.0435	0.0217	0.1910	0.0609
A-27	06/21/13	1.27	--	--	--	<0.25 *	2.7	<0.10	1.0	0.40 K	--	0.053	0.0024	0.043	0.0083
A-27	07/30/13	1.50	6.2	16	3.6	16	<0.50	<0.10	1.8	--	--	0.073	0.0039	0.051	0.017
A-27 (DUP)	07/30/13	1.50	--	--	--	--	--	--	1.5	--	--	0.058	0.0033	0.040	0.015
A-27	08/26/13	--	--	--	--	--	<0.50	--	1.9	--	--	--	--	--	--
A-27	08/26/13	--	--	--	--	--	--	--	2.1	--	--	--	--	--	--
A-27	10/02/13	0.00	7.4	14	3.6	<0.50 *	<0.50	<0.10	1.9	--	--	0.066	0.0041	0.038	0.021

Table 4
Performance Monitoring Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample ID	Date	Dissolved Oxygen mg/l	Methane (Head Space) mg/l	Total Iron mg/l	Dissolved Iron mg/l	Nitrate mg/l	Sulfate mg/l	Sulfide mg/l	GRO mg/l	DRO mg/l	HO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l
Site Specific Cleanup Levels:			N/A	N/A	N/A	N/A	N/A	N/A	1	10	10	0.071	200	29	N/A
A-27	01/22/14	0.00	--	--	--	--	<0.50	<0.10	2.6	--	--	0.078	0.0042	0.061	0.062
A-27	04/22/14	0.00	2.9	--	2.4	<0.25	4.2	<0.10	2.9	--	--	0.062	0.0023	0.074	0.078
A-27	07/14/14	--	5.7	18	16.0	--	<0.50	<0.10	1.8	--	--	0.051	0.0021	0.012	0.016
A-27	03/18/15	0.33	6.7	--	--	<0.25	3.1	<0.10	2.3	--	--	0.072	0.0019	0.072	0.010
A-27	09/29/15	0.29	3.86	--	--	<0.1	9	<0.05	1.68	--	--	0.0609	<0.005	0.00988	0.0074
MW-7	06/21/13	0.42 d	--	--	--	<0.25 *	3.2	<0.10	4.0	0.27 K	--	0.0059	0.064	0.28	1.1
MW-7	07/30/13	5.90	20	4.6	<0.30	<0.25	4.1	<0.10	7.2	--	--	0.016	0.11	0.29	1.6
MW-7	08/26/13	--	--	--	--	--	1,100	--	7.1	--	--	--	--	--	--
MW-7	10/03/13	0.00	20	170	140	0.81 *	3,100	<0.10	2.8	--	--	0.016	0.033	0.15	0.54
MW-7	01/22/14	0.00	--	--	--	--	2,100	0.23	2.1	--	--	0.014	0.010	0.13	0.17
MW-7	04/21/14	0.00	7.9	--	15	0.29	1,200	0.18	1.9	--	--	0.013	0.0093	0.11	0.20
MW-7 (DUP)	04/21/14	0.00	--	--	--	--	--	--	2.4	--	--	0.015	0.012	0.13	0.25
MW-7	07/14/14	--	24	4	6	--	1,000	<0.10	1.5	--	--	0.012	0.0012	0.073	0.021
MW-7	03/17/15	0.10	3.3	--	--	<0.25	750	0.16	1.6	--	--	0.0043	0.0061	0.050	0.13
MW-7 (DUP)	03/17/15	--	--	--	--	--	--	--	2.1	--	--	0.0059	0.0078	0.068	0.17
MW-7	09/30/15	0.21	12.1	--	--	<0.1	932	<0.05	1.02	--	--	0.00844	<0.005	0.033	0.034
MW-9	06/24/13	0.64 d	--	--	--	<0.25	5.3	0.11	0.33	0.37	--	0.014	<0.0005	<0.0005	0.0035
MW-9	07/30/13	5.80	14	2.0	<0.30	<0.25	72	<0.10	0.27	--	--	0.0017	<0.0005	0.00071	0.0060
MW-9	08/26/13	--	--	--	--	--	4.3	--	0.42	--	--	--	--	--	--
MW-9	10/03/13	0.00 d	18	3.8	1.5	<0.50 *	8.6	<0.10	0.30	--	--	0.0056	<0.0005	<0.0005	0.0092
MW-9	01/22/14	0.00 d	--	--	--	--	26	<0.10	<0.25	--	--	<0.0050	<0.0005	<0.0005	0.0013
MW-9	04/21/14	0.00 d	24	--	0.45	<0.25	300	<0.10	<0.25	--	--	0.017	<0.0005	<0.0005	<0.0005
MW-9	07/14/14	--	21	1.5	1.2	--	99	<0.10	<0.25	--	--	0.010	<0.0005	<0.0005	0.00072
MW-9	03/18/15	1.99	2.9	--	--	0.57	190	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	09/30/15	0.09	5.4	--	--	<0.1	28	<0.05	<0.1	--	--	<0.001	<0.005	<0.001	<0.003

Table 4
Performance Monitoring Parameters
 Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Sample ID	Date	Dissolved Oxygen mg/l	Methane (Head Space) mg/l	Total Iron mg/l	Dissolved Iron mg/l	Nitrate mg/l	Sulfate mg/l	Sulfide mg/l	GRO mg/l	DRO mg/l	HO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l
Site Specific Cleanup Levels:			N/A	N/A	N/A	N/A	N/A	N/A	1	10	10	0.071	200	29	N/A
MW-19	06/21/13	0.51	--	--	--	<0.25 *	<0.50	0.13	2.8	1.1 K	--	0.019	0.017	0.31	0.081
MW-19	07/30/13	2.40	--	--	--	--	--	--	4.4	--	--	0.0086	0.005	0.16	0.013
MW-19	08/26/13	--	--	--	--	--	<0.50	--	2.3	--	--	--	--	--	--
MW-19	10/03/13	0.00 d	--	--	--	--	--	--	3.2	--	--	0.0076	0.0023	0.046	0.0020
MW-19	01/22/14	0.00 d	--	--	--	--	620	--	2.2	--	--	0.021	0.00065	0.029	<0.0005
MW-19	04/21/14	0.00 d	28	--	30	<0.25	190	0.23	2.1	--	--	0.0066	0.0039	0.16	0.0064
MW-19	07/14/14	--	30	8.30	8	--	<0.50	<0.10	4.2	--	--	0.0059	0.010	0.21	0.15
MW-19 (DUP)	07/14/14	--	--	--	--	--	--	--	4.4	--	--	0.0052	0.0097	0.20	0.15
MW-19	03/17/15	0.05	30	--	--	<0.25	1.9	<0.10	4.3	--	--	0.0049	0.014	0.14	0.18
MW-19	09/30/15	0.20	7.96	--	--	<0.1	<5	<0.05	2.02	--	--	0.00341	<0.005	0.0157	<0.003
TMW-1	06/21/13	1.90	--	--	--	0.41 *	11	<0.10	<0.25	<0.25	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	07/30/13	1.70	0.075	10	<0.30	0.28	1,900	<0.10	<0.25	--	--	--	--	--	--
TMW-1	08/26/13	--	--	--	--	--	470	--	<0.25	--	--	--	--	--	--
TMW-1	10/03/13	2.92	0.081	13	5.20	<0.50 *	980	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	01/22/14	2.92	--	--	--	--	450	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	04/21/14	2.92	--	--	--	<0.25	670	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	07/14/14	--	<0.010	4	3.1	--	650	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	03/17/15	5.42	0.040	--	--	0.32	640	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-1	09/29/15	1.80	<0.01	--	--	0.571	1,090	<0.05	2.03	--	--	<0.001	<0.005	<0.001	<0.003
TMW-2	06/21/13	0.86	--	--	--	<0.25 *	0.83	<0.10	0.25	0.28	--	0.0075	0.00097	<0.0005	0.00068
TMW-2	07/30/13	1.40	17	29	1.2	<0.25	6.4	<0.10	0.26	--	--	--	--	--	--
TMW-2	08/26/13	--	--	--	--	--	61	--	0.64	--	--	--	--	--	--
TMW-2	10/03/13	0.00 d	15	160	110	<0.50 *	2,000	<0.10	0.50	--	--	0.013	0.00074	<0.0005	0.0024
TMW-2	01/22/14	0.00 d	--	--	--	--	2,000	<0.10	0.28	--	--	0.011	<0.0005	<0.0005	<0.0005
TMW-2	04/21/14	0.00 d	--	--	--	<0.25	2,600	<0.10	<0.25	--	--	<0.001 v	<0.001 v	<0.001 v	<0.001 v

Table 4
Performance Monitoring Parameters
 Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Sample ID	Date	Dissolved Oxygen mg/l	Methane (Head Space) mg/l	Total Iron mg/l	Dissolved Iron mg/l	Nitrate mg/l	Sulfate mg/l	Sulfide mg/l	GRO mg/l	DRO mg/l	HO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l
Site Specific Cleanup Levels:			N/A	N/A	N/A	N/A	N/A	N/A	1	10	10	0.071	200	29	N/A
TMW-2	07/14/14	--	7	68	67	--	2,700	<0.10	<0.25	--	--	0.0028	<0.0005	<0.0005	<0.0005
TMW-2	03/17/15	0.24	2.7	--	--	<0.25	1,500	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-2	10/01/15	0.34	0.0843	--	--	<0.1	1,810	<0.05	<0.1	--	--	<0.001	<0.005	<0.001	<0.003
TMW-3	06/24/13	0.34 d	--	--	--	<0.25	4.4	<0.10	0.86	0.85	--	<0.0005	0.00052	<0.0005	0.00087
TMW-3	07/30/13	5.70	2.6	10	<0.30	<0.25	3.1	<0.10	0.98	--	--	--	--	--	--
TMW-3	08/26/13	--	--	--	--	--	37	--	1.2	--	--	--	--	--	--
TMW-3	10/03/13	0.00 d	3.8	43	18	<0.50 *	1,100	<0.10	0.92	--	--	0.00057	0.00180	0.0076	0.0072
TMW-3	01/22/14	0.00 d	--	--	--	--	3,800	<0.10	0.75	--	--	<0.0010 v	0.0022	<0.0010 o	<0.0010 o
TMW-3	04/24/14	0.00 d	--	--	--	<0.25	2,500	<0.10	0.51	--	--	<0.0005	0.0046	0.0011	<0.0005
TMW-3	07/14/14	--	1.3	19	17	--	3,100	<0.10	<0.25	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-3	03/18/15	0.07	1.3	--	--	<0.25	1,300	<0.10	0.62	--	--	<0.0005	<0.0005	<0.0005	<0.0005
TMW-3	09/30/15	0.17	0.890	--	--	<0.1	984	<0.05	0.358	--	--	<0.001	<0.005	<0.001	<0.003
TMW-4	06/24/13	0.66	--	--	--	<0.25	32	0.11	4.9	2.5	--	0.17	0.084	0.23	0.95
TMW-4	07/30/13	1.70	13	24	5	0.48	1.4	0.11	5.1	--	--	--	--	--	--
TMW-4	08/26/13	--	--	--	--	--	2,200	--	9.2	--	--	--	--	--	--
TMW-4	10/03/13	0.00 d	16	410	17	<0.50 *	2,800	<0.10	4.7	--	--	0.13	0.12	0.29	1.3
TMW-4	01/22/14	0.00 d	--	--	--	--	2,800	<0.10	6.0	--	--	0.21	0.070	0.40	0.99
TMW-4	04/24/14	0.00 d	--	--	--	<0.25	1,400	<0.10	4.0	--	--	0.16	0.044	0.39	0.84
TMW-4	07/14/14	--	8	130	130	--	940	<0.10	5.6	--	--	0.19	0.016	0.38	0.35
TMW-4	03/18/15	0.08	7.5	--	--	<0.25	410	<0.10	7.5	--	--	0.21	0.019	0.53	0.38
TMW-4	09/30/15	0.12	1.12	--	--	<0.1	374	<0.05	3.49	--	--	0.107	<0.125	0.455	<0.075
TMW-5	06/21/13	0.98 d	--	--	--	<0.25 *	4.3	<0.10	1.3	0.65	--	0.10	0.0097	0.022	0.020
TMW-5	07/30/13	4.60	7.6	11	<0.30	<0.25	0.67	0.25	4.3	--	--	--	--	--	--
TMW-5	08/26/13	--	--	--	--	--	980	--	4.2	--	--	--	--	--	--

Table 4
Performance Monitoring Parameters

Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample ID	Date	Dissolved Oxygen mg/l	Methane (Head Space) mg/l	Total Iron mg/l	Dissolved Iron mg/l	Nitrate mg/l	Sulfate mg/l	Sulfide mg/l	GRO mg/l	DRO mg/l	HO mg/l	Benzene mg/l	Toluene mg/l	Ethylbenzene mg/l	Xylenes mg/l
Site Specific Cleanup Levels:															
			N/A	N/A	N/A	N/A	N/A	N/A	1	10	10	0.071	200	29	N/A
TMW-5	10/03/13	0.00 d	5.6	39	16	<0.50 *	2,500	0.10	1.9	--	--	0.044	0.0063	0.0038	0.0088
TMW-5	01/22/14	0.00 d	--	--	--	--	2,600	0.10	1.9	--	--	0.0039	0.0031	0.0012	0.0023
TMW-5	04/24/14	0.00 d	--	--	--	<0.25	4,000	<0.10	1.4	--	--	<0.0015 v	0.0026	0.0017	0.0021
TMW-5	07/14/14	--	2	8	1	--	1,300	<0.10	1.4	--	--	0.010	0.0016	<0.0005	0.0006
TMW-5	03/18/15	0.04	8.9	--	--	<0.25	700	0.2	3.0	--	--	0.046	0.0069	0.0160	0.0160
TMW-5	09/30/15	0.09	2	--	--	<0.1	734	6.72	1.2	--	--	0.00943	<0.005	<0.001	<0.003
TMW-6	06/24/13	0.41 d	--	--	--	<0.25	16	0.14	4.9	1.8	--	0.067	0.0099	0.15	0.55
TMW-6	07/30/13	5.00	5.4	13	2.4	<0.25	5.0	0.14	7.8	--	--	--	--	--	--
TMW-6	08/26/13	--	--	--	--	--	340	--	8.5	--	--	--	--	--	--
TMW-6	10/03/13	0.00 d	5.6	290	250	<0.50 *	1,700	<0.10	5.4	--	--	0.028	0.010	0.18	0.42
TMW-6	01/22/14	0.00 d	--	--	--	--	2,300	<0.10	7.0	--	--	0.060	0.010	0.28	0.53
TMW-6	04/24/14	0.00 d	--	--	--	<0.25	1,800	<0.10	5.1	--	--	0.015	0.0036	0.19	0.37
TMW-6	07/14/14	--	7	100	98	--	1,600	<0.10	3.9	--	--	0.064	0.0047	0.16	0.21
TMW-6	03/18/15	0.09	0.54	--	--	<0.25	1,000	<0.10	5.0	--	--	0.003	0.0028	0.15	0.12
TMW-6	09/30/15	0.19	1.2	--	--	<0.1	1,400	<0.05	5.1	--	--	0.0029	<0.005	0.133	0.189

Notes:

Highlighted = data from most recent monitoring event

< = Denotes compound was not detected at designated detection limit.

mg/l = Milligrams per liter (parts per million)

o = Reporting limit increased due to sample foaming

K = DRO concentration may include contributions from lighter-end hydrocarbons that elute in the DRO range

* = The lab analyzed nitrate using sulfuric acid preserved samples. Concentration may be biased high due to possible oxidation of nitrite to nitrate.

Total Petroleum Hydrocarbons as gasoline-range organics (GRO) - Analysis by Washington Method WTPH-G prior to 5/20/98; analysis by Northwest Method NWTPH-Gx from 5/20/98 through present.

Total Petroleum Hydrocarbons as diesel-range organics (DRO) and heavy oil-range organics (TPH-HO) - Analysis by Washington Method WTPH-D+ extended prior to 5/20/98; analysis by Northwest Method NWTPH-Dx from 5/20/98 through present.

Bold = Concentration detected above Site Specific Cleanup Levels

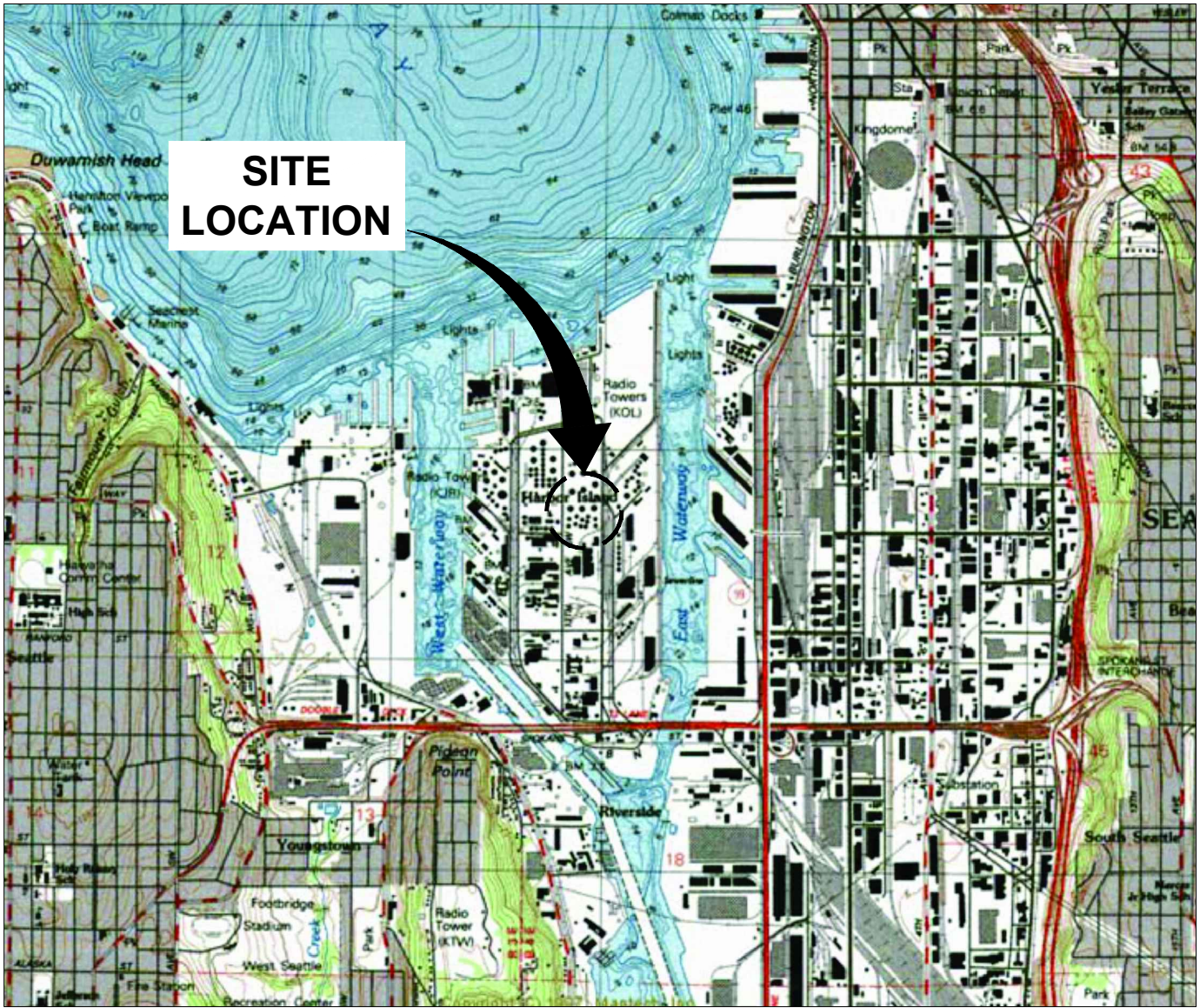
-- = Sample not analyzed for this parameter

v = Reporting limit increased due to high concentration of target analytes

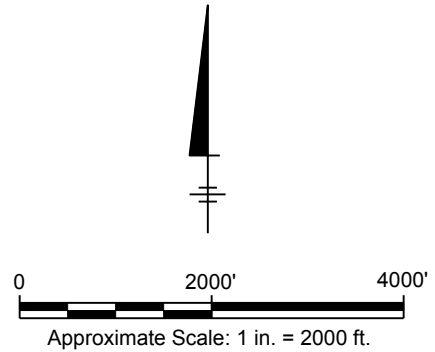
FIGURES



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 XREFS: IMAGES: PROJECTNAME: ---
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 WA000804 USGS.jpg



REFERENCE: BASE MAP USGS 7.5. MINUTE TOPOGRAPHIC MAP SEATTLE SOUTH, WASHINGTON 1083










KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
**SECOND SEMIANNUAL 2015
 GROUNDWATER MONITORING REPORT**

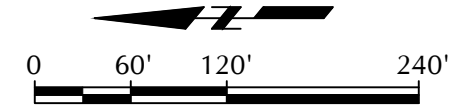
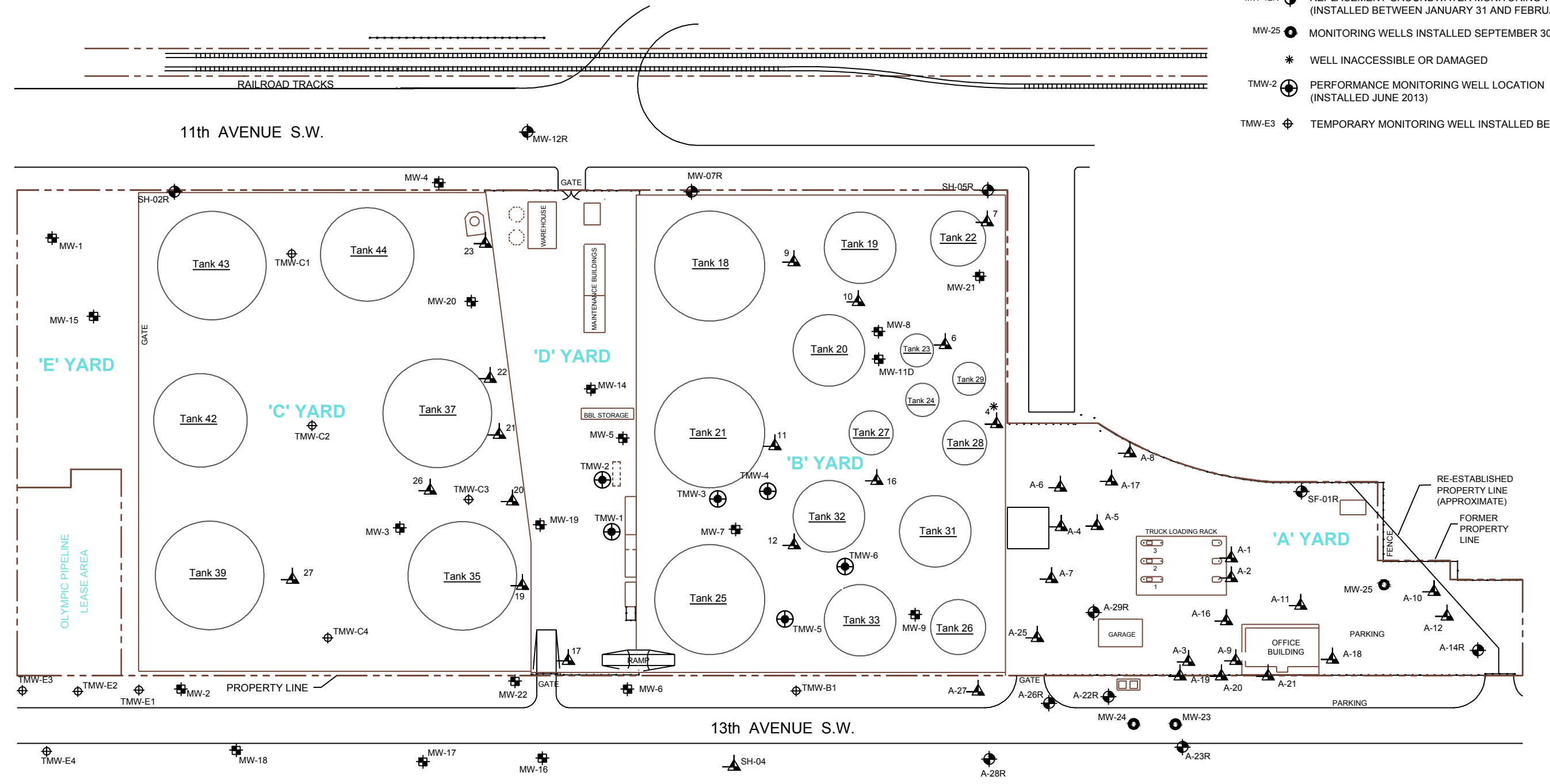
SITE LOCATION MAP



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 G:\ENVCAD\Emeryville\ACT\W\008042015\000012\m\semi\Ann2015\DWG\W\00804 B02.dwg

LEGEND

- SH-02  GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7  GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R  REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25  MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- *  WELL INACCESSIBLE OR DAMAGED
- TMW-2  PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
- TMW-E3  TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013

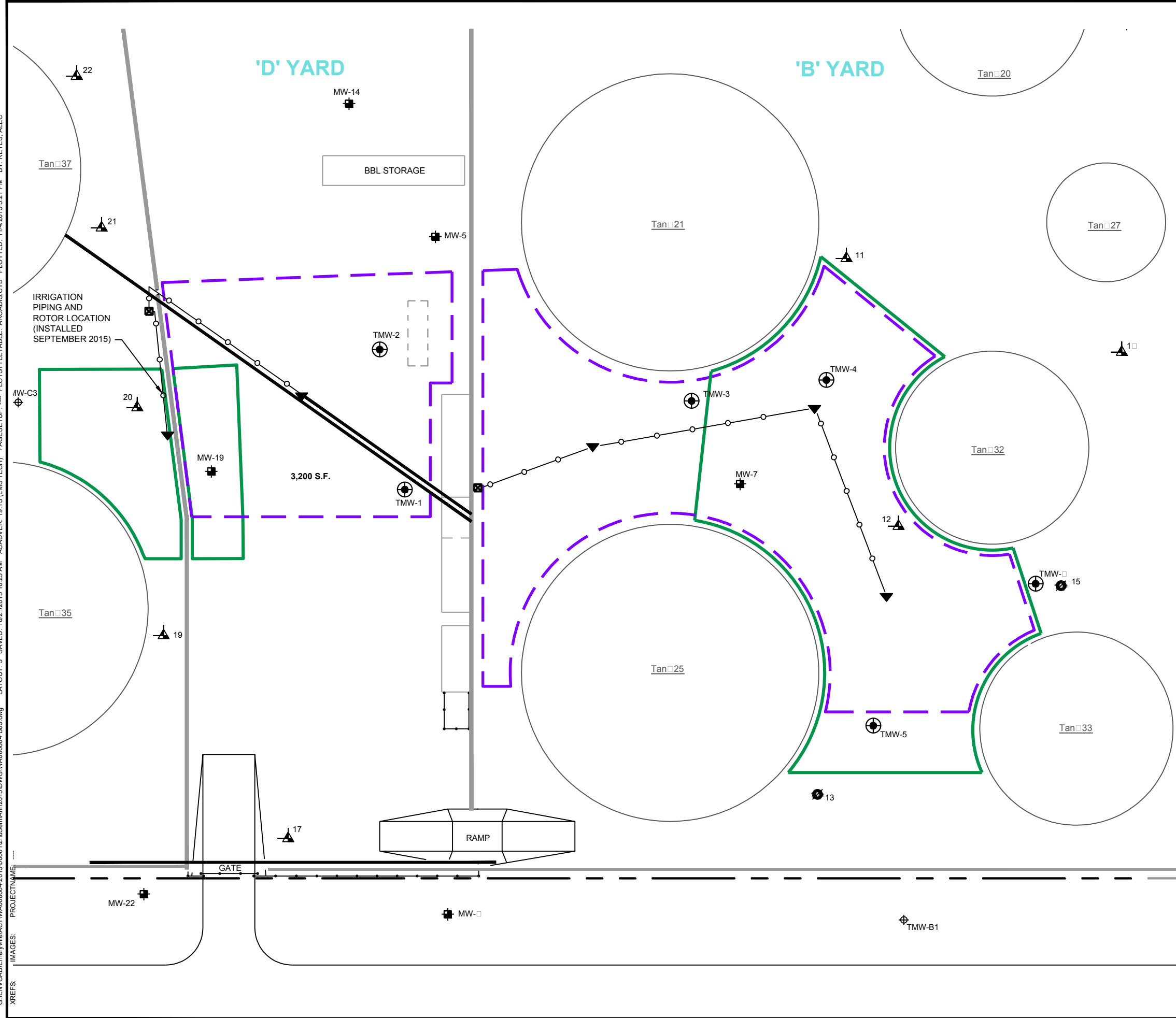


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GROUNDWATER MONITORING REPORT

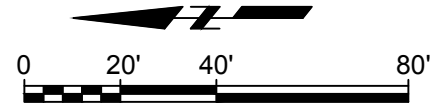
SITE PLAN



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 XREFS: IMAGES: PROJECTNAME:



- LEGEND**
- SH-02 ▲ GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
 - MW-7 ■ GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
 - MW-12R ● REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
 - MW-25 ⊕ MONITORING WELLS (INSTALLED SEPTEMBER 30, 2003)
 - 3 ● FORMER GROUNDWATER MONITORING WELL (ABANDONED JUNE 2003)
 - WATER SOURCE LOCATION
 - ⊕ PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
 - ▼ IRRIGATION ROTOR LOCATION
 - IRRIGATION PIPING
 - CONCRETE WALL
 - - - Sulfate Application Area; JUNE 2013
 - APPROXIMATE BOUNDARY OF SUPPLEMENTAL SULFATE APPLICATION AREA; SEPTEMBER 2015



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SEPTEMBER 2015 SUPPLEMENTAL
SULFATE APPLICATION AREA

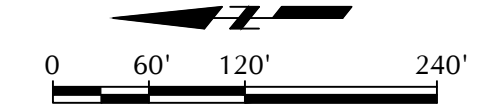
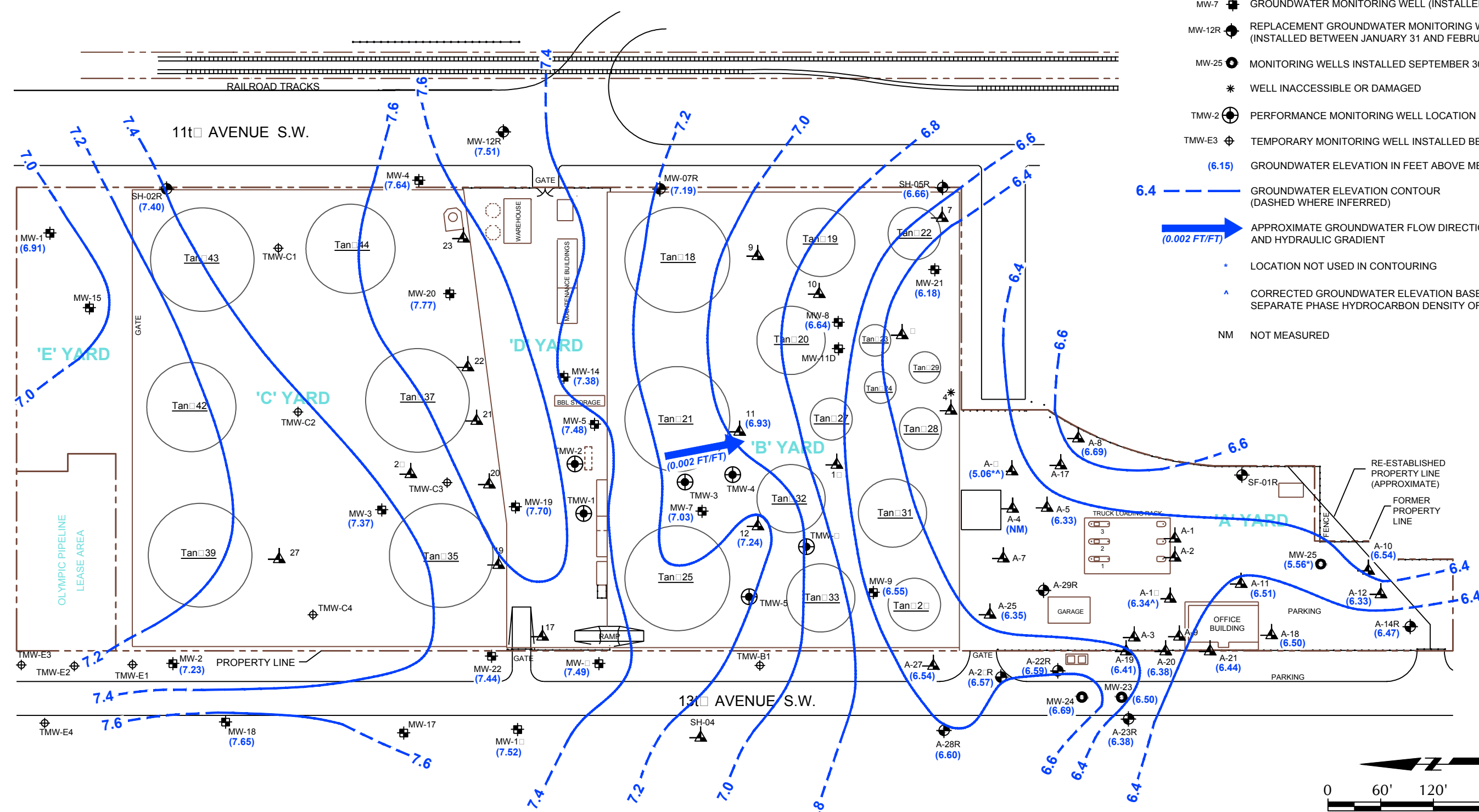
Design & Consultancy
 for natural and built assets

FIGURE
3

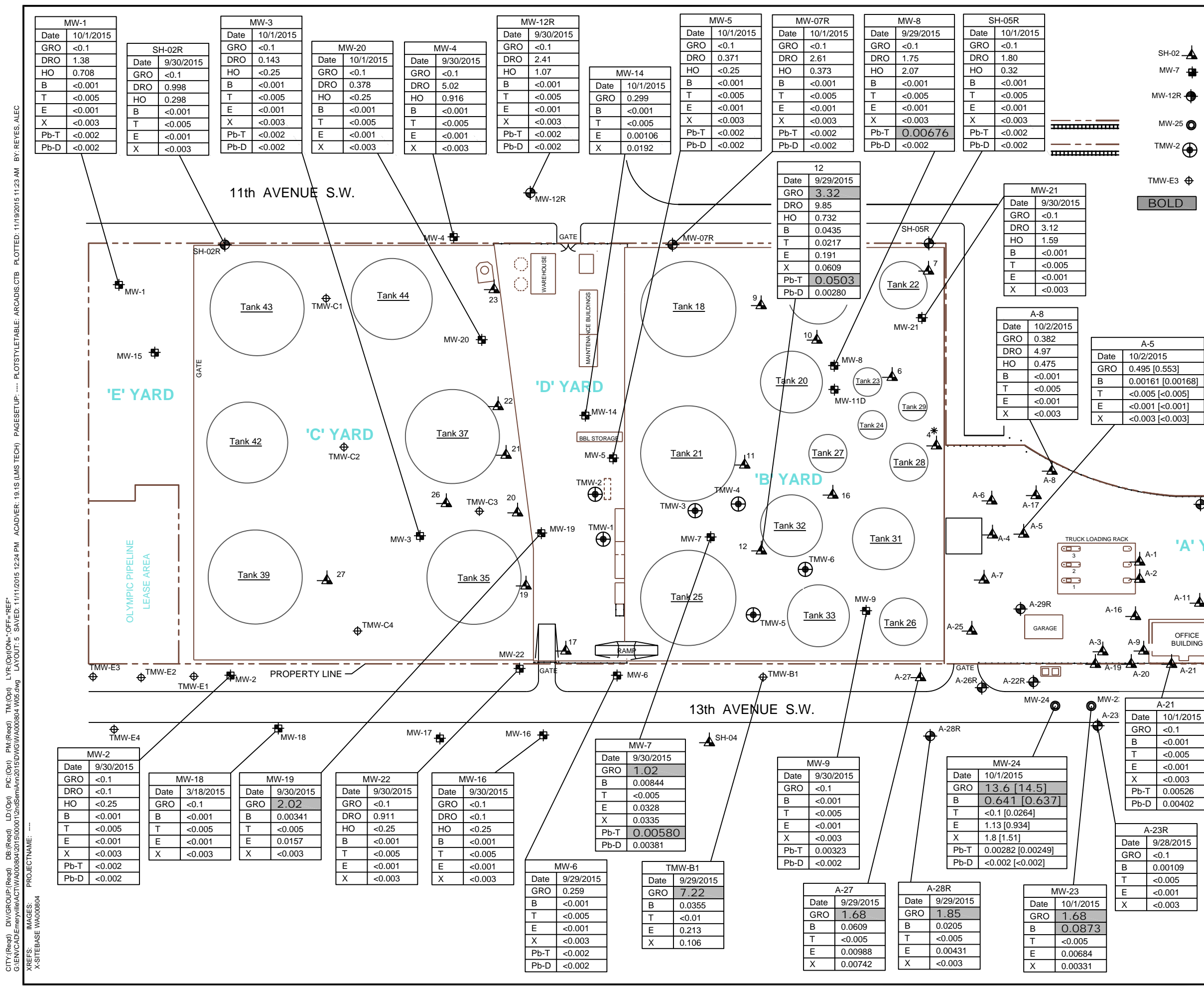
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LEGEND

- SH-02 GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- * WELL INACCESSIBLE OR DAMAGED
- TMW-2 PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
- TMW-E3 TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013
- (6.15) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 6.4 - - - GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE GROUNDWATER FLOW DIRECTION AND HYDRAULIC GRADIENT (0.002 FT/FT)
- * LOCATION NOT USED IN CONTOURING
- ^ CORRECTED GROUNDWATER ELEVATION BASED ON A SEPARATE PHASE HYDROCARBON DENSITY OF 0.8 g/mL
- NM NOT MEASURED



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 GROUNDWATER MONITORING REPORT
**GROUNDWATER ELEVATION
 CONTOUR MAP**
 SEPTEMBER 28-29, 2015



LEGEND

- SH-02 ▲ GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 ■ GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R ● REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 ○ MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- TMW-2 ⊕ PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
- TMW-E3 ⊕ TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013

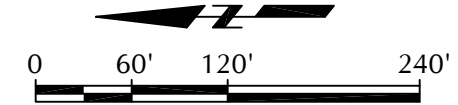
BOLD CONCENTRATIONS DETECTED ABOVE SITE-SPECIFIC CLEANUP LEVELS

NOTES:

- <= LESS THAN THE LABORATORY REPORTING LIMIT.
- 1.9 [2.4] = SAMPLE RESULT [BLIND DUPLICATE RESULT].
- ALL CONCENTRATIONS REPORTED IN MGL

SAMPLE ID	
Date	Date Collected
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
HO	Heavy Oil Range Organics
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
Pb-T	Total Lead
Pb-D	Dissolved Lead

MW-1	Date: 10/1/2015	GRO: <0.1	DRO: 1.38	HO: 0.708	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-3	Date: 10/1/2015	GRO: <0.1	DRO: 0.143	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-4	Date: 9/30/2015	GRO: <0.1	DRO: 5.02	HO: 0.916	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-5	Date: 10/1/2015	GRO: <0.1	DRO: 0.371	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-7R	Date: 10/1/2015	GRO: <0.1	DRO: 2.61	HO: 0.373	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-8	Date: 9/29/2015	GRO: <0.1	DRO: 1.75	HO: 2.07	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: 0.00676	Pb-D: <0.002
SH-05R	Date: 10/1/2015	GRO: <0.1	DRO: 1.80	HO: 0.32	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-12R	Date: 9/30/2015	GRO: <0.1	DRO: 2.41	HO: 1.07	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-14	Date: 10/1/2015	GRO: 0.299	DRO: <0.001	HO: <0.001	B: <0.001	T: <0.005	E: <0.001	X: <0.005	Pb-T: 0.00106	Pb-D: 0.0192
MW-15	Date: 9/30/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-20	Date: 10/1/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-21	Date: 9/30/2015	GRO: <0.1	DRO: 3.12	HO: 1.59	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-22	Date: 9/30/2015	GRO: <0.1	DRO: 9.85	HO: 0.732	B: 0.0435	T: 0.0217	E: 0.191	X: 0.0609	Pb-T: 0.0503	Pb-D: 0.00280
MW-23	Date: 10/2/2015	GRO: 0.382	DRO: 4.97	HO: 0.475	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-24	Date: 10/1/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-25	Date: 10/2/2015	GRO: <0.1	DRO: 1.19	HO: 1.19	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-18	Date: 3/18/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-19	Date: 9/30/2015	GRO: 2.02	DRO: 0.00341	HO: <0.25	B: <0.001	T: <0.005	E: 0.0157	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-22	Date: 9/30/2015	GRO: <0.1	DRO: 0.911	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-16	Date: 9/30/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-7	Date: 9/30/2015	GRO: 1.02	DRO: 0.00844	HO: <0.25	B: <0.001	T: <0.005	E: 0.0328	X: 0.0335	Pb-T: 0.00580	Pb-D: 0.00381
MW-9	Date: 9/30/2015	GRO: <0.1	DRO: <0.001	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: 0.00323	Pb-D: <0.002
MW-24	Date: 10/1/2015	GRO: 13.6 [14.5]	DRO: 0.641 [0.637]	HO: <0.1	B: <0.001	T: <0.1 [0.0264]	E: 1.13 [0.934]	X: 1.8 [1.51]	Pb-T: 0.00282 [0.00249]	Pb-D: <0.002 [<0.002]
MW-27	Date: 9/29/2015	GRO: 1.68	DRO: 0.0609	HO: <0.005	B: 0.0609	T: <0.005	E: 0.00988	X: 0.00742	Pb-T: <0.002	Pb-D: <0.002
MW-28R	Date: 9/29/2015	GRO: 1.85	DRO: 0.0205	HO: <0.005	B: 0.0205	T: <0.005	E: 0.00431	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
MW-23	Date: 10/1/2015	GRO: 1.68	DRO: 0.0873	HO: <0.005	B: 0.0873	T: <0.005	E: 0.00684	X: 0.00331	Pb-T: <0.002	Pb-D: <0.002
MW-6	Date: 9/29/2015	GRO: 0.259	DRO: <0.001	HO: <0.005	B: <0.001	T: <0.001	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
TMW-B1	Date: 9/29/2015	GRO: 7.22	DRO: 0.0355	HO: <0.01	B: 0.0355	T: <0.01	E: 0.213	X: 0.106	Pb-T: <0.002	Pb-D: <0.002
A-21	Date: 10/1/2015	GRO: <0.1	DRO: 1.19	HO: 1.19	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
A-21R	Date: 9/28/2015	GRO: <0.1	DRO: 0.00109	HO: <0.005	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
A-10	Date: 10/2/2015	GRO: <0.1	DRO: 0.723	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002
A-14R	Date: 10/1/2015	GRO: <0.1	DRO: <0.1	HO: <0.25	B: <0.001	T: <0.005	E: <0.001	X: <0.003	Pb-T: <0.002	Pb-D: <0.002



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GROUNDWATER MONITORING REPORT

GROUNDWATER ANALYTICAL RESULTS
COMPLIANCE MONITORING WELLS

CITY: (Read) DIV: (Group) (Req) DB: (Read) LD: (Opt) PIC: (Opt) PM: (Req) TM: (Opt) LTR: (Opt) OFF: (Ref)
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PROJECTNAME: XREFS: X-SITEBASE W\A000804

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 XREFS: X-SITEBASE W\A000804
 IMAGES: PROJECTNAME:

LEGEND

- SH-02 ▲ GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 ■ GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R ● REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 ○ MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- TMW-2 ⊕ PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
- TMW-E3 ⊕ TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013
- BOLD** CONCENTRATIONS DETECTED ABOVE SITE SPECIFIC CLEANUP LEVELS

SAMPLE ID	
Date	Date Collected
GRO	Gasoline Range Organics
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes

NOTES:
 < = LESS THAN THE LABORATORY REPORTING LIMIT
 1.9 [2.4] = SAMPLE RESULT [BLIND DUPLICATE RESULT]
 ALL CONCENTRATIONS REPORTED IN MG/L

TMW-2	
Date	10/1/2015
GRO	<0.1
B	<0.001
T	<0.005
E	<0.001
X	<0.003

11	
Date	9/29/2015
GRO	<0.1
B	<0.001
T	<0.005
E	<0.001
X	<0.003

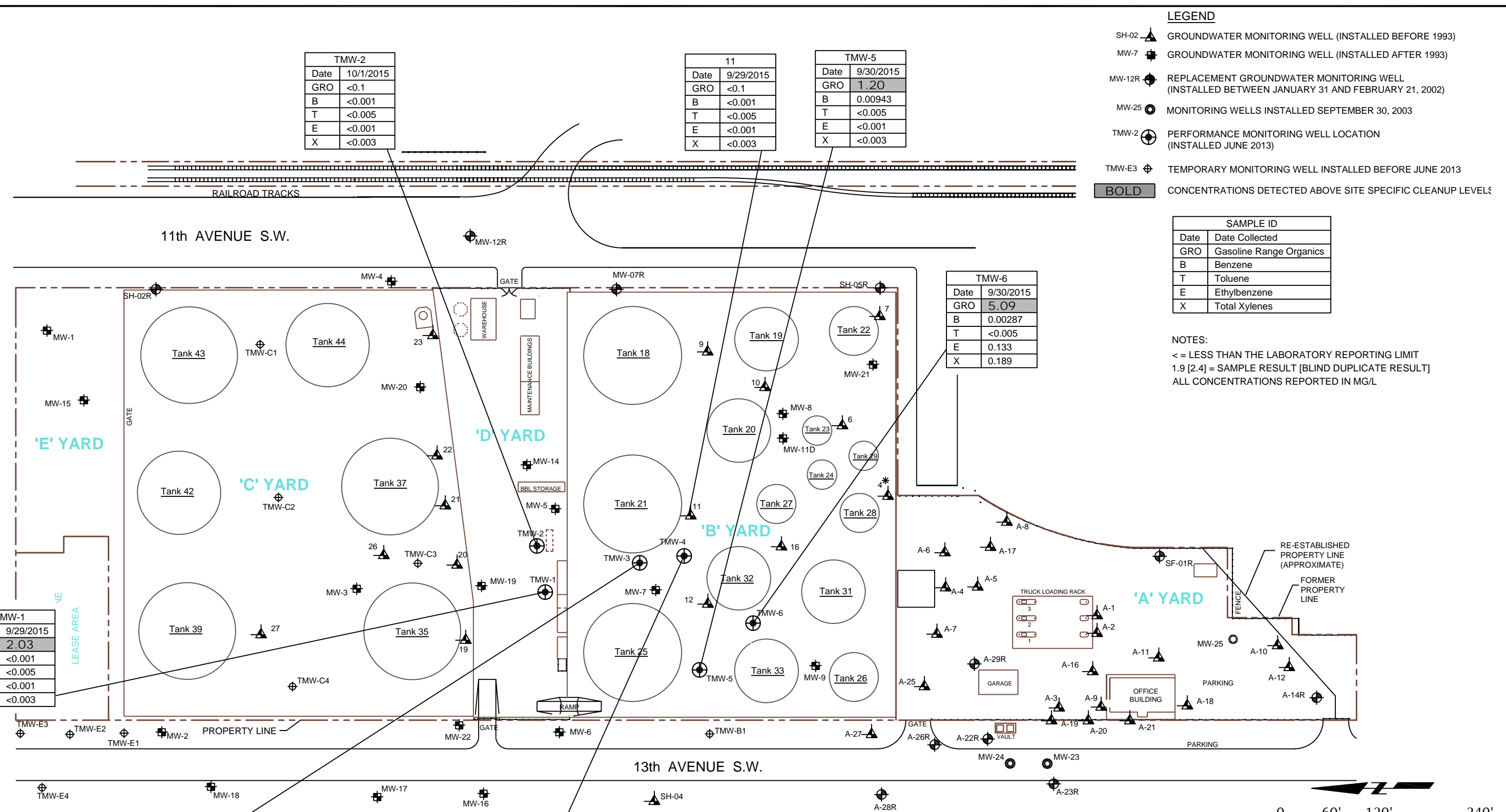
TMW-5	
Date	9/30/2015
GRO	1.20
B	0.00943
T	<0.005
E	<0.001
X	<0.003

TMW-6	
Date	9/30/2015
GRO	5.09
B	0.00287
T	<0.005
E	0.133
X	0.189

TMW-1	
Date	9/29/2015
GRO	2.03
B	<0.001
T	<0.005
E	<0.001
X	<0.003

TMW-3	
Date	9/30/2015
GRO	0.358
B	<0.001
T	<0.005
E	<0.001
X	<0.003

TMW-4	
Date	9/30/2015
GRO	3.49
B	0.107
T	<0.125
E	0.455
X	<0.075



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GROUNDWATER MONITORING REPORT

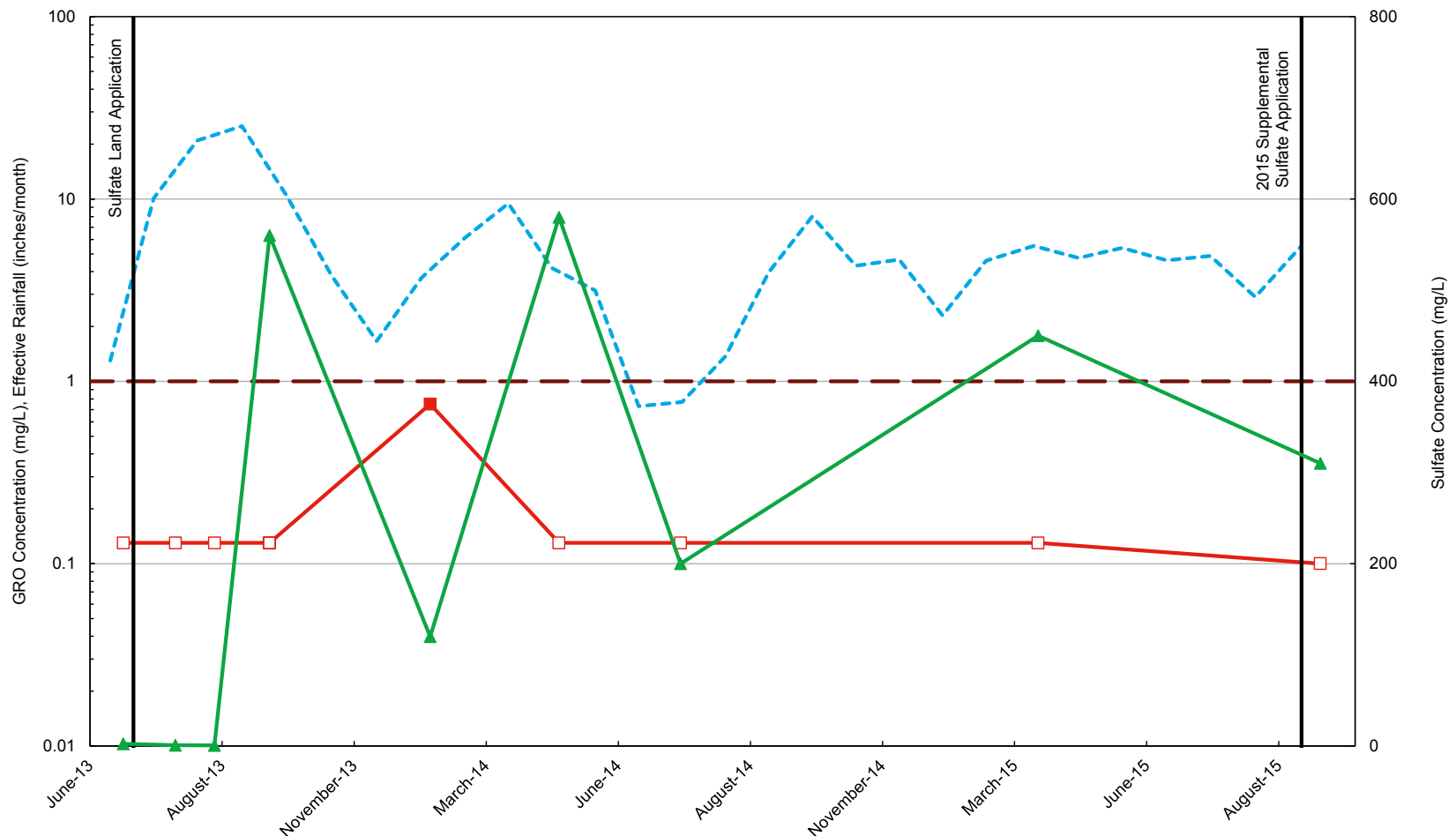
GROUNDWATER ANALYTICAL RESULTS
PERFORMANCE MONITORING WELLS

Design & Consultancy
 for natural and built assets

 FIGURE
6

GRAPHS





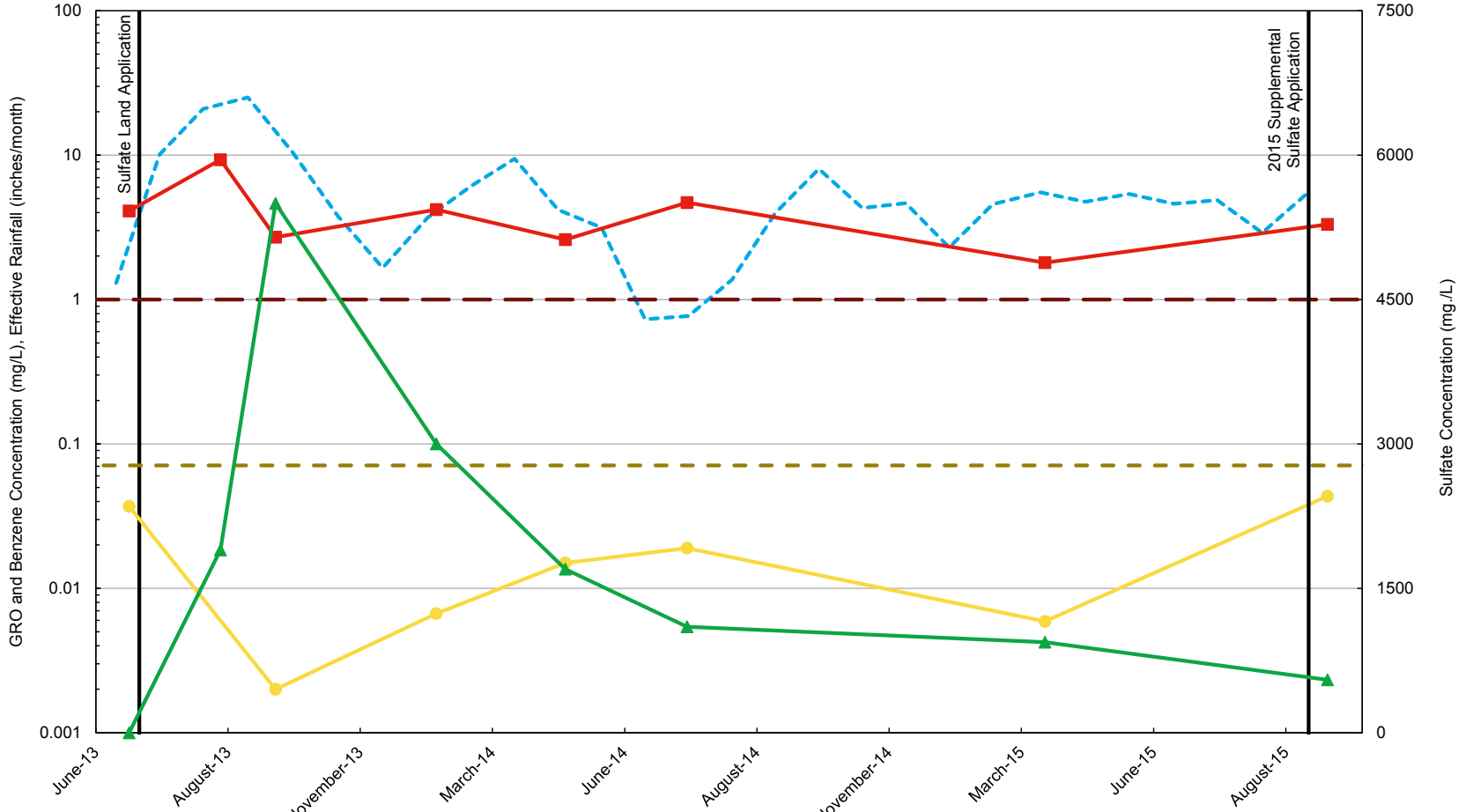
- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- ▲ Sulfate

Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
SECOND SEMIANNUAL 2015
GROUNDWATER MONITORING REPORT

11 CONSTITUENT TREND PLOT



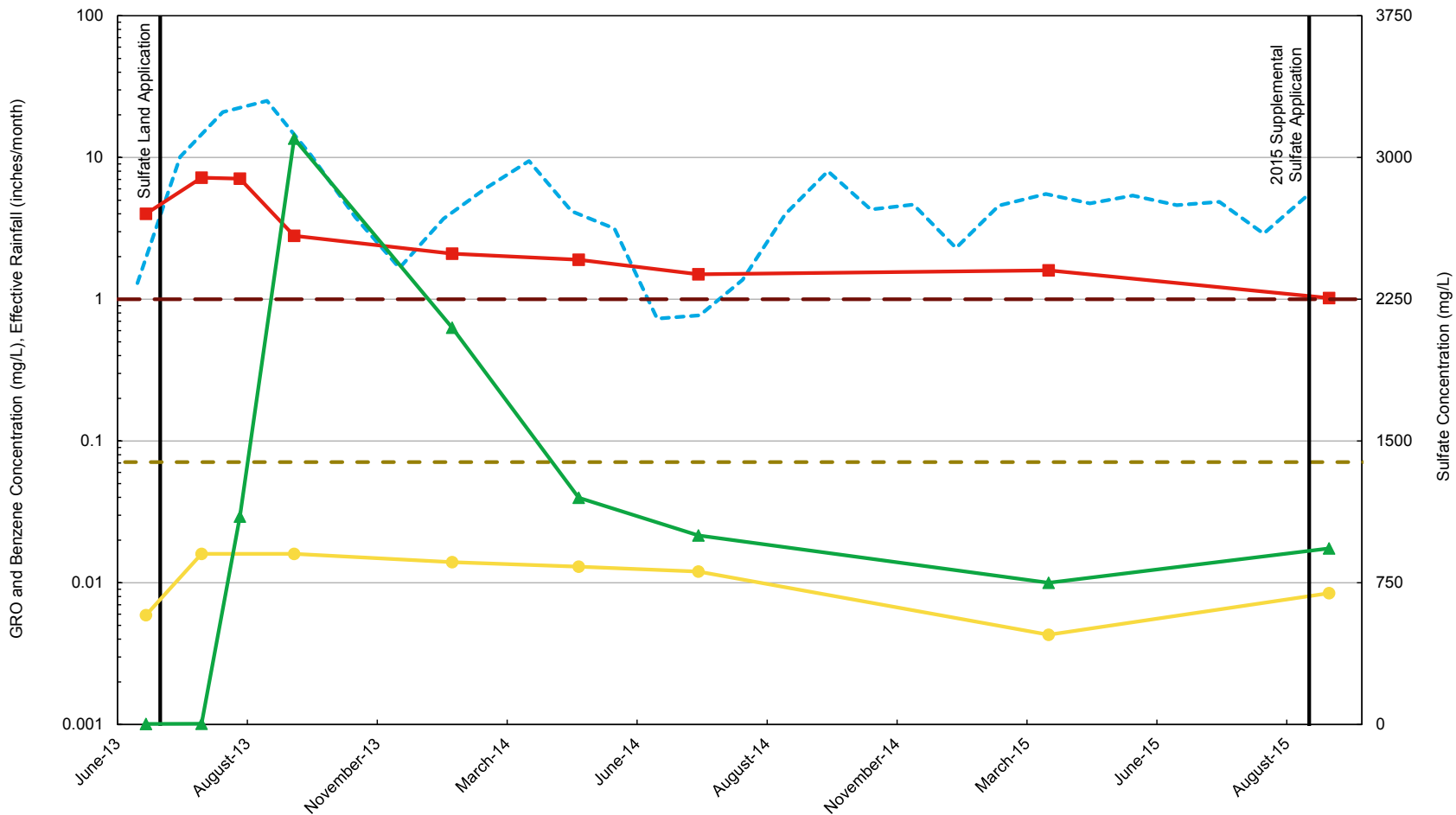


- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

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GROUNDWATER MONITORING REPORT

12 CONSTITUENT TREND PLOT



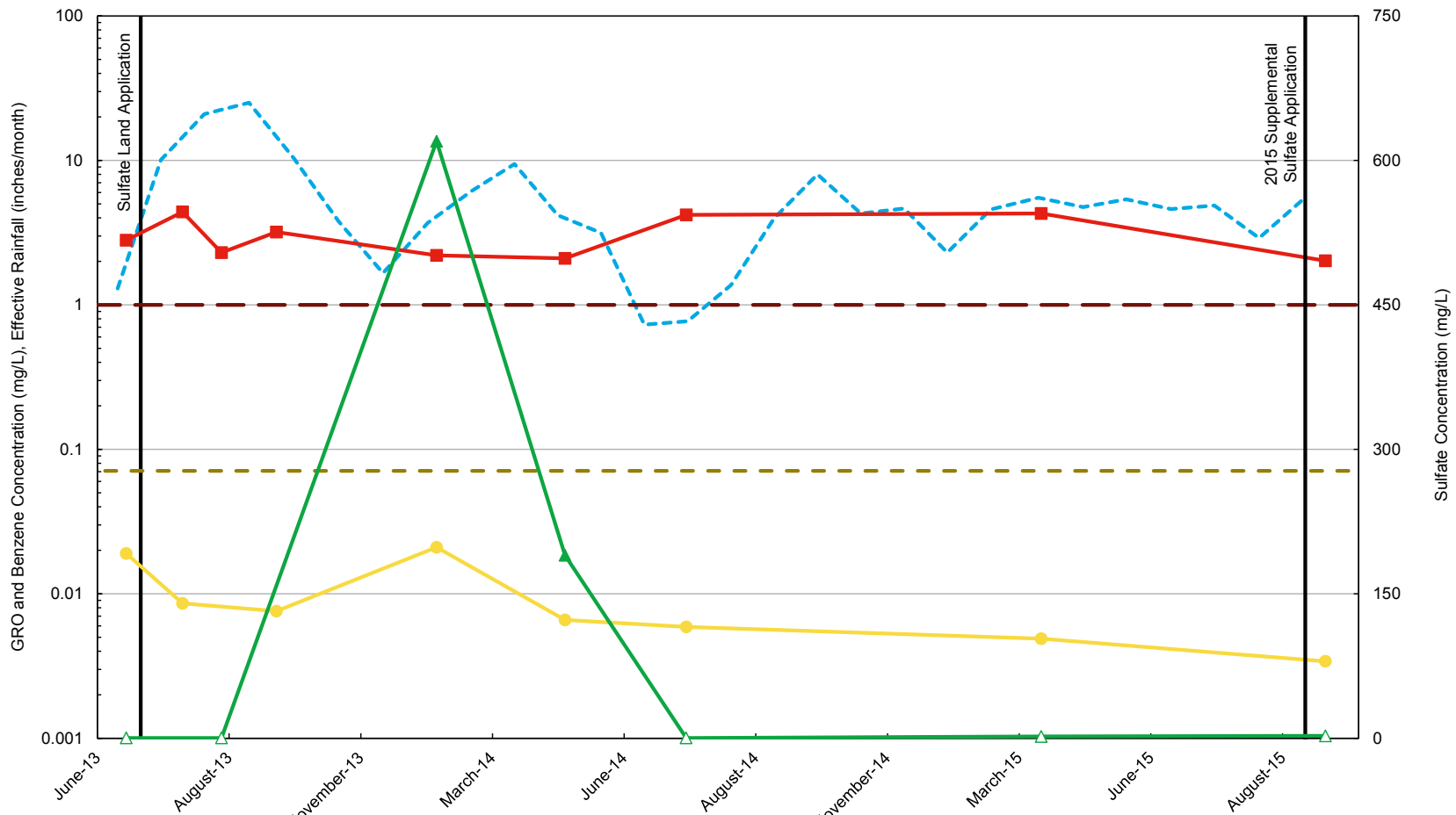


- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

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MW-7 CONSTITUENT TREND PLOT





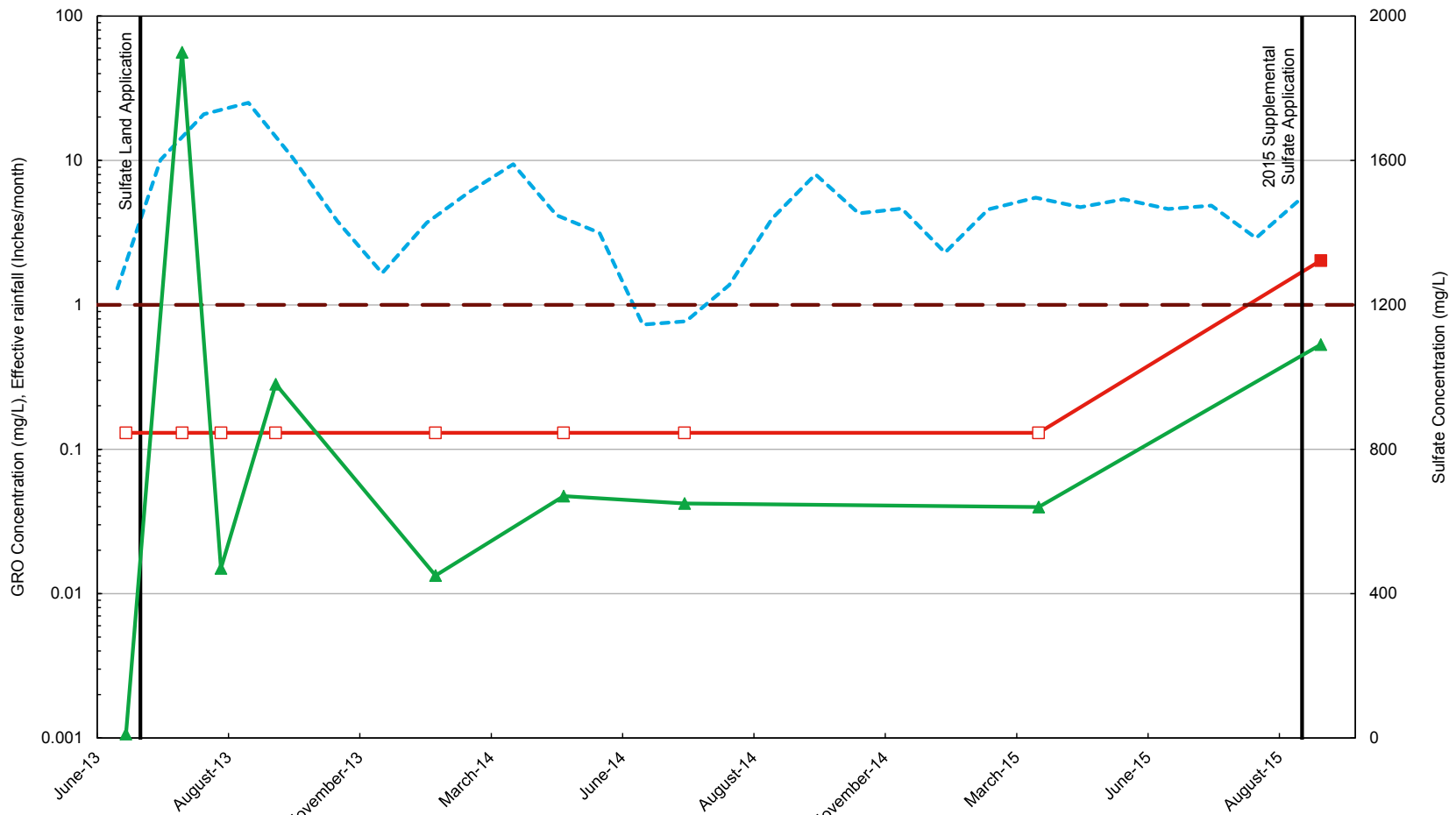
- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

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MW-19 CONSTITUENT TREND PLOT





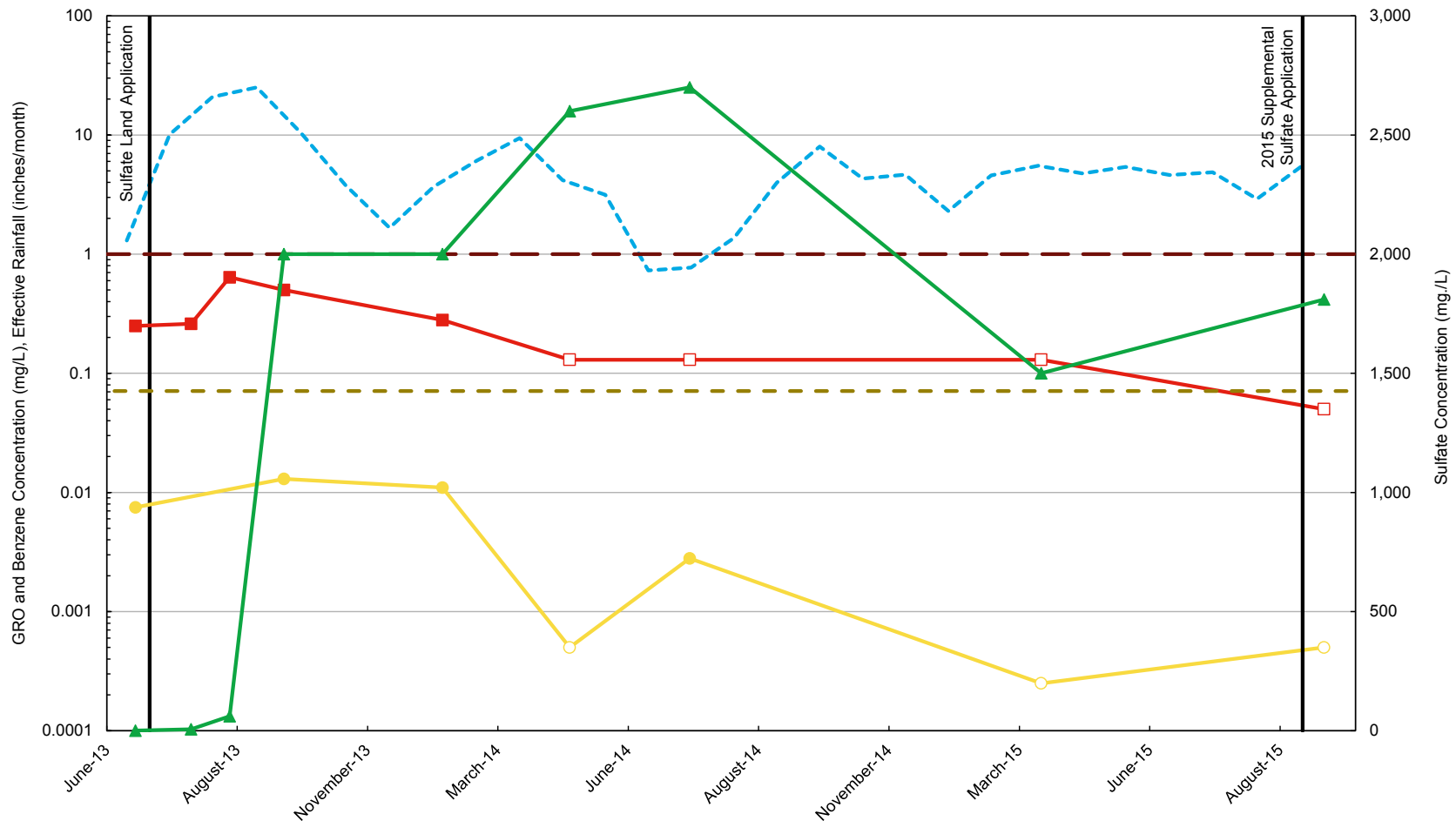
- Effective Rainfall (Precipitation + Irrigation)
- ■ GRO
- • Site Specific Cleanup Level; GRO
- ▲ Sulfate

Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

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TMW-1 CONSTITUENT TREND PLOT





- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲— Sulfate

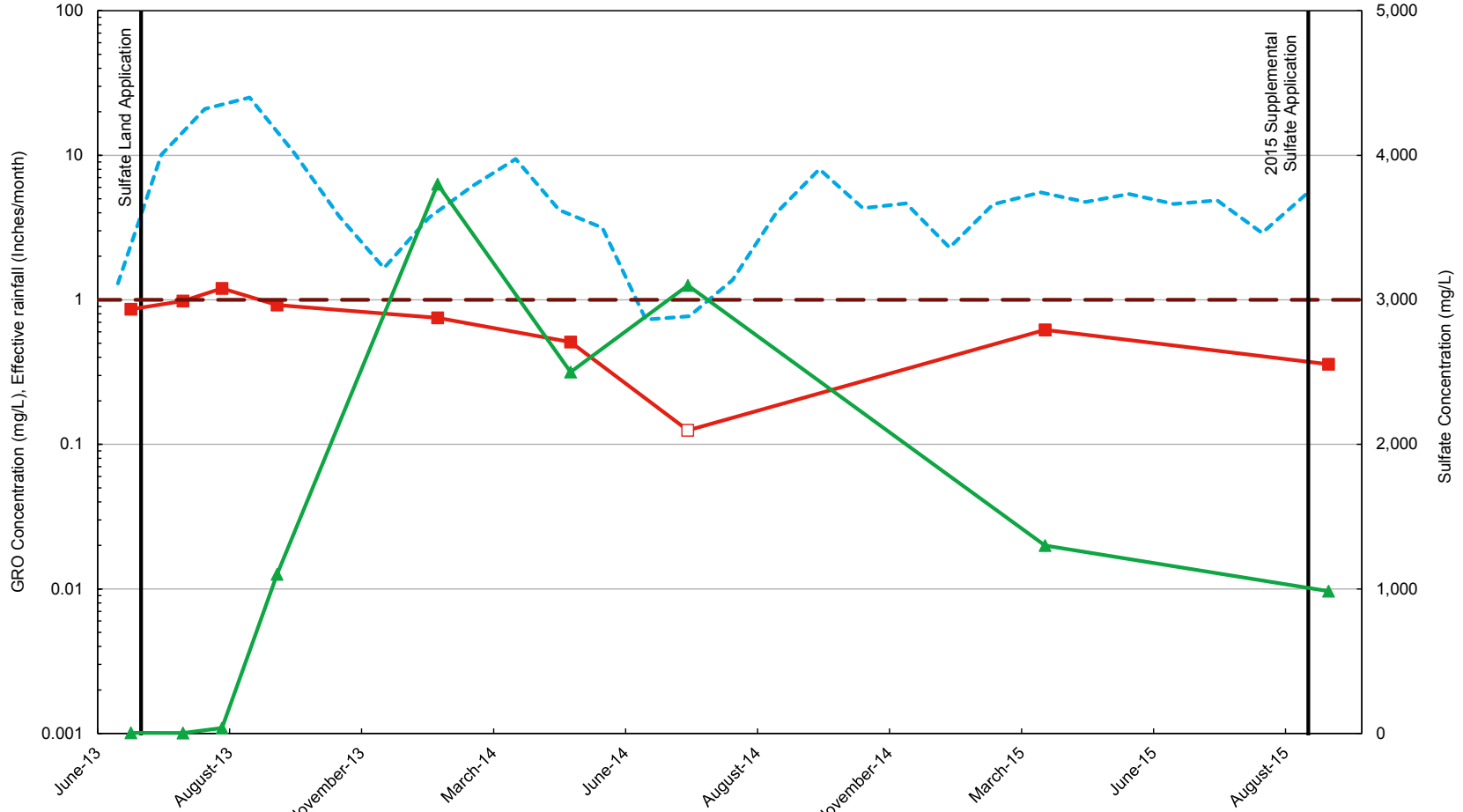
Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

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TMW-2 CONSTITUENT TREND PLOT



GRAPH
6



- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- ▲ Sulfate

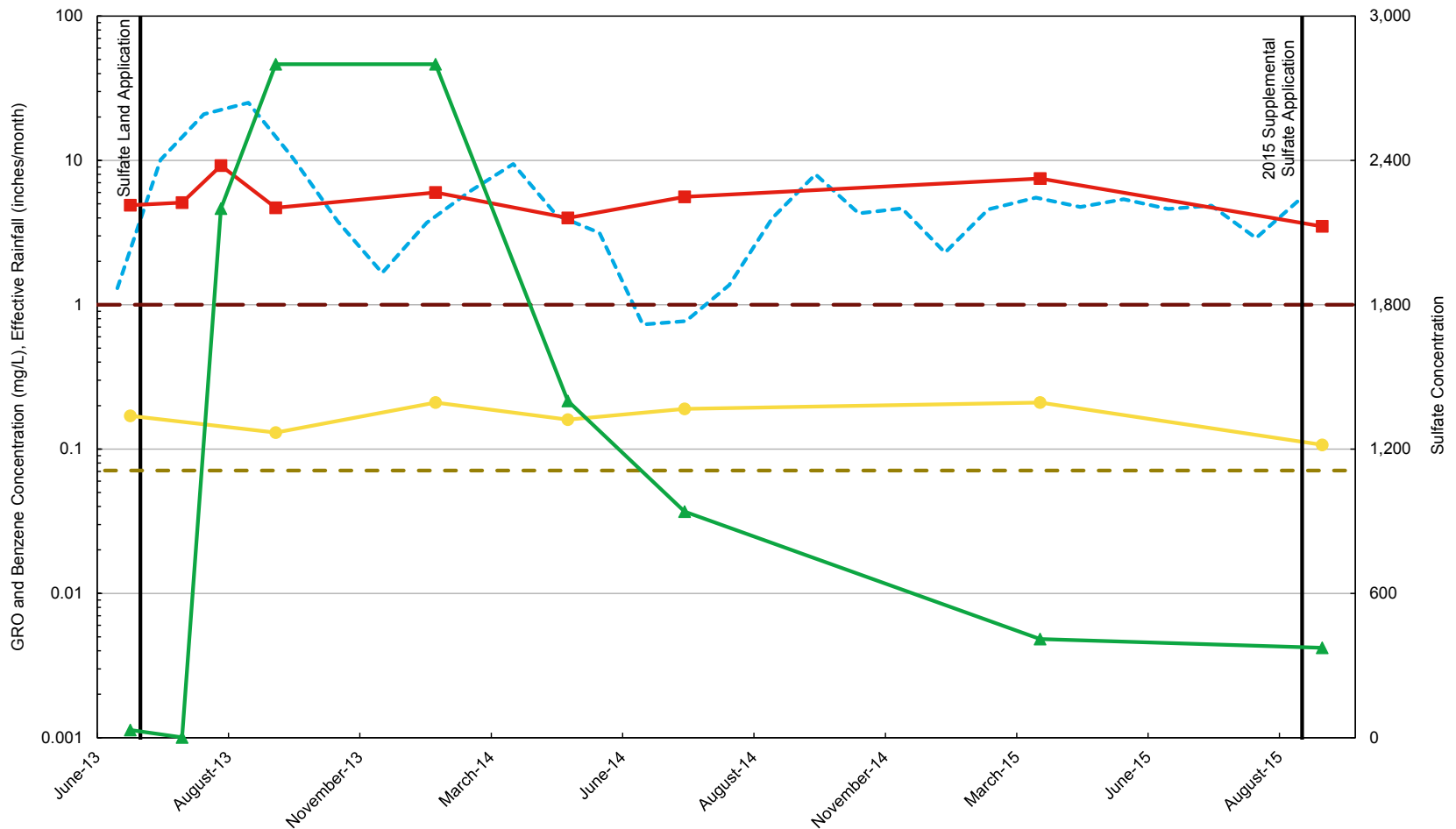
Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

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TMW-3 CONSTITUENT TREND PLOT

Design & Consultancy
for natural and built assets

GRAPH
7

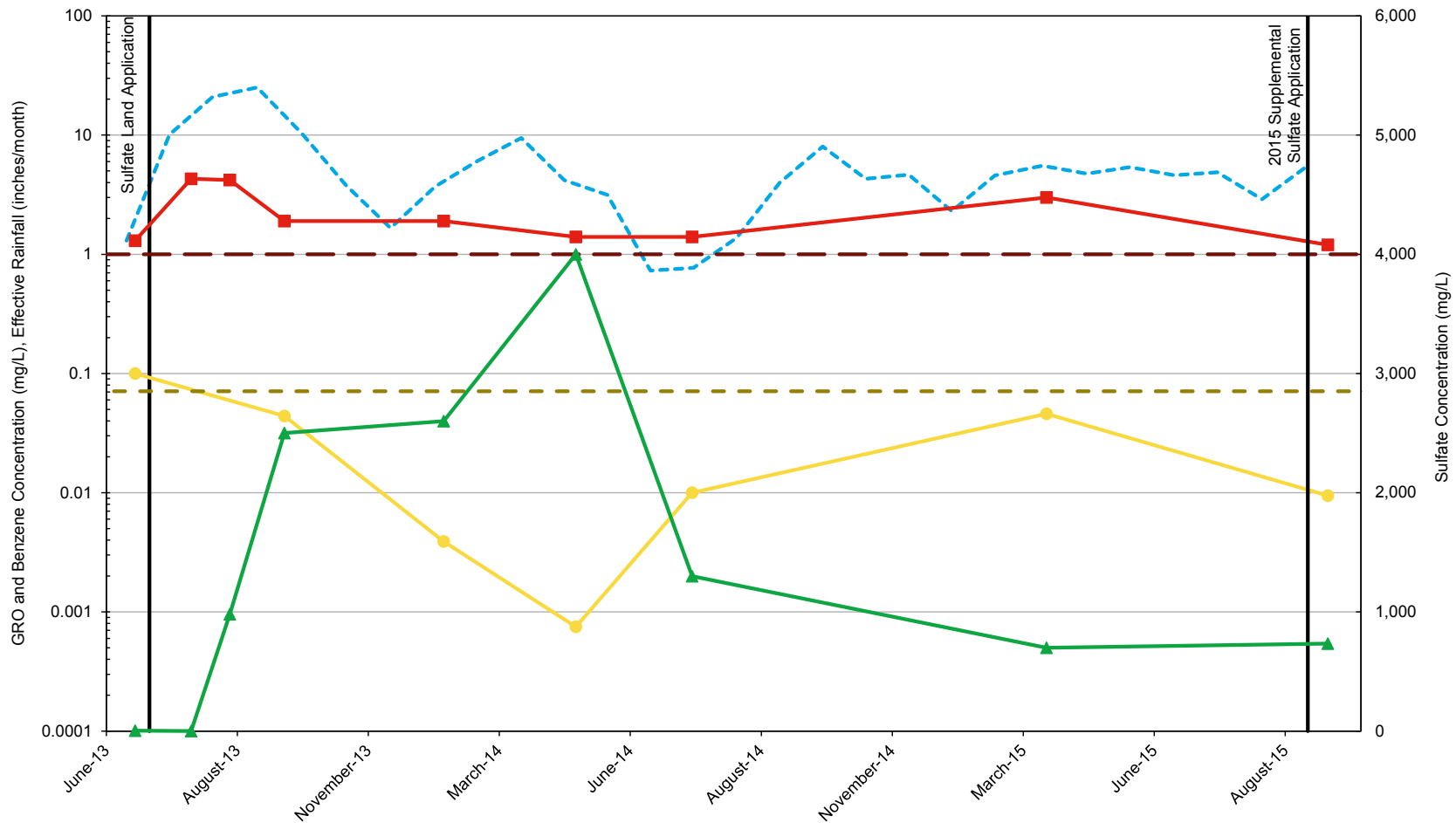


- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

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TMW-4 CONSTITUENT TREND PLOT





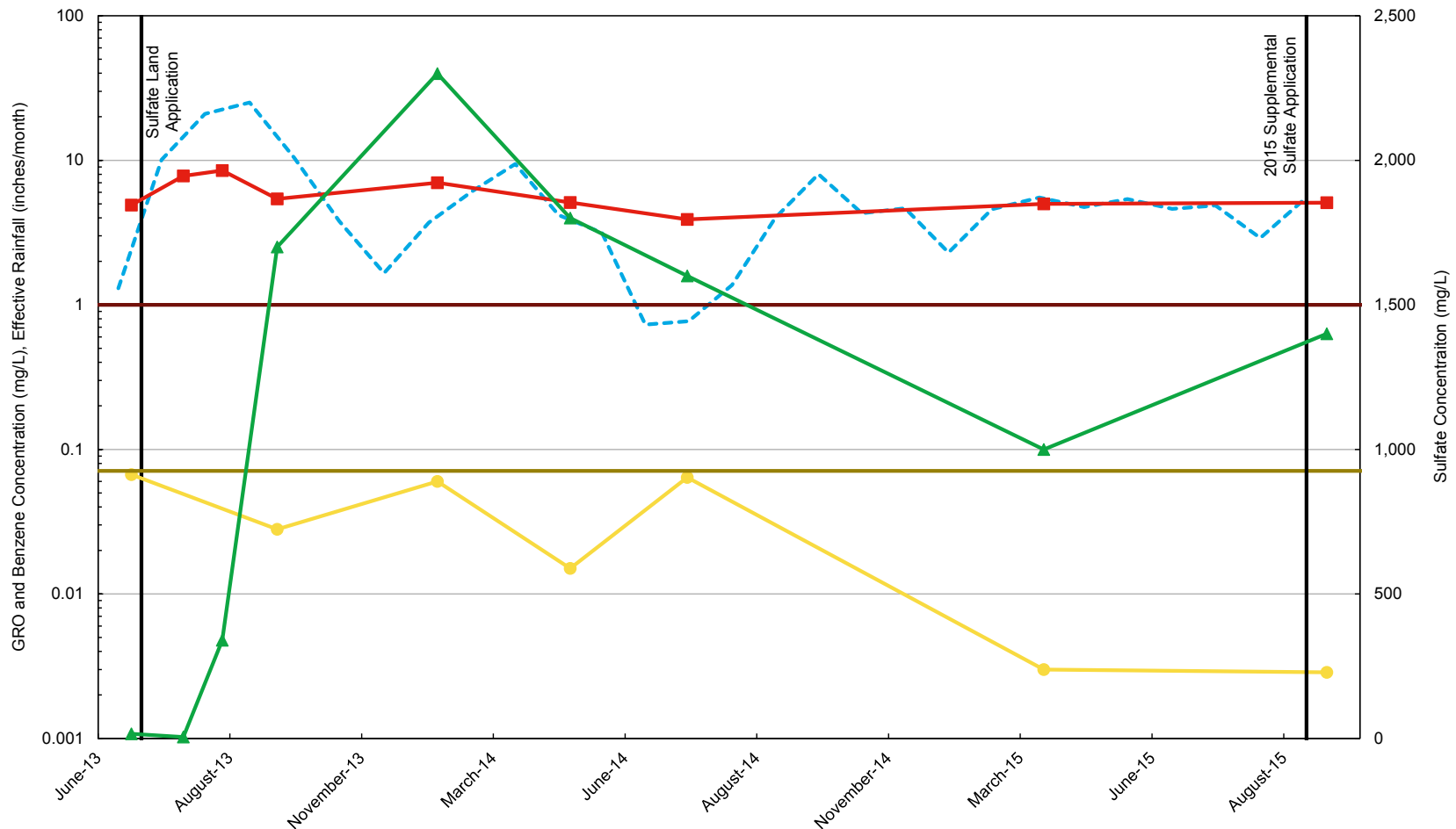
- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

Note: Open data points indicate that concentrations were not measured above the laboratory reporting limit (RL), plotted at half the RL

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SECOND SEMIANNUAL 2015
GROUNDWATER MONITORING REPORT

TMW-5 CONSTITUENT TREND PLOT





- Effective Rainfall (Precipitation + Irrigation)
- GRO
- Site Specific Cleanup Level; GRO
- Benzene
- Site Specific Cleanup Level; Benzene
- ▲ Sulfate

KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
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GROUNDWATER MONITORING REPORT

TMW-6 CONSTITUENT TREND PLOT



GRAPH
10

ATTACHMENT A

Site-Wide Groundwater Compliance Monitoring Plan - Proposed
Reduced Monitoring

Technical Revision Request

Ecology Approval Letter

Revised Site Groundwater Monitoring Plan

Ecology Approval Emails



June 21, 2007

Mr. Roger Nye
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue N.E.
Bellevue, Washington 98008-5452

Sent via FedEx Saver

SUBJ: Site-Wide Groundwater Compliance Monitoring Plan – Proposed
Reduced Monitoring
Kinder Morgan Harbor Island Terminal
Seattle, Washington
Delta Project No. STKM-001-M.0005



Dear Mr. Nye:

This plan has been prepared on behalf of Kinder Morgan Liquid Terminals, LLC (KMLT) by Delta Environmental Consultants (Delta) and presents a proposed revision to the site-wide groundwater compliance monitoring program for the KMLT Harbor Island Terminal located at 2720 13th Avenue Southwest in Seattle, Washington ("the site"). The revisions included in this document supersede those revisions previously proposed in an August 2, 2006 letter to you, and in a second draft dated March 22, 2007. These plan revisions are proposed in accordance with Section 2.3.4 of the Compliance Monitoring Plan (Plan) developed for the site. Further modifications to the Draft Plan were discussed with you by telephone on June 13, 2007, and this Final Proposed Reduced Monitoring Plan incorporates those modifications.

PROPOSED SITE-WIDE COMPLIANCE MONITORING PLAN

The Plan was developed to describe the protocol and procedures used to confirm that cleanup requirements are achieved at the site. This monitoring plan was prepared to satisfy the requirements of the Model Toxics Control Act (MTCA) regulations WAC 173-340-410, -720, and -820 and in accordance with requirements from Exhibit F of the Consent Decree.

The achievement of cleanup levels in groundwater is measured at points of performance and compliance located within the hydrocarbon plume area and at the downgradient edge of the site. The wells at the downgradient edge of the site are considered conditional points of compliance wells. These points of compliance and performance consist of a network of monitoring wells located in the hydrocarbon plume area and on the downgradient property boundary. Sentry wells are also used to document plume migration, performance standards, and to warn of any unanticipated change in off-site groundwater conditions.

The Compliance Monitoring Plan incorporated in the Consent Decree includes quarterly monitoring for free product, dissolved TPH constituents, total and dissolved lead, and natural attenuation parameters. In accordance with *Section 2.3.4 Monitoring Schedule* of the Plan, the sampling frequency and number of parameters may be reduced if monitoring data indicates that trends are declining. Following are the proposed revisions for each of these compliance monitoring criteria, and the rationale for each revision.

Free Product

As established in the Plan, KMLT currently performs quarterly gauging of 71 wells for monitoring of free product. KMLT proposes to continue monitoring of wells in which free product has been observed during the past 8 quarters, and the 29 wells which were identified as Compliance Monitoring Wells in Table 1 of the Plan. Accordingly, KMLT proposes to continue quarterly gauging of the following 43 wells: A-4, A-5, A-6, A-8, A-10, A-11, A-12, A-14R, A-16, A-18, A-19, A-20, A-21, A-22R, A-23R, A-25, A-26R, A-27, A-28R, 12, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-12R, MW-13R, MW-14, MW-16, MW-18, MW-19, MW-20, MW-21, MW-22, MW-23, MW-24, SH-02R, SH-05R, and MW-07R.

Dissolved TPH Constituents

The current compliance monitoring program for dissolved TPH constituents includes quarterly sampling of 32 monitoring wells (29 Compliance Monitoring Wells and 3 additional wells which were installed in September 2003 as part of a supplemental study to further characterize free product in the A Yard). A summary of monitoring wells and annual analyses included in the current dissolved TPH constituents compliance monitoring program is presented on Table 1. A site map showing locations of groundwater monitoring wells is included as Figure 2.

An evaluation of groundwater analytical data collected since the execution of the Consent Decree indicates that data collected from numerous monitoring wells have demonstrated that cleanup criteria have either been met from the outset of the program or have demonstrated at least 4 consecutive quarters meeting cleanup criteria. A summary of groundwater analytical results for 2000 through December 2006 are presented in Table 2.

An evaluation of historical groundwater analytical results with respect to established cleanup criteria is summarized in Table 3. Where applicable, wells and corresponding analytes which demonstrate a consistent trend of meeting cleanup criteria are noted. Wells and corresponding analytes are highlighted where historic monitoring indicates a reduction in monitoring frequency or analytes is warranted.

KMLT proposes a revision from quarterly monitoring for TPH parameters as follows. For wells which have demonstrated that cleanup criteria for TPH-G, BTEX, TPH-D, and TPH-O have been met from the outset of the program, KMLT proposes to reduce the frequency of quarterly monitoring to annual monitoring. For wells which have not met the criteria for TPH-G and BTEX, but have met the criteria for TPH-D and TPH-O, KMLT proposes to continue quarterly monitoring for TPH-G and BTEX and discontinue monitoring for TPH-D and TPH-O. Proposed compliance monitoring plan revisions are summarized in Table 4.

After the revised program is initiated, if results demonstrate that any TPH cleanup criteria has been exceeded in a well, KMLT will revert to quarterly monitoring for respective analytes that were exceeded for the well, and will resume quarterly monitoring for natural attenuation parameters.

Total and Dissolved Lead

As established in the Plan, KMLT currently monitors for total lead on a quarterly basis in 20 wells. The purpose of this monitoring is to demonstrate performance and confirmation monitoring of the surface cleanup action for the site. The surface cleanup action, which included removal of surface soils containing concentrations of total lead exceeding the hot-spot cleanup criteria, was executed and completed in April and May 2002. In accordance with *Section 2.2* of the Plan, performance monitoring for total lead has been performed on a quarterly basis since the completion of the surface cleanup action. Following the performance of the surface cleanup action, total lead has infrequently exceeded the cleanup criterion. KMLT proposes to continue monitoring for this parameter on an annual basis.

As required in the Plan, KMLT also currently monitors for dissolved lead on a quarterly basis in the same 20 wells which are monitored for total lead. Cleanup criteria for this parameter was not established in the Cleanup Action Plan. Dissolved lead has been detected in 4 of the 20 wells. Dissolved lead was detected in one or two instances in two wells, and was detected in two wells on a more frequent basis in two wells. Delta proposes to monitor for

dissolved lead in two wells (A-23R and MW-7) which have contained measurable concentrations on a periodic basis in the past.

A summary of monitoring wells and annual analyses included in the current total and dissolved lead compliance monitoring program is presented on Table 1. A summary of groundwater analytical results for 2000 through December 2006 are presented in Table 2. An evaluation of historical groundwater analytical results with respect to established cleanup criteria is summarized in Table 3. Proposed compliance monitoring plan revisions are summarized in Table 4.

Natural Attenuation Parameters

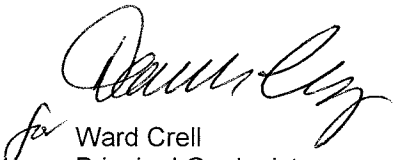
The current compliance monitoring program for natural attenuation parameters includes quarterly sampling of 26 monitoring wells (23 Compliance Monitoring Wells and 3 additional wells which were installed in September 2003 as part of a supplemental study to further characterize free product in the A Yard). In accordance with *Section 2.2.3 Monitoring Schedule* of the Plan which states that natural attenuation monitoring will be conducted quarterly for the first year and annually thereafter, KMLT proposes to discontinue monitoring of wells which have met the criteria for TPH-G, BTEX, TPH-D and TPH-O constituents, and continue monitoring on an annual basis those wells which have not met the criteria. Proposed compliance monitoring plan revisions are summarized in Table 4.

A summary of proposed compliance monitoring plan revisions are presented in Table 4. Wells which are designated for annual monitoring will be monitored during the second quarter event. A summary of monitoring wells and a tally of annual analyses for all parameters proposed in this compliance monitoring program revision is presented on Table 5.

KMLT proposes to incorporate the compliance monitoring plan revisions included herein during the third quarter 2007 monitoring event. Please call if you have any questions regarding the contents of this letter, or if you would like to discuss any aspect of the proposed compliance monitoring plan. Delta looks forward to your approval of this program.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.


for Ward Crell
Principal Geologist

Enc: Table 1 – Summary of Current Annual Analyses, Groundwater Compliance Program
Table 2 – Groundwater Analytical Results
Table 3 – Analytical Summary 2000 – December 2006, Current Groundwater Compliance Program
Table 4 – Proposed Groundwater Compliance Program, Recommended Monitoring Frequency
Table 5 – Summary of Proposed Annual Analyses, Groundwater Compliance Program
Figure 1 – Site Plan – Groundwater Monitoring Well Locations

cc: Mr. Robert Truedinger, Kinder Morgan Energy Partners, L.P., Richmond, California
Ms. Kelsy Hardy, Kinder Morgan Energy Partners, L.P., Orange, California (File Copy - CD Only)

TABLE 1
CURRENT ANNUAL ANALYSES
GROUNDWATER COMPLIANCE PROGRAM
 Kinder Morgan Harbor Island Terminal

Well ID	Indicator Hazardous Substances				Natural Attenuation Parameters				
	TPH-G/ BTEX	TPH-D+ extended	Total Lead	Dissolved Lead	Nitrate (NO3)	Ferrous Iron	Methane	Sulfate (SO4)	Sulfide (H2S)
A-5	4	4							
A-8	4	4							
A-10	4	4			4	4	4	4	4
A-14R	4	4	4	4	4	4	4	4	4
A-21	4	4	4	4	4	4	4	4	4
A-23R	4	4	4	4	4	4	4	4	4
A-27	4	4			4	4	4	4	4
A-28R	4	4	4	4	4	4	4	4	4
MW-1	4	4	4	4	4	4	4	4	4
MW-2	4	4	4	4	4	4	4	4	4
MW-3	4	4	4	4	4	4	4	4	4
MW-4	4	4			4	4	4	4	4
MW-5	4	4	4	4	4	4	4	4	4
MW-6	4	4	4	4	4	4	4	4	4
MW-7	4	4	4	4	4	4	4	4	4
MW-8	4	4	4	4	4	4	4	4	4
MW-9	4	4	4	4	4	4	4	4	4
MW-12R	4	4	4	4					
MW-13R	4	4	4	4					
MW-14	4	4			4	4	4	4	4
MW-16	4	4							
MW-18	4	4							
MW-19	4	4			4	4	4	4	4
MW-20	4	4			4	4	4	4	4
MW-21	4	4			4	4	4	4	4
MW-22	4	4			4	4	4	4	4
SH-02R	4	4	4	4	4	4	4	4	4
SH-05R	4	4	4	4	4	4	4	4	4
MW-07R	4	4	4	4	4	4	4	4	4
MW-23	4	4	4	4	4	4	4	4	4
MW-24	4	4	4	4	4	4	4	4	4
MW-25	4	4	4	4	4	4	4	4	4
ANNUAL TOTAL:	128	128	80	80	104	104	104	104	104

Notes: Number denotes number of quarters sampled annually

 Parameter not analyzed

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Kinder Morgan Liquid Terminals, LLC
 Harbor Island Terminal
 2720 13th Avenue Southwest
 Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-1	02/13/02	<0.25	2.0	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	05/21/02	<0.25	1.9	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	08/28/02	<0.25	1.0	<0.5	0.0013	0.0067	0.00052	0.0016	<0.005*
	11/05/02	<0.25	0.87	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.021*
	02/19/03	<0.25	1.9	<0.5	<0.0005	0.00058	<0.0005	<0.0005	<0.005*
	06/10/03	<0.25	1.1	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	09/16/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	11/19/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	02/25/04	<0.25	1.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	05/11/04	<0.25	0.87	<0.50	<0.0005	0.00068	<0.0005	<0.0005	<0.0050*
	08/25/04	0.83	0.40	<0.50	<0.0005	<0.0005	0.00065	<0.0005	<0.0050*
	12/15/04	<0.25	0.38	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/09/05	<0.25	0.63	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	0.80	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	0.40	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
03/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
06/07/06	<0.25	0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0052*	
12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
MW-2	02/13/02	<0.25	0.71	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	05/21/02	<0.25	0.66	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	08/29/02	<0.25	0.91	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	11/05/02	<0.25	0.73	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/19/03	<0.25	0.74	<0.5	<0.0005	0.00062	<0.0005	<0.0005	0.028*
	06/10/03	<0.25	0.61	<0.25	<0.0005	0.00071	<0.0005	<0.0005	0.026 ^{sa}
	09/16/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.062*
	11/19/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.021*
	02/25/04	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.030*
	05/11/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/10/05	<0.25	0.29	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/07/05	<0.25	0.91	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.036*
	09/20/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/13/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.024*
03/15/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
06/08/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0063*	
09/12/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
12/12/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
MW-3	02/13/02	<0.25	1.8	<0.5	0.011	0.0015	0.0045	0.011	<0.005*
	05/20/02	0.38	1.9	<0.5	0.052	0.0028	0.025	0.02	0.01*
	08/28/02	0.62	2.5	<0.5	0.11	0.0071	0.021	0.030	<0.005*
	11/06/02	0.63	1.1	<0.5	0.14	0.0053	0.021	0.015	0.006*
	02/19/03	<0.25	1.8	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.014*
	06/11/03	<0.25	1.3	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	0.019*
	09/17/03	<0.25	1.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.042*
	11/20/03	<0.25	2.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0063*
	02/25/04	<0.25	1.2	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.025*
	05/11/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0051*
	12/15/04	<0.25	0.33	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.018*
	03/09/05	<0.25	<0.25	<0.50	0.001	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	<0.25	<0.50	0.0011	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	<0.25	<0.50	0.00094	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
03/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
Dup-2^a	06/08/05	<0.25	<0.25	<0.50	0.0011	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	0.27	<0.50	0.00098	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.010*
	09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-4	02/14/02	0.78	280	<50	0.3	0.0072	0.0023	0.0082	NA
	05/21/02	1.5	8.6	<0.5	0.43	0.023	0.034	0.13	NA
	08/28/02	3.3	30	2.6	1.1	0.016	0.016	0.024	NA
	11/04/02	NS	NS	NS	NS	NS	NS	NS	NA
	02/19/03	3.1	31	<0.5	0.056	0.0017	0.014	0.02	NA
	06/10/03	0.39	12	<0.25	0.031	0.0012	0.0091	0.0096	NA
	09/16/03	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/03	0.25	19	<0.50	0.033	<0.001	0.0042	0.0069	NA
	02/25/04	0.36	15	<0.50	0.035	0.0014	0.0056	0.0094	NA
	05/12/04	0.33	7.4	<0.50	0.012	<0.001	0.0048	0.0058	NA
	08/26/04	<0.50	5.1	<0.50	0.014	<0.0025	0.0039	0.0069	NA
	12/15/04	NS	NS	NS	NS	NS	NS	NS	NA
	03/09/05	<2.0	11	<0.50	<0.01	<0.01	<0.01	0.013	NA
	06/08/05	<1.0	16	1.1	<0.005	<0.005	<0.005	<0.005	<0.0050
	09/21/05	<2.0	19	2.1	<0.010	<0.010	<0.010	<0.010	NA
	12/14/05	<0.50	6.2	0.81	0.012	<0.0025	0.0032	0.0084	NA
	03/14/06	<0.40	3.9	0.69	0.0063	<0.0020	0.0020	0.0062	NA
	06/07/06	<0.50	4.5	<0.50	0.0037	<0.0025	<0.0025	<0.0025	NA
	09/13/06	<0.50	2.7	<0.50	0.0034	<0.0025	<0.0025	0.0029	NA
	12/13/06	<0.25	3.7	0.62	0.0012	<0.0005	<0.0005	0.0023	NA
MW-5	02/13/02	<0.25	<0.25	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	05/21/02	<0.25	<0.5	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.01*
	08/29/02	<0.25	1.2	<0.5	<0.0005	0.0018	<0.0005	0.00063	<0.005*
	11/05/02	<0.25	1.6	<0.5	0.0055	0.0016	<0.0005	0.00056	<0.005*
	02/20/03	<0.25	<0.25	<0.5	<0.0005	0.00066	<0.0005	<0.0005	<0.005*
	06/11/03	<0.25	0.36	<0.25	<0.0005	0.00079	<0.0005	<0.0005	<0.005*
	09/16/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.011*
	11/20/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0086*
	02/24/04	<0.25	<0.50	<0.50	<0.0005	0.0014	<0.0005	<0.0005	<0.0050*
	05/11/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/15/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/09/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.11*
	06/08/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.012*
	06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0099*
	09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.013*
	12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0088*
MW-6	02/13/02	0.97	1.1	<0.5	0.014	0.0007	<0.0005	0.00065	<0.005*
	05/22/02	1.1	2.5	<0.5	0.035	0.0012	0.0024	0.00072	<0.005*
	08/29/02	0.58	6.4	<0.5	0.0014	<0.001	<0.001	<0.001	<0.005*
	11/05/02	0.59	7.3	<0.5	0.064	<0.001	<0.001	0.0016	0.02*
	02/19/03	0.54	1.7	<0.5	0.0062	<0.0005	<0.0005	<0.0005	<0.005*
	06/10/03	0.70	1.9	<0.25	0.025	0.0011	0.00052	0.00051	<0.005*
	09/16/03	0.68	<0.50	<0.50	<0.0005	<0.0005	0.00053	<0.0005	0.019*
	11/19/03	0.44	1.6	<0.50	0.0095	0.00067	<0.0005	0.00051	<0.0050*
	02/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	05/11/04	1.0	0.67	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/25/04	<0.25	0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/04	0.82	0.81	<0.50	0.008	<0.0005	<0.0005	<0.0005	0.011*
	03/10/05	1.0	0.42	<0.50	0.0011	<0.0005	<0.0005	<0.0005	<0.0050*
	06/07/05	0.9	<0.25	<0.50	0.0014	<0.0005	<0.0005	<0.0005	<0.0050*
	09/20/05	0.9	<0.25	<0.50	<0.0005	<0.0005	0.00062	<0.0005	<0.0050*
	12/13/05	1.2	0.38	<0.50	0.0032	<0.0005	0.0005	<0.0005	<0.0050*
	03/15/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/12/06	0.71	<0.25	<0.50	<0.0005	0.00055	<0.0005	<0.0005	<0.0050*
	12/12/06	<0.25	<0.25	<0.50	<0.0005	0.00055	<0.0005	<0.0005	<0.0050*

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-7	02/14/02	13	7.5	<0.5	0.20	0.24	0.57	1.8	0.035*
	05/21/02	6.6	11	<0.5	0.16	0.089	0.43	0.66	0.04*
	08/29/02	2.9	5.7	<0.5	0.12	0.042	0.24	0.11	0.047*
	11/05/02	0.9	5.9	<0.5	0.021	0.0022	0.004	0.0066	0.041*
	02/20/03	9.7	11	<0.5	0.12	0.13	0.33	1.4	0.11 ^{ab}
	06/11/03	5.7	8.7	<0.25	0.13	0.092	0.26	0.52	0.081 ^{ab}
	09/17/03	1.4	12	<0.50	0.078	0.031	0.15	0.089	0.11 ^{ab}
	11/20/03	0.26	0.8	<0.50	<0.0005	<0.0005	<0.0005	0.035	0.019 ^{ab}
	02/26/04	15	21	<0.50	0.11	0.34	0.63	3.8	0.034 ^{ab}
	05/11/04	6.3	11	<0.50	0.059	0.15	0.31	1.3	0.0083 ^{ab}
	08/26/04	7.1	20	<0.50	0.054	0.22	0.34	1.7	0.067 ^{ab}
	12/15/04	18	4.4	<0.50	0.14	0.37	0.53	3	0.19 ^{ab}
	03/09/05	3.5	2.1	<0.50	0.045	0.034	0.09	0.27	0.079 ^{ab}
	06/08/05	2.9	2.3	<0.50	0.054	0.05	0.11	0.44	0.069 ^{ab}
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/05	8.8	0.59	<0.50	0.16	0.19	0.31	1.5	0.042 ^{ab}
03/14/06	15	0.50	<0.50	0.12	0.26	0.50	3.6	0.026*	
06/07/06	17	0.85	<0.50	0.12	0.35	0.69	4.5	0.023*	
09/13/06	2.4	0.32	<0.50	0.05	0.06	0.19	0.39	0.021 ^a	
12/13/06	NS	NS	NS	NS	NS	NS	NS	NS	
MW-8	02/14/02	<0.25	8.1	<5.0	<0.0005	0.00086	<0.0005	<0.0005	0.03*
	08/29/02	<0.25	7.5	<0.5	<0.0005	0.00082	<0.0005	<0.0005	0.017*
	11/05/02	<0.25	1.7	1.2	<0.0005	<0.0005	<0.0005	<0.0005	0.012*
	02/20/03	<0.25	6.6	<0.5	<0.0005	0.00055	<0.0005	0.0024	0.029*
	06/11/03	<0.25	3.8	<0.25	0.0013	<0.001	<0.001	<0.001	0.012*
	09/17/03	<0.25	3.3	0.77	<0.0005	<0.0005	<0.0005	<0.0005	0.030*
	11/20/03	<0.25	2.5	<0.50	<0.001	<0.001	<0.001	<0.001	<0.0050*
	02/26/04	<0.25	2.7	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.016*
	05/11/04	<0.25	1.5	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	<0.25	1.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/15/04	<0.25	1.5	<0.50	<0.001	<0.001	<0.001	<0.001	0.0071*
	03/09/05	<0.25	1.6	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0094*
	06/08/05	<0.25	1.8	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.014*
	09/21/05	<0.25	1.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.011*
	12/14/05	<0.25	1.1	0.58	<0.001	<0.001	<0.001	0.0013	0.0060*
	03/14/06	<0.25	0.54	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.011*
06/07/06	<0.25	0.88	0.61	<0.0005	<0.0005	<0.0005	<0.0005	0.0093*	
09/13/06	<0.25	0.35	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.012*	
12/13/06	<0.25	0.82	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0060*	
MW-9	06/11/03	6.0	13	<0.50	0.0031	0.036	0.076	0.6	0.022*
	09/17/03	5.3	39	0.72	0.026	0.027	0.09	0.45	0.0095*
	11/20/03	8.5	19	<0.50	<0.005	0.018	0.14	1.1	0.0096*
	02/26/04	4.1	28	<0.50	0.022	0.0072	0.025	0.47	0.0083*
	05/11/04	4.1	5.8	<0.50	0.0023	0.0093	0.081	0.44	<0.0050*
	08/26/04	4.2	6.2	<0.50	0.0066	0.025	0.13	0.43	0.0099*
	12/15/04	5.4	7.6	<0.50	<0.0025	0.011	0.12	0.39	0.0094*
	03/09/05	4.5	3.5	<0.50	0.0037	0.0047	0.042	0.18	0.021*
	06/08/05	3.2	3.9	<0.50	0.0035	0.0087	0.069	0.17	0.0076*
	09/21/05	2.3	2.6	<0.50	0.007	0.0077	0.033	0.12	0.0076*
	12/14/05	4.7	1.2	<0.50	0.0078	0.010	0.12	0.38	0.0095*
	03/14/06	2.4	1.4	<0.50	0.0024	0.003	0.018	0.12	0.013*
	06/07/06	<0.25	1.0	<0.50	0.0011	0.023	0.049	0.21	0.021*
09/13/06	1.8	0.46	<0.50	0.0044	0.016	0.063	0.06	0.010*	
12/13/06	2.6	3.8	<0.50	<0.0025	<0.0025	0.024	0.190	0.025*	

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-12	06/20/01	<0.06	1.7	<0.5	<0.001	<0.001	<0.001	<0.003	<0.004
MW-12R	02/14/02	<0.25	1.4	<0.5	0.014	<0.0005	<0.0005	<0.0005	<0.005*
	05/21/02	<0.25	2.5	<0.5	0.08	0.0013	<0.0005	0.00066	<0.005*
	08/28/02	<0.25	2.1	<0.5	0.028	0.0059	<0.0005	0.0015	<0.005*
	11/05/02	<0.25	1.3	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/19/03	0.26	2.5	<0.5	0.19	0.0012	<0.001	<0.001	<0.005*
	06/10/03	0.41	1.3	<0.25	0.11	0.00055	<0.0005	<0.0005	<0.005*
	09/16/03	<0.25	0.67	<0.50	0.0021	<0.0005	<0.0005	<0.0005	<0.013*
	11/19/03	0.42	<0.25	<0.50	0.26	<0.001	<0.001	<0.001	0.0078
	02/25/04	0.26	1.8	<0.50	0.099	0.0005	<0.0005	0.00076	0.010*
	05/12/04	0.56	0.74	<0.50	0.20	<0.001	<0.001	<0.001	<0.0050*
	08/26/04	0.35	0.50	<0.50	0.089	<0.001	<0.001	<0.001	<0.0050*
	12/15/04	<0.25	0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/09/05	<0.25	0.39	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	0.39	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA*
	09/21/05	0.26	0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	<0.25	<0.50	<0.001	<0.001	<0.001	<0.001	<0.0050*
	06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/13/06	<0.25	0.27	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
MW-13	06/19/01	<0.05	1.3	<0.5	<0.001	<0.001	<0.001	<0.003	<0.004
MW-13R	02/14/02	<0.25	3.2	<0.5	0.056	<0.0005	<0.0005	0.00075	<0.005*
	05/21/02	<0.25	3.5	<0.5	0.0025	<0.0005	<0.0005	<0.0005	<0.005*
	08/28/02	<0.25	2.4	<0.5	<0.0005	0.0019	<0.0005	0.0007	<0.005*
	11/05/02	<0.25	2.0	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/19/03	<0.25	1.7	<0.5	0.00078	0.0032	<0.0005	0.00083	<0.005*
	06/10/03	<0.25	0.76	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	09/16/03	<0.25	1.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0078*
	11/19/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0066
	02/25/04	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.012*
	05/12/04	<0.25	0.61	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	<0.25	0.49	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/15/04	<0.25	0.91	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/09/05	<0.25	0.35	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	0.49	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA*
	09/21/05	<0.25	0.39	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	<0.25	<0.50	<0.001	<0.001	<0.001	<0.001	<0.0050*
	06/07/06	<0.25	<0.25	<0.50	<0.005	<0.005	<0.005	<0.005	<0.0050*
	09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/13/06	<0.25	0.33	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0077*

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-14	02/13/02	2.5	37	<5.0	0.01	0.0085	0.18	0.22	NA
	05/21/02	2.9	23	1.0	0.0093	0.0057	0.18	0.15	NA
	08/29/02	2.9	28	<0.5	0.017	0.0073	0.21	0.14	NA
	11/05/02	2.0	28	0.91	0.06	0.0059	0.12	0.076	NA
	02/20/03	3.4	18	<0.5	0.056	0.0062	0.14	0.11	NA
	06/11/03	3.1	28	<0.5	0.059	0.0098	0.23	0.13	NA
	09/16/03	<1.0	15	<0.50	0.13	<0.005	0.019	0.022	NA
	11/20/03	<2.0	29	0.70	0.12	<0.01	0.02	0.031	NA
	02/24/04	2.4	21	<0.50	0.061	0.014	0.25	0.2	NA
	05/11/04	2.7	27	<0.50	0.053	0.0092	0.21	0.16	NA
	08/26/04	2.3	11	0.53	0.024	<0.0025	0.16	0.19	NA
	12/15/04	1.2	9.6	<0.50	0.0084	<0.005	0.01	0.0055	NA
	03/09/05	4.2	7.7	<0.50	0.0053	0.0094	0.18	0.099	NA
	06/08/05	3.1	8.8	<0.50	0.0043	0.0069	0.17	0.11	NA
	09/21/05	1.6	10.0	1.1	0.012	0.0048	0.077	0.068	NA
	12/14/05	3.1	2.0	<0.50	0.0059	0.0075	0.120	0.068	NA
03/14/06	0.79	2.1	<0.50	<0.0025	<0.0025	0.023	0.03	NA	
06/07/06	0.84	3.0	<0.50	<0.0025	<0.0025	0.061	0.033	NA	
09/13/06	2.4	1.8	<0.50	<0.0025	0.0060	0.100	0.056	NA	
	12/13/06	1.1	1.4	<0.50	<0.0025	<0.0025	0.044	0.029	NA
MW-16	02/13/02	<0.25	<0.25	<0.5	0.0013	0.0037	<0.0005	0.0011	NA
	05/21/02	<0.25	<0.5	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/29/02	<0.25	<0.5	<0.5	<0.0005	0.0022	<0.0005	0.00069	NA
	11/05/02	<0.25	0.29	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/19/03	<0.25	<0.25	<0.5	<0.0005	0.0018	<0.0005	<0.0005	NA
	06/10/03	<0.25	<0.25	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	NA
	09/16/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	11/19/03	<0.25	<0.25	<0.50	<0.0005	0.0013	<0.0005	0.00062	NA
	02/25/04	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/11/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/26/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	12/15/04	<0.25	<0.25	<0.50	0.029	<0.0005	<0.0005	<0.0005	NA
	03/10/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	06/07/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	09/20/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	12/13/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
03/15/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
06/08/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
09/12/06	<0.25	<0.25	<0.50	<0.0005	0.00062	0.0012	<0.0005	NA	
	12/12/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-18	02/13/02	7.6	0.77	<0.5	1.8	0.067	0.29	0.34	NA
	05/21/02	1.2	0.30	<0.5	0.25	0.016	0.068	0.068	NA
	08/29/02	1.6	<0.5	<0.5	0.45	0.014	0.032	0.044	NA
	11/05/02	1.1	<0.25	<0.5	<0.3	0.010	0.011	0.031	NA
	02/19/03	<0.25	<0.25	<0.5	0.0035	0.0047	<0.0005	0.0016	NA
	06/10/03	<0.25	<0.25	<0.25	0.022	0.0016	<0.0005	0.004	NA
	09/16/03	<0.25	<0.50	<0.50	0.036	0.0019	<0.0005	0.0075	NA
	11/19/03	<0.25	<0.25	<0.50	0.0042	<0.0005	<0.0005	0.0015	NA
	02/25/04	0.58	<0.25	<0.50	0.11	0.0048	0.00087	0.026	NA
	05/11/04	1.1	<0.25	<0.50	0.25	0.0073	0.0016	0.037	NA
	08/26/04	<0.25	<0.25	<0.50	0.003	<0.0005	<0.0005	<0.0005	NA
	12/15/04	0.84	<0.25	<0.50	0.14	0.006	0.0019	0.029	NA
	03/10/05	0.84	<0.25	<0.50	0.25	0.0049	0.002	0.021	NA
	06/07/05	0.68	<0.25	<0.50	0.17	0.0039	0.0019	0.0098	NA
	09/20/05	4.0	<0.25	<0.50	0.74	0.021	0.0091	0.09	NA
	12/13/05	2.3	<0.25	<0.50	0.45	0.015	0.0067	0.033	NA
03/15/06	4.9	<0.25	<0.50	1.2	0.035	0.025	0.12	NA	
06/08/06	1.2	<0.25	<0.50	0.15	0.011	0.011	0.034	NA	
09/12/06	0.35	<0.25	<0.50	0.023	0.0021	0.0022	0.0047	NA	
	12/12/06	0.28	<0.25	<0.50	0.023	0.0018	0.0019	0.0060	NA

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-19	02/13/02	29	6.8	<2.5	0.057	0.73	0.58	6.5	NA
	05/21/02	30	7.7	<0.5	0.049	0.65	0.53	6.5	NA
	08/29/02	13	11	<0.5	0.14	0.29	0.20	2.1	NA
	11/05/02	8.2	3.0	<0.5	0.21	0.37	0.16	1.7	NA
	02/20/03	38	19	<0.5	0.091	1.2	0.80	8.0	NA
	06/11/03	32	15	<1.0	0.042	0.38	0.80	6.7	NA
	09/16/03	4.2	12	<0.50	0.19	0.043	0.19	1.1	NA
	11/20/03	22	10	<0.50	0.11	0.67	0.75	6.1	NA
	02/24/04	19	14	<0.50	<0.015	0.49	0.63	4.7	NA
	05/11/04	27	13	<0.50	<0.025	0.22	0.87	7.2	NA
	08/26/04	22	0.72	<0.50	0.042	0.26	0.64	4.6	NA
	12/15/04	15	7.6	<0.50	0.039	0.12	0.37	2.7	NA
	03/09/05	27	9.1	<0.50	0.073	0.18	0.56	3.4	NA
	06/08/05	17	6.3	<0.50	0.071	0.17	0.61	2.8	NA
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/05	NS	NS	NS	NS	NS	NS	NS	NS
	03/14/06	NS	NS	NS	NS	NS	NS	NS	NS
06/07/06	14	1.4	<0.50	<0.010	0.043	0.29	1.4	NA	
09/13/06	11	0.5	<0.50	0.032	0.047	0.41	1.1	NA	
	12/13/06	8.0	1.4	<0.50	0.016	0.052	0.30	1.4	NA
MW-20	02/13/02	<0.25	0.64	<0.5	<0.001	<0.001	<0.001	<0.001	NA
	05/20/02	<0.25	1.3	<0.5	0.018	0.0012	0.0048	0.014	NA
	08/29/02	0.6	1.1	<0.5	0.057	0.0065	0.021	0.084	NA
	11/06/02	<0.25	0.81	<0.5	0.0023	0.00053	<0.0005	<0.0005	NA
	02/19/03	<0.25	<0.25	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	06/11/03	<0.25	0.68	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	NA
	09/17/03	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	11/20/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	0.00072	NA
	02/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/11/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/26/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	12/15/04	<0.25	0.30	<0.50	0.0013	<0.0005	<0.0005	<0.0005	NA
	03/09/05	<0.25	<0.25	<0.50	0.00074	<0.0005	<0.0005	<0.0005	NA
	06/08/05	<0.25	0.55	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	09/21/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	03/14/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
	12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-21	06/11/03	NS	NS	NS	NS	NS	NS	NS	NS
	09/17/03	NS	NS	NS	NS	NS	NS	NS	NS
	11/20/03	0.97	19	<0.50	<0.0025	<0.0025	<0.0025	<0.0025	NA
	02/26/04	2.3	35	<0.50	<0.0025	<0.0025	<0.0025	<0.0025	NA
	05/11/04	1.2	29	<0.50	<0.0025	<0.0025	<0.0025	<0.0025	NA
	08/26/04	4.3	33	<0.50	<0.001	<0.001	0.0013	0.0014	NA
	12/15/04	NS	NS	NS	NS	NS	NS	NS	NA
	03/09/05	2.4	140	<5.0	<0.0015	<0.0015	0.0016	<0.0015	NA
	06/08/05	1.8	31	0.5	<0.002	<0.002	0.0026	<0.002	NA
	09/21/05	1.7	46	3.3	<0.0010	<0.0010	0.0013	<0.0010	NA
	12/14/05	1.0	6.1	0.54	<0.002	<0.002	0.0027	<0.002	NA
	03/14/06	<0.25	33	3.1	<0.0005	<0.0005	<0.0005	<0.0005	NA
06/07/06	0.8	18	1.2	<0.0025	<0.0025	<0.0025	<0.0025	NA	
09/13/06	NS	NS	NS	NS	NS	NS	NS	NS	
	12/13/06	NS	NS	NS	NS	NS	NS	NS	NS

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
MW-22	02/13/02	0.96	9.2	<0.5	0.012	0.0053	0.017	0.0097	NA
	05/21/02	1.1	7.7	<0.5	0.16	0.049	0.023	0.03	NA
	08/29/02	1.4	2.4	<0.5	0.5	0.0093	0.044	0.0066	NA
	11/05/02	0.49	1.7	<0.5	0.14	0.0031	0.025	<0.001	NA
	02/19/03	<0.25	9.1	<0.5	<0.001	<0.001	<0.001	<0.001	NA
	06/10/03	<0.25	7.4	0.87 ^a	<0.001	<0.001	<0.001	<0.001	NA
	09/16/03	<0.25	2.7	<0.50	0.0018	<0.0005	<0.0005	<0.0005	NA
	11/19/03	<0.50	8.4	<0.50	<0.0025	<0.0025	<0.0025	<0.0025	NA
	02/25/04	<0.25	6.4	<0.50	<0.001	<0.001	<0.001	<0.001	NA
	05/11/04	<0.25	2.0	<0.50	<0.001	<0.001	<0.001	<0.001	NA
	08/25/04	<0.25	0.61	<0.50	<0.001	<0.001	<0.001	<0.001	NA*
	12/14/04	<0.25	1.1	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	03/10/05	<0.25	2.2	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	06/07/05	<0.25	3.0	<0.50	0.0049	<0.001	<0.001	<0.001	NA
	09/20/05	0.40	2.9	<0.50	<0.001	<0.001	<0.001	<0.001	NA
	12/13/05	<0.25	0.71	<0.50	<0.001	<0.001	<0.001	<0.001	NA
	03/15/06	<0.25	2.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
06/08/06	<0.25	0.89	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
09/12/06	<0.25	0.45	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA	
12/12/06	<0.25	1.4	<0.50	<0.001	<0.001	<0.001	<0.001	NA	
MW-23	11/19/03	5.3	1.4	<0.50	0.87	0.016	0.098	0.23	NA
	02/25/04	3.3	0.85	<0.50	0.91	0.011	0.046	0.03	0.0052*
	05/12/04	4.2	1.3	<0.50	1.1	0.013	0.046	0.048	<0.0050*
	08/26/04	5.3	0.72	<0.50	1.1	0.023	0.2	0.17	0.014*
	12/14/04	NS	NS	NS	NS	NS	NS	NS	NS
	03/08/05	NS	NS	NS	NS	NS	NS	NS	NS
	06/07/05	NS	NS	NS	NS	NS	NS	NS	NS
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/13/05	6.3	<0.25	<0.50	1.3	0.014	0.048	0.044	<0.0050*
	03/15/06	7.0	0.28	<0.50	1.4	0.015	0.19	0.21	<0.0050*
	06/08/06	5.2	1.30	<0.50	1.4	0.014	0.11	0.11	<0.0050*
	09/12/06	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/06	8.1	<0.25	<0.50	1.8	0.020	0.11	0.16	<0.0050*
MW-24	11/19/03	34	6.4	0.54	2.8	0.54	1.4	6	NA
	02/25/04	26	3.0	<0.50	4.3	0.085	1.0	3.3	<0.0050*
	05/12/04	NS	NS	NS	NS	NS	NS	NS	NS
	08/26/04	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/04	NS	NS	NS	NS	NS	NS	NS	NS
	03/08/05	NS	NS	NS	NS	NS	NS	NS	NS
	06/07/05	NS	NS	NS	NS	NS	NS	NS	NS
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/05	NS	NS	NS	NS	NS	NS	NS	NS
	03/15/06	26	0.34	<0.50	4.4	0.064	0.88	4.2	0.0069
	06/08/06	21	<0.25	<0.50	1.5	0.039	0.86	4.9	0.0068
	09/12/06	NS	NS	NS	NS	NS	NS	NS	NS
	12/12/06	20	1.1	<0.50	1.5	0.037	0.69	3.2	0.0078*
MW-25	11/20/03	<0.25	1.3	<0.50	0.0061	<0.0005	<0.0005	<0.0005	NA
	02/26/04	0.38	8.9	<0.50	0.0011	<0.0005	0.0027	<0.0005	0.012*
	5/12/04	<0.25	1.6	<0.50	<0.0005	<0.0005	0.0034	<0.0005	<0.0050*
	08/26/04	<0.25	0.27	<0.50	0.013	<0.0005	<0.0005	<0.0005	0.034 ^{a,b}
	12/14/04	<0.25	1.4	<0.50	0.0035	<0.001	<0.001	<0.001	<0.0050*
	03/10/05	0.31	3.7	<0.50	0.0014	<0.0005	0.00064	<0.0005	<0.0050*
	06/07/05	0.40	3.2	<0.50	<0.001	<0.001	0.0014	<0.001	<0.0050*
	09/20/05	0.30	1.4	<0.50	0.0016	<0.0005	<0.0005	<0.0005	0.059 ^a
	12/13/05	<0.25	1.2	<0.50	<0.001	<0.001	<0.001	<0.001	<0.0050*
	03/15/06	<0.25	1.0	<0.50	0.0019	<0.001	<0.001	<0.001	<0.0050*
	06/08/06	<0.25	1.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
09/12/06	<0.25	0.31	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*	
12/12/06	<0.25	0.86	<0.50	0.0052	<0.0005	<0.0005	<0.0005	<0.0050*	

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
A-5	02/14/02	<0.25	2.3	<0.5	0.00055	0.0017	<0.0005	<0.0005	NA
	05/22/02	<0.25	2.0	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/29/02	<0.25	1.2	<0.5	0.0017	0.00062	<0.0005	0.00099	NA
	11/06/02	<0.25	1.2	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/20/03	<0.25	<0.25	<0.5	0.00086	0.0019	<0.0005	0.001	NA
	06/10/03	0.26	0.4	<0.25	<0.0005	0.00067	<0.0005	0.0007	NA
	09/17/03	<0.25	0.60	<0.50	0.0042	<0.0005	<0.0005	<0.0005	NA
	11/20/03	<0.25	0.53	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/26/04	<0.25	3.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/12/04	0.27	0.43	<0.50	<0.0005	<0.0005	<0.0005	0.00057	NA
	08/25/04	<0.25	1.1	<0.50	0.0029	<0.0005	<0.0005	<0.0005	NA
	12/14/04	<0.25	0.43	<0.50	0.021	<0.001	<0.001	<0.001	NA
	03/10/05	0.43	5.2	<0.50	0.12	0.0025	<0.001	0.0012	NA
	06/07/05	0.54	2.4	1.70	0.12	0.0028	<0.001	0.0013	NA
	09/20/05	0.37	1.2	<0.50	0.037	0.0017	<0.001	0.0011	NA
	12/13/05	0.44	0.31	<0.50	0.049	0.0021	<0.0005	0.0013	NA
03/15/06	0.36	0.45	<0.50	0.052	0.0017	<0.001	0.0017	NA	
06/08/06	0.91	0.55	<0.50	0.099	0.0036	0.00076	0.0034	NA	
09/12/06	0.46	0.43	<0.50	0.031	0.0016	<0.001	0.0014	NA	
	12/12/06	0.70	0.53	<0.50	0.079	0.0028	<0.001	0.0025	NA
A-8	02/14/02	<0.25	1.6	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/22/02	<0.25	0.51	<0.5	<0.0005	0.00058	<0.0005	<0.0005	NA
	08/28/02	<0.25	<0.5	<0.5	<0.0005	0.0014	<0.0005	0.00066	NA
	11/06/02	<0.25	0.43	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/20/03	<0.25	<0.25	<0.5	<0.0005	0.00083	<0.0005	<0.0005	NA
	06/10/03	<0.25	<0.25	<0.25	<0.0005	0.00056	<0.0005	<0.0005	NA
	09/17/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	11/20/03	<0.25	1.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/26/04	0.35	1.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/12/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/25/04	<0.25	4.9	<0.50	<0.001	<0.001	<0.001	<0.001	NA
	12/14/04	<0.25	1.7	<0.50	0.00056	0.00052	<0.0005	0.00094	NA
	03/10/05	<0.25	2.1	<0.50	<0.0005	<0.0005	<0.0005	0.00055	NA
	06/07/05	<0.25	1.2	1.5	<0.0005	<0.0005	<0.0005	<0.0005	NA
	09/20/05	<0.25	3.5	0.8	0.0012	<0.001	<0.001	0.0012	NA
	12/13/05	<0.25	0.54	<0.50	<0.0005	<0.0005	<0.0005	0.0011	NA
03/15/06	<0.25	0.55	<0.50	<0.001	<0.001	<0.001	<0.001	NA	
06/08/06	<0.25	0.47	<0.50	<0.001	<0.001	<0.001	<0.001	NA	
09/12/06	<0.25	0.76	<0.50	<0.001	<0.001	<0.001	0.0011	NA	
	12/12/06	0.27	0.87	<0.50	<0.001	0.0011	<0.001	0.0015	NA
A-10	02/14/02	<0.25	9.2	<0.5	<0.0005	0.00062	<0.0005	<0.0005	NA
	05/22/02	0.31	8.8	<0.5	<0.0005	0.00086	<0.0005	<0.0005	NA
	08/28/02	0.30	15	<0.5	<0.001	<0.001	<0.001	<0.001	NA
	11/06/02	0.37	13	<0.50	<0.0005	0.00057	<0.0005	<0.0005	NA
	02/20/03	<0.25	6.0	<0.5	0.0013	<0.0005	<0.0005	0.00055	NA
	06/10/03	0.45	19	<0.25	<0.001	<0.001	<0.001	<0.001	NA
	09/17/03	0.68	30	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	11/20/03	1.1	89	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	02/26/04	<0.25	35	0.74	<0.0005	<0.0005	<0.0005	<0.0005	NA
	05/12/04	<0.25	3.5	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	08/25/04	<0.25	5.1	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA*
	12/14/04	<0.25	1.1	<0.50	0.003	<0.001	<0.001	<0.001	NA
	03/10/05	<0.25	4.6	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	06/07/05	0.3	68.0	2.10	0.00069	<0.0005	<0.0005	<0.0005	NA
	09/20/05	0.6	1.5	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
	12/13/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA
03/15/06	<0.25	1.7	<0.50	<0.0005	<0.0005	<0.0005	0.0005	NA	
06/08/06	<0.25	0.7	<0.50	<0.0005	<0.0005	<0.0005	0.0005	NA	
09/12/06	<0.25	0.65	<0.50	<0.0005	<0.0005	<0.0005	0.0005	NA	
	12/12/06	<0.25	0.98	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
A-14	12/20/00	<0.05	<0.25	<0.5	<0.001	<0.001	<0.001	<0.003	0.65
A-14R	02/14/02	<0.25	<0.25	<0.5	0.00061	0.0021	<0.0005	<0.0005	0.005*
	05/22/02	<0.25	<0.5	<0.5	0.00053	0.0021	<0.0005	0.00054	0.02*
	08/28/02	<0.25	<0.5	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	11/06/02	<0.25	<0.25	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/20/03	<0.25	<0.25	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	06/10/03	<0.25	<0.25	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	0.02*
	09/17/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.025*
	11/20/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.032*
	02/26/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.018*
	05/12/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0072*
	03/10/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/07/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/13/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/15/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/12/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/12/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
A-21	02/14/02	<0.25	<0.25	<0.5	<0.0005	0.001	<0.0005	<0.0005	<0.005*
	05/22/02	<0.25	<0.5	<0.5	0.00061	0.0017	<0.0005	0.00057	<0.005*
	08/29/02	<0.25	0.76	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	11/06/02	<0.25	0.37	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/19/03	<0.25	<0.5	<0.5	0.0013	0.0018	<0.0005	0.00061	<0.005*
	06/10/03	0.25	<0.25	<0.25	0.0082	0.00058	<0.0005	<0.0005	0.062*
	09/16/03	<0.25	<0.25	<0.50	0.0034	<0.0005	<0.0005	<0.0005	0.0085*
	11/19/03	0.47	<0.25	<0.50	0.061	0.0019	<0.0005	0.0029	0.0067*
	02/25/04	0.63	<0.50	<0.50	0.013	0.00066	0.045	0.0016	<0.0050*
	05/12/04	0.50	<0.25	<0.50	0.0019	<0.0005	0.0042	0.00072	<0.0050*
	08/25/04	0.26	<0.25	<0.50	0.0015	<0.0005	<0.0005	0.0015	<0.0050*
	12/14/04	0.99	<0.25	<0.50	0.061	0.0025	0.022	0.0083	<0.0050*
	03/10/05	1.5	0.26	<0.50	0.024	0.0021	0.0025	0.011	0.020*
	06/07/05	1.2	0.35	<0.50	0.0076	0.00084	0.00077	0.0043	<0.0050*
	09/20/05	1.3	<0.25	<0.50	0.011	0.0012	0.00066	0.0048	<0.0050*
	12/13/05	1.6	<0.25	<0.50	0.017	0.0016	0.0015	0.0052	<0.0050*
	03/15/06	0.97	<0.25	<0.50	0.0098	0.00097	0.0023	0.0033	<0.0050*
	06/08/06	0.82	<0.25	<0.50	0.0023	0.00059	<0.0005	0.0019	<0.0050*
	09/12/06	0.85	<0.25	<0.50	0.0019	<0.0005	<0.0005	0.0016	<0.0050*
	12/12/06	0.85	<0.25	<0.50	0.0071	<0.0005	0.0021	0.0014	<0.0050*
A-23R	02/14/02	0.26	2.1	<0.5	0.06	0.001	0.0099	0.0072	0.72 ^{ab}
	05/20/02	0.74	6.9	<0.5	0.15	<0.001	0.088	0.0067	0.095 ^{ab}
	08/28/02	0.62	2.1	<0.5	0.2	0.0035	0.021	0.0075	0.23*
	11/05/02	0.74	1.7	<0.5	0.22	<0.0015	0.0059	0.014	0.18*
	02/19/03	0.71	2.3	<0.5	0.26	0.0033	0.0054	0.0059	0.049*
	06/10/03	<0.25	1.8	<0.25	0.0073	<0.001	0.0028	<0.001	<0.005*
	09/16/03	0.70	1.3	<0.50	0.043	0.0029	0.057	0.0018	0.38*
	11/19/03	1.0	0.78	<0.50	0.08	0.0037	0.069	0.0035	0.13*
	02/25/04	1.6	0.78	<0.50	0.26	0.0072	0.061	0.015	0.081*
	05/12/04	0.28	0.45	<0.50	0.020	0.00075	0.0022	0.00082	<0.0050*
	08/25/04	2.3	0.35	<0.50	0.46	0.012	0.074	0.02	0.012*
	12/14/04	2.0	0.65	<0.50	0.37	0.0084	0.041	0.013	0.018*
	03/10/05	0.60	0.31	<0.50	0.035	0.0011	0.0045	0.0014	0.035*
	06/07/05	0.33	<0.25	<0.50	0.0080	<0.0005	0.0012	<0.0005	0.013*
	09/20/05	<0.25	<0.25	<0.50	0.00060	<0.0005	<0.0005	<0.0005	0.0096 ^a
	12/14/05	0.37	<0.25	<0.50	0.019	0.00056	0.00065	0.00058	0.032*
	03/15/06	1.1	<0.25	<0.50	0.34	0.0033	<0.0025	0.0051	<0.0050*
	06/08/06	0.34	<0.25	<0.50	0.033	<0.0005	<0.0005	0.031	0.0081*
	09/12/06	0.42	<0.25	<0.50	0.010	<0.0005	0.032	0.0013	0.035*
	12/12/06	2.1	<0.25	<0.50	0.520	0.0066	0.053	0.021	<0.0050*
Dup-1^a	09/20/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	0.42	<0.25	<0.50	0.020	0.00064	0.00081	0.00063	0.025*
	03/15/06	1.1	<0.25	<0.50	0.310	0.0036	0.0027	0.0052	0.0099*
	06/08/06	0.33	<0.25	<0.50	0.032	<0.0005	<0.0005	0.031	0.013*
	09/12/06	0.36	<0.25	<0.50	0.009	<0.0005	0.027	0.0011	0.12*
	12/12/06	2.2	<0.25	<0.50	0.520	0.0076	0.061	0.024	0.0077*

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
A-27	02/14/02	2.9	11	<0.5	0.13	0.014	0.096	0.25	NA
	05/22/02	3.3	8.2	<0.5	0.2	0.016	0.14	0.38	NA
	08/29/02	3.8	8.1	<0.5	0.24	0.016	0.14	0.29	NA
	11/06/02	3.2	8.0	<0.5	0.16	0.016	0.065	0.14	NA
	02/19/03	3.1	6.8	<0.5	0.17	0.017	0.052	0.13	NA
	06/10/03	3.7	4.5	<0.25	0.14	0.013	0.11	0.23	NA
	09/16/03	4.5	5.6	<0.50	0.27	0.02	0.18	0.38	NA
	11/19/03	5.9	5.3	<0.50	0.25	0.023	0.13	0.33	NA
	02/25/04	4.4	16.0	<0.50	0.15	0.016	0.18	0.30	NA
	05/11/04	4.6	5.2	<0.50	0.16	0.017	0.23	0.38	NA
	08/25/04	4.7	2.5	<0.50	0.25	0.018	0.17	0.24	NA*
	12/14/04	4.5	4.4	<0.50	0.11	0.012	0.099	0.14	NA
	03/10/05	5.8	4.7	<0.50	0.14	0.015	0.16	0.22	NA
	06/07/05	4.5	7.8	<0.50	0.17	0.014	0.24	0.34	NA
	09/20/05	6.3	2.3	<0.50	0.25	0.019	0.18	0.22	NA
	12/13/05	3.7	0.83	<0.50	0.13	0.012	0.083	0.095	NA
03/15/06	4.4	1.3	<0.50	0.13	0.017	0.19	0.24	NA	
06/08/06	4.5	1.1	<0.50	0.19	0.016	0.23	0.28	NA	
09/12/06	3.4	0.82	<0.50	0.17	0.011	0.12	0.12	NA	
	12/12/06	3.7	0.90	<0.50	0.110	0.0096	0.10	0.12	NA
A-28R	02/14/02	5.3	2.7	<0.5	0.66	0.027	0.42	0.2	0.035*
	05/22/02	3.1	6.7	<0.5	0.14	0.01	0.2	0.092	0.05*
	08/29/02	4	6	<0.5	0.15	0.019	0.23	0.078	0.032*
	11/06/02	3.4	1.8	<0.5	0.47	0.015	0.053	0.05	0.028*
	02/19/03	3.5	4.6	<0.5	0.46	0.015	0.051	0.05	0.013*
	06/10/03	3.7	2.9	<0.25	0.31	0.0081	0.085	0.051	0.064*
	09/16/03	3.8	2.0	<0.50	1.0	0.013	0.075	0.048	0.17*
	11/19/03	4.9	<0.25	<0.50	0.58	0.012	0.059	0.064	0.11*
	02/25/04	5.1	1.7	<0.50	0.63	0.0093	0.19	0.076	0.0080*
	05/12/04	6.5	2.6	<0.50	0.96	0.012	0.20	0.058	<0.0050*
	08/25/04	5.9	0.88	<0.50	2.1	0.018	0.05	0.053	0.043*
	12/14/04	7.6	3.0	<0.50	1.4	0.015	0.073	0.062	0.025*
	03/10/05	10	0.76	<0.50	1.9	0.019	0.077	0.064	0.0078*
	06/07/05	6	1.20	<0.50	2.1	0.015	0.069	0.048	0.0068*
	09/20/05	NS	NS	NS	NS	NS	NS	NS	NS
	12/13/05	5.4	<0.25	<0.50	0.93	0.011	0.033	0.036	0.012*
03/15/06	4.6	<0.25	<0.50	0.80	0.012	0.11	0.035	<0.0050*	
06/08/06	4.2	0.49	0.73	0.87	0.013	0.07	0.035	0.019*	
09/12/06	5.2	<0.25	<0.50	1.0	0.015	0.048	0.036	0.016*	
	12/12/06	4.0	0.57	<0.50	0.30	0.0095	0.027	0.028	<0.0050*
SH-02	12/20/00	0.078	<0.25	<0.5	0.001	<0.001	<0.001	<0.003	0.015**
SH-02R	02/13/02	<0.25	0.56	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	05/21/02	<0.25	2.4	<0.5	0.037	<0.0005	<0.0005	<0.0005	0.005*
	08/28/02	<0.25	4.3	<0.5	0.087	0.0038	0.00061	0.0023	0.006*
	11/05/02	<0.25	1.1	<0.5	0.016	<0.0005	<0.0005	<0.0005	0.005*
	02/19/03	<0.25	<0.5	<0.5	<0.0005	0.00086	<0.0005	<0.0005	<0.005*
	06/10/03	<0.25	0.97	<0.25	<0.0005	0.00051	<0.0005	<0.0005	0.0059*
	09/16/03	<0.25	3.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.010*
	11/19/03	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	02/25/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	05/12/04	<0.25	0.74	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	<0.25	0.58	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/15/04	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/09/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	0.31	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	0.58	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	0.30	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0078*
03/14/06	<0.25	0.30	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0072*	
06/07/06	<0.25	0.59	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050*	
09/13/06	<0.25	<0.25	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050*	
	12/13/06	<0.25	0.49	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*

**TABLE 2
GROUNDWATER ANALYTICAL RESULTS**

Kinder Morgan Liquid Terminals, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington


Sample I.D.	Date	TPH-Gasoline (ppm)	TPH-Diesel (ppm)	TPH-Oil (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	Total Lead (ppm)
SH-05	12/20/00	<0.05	1.0	<0.5	<0.001	<0.001	<0.003	<0.001	0.017**
SH-05R	05/21/02	0.71	11	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	08/28/02	0.77	10	<0.5	<0.0005	0.0015	<0.0005	<0.0005	0.006*
	11/05/02	1.4	7.1	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.008*
	02/19/03	0.8	6.8	<0.5	<0.001	0.0016	<0.001	<0.001	<0.005*
	06/10/03	1.1	45	<0.25	<0.0005	<0.0005	<0.0005	<0.0005	0.04*
	09/16/03	<0.25	23	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.074*
	11/19/03	0.62	19	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.075*
	02/25/04	<0.25	5.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	05/12/04	0.43	4.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	0.63	3.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050
	12/15/04	0.30	10	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0056*
	03/09/05	0.78	4.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	0.32	4.0	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	0.61	2.8	1.0	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	0.78	1.3	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	1.4	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0074*
	06/07/06	<0.25	1.4	<0.50	<0.001	<0.001	<0.001	<0.001	<0.0050*
	09/13/06	0.34	0.56	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/13/06	<0.50	1.9	<0.50	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050*
MW-07R	02/13/02	<0.25	1.2	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.035*
	05/21/02	<0.25	2.1	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	0.005*
	08/28/02	<0.25	2.4	<0.5	<0.0005	0.0028	<0.0005	0.0012	0.006*
	11/05/02	<0.25	3.7	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.005*
	02/19/03	NS	NS	NS	NS	NS	NS	NS	NS
	06/10/03	NS	NS	NS	NS	NS	NS	NS	NS
	09/16/03	<0.25	1.9	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.045*
	11/19/03	<0.25	2.1	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.020*
	02/25/04	<0.25	<0.50	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	05/12/04	<0.25	0.48	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	08/26/04	<0.25	0.42	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	NA*
	12/15/04	<0.25	0.85	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0076*
	03/09/05	<0.25	0.54	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/08/05	<0.25	0.46	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/21/05	<0.25	0.70	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	12/14/05	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	03/14/06	<0.25	0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	06/07/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*
	09/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	0.0065
	12/13/06	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005	<0.0050*

Notes:
 < = Denotes compound was not detected at designated detection limit.
 NA = Not analyzed for this parameter
 NS = Not sampled
 ^ = Dup-1 is a duplicate sample for A-23R; Dup-2 is a duplicate sample for MW-3.
 * = Also tested for Dissolved Lead (EPA-200.8), results are below detection limit of 0.0050 ppm.
 ** = Also tested for Dissolved Lead (EPA-200.8), results are at or above detection limit of 0.0050 ppm.
 *** = Also tested for Dissolved Lead (EPA-7421), results are below detection limit of 0.004 ppm.
^a = Insulating oil range hydrocarbons were reported for MW-22 at concentration of 0.87 ppm.
 TPH as gasoline - Analysis by Washington Method WTPH-G prior to 5/20/98; analysis by Northwest Method NWTPH-Gx from 5/20/98 through present.
 TPH as diesel and oil - Analysis by Washington Method WTPH-D+ extended prior to 5/20/98; analysis by Northwest Method NWTPH-Dx from 5/20/98 through present.
 BTEX Compounds - Analysis by EPA Method 8020 prior to 5/20/98; analysis by EPA Method 8021B from 5/20/98 through present.

TABLE 3
ANALYTICAL SUMMARY 2000 - DECEMBER 2006
CURRENT GROUNDWATER COMPLIANCE PROGRAM
 Kinder Morgan Harbor Island Terminal

Well ID	Indicator Hazardous Substances, concentration in mg/L							
	TPH-G	Benzene	Ethylbenzene	Toluene	TPH-D	TPH-O	Total Lead	Dissolved Lead
Cleanup Criteria	1.0	0.071	29.0	200.0	10	10	0.0058	--
A-5	ND - 0.54	ND - 0.12, >0.071 on 12-06	ND	ND - 0.0036	ND - 5.2	ND - 1.7		
A-8	ND - 0.35	ND - 0.0012	ND	ND - 0.0014	ND - 4.9	ND - 1.5		
A-10	ND - 1.1, <1 since 02-04	ND - 0.0030	ND	ND - 0.00086	ND - 89, <10 since 09-05	ND - 2.1		
A-14R	ND	ND - 0.002	ND	ND - 0.0021	ND	ND	ND-0.032 <0.0058 since 06-05	ND
A-21	ND - 1.6, <1 since 03-06	ND - 0.061, <0.071 since 06-01	ND - 0.045	ND - 0.0025	ND - 0.76	ND	ND-0.062 <0.0058 since 06-05	ND
A-23R	ND - 2.3, >1 on 12-06	0.00060 - 0.46, >0.071 on 12-06	ND - 0.088	ND - 0.012	ND - 6.9	ND	ND - 0.72 <0.0058 since 09-06	detected
A-27	2.0 - 6.3, >1 on 12-06	0.11 - 0.27	0.04 - 0.24	0.009 - 0.023	0.83 - 16, <10 since 05-04	ND		
A-28R	3.1 - 10	0.14 - 2.1	0.033 - 0.42	0.0081 - 0.027	ND - 6.7	ND	ND - 0.17 <0.0058 since 12-06	ND
MW-1	ND - 0.83	ND - 0.0013	ND - 0.0020	ND - 0.0067	ND - 2.0	ND	ND - 0.021 <0.0058 since 02-03	ND
MW-2	ND	ND	ND	ND - 0.00071	ND - 0.91	ND	ND - 0.062 since 09-06	detected
MW-3	ND - 45, <1 since 02-02	ND - 0.36, <0.071 since 02-03	ND - 0.23	ND - 0.18	ND - 17, <10 since 12-00	ND - 0.68	ND - 0.042 <0.0058 since 03-05	ND
MW-4	ND - 3.3, <1 since 06-03*	ND - 1.1, <0.071 since 02-03	ND - 0.034	ND - 0.023	1.1 - 280, <10 since 12-05	ND - 2.6		
MW-5	ND - 0.13	ND - 0.019	ND	ND - 0.0018	ND - 1.6	ND	ND - 0.11 >0.0058 on 12-06	ND
MW-6	ND - 1.1, <1 since 03-06	ND - 0.19, <0.071 since 09-01	ND - 0.0050	ND - 0.0070	ND - 7.3	ND	ND - 0.052 since 03-05	ND
MW-7	0.26 - 18, >1 on 09-06	ND - 0.34, >0.071 on 09-06	ND - 0.69	ND - 0.37	ND - 21, <10 since 12-04	ND - 0.81	0.0083 - 0.23 >0.058 on 09-06	detected
MW-8	ND	ND - 0.0013	ND	ND - 0.00086	0.54 - 42, <10 since 03-01	ND - 2.9	ND - 0.069 <0.0058 since 12-06	ND
MW-9	ND - 10, >1 on 12-06	ND - 0.038	0.020 - 0.23	0.0034 - 0.049	1.2 - 39 <10 since 05-04	ND - 0.72	ND - 0.053 >0.0058 on 12-06	ND
MW-12R	ND - 0.56	ND - 0.26, <0.071 since 12-04	ND	ND - 0.0059	ND - 2.5	ND	ND - 0.013 <0.0058 since 05-04	ND
MW-13R	ND	ND - 0.056	ND	ND - 0.0032	ND - 3.5	ND	ND - 0.012 <0.0058 since 05-04	ND
MW-14	ND - 6.8, >1 on 12-06	ND - 0.48, <0.071 since 02-04	0.019 - 0.26	ND - 0.014	2.0 - 37, <10 since 12-05	ND - 1.1		
MW-16	ND - 0.88	ND - 0.029	ND - 0.0010	ND - 0.0037	ND - 1.7	ND		
MW-18	ND - 7.6, <1 since 09-06	ND - 1.8, <0.071 since 09-06	ND - 0.29	ND - 0.067	ND - 0.77	ND		
MW-19	4.2 - 68	ND - 1.4, <0.071 since 06-06	0.16 - 1.1	0.12 - 4.0	0.72 - 19 <10 since 08-04	ND		
MW-20	ND - 1.8, <1 since 03-01	ND - 0.68, <0.071 since 02-02	ND - 0.067	ND - 0.020	ND - 5.0	ND - 0.7		
MW-21	ND - 4.3, SPH on 12-06	ND	ND - 0.019	ND - 0.006	6.1 - 140, SPH on 12-06	ND - 3.3 SPH on 12-06		
MW-22	ND - 5.1, <1 since 11-02	ND - 1.9, <0.071 since 02-03	ND - 0.35	ND - 0.097	0.61 - 9.2	ND - 0.87		
SH-02R	ND - 0.078	ND - 0.087, <0.071 since 11-02	ND - 0.00061	ND - 0.0038	ND - 4.3	ND	ND - 0.010 <0.0058 since 06-06	ND
SH-05R	ND - 1.4, <1 since 09-03	ND	ND	ND - 0.0016	1.3 - 45, <10 since 03-05	ND - 1.0	ND - 0.075 <0.0058 since 03-05	ND
MW-07R	ND	ND	ND	ND - 0.0028	ND - 3.7	ND	ND - 0.045 <0.0058 since 12-06	ND
MW-23	SPH, 4.2 - 7.0 >1 on 12-06	0.87 - 1.4 >0.071 on 12-06	0.046 - 0.19	0.011 - 0.023	SPH, ND - 1.4	ND	ND - 0.014 <0.0058 since 12-05	ND
MW-24	SPH, 26 - 34	2.8 - 4.4	0.88 - 1.4	0.064 - 0.54	SPH, 0.34 - 6.4	ND - 0.54	ND - 0.0069 >0.0058 on 12-07	ND
MW-25	ND - 0.40	ND - 0.013	ND - 0.0034	ND	0.27 - 8.9	ND	ND - 0.034	detected

Notes: * ND but detection limit > 1 during 2 events in 2005

 Recommend reduction in monitoring frequency and/or parameters

 Parameter not analyzed

TABLE 4
PROPOSED GROUNDWATER COMPLIANCE PROGRAM
RECOMMENDED MONITORING FREQUENCY
Kinder Morgan Harbor Island Terminal

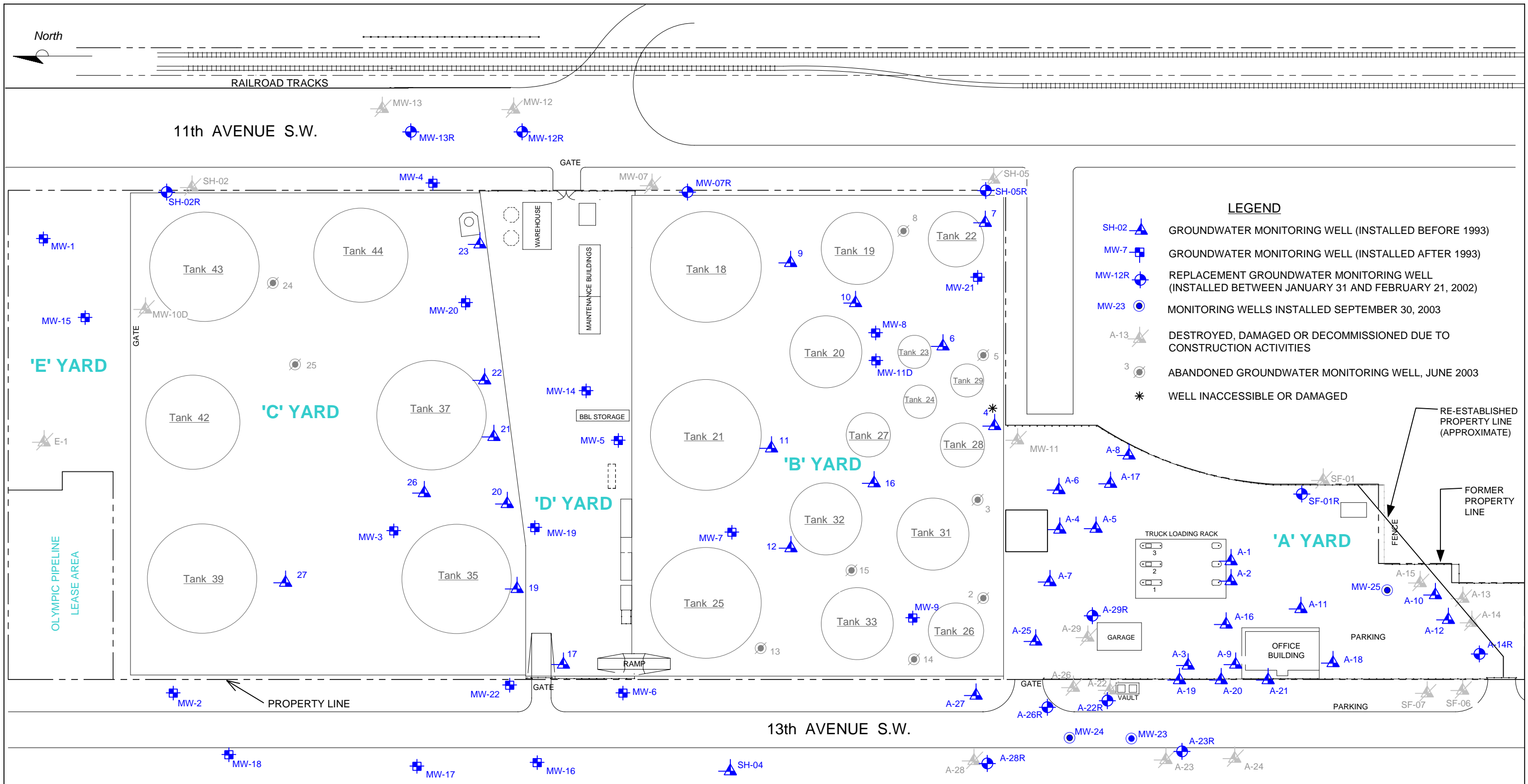
Well ID	Indicator Hazardous Substances				Natural Attenuation Parameters				
	TPH-G/ BTEX	TPH-D/TPH-O	Total Lead	Dissolved Lead	Nitrate (NO3)	Ferrous Iron	Methane	Sulfate (SO4)	Sulfide (H2S)
A-5	Quarterly	Discontinue							
A-8	Annual	Annual							
A-10	Annual	Annual			Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
A-14R	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
A-21	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
A-23R	Quarterly	Discontinue	Annual	Annual	Annual	Annual	Annual	Annual	Annual
A-27	Quarterly	Discontinue			Annual	Annual	Annual	Annual	Annual
A-28R	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
MW-1	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-2	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-3	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-4	Annual	Annual			Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-5	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-6	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
MW-7	Quarterly	Discontinue	Annual	Annual	Annual	Annual	Annual	Annual	Annual
MW-8	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-9	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
MW-12R	Annual	Annual	Annual	Discontinue					
MW-13R	Annual	Annual	Annual	Discontinue					
MW-14	Quarterly	Discontinue			Annual	Annual	Annual	Annual	Annual
MW-16	Annual	Annual							
MW-18	Quarterly	Discontinue							
MW-19	Quarterly	Discontinue			Annual	Annual	Annual	Annual	Annual
MW-20	Annual	Annual			Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-21	Quarterly	Quarterly			Annual	Annual	Annual	Annual	Annual
MW-22	Annual	Annual			Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
SH-02R	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
SH-05R	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-07R	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue
MW-23	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
MW-24	Quarterly	Discontinue	Annual	Discontinue	Annual	Annual	Annual	Annual	Annual
MW-25	Annual	Annual	Annual	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue	Discontinue

Notes: Recommended reduced monitoring frequency

 Parameter not analyzed

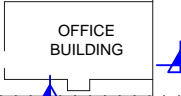
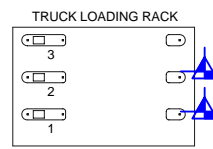
TABLE 5
PROPOSED ANNUAL ANALYSES
GROUNDWATER COMPLIANCE PROGRAM
Kinder Morgan Harbor Island Terminal

Well ID	Indicator Hazardous Substances				Natural Attenuation Parameters				
	TPH-G/ BTEX	TPH-D+ extended	Total Lead	Dissolved Lead	Nitrate (NO3)	Ferrous Iron	Methane	Sulfate (SO4)	Sulfide (H2S)
A-5	4	0							
A-8	1	1							
A-10	1	1			0	0	0	0	0
A-14R	1	1	1	0	0	0	0	0	0
A-21	4	0	1	0	1	1	1	1	1
A-23R	4	0	1	1	1	1	1	1	1
A-27	4	0			1	1	1	1	1
A-28R	4	0	1	0	1	1	1	1	1
MW-1	1	1	1	0	0	0	0	0	0
MW-2	1	1	1	0	0	0	0	0	0
MW-3	1	1	1	0	0	0	0	0	0
MW-4	1	1			0	0	0	0	0
MW-5	1	1	1	0	0	0	0	0	0
MW-6	4	0	1	0	1	1	1	1	1
MW-7	4	0	1	1	1	1	1	1	1
MW-8	1	1	1	0	0	0	0	0	0
MW-9	4	0	1	0	1	1	1	1	1
MW-12R	1	1	1	0					
MW-13R	1	1	1	0					
MW-14	4	0			1	1	1	1	1
MW-16	1	1							
MW-18	4	0							
MW-19	4	0			1	1	1	1	1
MW-20	1	1			0	0	0	0	0
MW-21	4	4			1	1	1	1	1
MW-22	1	1			0	0	0	0	0
SH-02R	1	1	1	0	0	0	0	0	0
SH-05R	1	1	1	0	0	0	0	0	0
MW-07R	1	1	1	0	0	0	0	0	0
MW-23	4	0	1	0	1	1	1	1	1
MW-24	4	0	1	0	1	1	1	1	1
MW-25	1	1	1	0	0	0	0	0	0
Annual Total	74	22	20	2	12	12	12	12	12



LEGEND

- SH-02 ▲ GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 ■ GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R ● REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-23 ● MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- A-13 ▲ DESTROYED, DAMAGED OR DECOMMISSIONED DUE TO CONSTRUCTION ACTIVITIES
- 3 ● ABANDONED GROUNDWATER MONITORING WELL, JUNE 2003
- * WELL INACCESSIBLE OR DAMAGED



APPROX. SCALE

FIGURE 1
SITE MAP
 KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13th AVENUE SOUTHWEST
 SEATTLE, WASHINGTON

PROJECT NO. STKM-001-M.0005	DRAWN BY DL March 2007	
FILE NO. STKM-001-M.0005	PREPARED BY DL March 2007	
REVISION NO. 0	REVIEWED BY WC	

September 4, 2008

Mr. Roger Nye
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue N.E.
Bellevue, Washington 98008-5452

Sent via FedEx Saver

SUBJ: Technical Revision Request – Low-Flow Groundwater Sampling
Kinder Morgan Harbor Island Terminal
Seattle, Washington
Delta Project No. STKM-001-P.0005



Dear Mr. Nye:

Delta Consultants (Delta) has prepared this request on behalf of Kinder Morgan Liquid Terminals, LLC (KMLT) to propose a technical revision to Appendix A (Compliance Sampling and Analysis Plan) of the Compliance Monitoring Plan, dated October 27, 1999. This letter request supersedes a previous request, dated July 16, 2008. The Compliance Monitoring Plan was included as Appendix F of the Model Toxics Control Act (MTCA) Consent Decree 00-2-07760-25EA, which was executed to implement remedial actions for the site. As discussed in a March 31, 2008 telephone conversation with you, KMLT is proposing a revision to Section 2.3.2, Sampling Procedures, of the Compliance Sampling and Analysis Plan (Plan) to replace the purge-sampling methodology with low-flow sampling techniques.

CURRENT PURGE-SAMPLING PROCEDURES

Sampling ground water traditionally involves purging a monitoring well to remove stagnant water in the well casing prior to sampling. The current sampling procedure incorporated into the Plan includes purging three to five volumes of the well prior to collecting a groundwater sample. This well evacuation approach can pose several problems, including: 1) as the well recovers, groundwater cascading in the well screen can affect contaminant and dissolved gas concentrations; 2) draining water from the sand pack surrounding the screen can result in air being trapped in the pore spaces, also affecting dissolved gas concentrations; and 3) increased turbidity can affect total and dissolved metal concentrations.

In the Revised Site-Wide Groundwater Compliance Monitoring Plan, dated June 21, 2007, Delta presented an evaluation of historical groundwater analytical results with respect to established cleanup criteria. During the preparation of the Revised Plan, Delta and Ecology discussed the periodic occurrence of dissolved lead in the wells sampled. These occurrences appeared to be random, with no apparent trend to the occurrence.

a member of:



At the time, it was mentioned that turbulence created during sampling may have caused the occurrence of dissolved lead. Eliminating turbulence during sampling may end or reduce this occurrence.

PROPOSED LOW-FLOW SAMPLING PROCEDURES

Low-flow/low-volume sampling is a method that can be used to overcome many of the problems created by traditional purge-sampling. Low-flow sampling can minimize turbidity and minimize groundwater chemistry alteration. By pumping at very low flowrates from the well screen zone, disturbance to the water column in the well is significantly reduced and stress on the surrounding formation is minimized. Samples obtained in this manner will better reflect contaminant concentrations and ground-water chemistry at ambient flow conditions.

Sampling Procedures

KMLT proposes to replace Section 2.3.2 of the Compliance Sampling and Analysis Plan with the following low-flow procedures for sampling the site's compliance wells.

Water Level Measurements

Water level measurements will be taken prior to purging and will be recorded to the nearest 0.01 foot. Measurements will be taken from least contaminated wells first followed by wells in increasing order of contamination. If product is observed, the thickness will be measured with an electronic oil/water interface meter. Wells with measurable product will not be purged or sampled.

Monitoring Well Purging

Purging will be conducted in a manner such that water levels do not drop more than two feet below static. Wells will be purged using dedicated downhole tubing connected to a surface portable peristaltic pump. The pump rate will be monitored and set at a rate of less than 1,000 ml/min. During purging, the following parameters will be monitored: dissolved oxygen, pH, specific conductance, temperature, turbidity, and depth to water. Field parameters will be measured in a flow-through container. Water level data will be collected with an electronic indicator probe. Measurements will be taken beginning with the first water purged from the well. During purging, additional measurements will be taken and recorded as frequently as possible. Measurements will be recorded to the following standards: dissolved oxygen to 0.05 mg/L; pH to ± 0.01 units; specific conductance to \pm uS/cm (measured specific conductance ≤ 99 uS/cm), to ± 10 uS/cm (99 uS/cm < specific conductance < 1,000 uS/cm), or to ± 100 uS/cm (measured specific conductance > 1,000 uS/cm); temperature to $\pm 0.5^\circ\text{C}$; and turbidity to 0.1 NTU. The meters will be calibrated near the beginning and end of each sampling day.

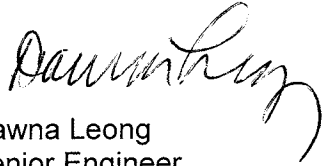
Groundwater samples will be collected after specific conductance and dissolved oxygen measurements are within 10 percent for 3 consecutive readings.

Sample Collection

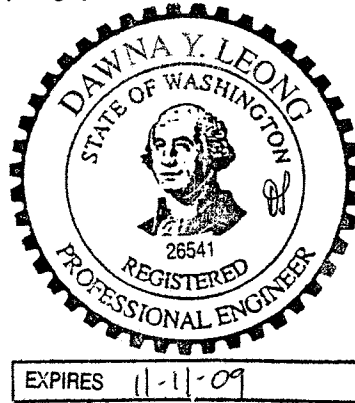
Following purging, samples will be collected for laboratory analyses. Samples will be pumped directly into laboratory-supplied sample containers, and each sample bottle will be labeled with the sample identification number, the sample date, the facility name, and the name of the technician who performed the sampling. Samples will be collected in the following order: TPH-G/BTEX, methane (if analyzed, TPH-Dx, metals (if analyzed), and field analytes (if analyzed). Duplicate samples will be collected by alternately filling the sample and the duplicate sample bottles.

KMLT proposes to implement the low-flow sampling procedures described herein upon approval from Ecology. Please call if you have any questions regarding the contents of this letter, or if you would like to discuss any aspect of the proposed sampling procedures. Delta looks forward to your approval of this proposal.

Sincerely,
DELTA CONSULTANTS, INC.



Dawna Leong
Senior Engineer



cc: Mr. Robert Truedinger, Kinder Morgan Energy Partners, L.P., Richmond, California (Electronic Copy)
Ms. Kelsy Hardy, Kinder Morgan Energy Partners, L.P., Orange, California (File Copy - CD Only)



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

August 7, 2007

Robert Truedinger
Remediation Project Manager
Kinder Morgan Energy Partners
1140 Canal Boulevard
Richmond, CA 94804

Re: Reduced Groundwater Monitoring Plan

Dear Mr. Truedinger:

This letter is to indicate the Department of Ecology's approval of the Site-Wide Groundwater Compliance Monitoring Plan – Proposed Reduced Monitoring, as presented in Delta Environmental Consultants' submittal dated June 21, 2007.

Sorry that this approval has taken awhile. Further adjustments / reductions in the monitoring may be appropriate in the future.

Sincerely,

A handwritten signature in cursive script that reads "Roger K. Nye".

Roger K. Nye
Project Coordinator

cc: Ward Crell, Dawna Leong: Delta Environmental Consultants





Ms. Maura O'Brien
Washington State Department of Ecology
Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008-5452

Subject:

Revised Site Groundwater Monitoring Plan

Kinder Morgan Harbor Island Terminal
KMLT File No. 29.79.02 (81171)
2720 13th Avenue Southwest
Seattle, Washington 98134

Dear Ms. O'Brien:

On behalf of Kinder Morgan Liquids Terminal, LLC (KMLT), ARCADIS US, Inc (ARCADIS) is pleased to submit this Revised Site Groundwater Monitoring Plan (Plan) for the KMLT Harbor Island Terminal located at 2720 13th Avenue Southwest in Seattle, Washington (site). The purpose of this Plan is to request and provide justification to support the reduction of groundwater sampling frequency at the site for the compliance and performance monitoring programs.

Reduced frequency of groundwater monitoring at the site is warranted due to:

- Quarterly groundwater quality data has been collected at the site since 2002
- Current groundwater conditions onsite are stable and not migrating offsite
- There have been no product releases reported at the site since 2010
- SPH has only been observed in one monitoring well (A-6) in the last 9 quarterly monitoring events.

Cleanup activities at the site are being conducted under a Consent Decree (CD) number 00-2-07760-2SEA between Washington State Department of Ecology (Ecology) and GATX Terminals Corporation (GATX) executed on April 4, 2000. KMLT assumed the obligations of the CD with the purchase of GATX Harbor Island Terminal in 2001. Compliance groundwater monitoring and sampling is currently

ARCADIS U.S., Inc.
1100 Olive Way
Suite 800
Seattle
Washington 98101
Tel 206.325.5254
Fax 206.325.8218
www.arcadis-us.com

ENVIRONMENT

Date:
May 20, 2014

Contact:
Matt Annis

Phone:
206.726.4716

Email:
matt.annis@arcadis-us.com

Our ref:
WA000804.2014

performed in accordance with the *Proposed Reduced Monitoring-Site-Wide Groundwater Compliance Monitoring Plan* (Reduced Monitoring Plan [Delta Consultants Inc. (Delta) 2007]). Additionally, low-flow groundwater sampling techniques are used in accordance with the Technical Revision Request (Delta 2008).

In addition, performance monitoring groundwater samples are collected in accordance with the letter Response to Comments - *B and D Yards Groundwater Remediation Engineering Design Report* dated December 12, 2012 (ARCADIS 2012) to evaluate the overall effectiveness of the sulfate land application.

Contaminants of Concern and Cleanup Levels

The approved Reduced Monitoring Plan (Delta 2007) outlines site-specific contaminants of concern (COCs) and applicable cleanup levels for groundwater. These site-specific COCs and their cleanup levels are as follows:

- Total Petroleum Hydrocarbons as Gasoline Range Organics at 1.0 milligrams per liter (mg/L)
- Total Petroleum Hydrocarbons as Diesel Range Organics at 10 mg/L
- Total Petroleum Hydrocarbons as Heavy Oil at 10 mg/L
- Benzene at 0.071 mg/L
- Toluene at 200 mg/L
- Ethylbenzene at 29 mg/L
- Total Lead at 0.0058 mg/L
- No Product Sheen

Current Groundwater Monitoring Plan

Compliance Monitoring

In accordance with the Reduced Monitoring Plan (Delta 2007) and Technical Revision Request (Delta 2008), the current groundwater compliance plan schedule is presented in Table 1 and Figure 2.

Performance Monitoring

In accordance with the Response to Comments - *B and D Yards Groundwater Remediation Engineering Design Report* dated December 12, 2012 (ARCADIS 2012), the current groundwater performance plan schedule is presented in Table 1.

Proposed Groundwater Monitoring Plan

The section below summarizes the proposed changes to the current groundwater monitoring plan. Groundwater gauging and sample collection protocols and procedures will continue to be implemented in accordance with the Ecology-approved plans mentioned above.

Compliance Monitoring

This proposed groundwater monitoring plan was prepared with consideration for the requirements of the Model Toxics Control Act (MTCA) regulations and requirements from Exhibit F of the CD. The achievement of cleanup levels in groundwater is measured at points of performance and compliance located within the hydrocarbon plume area and at the edges of the site in accordance with section 1.2 in Exhibit F of the CD. Points of compliance will not be altered for this plan and consist of the 44 wells presented in Table 2. Hydrograph and COC trend graphs for monitoring wells MW-7, MW-9, MW-14, and MW-19 are presented in Attachment A. The graphs are representative of the compliance points and indicate stable or decreasing groundwater conditions.

Future compliance groundwater monitoring events are proposed to be conducted on a semi-annual basis until the site has achieved compliance with the applicable cleanup levels. The proposed compliance groundwater monitoring plan is summarized in Table 2 and presented in Figure 3.

Proposed Performance Groundwater Monitoring Plan

In accordance with the Response to Comments letter dated December 20, 2012 and the KMLT *Remedial Action Report – B and D Yards* (RAP) [ARCADIS 2013]), the current groundwater performance monitoring plan will be conducted quarterly through third quarter 2014.

After the completion of the third quarter 2014 monitoring event KMLT proposes to alter the performance monitoring schedule to semi-annual monitoring which will be conducted concurrently with compliance monitoring activities. The proposed performance groundwater monitoring plan is summarized in Table 2 and presented in Figure 4.

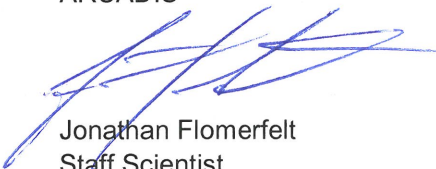
Schedule

The proposed Plan would be initiated during the third quarter 2014 sampling event upon Ecology approval; annual sampling will be conducted in the third quarter of each year.


If you have any questions or comments, please contact Matt Annis at 206.726.4716 or by email at matt.annis@arcadis-us.com.

Sincerely,

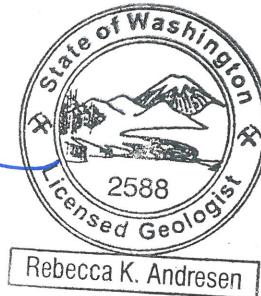
ARCADIS



Jonathan Flomerfelt
Staff Scientist



Rebecca Andresen, L.G.
Associate Vice President



Copies:

- Mr. Dave Rowland, KMLT, Seattle (CD Copy)
- Mr. Robert Truedinger, c/o Stephanie Randall, KMLT, Orange, CA (CD copy)
- Stephanie Randall, KMLT, Orange, CA (File Copy)

Tables

Table 1	Current Groundwater Monitoring
Table 2	Proposed Groundwater Monitoring Plan

Figures

Figure 1	Site Location
Figure 2	Current Groundwater Monitoring Plan
Figure 3	Proposed Groundwater Monitoring Plan
Figure 4	Proposed Performance Monitoring Plan

Attachments

Attachment A	Hydrographs and Trend Graphs
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Tables

Table 2
Proposed Monitoring Schedule
2014 Revised Groundwater Monitoring Plan
Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
Seattle, Washington

Well	Sampling Schedule	GRO by NWTPH-GX	DRO by NWTPH-DX	HO by NWTPH-DX	BTEX by EPA 8260B	Total and Dissolved Lead by EPA 200.8	MNA Geochemical Parameters ¹	Depth to Water/SPH by downhole meter
A-4	1Q							X
	3Q							X
A-5	1Q	X			X			X
	3Q	X			X			X
A-6	1Q							X
	3Q							X
A-8	1Q							X
	3Q	X	X	X	X			X
A-10	1Q							X
	3Q	X	X	X	X			X
A-11	1Q							X
	3Q							X
A-12	1Q							X
	3Q							X
A-14R	1Q							X
	3Q	X	X	X	X	X		X
A-16	1Q							X
	3Q							X
A-18	1Q							X
	3Q							X
A-19	1Q							X
	3Q							X
A-20	1Q							X
	3Q							X

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A-21	1Q	X			X		X	X
	3Q	X			X	X	X	X
A-22R	1Q							X
	3Q							X
A-23R	1Q							X
	3Q	X			X		X	X
A-25	1Q							X
	3Q							X
A-26R	1Q							X
	3Q							X
A-27	1Q	X			X		X	X
	3Q	X			X		X	X
A-28R	1Q	X			X		X	X
	3Q	X			X	X	X	X
11 ²	1Q	X			X		X	X
	3Q	X			X		X	X
12 ²	1Q	X			X		X	X
	3Q	X	X	X	X	X	X	X
MW-1	1Q							X
	3Q	X	X	X	X	X		X
MW-2	1Q							X
	3Q	X	X	X	X	X	X	X
MW-3	1Q							X
	3Q	X	X	X	X	X		X

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MW-4	1Q							X
	3Q	X	X	X	X			X
MW-5	1Q							X
	3Q	X	X	X	X	X		X
MW-6	1Q							X
	3Q	X			X	X	X	X
MW-7 ²	1Q	X			X		X	X
	3Q	X			X	X	X	X
MW-8	1Q							X
	3Q	X	X	X	X	X		X
MW-9 ²	1Q	X			X		X	X
	3Q	X			X	X	X	X
MW-12R	1Q							X
	3Q	X	X	X	X	X	X	X
MW-14	1Q							X
	3Q	X			X		X	X
MW-16	1Q							X
	3Q	X	X	X	X			X
MW-18	1Q	X			X			X
	3Q	X			X			X
MW-19 ²	1Q	X			X		X	X
	3Q	X			X		X	X
MW-20	1Q							X
	3Q	X	X	X	X			X

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MW-21	1Q	X	X	X	X		X	X
	3Q	X	X	X	X		X	X
MW-22	1Q							X
	3Q	X	X	X	X			X
MW-23	1Q	X			X		X	X
	3Q	X			X	X	X	X
MW-24	1Q	X			X		X	X
	3Q	X			X	X	X	X
MW-25	1Q							X
	3Q	X	X	X	X	X		X
MW-07R	1Q							X
	3Q	X	X	X	X	X	X	X
SH-02R	1Q							X
	3Q	X	X	X	X	X	X	X
SH-05R	1Q							X
	3Q	X	X	X	X	X		X
TMW-B1	1Q							X
	3Q	X			X			

Table 2
Proposed Monitoring Schedule
2014 Revised Groundwater Monitoring Plan
Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
Seattle, Washington

Well	Sampling Schedule	GRO by NWTPH-GX	DRO by NWTPH-DX	HO by NWTPH-DX	BTEX by EPA 8260B	Total and Dissolved Lead by EPA 200.8	MNA Geochemical Parameters ¹	Depth to Water/SPH by downhole meter
TMW-1 ²	1Q	X			X		X	X
	3Q	X			X		X	X
TMW-2 ²	1Q	X			X		X	X
	3Q	X			X		X	X
TMW-3 ²	1Q	X			X		X	X
	3Q	X			X		X	X
TMW-4 ²	1Q	X			X		X	X
	3Q	X			X		X	X
TMW-5 ²	1Q	X			X		X	X
	3Q	X			X		X	X
TMW-6 ²	1Q	X			X		X	X
	3Q	X			X		X	X

Notes

1 Monitored Natural Attenuation (MNA) Geochemical Parameters include dissolved oxygen, methane, ferrous iron, nitrate, sulfate, and sulfide
2 Performance monitoring locations
GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics by Northwest Method NWTPH-Gx
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes by Environmental Protection Agency (EPA) Method 8260B.
1Q, 2Q, 3Q, 4Q = Denotes the quarter for each sampling event
-- Not Applicable

Table 1
Current Monitoring Schedule
2014 Revised Groundwater Monitoring Plan
Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
Seattle, Washington

Well	Sampling Schedule	GRO by NWTPH-GX	DRO by NWTPH-DX	HO by NWTPH-DX	BTEX by EPA 8260B	Total and Dissolved Lead by EPA 200.8	MNA Geochemical Parameters ¹	Depth to Water/SPH by downhole meter
A-4	1Q, 3Q, 4Q							X
	2Q							X
A-5	1Q, 3Q, 4Q	X			X			X
	2Q	X			X			X
A-6	1Q, 3Q, 4Q							X
	2Q							X
A-8	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X
A-10	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X
A-11	1Q, 3Q, 4Q							X
	2Q							X
A-12	1Q, 3Q, 4Q							X
	2Q							X
A-14R	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
A-16	1Q, 3Q, 4Q							X
	2Q							X
A-18	1Q, 3Q, 4Q							X
	2Q							X
A-19	1Q, 3Q, 4Q							X
	2Q							X
A-20	1Q, 3Q, 4Q							X
	2Q							X

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A-21	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
A-22R	1Q, 3Q, 4Q							X
	2Q							X
A-23R	1Q, 3Q, 4Q	X			X			X
	2Q	X			X		X	X
A-25	1Q, 3Q, 4Q							X
	2Q							X
A-26R	1Q, 3Q, 4Q							X
	2Q							X
A-27	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X		X	X
A-28R	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
12	1Q, 3Q, 4Q							X
	2Q							X
MW-1	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
MW-2	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X	X	X
MW-3	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
MW-4	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X

**Table 1
Current Monitoring Schedule
2014 Revised Groundwater Monitoring Plan
Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
Seattle, Washington**

Well	Sampling Schedule	GRO by NWTPH-GX	DRO by NWTPH-DX	HO by NWTPH-DX	BTEX by EPA 8260B	Total and Dissolved Lead by EPA 200.8	MNA Geochemical Parameters ¹	Depth to Water/SPH by downhole meter
MW-5	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
MW-6	1Q, 3Q, 4Q	X			X			X
	2Q	X			X	X	X	X
MW-7	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
MW-8	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
MW-9	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
MW-12R	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X	X	X
MW-14	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X		X	X
MW-16	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X
MW-18	1Q, 3Q, 4Q	X			X			X
	2Q	X			X			X
MW-19	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X		X	X
MW-20	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X
MW-21	1Q, 3Q, 4Q	X	X	X	X		X	X
	2Q	X	X	X	X		X	X

Table 1
Current Monitoring Schedule
2014 Revised Groundwater Monitoring Plan
Kinder Morgan Liquids Terminals, LLC, Harbor Island Terminal
Seattle, Washington

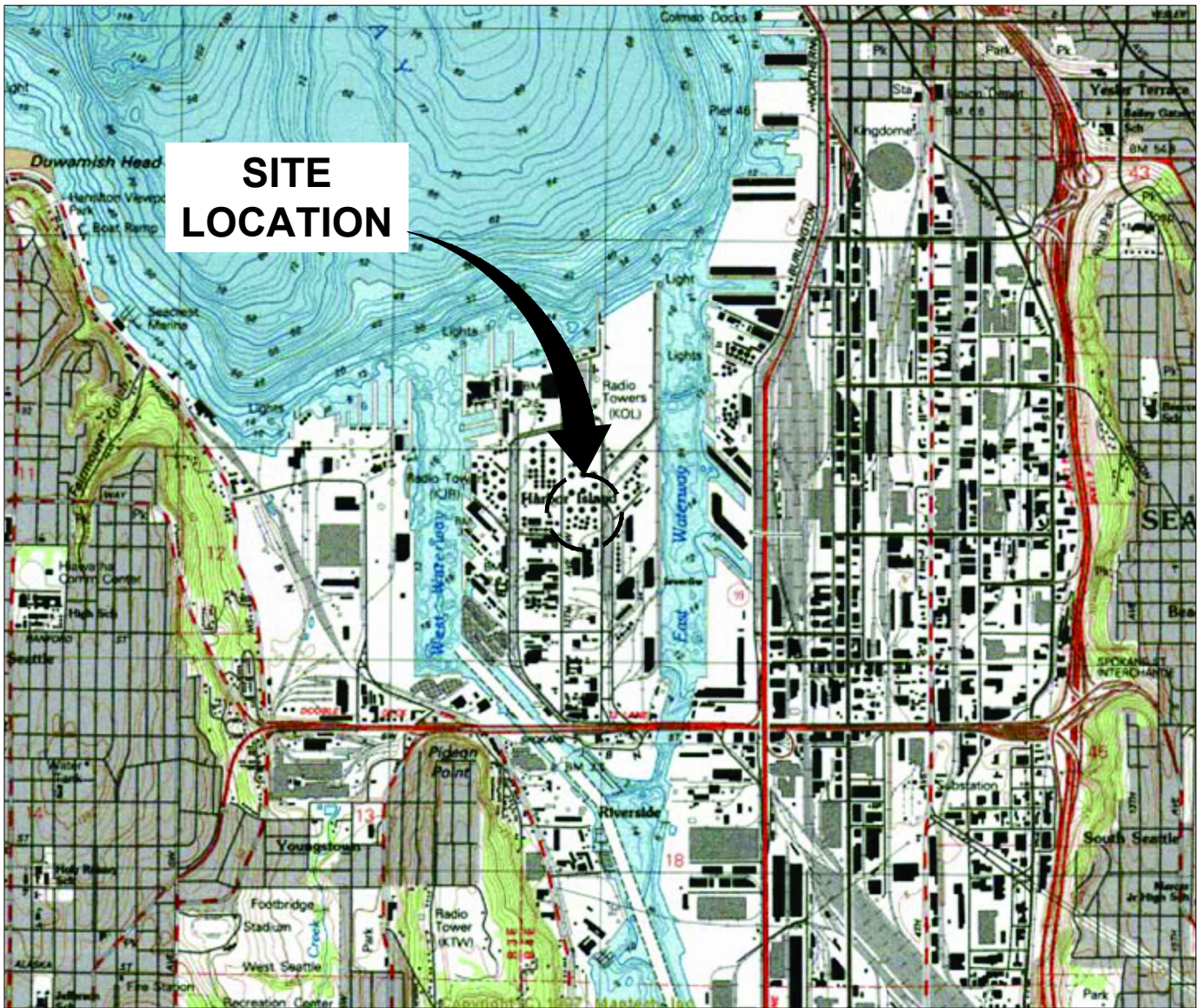
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MW-22	1Q, 3Q, 4Q							X
	2Q	X	X	X	X			X
MW-23	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
MW-24	1Q, 3Q, 4Q	X			X		X	X
	2Q	X			X	X	X	X
MW-25	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X		X
MW-07R	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X	X	X
SH-02R	1Q, 3Q, 4Q							X
	2Q	X	X	X	X	X	X	X
SH-05R	1Q, 3Q, 4Q							X
	2Q							X
TMW-B1	1Q, 3Q, 4Q							X
	2Q	X			X			

Notes

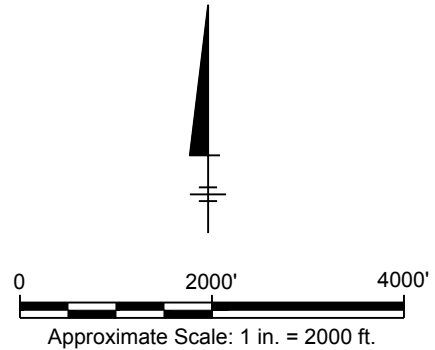
1 Monitored Natural Attenuation (MNA) Geochemical Parameters include dissolved oxygen, methane, ferrous iron, nitrate, sulfate, and sulfide
GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics by Northwest Method NWTPH-Gx
BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes by Environmental Protection Agency (EPA) Method 8260B.
1Q, 2Q, 3Q, 4Q = Denotes the quarter for each sampling event
-- Not Applicable

Figures

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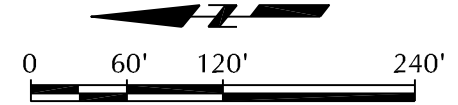
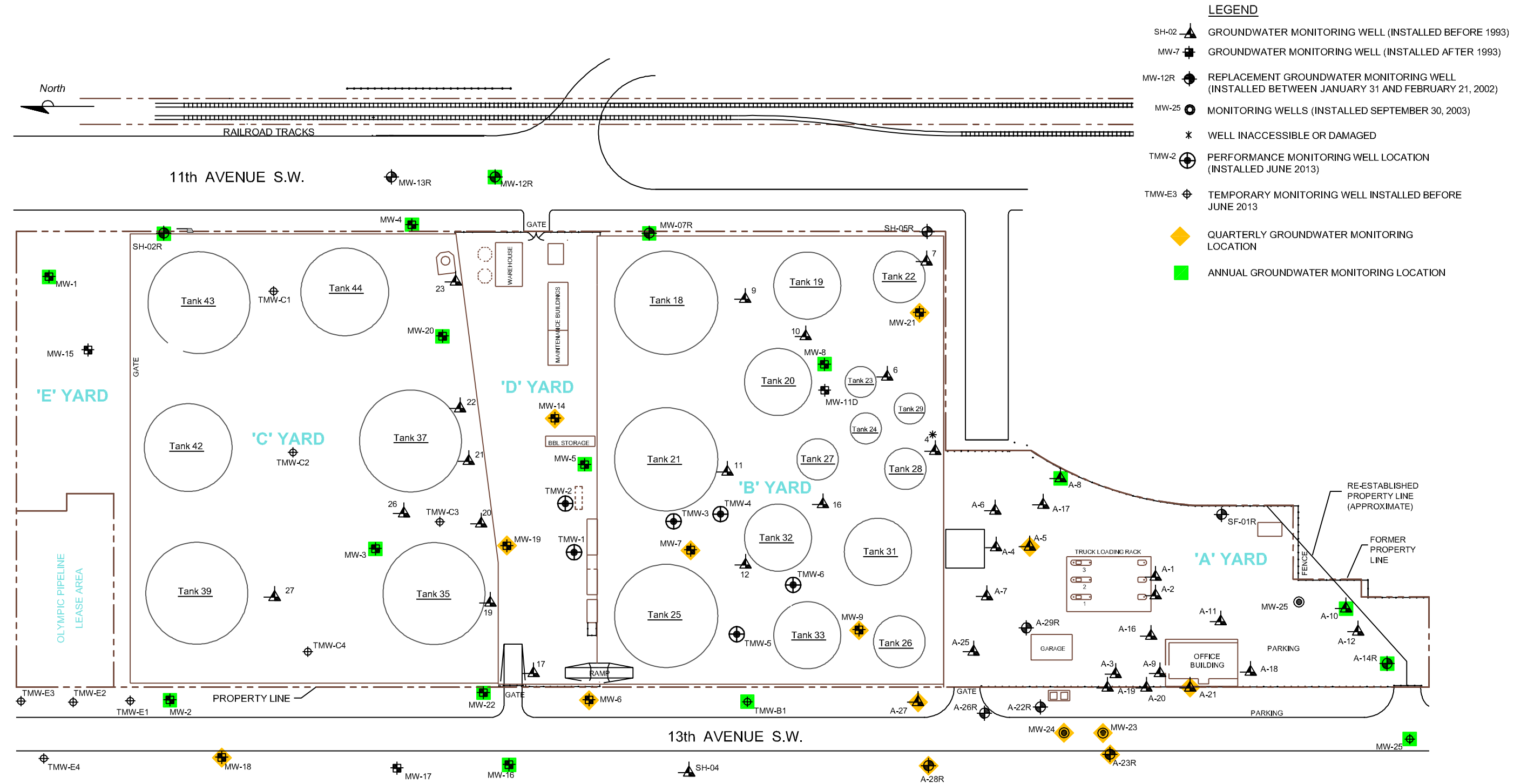


REFERENCE: BASE MAP USGS 7.5. MINUTE TOPOGRAPHIC MAP SEATTLE SOUTH, WASHINGTON 1083



KINDER MORGAN LIQUID TERMINALS, LLC HARBOR ISLAND TERMINAL 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON 2014 REVISED GROUNDWATER MONITORING PLAN	
SITE LOCATION MAP	
	FIGURE 1

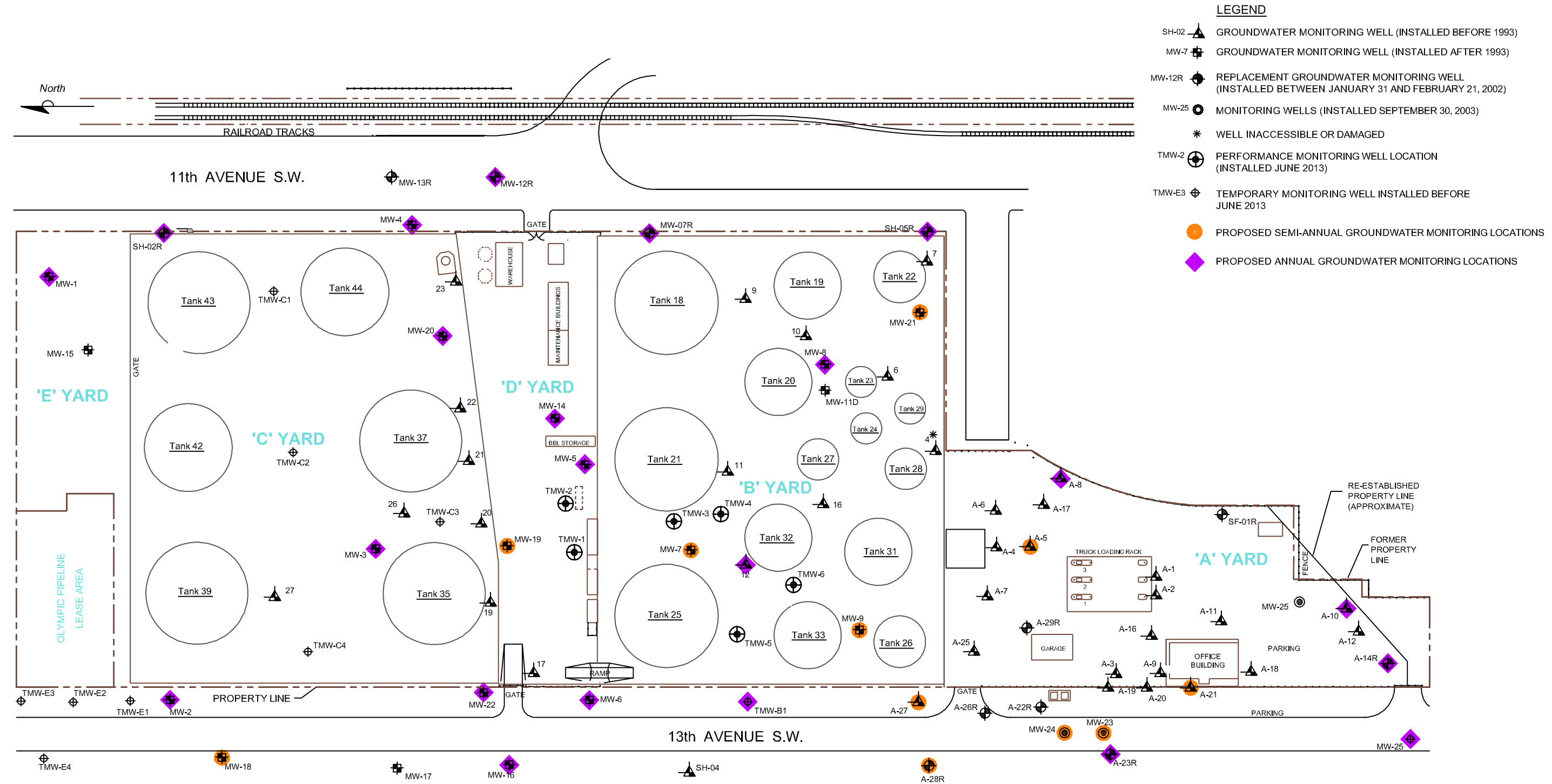
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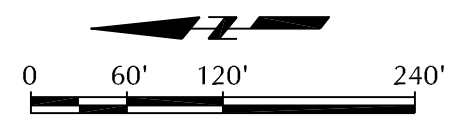
KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
2014 REVISED GROUNDWATER MONITORING PLAN
CURRENT QUARTERLY AND ANNUAL GROUNDWATER MONITORING LOCATIONS

FIGURE
2

CITY:\Read\ DIV\GROUP\F\Read\ DB\Read\ LD\Op\ PIC\Op\ PM\Read\ TM\Op\ LYR\Option\OFF\REF*
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- LEGEND**
- SH-02 ▲ GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
 - MW-7 ◻ GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
 - MW-12R ● REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
 - MW-25 ● MONITORING WELLS (INSTALLED SEPTEMBER 30, 2003)
 - * WELL INACCESSIBLE OR DAMAGED
 - TMW-2 ◉ PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
 - TMW-E3 ◉ TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013
 - PROPOSED SEMI-ANNUAL GROUNDWATER MONITORING LOCATIONS
 - ◆ PROPOSED ANNUAL GROUNDWATER MONITORING LOCATIONS



KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
2014 REVISED GROUNDWATER MONITORING PLAN

**PROPOSED SEMI-ANNUAL AND ANNUAL
 GROUNDWATER MONITORING
 LOCATIONS**


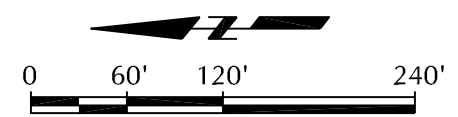
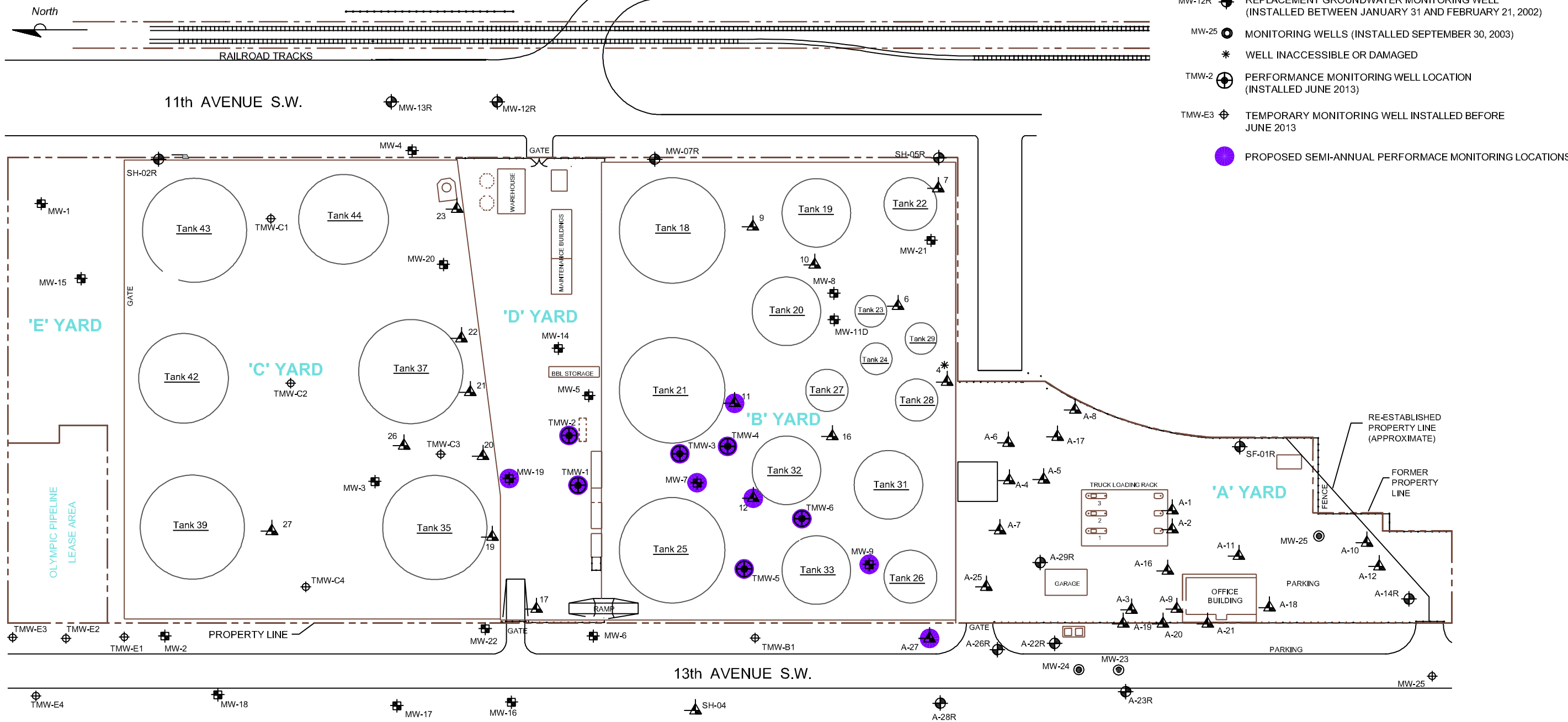


FIGURE
3

CITY:\Read\ D:\GROUP\Read\ DB\Read\ LD\Op\ PIC\Op\ PM\Read\ TM\Op\ Lyr\Option\Off\REF* G:\EN\CAD\Imeryville\ACT\TWA000804\2014\REV\GM\PO\GM\WA000804\BIM.dwg LAYOUT: 4. SAVER: 3/19/2014 11:44 AM ACADVER: 18.1 S (LMS TECH) PAGES: 18. PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 4/16/2014 4:37 PM BY: REYES, ALEC XREFS: IMAGES: PROJECTNAME: --


LEGEND

- SH-02 GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 MONITORING WELLS (INSTALLED SEPTEMBER 30, 2003)
- * WELL INACCESSIBLE OR DAMAGED
- TMW-2 PERFORMANCE MONITORING WELL LOCATION (INSTALLED JUNE 2013)
- TMW-E3 TEMPORARY MONITORING WELL INSTALLED BEFORE JUNE 2013
- PROPOSED SEMI-ANNUAL PERFORMANCE MONITORING LOCATIONS



KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
2014 REVISED GROUNDWATER MONITORING PLAN

PROPOSED PERFORMANCE MONITORING LOCATIONS

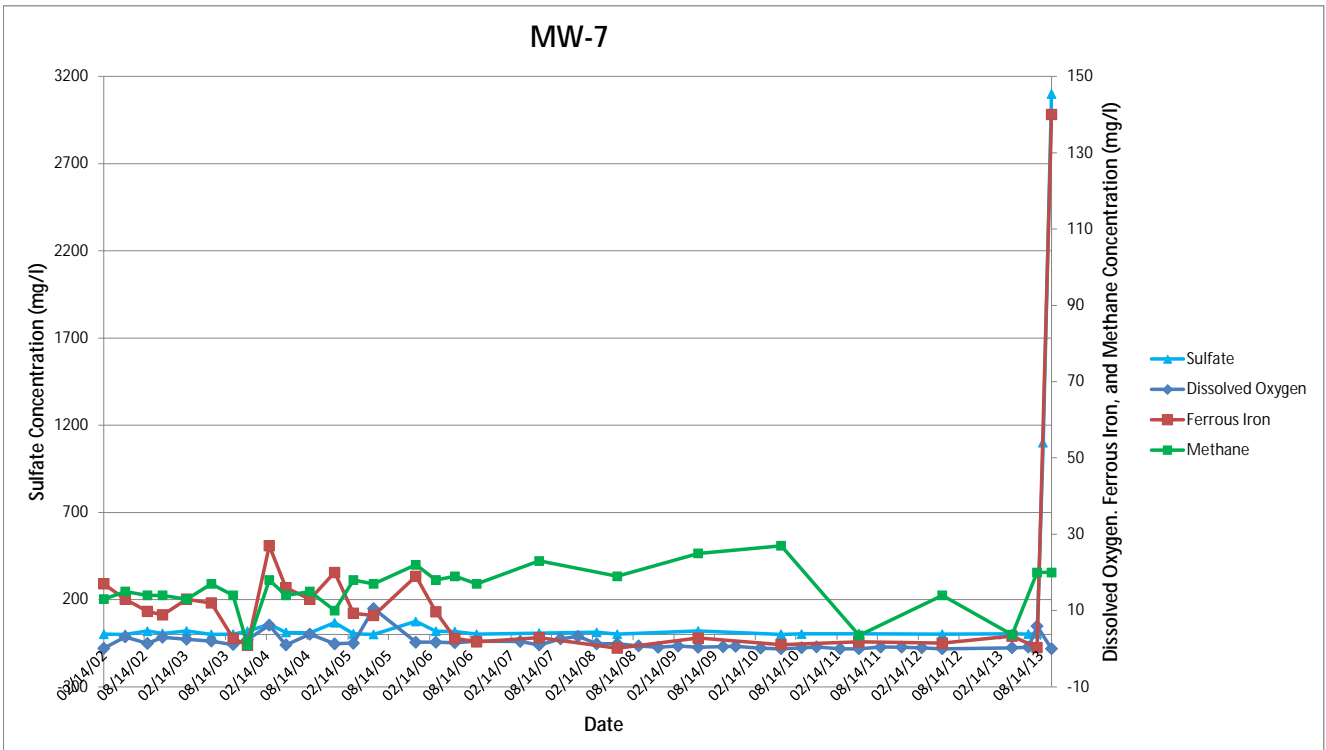
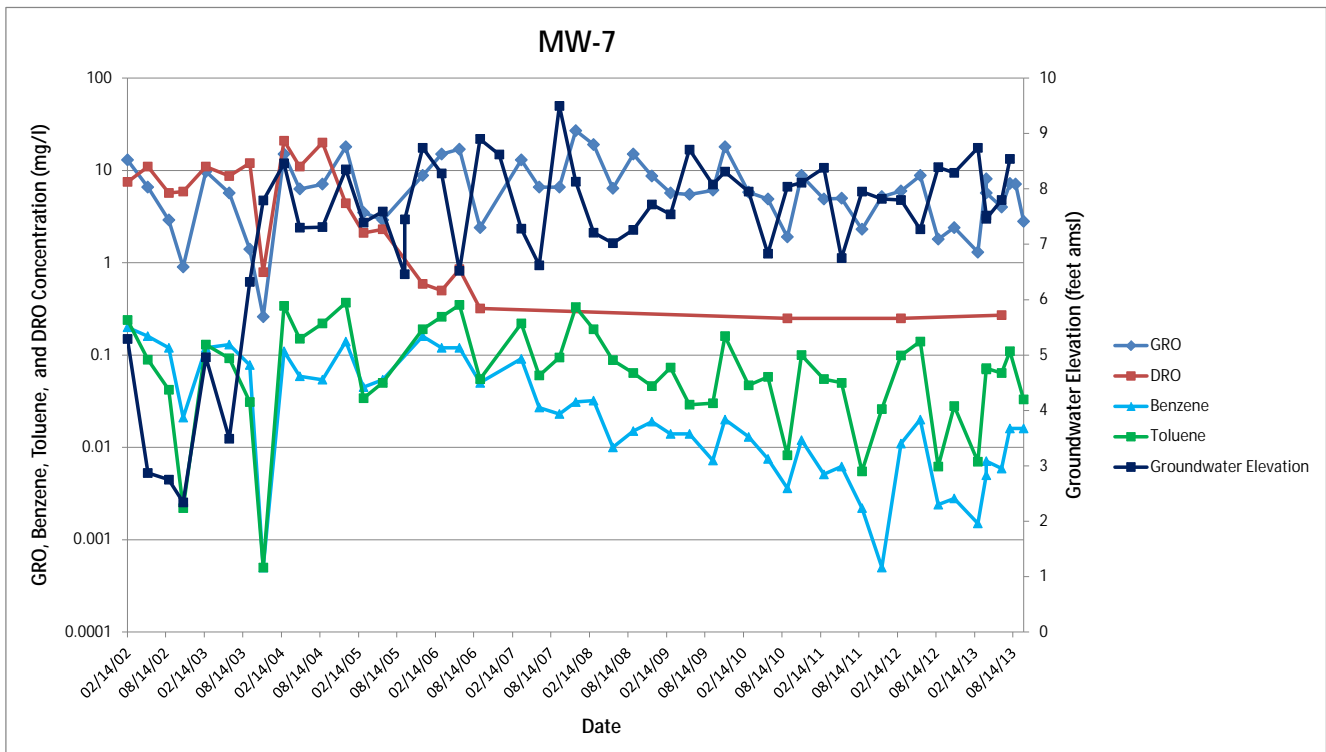


FIGURE


4

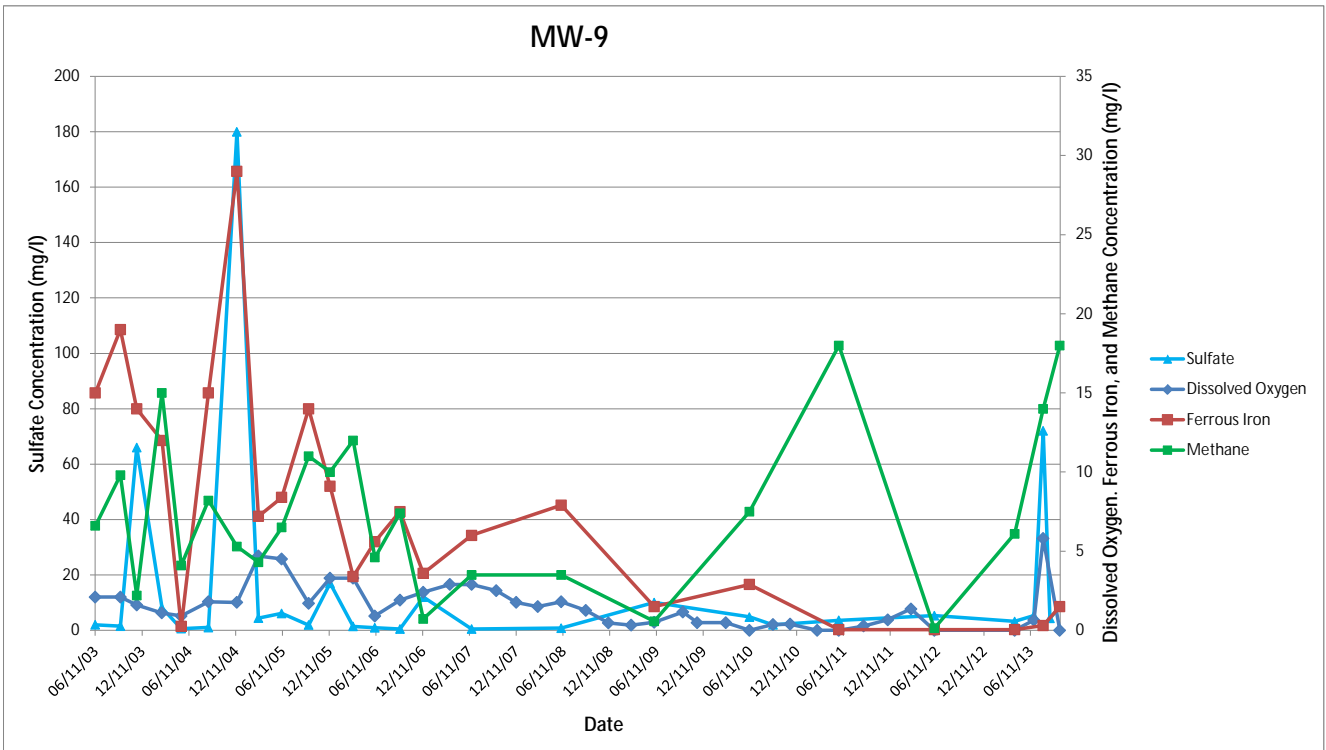
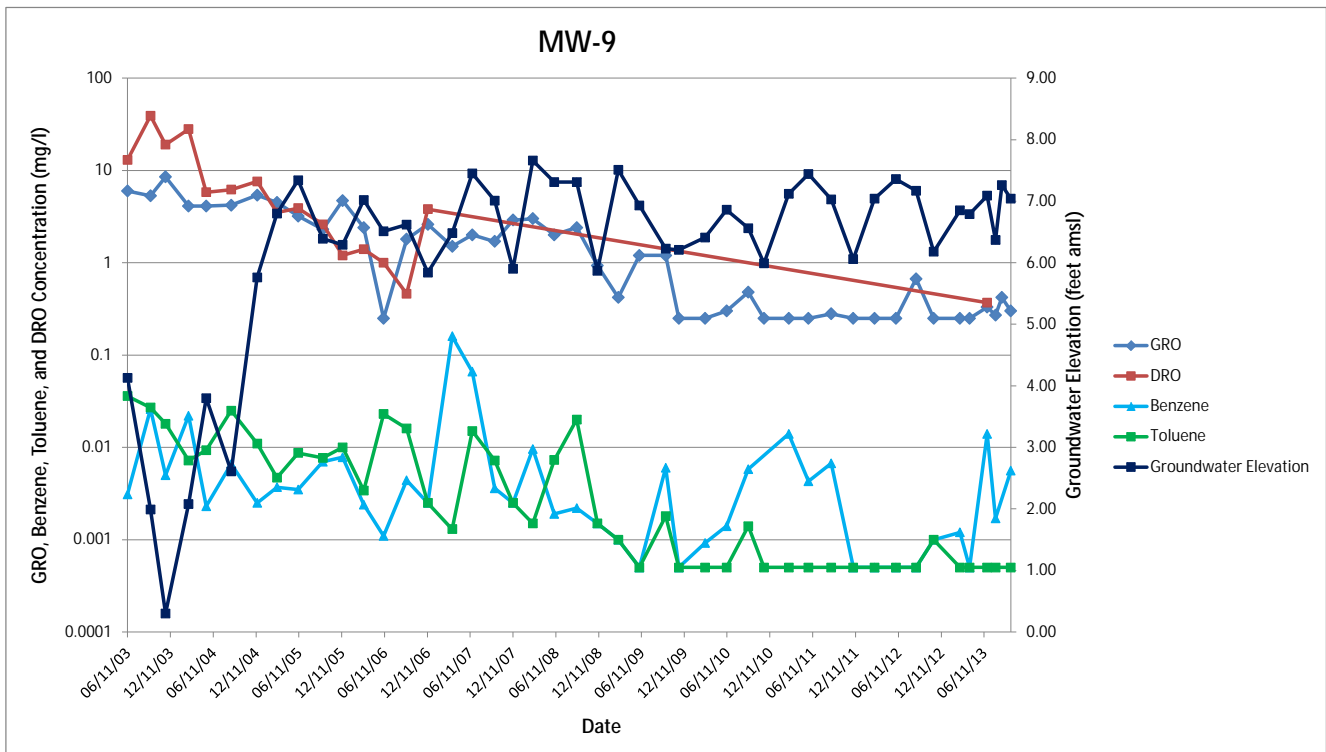


Attachment A




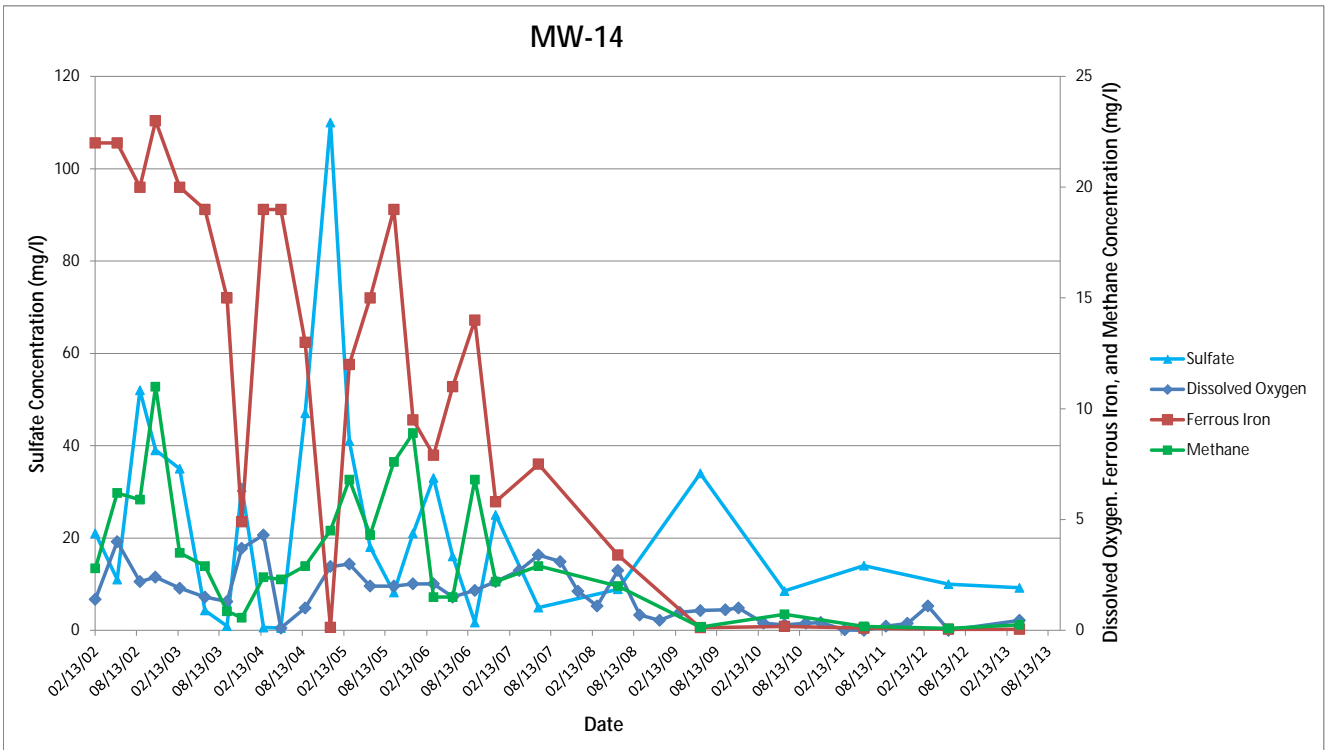
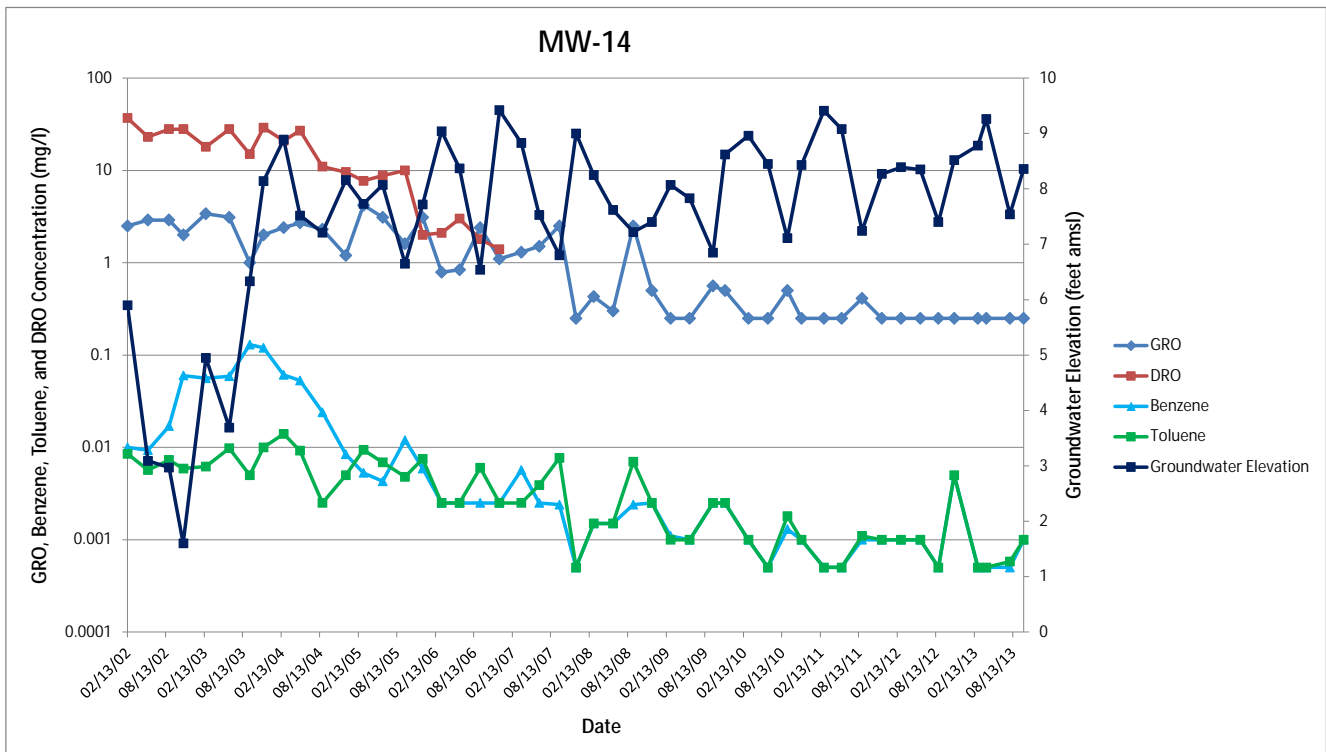
KINDER MORGAN LIQUID TERMINALS, LLC
 HARBOR ISLAND TERMINAL
 2720 13TH AVENUE SOUTHWEST, SEATTLE, WASHINGTON
2014 REVISED GROUNDWATER MONITORING PLAN
ATTACHMENT A
HYDROGRAPH AND CONSTITUENT TREND GRAPHS






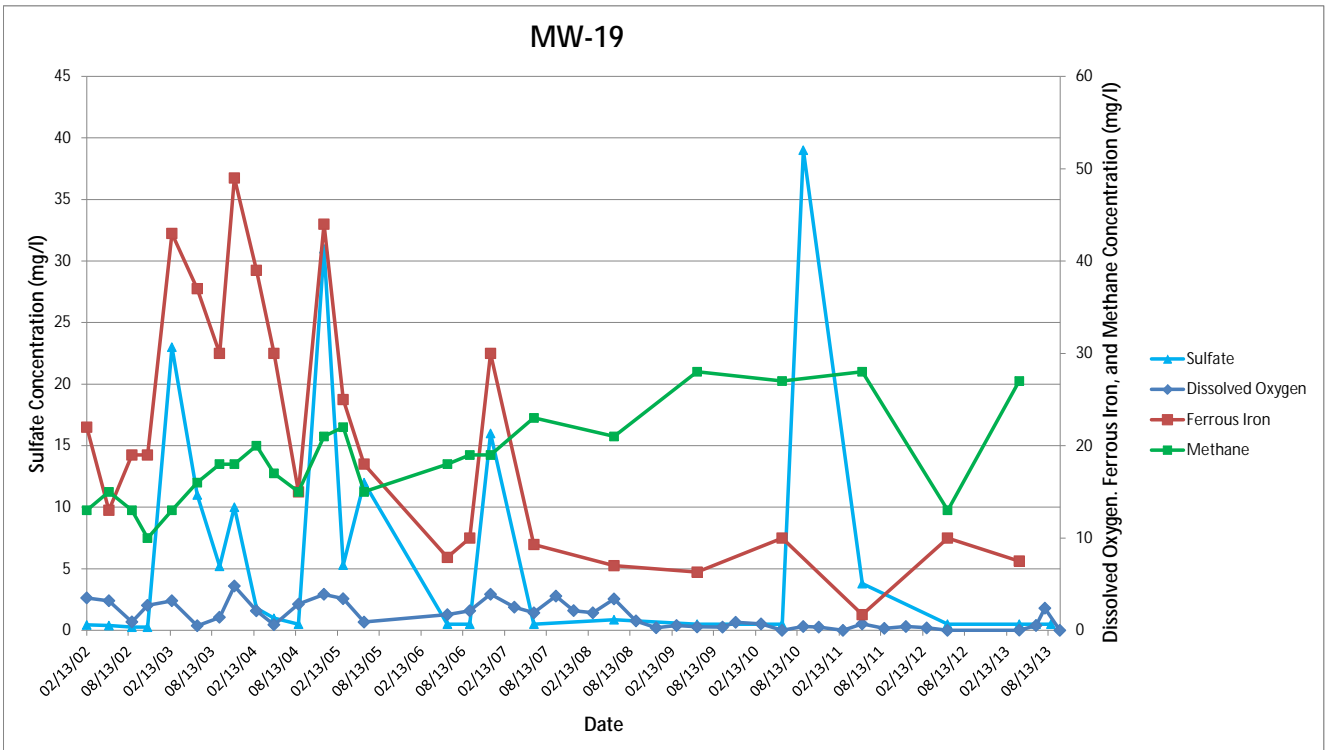
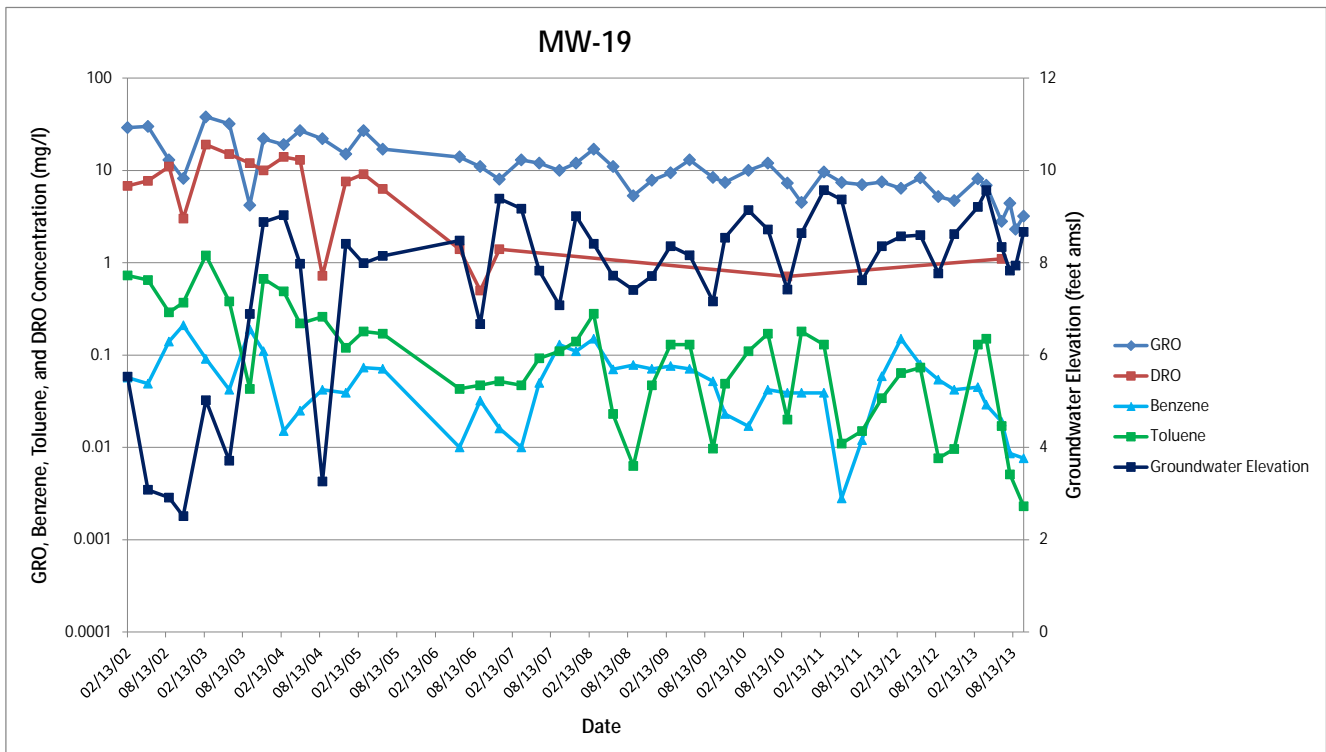
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HYDROGRAPH AND CONSTITUENT TREND GRAPHS



From: [Flomerfelt, Jonathan](mailto:Flomerfelt_Jonathan)
To: [Wenning, Scott](mailto:Wenning_Scott)
Cc: [Annis, Matt](mailto:Annis_Matt)
Subject: FW: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan
Date: Wednesday, August 20, 2014 9:25:42 AM

Since there were some clarifications, lets use 8/13, email below as official approval

From: O'Brien, Maura (ECY) [<mailto:MOBR461@ECY.WA.GOV>]
Sent: Wednesday, August 13, 2014 4:50 PM
To: Annis, Matt; Flomerfelt, Jonathan; Truedinger, Robert
Cc: Wang, Ching-Pi (ECY)
Subject: RE: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan

This is fine.

Maura

Maura S. O'Brien, PG/HG #869
Professional Geologist/Hydrogeologist
Toxics Cleanup Program - NWRO
Department of Ecology
3190 - 160th Avenue SE
Bellevue, WA 98008-5452
Tele 425-649-7249
Fax 425-649-7098
Email mobr461@ecy.wa.gov

From: Annis, Matt [<mailto:Matt.Annis@arcadis-us.com>]
Sent: Wednesday, August 13, 2014 3:08 PM
To: O'Brien, Maura (ECY); Flomerfelt, Jonathan; Truedinger, Robert
Cc: Wang, Ching-Pi (ECY)
Subject: RE: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan

Hi Maura – One last clarification. Please see below in red. Thanks.

Matt Annis | Principal Environmental Scientist | matt.annis@arcadis-us.com
ARCADIS U.S., Inc. | 1100 Olive Way, Suite 800 | Seattle, WA, 98101
T: 206.726.4716 | C: 206.434.1929 | F: 206.325.8218
www.arcadis-us.com

ARCADIS, Imagine the result

Please consider the environment before printing this email.

From: O'Brien, Maura (ECY) [<mailto:MOBR461@ECY.WA.GOV>]
Sent: Wednesday, August 13, 2014 2:07 PM
To: Annis, Matt; Flomerfelt, Jonathan; Truedinger, Robert
Cc: Wang, Ching-Pi (ECY)
Subject: RE: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan

Rob Truedinger and Matt Annis,
Ecology approves the revised Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan for the KM Terminal prepared by Arcadis on May 20, 2014 and revised August 13, 2014. The revised plan is effective fall 2014 and the next monitoring **quarter event** will occur first quarter 2015.

Maura

Maura S. O'Brien, PG/HG #869
Professional Geologist/Hydrogeologist
Toxics Cleanup Program - NWRO
Department of Ecology
3190 - 160th Avenue SE
Bellevue, WA 98008-5452
Tele 425-649-7249
Fax 425-649-7098
Email mobr461@ecy.wa.gov

From: Annis, Matt [<mailto:Matt.Annis@arcadis-us.com>]
Sent: Wednesday, August 13, 2014 12:50 PM
To: O'Brien, Maura (ECY); Flomerfelt, Jonathan; Truedinger, Robert
Cc: Wang, Ching-Pi (ECY)
Subject: RE: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan

Hi Maura,

Below in red are responses/clarifications to your comments. Thank you for reviewing the Revised Site Groundwater Monitoring Plan so quickly.

Matt Annis | Principal Environmental Scientist | matt.annis@arcadis-us.com
ARCADIS U.S., Inc. | 1100 Olive Way, Suite 800 | Seattle, WA, 98101
T: 206.726.4716 | C: 206.434.1929 | F: 206.325.8218
www.arcadis-us.com

ARCADIS, Imagine the result

Please consider the environment before printing this email.

From: O'Brien, Maura (ECY) [<mailto:MOBR461@ECY.WA.GOV>]
Sent: Thursday, August 07, 2014 3:35 PM
To: Annis, Matt; Flomerfelt, Jonathan; Truedinger, Robert
Cc: Wang, Ching-Pi (ECY)
Subject: RE: Kinder Morgan Harbor Island Terminal Proposed Revised Compliance Monitoring Plan

Hello

Thank you for your proposed Revised Site Groundwater Monitoring Plan at the Kinder Morgan Harbor Island Terminal site prepared by Arcadis US dated May 20, 2014. Ecology approves this

revised compliance plan with two additions:

-If SPH or LNAPL occur at any well, then gauging and removal will be implemented quarterly for four quarters and then to re-evaluate. If SPH or LNAPL occur at any well, ARCADIS will gauge and remove quarterly. Removal will be performed using absorbent socks, which is consistent with recent SPH/LNAPL removal performed at the site.

-If any groundwater compliance well shows concentration increase for two consecutive events, then to discuss with Ecology if additional monitoring or cleanup action needs to be implemented at that location. OK

Starting third quarter 2014, this revised annual and semi-annual monitoring will begin. The next monitoring event will occur in 1Q2015 and moving forward reporting will be conducted semi-annually.

Thanks for your hard work and continued efforts to bring this site to completion under MTCA.

Maura

Maura S. O'Brien, PG/HG #869
Professional Geologist/Hydrogeologist
Toxics Cleanup Program - NWRO
Department of Ecology
3190 - 160th Avenue SE
Bellevue, WA 98008-5452
Tele 425-649-7249
Fax 425-649-7098
Email mobr461@ecy.wa.gov

From: Annis, Matt [<mailto:Matt.Annis@arcadis-us.com>]
Sent: Thursday, August 07, 2014 11:09 AM
To: O'Brien, Maura (ECY)
Cc: Flomerfelt, Jonathan
Subject: Kinder Morgan Harbor Island Periodic Review

Hi Maura,

Under Section 2.2 of the boilerplate you sent, are you looking for a summary of all site investigations and sample results to date or just those between the last 5-year review and present? Thanks.

Matt Annis | Senior Environmental Scientist | matt.annis@arcadis-us.com
ARCADIS U.S., Inc. | 1100 Olive Way, Suite 800 | Seattle, WA, 98101
T: 206.726.4716 | C: 206.434.1929 | F: 206.325.8218
www.arcadis-us.com

ARCADIS, Imagine the result

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ATTACHMENT B

Groundwater Monitoring Field Data Sheets





Site ID: KMLT - Harbor Island

Project #: WA000804.0000.00003

Site Address: 2720 13th Ave SW, Seattle, WA

Date:

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thickness	DTW	TD	^{DOCS} ppm Notes
A-28R	1055	odor	-	-	8.33	14.21	697.7 ppm
11	1046	-	-	-	5.15	10.09	0.0
12	1017	-	-	-	2.55	7.30	17.7 17.7
MW-07R	1150	-	-	-	6.73	12.08	0.5
MW-1	1059	-	-	-	6.30	12.90	0.0
MW-2	1015	-	-	-	7.99	12.75	0.0
MW-3	0921	-	-	-	4.02	13.24	0.0
MW-4	1007 1140	-	-	-	7.05	14.10	34.2
MW-5	0901	-	-	-	3.65	13.16	0.0
MW-6	1014	-	-	-	3.99		0.0
MW-7	1034	-	-	-	3.59	12.95	0.7
MW-8	1001	-	-	-	3.99	12.80	0.0
MW-9	1008	-	-	-	3.20	12.87	2.3
MW-12R	1145	-	-	-	7.96	14.08	0.0
MW-13R							
MW-14	0852	none	-	-	4.06	13.42	6.0 ppm
MW-16	1045 1045	-	-	-	7.71	14.04	1.9
MW-18	1030	-	-	-	7.84	15.51	2.3

12 * - accuracy issues, black type on meter



Site ID: KMLT - Harbor Island

Project #: WA000804.0000.00003

Site Address: 2720 13th Ave SW, Seattle, WA

Date: 9/27

may be a mistake

9/29
9/28
9/27
9/29
9/29
9/29

perks on

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thickness	DTW	TD	PPM Notes
A-4							BTM truck
A-5	0842	odor	-	-	7.80 6.80	14.82	176.5
A-6	0836	odor	7.74	0.05	7.79	23.91	148.0 ppm
A-8	0831	-	-	-	7.92	24.82	41.1 ppm
A-10	08/24	-	-	-	6.97 6.748	24.60 14.72	4.9
A-11	0859	-	-	-	7.89 7.2	24.58	8.5
A-12	0818	-	-	-	6.62	23.27	3.5
A-14R	0815	-	-	-	7.74	14.92	PID: 4.1 ppm
A-16	0857	odor	8.02	0.17	8.19	13.95	199
A-18	0905	-	-	-	8.24	13.80	4.9
A-19	0923	-	-	-	8.16	14.09	2.4
A-20	0927	-	-	-	7.81	13.61	3.0
A-21	0931	-	-	-	7.91	14.48	0.0
A-22R	0900	odor	-	-	7.52	14.55	250.0
A-23R	1415	-	-	-	9.19	15.68	0.0
A-25	0850	odor	-	-	7.55	13.94	135
A-26R	0910	-	-	-	7.62	14.39	196.6
A-27	0920	odor	-	-	10.68	18.05	367.7



Site ID: **KMLT - Harbor Island**

Project #: **WA000804.0000.00003**

Site Address: **2720 13th Ave SW, Seattle, WA**

Date:

Well ID	Time	Sheen/ Odor	LNAPL Depth	LNAPL Thickness	DTW	TD	Notes
MW-19	0911	-	-	-	3.69	12.89	1.2
MW-20	0940	-	-	-	3.95	11.69	0.0
MW-21	0953	-	-	-	3.23	11.43	0.0
MW-22	1000 1155	-	-	-	8.88	13.18	5.7
9/29 MW-23	0900	odor	-	-	7.65	14.81	476.0
9/21 MW-24	0755	gas/odor	-	-	7.65	14.83	530ppm
SH-02R	1115	-	-	-	6.00	14.56	0.0
SH-05R	1155	-	-	-	7.23	13.48	0.0
TMW-B1	0930	odor	-	-	8.26	14.66	384.9

9/29 MW-25 0800
 - - 8.0 14.79 3.6
 7.49 14.89 4.9



Groundwater Sampling Form

Page 1 of 1

Project No. GP09BPNA.WA

Well ID MW-25

Date 10/22/15

Project Name/Location Harbor Island

Weather cloudy SS

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 7.49 Total Depth (ft-btoc) 14.89 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other

Sample Method low Flow

Pump On/Off 0900 Volumes Purged

Sample Time: Label 0935 Replicate/ Start End Code No.

Sampled by SW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 12 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47.

Well Information

Well Location: Well Locked at Arrival: Yes / No Condition of Well: Well Locked at Departure: Yes / No Well Completion: Flush Mount / Stick Up Key Number To Well:

Project No. GP09BPNA.WA

 Well ID A-5 - Dup - 2

 Date 10/2/15

 Project Name/Location Harbor Island

Weather _____

 Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) _____

 Well Material PVC
 SS

 Static Water Level (ft-btoc) 7.90 Total Depth (ft-btoc) 14.82 Water Column/
 Gallons in Well _____

 Initial PID _____
 Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: _____

 Sample Method low Flow

 Pump On/Off 1020 Volumes Purged _____
 Centrifugal _____
 Submersible _____
 Other per

 Sample Time: Label 1100 Replicate/ _____
 Start _____ Code No. _____
 End _____

 Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1025	0	300	8.02		8.03	879	8.0	0.43	20.1	-126.8	clear	-
1028	3	200	8.06		7.75	878	7.7	0.40	20.1	-128.0	clear	-
1031	6	200	8.00		7.56	877	7.5	0.38	20.1	-129.0	clear	-
1035	10	200	8.01		7.49	875	9.7	0.32	20.1	-131.7	clear	-
1040	15	200	8.60		7.21	870	6.7	0.23	20.2	-135.8	clear	-
1045	20	200	8.02		7.08	866	6.2	0.15	20.1	-137.0	clear	-
1050	25	200	7.99		7.02	864	6.7	0.13	20.1	-140.2	clear	-
1055	30	200	8.01		6.95	857	5.3	0.10	20.2	-145.8	clear	-
1100	35	200	8.06		6.93	857	5.6	0.10	20.2	-146.1	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____

Project No. GP09BPNA.WA Well ID ~~24~~ A-8

Date 10/2/15

Project Name/Location KMEP Harbor Island

Weather overcast, 70°F

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 4

Well Material PVC
SS

Static Water Level (ft-btoc) 7.94 Total Depth (ft-btoc) 24.87 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: Low Flow

Sample Method Grab

Pump On/Off 0947/1013 Volumes Purged _____ Centrifugal _____ Submersible _____ Other Peristaltic

Sample Time: Label 1015 Replicate/ Code No. _____ Start 1010 End 1013

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
0951	4	150	7.95		6.82	0.521	1.4	0.92	17.1	-125.0	Clear	-
0954	7		7.95		6.82	0.516	1.4	0.67	17.1	-130.0	Clear	-
0957	10	225	7.95		6.82	0.517	1.5	0.54	17.1	-134.3	Clear	-
1000	13		7.95		6.84	0.516	1.5	0.46	17.1	-138.7	Clear	-
1003	16	200	7.95		6.84	0.515	1.4	0.41	17.1	-141.3	Clear	-
1006	19		7.95		6.84	0.514	1.4	0.39	17.1	-142.3	Clear	-
1009	22				6.85	0.514	1.4	0.37	17.1	-143.5	Clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____

Project No. GP09BPNA.WA

Well ID A-10

Date 10/2/15

Project Name/Location KMEP Harbor Island

Weather overcast, 60°F

Measuring Pt. Description Screen Setting (ft-bmp)

Casing Diameter (in.) 4

Well Material PVC SS

Static Water Level (ft-btoc) 6.97 Total Depth (ft-btoc) 24.00
~~44.27~~

Water Column/ Gallons in Well

Initial PID Reading (ppm) 0.0

TOC Elevation Pump Intake (ft-btoc)

Purge Method: Low flow

Sample Method Grab

Pump On/Off 850/0921 Volumes Purged

Centrifugal Submersible Other Peristaltic

Sample Method Grab

Sample Time: Label 0920 Replicate/ Code No.
Start 0918
End 0921

Sampled by MLL

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
853	3	300	7.00		6.75	24.8	5.8	0.82	18.7	-156.7	Rusty	-
855 Pump off to clear flow cell of debris												
857 Pump back on												
0900	8		7.00		6.72	24.3	7.9	1.06	18.9	-137.1	Rusty	-
0903	11	200	7.00		6.71	24.2	6.8	0.74	19.0	-139.1	Rusty	-
0907	15		7.00		6.70	24.1	5.9	0.61	19.0	-139.3	Rusty	-
0910	18	200	7.00		6.69	23.9	5.6	0.51	19.1	-138.9	Rusty	-
0913	21		7.00		6.68	23.9	4.6	0.47	19.0	-138.8	Rusty	-
0916	24		7.00		6.67	23.8	4.4	0.43	19.0	-138.4	Rusty	-

Constituents Sampled	Container	Number	Preservative
GEO	20mL VOA	2	HCl
DRO/NO	40mL VOA	2	HCl
BTEX	40mL VOA	2	HCl

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: Well Locked at Arrival: Yes / No

Condition of Well: Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well:

Project No: GP09BPNA.WA Well ID MW-12R

Date 9/30/15

Project Name/Location KMEP Harbor Island

Weather Sunny, 70°F

Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) _____

Well Material PVC
 SS

Static Water Level (ft-btoc) 8.00 Total Depth (ft-btoc) _____
 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: Low Flow

Sample Method Grab

Pump On/Off 1600/1635 Volumes Purged _____
 Centrifugal _____
 Submersible _____
 Other Peristaltic

Sample Time: Label 1630 Replicate/ _____
 Start 1625 Code No. _____
 End 1635

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1608	2	225	8.02		6.85	0.527	1.6	1.21	18.6	-105.6	Clear	-
1611	5		8.02		6.85	0.535	1.7	0.76	18.6	-110.1	Clear	-
1614	8	225	8.02		6.79	0.549	1.4	0.53	18.6	-110.7	Clear	-
1617	11		8.02		6.78	0.560	1.5	0.44	18.6	-111.2	Clear	-
1620	14		8.02		6.78	0.565	1.5	0.41	18.5	-111.7	Clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Page ___ of ___

Project No. GP09BPNA.WA

Well ID SH-02R

Date 9/30/15

Project Name/Location Knap Harbor Island

Weather Sunny 70°F

Measuring Pt. Screen Description Setting (ft-bmp)

Casing Diameter (in.) 2

Well Material [X] PVC SS

Static Water Level (ft-btoc) 6.10 Total Depth (ft-btoc)

Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc)

Purge Method: Low Flow

Sample Method Grab

Pump On/Off 1403/1445 Volumes Purged

Centrifugal Submersible Other Peristaltic

Sample Time: Label 1425 Replicate/ Start 1425 Code No. End 1445

Sampled by ML

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.5" = 0.09, 2.5" = 0.26, 3.5" = 0.50, 6" = 1.47. Includes sub-rows for 1.25", 2", 3", 4" diameters.

Well Information

Well Location: Well Locked at Arrival: Yes / No Condition of Well: Well Locked at Departure: Yes / No Well Completion: Flush Mount / Stick Up Key Number To Well:

Project No. GP09BPNA.WA Well ID MW-18

 Date 9/30/15

 Project Name/Location Kumipi Harbor Island

 Weather Overcast 65°F

 Measuring Pt. Screen Casing 2
 Description Setting (ft-bmp) Diameter (in.)

 Well Material PVC
 SS

 Static Water Level (ft-btoc) 7.95 Total Depth (ft-btoc) _____
 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

 TOC Elevation 1 Pump Intake (ft-btoc) _____ Purge Method: Low flow

 Sample Method Grab

 Pump On/Off 1310/1337 Volumes Purged _____
 Centrifugal _____
 Submersible _____
 Other Peristaltic

 Sample Time: Label 1335 Replicate/ _____
 Start 1330 Code No. _____
 End 1337

 Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1314	4	200	7.98		6.58	0.218	9.3	0.93	17.9	-94.8	Clear	-
1317	7		7.98		6.58	0.219	5.6	0.73	17.9	-103.9	Clear	-
1320	10		7.98		6.59	0.222	5.2	0.60	17.9	-108.2	Clear	-
1323	13	175	7.98		6.55	0.225	5.5	0.53	18.0	-102.5	Clear	-
1327	17		7.98		6.51	0.228	4.8	0.49	18.0	-100.0	Clear	-
1330	20		7.98		6.49	0.229	5.0	0.47	18.0	-97.9	Clear	-

Constituents Sampled	Container	Number	Preservative
GRO	400mL VOA	2	HCl
BTEX	400mL VOA	2	HCl

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Page of

Project No. GP09BPNA.WA

Well ID MW-2

Date 9/30/15

Project Name/Location KMEP Harbor Island

Weather Overcast, 70°F

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.) 4

Well Material PVC
SS

Static Water Level (ft-btoc) 8.08 Total Depth (ft-btoc) Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Low Flow

Sample Method Grab

Pump On/Off 1000/1055 Volumes Purged Centrifugal

Submersible

Other Peristaltic

Sample Time: Label 1010 Replicate/ Code No.

Start 1037

End 1055

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1009	3		8.10		6.04	0.084	3.2	3.21	18.2	117.5	Clear	-
1012	6	200	8.10		5.87	0.079	3.4	2.60	18.2	126.4	Clear	-
1015	9		8.10		5.91	0.078	3.4	1.97	18.2	129.0	Clear	-
1018	12	200	8.11		5.92	0.077	3.5	1.62	18.2	121.0	Clear	-
1021	15		8.11		5.92	0.077	3.5	1.54	18.1	118.6	Clear	-
1024	18		8.11		5.93	0.078	3.5	1.36	18.1	111.6	Clear	-
1027	21	200	8.10		5.94	0.078	3.5	1.23	18.1	104.5	Clear	-
1031	25		8.10		5.95	0.078	3.5	1.12	18.1	100.5	Clear	-
1036	30		8.10		5.97	0.078	3.5	1.02	18.1	94.6	Clear	-

Constituents Sampled	Container	Number	Preservative
Lead	250ml HDPE	1	HNO ₃
Dissolved Lead	250ml HDPE	1	-
Nitrate / sulfate	125ml HDPE	1	-
Sulfide	125ml Amber	1	NaOH + ZnAc ₂
Ferrous Iron	250ml Amber	1	HCl
BTEX	40ml VOA	2	HCl
CSO	40ml VOA	2	HCl
DRO/HO	40ml VOA	2	HCl
Methane	40ml VOA	2	HCl

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: <u> </u>	Well Locked at Arrival: Yes / No
Condition of Well: <u> </u>	Well Locked at Departure: Yes / No
Well Completion: <u>Flush Mount / Stick Up</u>	Key Number To Well: <u> </u>



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID MW-22

Date 9/30/15

Project Name/Location KMER Harbor Island

Weather Overcast, 60°F

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 2

Well Material PVC SS

Static Water Level (ft-btoc) 9.0 Total Depth (ft-btoc) _____ Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____

Purge Method: Low flow

Sample Method Grab

Pump On/Off 909/938 Volumes Purged _____

Centrifugal _____
Submersible _____
Other Resistivity

Sample Time: Label 935 Replicate/ Code No. _____
Start 932
End 938

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
912	3	200	9.10 9.01		6.10	0.212	15.5	0.99	18.8	-61.1	Clear	-
915	6		9.01		6.04	0.204	10.4	0.81	18.8	-59.3	Clear	-
918	9	200	9.01		6.08	0.189	5.0	0.56	18.9	-59.0	Clear	-
921	12		9.01		6.08	0.182	3.6	0.48	18.9	-58.6	Clear	-
925	16		9.01		6.08	0.173	2.7	0.42	18.9	-57.8	Clear	-
928	19		9.01		6.08	0.169	2.4	0.38	18.9	-57.6	Clear	-
931	22		9.01		6.08	0.165	2.4	0.36	18.9	-57.0	Clear	-

Constituents Sampled	Container	Number	Preservative
<u>GRO</u>	<u>40ml VOA</u>	<u>2</u>	<u>HCl</u>
<u>BTEX</u>	<u>40ml VOA</u>	<u>2</u>	<u>HCl</u>
<u>ORO/HO</u>	<u>40ml VOA</u>	<u>2</u>	<u>HCl</u>

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Project No. GP09BPNA.WA Well ID MW-19

Date 9/30/15

Project Name/Location Harbor Island

Weather Sun GS

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 3.05 Total Depth (ft-btoc) 12.89 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method:

Sample Method Low Flow

Pump On/Off 1530 Volumes Purged Centrifugal Submersible Other per.

Sample Time: Label 1600 Replicate/ Start End Code No.

Sampled by SW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes

Table with 2 rows and 6 columns showing gallons per foot for casing diameters: 1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6".

Well Information

Form with fields for Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), and Key Number To Well.

Project No. GP09BPNA.WA Well ID 12

 Date 9/29/15

 Project Name/Location Harbor Island

 Weather Sunny 60 F

 Measuring Pt. Screen Casing 4
 Description Setting (ft-bmp) Diameter (in.) 4

 Well Material 4" PVC
SS

 Static Water Level (ft-btoc) 2.65
3.65 Total Depth (ft-btoc) 7.30

 Water Column/
 Gallons in Well _____
 Initial PID _____
 Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____

Purge Method: _____

 Sample Method low flow

 Pump On/Off 1232 Volumes Purged _____

 Centrifugal _____
 Submersible _____
 Other ACI

 Sample Time: Label 1259 Replicate/ Code No. _____
 Start _____ End _____

 Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1232	0	300	7.30 7.30	0	6.29	159.5 145	84.5	0.37	17.3	-159.9	dark	-
1235	3	250	3.27		6.05	1518	76.5	0.25	17.2	-170.1	dark	-
1238	6	250	3.40		5.81	1576	72.0	0.22	17.2	-183.1	dark	
1241	9	200	3.59		5.66	1620	65.2	0.19	17.1	-191.5	dark	
1245	13	200	3.73		5.56	1638	64.0	0.18	17.1	-194.5	dark	
1248	16	200	3.75		5.49	1625	67.7	0.16	17.1	-203.8	dark	cloudy
1250	18	200	4.02		5.56	1559	78.1	0.14	17.1	-248.0	cloudy	
1255	23	200	4.11		5.44	1592	76.2	0.14	17.1	-248.0	cloudy	

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: <u>Flush Mount / Stick Up</u>	Key Number To Well: _____



Groundwater Sampling Form

Project No. GP09BPNA.WA Well ID 11

Date 9/29

Project Name/Location Harbor Island

Weather Sun 65

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 4

Well Material PVC
SS

Static Water Level (ft-btoc) 5.28 Total Depth (ft-btoc) 10.69 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation 1450 SW Pump Intake (ft-btoc) _____ Purge Method: _____

Sample Method low flow

Pump On/Off 1400 Volumes Purged _____ Centrifugal _____ Submersible _____ Other peri

Sample Time: Label 1415 Replicate/ Start _____ Code No. _____ End _____

Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1400	0	200	5.49	0	5.64	715	8.3	5.23	22.5	-48.2	brown	-
1405	5	200	5.49		5.45	714	9.0	5.20	22.5	-46.2	clear	-
1410	10	200	5.49		5.01	714	9.0	4.91	22.5	-46.0	clear	-
1415	15	200	5.49		4.94	715	10.6	4.86	22.6	-47.2	clear	-
1420	20	200	5.49		4.94	715	10.3	4.71	22.5	-53.6	clear	-
1425	25	200	5.49		4.81	714	10.2	4.22	22.6	-65.6	clear	-
1430	30	200	5.51		4.60	709	10.7	3.94	22.7	-73.6	clear	-
1435	35	200	5.51		4.67	708	10.9	3.63	22.7	-76.1	clear	-
1440	40	200	5.51		4.75	705	11.9	3.59	22.7	-77.0		

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-8

Date 9/29/15

Project Name/Location Harbor Island

Weather Sun 65

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 4.01 Total Depth (ft-btoc) 12.80

Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method:

Centrifugal Submersible Other

Pump On/Off 1510 Volumes Purged

Sample Time: Label 1540 Replicate/ Start Code No. End

Sampled by

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 7 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), Key Number To Well

Project No. GP09BPNA.WA Well ID TMW-1

 Date 9/29/15

 Project Name/Location Harbor Island

 Weather Sun 70

 Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) 4.0

 Well Material PVC
SS

 Static Water Level (ft-btoc) 4.06 Total Depth (ft-btoc) 14.42 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

 TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: _____
 Pump On/Off 1625 Volumes Purged _____ Centrifugal _____
 Submersible _____ Other peri

 Sample Method low flow

 Sample Time: Label 1655 Replicate/ Code No. _____
 Start _____ End _____

 Sampled by SLW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1625	0	300	4.09	0	4.84	1644	202.0	2.90	18.3	4.1	brn	-
1630	5	200	4.09		4.12	1694	113.0	1.95	18.3	-2.6	brn	-
1635	10	200	4.10		4.03	1655	12.6	1.95	18.3	4.3	clear	-
1640	15	200	4.10		4.01	1660	10.7	1.94	18.3	4.0	clear	-
1645	20	200	4.12		4.0	1669	8.9	1.91	18.3	8.1	clear	-
1650	25	200	4.12		4.10	1672	5.7	1.92	18.3	2.9	clear	-
1655	31	200	4.13		3.98	1693	3.6	1.80	18.3	2.2	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____ Well Locked at Arrival: Yes / No

Condition of Well: _____ Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: _____

Project No. GP09BPNA.WA

Well ID TMW-6

Date 9/30/15

Project Name/Location Harbor Island

Weather Foggy 50

Measuring Pt. Screen Casing 4
 Description Setting (ft-bmp) Diameter (in.)

Well Material PVC
SS

Static Water Level (ft-btoc) 3.21 Total Depth (ft-btoc) 14.49
 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation 0825 Pump Intake (ft-btoc) 0825 Purge Method:
 Pump On/Off Volumes Purged 0825 Centrifugal _____
 Submersible _____
 Other Peri

Sample Method Low Flow

Sample Time: Label 0900 Replicate/ Code No. _____
 Start _____
 End _____

Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
0825	0	200	3.27	0	4.94	2253	12.7	0.37	17.0	-119	clear	-
0828	3	200	3.31		5.04	2220	12.5	0.30	16.9	-120.8	clear	-
0831	6	200	3.34		5.02	2181	12.0	0.29	16.9	-124.7	clear	-
0835	10	200	3.32		5.02	2118	10.8	0.28	16.9	-127.3	clear	-
0840	15	200	3.33		5.06	1970	8.7	0.25	16.9	-136.5	clear	-
0845	20	200	3.37		5.01	1925	5.3	0.28	17.0	-148.8	clear	-
0850	25	200	3.36		4.95	1956	5.1	0.19	16.9	-149.6	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Page 1 of 1

Project No. GP09BPNA.WA

Well ID MW-7

Date 9/30/15

Project Name/Location Harbour Island

Weather Foggy SS

Measuring Pt. Screen
Description Setting (ft-bmp)

Casing Diameter (in.) 2 1/2

Well Material PVC
SS

Static Water Level (ft-bloc) 3.44
Total Depth (ft-bloc) 12.88

Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-bloc)

Purge Method:

Sample Method Low Flow

Pump On/Off 1016 Volumes Purged

Centrifugal
Submersible
Other Ari

Sample Time: Label 1035
Start
End
Replicate/ Code No.

Sampled by SW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes

Table with 2 rows and 6 columns showing conversion factors for well casing diameters (1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6").

Well Information

Form with fields for Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes/No), and Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID TMW-3

Date 9/20/15

Project Name/Location Harbor Island

Weather cloudy 55

Measuring Pt. Screen
Description Setting (ft-bmp)

Casing Diameter (in.)

Well Material PVC
SS

Static Water Level (ft-bloc) 4.21
Total Depth (ft-bloc) 1559

Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-bloc)

Purge Method:

Sample Method

Pump On/Off 1130 Volumes Purged

Centrifugal
Submersible
Other per.

Sample Time: Label 1150 Replicate/ Code No.

Sampled by SLW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47.

Well Information

Well Location:
Condition of Well:
Well Completion: Flush Mount / Stick Up
Well Locked at Arrival: Yes / No
Well Locked at Departure: Yes / No
Key Number To Well:



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID TMW-5

Date 9/30/15

Project Name/Location Harbor Island

Weather cloudy 55

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.) 2

Well Material PVC SS

Static Water Level (ft-btoc) 3.71 Total Depth (ft-btoc) 14.24 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation 1215 Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other

Sample Method low Flow

Pump On/Off 1215 Volumes Purged

Sample Time: Label 1245 Replicate/ Code No. Start End

Sampled by SW

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Rows 1220-1245.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47.

Well Information section with fields for Well Location, Condition of Well, Well Completion, Well Locked at Arrival/Departure, and Key Number To Well.

Project No. GP09BPNA.WA Well ID MW-21 Date 9/30/15
 Project Name/Location Harbor Island Weather cloudy CO
 Measuring Pt. Screen Casing Well Material PVC
 Description Setting (ft-bmp) Diameter (in.) 2 SS
 Static Water Level (ft-btoc) 3.18 Total Depth (ft-btoc) 11.68 Water Column/ Gallons in Well Initial PID Reading (ppm) _____
 TOC Elevation Pump Intake (ft-btoc) Purge Method: _____
 Pump On/Off 1335 Volumes Purged _____ Centrifugal _____
 Sample Time: Label 1405 Replicate/ Code No. _____ Other peri Sample Method low Flow
 Start _____ End _____ Sampled by SLW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1340	0	300	3.32	0	5.77	77.6	8.4	1.26	18.3	-108.1	clear	-
1343	3	200	3.46		4.60	73.1	11.1	0.67	18.3	-110.0	clear	-
1346	6	200	3.62		3.59	70.7	8.4	0.41	18.6	-95.0	clear	-
1350	10	200	3.67		3.53	70.5	7.6	0.40	18.7	-94.3	clear	-
1355	15	200	3.75		3.34	72.4	8.2 10.3	0.31	19.0	-103.6	clear	-
1400	20	200	3.90		3.32	73.2	9.4	0.29	18.8	-110.1	clear	-
1405	25	200	3.99		3.28	77.2	10.9	0.28	19.0	-110.6	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID MW-9

Date 9/30/15

Project Name/Location Harbor Island

Weather Sunny 62

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 4

Well Material PVC
SS

Static Water Level (ft-btoc) 3.20 Total Depth (ft-btoc) 12.87 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: _____

Sample Method Low Flow

Pump On/Off 1445 Volumes Purged _____ Centrifugal _____ Submersible _____ Other per

Sample Time: Label 1515 Replicate/ Code No. _____ Start _____ End _____

Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1450	0	400	3.27	0	4.40	191.5	3.5	0.93	17.4	-67.7	clear	-
1453	3	200	3.31		4.07	191.3	3.3	0.51	17.4	-65.1	clear	-
1456	6	200	3.32		3.78	191.0	3.4	0.37	17.3	-58.6	clear	-
1500	10	200	3.39		3.56	191.0	3.8	0.25	17.3	-53.3	clear	-
1505	15	200	3.40		3.53	190.9	4.0	0.19	17.4	-47.9	clear	-
1510	20	200	3.43		3.51	190.7	4.1	0.13	17.5	-53.9	clear	-
1515	25	200	3.45		3.51	190.0	4.6	0.09	17.5	-95.6	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____ Well Locked at Arrival: Yes / No

Condition of Well: _____ Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: _____

Project No. GP09BPNA.WA Well ID MW-6

Date 9/29/15

Project Name/Location KMER Harbor Island

Weather Sunny, 70°F

Measuring Pt. _____ Screen _____ Casing Diameter (in.) 4
 Description _____ Setting (ft-bmp) _____

Well Material PVC
 SS

Static Water Level (ft-bloc) 7.71 Total Depth (ft-bloc) _____
 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-bloc) _____ Purge Method: low flow

Sample Method LFD

Pump On/Off 1648/ Volumes Purged _____
 Centrifugal
 Submersible
 Other _____

Sample Time: Label 1715 Replicate/Code No. _____
1710 Start 1718
 End 1723

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) <u>(mL/min)</u>	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1650	2	275	7.73		6.38	0.460	2.9	0.86	19.0	30.3	Clear	-
1653	5	275	7.73		6.34	0.458	4.0	0.64	18.9	29.0	Clear	-
1659	11		7.73		6.35	0.452	2.4	0.46	18.8	11.0	Clear	-
1703	15	275	7.73		6.40	0.444	2.3	0.39	18.7	-7.3	Clear	-
1706	18		7.73		6.42	0.443	2.7	0.37	18.7	-13.5	Clear	-
1709	21		7.73		6.44	0.443	2.4	0.36	18.7	-18.3	Clear	-

Constituents Sampled	Container	Number	Preservative
Dissolved Lead	500 mL HDPE	1	-
Lead	500 mL HDPE	1	As ₂ O ₃
GRD	40 mL LDA	2	HCl
BrEx	40 mL LDA	2	HCl
CH ₄	40 mL LDA	2	HCl
Nitrate/Sulfate	125 mL HDPE	1	-
Ferrous Iron	250 mL Amber	1	HCl
Sulfide	125 mL Amber	1	NaOH + ZnAc

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID JMW-B1

Date 9/29/15

Project Name/Location KMPD Harbor Island

Weather Sunny, 70°F

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.) 2

Well Material X PVC SS

Static Water Level (ft-btoc) 8.39 Total Depth (ft-btoc) Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Low flow

Sample Method Low Flow Purge

Pump On/Off 1606/1630 Volumes Purged Centrifugal Submersible Other

Sample Time: Label 1630 Replicate/ Code No.
Start 1606
End 1630

Sampled by

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1607	1		8.39		6.36	0.333	2.8	0.89	18.8	-92.3	Clear	-
1612	6	350	8.42		6.21	0.341	2.9	0.46	18.9	-92.7	Clear	-
1615	9	300	8.42		6.23	0.342	3.0	0.40	18.8	-95.5	Clear	-
1619	13		8.42		6.25	0.318	3.2	0.34	19.0	-97.8	Clear	-
1622	16				6.28	0.333	3.3	0.33	19.0	-101.5	Clear	-

Constituents Sampled	Container	Number	Preservative
<u>BTEX</u>	<u>40mL UDA</u>	<u>2</u>	<u>HCl</u>
<u>CRU</u>	<u>40mL UDA</u>	<u>2</u>	<u>HCl</u>

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: Well Locked at Arrival: Yes / No

Condition of Well: Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well:



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID A-27

Date _____

Project Name/Location KMEP Harbor Island

Weather Sunny, 70°F

Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) 4

Well Material PVC
 SS

Static Water Level (ft-btoc) 10.66 Total Depth (ft-btoc) _____
 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: Low Flow

Centrifugal _____
 Submersible _____
 Other _____

Sample Method LFP

Pump On/Off 1338/1423 Volumes Purged _____

Sample Time: Label 1400 Replicate/ _____
 Start 1338 Code No. _____
 End 1423

Sampled by MU

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1338	0	450	10.75		6.18	264.4	44.9	1.28	17.6	-84.0	Clear	-
1341	3	450	10.76		6.11	263.7	174.5	1.00	17.6	-83.2	Clear	-
1344	6	350	10.76		4.08	263.7	302.2	0.80	17.6	-83.5	Clear	-
1347	9		10.76		6.07	263.7	726.4	0.78	17.5	-84.2	Clear	-
1350	12	325	10.76		6.05	263.6	108.5	0.38	17.3	-85.6	Clear	-
1356	18		10.76		6.09	268.1	85.0	0.29	17.3	-90.1	Clear	-
1400	Pump off											
1410	Pump restarted				6.10	279.9	13.0	0.64	17.5	-68.3	Clear	-
1413	25		10.75		6.04	279.4	13.0	0.41	17.5	-68.3	Clear	-
1416	28		10.75		6.01	282.6	48.5	0.44	17.4	-72.7	Clear	-
1419	31	325	10.75		6.11	291.2	183.5	0.33	17.2	-78.8	Clear	-
1422	34		10.75		6.12	297.6	110.5	0.29	17.1	-82.7	Clear	-

Constituents Sampled	Container	Number	Preservative
GRO	40ml VOA	2	HCl
BTEX	40ml VOA	2	HCl
Nitrate/Sulfate	125ml HDPE	1	-
Sulfide	125ml Amber	1	NaOH + Zn Ac
Perman Iron	250ml Amber	1	HCl
CH4	40ml VOA	2	HCl

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID A-23R

Date 9/29

Project Name/Location KMER Harbor Island

Weather Sunny, 70F

Measuring Pt. Screen Casing
Description Setting (ft-bmp) Diameter (in.)

Well Material [X] PVC
SS

Static Water Level (ft-btoc) 9.19' Total Depth (ft-btoc) 15.68'
Water Column/ Gallons in Well

Initial PID Reading (ppm) 0.0

TOC Elevation Pump Intake (ft-btoc) Purge Method:

Sample Method

Pump On/Off 1504/ Volumes Purged
Centrifugal
Submersible
Other

Sample Time: Label 1510 Replicate/
Start 1504 Code No.
End 1520

Sampled by [Signature]

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm/mL/min), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos/mS/cm), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C/°F), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Location: _____ Well Locked at Arrival: Yes / No
Condition of Well: _____ Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID MW-07R

Date 10/1/15

Project Name/Location KMEP Harbor Island

Weather Sunny, 60F

Measuring Pt. Description _____
Screen Setting (ft-bmp) _____

Casing Diameter (in.) 2

Well Material PVC
 SS

Static Water Level (ft-btoc) 6.74 Total Depth (ft-btoc) _____

Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____

Purge Method: Low Flow

Sample Method Grab

Pump On/Off 0822/0908 Volumes Purged _____

Centrifugal _____
Submersible _____
Other Resistive

Sample Time: Label 0900 Replicate/ Code No. _____
Start 0855
End 0908

Sampled by mu

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
0825	3		6.85		5.64	0.129	14.3	1.16	19.2	99.2	Clear	-
0828	6	200	6.85		5.64	0.147	10.1	0.64	19.4	35.5	Clear	-
0831	9		6.85		5.77	0.156	7.9	0.58	19.4	17.6	Clear	-
0834	12	200	6.85		5.93	0.176	6.5	0.58	19.5	22.2	Clear	-
0837	15		6.85		6.00	0.190	5.2	0.46	19.5	22.9	Clear	-
0840	18	200	6.85		6.08	0.202	4.1	0.42	19.6	35.3	Clear	-
0843	21		6.85		6.11	0.205	4.0	0.41	19.6	40.2	Clear	-
0846	24		6.85		6.13	0.211	7.8	0.40	19.5	45.5	Clear	-
0850	28		6.85		6.16	0.214	5.0	0.37	19.6	50.2	Clear	-

Constituents Sampled	Container	Number	Preservative
GR0	40ml UOA	2	HCl
BTEX	40ml UOA	2	HCl
Methane	40ml UOA	2	HCl
Ferrous Iron	250ml Amber	1	HCl
Lead	500ml HDPE	1	HNO ₃
Dissolved Lead	500ml HDPE	1	-
Sulfide	125ml Amber	1	NaOH + Zn Ac
DR0/H0	40ml UOA	2	HCl
Nitrate / Sulfate	125ml HDPE	1	-

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID SH05R

Date 10/1/15

Project Name/Location KUMEP Harbor Island

Weather Sunny 70°F

Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) _____

Well Material PVC
 SS

Static Water Level (ft-btoc) 7.18 Total Depth (ft-btoc) _____
 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: Low flow

Sample Method Grab

Pump On/Off 948/1025 Volumes Purged _____
 Centrifugal _____
 Submersible _____
 Other Penstatric

Sample Time: Label 1020 Replicate/ _____
 Start 1016 Code No. _____
 End 1025

Sampled by Mu

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
0958	4.5	200	7.35		5.83	0.209	27.4	1.28	18.3	7.1	Clear	-
0957	9		7.35		5.86	0.148	22.0	1.06	18.3	1.0	Clear	-
1000	12		7.35		5.89	0.185	19.3	0.84	18.4	-5.0	Clear	-
1003	15	250	7.35		5.89	0.176	16.4	0.64	18.3	-6.5	Clear	-
1006	18		7.35		5.89	0.173	15.3	0.57	18.4	-6.3	Clear	-
1009	21	225	7.35		5.90	0.170	13.3	0.49	18.4	-9.3	Clear	-
1014	26		7.35		5.92	0.167	21.21	0.42	18.3	-12.4	Clear	-

Constituents Sampled	Container	Number	Preservative
<u>GRO</u>	<u>40 mL VOA</u>	<u>2</u>	<u>HCl</u>
<u>DRO/HO</u>	<u>40 mL VOA</u>	<u>2</u>	<u>HCl</u>
<u>BTEX</u>	<u>40 mL VOA</u>	<u>2</u>	<u>HCl</u>
<u>Total Lead</u>	<u>500 mL HDPE</u>	<u>1</u>	<u>HCl HNO₃</u>
<u>Dissolved Lead</u>	<u>500 mL HDPE</u>	<u>1</u>	<u>-</u>

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: <u>Yes</u> / <u> </u> / <u>No</u>
Condition of Well: _____	Well Locked at Departure: <u>Yes</u> / <u> </u> / <u>No</u>
Well Completion: <u>Flush Mount</u> / <u>Stick Up</u>	Key Number To Well: _____



Groundwater Sampling Form

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Project No. GP09BPNA.WA Well ID A-21

Date 10/1/15

Project Name/Location KMEP Harbor Island

Weather Sunny, 70°F

Measuring Pt. Screen Casing Description Setting (ft-bmp) Diameter (in.) 4

Well Material X PVC SS

Static Water Level (ft-btoc) 7.80 Total Depth (ft-btoc) 14.48 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Low Flow

Sample Method Grab

Pump On/Off 1107/1145 Volumes Purged

Centrifugal Submersible Other Peristaltic

Sample Time: Label 1140 Replicate/ Start 1133 Code No. End 1145

Sampled by MU

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 9 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Lists various samples like Total Lead, Dissolved Lead, Ferrous Iron, GRO, BTEX, Methane, Nitrate/Sulfate, Sulfide.

Well Casing Volumes table with 2 rows and 6 columns: Gallons/Foot, 1", 1.25", 2", 2.5", 3", 3.5", 4", 6".

Well Information

Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), Key Number To Well.



Groundwater Sampling Form

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Project No. GP09BPNA.WA Well ID A-14R

Date 10/1/15

Project Name/Location KMEP Harbor Island

Weather Sunny 70°F

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.) 2

Well Material X PVC SS

Static Water Level (ft-bloc) 7.60 Total Depth (ft-bloc) 14.92 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-bloc) Purge Method: Low flow

Sample Method Grab

Pump On/Off 1420/ Volumes Purged Centrifugal Submersible Other Peristaltic

Sample Time: Label 1450 Replicate/ Start 1457 Code No. End 1454

Sampled by MU

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 8 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Lists GPO, DPO/HO, BTEX, Total Lead, Dissolved Lead with their respective containers and numbers.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47.

Well Information

Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), Key Number To Well.



Groundwater Sampling Form

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Project No. GP09BPNA.WA

Well ID MW-23

Date 10/15/15

Project Name/Location Harbor Island

Weather Sun GS

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 7.67 Total Depth (ft-btoc) 14.81 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other Peric

Sample Method low Flow

Pump On/Off 01535 Volumes Purged Sample Time: Label 1600 Replicate/ Code No.

Sampled by SW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 6 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with columns for Gallons/Foot and casing diameters (1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6").

Well Information

Well Information form with fields for Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure, and Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-5

Date 10/1/15

Project Name/Location _____

Weather sun ss

Measuring Pt. _____ Screen _____ Casing _____
 Description _____ Setting (ft-bmp) _____ Diameter (in.) _____

Well Material PVC
 SS

Static Water Level (ft-btoc) 3.66 Total Depth (ft-btoc) 13.16 Water Column/ Gallons in Well _____

Initial PID Reading (ppm) _____

TOC Elevation _____ Pump Intake (ft-btoc) _____ Purge Method: _____

Sample Method low flow

Pump On/Off 0910 Volumes Purged _____ Centrifugal _____
 Submersible _____
 Other per i

Sample Time: Label 0935 Replicate/ Code No. _____
 Start _____
 End _____

Sampled by SW

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
0912	0	300	3.75		7.92	152.4	6.5	1.03	17.2	-77.9	clear	-
0915	3	300	3.79		7.67	152.0	5.4	0.74	17.3	-80.0	clear	-
0918	6	200	3.76		6.99	154.4	5.0	0.56	17.2	-77.8	clear	-
0921	9	200	3.76		6.96	155.8	5.3	0.56	17.2	-78.1	clear	-
0925	13	200	3.77		6.85	159.6	4.9	0.55	17.3	-80.5	clear	-
0930	18	200	3.77		6.82	163.6	5.3	0.54	17.2	-82.2	clear	-
0935	23	200	3.76		6.80	170.6	3.6	0.45	17.3	-89.2	clear	-

Constituents Sampled	Container	Number	Preservative

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: _____	Well Locked at Arrival: Yes / No
Condition of Well: _____	Well Locked at Departure: Yes / No
Well Completion: Flush Mount / Stick Up	Key Number To Well: _____



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID TMW-2

Date 10/11/15

Project Name/Location Harbor Island

Weather cloudy 55

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 4.16 Total Depth (ft-btoc) 15.41 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method:

Sample Method Low Flow

Pump On/Off 0815 Volumes Purged

Centrifugal Submersible Other per

Sample Time: Label 0835 Replicate/ Code No. Start End

Sampled by SW

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 7 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-20

Date 10/01/15

Project Name/Location Harbor Island

Weather Sunny 65

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 4.13 Total Depth (ft-btoc) 11.69

Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method:

Sample Method Low Flow

Pump On/Off 1125 Volumes Purged

Centrifugal Submersible Other peri

Sample Time: Label 1155 Replicate/ Start Code No. End

Sampled by SW

Table with 12 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 5 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes

Table with 2 rows and 6 columns showing Gallons/Foot for casing diameters: 1", 1.25", 1.5", 2", 2.5", 3", 3.5", 4", 6".

Well Information

Form with fields for Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), and Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-14

Date 12/01/15

Project Name/Location Harbor Island

Weather Sun Cool

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.) Well Material PVC SS

Static Water Level (ft-btoc) 4.13 Total Depth (ft-btoc) 13.42 Water Column/ Gallons in Well Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other peri Sample Method Low Flow

Pump On/Off 1005 Volumes Purged Sample Time: Label 1036 Replicate/ Code No. Start End Sampled by SW

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 5 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 2 rows and 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes / No), Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-1

Date 10/01/15

Project Name/Location Harbor Island

Weather Sunny

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 6.30 Total Depth (ft-btoc) 12.20 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other

Sample Method low flow

Pump On/Off 1405 Volumes Purged Sample Time: Label 1450 Replicate/ Code No. Start End

Sampled by SW

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C/°F), Redox (mV), Appearance (Color, Odor). Contains 10 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 2 rows and 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47

Well Information

Well Information form with fields: Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival, Well Locked at Departure, Key Number To Well.



Groundwater Sampling Form

Project No. GP09BPNA.WA

Well ID MW-3

Date 10/01/15

Project Name/Location Harbor Island

Weather Sunny 65

Measuring Pt. Description Screen Setting (ft-bmp) Casing Diameter (in.)

Well Material PVC SS

Static Water Level (ft-btoc) 4.06 Total Depth (ft-btoc) 13.24 Water Column/ Gallons in Well

Initial PID Reading (ppm)

TOC Elevation Pump Intake (ft-btoc) Purge Method: Centrifugal Submersible Other

Sample Method Low Flow

Pump On/Off 1225 Volumes Purged Sample Time: Label 1245 Replicate/ Code No. Start End

Sampled by SW

Table with 13 columns: Time, Minutes Elapsed, Rate (gpm), Depth to Water (ft), Gallons Purged, pH, Cond. (µMhos), Turbidity (NTU), Dissolved Oxygen (mg/L), Temp. (°C), Redox (mV), Appearance (Color, Odor). Contains 10 rows of data.

Table with 4 columns: Constituents Sampled, Container, Number, Preservative. Multiple empty rows for data entry.

Well Casing Volumes table with 2 rows and 6 columns: Gallons/Foot, 1" = 0.04, 1.25" = 0.06, 1.5" = 0.09, 2" = 0.16, 2.5" = 0.26, 3" = 0.37, 3.5" = 0.50, 4" = 0.65, 6" = 1.47.

Well Information section with fields for Well Location, Condition of Well, Well Completion (Flush Mount / Stick Up), Well Locked at Arrival/Departure (Yes/No), and Key Number To Well.

ATTACHMENT C

Laboratory Reports and Chain-of-Custody Documentation



October 07, 2015

Kinder Morgan- Orange, CA

Sample Delivery Group: L791503
Samples Received: 09/30/2015
Project Number: WA000804.2015
Description: KMEP Harbor Island
Site: HARBOR ISLAND
Report To: Rob Truedinger / Kyle Haslam
1100 Olive Way, Suite 800
Seattle, WA 98101










Entire Report Reviewed By:



Jason Romer
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



¹Cp: Cover Page	1	
²Tc: Table of Contents	2	
³Ss: Sample Summary	3	
⁴Cn: Case Narrative	4	
⁵Sr: Sample Results	5	
A-23R L791503-01	5	
⁶Qc: Quality Control Summary	6	
Wet Chemistry by Method 3500Fe B-2011	6	
Wet Chemistry by Method 4500S2 D-2011	7	
Wet Chemistry by Method 9056	8	
Volatile Organic Compounds (GC) by Method NWTPHGX	9	
Volatile Organic Compounds (GC) by Method RSK175	10	
Volatile Organic Compounds (GC/MS) by Method 8260C	12	
⁷Gl: Glossary of Terms	13	
⁸Al: Accreditations & Locations	14	
⁹Sc: Chain of Custody	15	

SAMPLE SUMMARY



A-23R L791503-01 GW

Collected by
M Ullery

Collected date/time
09/28/15 15:10

Received date/time
09/30/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG818964	1	10/01/15 16:00	10/01/15 16:00	MCB
Volatile Organic Compounds (GC) by Method RSK175	WG819756	1	10/05/15 13:23	10/05/15 13:23	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG819974	20	10/06/15 10:22	10/06/15 10:22	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG819631	1	10/04/15 03:47	10/04/15 03:47	KLO
Wet Chemistry by Method 3500Fe B-2011	WG818338	25	10/02/15 11:54	10/02/15 11:54	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:46	10/05/15 16:46	KBC
Wet Chemistry by Method 9056	WG818651	1	09/30/15 16:01	09/30/15 16:01	NJM

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L791503-01	A-23R	3500Fe B-2011, 9056

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	4870		1250	25	10/02/2015 11:54	WG818338

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	10/05/2015 16:46	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate	ND		100	1	09/30/2015 16:01	WG818651
Sulfate	23700		5000	1	09/30/2015 16:01	WG818651

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND	<u>J3</u>	100	1	10/01/2015 16:00	WG818964
(S) a, a, a-Trifluorotoluene(FID)	94.7		62.0-128		10/01/2015 16:00	WG818964

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	3550		200	20	10/06/2015 10:22	WG819974
Ethane	ND		13.0	1	10/05/2015 13:23	WG819756
Ethene	ND		13.0	1	10/05/2015 13:23	WG819756

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.09		1.00	1	10/04/2015 03:47	WG819631
Toluene	ND		5.00	1	10/04/2015 03:47	WG819631
Ethylbenzene	ND		1.00	1	10/04/2015 03:47	WG819631
Total Xylenes	ND		3.00	1	10/04/2015 03:47	WG819631
(S) Toluene-d8	101		90.0-115		10/04/2015 03:47	WG819631
(S) Dibromofluoromethane	99.1		79.0-121		10/04/2015 03:47	WG819631
(S) a, a, a-Trifluorotoluene	103		90.4-116		10/04/2015 03:47	WG819631
(S) 4-Bromofluorobenzene	102		80.1-120		10/04/2015 03:47	WG819631

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) 10/02/15 11:50

Analyte	MB Result	MB Qualifier	MB RDL
Ferrous Iron	ND		0.0500

¹Cp

²Tc

³Ss

⁴Cn

L791503-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/02/15 11:54 • (DUP) 10/02/15 11:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ferrous Iron	4.87	4.87	25	0.000		20

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/02/15 11:50 • (LCSD) 10/02/15 11:50

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ferrous Iron	1.00	0.966	0.965	96.6	96.5	85.0-115			0.104	20

⁷Gl

⁸Al

L791503-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/02/15 11:54 • (MS) 10/02/15 11:55 • (MSD) 10/02/15 11:55

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ferrous Iron	1.50	4.87	37.0	37.0	85.7	85.7	25	80.0-120			0.000	20

⁹Sc



Method Blank (MB)

(MB) 10/05/15 16:43

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Sulfide	ND		0.0500

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L791819-18 Original Sample (OS) • Duplicate (DUP)

(OS) 10/05/15 16:56 • (DUP) 10/05/15 16:56

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

L791503-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/05/15 16:46 • (DUP) 10/05/15 16:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 16:45 • (LCSD) 10/05/15 16:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfide	0.500	0.536	0.534	107	107	85.0-115			0.374	20

L791819-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/05/15 16:55 • (MS) 10/05/15 16:56 • (MSD) 10/05/15 16:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	1.00	0.0140	1.01	1.02	101	102	1	80.0-120			0.985	20



Method Blank (MB)

(MB) 09/30/15 06:34

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Nitrate	ND		0.100
Sulfate	ND		5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L787576-01 Original Sample (OS) • Duplicate (DUP)

(OS) 09/30/15 09:18 • (DUP) 09/30/15 09:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	ND	0.000	1	0		20
Sulfate	12.0	11.4	1	5		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/30/15 06:52 • (LCSD) 09/30/15 07:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate	8.00	8.22	8.34	103	104	90-110			1	20
Sulfate	40.0	40.3	41.0	101	103	90-110			2	20

L791402-01 Original Sample (OS) • Matrix Spike (MS)

(OS) 09/30/15 12:40 • (MS) 09/30/15 12:55

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	0.0681	5.15	102	1	80-120	
Sulfate	50.0	21.7	71.5	100	1	80-120	

L791509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/30/15 17:03 • (MS) 09/30/15 17:18 • (MSD) 09/30/15 17:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate	5.00	ND	4.84	5.03	97	101	1	80-120			4	20
Sulfate	50.0	0.104	49.2	50.1	98	100	1	80-120			2	20



Method Blank (MB)

(MB) 10/01/15 08:37

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	102		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/01/15 07:28 • (LCSD) 10/01/15 07:51

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	4.67	5.77	84.9	105	66.0-123		J3	21.1	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				97.8	98.0	62.0-128				

5 Sr

6 Qc

L790811-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/01/15 12:58 • (MS) 10/01/15 11:50 • (MSD) 10/01/15 12:12

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	ND	6.08	5.42	111	98.6	1	47.5-136			11.5	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					98.0	95.3		62.0-128				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/05/15 13:05

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Ethane	ND		0.0130
Ethene	ND		0.0130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 15:03 • (LCSD) 10/05/15 15:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Ethane	0.129	0.121	0.122	94.0	94.8	85.0-115			0.900	20
Ethene	0.127	0.118	0.120	93.3	94.7	85.0-115			1.58	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 10:19

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100

¹ Cp

² Tc

³ Ss

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 10:55 • (LCSD) 10/06/15 10:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0733	0.0691	108	102	85.0-115			5.90	20

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/04/15 00:48

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	100		90.0-115
(S) Dibromofluoromethane	96.2		79.0-121
(S) a,a,a-Trifluorotoluene	104		90.4-116
(S) 4-Bromofluorobenzene	104		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/03/15 23:30 • (LCSD) 10/03/15 23:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0266	0.0264	106	106	73.0-122			0.740	20
Ethylbenzene	0.0250	0.0288	0.0290	115	116	80.9-121			0.710	20
Toluene	0.0250	0.0272	0.0271	109	108	77.9-116			0.260	20
Xylenes, Total	0.0750	0.0862	0.0876	115	117	79.2-122			1.67	20
(S) Toluene-d8				101	102	90.0-115				
(S) Dibromofluoromethane				99.3	98.2	79.0-121				
(S) a,a,a-Trifluorotoluene				103	104	90.4-116				
(S) 4-Bromofluorobenzene				102	104	80.1-120				

L791503-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/04/15 03:47 • (MS) 10/04/15 04:07 • (MSD) 10/04/15 04:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.00109	0.0227	0.0270	86.2	104	1	58.6-133			17.5	20
Ethylbenzene	0.0250	ND	0.0233	0.0272	93.2	109	1	62.7-136			15.4	20
Toluene	0.0250	ND	0.0222	0.0263	88.9	105	1	67.8-124			16.7	20
Xylenes, Total	0.0750	ND	0.0692	0.0812	92.3	108	1	65.6-133			15.9	20
(S) Toluene-d8					102	101		90.0-115				
(S) Dibromofluoromethane					99.5	101		79.0-121				
(S) a,a,a-Trifluorotoluene					104	103		90.4-116				
(S) 4-Bromofluorobenzene					102	102		80.1-120				



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

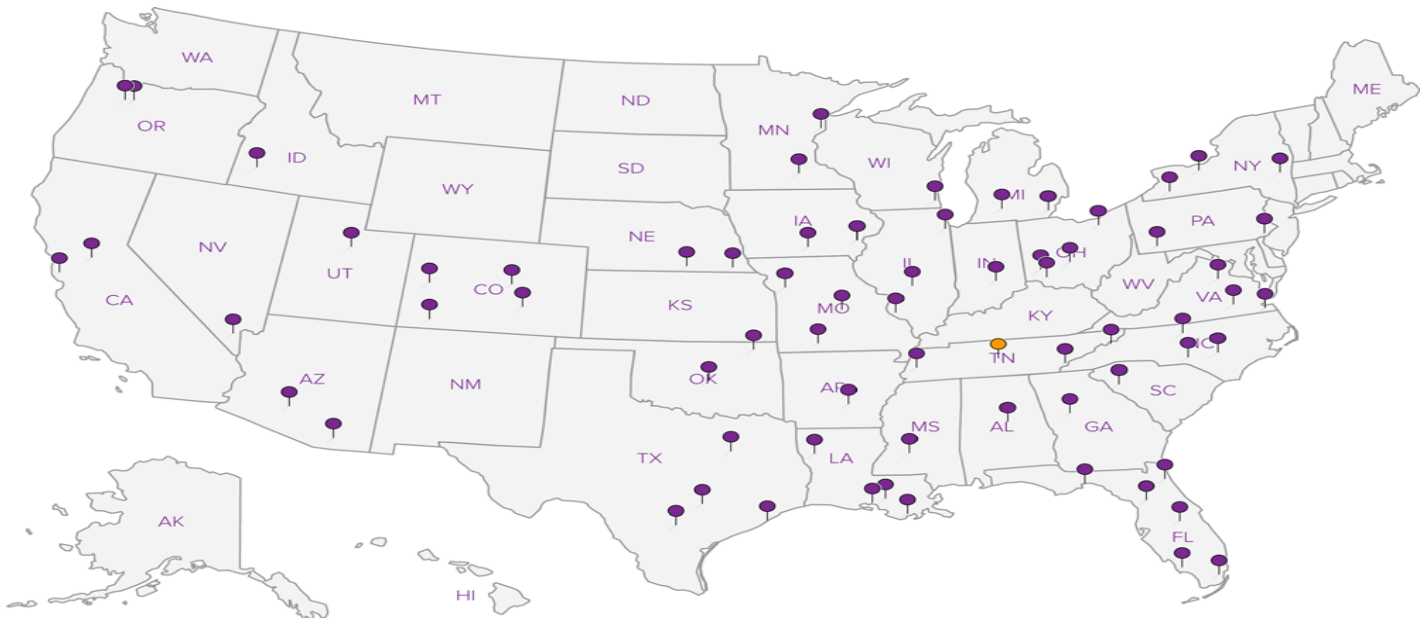
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
 Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
McUlberg

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice **N** **Y** X

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___ No **X** Yes
 FAX? ___ No ___ Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative											
							Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-5-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTECX 40mlAmb-HCl		
12		GW				13	X	X	X	X	X	X	X	X	X	X	X	X
MW-07R		GW				13	X	X	X	X	X	X	X	X	X	X	X	X
MW-2		GW				13	X	X	X	X	X	X	X	X	X	X	X	X
MW-12R		GW				13	X	X	X	X	X	X	X	X	X	X	X	X
SH-02R		GW				13	X	X	X	X	X	X	X	X	X	X	X	X
11		GW				9		X	X	X		X	X		X		X	
A-23R	Grab	GW		9/28/15	1510	9		X	X	X		X	X		X		X	
A-27		GW				9		X	X	X		X	X		X		X	
MW-14		GW				9		X	X	X		X	X		X		X	
MW-19		GW				9		X	X	X		X	X		X		X	

Chain of Custody Page of



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **1791503**
A062

Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 PB:

Shipped Via: **FedEX Ground**

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 9-29-15	Time: 11:00	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: _____ °C Bottles Received: 9
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 9/30/15 Time: 0900

Hold # _____

Condition: (lab use only)
** could not edit due to matrix a*

COC Seal Intact: ___ Y ___ N ___ NA

pH Checked: **42** NCF: _____

October 13, 2015

Kinder Morgan- Orange, CA

Sample Delivery Group: L791819
Samples Received: 10/01/2015
Project Number: WA000804.2015
Description: KMEP Harbor Island
Site: HARBOR ISLAND
Report To: Rob Truedinger / Kyle Haslam
1100 Olive Way, Suite 800
Seattle, WA 98101

Entire Report Reviewed By:



Jarred Willis
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc



⁹Sc: Chain of Custody

61

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

SAMPLE SUMMARY



12 L791819-01 GW

						Collected by	Collected date/time	Received date/time
						Mark Ullery	09/29/15 12:59	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst			
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:00	VSS			
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 10:50	LAT			
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/02/15 21:42	JNS			
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	5	10/01/15 21:37	10/05/15 20:48	JNS			
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/05/15 17:37	10/05/15 17:37	MCB			
Volatile Organic Compounds (GC) by Method RSK175	WG819756	1	10/05/15 14:53	10/05/15 14:53	MBF			
Volatile Organic Compounds (GC) by Method RSK175	WG819974	10	10/06/15 10:50	10/06/15 10:50	MBF			
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820781	2	10/09/15 11:30	10/09/15 11:30	KLO			
Wet Chemistry by Method 3500Fe B-2011	WG819348	1	10/06/15 12:54	10/06/15 12:54	KBC			
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:49	10/05/15 16:49	KBC			
Wet Chemistry by Method 9056	WG819021	1	10/01/15 12:25	10/01/15 12:25	DJD			
Wet Chemistry by Method 9056	WG819021	10	10/01/15 17:30	10/01/15 17:30	DJD			

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

MW-2 L791819-02 GW

						Collected by	Collected date/time	Received date/time
						Mark Ullery	09/30/15 10:40	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst			
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:02	VSS			
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 10:40	LAT			
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/05/15 20:31	JNS			
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/05/15 17:59	10/05/15 17:59	MCB			
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:18	10/06/15 13:18	MBF			
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/06/15 21:27	10/06/15 21:27	KLO			
Wet Chemistry by Method 3500Fe B-2011	WG819348	1	10/06/15 12:54	10/06/15 12:54	KBC			
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:50	10/05/15 16:50	KBC			
Wet Chemistry by Method 9056	WG818860	1	10/01/15 17:09	10/01/15 17:09	NJM			

MW-12R L791819-03 GW

						Collected by	Collected date/time	Received date/time
						Mark Ullery	09/30/15 16:30	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst			
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:05	VSS			
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 10:53	LAT			
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 00:46	JNS			
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819965	1	10/06/15 15:28	10/06/15 15:28	KLO			
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:21	10/06/15 13:21	MBF			
Volatile Organic Compounds (GC) by Method RSK175	WG820120	20	10/06/15 15:50	10/06/15 15:50	MBF			
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/06/15 22:54	10/06/15 22:54	KLO			
Wet Chemistry by Method 3500Fe B-2011	WG819348	1	10/06/15 12:55	10/06/15 12:55	KBC			
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:50	10/05/15 16:50	KBC			
Wet Chemistry by Method 9056	WG820871	1	10/09/15 12:31	10/09/15 12:31	DJD			

SH-02R L791819-04 GW

						Collected by	Collected date/time	Received date/time
						Mark Ullery	09/30/15 14:25	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst			
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:08	VSS			
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 10:56	LAT			
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 01:12	JNS			
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819965	1	10/06/15 15:50	10/06/15 15:50	KLO			
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:25	10/06/15 13:25	MBF			
Volatile Organic Compounds (GC) by Method RSK175	WG820120	20	10/06/15 15:53	10/06/15 15:53	MBF			

SAMPLE SUMMARY



SH-02R L791819-04 GW

Collected by
Mark Ullery
Collected date/time
09/30/15 14:25
Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/06/15 23:16	10/06/15 23:16	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	25	10/06/15 12:56	10/06/15 12:56	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:51	10/05/15 16:51	KBC
Wet Chemistry by Method 9056	WG820871	1	10/09/15 12:44	10/09/15 12:44	DJD

1
Cp

2
Tc

3
Ss

4
Cn

11 L791819-05 GW

Collected by
Mark Ullery
Collected date/time
09/29/15 14:45
Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819965	1	10/06/15 16:13	10/06/15 16:13	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:29	10/06/15 13:29	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/06/15 23:38	10/06/15 23:38	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	1	10/06/15 12:57	10/06/15 12:57	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:51	10/05/15 16:51	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 12:53	10/01/15 12:53	DJD
Wet Chemistry by Method 9056	WG819021	5	10/01/15 17:44	10/01/15 17:44	DJD

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

A-27 L791819-06 GW

Collected by
Mark Ullery
Collected date/time
09/29/15 14:00
Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG820357	1	10/08/15 00:55	10/08/15 00:55	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:38	10/06/15 13:38	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	20	10/06/15 15:55	10/06/15 15:55	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 19:44	10/08/15 19:44	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	100	10/06/15 13:04	10/06/15 13:04	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:52	10/05/15 16:52	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 12:39	10/01/15 12:39	DJD

MW-19 L791819-07 GW

Collected by
Mark Ullery
Collected date/time
09/30/15 16:00
Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG820357	1	10/08/15 01:15	10/08/15 01:15	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 13:45	10/06/15 13:45	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	25	10/06/15 15:58	10/06/15 15:58	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 20:06	10/08/15 20:06	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	100	10/06/15 13:04	10/06/15 13:04	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:52	10/05/15 16:52	KBC
Wet Chemistry by Method 9056	WG820871	1	10/09/15 12:58	10/09/15 12:58	DJD

TMW-1 L791819-08 GW

Collected by
Mark Ullery
Collected date/time
09/29/15 16:55
Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG820357	1	10/08/15 03:00	10/08/15 03:00	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:01	10/06/15 14:01	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/07/15 00:43	10/07/15 00:43	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	1	10/06/15 13:05	10/06/15 13:05	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:52	10/05/15 16:52	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 13:08	10/01/15 13:08	DJD
Wet Chemistry by Method 9056	WG819021	20	10/01/15 17:59	10/01/15 17:59	DJD

SAMPLE SUMMARY



TMW-3 L791819-09 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by				Mark Ullery	
Collected date/time				09/30/15 11:50	
Received date/time					10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819965	1	10/06/15 20:03	10/06/15 20:03	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:07	10/06/15 14:07	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	4	10/06/15 16:01	10/06/15 16:01	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 20:27	10/08/15 20:27	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819348	100	10/06/15 13:05	10/06/15 13:05	KBC
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:53	10/05/15 16:53	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 13:51	10/01/15 13:51	DJD
Wet Chemistry by Method 9056	WG819021	20	10/01/15 18:13	10/01/15 18:13	DJD

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

TMW-4 L791819-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by				Mark Ullery	
Collected date/time				09/30/15 09:40	
Received date/time					10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/05/15 23:07	10/05/15 23:07	MCB
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:18	10/06/15 14:18	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	4	10/06/15 16:03	10/06/15 16:03	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	25	10/07/15 01:26	10/07/15 01:26	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:46	10/07/15 10:46	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:53	10/05/15 16:53	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 14:20	10/01/15 14:20	DJD
Wet Chemistry by Method 9056	WG819021	10	10/01/15 18:42	10/01/15 18:42	DJD

6
Qc

7
Gl

8
Al

9
Sc

TMW-5 L791819-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by				Mark Ullery	
Collected date/time				09/30/15 12:45	
Received date/time					10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/05/15 23:29	10/05/15 23:29	MCB
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:22	10/06/15 14:22	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	5	10/06/15 16:07	10/06/15 16:07	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 20:48	10/08/15 20:48	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:47	10/07/15 10:47	JEH
Wet Chemistry by Method 4500S2 D-2011	WG820099	50	10/07/15 09:20	10/07/15 09:20	AS
Wet Chemistry by Method 9056	WG819021	1	10/01/15 14:48	10/01/15 14:48	DJD
Wet Chemistry by Method 9056	WG819021	10	10/01/15 19:11	10/01/15 19:11	DJD

TMW-6 L791819-12 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by				Mark Ullery	
Collected date/time				09/30/15 09:00	
Received date/time					10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/05/15 23:51	10/05/15 23:51	MCB
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:31	10/06/15 14:31	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	4	10/06/15 16:09	10/06/15 16:09	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 21:09	10/08/15 21:09	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:47	10/07/15 10:47	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:55	10/05/15 16:55	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 16:47	10/01/15 16:47	DJD
Wet Chemistry by Method 9056	WG819871	20	10/06/15 18:02	10/06/15 18:02	DJD

SAMPLE SUMMARY



MW-18 L791819-13 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/30/15 13:35	Received date/time 10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/06/15 00:13	10/06/15 00:13	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/07/15 02:31	10/07/15 02:31	KLO

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

TMW-B1 L791819-14 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/29/15 16:30	Received date/time 10/01/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819268	1	10/06/15 00:35	10/06/15 00:35	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	2	10/08/15 21:30	10/08/15 21:30	KLO

MW-4 L791819-15 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/30/15 15:30	Received date/time 10/01/15 09:00
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 01:36	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	5	10/01/15 21:37	10/05/15 21:42	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 15:32	10/05/15 15:32	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/07/15 03:14	10/07/15 03:14	KLO

MW-22 L791819-16 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/30/15 09:35	Received date/time 10/01/15 09:00
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 02:00	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 16:56	10/05/15 16:56	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/07/15 03:35	10/07/15 03:35	KLO

MW-8 L791819-17 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/29/15 15:40	Received date/time 10/01/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:10	VSS
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 12:16	LAT
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 02:23	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 17:17	10/05/15 17:17	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820031	1	10/07/15 03:57	10/07/15 03:57	KLO

A-28R L791819-18 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Mark Ullery				Collected date/time 09/29/15 15:30	Received date/time 10/01/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:13	VSS
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 12:19	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 17:38	10/05/15 17:38	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:33	10/06/15 14:33	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	20	10/06/15 16:13	10/06/15 16:13	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 21:52	10/08/15 21:52	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:47	10/07/15 10:47	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819609	1	10/05/15 16:56	10/05/15 16:56	KBC
Wet Chemistry by Method 9056	WG819021	1	10/01/15 13:22	10/01/15 13:22	DJD

SAMPLE SUMMARY



MW-6 L791819-19 GW

			Collected by	Collected date/time	Received date/time
			Mark Ullery	09/29/15 17:15	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:16	VSS
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 12:22	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 17:59	10/05/15 17:59	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:37	10/06/15 14:37	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820172	1	10/07/15 16:25	10/07/15 16:25	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	1	10/07/15 10:48	10/07/15 10:48	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:37	10/06/15 16:37	AS
Wet Chemistry by Method 9056	WG819021	1	10/01/15 13:36	10/01/15 13:36	DJD

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

MW-7 L791819-20 GW

			Collected by	Collected date/time	Received date/time
			Mark Ullery	09/30/15 10:35	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:18	VSS
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 12:24	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 18:20	10/05/15 18:20	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:40	10/06/15 14:40	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	25	10/06/15 16:15	10/06/15 16:15	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820172	1	10/07/15 16:46	10/07/15 16:46	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:48	10/07/15 10:48	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:37	10/06/15 16:37	AS
Wet Chemistry by Method 9056	WG819021	1	10/01/15 15:46	10/01/15 15:46	DJD
Wet Chemistry by Method 9056	WG819021	20	10/01/15 19:54	10/01/15 19:54	DJD

6
Qc

7
Gl

8
Al

9
Sc

MW-9 L791819-21 GW

			Collected by	Collected date/time	Received date/time
			Mark Ullery	09/30/15 15:15	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:21	VSS
Metals (ICPMS) by Method 6020	WG820215	1	10/07/15 06:46	10/07/15 12:27	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 18:40	10/05/15 18:40	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:43	10/06/15 14:43	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	20	10/06/15 16:25	10/06/15 16:25	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820172	1	10/07/15 17:06	10/07/15 17:06	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	1	10/07/15 10:49	10/07/15 10:49	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:38	10/06/15 16:38	AS
Wet Chemistry by Method 9056	WG819021	1	10/01/15 16:04	10/01/15 16:04	DJD

MW-21 L791819-22 GW

			Collected by	Collected date/time	Received date/time
			Mark Ullery	09/30/15 14:05	10/01/15 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 02:46	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	5	10/01/15 21:37	10/05/15 21:59	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819271	1	10/05/15 19:01	10/05/15 19:01	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG819975	1	10/06/15 14:54	10/06/15 14:54	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820120	10	10/06/15 16:28	10/06/15 16:28	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820172	1	10/07/15 17:29	10/07/15 17:29	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	50	10/07/15 10:50	10/07/15 10:50	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:38	10/06/15 16:38	AS
Wet Chemistry by Method 9056	WG819021	1	10/01/15 16:18	10/01/15 16:18	DJD



MW-16 L791819-23 GW

Collected by
Mark Ullery

Collected date/time
09/30/15 08:40

Received date/time
10/01/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG818650	1	10/01/15 21:37	10/03/15 03:09	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819965	1	10/06/15 20:25	10/06/15 20:25	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820172	1	10/07/15 17:50	10/07/15 17:50	KLO

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jarred Willis
 Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L791819-01	I2	3500Fe B-2011
L791819-02	MW-2	3500Fe B-2011
L791819-03	MW-12R	3500Fe B-2011, 9056
L791819-04	SH-02R	3500Fe B-2011, 9056
L791819-05	11	3500Fe B-2011
L791819-06	A-27	3500Fe B-2011
L791819-07	MW-19	3500Fe B-2011, 9056
L791819-08	TMW-1	3500Fe B-2011
L791819-09	TMW-3	3500Fe B-2011
L791819-10	TMW-4	3500Fe B-2011
L791819-11	TMW-5	3500Fe B-2011
L791819-12	TMW-6	3500Fe B-2011
L791819-18	A-28R	3500Fe B-2011
L791819-19	MW-6	3500Fe B-2011
L791819-20	MW-7	3500Fe B-2011
L791819-21	MW-9	3500Fe B-2011
L791819-22	MW-21	3500Fe B-2011



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	1340		50.0	1	10/06/2015 12:54	WG819348

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	499		50.0	1	10/05/2015 16:49	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate	ND		100	1	10/01/2015 12:25	WG819021
Sulfate	550000		50000	10	10/01/2015 17:30	WG819021

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	50.8		2.00	1	10/07/2015 10:50	WG820215
Lead,Dissolved	2.80		2.00	1	10/07/2015 22:00	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	3320		100	1	10/05/2015 17:37	WG819268
(S) a,a,a-Trifluorotoluene(FID)	103		62.0-128		10/05/2015 17:37	WG819268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	3010		100	10	10/06/2015 10:50	WG819974
Ethane	17.8		13.0	1	10/05/2015 14:53	WG819756
Ethene	ND		13.0	1	10/05/2015 14:53	WG819756

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	43.5		2.00	2	10/09/2015 11:30	WG820781
Toluene	21.7		10.0	2	10/09/2015 11:30	WG820781
Ethylbenzene	191		2.00	2	10/09/2015 11:30	WG820781
Total Xylenes	60.9		6.00	2	10/09/2015 11:30	WG820781
(S) Toluene-d8	102		90.0-115		10/09/2015 11:30	WG820781
(S) Dibromofluoromethane	99.6		79.0-121		10/09/2015 11:30	WG820781
(S) a,a,a-Trifluorotoluene	97.9		90.4-116		10/09/2015 11:30	WG820781
(S) 4-Bromofluorobenzene	93.1		80.1-120		10/09/2015 11:30	WG820781

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	9850		500	5	10/05/2015 20:48	WG818650
Residual Range Organics (RRO)	732		250	1	10/02/2015 21:42	WG818650
(S) o-Terphenyl	57.9		50.0-150		10/02/2015 21:42	WG818650



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	115		50.0	1	10/06/2015 12:54	WG819348

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:50	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 17:09	WG818860
Sulfate	6980		5000	1	10/01/2015 17:09	WG818860

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/07/2015 10:40	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:02	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 17:59	WG819268
(S) a,a,a-Trifluorotoluene(FID)	97.7		62.0-128		10/05/2015 17:59	WG819268

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	276		10.0	1	10/06/2015 13:18	WG819975
Ethane	ND		13.0	1	10/06/2015 13:18	WG819975
Ethene	ND		13.0	1	10/06/2015 13:18	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/06/2015 21:27	WG820031
Toluene	ND		5.00	1	10/06/2015 21:27	WG820031
Ethylbenzene	ND		1.00	1	10/06/2015 21:27	WG820031
Total Xylenes	ND		3.00	1	10/06/2015 21:27	WG820031
(S) Toluene-d8	106		90.0-115		10/06/2015 21:27	WG820031
(S) Dibromofluoromethane	106		79.0-121		10/06/2015 21:27	WG820031
(S) a,a,a-Trifluorotoluene	99.4		90.4-116		10/06/2015 21:27	WG820031
(S) 4-Bromofluorobenzene	101		80.1-120		10/06/2015 21:27	WG820031

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	ND		100	1	10/05/2015 20:31	WG818650
Residual Range Organics (RRO)	ND		250	1	10/05/2015 20:31	WG818650
(S) o-Terphenyl	96.8		50.0-150		10/05/2015 20:31	WG818650

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	2100		50.0	1	10/06/2015 12:55	WG819348

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:50	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/09/2015 12:31	WG820871
Sulfate	5550		5000	1	10/09/2015 12:31	WG820871

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/07/2015 10:53	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:05	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/06/2015 15:28	WG819965
(S) a,a,a-Trifluorotoluene(FID)	93.4		62.0-128		10/06/2015 15:28	WG819965

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	4050		200	20	10/06/2015 15:50	WG820120
Ethane	ND		13.0	1	10/06/2015 13:21	WG819975
Ethene	ND		13.0	1	10/06/2015 13:21	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/06/2015 22:54	WG820031
Toluene	ND		5.00	1	10/06/2015 22:54	WG820031
Ethylbenzene	ND		1.00	1	10/06/2015 22:54	WG820031
Total Xylenes	ND		3.00	1	10/06/2015 22:54	WG820031
(S) Toluene-d8	106		90.0-115		10/06/2015 22:54	WG820031
(S) Dibromofluoromethane	107		79.0-121		10/06/2015 22:54	WG820031
(S) a,a,a-Trifluorotoluene	99.8		90.4-116		10/06/2015 22:54	WG820031
(S) 4-Bromofluorobenzene	103		80.1-120		10/06/2015 22:54	WG820031

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	2410		100	1	10/03/2015 00:46	WG818650
Residual Range Organics (RRO)	1070		250	1	10/03/2015 00:46	WG818650
(S) o-Terphenyl	99.8		50.0-150		10/03/2015 00:46	WG818650

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	3880		1250	25	10/06/2015 12:56	WG819348

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:51	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/09/2015 12:44	WG820871
Sulfate	ND		5000	1	10/09/2015 12:44	WG820871

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/07/2015 10:56	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:08	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/06/2015 15:50	WG819965
(S) a,a,a-Trifluorotoluene(FID)	94.3		62.0-128		10/06/2015 15:50	WG819965

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	4260		200	20	10/06/2015 15:53	WG820120
Ethane	ND		13.0	1	10/06/2015 13:25	WG819975
Ethene	ND		13.0	1	10/06/2015 13:25	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/06/2015 23:16	WG820031
Toluene	ND		5.00	1	10/06/2015 23:16	WG820031
Ethylbenzene	ND		1.00	1	10/06/2015 23:16	WG820031
Total Xylenes	ND		3.00	1	10/06/2015 23:16	WG820031
(S) Toluene-d8	107		90.0-115		10/06/2015 23:16	WG820031
(S) Dibromofluoromethane	107		79.0-121		10/06/2015 23:16	WG820031
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/06/2015 23:16	WG820031
(S) 4-Bromofluorobenzene	103		80.1-120		10/06/2015 23:16	WG820031

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	998		100	1	10/03/2015 01:12	WG818650
Residual Range Organics (RRO)	298		250	1	10/03/2015 01:12	WG818650
(S) o-Terphenyl	98.9		50.0-150		10/03/2015 01:12	WG818650

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	518		50.0	1	10/06/2015 12:57	WG819348

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:51	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	438		100	1	10/01/2015 12:53	WG819021
Sulfate	310000		25000	5	10/01/2015 17:44	WG819021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/06/2015 16:13	WG819965
(S) a, a, a-Trifluorotoluene(FID)	92.2		62.0-128		10/06/2015 16:13	WG819965

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	74.7		10.0	1	10/06/2015 13:29	WG819975
Ethane	ND		13.0	1	10/06/2015 13:29	WG819975
Ethene	ND		13.0	1	10/06/2015 13:29	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/06/2015 23:38	WG820031
Toluene	ND		5.00	1	10/06/2015 23:38	WG820031
Ethylbenzene	ND		1.00	1	10/06/2015 23:38	WG820031
Total Xylenes	ND		3.00	1	10/06/2015 23:38	WG820031
(S) Toluene-d8	106		90.0-115		10/06/2015 23:38	WG820031
(S) Dibromofluoromethane	107		79.0-121		10/06/2015 23:38	WG820031
(S) a, a, a-Trifluorotoluene	99.5		90.4-116		10/06/2015 23:38	WG820031
(S) 4-Bromofluorobenzene	104		80.1-120		10/06/2015 23:38	WG820031

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	22800		5000	100	10/06/2015 13:04	WG819348

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	10/05/2015 16:52	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate	ND		100	1	10/01/2015 12:39	WG819021
Sulfate	9300		5000	1	10/01/2015 12:39	WG819021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	1680		100	1	10/08/2015 00:55	WG820357
(S) a,a,a-Trifluorotoluene(FID)	87.1		62.0-128		10/08/2015 00:55	WG820357

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	3860		200	20	10/06/2015 15:55	WG820120
Ethane	ND		13.0	1	10/06/2015 13:38	WG819975
Ethene	ND		13.0	1	10/06/2015 13:38	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	60.9		1.00	1	10/08/2015 19:44	WG820402
Toluene	ND		5.00	1	10/08/2015 19:44	WG820402
Ethylbenzene	9.88		1.00	1	10/08/2015 19:44	WG820402
Total Xylenes	7.42		3.00	1	10/08/2015 19:44	WG820402
(S) Toluene-d8	101		90.0-115		10/08/2015 19:44	WG820402
(S) Dibromofluoromethane	103		79.0-121		10/08/2015 19:44	WG820402
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/08/2015 19:44	WG820402
(S) 4-Bromofluorobenzene	105		80.1-120		10/08/2015 19:44	WG820402

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	11000		5000	100	10/06/2015 13:04	WG819348

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:52	WG819609

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/09/2015 12:58	WG820871
Sulfate	ND		5000	1	10/09/2015 12:58	WG820871

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	2020		100	1	10/08/2015 01:15	WG820357
(S) a,a,a-Trifluorotoluene(FID)	98.4		62.0-128		10/08/2015 01:15	WG820357

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	7960		250	25	10/06/2015 15:58	WG820120
Ethane	ND		13.0	1	10/06/2015 13:45	WG819975
Ethene	ND		13.0	1	10/06/2015 13:45	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	3.41		1.00	1	10/08/2015 20:06	WG820402
Toluene	ND		5.00	1	10/08/2015 20:06	WG820402
Ethylbenzene	15.7		1.00	1	10/08/2015 20:06	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 20:06	WG820402
(S) Toluene-d8	101		90.0-115		10/08/2015 20:06	WG820402
(S) Dibromofluoromethane	103		79.0-121		10/08/2015 20:06	WG820402
(S) a,a,a-Trifluorotoluene	105		90.4-116		10/08/2015 20:06	WG820402
(S) 4-Bromofluorobenzene	106		80.1-120		10/08/2015 20:06	WG820402



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	1400		50.0	1	10/06/2015 13:05	WG819348

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:52	WG819609

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	571		100	1	10/01/2015 13:08	WG819021
Sulfate	1090000		100000	20	10/01/2015 17:59	WG819021

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	2030		100	1	10/08/2015 03:00	WG820357
(S) a, a, a-Trifluorotoluene(FID)	104		62.0-128		10/08/2015 03:00	WG820357

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	ND		10.0	1	10/06/2015 14:01	WG819975
Ethane	ND		13.0	1	10/06/2015 14:01	WG819975
Ethene	ND		13.0	1	10/06/2015 14:01	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/07/2015 00:43	WG820031
Toluene	ND		5.00	1	10/07/2015 00:43	WG820031
Ethylbenzene	ND		1.00	1	10/07/2015 00:43	WG820031
Total Xylenes	ND		3.00	1	10/07/2015 00:43	WG820031
(S) Toluene-d8	106		90.0-115		10/07/2015 00:43	WG820031
(S) Dibromofluoromethane	108		79.0-121		10/07/2015 00:43	WG820031
(S) a, a, a-Trifluorotoluene	99.4		90.4-116		10/07/2015 00:43	WG820031
(S) 4-Bromofluorobenzene	101		80.1-120		10/07/2015 00:43	WG820031



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	13400		5000	100	10/06/2015 13:05	WG819348

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:53	WG819609

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 13:51	WG819021
Sulfate	984000		100000	20	10/01/2015 18:13	WG819021

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	358		100	1	10/06/2015 20:03	WG819965
(S) a, a, a-Trifluorotoluene(FID)	93.3		62.0-128		10/06/2015 20:03	WG819965

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	890		40.0	4	10/06/2015 16:01	WG820120
Ethane	16.7		13.0	1	10/06/2015 14:07	WG819975
Ethene	ND		13.0	1	10/06/2015 14:07	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/08/2015 20:27	WG820402
Toluene	ND		5.00	1	10/08/2015 20:27	WG820402
Ethylbenzene	ND		1.00	1	10/08/2015 20:27	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 20:27	WG820402
(S) Toluene-d8	101		90.0-115		10/08/2015 20:27	WG820402
(S) Dibromofluoromethane	101		79.0-121		10/08/2015 20:27	WG820402
(S) a, a, a-Trifluorotoluene	104		90.4-116		10/08/2015 20:27	WG820402
(S) 4-Bromofluorobenzene	109		80.1-120		10/08/2015 20:27	WG820402



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	43400		3750	75	10/07/2015 10:46	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:53	WG819609

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 14:20	WG819021
Sulfate	374000		50000	10	10/01/2015 18:42	WG819021

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	3490		100	1	10/05/2015 23:07	WG819268
(S) a,a,a-Trifluorotoluene(FID)	99.0		62.0-128		10/05/2015 23:07	WG819268

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1120		40.0	4	10/06/2015 16:03	WG820120
Ethane	18.8		13.0	1	10/06/2015 14:18	WG819975
Ethene	ND		13.0	1	10/06/2015 14:18	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	107		25.0	25	10/07/2015 01:26	WG820031
Toluene	ND		125	25	10/07/2015 01:26	WG820031
Ethylbenzene	455		25.0	25	10/07/2015 01:26	WG820031
Total Xylenes	ND		75.0	25	10/07/2015 01:26	WG820031
(S) Toluene-d8	108		90.0-115		10/07/2015 01:26	WG820031
(S) Dibromofluoromethane	106		79.0-121		10/07/2015 01:26	WG820031
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/07/2015 01:26	WG820031
(S) 4-Bromofluorobenzene	102		80.1-120		10/07/2015 01:26	WG820031



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	43100		3750	75	10/07/2015 10:47	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	6720		2500	50	10/07/2015 09:20	WG820099

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 14:48	WG819021
Sulfate	734000		50000	10	10/01/2015 19:11	WG819021

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	1200		100	1	10/05/2015 23:29	WG819268
(S) a,a,a-Trifluorotoluene(FID)	98.8		62.0-128		10/05/2015 23:29	WG819268

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	2000		50.0	5	10/06/2015 16:07	WG820120
Ethane	16.7		13.0	1	10/06/2015 14:22	WG819975
Ethene	ND		13.0	1	10/06/2015 14:22	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	9.43		1.00	1	10/08/2015 20:48	WG820402
Toluene	ND		5.00	1	10/08/2015 20:48	WG820402
Ethylbenzene	ND		1.00	1	10/08/2015 20:48	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 20:48	WG820402
(S) Toluene-d8	100		90.0-115		10/08/2015 20:48	WG820402
(S) Dibromofluoromethane	102		79.0-121		10/08/2015 20:48	WG820402
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/08/2015 20:48	WG820402
(S) 4-Bromofluorobenzene	107		80.1-120		10/08/2015 20:48	WG820402



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	41700		3750	75	10/07/2015 10:47	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:55	WG819609

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 16:47	WG819021
Sulfate	1400000		100000	20	10/06/2015 18:02	WG819871

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	5090		100	1	10/05/2015 23:51	WG819268
(S) a,a,a-Trifluorotoluene(FID)	103		62.0-128		10/05/2015 23:51	WG819268

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1150		40.0	4	10/06/2015 16:09	WG820120
Ethane	13.1		13.0	1	10/06/2015 14:31	WG819975
Ethene	ND		13.0	1	10/06/2015 14:31	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	2.87		1.00	1	10/08/2015 21:09	WG820402
Toluene	ND		5.00	1	10/08/2015 21:09	WG820402
Ethylbenzene	133		1.00	1	10/08/2015 21:09	WG820402
Total Xylenes	189		3.00	1	10/08/2015 21:09	WG820402
(S) Toluene-d8	101		90.0-115		10/08/2015 21:09	WG820402
(S) Dibromofluoromethane	101		79.0-121		10/08/2015 21:09	WG820402
(S) a,a,a-Trifluorotoluene	104		90.4-116		10/08/2015 21:09	WG820402
(S) 4-Bromofluorobenzene	102		80.1-120		10/08/2015 21:09	WG820402



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/06/2015 00:13	WG819268
(S) a,a,a-Trifluorotoluene(FID)	97.9		62.0-128		10/06/2015 00:13	WG819268

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2015 02:31	WG820031
Toluene	ND		5.00	1	10/07/2015 02:31	WG820031
Ethylbenzene	ND		1.00	1	10/07/2015 02:31	WG820031
Total Xylenes	ND		3.00	1	10/07/2015 02:31	WG820031
(S) Toluene-d8	107		90.0-115		10/07/2015 02:31	WG820031
(S) Dibromofluoromethane	108		79.0-121		10/07/2015 02:31	WG820031
(S) a,a,a-Trifluorotoluene	99.4		90.4-116		10/07/2015 02:31	WG820031
(S) 4-Bromofluorobenzene	103		80.1-120		10/07/2015 02:31	WG820031

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	7220		100	1	10/06/2015 00:35	WG819268
(S) a,a,a-Trifluorotoluene(FID)	127		62.0-128		10/06/2015 00:35	WG819268

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	35.5		2.00	2	10/08/2015 21:30	WG820402
Toluene	ND		10.0	2	10/08/2015 21:30	WG820402
Ethylbenzene	213		2.00	2	10/08/2015 21:30	WG820402
Total Xylenes	106		6.00	2	10/08/2015 21:30	WG820402
(S) Toluene-d8	99.3		90.0-115		10/08/2015 21:30	WG820402
(S) Dibromofluoromethane	101		79.0-121		10/08/2015 21:30	WG820402
(S) a,a,a-Trifluorotoluene	102		90.4-116		10/08/2015 21:30	WG820402
(S) 4-Bromofluorobenzene	101		80.1-120		10/08/2015 21:30	WG820402

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND	J3	100	1	10/05/2015 15:32	WG819271
(S) a,a,a-Trifluorotoluene(FID)	99.5		62.0-128		10/05/2015 15:32	WG819271

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2015 03:14	WG820031
Toluene	ND		5.00	1	10/07/2015 03:14	WG820031
Ethylbenzene	ND		1.00	1	10/07/2015 03:14	WG820031
Total Xylenes	ND		3.00	1	10/07/2015 03:14	WG820031
(S) Toluene-d8	108		90.0-115		10/07/2015 03:14	WG820031
(S) Dibromofluoromethane	109		79.0-121		10/07/2015 03:14	WG820031
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/07/2015 03:14	WG820031
(S) 4-Bromofluorobenzene	102		80.1-120		10/07/2015 03:14	WG820031

4 Cn

5 Sr

6 Qc

7 Gl

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	5020		500	5	10/05/2015 21:42	WG818650
Residual Range Organics (RRO)	916		250	1	10/03/2015 01:36	WG818650
(S) o-Terphenyl	89.8		50.0-150		10/03/2015 01:36	WG818650

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 16:56	WG819271
(S) a,a,a-Trifluorotoluene(FID)	99.5		62.0-128		10/05/2015 16:56	WG819271

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/07/2015 03:35	WG820031
Toluene	ND		5.00	1	10/07/2015 03:35	WG820031
Ethylbenzene	ND		1.00	1	10/07/2015 03:35	WG820031
Total Xylenes	ND		3.00	1	10/07/2015 03:35	WG820031
(S) Toluene-d8	107		90.0-115		10/07/2015 03:35	WG820031
(S) Dibromofluoromethane	110		79.0-121		10/07/2015 03:35	WG820031
(S) a,a,a-Trifluorotoluene	98.8		90.4-116		10/07/2015 03:35	WG820031
(S) 4-Bromofluorobenzene	101		80.1-120		10/07/2015 03:35	WG820031

4 Cn

5 Sr

6 Qc

7 Gl

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	911		100	1	10/03/2015 02:00	WG818650
Residual Range Organics (RRO)	ND		250	1	10/03/2015 02:00	WG818650
(S) o-Terphenyl	102		50.0-150		10/03/2015 02:00	WG818650

8 Al

9 Sc



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	6.76		2.00	1	10/07/2015 12:16	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:10	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 17:17	WG819271
(S) a,a,a-Trifluorotoluene(FID)	99.7		62.0-128		10/05/2015 17:17	WG819271

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2015 03:57	WG820031
Toluene	ND		5.00	1	10/07/2015 03:57	WG820031
Ethylbenzene	ND		1.00	1	10/07/2015 03:57	WG820031
Total Xylenes	ND		3.00	1	10/07/2015 03:57	WG820031
(S) Toluene-d8	107		90.0-115		10/07/2015 03:57	WG820031
(S) Dibromofluoromethane	108		79.0-121		10/07/2015 03:57	WG820031
(S) a,a,a-Trifluorotoluene	99.1		90.4-116		10/07/2015 03:57	WG820031
(S) 4-Bromofluorobenzene	102		80.1-120		10/07/2015 03:57	WG820031

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	1750		100	1	10/03/2015 02:23	WG818650
Residual Range Organics (RRO)	2070		250	1	10/03/2015 02:23	WG818650
(S) o-Terphenyl	109		50.0-150		10/03/2015 02:23	WG818650



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	71300		3750	75	10/07/2015 10:47	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/05/2015 16:56	WG819609

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 13:22	WG819021
Sulfate	ND		5000	1	10/01/2015 13:22	WG819021

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/07/2015 12:19	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:13	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	1850		100	1	10/05/2015 17:38	WG819271
(S) a,a,a-Trifluorotoluene(FID)	88.7		62.0-128		10/05/2015 17:38	WG819271

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	4150		200	20	10/06/2015 16:13	WG820120
Ethane	14.1		13.0	1	10/06/2015 14:33	WG819975
Ethene	ND		13.0	1	10/06/2015 14:33	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	20.5		1.00	1	10/08/2015 21:52	WG820402
Toluene	ND		5.00	1	10/08/2015 21:52	WG820402
Ethylbenzene	4.31		1.00	1	10/08/2015 21:52	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 21:52	WG820402
(S) Toluene-d8	99.6		90.0-115		10/08/2015 21:52	WG820402
(S) Dibromofluoromethane	101		79.0-121		10/08/2015 21:52	WG820402
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/08/2015 21:52	WG820402
(S) 4-Bromofluorobenzene	102		80.1-120		10/08/2015 21:52	WG820402

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	203		50.0	1	10/07/2015 10:48	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:37	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 13:36	WG819021
Sulfate	9640		5000	1	10/01/2015 13:36	WG819021

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/07/2015 12:22	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:16	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	259		100	1	10/05/2015 17:59	WG819271
(S) a,a,a-Trifluorotoluene(FID)	98.9		62.0-128		10/05/2015 17:59	WG819271

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	123		10.0	1	10/06/2015 14:37	WG819975
Ethane	ND		13.0	1	10/06/2015 14:37	WG819975
Ethene	ND		13.0	1	10/06/2015 14:37	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/07/2015 16:25	WG820172
Toluene	ND		5.00	1	10/07/2015 16:25	WG820172
Ethylbenzene	ND		1.00	1	10/07/2015 16:25	WG820172
Total Xylenes	ND		3.00	1	10/07/2015 16:25	WG820172
(S) Toluene-d8	98.5		90.0-115		10/07/2015 16:25	WG820172
(S) Dibromofluoromethane	105		79.0-121		10/07/2015 16:25	WG820172
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/07/2015 16:25	WG820172
(S) 4-Bromofluorobenzene	91.4		80.1-120		10/07/2015 16:25	WG820172

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	19700		3750	75	10/07/2015 10:48	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	ND		50.0	1	10/06/2015 16:37	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate	ND		100	1	10/01/2015 15:46	WG819021
Sulfate	932000		100000	20	10/01/2015 19:54	WG819021

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	5.80		2.00	1	10/07/2015 12:24	WG820215
Lead,Dissolved	3.81		2.00	1	10/07/2015 22:18	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	1020		100	1	10/05/2015 18:20	WG819271
(S) a,a,a-Trifluorotoluene(FID)	95.1		62.0-128		10/05/2015 18:20	WG819271

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	12100		250	25	10/06/2015 16:15	WG820120
Ethane	17.9		13.0	1	10/06/2015 14:40	WG819975
Ethene	ND		13.0	1	10/06/2015 14:40	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8.44		1.00	1	10/07/2015 16:46	WG820172
Toluene	ND		5.00	1	10/07/2015 16:46	WG820172
Ethylbenzene	32.8		1.00	1	10/07/2015 16:46	WG820172
Total Xylenes	33.5		3.00	1	10/07/2015 16:46	WG820172
(S) Toluene-d8	98.3		90.0-115		10/07/2015 16:46	WG820172
(S) Dibromofluoromethane	104		79.0-121		10/07/2015 16:46	WG820172
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/07/2015 16:46	WG820172
(S) 4-Bromofluorobenzene	92.3		80.1-120		10/07/2015 16:46	WG820172

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	207		50.0	1	10/07/2015 10:49	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:38	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/01/2015 16:04	WG819021
Sulfate	27800		5000	1	10/01/2015 16:04	WG819021

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	3.23		2.00	1	10/07/2015 12:27	WG820215
Lead,Dissolved	ND		2.00	1	10/07/2015 22:21	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 18:40	WG819271
(S) a,a,a-Trifluorotoluene(FID)	102		62.0-128		10/05/2015 18:40	WG819271

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	5400		200	20	10/06/2015 16:25	WG820120
Ethane	13.0		13.0	1	10/06/2015 14:43	WG819975
Ethene	ND		13.0	1	10/06/2015 14:43	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/07/2015 17:06	WG820172
Toluene	ND		5.00	1	10/07/2015 17:06	WG820172
Ethylbenzene	ND		1.00	1	10/07/2015 17:06	WG820172
Total Xylenes	ND		3.00	1	10/07/2015 17:06	WG820172
(S) Toluene-d8	97.6		90.0-115		10/07/2015 17:06	WG820172
(S) Dibromofluoromethane	104		79.0-121		10/07/2015 17:06	WG820172
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/07/2015 17:06	WG820172
(S) 4-Bromofluorobenzene	90.9		80.1-120		10/07/2015 17:06	WG820172

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Ferrous Iron	4360		2500	50	10/07/2015 10:50	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Sulfide	81.0		50.0	1	10/06/2015 16:38	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate	107		100	1	10/01/2015 16:18	WG819021
Sulfate	ND		5000	1	10/01/2015 16:18	WG819021

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 19:01	WG819271
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		10/05/2015 19:01	WG819271

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	2510		100	10	10/06/2015 16:28	WG820120
Ethane	ND		13.0	1	10/06/2015 14:54	WG819975
Ethene	ND		13.0	1	10/06/2015 14:54	WG819975

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2015 17:29	WG820172
Toluene	ND		5.00	1	10/07/2015 17:29	WG820172
Ethylbenzene	ND		1.00	1	10/07/2015 17:29	WG820172
Total Xylenes	ND		3.00	1	10/07/2015 17:29	WG820172
(S) Toluene-d8	97.5		90.0-115		10/07/2015 17:29	WG820172
(S) Dibromofluoromethane	102		79.0-121		10/07/2015 17:29	WG820172
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/07/2015 17:29	WG820172
(S) 4-Bromofluorobenzene	95.4		80.1-120		10/07/2015 17:29	WG820172

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	3120		500	5	10/05/2015 21:59	WG818650
Residual Range Organics (RRO)	1590		250	1	10/03/2015 02:46	WG818650
(S) o-Terphenyl	107		50.0-150		10/03/2015 02:46	WG818650

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/06/2015 20:25	WG819965
(S) a,a,a-Trifluorotoluene(FID)	88.6		62.0-128		10/06/2015 20:25	WG819965

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/07/2015 17:50	WG820172
Toluene	ND		5.00	1	10/07/2015 17:50	WG820172
Ethylbenzene	ND		1.00	1	10/07/2015 17:50	WG820172
Total Xylenes	ND		3.00	1	10/07/2015 17:50	WG820172
(S) Toluene-d8	97.1		90.0-115		10/07/2015 17:50	WG820172
(S) Dibromofluoromethane	106		79.0-121		10/07/2015 17:50	WG820172
(S) a,a,a-Trifluorotoluene	98.2		90.4-116		10/07/2015 17:50	WG820172
(S) 4-Bromofluorobenzene	90.7		80.1-120		10/07/2015 17:50	WG820172

4 Cn

5 Sr

6 Qc

7 Gl

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		100	1	10/03/2015 03:09	WG818650
Residual Range Organics (RRO)	ND		250	1	10/03/2015 03:09	WG818650
(S) o-Terphenyl	105		50.0-150		10/03/2015 03:09	WG818650

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 12:22

Analyte	MB Result	MB Qualifier	MB RDL
Ferrous Iron	ND		0.0500

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L791819-05 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 12:57 • (DUP) 10/06/15 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ferrous Iron	0.518	0.517	1	0.193		20

L791672-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 12:24 • (DUP) 10/06/15 12:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ferrous Iron	0.0510	0.0520	1	1.94		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 12:23 • (LCSD) 10/06/15 12:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ferrous Iron	1.00	0.974	0.974	97.4	97.4	85.0-115			0.000	20

L791672-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 12:24 • (MS) 10/06/15 12:26 • (MSD) 10/06/15 12:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ferrous Iron	1.50	0.0510	1.61	1.61	104	104	1	80.0-120			0.000	20



Method Blank (MB)

(MB) 10/07/15 10:45

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Ferrous Iron	ND		0.0500

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L791819-21 Original Sample (OS) • Duplicate (DUP)

(OS) 10/07/15 10:49 • (DUP) 10/07/15 10:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ferrous Iron	0.207	0.207	1	0.000		20

L792110-13 Original Sample (OS) • Duplicate (DUP)

(OS) 10/07/15 10:57 • (DUP) 10/07/15 10:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ferrous Iron	8.61	8.64	75	0.348		20

⁷Gl

⁸Al

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 10:46 • (LCSD) 10/07/15 10:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ferrous Iron	1.00	0.908	0.909	90.8	90.9	85.0-115			0.110	20

⁹Sc

L791819-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 10:49 • (MS) 10/07/15 10:49 • (MSD) 10/07/15 10:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ferrous Iron	1.50	0.207	1.61	1.61	93.5	93.5	1	80.0-120			0.000	20



Method Blank (MB)

(MB) 10/05/15 16:43

Analyte	MB Result	MB Qualifier	MB RDL
Sulfide	ND		0.0500

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L791819-18 Original Sample (OS) • Duplicate (DUP)

(OS) 10/05/15 16:56 • (DUP) 10/05/15 16:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	ND	1	0.000		20

L791503-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/05/15 16:46 • (DUP) 10/05/15 16:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 16:45 • (LCSD) 10/05/15 16:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfide	0.500	0.536	0.534	107	107	85.0-115			0.374	20

L791819-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/05/15 16:55 • (MS) 10/05/15 16:56 • (MSD) 10/05/15 16:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	1.00	0.0140	1.01	1.02	101	102	1	80.0-120			0.985	20



Method Blank (MB)

(MB) 10/06/15 16:35

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Sulfide	ND		0.0500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L792110-09 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 16:39 • (DUP) 10/06/15 16:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

L792495-08 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 16:43 • (DUP) 10/06/15 16:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 16:36 • (LCSD) 10/06/15 16:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfide	0.500	0.530	0.533	106	107	85.0-115			0.564	20

⁹ Sc

L792495-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 16:44 • (MS) 10/06/15 16:45 • (MSD) 10/06/15 16:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	1.00	0.0670	0.412	0.401	34.5	33.4	1	80.0-120	<u>J6</u>	<u>J6</u>	2.71	20



Method Blank (MB)

(MB) 10/07/15 09:16

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Sulfide	ND		0.0500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L791819-11 Original Sample (OS) • Duplicate (DUP)

(OS) 10/07/15 09:20 • (DUP) 10/07/15 09:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	6.72	6.72	50	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 09:16 • (LCSD) 10/07/15 09:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfide	0.500	0.492	0.492	98.4	98.4	85.0-115			0.000	20

L792600-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 09:21 • (MS) 10/07/15 09:21 • (MSD) 10/07/15 09:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	1.00	0.0230	0.752	0.753	75.2	75.3	1	80.0-120	<u>J6</u>	<u>J6</u>	0.133	20



Method Blank (MB)

(MB) 10/01/15 07:32

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Nitrate	ND		0.100
Sulfate	ND		5.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L791808-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/01/15 13:58 • (DUP) 10/01/15 14:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	ND	0.000	1	0		20
Sulfate	0.619	0.615	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/01/15 08:00 • (LCSD) 10/01/15 08:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate	8.00	8.09	8.12	101	102	90-110			0	20
Sulfate	40.0	38.8	39.0	97	97	90-110			1	20

L791808-02 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/01/15 14:26 • (MS) 10/01/15 14:40

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	0.0230	5.22	104	1	80-120	
Sulfate	50.0	4.05	56.4	105	1	80-120	



Method Blank (MB)

(MB) 10/01/15 07:36

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Nitrate	ND		0.100
Sulfate	ND		5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L791819-09 Original Sample (OS) • Duplicate (DUP)

(OS) 10/01/15 13:51 • (DUP) 10/01/15 14:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	ND	0.000	1	0		20

L791819-22 Original Sample (OS) • Duplicate (DUP)

(OS) 10/01/15 16:18 • (DUP) 10/01/15 16:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	0.107	0.106	1	1		20
Sulfate	3.80	3.88	1	0		20

L791819-09 Original Sample (OS) • Duplicate (DUP)

(OS) 10/01/15 18:13 • (DUP) 10/01/15 18:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Sulfate	984	982	20	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/01/15 07:50 • (LCSD) 10/01/15 08:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate	8.00	7.91	7.92	99	99	90-110			0	20
Sulfate	40.0	39.4	39.5	99	99	90-110			0	20



L791819-10 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/01/15 14:20 • (MS) 10/01/15 14:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5.00	ND	4.66	93	1	80-120	

L791819-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/01/15 16:04 • (MS) 10/01/15 17:01 • (MSD) 10/01/15 17:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5.00	0.0417	5.09	4.87	101	96	1	80-120			4	20
Sulfate	50.0	27.8	77.6	75.3	100	95	1	80-120			3	20

L791819-10 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/01/15 18:42 • (MS) 10/01/15 18:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	5.00	374	824	90	10	80-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 07:56

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Sulfate	ND		5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L791474-06 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 15:12 • (DUP) 10/06/15 15:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	ND	0.000	10	0		20

L791844-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 18:17 • (DUP) 10/06/15 18:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 08:12 • (LCSD) 10/06/15 08:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfate	40.0	41.1	41.2	103	103	90-110			0	20

L791474-07 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/06/15 16:14 • (MS) 10/06/15 16:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	5.00	ND	533	107	10	80-120	



[L791819-12](#)

L791853-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 18:48 • (MS) 10/06/15 19:04 • (MSD) 10/06/15 19:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Sulfate	50.0	13.0	64.8	64.8	103	103	1	80-120			0	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 10/09/15 08:32

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Nitrate	ND		0.100
Sulfate	ND		5.00

1 Cp

2 Tc

3 Ss

4 Cn

L791794-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/09/15 10:53 • (DUP) 10/09/15 11:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	0.0487	0.0828	1	0		20
Sulfate	10.5	11.2	1	6		20

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 08:46 • (LCSD) 10/09/15 09:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate	8.00	8.23	8.25	103	103	90-110			0	20
Sulfate	40.0	38.4	38.4	96	96	90-110			0	20

7 Gl

8 Al

L791794-02 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/09/15 11:21 • (MS) 10/09/15 11:35

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	0.0684	5.38	106	1	80-120	
Sulfate	50.0	10.8	60.9	100	1	80-120	

9 Sc



Method Blank (MB)

(MB) 10/07/15 20:33

Analyte	MB Result	MB Qualifier	MB RDL
Lead,Dissolved	ND		0.00200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 20:35 • (LCSD) 10/07/15 20:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Lead,Dissolved	0.0500	0.0454	0.0465	91	93	80-120			3	20

L792110-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 20:41 • (MS) 10/07/15 20:46 • (MSD) 10/07/15 20:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Lead,Dissolved	0.0500	0.000159	0.0426	0.0468	85	93	1	75-125			9	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/07/15 10:31

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lead	ND		0.00200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 10:34 • (LCSD) 10/07/15 10:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.0483	0.0494	97	99	80-120			2	20

L791819-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 10:40 • (MS) 10/07/15 10:45 • (MSD) 10/07/15 10:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.000336	0.0473	0.0506	94	101	1	75-125			7	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/05/15 12:41

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	97.6		62.0-128

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 10:47 • (LCSD) 10/05/15 11:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	6.36	6.40	116	116	66.0-123			0.600	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				107	107	62.0-128				

L791792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/05/15 15:24 • (MS) 10/05/15 15:46 • (MSD) 10/05/15 16:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	1.50	7.68	8.23	112	122	1	47.5-136			6.89	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					108	109		62.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/05/15 13:23

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	99.9		62.0-128

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 12:20 • (LCSD) 10/05/15 12:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	6.07	6.09	110	111	66.0-123			0.170	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				102	100	62.0-128				

L791819-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/05/15 15:32 • (MS) 10/05/15 15:53 • (MSD) 10/05/15 16:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	0.00768	4.94	6.60	89.7	120	1	47.5-136		J3	28.8	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					97.5	102		62.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 11:47

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	92.9		62.0-128

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 10:40 • (LCSD) 10/06/15 11:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	6.10	6.05	111	110	66.0-123			0.800	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				102	102	62.0-128				

L792536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 14:44 • (MS) 10/06/15 12:53 • (MSD) 10/06/15 13:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	ND	5.82	5.51	106	100	1	47.5-136			5.56	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					102	101		62.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/07/15 22:27

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	100		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 21:24 • (LCSD) 10/07/15 21:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	6.47	6.05	118	110	66.0-123			6.80	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				103	102	62.0-128				

L792214-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/08/15 00:34 • (MS) 10/07/15 23:31 • (MSD) 10/07/15 23:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	0.962	6.85	7.14	107	112	1	47.5-136			4.13	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					103	104		62.0-128				



Method Blank (MB)

(MB) 10/05/15 13:05

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Ethane	ND		0.0130
Ethene	ND		0.0130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 15:03 • (LCSD) 10/05/15 15:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Ethane	0.129	0.121	0.122	94.0	94.8	85.0-115			0.900	20
Ethene	0.127	0.118	0.120	93.3	94.7	85.0-115			1.58	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 10:19

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100

¹ Cp

² Tc

³ Ss

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 10:55 • (LCSD) 10/06/15 10:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0733	0.0691	108	102	85.0-115			5.90	20

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/06/15 13:16

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100
Ethane	ND		0.0130
Ethene	ND		0.0130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 15:15 • (LCSD) 10/06/15 15:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0730	0.0650	108	95.9	85.0-115			11.6	20
Ethane	0.129	0.124	0.121	96.3	93.6	85.0-115			2.82	20
Ethene	0.127	0.122	0.118	96.1	93.1	85.0-115			3.19	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/06/15 15:46

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 16:34 • (LCSD) 10/06/15 16:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0697	0.0711	103	105	85.0-115			1.97	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/06/15 20:02

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	105		90.0-115
(S) Dibromofluoromethane	105		79.0-121
(S) a,a,a-Trifluorotoluene	101		90.4-116
(S) 4-Bromofluorobenzene	101		80.1-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 18:36 • (LCSD) 10/06/15 18:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0233	0.0242	93.1	96.8	73.0-122			3.89	20
Ethylbenzene	0.0250	0.0234	0.0233	93.8	93.0	80.9-121			0.800	20
Toluene	0.0250	0.0233	0.0226	93.2	90.5	77.9-116			2.93	20
Xylenes, Total	0.0750	0.0681	0.0675	90.8	89.9	79.2-122			1.01	20
(S) Toluene-d8				107	106	90.0-115				
(S) Dibromofluoromethane				98.7	105	79.0-121				
(S) a,a,a-Trifluorotoluene				97.7	97.8	90.4-116				
(S) 4-Bromofluorobenzene				94.5	94.2	80.1-120				

7 Gl

8 Al

9 Sc

L791819-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 21:27 • (MS) 10/06/15 20:23 • (MSD) 10/06/15 20:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0205	0.0211	82.1	84.3	1	58.6-133			2.66	20
Ethylbenzene	0.0250	ND	0.0204	0.0209	81.4	83.8	1	62.7-136			2.81	20
Toluene	0.0250	ND	0.0197	0.0201	78.7	80.5	1	67.8-124			2.28	20
Xylenes, Total	0.0750	ND	0.0603	0.0622	80.4	83.0	1	65.6-133			3.21	20
(S) Toluene-d8					107	107		90.0-115				
(S) Dibromofluoromethane					106	107		79.0-121				
(S) a,a,a-Trifluorotoluene					99.7	101		90.4-116				
(S) 4-Bromofluorobenzene					97.1	96.2		80.1-120				



Method Blank (MB)

(MB) 10/07/15 04:41

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	98.7		90.0-115
(S) Dibromofluoromethane	109		79.0-121
(S) a,a,a-Trifluorotoluene	96.0		90.4-116
(S) 4-Bromofluorobenzene	89.8		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 03:19 • (LCSD) 10/07/15 07:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0267	0.0259	107	104	73.0-122			3.00	20
Ethylbenzene	0.0250	0.0235	0.0226	94.1	90.4	80.9-121			3.98	20
Toluene	0.0250	0.0235	0.0227	93.8	90.8	77.9-116			3.34	20
Xylenes, Total	0.0750	0.0702	0.0678	93.7	90.4	79.2-122			3.54	20
(S) Toluene-d8				98.7	98.2	90.0-115				
(S) Dibromofluoromethane				104	104	79.0-121				
(S) a,a,a-Trifluorotoluene				103	99.6	90.4-116				
(S) 4-Bromofluorobenzene				92.5	91.1	80.1-120				

L791814-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 12:12 • (MS) 10/07/15 12:33 • (MSD) 10/07/15 12:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0315	0.0295	126	118	1	58.6-133			6.59	20
Ethylbenzene	0.0250	ND	0.0265	0.0242	106	96.7	1	62.7-136			9.22	20
Toluene	0.0250	0.000751	0.0295	0.0266	115	104	1	67.8-124			10.1	20
Xylenes, Total	0.0750	ND	0.0778	0.0716	104	95.5	1	65.6-133			8.25	20
(S) Toluene-d8					99.3	98.6		90.0-115				
(S) Dibromofluoromethane					104	105		79.0-121				
(S) a,a,a-Trifluorotoluene					100	97.7		90.4-116				
(S) 4-Bromofluorobenzene					90.8	90.5		80.1-120				



Method Blank (MB)

(MB) 10/08/15 14:30

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	101		90.0-115
(S) Dibromofluoromethane	110		79.0-121
(S) a,a,a-Trifluorotoluene	100		90.4-116
(S) 4-Bromofluorobenzene	105		80.1-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/08/15 12:55 • (LCSD) 10/08/15 13:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0252	0.0248	101	99.3	73.0-122			1.50	20
Ethylbenzene	0.0250	0.0281	0.0272	112	109	80.9-121			3.10	20
Toluene	0.0250	0.0250	0.0251	100	100	77.9-116			0.210	20
Xylenes, Total	0.0750	0.0842	0.0826	112	110	79.2-122			1.86	20
(S) Toluene-d8				101	101	90.0-115				
(S) Dibromofluoromethane				107	106	79.0-121				
(S) a,a,a-Trifluorotoluene				101	101	90.4-116				
(S) 4-Bromofluorobenzene				100	99.5	80.1-120				

7 Gl

8 Al

9 Sc

L792110-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/08/15 22:13 • (MS) 10/08/15 18:21 • (MSD) 10/08/15 18:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0242	0.0236	96.8	94.4	1	58.6-133			2.59	20
Ethylbenzene	0.0250	ND	0.0266	0.0258	106	103	1	62.7-136			3.24	20
Toluene	0.0250	ND	0.0234	0.0230	93.5	92.2	1	67.8-124			1.43	20
Xylenes, Total	0.0750	ND	0.0800	0.0775	107	103	1	65.6-133			3.17	20
(S) Toluene-d8					101	100		90.0-115				
(S) Dibromofluoromethane					112	110		79.0-121				
(S) a,a,a-Trifluorotoluene					101	101		90.4-116				
(S) 4-Bromofluorobenzene					102	99.6		80.1-120				



Method Blank (MB)

(MB) 10/09/15 09:19

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	102		90.0-115
(S) Dibromofluoromethane	98.8		79.0-121
(S) a,a,a-Trifluorotoluene	98.2		90.4-116
(S) 4-Bromofluorobenzene	91.7		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 07:58 • (LCSD) 10/09/15 08:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0276	0.0272	111	109	73.0-122			1.50	20
Ethylbenzene	0.0250	0.0232	0.0231	92.6	92.5	80.9-121			0.100	20
Toluene	0.0250	0.0254	0.0249	101	99.6	77.9-116			1.86	20
Xylenes, Total	0.0750	0.0686	0.0693	91.4	92.3	79.2-122			0.970	20
(S) Toluene-d8				103	103	90.0-115				
(S) Dibromofluoromethane				102	101	79.0-121				
(S) a,a,a-Trifluorotoluene				100	98.8	90.4-116				
(S) 4-Bromofluorobenzene				91.4	92.3	80.1-120				

L791956-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 13:12 • (MS) 10/09/15 13:32 • (MSD) 10/09/15 13:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0278	0.0270	111	108	1	58.6-133			2.89	20
Ethylbenzene	0.0250	ND	0.0237	0.0229	94.7	91.7	1	62.7-136			3.22	20
Toluene	0.0250	ND	0.0249	0.0248	99.7	99.2	1	67.8-124			0.520	20
Xylenes, Total	0.0750	0.000475	0.0709	0.0680	93.9	90.0	1	65.6-133			4.22	20
(S) Toluene-d8					101	102		90.0-115				
(S) Dibromofluoromethane					103	99.4		79.0-121				
(S) a,a,a-Trifluorotoluene					98.7	101		90.4-116				
(S) 4-Bromofluorobenzene					94.1	91.6		80.1-120				



Method Blank (MB)

(MB) 10/02/15 12:43

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Diesel Range Organics (DRO)	ND		0.100
Residual Range Organics (RRO)	ND		0.250
<i>(S) o-Terphenyl</i>	99.1		50.0-150

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/02/15 13:02 • (LCSD) 10/02/15 13:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	0.750	0.849	0.847	113	113	50.0-150			0.210	20
Residual Range Organics (RRO)	0.750	0.901	0.893	120	119	50.0-150			0.900	20
<i>(S) o-Terphenyl</i>				97.4	97.0	50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

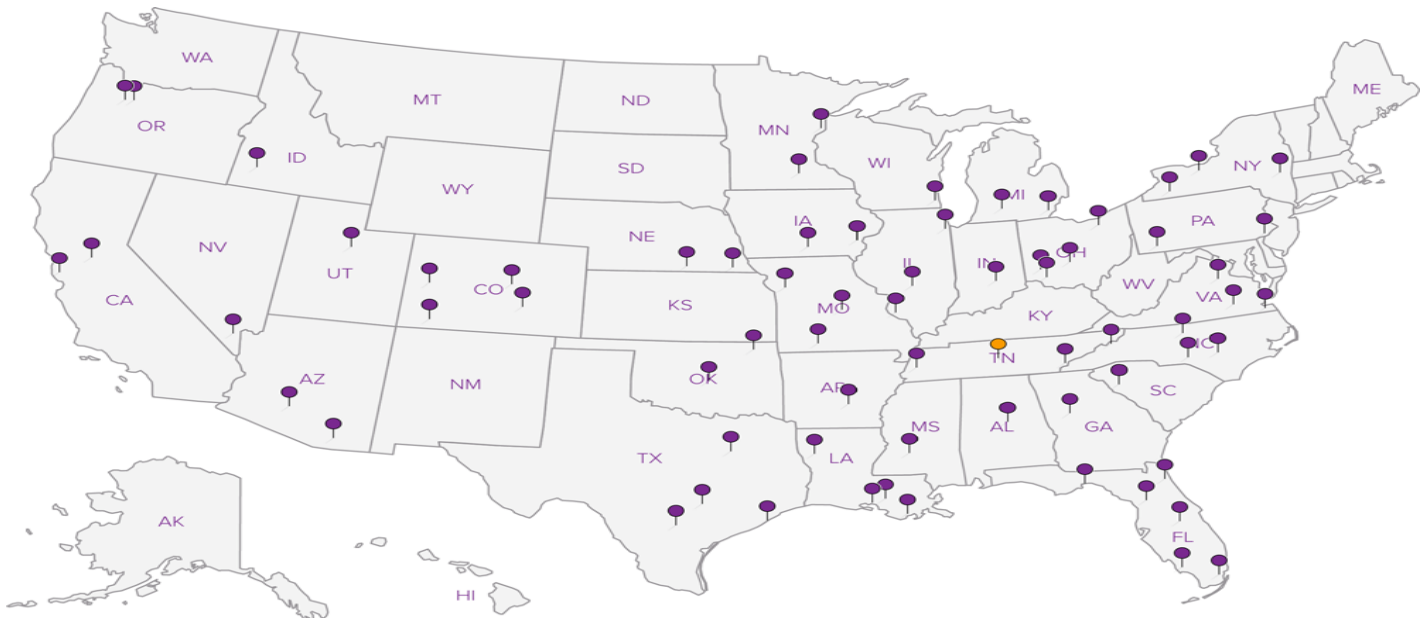
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:
Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: **KMEP Harbor Island**

City/State
Collected: **Seattle, WA**

Phone: 206-726-4753
Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Ullery

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
10/16/15

Email? No Yes
FAX? No Yes

Immediately Packed on Ice N Y

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRAB Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
12	Grab	GW		9/29/15	1259	13	X	X	X	X	X	X	X	X	X	X		01
MW-07R		GW				13	X	X	X	X	X	X	X	X	X	X		
MW-2		GW				13	X	X	X	X	X	X	X	X	X	X		
MW-12R		GW				13	X	X	X	X	X	X	X	X	X	X		
SH-02R		GW				13	X	X	X	X	X	X	X	X	X	X		
11	Grab	GW		9/29/15	1445	9		X	X	X		X	X	X		X		05
A-23R		GW				9		X	X	X		X	X	X		X		
A-27	Grab	GW		9/29/15	1400	9		X	X	X		X	X	X		X		06
MW-14		GW				9		X	X	X		X	X	X		X		
MW-19		GW				9		X	X	X		X	X	X		X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **6443 1368 8660 6443 1368 8682 7746 3543 5340 7746 3543 5545**

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 9/29/15	Time: 1900	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 3.1 °C Bottles Received: 212 + 3TB
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/1/15 Time: 0900

Hold # _____
Condition: (lab use only) **SW7**
COC Seal Intact: Y N NA
pH Checked: _____ NCF: _____

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **791819**
Table # _____
Acctnum: **KINMOROCA**
Template: **T105402**
Prelogin: **P524032**
TSR: **358 - Jarred Willis**
PB: _____
Shipped Via: **FedEX Ground**

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
Fax:

Client Project #

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Scott Wenning + Mark Albery

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___ No **X** Yes
 FAX? ___ No ___ Yes

Immediately Packed on Ice N ___ Y **X**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
12		GW				13
MW-07R		GW				13
MW-2	Grab	GW		9/30/15	1040	13
MW-12R	Grab	GW		9/30/15	1630	13
SH-02R		GW				13
11		GW				9
A-23R		GW				9
A-27		GW				9
MW-14		GW				9
MW-19	G	GW		9/30/15	1600	9

Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRAB Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X

L# **719815**

Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 Shipped Via: **FedEX Ground**

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other
 Remarks: **7746 3543 5545**
6443 1368 8660 **6443 1368 8682**
7746 3543 5340 **6443 1368 8671**

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature)
[Signature]
 Date: **9/30/15**
 Time: **1730**

Received by: (Signature)
[Signature]
 Date: _____
 Time: _____

Samples returned via: UPS
 FedEx Courier _____
 Temp: **3.8** °C Bottles Received: **35**
 Date: **10/6/15** Time: **0900**

Condition: **7F** (lab use only)
 COC Seal Intact: **Y** N NA
 pH Checked: **22**
 NCF:

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: **KMEP Harbor Island**

City/State
Collected: **Seattle, WA**

Phone: **206-726-4753**
Fax:

Client Project #

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Ullery

Site/Facility ID #

P.O. #

Collected by (signature):
Mark Ullery

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately
Packed on Ice N Y

Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Email? No Yes
FAX? No Yes

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
12		GW				13	X	X	X	X	X	X	X	X	X	X
MW-07R		GW				13	X	X	X	X	X	X	X	X	X	X
MW-2		GW				13	X	X	X	X	X	X	X	X	X	X
MW-12R		GW				13	X	X	X	X	X	X	X	X	X	X
SH-02R	Grab	GW		9/30/15	1425	13	X	X	X	X	X	X	X	X	X	X
11		GW				9		X	X	X		X		X		X
A-23R		GW				9		X	X	X		X		X		X
A-27		GW				9		X	X	X		X		X		X
MW-14		GW				9		X	X	X		X		X		X
MW-19		GW				9		X	X	X		X		X		X

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

7746 3543 5545
6443 1368 8660 / 6443 1368 8682
7746 3543 5340 / 6443 1368 8671

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>Mark Ullery</i>	Date: 9/30/15	Time: 1730	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only)
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: °C 3.1	Bottles Received: 212+3TB
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/1/15	Time: 0900



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **791819**

Table #

Acctnum: KINMOROCA

Template: T105402

Prelogin: P524032

TSR: 358 - Jarred Willis

PB:

Shipped Via: **FedEX Ground**

Rem./Contaminant Sample # (lab only)

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Report to:
Kyle Haslam

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Analysis / Container / Preservative



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
Fax:

Client Project #
WA000004.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Willey

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___ No **X** Yes
 FAX? ___ No ___ Yes

Immediately Packed on Ice N ___ Y **X**

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
TMW-1	Grab Comp	GW		9/29/15	1655	9		X	X	X		X		X		X		08
TMW-2		GW				9		X	X	X		X		X		X		
TMW-3		GW				9		X	X	X		X		X		X		
TMW-4		GW				9		X	X	X		X		X		X		
TMW-5		GW				9		X	X	X		X		X		X		
TMW-6		GW				9		X	X	X		X		X		X		
A-5		GW				4						X				X		
MW-18		GW				4						X				X		
TMW-B1	Grab	GW		9/29/15	1630	4						X				X		14
A-8		GW				6					X	X				X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: **6443 1368 8660 6443 1368 8682 7746 3543 5340 6443 1368 8621** pH _____ Temp _____ Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 9/29/15	Time: 1900	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1 °C Bottles Received: 242+3TB
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/1/15 Time: 0900

Hold # _____
 Condition: (lab use only) **SW1**
 COC Seal Intact: ___ Y ___ N ___ NA
 pH Checked: _____ NCF: _____

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
 Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: KMEP Harbor Island

City/State Collected: *Seattle, WA*

Phone: 206-726-4753
 Fax:

Client Project #

Lab Project #
 KINMOROCA-HARBORISLA

Collected by (print):
Mark Ullery

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]
 Immediately Packed on Ice N ___ Y

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___ No Yes
 FAX? ___ No ___ Yes

Analysis / Container / Preservative

Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRAB Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTECX 40mlAmb-HCl
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Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# *719819*

Table #

Acctnum: KINMOROCA
 Template: T105402
 Prelogin: P524032
 TSR: 358 - Jarred Willis
 PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Nr. of Cntrs	Diss Pb	Ferrous Fe	Methane	NITRATE / Sulfate	NWTPHDx	NWTPHGx	RCRAB Metals	SULFIDE	Total Pb	V8260BTECX	Rem./Contaminant	Sample # (lab only)
TMW-1		GW				9		X	X	X		X		X		X		
TMW-2		GW				9		X	X	X		X		X		X		
TMW-3	<i>Grab</i>	GW		<i>9/30/15</i>	<i>1150</i>	9		X	X	X		X		X		X		<i>09</i>
TMW-4	<i>Grab</i>	GW		<i>9/30/15</i>	<i>0940</i>	9		X	X	X		X		X		X		<i>10</i>
TMW-5	<i>Grab</i>	GW		<i>9/30/15</i>	<i>1245</i>	<i>98</i>		X	X	X		X		X		X		<i>11</i>
TMW-6	<i>Grab</i>	GW		<i>9/30/15</i>	<i>0900</i>	9		X	X	X		X		X		X		<i>12</i>
A-5		GW				4						X				X		
MW-18		GW				4						X				X		
TMW-B1		GW				4						X				X		
A-8		GW				6					X	X				X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: *7746 3543 5545*
6443 1368 8660 6443 1368 8682
7746 3543 5340 6443 1368 8671

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>9/30/15</i>	Time: <i>1730</i>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Hold #
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: _____ °C Bottles Received: <i>3-1 212+3TB</i>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>10/1/15</i> Time: <i>0900</i>	COC Seal Intact: ___ Y ___ N ___ NA pH Checked: _____ NCF: _____

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: **KMEP Harbor Island**

City/State
Collected: **Seattle, WA**

Phone: **206-726-4753**
Fax:

Client Project #

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Wilsey

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Immediately
Packed on Ice N Y

Email? No Yes
FAX? No Yes

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
TMW-1		GW				9	X	X	X	X	X	X	X	X	X	X
TMW-2		GW				9	X	X	X	X	X	X	X	X	X	X
TMW-3		GW				9	X	X	X	X	X	X	X	X	X	X
TMW-4		GW				9	X	X	X	X	X	X	X	X	X	X
TMW-5		GW				9	X	X	X	X	X	X	X	X	X	X
TMW-6		GW				9	X	X	X	X	X	X	X	X	X	X
A-5		GW				4						X				X
MW-18	Grab	GW		9/30/15	1335	4						X				X
TMW-B1		GW				4						X				X
A-8		GW				6					X	X				X

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: *7746 3543 5545*
6443 1368 8660
7746 3543 5340
6443 1368 8682
6443 1368 8671

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>9/30/15</i>	Time: <i>1730</i>	Received By: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <i>31</i> °C Bottles Received: <i>212+3TB</i>	COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>10/1/15</i> Time: <i>0900</i>	pH Checked: _____ NCF: _____

L # *719819*
 Table #
 Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 PB:
 Shipped Via: **FedEX Ground**

Rem./Contaminant Sample # (lab only)

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

Client Project #

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Wiley

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]
 Immediately Packed on Ice N ___ Y

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
 Email? ___ No Yes
 FAX? ___ No ___ Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
A-10		GW				6
MW-4	Grab	GW		9/30/15	1530	6
MW-16		GW				6
MW-20		GW				6
MW-22	Grab	GW		9/30/15	935	6
A-14R		GW				8
MW-1		GW				8
MW-3		GW				8
MW-5		GW				8
MW-8		GW				8

Analysis / Container / Preservative									
Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRAB Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
				X	X				X
				X	X				X
				X	X				X
				X	X				X
				X	X				X
				X	X			X	X
				X	X			X	X
				X	X			X	X

Chain of Custody Page ___ of ___



LAB SCIENCES
 YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **71989**
 Table #
 Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 PB:
 Shipped Via: **FedEX Ground**

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other **6443 1368 8681**

Remarks: **6443 1368 8660 6443 1368 8682**
7746 8593 5340 7746 3543 5545

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 9/30/15	Time: 1730	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only)
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 24 °C Bottles Received: 212+3TB	COC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/1/15 Time: 0900	pH Checked: _____ NCF: _____

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected:

Phone: **206-726-4753**
 Fax:

Client Project #
WACOD 804 2005

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Ullery

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___ No X Yes
 FAX? ___ No ___ Yes

Analysis / Container / Preservative	
Diss Pb 6020 500mlHDPE-NoPres	
Ferrous Fe 250mlAmb-HCl	
Methane RSK175 40mlAmb HCl	
NITRATE / Sulfate 125mlHDPE-NoPres	
NWTPHDx 40mlAmb-HCl-BT	
NWTPHGx 40mlAmb HCl	
RCRA8 Metals 6020 500mlHDPE-HNO3	
SULFIDE 125mlAmb-S-NaOH+ZnAc	
Total Pb 6020 500mlHDPE-HNO3	
V8260BTEXC 40mlAmb-HCl	

Chain of Custody Page of



L.A.B S.C.I.E.N.C.E.S

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 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # *719819*

Table #

Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: 358 - Jarred Willis
 PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
A-10		GW				6					X	X					X	
MW-4		GW				6					X	X					X	
MW-16		GW				6					X	X					X	
MW-20		GW				6					X	X					X	
MW-22		GW				6					X	X					X	
A-14R		GW				8	X				X	X			X	X		
MW-1		GW				8	X				X	X			X	X		
MW-3		GW				8	X				X	X			X	X		
MW-5		GW				8	X				X	X			X	X		
MW-8	<i>Grab</i>	GW		<i>9/29/15</i>	<i>1540</i>	8	X				X	X			X	X		<i>17</i>

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: *6443 1368 8671* pH Temp
6443 1368 8660 6443 1368 8682 Flow Other
7746 3543 8340 7746 3543 8545 Hold #

Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>9/29/15</i>	Time: <i>K100</i>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) <i>Sw 7</i>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C <i>3.1</i>	Bottles Received: <i>212+3B</i>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>10/1/15</i>	Time: <i>0900</i>


COC Seal Intact: ___ Y ___ N ___ NA
 pH Checked: ___ NCF: ___

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Analysis / Container / Preservative


Chain of Custody Page of



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 L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected:

Phone: **206-726-4753**
 Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Wherry

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___ No X Yes
 FAX? ___ No ___ Yes

Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3 62	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
-------------------------------	-------------------------	----------------------------	------------------------------------	------------------------	---------------------	--	------------------------------	------------------------------	------------------------

L# **791819**

Table #

Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
MW-25		GW				8	X				X	X			X	X		
SH-05R		GW				8	X				X	X			X	X		
A-21		GW				11	X	X	X	X		X		X	X	X		
A-28R	Grab	GW		9/29/15	1530	11	X	X	X	X		X		X	X	X		18
MW-6	Grab	GW		9/29/15	1715	11	X	X	X	X		X		X	X	X		19
MW-7		GW				11	X	X	X	X		X		X	X	X		
MW-9		GW				11	X	X	X	X		X		X	X	X		
MW-23		GW				11	X	X	X	X		X		X	X	X		
MW-24		GW				11	X	X	X	X		X		X	X	X		
MW-21		GW				11		X	X	X	X	X		X		X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other 7746 3543 5340

Remarks: 6443 1368 8671 7746 3543 5545
6443 1368 8660 6443 1368 8682

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>Mark Wherry</i>	Date: <u>9/29/15</u>	Time: <u>1900</u>	Received by: (Signature) <i>Colin</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only) <u>JW7</u>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>3.1</u> °C Bottles Received: <u>212+3TB</u>	COC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>Colin</i>	Date: <u>10/1/15</u> Time: <u>0900</u>	pH Checked: <u>6.2</u> NCF:

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: KMEP Harbor Island

City/State
Collected: *Seattle, WA*

Phone: 206-726-4753
Fax:

Client Project #
WA000801.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Mark Alley

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed

Email? No Yes

FAX? No Yes

No. of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3 < 2	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
MW-25		GW				8	X				X	X			X	X		
SH-05R		GW				8	X				X	X			X	X		
A-21		GW				11	X	X	X	X		X		X	X	X		
A-28R		GW				11	X	X	X	X		X		X	X	X		
MW-6		GW				11	X	X	X	X		X		X	X	X		
MW-7	<i>Grab</i>	GW		<i>9/30/15</i>	<i>1035</i>	11	X	X	X	X		X		X	X	X		<i>20</i>
MW-9	<i>Grab</i>	GW		<i>9/30/15</i>	<i>1515</i>	11	X	X	X	X		X		X	X	X		<i>21</i>
MW-23		GW				11	X	X	X	X		X		X	X	X		
MW-24		GW				11	X	X	X	X		X		X	X	X		
MW-21	<i>Grab</i>	GW		<i>9/30/15</i>	<i>1405</i>	11		X	X	X	X	X		X		X		<i>22</i>

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

7746 3543 5340 pH _____ Temp _____ *6443 1368 8660*
7746 3543 5545 *6443 1368 8682* Flow _____ Other _____
6443 1368 8671 Hold #

Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>9/30/15</i>	Time: <i>1730</i>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only) <i>Toll</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: <i>2.4</i> °C Bottles Received: <i>33 212 + 375</i>	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>10/1/15</i> Time: <i>0900</i>	pH Checked: <i>< 2</i> NCF:

Analysis / Container / Preservative



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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# *791815*

Acctnum: KINMOROCA

Template: T105402

Prelogin: P524032

TSR: 358 - Jarred Willis

PB:

Shipped Via: FedEX Ground

Matt Shacklock

ESC Lab Sciences
Non-Conformance Form

Login #L791819	Client: KINMOROCA	Date:10/01/15	Evaluated by:Caleb B
----------------	-------------------	---------------	----------------------

Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	If Broken Container:
Parameter(s) past holding time x	Login Clarification Needed	
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.	Trip Blank not received.	If no Chain of Custody:
Broken container	Client did not "X" analysis.	Received by:
Broken container:	Chain of Custody is missing	Date/Time:
Sufficient sample remains		Temp./Cont. Rec./pH:
		Carrier:
		Tracking#

Login Comments: received MW-16 not marked on COC

Client informed by:	Call X	Email	Voice Mail	Date: 10/1/15	Time: 1400
TSR Initials: JW	Client Contact: Kyle Haslam				

Login Instructions: MW-16 is listed on page 7 of the COC, but no collection date and time is listed. Analyze MW-16 for NWTPHDX, NWTPHGX, and V8260BTEXC. Client will e-mail us the collection date and time to be added.

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

791819

Matt Shacklock

From: Haslam, Kyle <Kyle.Haslam@arcadis.com>
Sent: Thursday, October 01, 2015 2:07 PM
To: Jarred Willis
Subject: MW-16

Hi Jarred,

MW-16 was collected at 8:40 on September 30, 2015.

Please analyze this sample for:

- GRO by NWTPH-Gx
- DRO and HO by NWTPH-Dx (w/ silica gel cleanup)
- BTEX by 8260B

Thank you,
Kyle

Kyle Haslam | Staff Scientist | kyle.haslam@arcadis.com
Arcadis | Arcadis U.S., Inc.
1100 Olive Way, Suite 800
Seattle, Washington 98101
T. +1 206 726 4753 | M. + 1 206 719 6991



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October 13, 2015

Kinder Morgan- Orange, CA

Sample Delivery Group: L792110
Samples Received: 10/02/2015
Project Number: WA000804.2015
Description: KMEP Harbor Island
Site: HARBOR ISLAND
Report To: Rob Truedinger / Kyle Haslam
1100 Olive Way, Suite 800
Seattle, WA 98101

Entire Report Reviewed By:



Jarred Willis
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



MW-20 L792110-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 17:21	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819619	1	10/04/15 18:53	10/04/15 18:53	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 22:13	10/08/15 22:13	KLO

Collected by SW/MU
 Collected date/time 10/01/15 11:55
 Received date/time 10/02/15 09:00

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

A-14R L792110-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:24	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 19:37	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 17:38	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819619	1	10/04/15 19:14	10/04/15 19:14	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820402	1	10/08/15 22:34	10/08/15 22:34	KLO

Collected by SW/MU
 Collected date/time 10/01/15 14:50
 Received date/time 10/02/15 09:00

MW-1 L792110-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:55	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:05	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 17:56	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819275	1	10/05/15 19:48	10/05/15 19:48	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820700	1	10/09/15 23:51	10/09/15 23:51	KLO

Collected by SW/MU
 Collected date/time 10/01/15 14:50
 Received date/time 10/02/15 09:00

MW-3 L792110-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 20:41	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:08	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 18:14	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819275	1	10/05/15 20:10	10/05/15 20:10	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820692	1	10/09/15 17:19	10/09/15 17:19	MCB

Collected by SW/MU
 Collected date/time 10/01/15 12:45
 Received date/time 10/02/15 09:00

MW-5 L792110-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 22:58	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:10	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 18:31	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 09:05	10/09/15 09:05	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820692	1	10/09/15 17:39	10/09/15 17:39	MCB

Collected by SW/MU
 Collected date/time 10/01/15 09:35
 Received date/time 10/02/15 09:00

DUP-1 L792110-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:01	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:12	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	10	10/09/15 10:28	10/09/15 10:28	KLO

Collected by SW/MU
 Collected date/time 10/01/15 00:00
 Received date/time 10/02/15 09:00

SAMPLE SUMMARY



DUP-1 L792110-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by SW/MU				Collected date/time 10/01/15 00:00	Received date/time 10/02/15 09:00
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820692	1	10/09/15 17:59	10/09/15 17:59	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG821095	5	10/10/15 17:05	10/10/15 17:05	KLO

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

SH-05R L792110-07 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by SW/MU				Collected date/time 10/01/15 10:20	Received date/time 10/02/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:03	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:15	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 18:49	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 10:49	10/09/15 10:49	KLO
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820692	1	10/09/15 18:19	10/09/15 18:19	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG821095	1	10/10/15 17:25	10/10/15 17:25	KLO

A-21 L792110-08 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by SW/MU				Collected date/time 10/01/15 11:40	Received date/time 10/02/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:06	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:17	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 11:10	10/09/15 11:10	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820535	1	10/08/15 13:40	10/08/15 13:40	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820700	1	10/10/15 00:11	10/10/15 00:11	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	50	10/07/15 10:52	10/07/15 10:52	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:39	10/06/15 16:39	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 16:13	10/02/15 16:13	NJM

MW-23 L792110-09 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by SW/MU				Collected date/time 10/01/15 16:00	Received date/time 10/02/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:09	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:20	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 11:31	10/09/15 11:31	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820535	1	10/08/15 13:44	10/08/15 13:44	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820838	20	10/09/15 14:42	10/09/15 14:42	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820700	1	10/10/15 00:31	10/10/15 00:31	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	25	10/07/15 10:55	10/07/15 10:55	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:39	10/06/15 16:39	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 16:26	10/02/15 16:26	NJM

MW-24 L792110-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by SW/MU				Collected date/time 10/01/15 16:00	Received date/time 10/02/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:11	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:22	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	5	10/09/15 11:52	10/09/15 11:52	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820535	1	10/08/15 13:47	10/08/15 13:47	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820838	20	10/09/15 14:44	10/09/15 14:44	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG821472	20	10/13/15 11:55	10/13/15 11:55	KLO

SAMPLE SUMMARY



MW-24 L792110-10 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:55	10/07/15 10:55	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:40	10/06/15 16:40	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 16:40	10/02/15 16:40	NJM

Collected by SW/MU	Collected date/time	Received date/time
	10/01/15 16:00	10/02/15 09:00

- 1
Cp
- 2
Tc
- 3
Ss
- 4
Cn
- 5
Sr
- 6
Qc
- 7
Gl
- 8
Al
- 9
Sc

TMW-2 L792110-11 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 12:13	10/09/15 12:13	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820535	1	10/08/15 13:58	10/08/15 13:58	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG821472	1	10/13/15 12:16	10/13/15 12:16	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:56	10/07/15 10:56	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:40	10/06/15 16:40	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 16:54	10/02/15 16:54	NJM
Wet Chemistry by Method 9056	WG819874	50	10/07/15 00:49	10/07/15 00:49	DJD

Collected by SW/MU	Collected date/time	Received date/time
	10/01/15 08:35	10/02/15 09:00

MW-07R L792110-12 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:14	VSS
Metals (ICPMS) by Method 6020	WG820439	1	10/08/15 10:07	10/08/15 20:24	VSS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 19:07	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 12:34	10/09/15 12:34	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820535	1	10/08/15 14:03	10/08/15 14:03	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820838	4	10/09/15 14:51	10/09/15 14:51	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820503	1	10/09/15 14:38	10/09/15 14:38	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:56	10/07/15 10:56	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:41	10/06/15 16:41	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 17:10	10/02/15 17:10	NJM

Collected by SW/MU	Collected date/time	Received date/time
	10/01/15 09:00	10/02/15 09:00

MW-14 L792110-13 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819620	1	10/09/15 12:55	10/09/15 12:55	KLO
Volatile Organic Compounds (GC) by Method RSK175	WG820838	1	10/09/15 14:53	10/09/15 14:53	MBF
Volatile Organic Compounds (GC) by Method RSK175	WG820838	10	10/09/15 15:19	10/09/15 15:19	MBF
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820503	1	10/09/15 14:57	10/09/15 14:57	KLO
Wet Chemistry by Method 3500Fe B-2011	WG819349	75	10/07/15 10:57	10/07/15 10:57	JEH
Wet Chemistry by Method 4500S2 D-2011	WG819824	1	10/06/15 16:42	10/06/15 16:42	AS
Wet Chemistry by Method 9056	WG819257	1	10/02/15 17:23	10/02/15 17:23	NJM

Collected by SW/MU	Collected date/time	Received date/time
	10/01/15 10:30	10/02/15 09:00



All MDL (LOD) and RDL (LOG) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jarred Willis
 Technical Service Representative

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L792110-08	A-21	3500Fe B-2011
L792110-09	MW-23	3500Fe B-2011
L792110-10	MW-24	3500Fe B-2011
L792110-11	TMW-2	3500Fe B-2011
L792110-12	MW-07R	3500Fe B-2011
L792110-13	MW-14	3500Fe B-2011



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/04/2015 18:53	WG819619
(S) a,a,a-Trifluorotoluene(FID)	108		62.0-128		10/04/2015 18:53	WG819619

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2015 22:13	WG820402
Toluene	ND		5.00	1	10/08/2015 22:13	WG820402
Ethylbenzene	ND		1.00	1	10/08/2015 22:13	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 22:13	WG820402
(S) Toluene-d8	100		90.0-115		10/08/2015 22:13	WG820402
(S) Dibromofluoromethane	102		79.0-121		10/08/2015 22:13	WG820402
(S) a,a,a-Trifluorotoluene	105		90.4-116		10/08/2015 22:13	WG820402
(S) 4-Bromofluorobenzene	108		80.1-120		10/08/2015 22:13	WG820402

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	378		100	1	10/07/2015 17:21	WG819601
Residual Range Organics (RRO)	ND		250	1	10/07/2015 17:21	WG819601
(S) o-Terphenyl	104		50.0-150		10/07/2015 17:21	WG819601

9 Sc



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/08/2015 19:37	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 22:24	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/04/2015 19:14	WG819619
(S) a,a,a-Trifluorotoluene(FID)	108		62.0-128		10/04/2015 19:14	WG819619

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2015 22:34	WG820402
Toluene	ND		5.00	1	10/08/2015 22:34	WG820402
Ethylbenzene	ND		1.00	1	10/08/2015 22:34	WG820402
Total Xylenes	ND		3.00	1	10/08/2015 22:34	WG820402
(S) Toluene-d8	99.4		90.0-115		10/08/2015 22:34	WG820402
(S) Dibromofluoromethane	103		79.0-121		10/08/2015 22:34	WG820402
(S) a,a,a-Trifluorotoluene	104		90.4-116		10/08/2015 22:34	WG820402
(S) 4-Bromofluorobenzene	109		80.1-120		10/08/2015 22:34	WG820402

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	ND		100	1	10/07/2015 17:38	WG819601
Residual Range Organics (RRO)	ND		250	1	10/07/2015 17:38	WG819601
(S) o-Terphenyl	102		50.0-150		10/07/2015 17:38	WG819601



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/08/2015 20:05	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 22:55	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 19:48	WG819275
(S) a,a,a-Trifluorotoluene(FID)	93.6		62.0-128		10/05/2015 19:48	WG819275

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/09/2015 23:51	WG820700
Toluene	ND		5.00	1	10/09/2015 23:51	WG820700
Ethylbenzene	ND		1.00	1	10/09/2015 23:51	WG820700
Total Xylenes	ND		3.00	1	10/09/2015 23:51	WG820700
(S) Toluene-d8	105		90.0-115		10/09/2015 23:51	WG820700
(S) Dibromofluoromethane	99.7		79.0-121		10/09/2015 23:51	WG820700
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/09/2015 23:51	WG820700
(S) 4-Bromofluorobenzene	95.7		80.1-120		10/09/2015 23:51	WG820700

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	1380		100	1	10/07/2015 17:56	WG819601
Residual Range Organics (RRO)	708		250	1	10/07/2015 17:56	WG819601
(S) o-Terphenyl	103		50.0-150		10/07/2015 17:56	WG819601



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/08/2015 20:08	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 20:41	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/05/2015 20:10	WG819275
(S) a,a,a-Trifluorotoluene(FID)	92.0		62.0-128		10/05/2015 20:10	WG819275

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/09/2015 17:19	WG820692
Toluene	ND		5.00	1	10/09/2015 17:19	WG820692
Ethylbenzene	ND		1.00	1	10/09/2015 17:19	WG820692
Total Xylenes	ND		3.00	1	10/09/2015 17:19	WG820692
(S) Toluene-d8	98.1		90.0-115		10/09/2015 17:19	WG820692
(S) Dibromofluoromethane	92.3		79.0-121		10/09/2015 17:19	WG820692
(S) a,a,a-Trifluorotoluene	105		90.4-116		10/09/2015 17:19	WG820692
(S) 4-Bromofluorobenzene	96.2		80.1-120		10/09/2015 17:19	WG820692

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	143		100	1	10/07/2015 18:14	WG819601
Residual Range Organics (RRO)	ND		250	1	10/07/2015 18:14	WG819601
(S) o-Terphenyl	104		50.0-150		10/07/2015 18:14	WG819601



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/08/2015 20:10	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 22:58	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 09:05	WG819620
(S) a,a,a-Trifluorotoluene(FID)	100		62.0-128		10/09/2015 09:05	WG819620

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/09/2015 17:39	WG820692
Toluene	ND		5.00	1	10/09/2015 17:39	WG820692
Ethylbenzene	ND		1.00	1	10/09/2015 17:39	WG820692
Total Xylenes	ND		3.00	1	10/09/2015 17:39	WG820692
(S) Toluene-d8	98.1		90.0-115		10/09/2015 17:39	WG820692
(S) Dibromofluoromethane	92.2		79.0-121		10/09/2015 17:39	WG820692
(S) a,a,a-Trifluorotoluene	107		90.4-116		10/09/2015 17:39	WG820692
(S) 4-Bromofluorobenzene	98.5		80.1-120		10/09/2015 17:39	WG820692

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	371		100	1	10/07/2015 18:31	WG819601
Residual Range Organics (RRO)	ND		250	1	10/07/2015 18:31	WG819601
(S) o-Terphenyl	105		50.0-150		10/07/2015 18:31	WG819601



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	2.49		2.00	1	10/08/2015 20:12	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 23:01	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	14500		1000	10	10/09/2015 10:28	WG819620
(S) a,a,a-Trifluorotoluene(FID)	93.0		62.0-128		10/09/2015 10:28	WG819620

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	637		5.00	5	10/10/2015 17:05	WG821095
Toluene	26.4		5.00	1	10/09/2015 17:59	WG820692
Ethylbenzene	934		5.00	5	10/10/2015 17:05	WG821095
Total Xylenes	1510		15.0	5	10/10/2015 17:05	WG821095
(S) Toluene-d8	96.8		90.0-115		10/09/2015 17:59	WG820692
(S) Dibromofluoromethane	85.7		79.0-121		10/09/2015 17:59	WG820692
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/09/2015 17:59	WG820692
(S) 4-Bromofluorobenzene	86.4		80.1-120		10/09/2015 17:59	WG820692

6 Qc

7 Gl

8 Al

9 Sc



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/08/2015 20:15	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 23:03	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 10:49	WG819620
(S) a,a,a-Trifluorotoluene(FID)	99.5		62.0-128		10/09/2015 10:49	WG819620

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/10/2015 17:25	WG821095
Toluene	ND		5.00	1	10/09/2015 18:19	WG820692
Ethylbenzene	ND		1.00	1	10/10/2015 17:25	WG821095
Total Xylenes	ND		3.00	1	10/10/2015 17:25	WG821095
(S) Toluene-d8	98.3		90.0-115		10/09/2015 18:19	WG820692
(S) Dibromofluoromethane	95.0		79.0-121		10/09/2015 18:19	WG820692
(S) a,a,a-Trifluorotoluene	105		90.4-116		10/09/2015 18:19	WG820692
(S) 4-Bromofluorobenzene	97.3		80.1-120		10/09/2015 18:19	WG820692

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	1800		100	1	10/07/2015 18:49	WG819601
Residual Range Organics (RRO)	320		250	1	10/07/2015 18:49	WG819601
(S) o-Terphenyl	103		50.0-150		10/07/2015 18:49	WG819601



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	73900		2500	50	10/07/2015 10:52	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	78.0		50.0	1	10/06/2015 16:39	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 16:13	WG819257
Sulfate	41000		5000	1	10/02/2015 16:13	WG819257

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	5.26		2.00	1	10/08/2015 20:17	WG820439
Lead,Dissolved	4.02		2.00	1	10/07/2015 23:06	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 11:10	WG819620
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		10/09/2015 11:10	WG819620

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	59.0		10.0	1	10/08/2015 13:40	WG820535
Ethane	ND		13.0	1	10/08/2015 13:40	WG820535
Ethene	ND		13.0	1	10/08/2015 13:40	WG820535

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/10/2015 00:11	WG820700
Toluene	ND		5.00	1	10/10/2015 00:11	WG820700
Ethylbenzene	ND		1.00	1	10/10/2015 00:11	WG820700
Total Xylenes	ND		3.00	1	10/10/2015 00:11	WG820700
(S) Toluene-d8	103		90.0-115		10/10/2015 00:11	WG820700
(S) Dibromofluoromethane	99.3		79.0-121		10/10/2015 00:11	WG820700
(S) a,a,a-Trifluorotoluene	99.9		90.4-116		10/10/2015 00:11	WG820700
(S) 4-Bromofluorobenzene	97.3		80.1-120		10/10/2015 00:11	WG820700

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	6480		1250	25	10/07/2015 10:55	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:39	WG819824

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 16:26	WG819257
Sulfate	58300		5000	1	10/02/2015 16:26	WG819257

5 Sr

6 Qc

7 Gl

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/08/2015 20:20	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 23:09	WG820197

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	1680		100	1	10/09/2015 11:31	WG819620
(S) a,a,a-Trifluorotoluene(FID)	85.7		62.0-128		10/09/2015 11:31	WG819620

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	6030		200	20	10/09/2015 14:42	WG820838
Ethane	16.6		13.0	1	10/08/2015 13:44	WG820535
Ethene	ND		13.0	1	10/08/2015 13:44	WG820535

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	87.3		1.00	1	10/10/2015 00:31	WG820700
Toluene	ND		5.00	1	10/10/2015 00:31	WG820700
Ethylbenzene	6.84		1.00	1	10/10/2015 00:31	WG820700
Total Xylenes	3.31		3.00	1	10/10/2015 00:31	WG820700
(S) Toluene-d8	104		90.0-115		10/10/2015 00:31	WG820700
(S) Dibromofluoromethane	96.6		79.0-121		10/10/2015 00:31	WG820700
(S) a,a,a-Trifluorotoluene	98.8		90.4-116		10/10/2015 00:31	WG820700
(S) 4-Bromofluorobenzene	96.6		80.1-120		10/10/2015 00:31	WG820700



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	31300		3750	75	10/07/2015 10:55	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:40	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 16:40	WG819257
Sulfate	ND		5000	1	10/02/2015 16:40	WG819257

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	2.82		2.00	1	10/08/2015 20:22	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 23:11	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	13600		500	5	10/09/2015 11:52	WG819620
(S) a,a,a-Trifluorotoluene(FID)	88.2		62.0-128		10/09/2015 11:52	WG819620

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	10400		200	20	10/09/2015 14:44	WG820838
Ethane	15.8		13.0	1	10/08/2015 13:47	WG820535
Ethene	ND		13.0	1	10/08/2015 13:47	WG820535

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	641		20.0	20	10/13/2015 11:55	WG821472
Toluene	ND		100	20	10/13/2015 11:55	WG821472
Ethylbenzene	1130		20.0	20	10/13/2015 11:55	WG821472
Total Xylenes	1800		60.0	20	10/13/2015 11:55	WG821472
(S) Toluene-d8	96.5		90.0-115		10/13/2015 11:55	WG821472
(S) Dibromofluoromethane	88.8		79.0-121		10/13/2015 11:55	WG821472
(S) a,a,a-Trifluorotoluene	106		90.4-116		10/13/2015 11:55	WG821472
(S) 4-Bromofluorobenzene	98.1		80.1-120		10/13/2015 11:55	WG821472

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	34800		3750	75	10/07/2015 10:56	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:40	WG819824

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 16:54	WG819257
Sulfate	1810000		250000	50	10/07/2015 00:49	WG819874

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 12:13	WG819620
(S) a, a, a-Trifluorotoluene(FID)	99.2		62.0-128		10/09/2015 12:13	WG819620

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	84.3		10.0	1	10/08/2015 13:58	WG820535
Ethane	ND		13.0	1	10/08/2015 13:58	WG820535
Ethene	ND		13.0	1	10/08/2015 13:58	WG820535

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/13/2015 12:16	WG821472
Toluene	ND		5.00	1	10/13/2015 12:16	WG821472
Ethylbenzene	ND		1.00	1	10/13/2015 12:16	WG821472
Total Xylenes	ND		3.00	1	10/13/2015 12:16	WG821472
(S) Toluene-d8	96.6		90.0-115		10/13/2015 12:16	WG821472
(S) Dibromofluoromethane	93.0		79.0-121		10/13/2015 12:16	WG821472
(S) a, a, a-Trifluorotoluene	108		90.4-116		10/13/2015 12:16	WG821472
(S) 4-Bromofluorobenzene	98.2		80.1-120		10/13/2015 12:16	WG821472



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	11800		3750	75	10/07/2015 10:56	WG819349

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:41	WG819824

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 17:10	WG819257
Sulfate	ND		5000	1	10/02/2015 17:10	WG819257

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Lead	ND		2.00	1	10/08/2015 20:24	WG820439
Lead,Dissolved	ND		2.00	1	10/07/2015 23:14	WG820197

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 12:34	WG819620
(S) a,a,a-Trifluorotoluene(FID)	101		62.0-128		10/09/2015 12:34	WG819620

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	1540		40.0	4	10/09/2015 14:51	WG820838
Ethane	ND		13.0	1	10/08/2015 14:03	WG820535
Ethene	ND		13.0	1	10/08/2015 14:03	WG820535

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/09/2015 14:38	WG820503
Toluene	ND		5.00	1	10/09/2015 14:38	WG820503
Ethylbenzene	ND		1.00	1	10/09/2015 14:38	WG820503
Total Xylenes	ND		3.00	1	10/09/2015 14:38	WG820503
(S) Toluene-d8	103		90.0-115		10/09/2015 14:38	WG820503
(S) Dibromofluoromethane	101		79.0-121		10/09/2015 14:38	WG820503
(S) a,a,a-Trifluorotoluene	103		90.4-116		10/09/2015 14:38	WG820503
(S) 4-Bromofluorobenzene	102		80.1-120		10/09/2015 14:38	WG820503

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	2610		100	1	10/07/2015 19:07	WG819601
Residual Range Organics (RRO)	373		250	1	10/07/2015 19:07	WG819601
(S) o-Terphenyl	101		50.0-150		10/07/2015 19:07	WG819601

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Wet Chemistry by Method 3500Fe B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Ferrous Iron	8610		3750	75	10/07/2015 10:57	WG819349

1 Cp

2 Tc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Sulfide	ND		50.0	1	10/06/2015 16:42	WG819824

3 Ss

4 Cn

Wet Chemistry by Method 9056

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Nitrate	ND		100	1	10/02/2015 17:23	WG819257
Sulfate	ND		5000	1	10/02/2015 17:23	WG819257

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	299		100	1	10/09/2015 12:55	WG819620
(S) a,a,a-Trifluorotoluene(FID)	95.5		62.0-128		10/09/2015 12:55	WG819620

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Methane	3470		100	10	10/09/2015 15:19	WG820838
Ethane	ND		13.0	1	10/09/2015 14:53	WG820838
Ethene	ND		13.0	1	10/09/2015 14:53	WG820838

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/09/2015 14:57	WG820503
Toluene	ND		5.00	1	10/09/2015 14:57	WG820503
Ethylbenzene	1.06		1.00	1	10/09/2015 14:57	WG820503
Total Xylenes	19.2		3.00	1	10/09/2015 14:57	WG820503
(S) Toluene-d8	104		90.0-115		10/09/2015 14:57	WG820503
(S) Dibromofluoromethane	101		79.0-121		10/09/2015 14:57	WG820503
(S) a,a,a-Trifluorotoluene	104		90.4-116		10/09/2015 14:57	WG820503
(S) 4-Bromofluorobenzene	102		80.1-120		10/09/2015 14:57	WG820503



Method Blank (MB)

(MB) 10/07/15 10:45

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Ferrous Iron	ND		0.0500

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L791819-21 Original Sample (OS) • Duplicate (DUP)

(OS) 10/07/15 10:49 • (DUP) 10/07/15 10:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ferrous Iron	0.207	0.207	1	0.000		20

L792110-13 Original Sample (OS) • Duplicate (DUP)

(OS) 10/07/15 10:57 • (DUP) 10/07/15 10:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Ferrous Iron	8.61	8.64	75	0.348		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 10:46 • (LCSD) 10/07/15 10:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ferrous Iron	1.00	0.908	0.909	90.8	90.9	85.0-115			0.110	20

L791819-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 10:49 • (MS) 10/07/15 10:49 • (MSD) 10/07/15 10:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ferrous Iron	1.50	0.207	1.61	1.61	93.5	93.5	1	80.0-120			0.000	20



Method Blank (MB)

(MB) 10/06/15 16:35

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Sulfide	ND		0.0500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L792110-09 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 16:39 • (DUP) 10/06/15 16:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

L792495-08 Original Sample (OS) • Duplicate (DUP)

(OS) 10/06/15 16:43 • (DUP) 10/06/15 16:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 16:36 • (LCSD) 10/06/15 16:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sulfide	0.500	0.530	0.533	106	107	85.0-115			0.564	20

L792495-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 16:44 • (MS) 10/06/15 16:45 • (MSD) 10/06/15 16:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfide	1.00	0.0670	0.412	0.401	34.5	33.4	1	80.0-120	J6	J6	2.71	20



Method Blank (MB)

(MB) 10/02/15 02:38

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Nitrate	ND		0.100
Sulfate	ND		5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L792077-01 Original Sample (OS) • Duplicate (DUP)

(OS) 10/02/15 12:17 • (DUP) 10/02/15 12:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	4.30	4.26	1	1		20

L792077-04 Original Sample (OS) • Duplicate (DUP)

(OS) 10/02/15 14:37 • (DUP) 10/02/15 14:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	0.873	0.883	1	1		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/02/15 02:52 • (LCSD) 10/02/15 03:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate	8.00	8.31	8.29	104	104	90-110			0	20
Sulfate	40.0	39.8	39.9	100	100	90-110			0	20

L792077-02 Original Sample (OS) • Matrix Spike (MS)

(OS) 10/02/15 12:45 • (MS) 10/02/15 12:59

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	4.20	9.15	99	1	80-120	



L792110-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/02/15 17:23 • (MS) 10/02/15 17:37 • (MSD) 10/02/15 17:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Nitrate	5.00	0.0239	5.17	5.18	103	103	1	80-120			0	20
Sulfate	50.0	1.38	53.6	53.6	104	104	1	80-120			0	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 10/06/15 20:10

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Sulfate	ND		5.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 20:24 • (LCSD) 10/06/15 20:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Sulfate	40.0	39.4	39.4	99	98	90-110			0	20

6 Qc

L792136-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 01:44 • (MS) 10/07/15 01:58 • (MSD) 10/07/15 02:12

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Sulfate	50.0	20.3	60.2	62.2	80	84	1	80-120			3	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/07/15 20:33

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lead,Dissolved	ND		0.00200

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 20:35 • (LCSD) 10/07/15 20:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.0454	0.0465	91	93	80-120			3	20

L792110-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 20:41 • (MS) 10/07/15 20:46 • (MSD) 10/07/15 20:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.000159	0.0426	0.0468	85	93	1	75-125			9	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/08/15 19:30

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lead	ND		0.00200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/08/15 19:32 • (LCSD) 10/08/15 19:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.0480	0.0481	96	96	80-120			0	20

L792110-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/08/15 19:37 • (MS) 10/08/15 19:42 • (MSD) 10/08/15 19:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	0.0500	0.000336	0.0492	0.0495	98	98	1	75-125			1	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/05/15 11:10

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	93.6		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/05/15 10:04 • (LCSD) 10/05/15 10:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	5.55	5.65	101	103	66.0-123			1.81	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				101	102	62.0-128				

L791992-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/05/15 13:53 • (MS) 10/05/15 14:15 • (MSD) 10/05/15 14:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	ND	5.33	6.02	96.9	109	1	47.5-136			12.2	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					102	103		62.0-128				



Method Blank (MB)

(MB) 10/04/15 10:19

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	106		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/04/15 08:46 • (LCSD) 10/04/15 09:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	5.80	5.68	106	103	66.0-123			2.08	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				108	108	62.0-128				

L791605-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/04/15 17:27 • (MS) 10/04/15 13:30 • (MSD) 10/04/15 13:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	12.3	35.0	36.0	82.5	86.2	5	47.5-136			2.86	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					107	109		62.0-128				



Method Blank (MB)

(MB) 10/09/15 07:16

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	101		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 06:14 • (LCSD) 10/09/15 06:34

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	5.77	5.83	105	106	66.0-123			1.01	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				105	103	62.0-128				

5 Sr

6 Qc

L792110-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 09:05 • (MS) 10/09/15 09:26 • (MSD) 10/09/15 09:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	ND	6.06	6.29	110	114	1	47.5-136			3.62	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					103	101		62.0-128				

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/08/15 12:19

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100
Ethane	ND		0.0130
Ethene	ND		0.0130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/08/15 14:19 • (LCSD) 10/08/15 14:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0738	0.0706	109	104	85.0-115			4.38	20
Ethane	0.129	0.135	0.131	104	102	85.0-115			2.57	20
Ethene	0.127	0.133	0.129	104	101	85.0-115			3.01	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/09/15 14:20

Analyte	MB Result	MB Qualifier	MB RDL
	ppm		ppm
Methane	ND		0.0100
Ethane	ND		0.0130
Ethene	ND		0.0130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 15:24 • (LCSD) 10/09/15 15:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppm	ppm	ppm	%	%	%			%	%
Methane	0.0678	0.0745	0.0720	110	106	85.0-115			3.42	20
Ethane	0.129	0.132	0.132	103	102	85.0-115			0.210	20
Ethene	0.127	0.130	0.130	103	102	85.0-115			0.220	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/08/15 14:30

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	101		90.0-115
(S) Dibromofluoromethane	110		79.0-121
(S) a,a,a-Trifluorotoluene	100		90.4-116
(S) 4-Bromofluorobenzene	105		80.1-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/08/15 12:55 • (LCSD) 10/08/15 13:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0252	0.0248	101	99.3	73.0-122			1.50	20
Ethylbenzene	0.0250	0.0281	0.0272	112	109	80.9-121			3.10	20
Toluene	0.0250	0.0250	0.0251	100	100	77.9-116			0.210	20
Xylenes, Total	0.0750	0.0842	0.0826	112	110	79.2-122			1.86	20
(S) Toluene-d8				101	101	90.0-115				
(S) Dibromofluoromethane				107	106	79.0-121				
(S) a,a,a-Trifluorotoluene				101	101	90.4-116				
(S) 4-Bromofluorobenzene				100	99.5	80.1-120				

7 Gl

8 Al

9 Sc

L792110-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/08/15 22:13 • (MS) 10/08/15 18:21 • (MSD) 10/08/15 18:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0242	0.0236	96.8	94.4	1	58.6-133			2.59	20
Ethylbenzene	0.0250	ND	0.0266	0.0258	106	103	1	62.7-136			3.24	20
Toluene	0.0250	ND	0.0234	0.0230	93.5	92.2	1	67.8-124			1.43	20
Xylenes, Total	0.0750	ND	0.0800	0.0775	107	103	1	65.6-133			3.17	20
(S) Toluene-d8					101	100		90.0-115				
(S) Dibromofluoromethane					112	110		79.0-121				
(S) a,a,a-Trifluorotoluene					101	101		90.4-116				
(S) 4-Bromofluorobenzene					102	99.6		80.1-120				



Method Blank (MB)

(MB) 10/09/15 09:11

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	102		90.0-115
(S) Dibromofluoromethane	101		79.0-121
(S) a,a,a-Trifluorotoluene	102		90.4-116
(S) 4-Bromofluorobenzene	102		80.1-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 07:54 • (LCSD) 10/09/15 08:13

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Benzene	0.0250	0.0272	0.0277	109	111	73.0-122			1.86	20
Ethylbenzene	0.0250	0.0269	0.0277	108	111	80.9-121			2.69	20
Toluene	0.0250	0.0268	0.0272	107	109	77.9-116			1.34	20
Xylenes, Total	0.0750	0.0804	0.0827	107	110	79.2-122			2.90	20
(S) Toluene-d8				102	103	90.0-115				
(S) Dibromofluoromethane				100	100	79.0-121				
(S) a,a,a-Trifluorotoluene				103	102	90.4-116				
(S) 4-Bromofluorobenzene				100	101	80.1-120				

7 Gl

8 Al

9 Sc

L792139-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 12:21 • (MS) 10/09/15 12:40 • (MSD) 10/09/15 13:00

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Benzene	0.0250	0.0538	0.0670	0.0657	52.6	47.4	1	58.6-133	J6	J6	1.97	20
Ethylbenzene	0.0250	0.124	0.115	0.111	0.000	0.000	1	62.7-136	J6	J6	3.85	20
Toluene	0.0250	0.0119	0.0354	0.0353	94.0	93.6	1	67.8-124			0.280	20
Xylenes, Total	0.0750	0.335	0.321	0.312	0.000	0.000	1	65.6-133	J6	J6	2.98	20
(S) Toluene-d8					103	102		90.0-115				
(S) Dibromofluoromethane					57.8	59.6		79.0-121	J2	J2		
(S) a,a,a-Trifluorotoluene					104	103		90.4-116				
(S) 4-Bromofluorobenzene					101	101		80.1-120				



Method Blank (MB)

(MB) 10/09/15 06:36

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	97.7		90.0-115
(S) Dibromofluoromethane	93.5		79.0-121
(S) a,a,a-Trifluorotoluene	105		90.4-116
(S) 4-Bromofluorobenzene	96.2		80.1-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 05:16 • (LCSD) 10/09/15 05:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0221	0.0227	88.4	90.7	73.0-122			2.47	20
Ethylbenzene	0.0250	0.0258	0.0260	103	104	80.9-121			0.730	20
Toluene	0.0250	0.0229	0.0232	91.4	93.0	77.9-116			1.64	20
Xylenes, Total	0.0750	0.0764	0.0773	102	103	79.2-122			1.25	20
(S) Toluene-d8				97.7	98.3	90.0-115				
(S) Dibromofluoromethane				94.2	95.3	79.0-121				
(S) a,a,a-Trifluorotoluene				105	105	90.4-116				
(S) 4-Bromofluorobenzene				97.1	97.8	80.1-120				

L792028-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 11:58 • (MS) 10/09/15 06:56 • (MSD) 10/09/15 07:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.000670	0.0201	0.0202	77.9	78.1	1	58.6-133			0.250	20
Ethylbenzene	0.0250	ND	0.0240	0.0237	96.1	94.8	1	62.7-136			1.33	20
Toluene	0.0250	0.000439	0.0212	0.0210	83.0	82.1	1	67.8-124			1.00	20
Xylenes, Total	0.0750	ND	0.0710	0.0700	94.6	93.3	1	65.6-133			1.41	20
(S) Toluene-d8					98.0	98.8		90.0-115				
(S) Dibromofluoromethane					94.7	93.5		79.0-121				
(S) a,a,a-Trifluorotoluene					106	105		90.4-116				
(S) 4-Bromofluorobenzene					97.6	98.5		80.1-120				



Method Blank (MB)

(MB) 10/09/15 17:54

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	105		90.0-115
(S) Dibromofluoromethane	97.5		79.0-121
(S) a,a,a-Trifluorotoluene	101		90.4-116
(S) 4-Bromofluorobenzene	100		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 16:36 • (LCSD) 10/09/15 16:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0228	0.0240	91.3	96.2	73.0-122			5.16	20
Ethylbenzene	0.0250	0.0230	0.0237	92.2	94.6	80.9-121			2.63	20
Toluene	0.0250	0.0234	0.0239	93.6	95.7	77.9-116			2.19	20
Xylenes, Total	0.0750	0.0694	0.0720	92.6	96.0	79.2-122			3.67	20
(S) Toluene-d8				104	105	90.0-115				
(S) Dibromofluoromethane				93.7	96.0	79.0-121				
(S) a,a,a-Trifluorotoluene				100	102	90.4-116				
(S) 4-Bromofluorobenzene				97.5	98.1	80.1-120				

L792110-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 23:51 • (MS) 10/09/15 22:33 • (MSD) 10/09/15 22:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0201	0.0229	80.3	91.7	1	58.6-133			13.2	20
Ethylbenzene	0.0250	ND	0.0203	0.0225	81.3	90.0	1	62.7-136			10.2	20
Toluene	0.0250	ND	0.0205	0.0231	82.0	92.5	1	67.8-124			12.1	20
Xylenes, Total	0.0750	ND	0.0609	0.0684	81.2	91.1	1	65.6-133			11.6	20
(S) Toluene-d8					106	105		90.0-115				
(S) Dibromofluoromethane					96.0	97.4		79.0-121				
(S) a,a,a-Trifluorotoluene					101	102		90.4-116				
(S) 4-Bromofluorobenzene					97.0	96.9		80.1-120				



Method Blank (MB)

(MB) 10/10/15 13:27

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Xylenes, Total	ND		0.00300

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/10/15 12:07 • (LCSD) 10/10/15 12:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0248	0.0261	99.1	104	73.0-122			5.06	20
Ethylbenzene	0.0250	0.0230	0.0232	92.1	93.0	80.9-121			0.960	20
Xylenes, Total	0.0750	0.0693	0.0706	92.3	94.2	79.2-122			1.97	20

L793138-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/10/15 15:06 • (MS) 10/10/15 13:47 • (MSD) 10/10/15 14:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0270	0.0261	108	105	1	58.6-133			3.22	20
Ethylbenzene	0.0250	ND	0.0245	0.0240	98.2	96.0	1	62.7-136			2.18	20
Xylenes, Total	0.0750	ND	0.0732	0.0728	97.6	97.1	1	65.6-133			0.500	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 10/13/15 10:21

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	96.0		90.0-115
(S) Dibromofluoromethane	90.9		79.0-121
(S) a,a,a-Trifluorotoluene	106		90.4-116
(S) 4-Bromofluorobenzene	95.7		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/13/15 08:39 • (LCSD) 10/13/15 08:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0266	0.0245	107	98.1	73.0-122			8.23	20
Ethylbenzene	0.0250	0.0296	0.0278	118	111	80.9-121			6.11	20
Toluene	0.0250	0.0275	0.0256	110	102	77.9-116			7.30	20
Xylenes, Total	0.0750	0.0870	0.0824	116	110	79.2-122			5.50	20
(S) Toluene-d8				96.3	96.4	90.0-115				
(S) Dibromofluoromethane				93.0	91.1	79.0-121				
(S) a,a,a-Trifluorotoluene				105	105	90.4-116				
(S) 4-Bromofluorobenzene				99.1	97.1	80.1-120				

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/07/15 11:39

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Diesel Range Organics (DRO)	ND		0.100
Residual Range Organics (RRO)	ND		0.250
<i>(S) o-Terphenyl</i>	99.5		50.0-150

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 11:57 • (LCSD) 10/07/15 12:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	0.750	0.968	0.950	129	127	50.0-150			1.89	20
Residual Range Organics (RRO)	0.750	0.943	0.875	126	117	50.0-150			7.47	20
<i>(S) o-Terphenyl</i>				106	103	50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

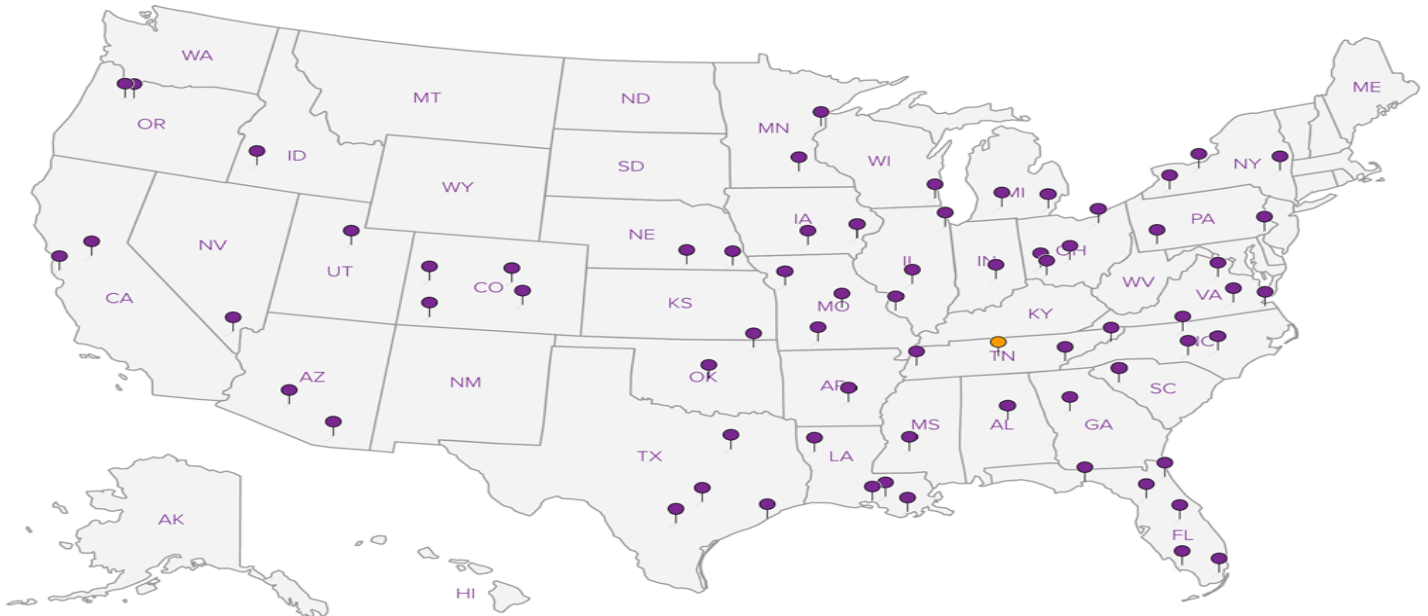
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project
 Description: **KMEP Harbor Island**

City/State
 Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
mu

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/10/15
 Email? ___ No Yes
 FAX? ___ No ___ Yes

Analysis / Container / Preservative

Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
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Chain of Custody Page ___ of ___



L.A.B. S.C.I.E.N.C.E.S.

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
DRUM-1		GW				5												
Dup-1	G	GW		10/01/15		11	X	X	X	X	X	X	X	X	X	X		-db
		GW				13	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature)	Date: 10/01/15	Time: 1740	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only) 7F
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.8 °C Bottles Received: 50	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/2/15 Time: 0900	pH Checked: <2 >12 NCF:

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: KMEP Harbor Island

City/State
Collected: Seattle, WA

Phone: 206-726-4753
Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
SWT MU

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___No ___Yes
 FAX? ___No ___Yes

Immediately Packed on Ice N ___ Y ___

No. of Cntrs

Analysis / Container / Preservative

Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl X 2	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3 22	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3 2	V8260BTEXC 40mlAmb-HCl
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YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# L792110
A015

Acctnum: KINMOROCA

Template: T105402

Prelogin: P524032

TSR: 358 - Jarred Willis

PB:

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl X 2	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3 22	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3 2	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
MW-25		GW				8	X				X	X			X	X		
SH-05R	A	G		10/01/15	1020	8	X				X	X			X	X		07
A-21	A	G		10/01/15	1140	11	X	X	X	X		X		X	X	X		08
A-28R		GW				11	X	X	X	X		X		X	X	X		
MW-6		GW				11	X	X	X	X		X		X	X	X		
MW-7		GW				11	X	X	X	X		X		X	X	X		
MW-9		GW				11	X	X	X	X		X		X	X	X		
MW-23	X A	G		10/01/15	1600	11	X	X	X	X		X		X	X	X		09
MW-24	A	G		10/01/15	1600	11	X	X	X	X		X		X	X	X		10
MW-21		GW				11		X	X	X	X	X		X		X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks:

8081 8774 2194
pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date: 10/01/15	Time: 1740	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) Adj w/ 2.5 ml HCl SW7 @ 0959 * could not adj due to matrix
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.1 °C Bottles Received: 4/	COC Seal Intact: ___Y___N___NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/2/15 Time: 0900	pH Checked: 2 NCF:

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:
Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**


City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
Fax:

Client Project # **WA000804, 2015**
Lab Project # **KINMOROCA-HARBORISLA**

Collected by (print): **SW + MU**

Site/Facility ID # **Harbor Island**
P.O. #

Collected by (signature): 

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%
 Date Results Needed **10/16/15**
 Email? ___ No Yes
 FAX? ___ No ___ Yes

Immediately Packed on Ice N ___ Y ___

No. of Cntrs

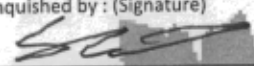

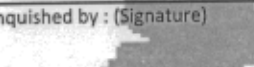
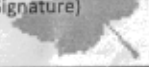
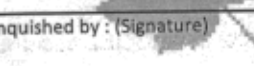
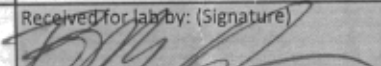
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
TMW-1		GW				9		X	X	X		X		X		X
TMW-2	G	GW		10/16/15	0835	9		X	X	X		X		X		X
TMW-3		GW				9		X	X	X		X		X		X
TMW-4		GW				9		X	X	X		X		X		X
TMW-5		GW				9		X	X	X		X		X		X
TMW-6		GW				9		X	X	X		X		X		X
A-5		GW				4						X				X
MW-18		GW				4						X				X
TMW-B1		GW				4						X				X
A-8		GW				6					X	X				X

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6443 1308 8693

Relinquished by: (Signature) 	Date: 10/16/15	Time: 1740	Received by: (Signature) 	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) M11
Relinquished by: (Signature) 	Date:	Time:	Received by: (Signature) 	Temp: _____ °C Bottles Received: 31 + TB	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 10-2-15 Time: 0900	pH Checked: 6.2 NCF:

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# **L792116**

J114

Acctnum: KINMOROCA

Template: T105402

Prelogin: P524032

TSR: 358 - Jarred Willis

PB:

Shipped Via: **FedEX Ground**

Rem./Contaminant Sample # (lab only)

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:
Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: KMEP Harbor Island

City/State
Collected: *Seattle, WA*

Phone: 206-726-4753
Fax:

Client Project #
WA600804, 2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
SW + MM

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15

Email? ___ No Yes
FAX? ___ No ___ Yes

Immediately Packed on Ice N ___ Y ___

No. of
Cntrs

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# *L792110*

Table #

Acctnum: KINMOROCA

Template: T105402

Prelogin: P524032

TSR: 358 - Jarred Willis

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
12		GW				13	X	X	X	X	X	X	X	X	X	X		
MW-07R	G	GW		10/10/15	0900	13	X	X	X	X	X	X	X	X	X	X		12
MW-2		GW				13	X	X	X	X	X	X	X	X	X	X		
MW-12R		GW				13	X	X	X	X	X	X	X	X	X	X		
SH-02R		GW				13	X	X	X	X	X	X	X	X	X	X		
11		GW				9		X	X	X		X		X		X		
A-23R		GW				9		X	X	X		X		X		X		
A-27		GW				9		X	X	X		X		X		X		
MW-14	G	GW		10/01/15	1030	9		X	X	X		X		X		X		13
MW-19		GW				9		X	X	X		X		X		X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: UPS

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received:

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: Time:

pH Checked:

NCF:

Matt Shacklock

From: Jason Romer
Sent: Friday, October 02, 2015 2:13 PM
To: Login
Subject: FW: Samples received today for KMEP Harbor Island project - KINMOROCA - L792110

Please remove FERUSFE, NITRATE, RSK175, SULFATE and SULFIDE from sample DUP-1 (L792110-06). Please scan this email with the COC.

Thanks,
Jason

From: Haslam, Kyle [mailto:Kyle.Haslam@arcadis.com]
Sent: Friday, October 02, 2015 1:34 PM
To: Jason Romer
Subject: RE: Samples received today for KMEP Harbor Island project

Hi Jason,

For the duplicate sample shipped yesterday (DUP-1), please only analyze GRO, BTEX, and Pb. We will not be running the geochemical analytes.

Thanks,
Kyle

Kyle Haslam | Staff Scientist | kyle.haslam@arcadis.com
Arcadis | Arcadis U.S., Inc.
1100 Olive Way, Suite 800
Seattle, Washington 98101
T. +1 206 726 4753 | M. + 1 206 719 6991



Kinder Morgan- Orange, CA

Sample Delivery Group: L792383
Samples Received: 10/03/2015
Project Number: WA000804.2015
Description: KMEP Harbor Island
Site: HARBOR ISLAND
Report To: Rob Truedinger / Kyle Haslam
1100 Olive Way, Suite 800
Seattle, WA 98101

Entire Report Reviewed By:



Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY



A-5 L792383-01 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 11:00	Received date/time 10/03/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 14:58	10/09/15 14:58	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 00:50	10/10/15 00:50	KLO

1 Cp

2 Tc

3 Ss

A-8 L792383-02 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 10:15	Received date/time 10/03/15 09:00
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 22:21	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 17:40	10/09/15 17:40	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 01:13	10/10/15 01:13	KLO

4 Cn

5 Sr

6 Qc

A-10 L792383-03 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 09:20	Received date/time 10/03/15 09:00
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 22:39	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 18:05	10/09/15 18:05	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 01:36	10/10/15 01:36	KLO

7 Gl

8 Al

9 Sc

MW-25 L792383-04 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 09:35	Received date/time 10/03/15 09:00
Metals (ICPMS) by Method 6020	WG820197	1	10/07/15 16:19	10/07/15 23:17	VSS
Metals (ICPMS) by Method 6020	WG820217	1	10/08/15 17:56	10/09/15 00:34	LAT
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	1	10/05/15 03:35	10/07/15 22:57	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG819601	5	10/05/15 03:35	10/09/15 10:50	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 18:30	10/09/15 18:30	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 01:59	10/10/15 01:59	KLO

DRUM-1 L792383-05 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 12:45	Received date/time 10/03/15 09:00
Mercury by Method 7470A	WG819580	1	10/05/15 14:56	10/06/15 09:12	BRJ
Metals (ICPMS) by Method 6020	WG820217	1	10/08/15 17:56	10/09/15 00:36	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 18:55	10/09/15 18:55	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 11:45	10/10/15 11:45	KLO

DUP-2 L792383-06 GW

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Collected by Scott W				Collected date/time 10/02/15 00:00	Received date/time 10/03/15 09:00
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 19:20	10/09/15 19:20	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 12:08	10/10/15 12:08	KLO



TRIP BLANK L792383-07 GW

Collected by Scott W
 Collected date/time 10/02/15 00:00
 Received date/time 10/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 08:21	10/09/15 08:21	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/09/15 22:32	10/09/15 22:32	KLO

¹ Cp

² Tc

³ Ss

DRUM-2 L792383-08 GW

Collected by Scott W
 Collected date/time 10/02/15 12:40
 Received date/time 10/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG819580	1	10/05/15 14:56	10/06/15 09:14	BRJ
Metals (ICPMS) by Method 6020	WG820217	1	10/08/15 17:56	10/09/15 00:38	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG819622	1	10/09/15 19:44	10/09/15 19:44	MCB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG820782	1	10/10/15 12:31	10/10/15 12:31	KLO

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	495		100	1	10/09/2015 14:58	WG819622
(S) a,a,a-Trifluorotoluene(FID)	98.0		62.0-128		10/09/2015 14:58	WG819622

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.61		1.00	1	10/10/2015 00:50	WG820782
Toluene	ND		5.00	1	10/10/2015 00:50	WG820782
Ethylbenzene	ND		1.00	1	10/10/2015 00:50	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 00:50	WG820782
(S) Toluene-d8	102		90.0-115		10/10/2015 00:50	WG820782
(S) Dibromofluoromethane	98.7		79.0-121		10/10/2015 00:50	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/10/2015 00:50	WG820782
(S) 4-Bromofluorobenzene	103		80.1-120		10/10/2015 00:50	WG820782

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	382		100	1	10/09/2015 17:40	WG819622
(S) a,a,a-Trifluorotoluene(FID)	96.6		62.0-128		10/09/2015 17:40	WG819622

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/10/2015 01:13	WG820782
Toluene	ND		5.00	1	10/10/2015 01:13	WG820782
Ethylbenzene	ND		1.00	1	10/10/2015 01:13	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 01:13	WG820782
(S) Toluene-d8	101		90.0-115		10/10/2015 01:13	WG820782
(S) Dibromofluoromethane	98.0		79.0-121		10/10/2015 01:13	WG820782
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/10/2015 01:13	WG820782
(S) 4-Bromofluorobenzene	99.5		80.1-120		10/10/2015 01:13	WG820782

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	4970		100	1	10/07/2015 22:21	WG819601
Residual Range Organics (RRO)	475		250	1	10/07/2015 22:21	WG819601
(S) o-Terphenyl	100		50.0-150		10/07/2015 22:21	WG819601

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 18:05	WG819622
(S) a,a,a-Trifluorotoluene(FID)	98.0		62.0-128		10/09/2015 18:05	WG819622

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	ND		1.00	1	10/10/2015 01:36	WG820782
Toluene	ND		5.00	1	10/10/2015 01:36	WG820782
Ethylbenzene	ND		1.00	1	10/10/2015 01:36	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 01:36	WG820782
(S) Toluene-d8	102		90.0-115		10/10/2015 01:36	WG820782
(S) Dibromofluoromethane	97.8		79.0-121		10/10/2015 01:36	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/10/2015 01:36	WG820782
(S) 4-Bromofluorobenzene	99.4		80.1-120		10/10/2015 01:36	WG820782

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Diesel Range Organics (DRO)	723		100	1	10/07/2015 22:39	WG819601
Residual Range Organics (RRO)	ND		250	1	10/07/2015 22:39	WG819601
(S) o-Terphenyl	108		50.0-150		10/07/2015 22:39	WG819601

9 Sc



Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Lead	ND		2.00	1	10/09/2015 00:34	WG820217
Lead,Dissolved	ND		2.00	1	10/07/2015 23:17	WG820197

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 18:30	WG819622
(S) a,a,a-Trifluorotoluene(FID)	98.9		62.0-128		10/09/2015 18:30	WG819622

4 Cn

5 Sr

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/10/2015 01:59	WG820782
Toluene	ND		5.00	1	10/10/2015 01:59	WG820782
Ethylbenzene	ND		1.00	1	10/10/2015 01:59	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 01:59	WG820782
(S) Toluene-d8	102		90.0-115		10/10/2015 01:59	WG820782
(S) Dibromofluoromethane	98.7		79.0-121		10/10/2015 01:59	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/10/2015 01:59	WG820782
(S) 4-Bromofluorobenzene	101		80.1-120		10/10/2015 01:59	WG820782

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Diesel Range Organics (DRO)	1190		500	5	10/09/2015 10:50	WG819601
Residual Range Organics (RRO)	1190		250	1	10/07/2015 22:57	WG819601
(S) o-Terphenyl	110		50.0-150		10/07/2015 22:57	WG819601



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Mercury	ND		0.200	1	10/06/2015 09:12	WG819580

1 Cp

2 Tc

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Arsenic	11.3		2.00	1	10/09/2015 00:36	WG820217
Barium	ND		5.00	1	10/09/2015 00:36	WG820217
Cadmium	ND		1.00	1	10/09/2015 00:36	WG820217
Chromium	ND		2.00	1	10/09/2015 00:36	WG820217
Lead	ND		2.00	1	10/09/2015 00:36	WG820217
Selenium	ND		2.00	1	10/09/2015 00:36	WG820217
Silver	ND		2.00	1	10/09/2015 00:36	WG820217

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	292		100	1	10/09/2015 18:55	WG819622
(S) a,a,a-Trifluorotoluene(FID)	99.8		62.0-128		10/09/2015 18:55	WG819622

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
Benzene	6.05		1.00	1	10/10/2015 11:45	WG820782
Toluene	ND		5.00	1	10/10/2015 11:45	WG820782
Ethylbenzene	8.24		1.00	1	10/10/2015 11:45	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 11:45	WG820782
(S) Toluene-d8	102		90.0-115		10/10/2015 11:45	WG820782
(S) Dibromofluoromethane	97.1		79.0-121		10/10/2015 11:45	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/10/2015 11:45	WG820782
(S) 4-Bromofluorobenzene	102		80.1-120		10/10/2015 11:45	WG820782



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	553		100	1	10/09/2015 19:20	WG819622
(S) a,a,a-Trifluorotoluene(FID)	97.6		62.0-128		10/09/2015 19:20	WG819622

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1.68		1.00	1	10/10/2015 12:08	WG820782
Toluene	ND		5.00	1	10/10/2015 12:08	WG820782
Ethylbenzene	ND		1.00	1	10/10/2015 12:08	WG820782
Total Xylenes	ND		3.00	1	10/10/2015 12:08	WG820782
(S) Toluene-d8	102		90.0-115		10/10/2015 12:08	WG820782
(S) Dibromofluoromethane	96.5		79.0-121		10/10/2015 12:08	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/10/2015 12:08	WG820782
(S) 4-Bromofluorobenzene	101		80.1-120		10/10/2015 12:08	WG820782

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	ND		100	1	10/09/2015 08:21	WG819622
(S) a,a,a-Trifluorotoluene(FID)	99.1		62.0-128		10/09/2015 08:21	WG819622

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/09/2015 22:32	WG820782
Toluene	ND		5.00	1	10/09/2015 22:32	WG820782
Ethylbenzene	ND		1.00	1	10/09/2015 22:32	WG820782
Total Xylenes	ND		3.00	1	10/09/2015 22:32	WG820782
(S) Toluene-d8	101		90.0-115		10/09/2015 22:32	WG820782
(S) Dibromofluoromethane	98.0		79.0-121		10/09/2015 22:32	WG820782
(S) a,a,a-Trifluorotoluene	101		90.4-116		10/09/2015 22:32	WG820782
(S) 4-Bromofluorobenzene	101		80.1-120		10/09/2015 22:32	WG820782

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Mercury	ND		0.200	1	10/06/2015 09:14	WG819580

1 Cp

2 Tc

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Arsenic	39.1		2.00	1	10/09/2015 00:38	WG820217
Barium	40.2		5.00	1	10/09/2015 00:38	WG820217
Cadmium	ND		1.00	1	10/09/2015 00:38	WG820217
Chromium	ND		2.00	1	10/09/2015 00:38	WG820217
Lead	10.5		2.00	1	10/09/2015 00:38	WG820217
Selenium	ND		2.00	1	10/09/2015 00:38	WG820217
Silver	ND		2.00	1	10/09/2015 00:38	WG820217

3 Ss

4 Cn

5 Sr

6 Qc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Gasoline Range Organics-NWTPH	776		100	1	10/09/2015 19:44	WG819622
(S) a,a,a-Trifluorotoluene(FID)	96.2		62.0-128		10/09/2015 19:44	WG819622

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	41.7		1.00	1	10/10/2015 12:31	WG820782
Toluene	ND		5.00	1	10/10/2015 12:31	WG820782
Ethylbenzene	14.3		1.00	1	10/10/2015 12:31	WG820782
Total Xylenes	105		3.00	1	10/10/2015 12:31	WG820782
(S) Toluene-d8	101		90.0-115		10/10/2015 12:31	WG820782
(S) Dibromofluoromethane	97.8		79.0-121		10/10/2015 12:31	WG820782
(S) a,a,a-Trifluorotoluene	100		90.4-116		10/10/2015 12:31	WG820782
(S) 4-Bromofluorobenzene	104		80.1-120		10/10/2015 12:31	WG820782



Method Blank (MB)

(MB) 10/06/15 08:19

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Mercury	ND		0.000200

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/06/15 08:21 • (LCSD) 10/06/15 08:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00277	0.00278	92	93	80-120			1	20

L792199-41 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/06/15 08:30 • (MS) 10/06/15 08:32 • (MSD) 10/06/15 08:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00302	0.00292	101	97	1	75-125			4	20

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 10/07/15 20:33

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lead,Dissolved	ND		0.00200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 20:35 • (LCSD) 10/07/15 20:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.0454	0.0465	91	93	80-120			3	20

L792110-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/07/15 20:41 • (MS) 10/07/15 20:46 • (MSD) 10/07/15 20:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.000159	0.0426	0.0468	85	93	1	75-125			9	20

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/08/15 21:27

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Arsenic	ND		0.00200
Barium	ND		0.00500
Cadmium	ND		0.00100
Chromium	ND		0.00200
Lead	ND		0.00200
Selenium	ND		0.00200
Silver	ND		0.00200

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/08/15 21:30 • (LCSD) 10/08/15 21:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	0.0448	0.0455	90	91	80-120			2	20
Barium	0.0500	0.0487	0.0486	97	97	80-120			0	20
Cadmium	0.0500	0.0478	0.0484	96	97	80-120			1	20
Chromium	0.0500	0.0469	0.0466	94	93	80-120			1	20
Lead	0.0500	0.0482	0.0474	96	95	80-120			2	20
Selenium	0.0500	0.0454	0.0452	91	90	80-120			0	20
Silver	0.0500	0.0490	0.0482	98	96	80-120			2	20

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L792420-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/08/15 21:34 • (MS) 10/08/15 21:39 • (MSD) 10/08/15 21:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	0.00241	0.0500	0.0491	95	93	1	75-125			2	20
Barium	0.0500	0.382	0.425	0.430	85	95	1	75-125			1	20
Cadmium	0.0500	0.0000504	0.0487	0.0473	97	94	1	75-125			3	20
Chromium	0.0500	0.000379	0.0460	0.0456	91	90	1	75-125			1	20
Lead	0.0500	0.000340	0.0487	0.0467	97	93	1	75-125			4	20
Selenium	0.0500	0.000217	0.0465	0.0466	93	93	1	75-125			0	20
Silver	0.0500	0.0000354	0.0489	0.0477	98	95	1	75-125			2	20



Method Blank (MB)

(MB) 10/09/15 07:35

Analyte	MB Result	MB Qualifier	MB RDL
	mg/l		mg/l
TPHG C6 - C12	ND		0.100
<i>(S) a,a,a-Trifluorotoluene(FID)</i>	99.2		62.0-128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 06:20 • (LCSD) 10/09/15 06:45

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPHG C6 - C12	5.50	5.15	5.28	93.6	96.1	66.0-123			2.62	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>				111	111	62.0-128				

L792211-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 10/09/15 08:46 • (MS) 10/09/15 09:11 • (MSD) 10/09/15 09:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPHG C6 - C12	5.50	ND	5.22	4.58	94.9	83.4	1	47.5-136			13.0	20
<i>(S) a,a,a-Trifluorotoluene(FID)</i>					107	106		62.0-128				



Method Blank (MB)

(MB) 10/09/15 16:57

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.00100
Ethylbenzene	ND		0.00100
Toluene	ND		0.00500
Xylenes, Total	ND		0.00300
(S) Toluene-d8	102		90.0-115
(S) Dibromofluoromethane	95.9		79.0-121
(S) a,a,a-Trifluorotoluene	102		90.4-116
(S) 4-Bromofluorobenzene	102		80.1-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/09/15 15:25 • (LCSD) 10/09/15 15:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0250	0.0247	100	98.9	73.0-122			1.21	20
Ethylbenzene	0.0250	0.0260	0.0254	104	102	80.9-121			2.52	20
Toluene	0.0250	0.0246	0.0242	98.2	96.8	77.9-116			1.50	20
Xylenes, Total	0.0750	0.0795	0.0775	106	103	79.2-122			2.46	20
(S) Toluene-d8				100	100	90.0-115				
(S) Dibromofluoromethane				99.2	100	79.0-121				
(S) a,a,a-Trifluorotoluene				99.7	100	90.4-116				
(S) 4-Bromofluorobenzene				101	101	80.1-120				

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) 10/07/15 11:39

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Diesel Range Organics (DRO)	ND		0.100
Residual Range Organics (RRO)	ND		0.250
<i>(S) o-Terphenyl</i>	99.5		50.0-150

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 10/07/15 11:57 • (LCSD) 10/07/15 12:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	0.750	0.968	0.950	129	127	50.0-150			1.89	20
Residual Range Organics (RRO)	0.750	0.943	0.875	126	117	50.0-150			7.47	20
<i>(S) o-Terphenyl</i>				106	103	50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
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The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

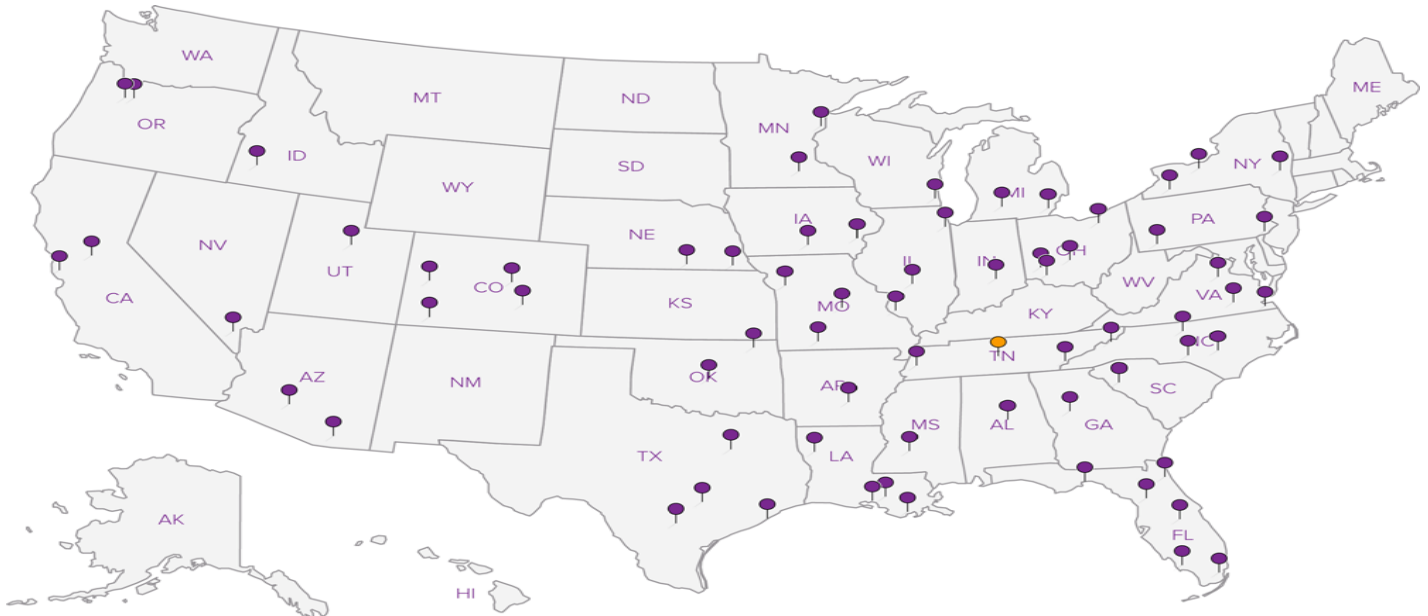
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Kinder Morgan- Orange, CA

1100 Olive Way, Suite 800
Seattle, WA 98101

Billing Information:

Accounts Payable- Rob Truedinger
1100 Town and Country Rd
Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
Scott.Wenning@arcadis.com;

Project
Description: **KMEP Harbor Island**

City/State
Collected: **Seattle, WA**

Phone: 206-726-4753
Fax:

Client Project #
WA000804, 2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Scott Wenning

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15

Email? ___ No **X** Yes

FAX? ___ No ___ Yes

No. of
Cntrs

Immediately
Packed on Ice N ___ Y **X**

Analysis / Container / Preservative

Diss Pb 6020 500mlHDPE-NoPres
 Ferrous Fe 250mlAmb-HCl
 Methane RSK175 40mlAmb HCl
 NITRATE / Sulfate 125mlHDPE-NoPres
 NWTPhDx 40mlAmb-HCl-BT
 NWTPhGx 40mlAmb HCl
 RCRA8 Metals 6020 500mlHDPE-HNO3
 SULFIDE 125mlAmb-S-NaOH+ZnAc
 Total Pb 6020 500mlHDPE-HNO3
 V8260BTEXC 40mlAmb-HCl



YOUR LAB OF CHOICE
 12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L# **792383**

Table #

Acctnum: **KINMOROCA**

Template: **T105402**

Prelogin: **P524032**

TSR: 358 - Jarred Willis

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPhDx 40mlAmb-HCl-BT	NWTPhGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
TMW-1		GW				9	X	X	X			X		X		X		
TMW-2		GW				9	X	X	X			X		X		X		
TMW-3		GW				9	X	X	X			X		X		X		
TMW-4		GW				9	X	X	X			X		X		X		
TMW-5		GW				9	X	X	X			X		X		X		
TMW-6		GW				9	X	X	X			X		X		X		
A-5	G	GW		10/02/15	1100	4						X				X		01
MW-18		GW				4						X				X		
TMW-B1		GW				4						X				X		
A-8	G	GW		10/2/15	1015	6					X	X				X		02

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks:

pH _____ Temp _____
 Flow _____ Other _____

Hold #

Relinquished by: (Signature) <i>[Signature]</i>	Date: 10/2/15	Time: 1400	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) <i>[Signature]</i> Go
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: _____ °C Bottles Received: 3.2 39	COC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/3/15 Time: 900	pH Checked: _____ NCF: _____

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Scott Wenning

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___No XYes
 FAX? ___No ___Yes

Analysis / Container / Preservative	
Diss Pb 6020 500mlHDPE-NoPres	
Ferrous Fe 250mlAmb-HCl	
Methane RSK175 40mlAmb HCl	
NITRATE / Sulfate 125mlHDPE-NoPres	
NWTPHDx 40mlAmb-HCl-BT	
NWTPHGx 40mlAmb HCl	
RCRA8 Metals 6020 500mlHDPE-HNO3	
SULFIDE 125mlAmb-S-NaOH+ZnAc	
Total Pb 6020 500mlHDPE-HNO3	
V8260BTEXC 40mlAmb-HCl	

Chain of Custody Page of



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **792383**

Table #

Acctnum: **KINMOROCA**

Template: **T105402**

Prelogin: **P524032**

TSR: **358 - Jarred Willis**

PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
A-10	G	GW		10/2/15	0920	6					X	X				X		03
MW-4		GW				6					X	X				X		
MW-16		GW				6					X	X				X		
MW-20		GW				6					X	X				X		
MW-22		GW				6					X	X				X		
A-14R		GW				8	X				X	X			X	X		
MW-1		GW				8	X				X	X			X	X		
MW-3		GW				8	X				X	X			X	X		
MW-5		GW				8	X				X	X			X	X		
MW-8		GW				8	X				X	X			X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 10/2/15	Time: 1460	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) GD10
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 32 °C Bottles Received: 39	COC Seal Intact: <u> </u> Y <u> </u> N <u> </u> NA
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/3/15 Time: 900	pH Checked: 22 NCF:

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project Description: **KMEP Harbor Island**

City/State Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

Client Project #
WA000804,2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Scott Wenning

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):
 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day200%
 Next Day100%
 Two Day50%
 Three Day25%

Date Results Needed
10/16/15
 Email? No Yes
 FAX? No Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
MW-25	G	GW		10/2/15	0935	8
SH-05R		GW				8
A-21		GW				11
A-28R		GW				11
MW-6		GW				11
MW-7		GW				11
MW-9		GW				11
MW-23		GW				11
MW-24		GW				11
MW-21		GW				11

Analysis / Container / Preservative														
Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl					

Chain of Custody Page ___ of ___



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **742783**
D191

Acctnum: KINMOROCA
 Template: T105402
 Prelogin: P524032
 TSR: 358 - Jarred Willis
 PB:

Shipped Via: **FedEX Ground**

Rem./Contaminant	Sample # (lab only)
	cy

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: _____

pH _____ Temp _____ Flow _____ Other _____

644313688752

Relinquished by: (Signature) <i>[Signature]</i>	Date: 10/2/15 1400	Time: 1400	Received by: (Signature) <i>[Signature]</i>	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) 60
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received by: (Signature) <i>[Signature]</i>	Temp: 3.2 °C Bottles Received: 39	COC Seal Intact: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA
Relinquished by: (Signature) <i>[Signature]</i>	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 10/3/15 Time: 900	pH Checked: 42 NCF:

Kinder Morgan- Orange, CA
 1100 Olive Way, Suite 800
 Seattle, WA 98101

Billing Information:
 Accounts Payable- Rob Truedinger
 1100 Town and Country Rd
 Orange, CA 92868

Report to:
Kyle Haslam

Email To: Kyle.Haslam@arcadis.com;
 Scott.Wenning@arcadis.com;

Project
 Description: **KMEP Harbor Island**

City/State
 Collected: **Seattle, WA**

Phone: **206-726-4753**
 Fax:

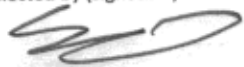
Client Project #
WA000804.2015

Lab Project #
KINMOROCA-HARBORISLA

Collected by (print):
Scott Wenning

Site/Facility ID #
Harbor Island

P.O. #

Collected by (signature):

 Immediately Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 ___ Same Day200%
 ___ Next Day100%
 ___ Two Day50%
 ___ Three Day25%

Date Results Needed
10/16/15
 Email? ___ No Yes
 FAX? ___ No ___ Yes

Analysis / Container / Preservative									
Diss Pb 6020 500mlHDPE-NoPres	Ferrous Fe 250mlAmb-HCl	Methane RSK175 40mlAmb HCl	NITRATE / Sulfate 125mlHDPE-NoPres	NWTPHDx 40mlAmb-HCl-BT	NWTPHGx 40mlAmb HCl	RCRA8 Metals 6020 500mlHDPE-HNO3	SULFIDE 125mlAmb-S-NaOH+ZnAc	Total Pb 6020 500mlHDPE-HNO3	V8260BTEXC 40mlAmb-HCl
						X			X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X		X	X	X
X	X	X	X	X	X		X	X	X
X	X	X	X	X	X		X	X	X
X	X	X	X	X	X		X	X	X
X	X	X	X	X	X		X	X	X
X	X	X	X	X	X		X	X	X
					X				X
					X	X			X

Chain of Custody Page ___ of ___



ESC
 L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

12065 Lebanon Rd
 Mount Juliet, TN 37122
 Phone: 615-758-5858
 Phone: 800-767-5859
 Fax: 615-758-5859



L # **792383**

Table #

Acctnum: **KINMOROCA**
 Template: **T105402**
 Prelogin: **P524032**
 TSR: **358 - Jarred Willis**
 PB:

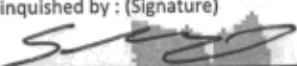

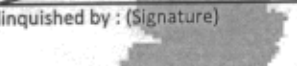
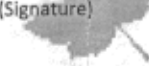
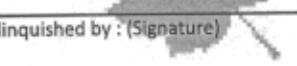
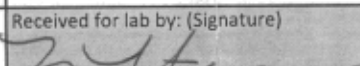
Shipped Via: **FedEx Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	Analysis / Container / Preservative										Rem./Contaminant	Sample # (lab only)		
DRUM-1	G	GW		10/2/15	1245	5										X		X		05
DUP-2	Grab	GW		10/2/15	-	422	X	X	X	X	X	X	X	X	X	X	X	X		04
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
		GW				13	X	X	X	X	X	X	X	X	X	X	X	X		
Trip Blank				10/2/15	-	1														09
DRUM-2	G	GW		10/2/15	1240	5						X	X			X	X			02

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

Remarks:

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) 	Date: 10/2/14	Time: 1400	Received by: (Signature) 	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: (lab use only) G010
Relinquished by: (Signature) 	Date:	Time:	Received by: (Signature) 	Temp: _____ °C Bottles Received: 32 39	COC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature) 	Date:	Time:	Received for lab by: (Signature) 	Date: 10/3/15 Time: 900	pH Checked: <2 NCF:

Arcadis U.S., Inc.

1100 Olive Way

Suite 800

Seattle, Washington 98101

Tel 206 325 5254

Fax 206 325 8218

www.arcadis.com

A decorative graphic consisting of three thin orange lines. One line is horizontal, extending across the bottom of the page. Two other lines are diagonal, starting from the bottom left and extending towards the top right, crossing the horizontal line.