REPORT

Annual Groundwater Monitoring Report
1st Quarter through 4th Quarter 2015

Linnton Terminal
Portland, Oregon
DEQ ESCI No. 1096

Prepared for

Kinder Morgan Liquids Terminals, LLC

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Prepared by

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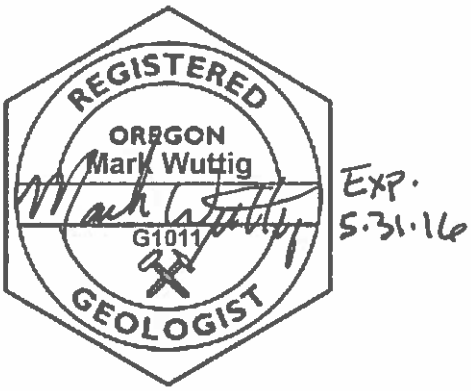

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SECTION 1

Introduction

This annual groundwater monitoring report presents the results of groundwater monitoring performed for the Kinder Morgan Liquids Terminals, LLC (KMLT), Linnton Terminal (the Site), located at 11400 NW St. Helens Road in Portland, Oregon (Multnomah County) (Figure 1). The Site is a bulk fuel storage and distribution facility located at 11400 NW St. Helens Road, Portland Oregon, between Highway 30 to the west and the Willamette River to the east. This report presents the results of monitoring of groundwater and light non-aqueous phase liquid (LNAPL) conducted at the Site for the first through fourth quarters of 2015.

In addition, summary data from 2012 to 2015 and a complete historical dataset are also included to correct data discrepancies for PAHs identified in previous Groundwater Monitoring Reports as described in Section 3.1.2 of this report.

Groundwater monitoring is conducted in accordance with the *Sampling and Analysis Plan* in Appendix A of the *Remedial Investigation Work Plan* (KHM, 2002), the *Groundwater Monitoring and Reporting Update Request* (Delta Consultants, May 7, 2007), and the *Revised Groundwater Sampling and Analysis Plan – Linnton Terminal, Kinder Morgan Liquids Terminals, LLC* (CH2M, 2014a), which was approved by DEQ (email communication, January 13, 2015) and implemented beginning in January 2015.

The barrier wall monitoring system was completed in April 2012 (CH2M, 2013a). Subsequent additions to the hydraulic gradient control system included installation of extraction well (EW-5) and piezometers (PZ-9 and PZ-10) in June 2013 (CH2M, 2013b), and installation of extraction wells EW-6 and EW-7 in August 2014 (CH2M, 2014b).

Groundwater monitoring is conducted on behalf of KMLT by Antea Group. Field procedures are performed in accordance with Antea Group's standard operating procedures for quality assurance and quality control (QA/QC), consistent with the February 2002 *Sampling and Analysis Plan* (KHM, 2002).

The site layout is shown in Figure 2. Former and current remediation systems are outlined in detail in the *Groundwater and Bank Soil Source Control Evaluation* (CH2M, 2015a).

SECTION 2

Monitoring and Field Activities

Beginning in 2015, the site-wide monitoring program has followed the *Revised Groundwater Sampling and Analysis Plan (*CH2M, 2014a). The following field activities are conducted as part of KMLT's monitoring program:

- Semi-annual measurement of groundwater elevations and LNAPL (if present) in shallow aquifer groundwater monitoring wells, piezometers, and extraction wells at the site in January and July.
- Annual sampling in July for 14 monitoring wells screened in the shallow aquifer. Samples analyzed for metals, PAHs, TPH, and BTEX.
- Quarterly gauging of monitoring wells in the vicinity of the barrier wall (conducted in January, April, July, and October).

The following additional activities were performed:

- Semi-annual monitoring of three sumps (Sump-1 through Sump-3) for the presence of LNAPL.
- Regular removal of LNAPL from near-river wells with significant LNAPL thickness.
- Weekly inspection of the absorbent boom on the water along the river bank.
- As-needed operation and maintenance (O&M) activities for the barrier wall system.

Details of these field activities are included in this section. A summary of the monitoring network including well construction details and monitoring frequency is included in Table 1.

2.1 Groundwater Monitoring

Semi-annual groundwater elevation and LNAPL monitoring activities were conducted on the following dates:

- January 28, 2015 (first quarter 2015 event)
- July 1, 2015 (third quarter 2015 event)

2.1.1 Water Level Measurements

Water level measurements were attempted in 31 monitoring wells, 14 piezometers, and 7 extraction wells during this monitoring period. Semi-annual water level measurements are collected at MW-1, MW-3 through MW-28, MW-4B, MW-8B, MW-12B, MW-12C, P-1 through P-4, PZ-1 through PZ-10, and EW-1 through EW-7. The extraction wells EW-1 through EW-7 were operating during each monitoring event. MW-19 operates as a product-skimming well and was operating during the July event but not the January event. Deviations from this plan for each monitoring event are as follows:

- First quarter 2015 –Water level measurements were completed at 27 monitoring wells, 13 piezometers, and 7 extraction wells. MW-27 was not measured due to lack of water in the well. Water levels were not measured at MW-11 and MW-16 due to fouling of the probe from high-viscosity LNAPL present in this well. MW-5 and piezometer P-1 were inaccessible during the monitoring event.
- Third quarter 2015 – Water level measurements were completed at 27 monitoring wells, 13 piezometers, and 7 extraction wells. MW-5 and MW-6 were not measured due to lack of water in the well. Water levels were not measured at MW-11 due to fouling of the probe from high-viscosity LNAPL present in this well. MW-18 and piezometer P-1 were inaccessible during the monitoring event.

A summary of groundwater gauging measurements for this monitoring period is presented in Table 2. Figure 2 shows the locations of Site wells. Site-wide groundwater contours for first and third quarter events are shown in Figure 3 and Figure 4. Field gauging forms and a table of all historical water level measurements are provided in Appendix A.

2.1.2 Groundwater Sampling and Analysis

Groundwater samples are collected during the third quarter monitoring event. Groundwater samples are collected from all shallow groundwater monitoring wells specified in the 2014 *Revised Groundwater Sampling and Analysis Plan (*CH2M 2014a) that do not have measureable LNAPL present at the time of monitoring. Groundwater sampling is conducted using a peristaltic pump using low-flow sampling methods with pumping rates between 0.2 to 0.5 liters per minute. Water quality parameters, including water levels, pH, temperature, and specific conductance are measured during purging and samples are collected when the parameters are within approximately 10 percent for three consecutive readings.

The following monitoring wells are sampled on an annual basis:

- Downgradient perimeter wells: MW-1, MW-3, MW-4, MW-8, MW-12, MW-20, MW-22, and MW-25
- Cross-gradient Perimeter wells: MW-6 and MW-9
- Upgradient perimeter wells: MW-16, MW-23, MW-24, and MW-26

Monitoring wells MW-3, MW-12, MW-16, MW-20, MW-23, and MW-24 were not sampled during this monitoring event because of LNAPL present in the wells at the time sampling was conducted. MW-6 was not sampled due to lack of water in the well. Field sampling forms are provided in Appendix B.

Groundwater samples were submitted to ESC Lab Sciences of Mount Juliet, Tennessee, and analyzed for the following:

- Total petroleum hydrocarbons (TPH) in the gasoline range hydrocarbons (TPH-g) by Northwest Method NWTPH-Gx.
- Total petroleum hydrocarbons in the diesel range (TPH-d) and heavy oil range (TPH-o) by Northwest Method NWTPH-Dx.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8260B.
- PAHs by EPA Method 8270C-SIM.
- Selected total metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc) by EPA Method SW6020/6020A.

Laboratory analytical results are provided in Appendix C, and data validation results are presented in Appendix D. All data fell within acceptable QA/QC standards as indicated in the data validation report included in Appendix E. Tables 3 through 5 contain 2015 monitoring data for BTEX and TPH, PAHs, and total metals, respectively.

2.1.3 LNAPL Observations

In conjunction with groundwater elevation measurements, the thickness of LNAPL, where present, is also measured site-wide on a semi-annual basis and quarterly in the vicinity of the barrier wall. Results of semi-annual LNAPL thickness measurements are summarized in Table 2 and Figures 3 and 4. In addition to the regular monitoring network, three sumps (Sump 1 through Sump 3) located downgradient of MW-12 are also monitored for the presence of LNAPL. Monitoring of the sumps was initiated after LNAPL began to be observed in well MW-12 in 2006. LNAPL has not been observed in the sumps since monitoring began in 2002.

LNAPL levels at the site continue to be monitored to assess equilibrium conditions with removal of LNAPL determined on a case-by-case basis at wells with significant LNAPL thickness.

In 2015, baildown testing was conducted in April in wells EW-1, EW-6, PZ-3, and PZ-8 and in July in well PZ-1. In addition, product was bailed from wells with product thicknesses of greater than 0.1 ft in September (PZ-1, PZ-3, PZ-5), November (PZ-1, PZ-2, PZ-5, PZ-6, PZ-7) and December (PZ-1, PZ-2, PZ-3, PZ-7, PZ-8). Field sheets from 2015 NAPL baildown tests and purging events are included in Appendix A. The results from the baildown testing are summarized in Section 3.1.3.

2.2 Barrier Wall Activities

As described in Section 1.0, a 216-foot-long, 30-foot-deep sheet pile barrier wall was installed in late-2011, replacing the previous IRAM system. The new barrier wall system was installed to prevent LNAPL migration to the river within an interim action target area identified in the *Interim Action Feasibility Study* (CH2M, 2011b). The groundwater extraction and treatment system came online in April 2012.

The barrier wall hydraulic containment system initially consisted of three extraction wells behind the barrier wall (EW-1 to EW-3), one extraction wall near the southeast portion of the Site (EW-4), and a network of eight piezometers for gauging water levels near the wall (PZ-1 through PZ-8). PZ-1, PZ-3, and PZ-5 are east of the wall (outside); PZ-2, PZ-4, and PZ-6 are west of the well (inside); PZ-7 is north of the wall; and PZ-8 is south of the wall. To further decrease groundwater levels behind the wall, groundwater pumping from monitoring well MW-19 (located behind the barrier wall) was initiated in January 2013. In June 2013, an additional extraction well (EW-5) and piezometer (PZ-9) were also added behind the barrier wall. An additional piezometer (PZ-10) was added along the southeast portion of the Site to assist in assessing groundwater flow directions in the EW-4 area. The locations of EW-5, PZ-9, and PZ-10 are shown in Figure 2. Extraction well EW-5 was connected to the treatment system in December 2013.

In August 2014, two additional extraction wells (EW-6 and EW-7) were installed approximately 10 feet from either end of the barrier wall to augment the existing extraction well system and maintain hydraulic containment behind the barrier wall (CH2M, 2014b). The wells are screened to the base of the shallow sand that overlies the low conductivity fine-grained unit into which the barrier wall is anchored. Following installation and development of EW-6 and EW-7, existing extraction wells EW-1 though EW-4 were redeveloped using mechanical methods (i.e., brushing and surging) in conjunction with application of sulfamic and hydroxyacetic (glycolic) acid to improve hydraulic connection between the wells and the surrounding aquifer (CH2M, 2014b).

Groundwater extracted from the barrier wall system is pumped to the onsite groundwater treatment system that includes an oil-water separator (OWS) and two granular activated carbon pressure vessels. Treated groundwater is discharged under a National Pollutant Discharge Elimination System (NPDES) permit (EPA Permit File No. ORG 910059/DEQ NPDES Permit No. 17609). Effluent limits in the permit are defined for TPH, BTEX compounds, pH, and flow. Effluent samples are collected on a monthly basis, compared to permit limits, and summarized in quarterly discharge monitoring reports that are submitted to DEQ. LNAPL collected in the pretreatment tank and OWS are routed to a collection tank where it is temporarily stored for offsite recycling.

O&M site visits for the system are conducted approximately one to two times per week. During site visits, system operational parameters are monitored and system components are adjusted or maintained as needed. System adjustments and maintenance checks involve tasks such as cleaning pump control sensors, removing collected LNAPL from the storage tank, backflushing the carbon vessels, cleaning the pretreatment and batch tanks and associated controls, checking the operation of the pumps, and, as necessary, adjusting pump settings. Measurements and readings recorded during each of the site visits include:

- Pressure readings at the manifold and both carbon vessels.

- The total flow volume for the system.
- LNAPL level in the product storage tank.
- The condition of the hard boom and absorbent booms are checked.
- A qualitative description of the sheen on the river, if present.

In addition, measurements of groundwater elevation and LNAPL thickness are collected quarterly at monitoring wells (MW-1, MW-3, MW-4, MW-8, MW-9, MW-10, MW-19 through MW-22), piezometers (PZ-1 through PZ-10), and extraction wells (EW-1 through EW-7 and MW-19) near the barrier wall. In the fourth quarter of 2014, P-3, P-4, MW-11 and MW-28 were added to the barrier wall monitoring program to provide additional information on groundwater flow in the vicinity of the barrier wall.

SECTION 3

Monitoring Results and Data Analysis

This section presents the results of groundwater and LNAPL monitoring and sampling as well as performance monitoring data and evaluation of the sheet pile barrier wall and hydraulic containment system.

3.1 Groundwater

Groundwater monitoring results include analysis of groundwater elevation and resulting groundwater flow directions, analytical results from semi-annual groundwater sampling, and LNAPL thickness measurements.

A description of hydrostratigraphy at the site as well as detailed cross-sections are included in the Groundwater SCE report (CH2M 2015a). Well construction information is included in Table 1.

The groundwater monitoring network includes 27 wells screened in the shallow sands and fine-grained deposits (MW-1, MW-3 through MW 18, MW-20, and MW-22 through MW-28); four wells screened in the lower sand lenses (MW-4B, MW-8B, MW-12B, MW-12C); two wells screened within both the shallow sand deposits and lower sand lens (MW-19 and MW 21); 14 shallow piezometers (P-1 through P-4 and PZ-1 through PZ-10); and seven extraction wells (EW-1 to EW-7).

The deeper wells at three well clusters (MW-4B, MW-8B, MW-12B, and MW-12C), provide information on vertical groundwater gradients. These well clusters and vertical gradients are further described below.

3.1.1 Elevation and Flow Direction

Figure 5 provides a hydrograph of wells MW-1 through MW-12 to show seasonal groundwater elevation changes across the Linnton Terminal. Figure 6 shows groundwater levels along the top of bank near the river at the barrier wall and the elevation of surface water in the Willamette River. As in previous years, groundwater elevations varied seasonally in response to differences in recharge from precipitation and change in the surface water elevation of the Willamette River. Groundwater elevations are typically higher during the rainy winter and spring months and lower during the drier summer and fall months. In 2015, river and groundwater levels experienced unseasonably low elevations during the winter and spring (Figure 5 and 6).

The river elevation at the site was estimated by correlating river levels adjacent to the site with the United States Geological Survey gage 14211720 at the Morrison Bridge, located about 6 miles upriver (east) of the site. The correlation was developed from surface water measurements conducted as part of the tidal study in fall 2010. As illustrated in Figure 5 and 6, groundwater levels at the top of bank are consistently above the surface water elevation, indicating that the dominant groundwater flow direction is towards the river.

Figures 3 and 4 present groundwater elevation contours and groundwater flow directions for the semi-annual events at the site. Flow directions are consistent with observations from previous years, with the exception of in the vicinity of the barrier wall, where the additional of extraction wells EW-6 and EW-7 have improved hydraulic capture behind the wall as detailed in Section 3.2.2 and *Groundwater and Bank Soil Source Control Evaluation* (CH2M 2015a).

Groundwater generally flows towards the Willamette River, with localized variations that appear to be related to variations in lithology.

- To the northwest, groundwater elevations are generally higher within the sand channel at the northwest portion of the site, which runs from MW-23 to MW-12.
- To the southeast, groundwater elevations are influenced by the barrier wall extraction system and the more permeable fill materials in this area. As further described below, groundwater is extracted behind this wall and at either end of the wall to remove groundwater and hydrocarbon product that would otherwise migrate towards the Willamette River.

Three wells clusters provide wells that are screened at different vertical depths, providing information on vertical groundwater gradients. These well clusters and vertical gradients are as follows:

- Well cluster MW-12, MW-12B, and MW-12C is located where the more permeable sand channel occurs at the northern part of the terminal. There is a downward gradient from MW-12 to the deeper wells MW-12B and MW-12C (Table 2, Figure 3 and 4). The water level elevation in MW-12 is several feet higher than at MW-12B and MW-12C based on historical and 2015 monitoring data. This downward gradient is consistent with historical data.
- Well clusters MW-4 and 4B and MW-8 and MW-8B are located to the south of the sand channel. MW-4 and MW-4B occur to the north of the barrier wall and MW-8 and MW-8B are located to the south of the barrier wall. There is an upward gradient from the deeper "B" wells to the shallower wells based on historical and 2015 monitoring data (Table 2, Figure 3 and 4). This upward gradient is consistent with historical data.

3.1.2 Groundwater Analytical Results

Groundwater sampling is conducted annually during the third quarter of each year. Tables 3, 4, and 5 present the analytical results for the 2012 to 2015 monitoring period for BTEX and TPH, PAHs, and total metals, respectively. Laboratory reports are included in Appendix C; data validation results are included in Appendix D. In general, results from the 2015 event were similar to results from recent years. For completeness, a summary of the results and trends for 2012 to 2015 is included below for each constituent group.

Note that Table 4 and Appendix D (Table B-3) contain corrections to errors in Table 3 - PAHs from several previous Groundwater Monitoring Reports (CH2M 2013c, 2014c, 2014d, 2015b). Tables 4 and B-3 of this report include the corrected dataset for 2012 to 2015. The corrected dataset shows that PAH trends and concentrations are consistent with the last 12 years of data collected. The corrected dataset is also included in the Groundwater and Bank Soils SCE (CH2M, 2015a).

3.1.2.1 BTEX and TPH

Table 3 presents results for BTEX compounds and TPH in groundwater samples; results for 2012-2015 are summarized below. Historical results are tabulated in Table B-2. Note that the 2015 reporting limits for TPH compounds were lower than for previous events, leading to low-level detections of compounds in some wells.

- Between 2012 and 2015, BTEX compounds were detected in wells MW-1, MW-6, MW-8, MW-9, MW-10, MW-13, MW-16, MW-20, MW-21, MW-22, and MW-28. The maximum concentrations of BTEX compounds were detected at MW-9 with the highest concentrations ranging from 500 to 1000 µg/L. Concentrations at MW-9 are up to 2 orders of magnitude higher than other wells on-site.
- Between 2012 and 2015, TPH-g and TPH-d were detected in 16 wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW-12, MW-13, MW-16, MW-20, MW-21, MW-22, MW-25, MW-26, and MW-28), with the highest recorded TPH-g concentrations at MW-28 and MW-9 (on order of 4,000 µg/L) and the highest concentrations of TPH-d at MW-1, MW-3, MW-4 and MW-28 (between 4,000 and 16,000 µg/L). TPH-d concentrations were higher in 2015 than for previous years at several wells (MW-1, MW-4, MW-9, MW-22, MW-25 and MW-26) most likely due to prolonged low water

levels. Current concentrations still indicate an order of magnitude decrease in site-wide TPH-d concentrations since 2002.

- Between 2012 and 2015, TPH-o was detected in MW-1, MW-3, MW-4, MW-8, MW-9, MW-22, MW-25, MW-26 and MW-28, with the highest concentration at MW-3 (3,100 µg/L) in July 2014.

3.1.2.2 PAHs

Table 4 presents the results for PAHs in groundwater samples. Historical results are tabulated in Table B-3. Between 2012 and 2015, PAHs were detected in all sampled wells (i.e., MW-1, MW-3, MW-4, MW-6, MW-8, MW-9, MW-10, MW-12, MW-13, MW-16, MW-21, MW-22, MW-25, MW-26, MW-28). Concentrations are less than or consistent with historical levels for all wells.

3.1.2.3 Metals

Table 5 presents the results for metals in groundwater samples. Historical results are tabulated in Table B-4. Between 2012 and 2015, arsenic, barium, chromium, copper, lead and zinc were detected in groundwater. Arsenic was detected in 11 wells (MW-1, MW-3, MW-4, MW-6, MW-8, MW-9, MW-10, MW-12, MW-13, MW-16, MW-17, MW-20, MW-22, MW-25, MW-26, and MW-28), with the maximum concentration detected at well MW-26 at 0.19 mg/L. Barium was detected in all monitoring wells sampled, at a maximum concentration of 0.1 mg/L at well MW-1 and MW-3. For metals other than arsenic, sporadic detections have occurred for select metals (chromium, copper, lead and zinc) in localized.

3.1.3 LNAPL Observations

Results of measured LNAPL thicknesses are presented in Table 2 and shown on Figure 3 and 4 for the first and third quarters of the 2015 monitoring period. Field sheets from NAPL gauging and purging events are included in Appendix A.

Between 2002 and 2014, approximately 400 gallons of LNAPL was recovered manually. In 2015, a total of 17.85 gal of NAPL was purged from 9 selected wells and piezometers (i.e., EW-1, EW-6, PZ-1, PZ-2, PZ-3, PZ-5, PZ-6, PZ-7, and PZ-8).

In January 2015, a sheen or measureable product was observed in 15 wells with the maximum recorded thickness of 1.13 ft at PZ-3. In July 2015, a sheen or measureable product was observed in 17 wells with the maximum recorded thickness of 3.63 ft at PZ-1. The overall LNAPL footprints site-wide have not changed significantly over the last 10 years (CH2M, 2015a), indicating the LNAPL zones are stable.

A pattern of increased LNAPL thicknesses during times of low water levels has been observed since monitoring of the barrier wall piezometers began in 2012. Based on an analysis of LNAPL and groundwater elevations presented in CH2M (2015a), the increased LNAPL thickness in the wells appears directly related to occurrence of seasonally low aquifer water levels between 10 and 13 feet NAVD 88. This elevation corresponds to the zone where LNAPL was observed during previous investigations along the bank (CH2M, 2011b). During low-water conditions, the lower water levels in the piezometers allow residual LNAPL in this area to drain from the pore spaces and accumulate within the piezometers.

LNAPL transmissivity results from April 2015 baildown testing (at EW-1, EW-6, PZ-3, and PZ-8) were evaluated in CH2M (2015a) and range from 0.001 to 0.2 ft2/day. Results from the July 2015 baildown testing conducted at PZ-1 are presented in Appendix F and range between 0.05 and 0.07 ft2/dy. Results from the April and July 2015 baildown tests confirm that LNAPL mobility in the vicinity of the barrier wall is below recovery endpoints as defined by ITRC (ITRC, 2009). The low LNAPL transmissivity at the Site, coupled with the correlation between LNAPL and groundwater elevations indicates that temporary increases in LNAPL thickness in the vicinity of the barrier wall are related to low water levels and not an increase in mobility.

3.2 IRAM and Barrier Wall Performance

3.2.1 System Operations

The IRAM system was operational from July 24, 2004, to January 3, 2012, when the last IRAM wells were shut off and abandoned. During its operation, the IRAM system recovered a total of just over 19.2 million gallons of combined fluids. The volume of recovered LNAPL was recorded by Antea Group at the time of removal from the Site. Through May 2015, approximately 10,397 gallons of LNAPL were removed from the Site since startup in 2004. LNAPL was transported to Oil Re-Refining Company (ORRCO) in Portland, Oregon, for recycling.

The barrier wall extraction wells and treatment system began operation April 24, 2012. Figure 7 shows the total volume extracted by the system and the average combined pumping rates for the extraction wells over the period of operation. Approximately 2.4 million gallons of total fluids were extracted by the system in 2015, with 56.5 gallons of LNAPL extracted during this period. The LNAPL removal rate was approximately 20 to 25 gallons per month for the first 3 months of operation in 2012 when groundwater levels were relatively high. NAPL removal rates in 2015 averaged 5 gallons per month. Recovered product is stored on site until sufficient volume has been accumulated for recycling.

The combined average pumping rates shown on Figure 7 vary due to variation in water levels, pumps being turned on/off for maintenance or repair, or the addition of pumping wells (e.g., EW-6 and EW-7 in late October 2014). The system was off from March 25 through May 6 during system maintenance, which included carbon vessel change-out.

Extraction rates vary seasonally with water level fluctuation (CH2M, 2015a). During the first quarter 2015, a maximum extraction rate of 17 gpm was recorded with a quarterly average of 11.6 gpm. During an extended period of low water levels in the 2nd and 3rd quarter, the maximum pumping rate was 5.3 gpm, with an average of 3.4 gpm. Water levels started to rise again in December 2015, with pumping rates reaching a maximum of 9.5 gpm.

3.2.2 Hydraulic Containment behind Barrier Wall

Water levels are currently being measured quarterly in extraction wells, piezometers, and monitoring wells in the area around the barrier wall and extraction well EW-4 to evaluate hydraulic performance of these features.

A detailed discussion of the effectiveness of the barrier wall and extraction system is included in Appendix D of *Groundwater and Bank Soil Source Control Evaluation* (CH2M 2015a). Water levels contours from January 2015 and analytical calculations of capture zone geometry demonstrated capture upgradient of barrier wall, north to MW-3, and south to MW-20 (CH2M, 2015). Water level contours from the July 2015 (Figure 4) event further support the findings that the barrier wall system achieves hydraulic capture upgradient and on either ends of the barrier wall.

3.2.3 Sheens in Boom Area

Boom inspections and observations of sheens are performed on a weekly basis. Booms are maintained or replaced as necessary. A qualitative description (e.g., 'trace,' 'moderate,' 'heavy') of the intensity of sheen present on the Willamette River is recorded (if any documented).

A trace sheen was observed in the boom area in January, February, and December of 2015. No sheens were observed from March to November 2015. The river stage has typically been observed to be medium to medium-high during periods when the intermittent sheen was observed and medium to low during periods when the sheen was not observed. Since installation of the barrier wall and new

extraction wells in 2011 and 2012, sheens on the river have been less frequent and of much lower intensity than the sheens and seeps observed prior to installation of the barrier wall.

SECTION 4

Activities Scheduled for Annual Monitoring in 2016

The following activities will be performed in 2016 in accordance with the approved revisions to the Groundwater Monitoring Program (CH2M, 2014a):

- Semi-annual gauging of groundwater and LNAPL thickness in site-wide monitoring wells during the first and third quarters.
- Quarterly gauging of groundwater and LNAPL thickness in monitoring wells in the vicinity of the barrier wall.
- Continued evaluation of LNAPL recovery and transmissivity at the site, with removal of LNAPL to be determined on a case-by-case basis at wells with significant LNAPL thickness.
- Annual groundwater sampling during the third quarter (from monitoring wells that do not contain LNAPL).
- Weekly inspections of the containment booms in the seep area.
- Continued operations, maintenance, and monitoring for the barrier wall system.

SECTION 5

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Tables

Table 1. Well Construction Details

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Installation Date	Well Diameter (inches)	Total Depth (feet bgs)	MP Elevation[a] (feet msl)	Surface Finish[b]	Screen Interval (feet bgs)	Well Status	Quarterly Barrier Wall Monitoring	Semi-Annual Monitoring	Annual Sampling
MW-1	7/13/95	4	30	27.98	F	5-30	Active	X	X	X
MW-2	7/14/95	4	30	28.47	V	5-30	Abandoned 2011			
MW-3	7/14/95	4	30	28.97	F	5-30	Active	X	X	X
MW-4	7/14/95	2	30	32.88	F	5-30	Active	X	X	X
MW-4B	9/10/08	2	50	33.11	F	40-50	Active		X	
MW-5	9/16/99	2	25	40.08	F	7.5-25	Active		X	
MW-6	9/16/99	2	22	36.93	F	7-22	Active		X	X
MW-7	9/16/99	2	25	32.26	F	10-25	Active		X	
MW-8	9/16/99	2	22.5	30.06	F	7.5-22.5	Active	X	X	X
MW-8B	9/11/08	2	46	30.10	F	36-46	Active		X	
MW-9	1/15/02	2	27.5	30.45	F	12.5-27.5	Active	X	X	X
MW-10	1/15/02	2	25	30.26[c]	F	10-25	Active	X	X	
MW-11	1/17/02	2	30	35.03	F	15-30	Active	X	X	
MW-12	1/16/02	2	30	34.03	F	15-30	Active		X	X
MW-12B	9/10/08	2	51	33.87	F	41-51	Active		X	
MW-12C	9/10/08	2	66	33.63	F	56-66	Active		X	
MW-13	1/14/02	2	30	35.81	F	15-30	Active		X	
MW-14	1/14/02	2	27.5	36.54	F	12.5-27.5	Active		X	
MW-15	1/16/02	2	27.5	37.15	F	12.5-27.5	Active		X	
MW-16	1/14/02	2	20	38.92[c]	F	5-20	Active		X	X
MW-17	1/21/02	2	30	36.57	F	15-30	Active		X	
MW-18	4/15/02	2	30	36.66	F	15-30	Active		X	
MW-19	2/26/03	4	35	33.29[c]	S	10-30	Active	X	X	
MW-20	2/25/03	4	35	30.2[c]	F	10-30	Active	X	X	X
MW-21	2/28/03	4	35	30.6[c]	F	10-30	Active	X	X	
MW-22	2/26/03	4	30	30.18[c]	F	10-30	Active	X	X	X
MW-23	6/3/04	2	25	36.98[c]	F	5-25	Active		X	X
MW-24	6/3/04	2	20	38.05[c]	F	5-20	Active		X	X
MW-25	4/5/05	2	30	33.2	F	10-30	Active		X	X
MW-26	4/5/05	4	28	37.32[c]	F	8-28	Active		X	X
MW-27	4/5/05	0.75	19	36.51	F	9-19	Active		X	
MW-28	4/6/05	4	25	31.31	F	5.5-25	Active	X	X	
RW-1	10/21/02	4	35	25.85	V	15-30	Abandoned 2011			
RW-2	10/21/02	4	35	26.04	V	10-30	Abandoned 2011			
RW-3	10/21/02	4	35	26.28	V	15-30	Abandoned 2012			
RW-4	10/22/08	4	35	26.82	V	15-30	Abandoned 2012			
RW-5	10/22/08	4	35	26.81	V	15-30	Abandoned 2011			
P-1	9/14/99	0.75	20	37.89	F	11-20	Active		X	
P-2	9/14/99	0.75	20	36.54	F	10.5-20	Active		X	
P-3	9/14/99	0.75	22	33.53	F	11-22	Active	X	X	
P-4	9/14/99	0.75	21	31.75	F	11.5-21	Active	X	X	
P-5	9/14/99	0.75	NA	29.75	NA	NA	Abandoned 2005; replaced with P-5A			
P-5A	1/1/05	2	NA	29.85	NA	NA	Abandoned 2011			
PZ-1	1/10/12	2	30	28.43	F	15-30	Active	X	X	
PZ-2	1/10/12	2	25	28.57	F	15-25	Active	X	X	
PZ-3	1/11/12	2	25	29.03	F	15-25	Active	X	X	
PZ-4	1/11/12	2	25	29.12	F	15-25	Active	X	X	
PZ-5	3/6/12	2	25	29.87[c]	F	15-25	Active	X	X	
PZ-6	3/6/12	2	25	29.96[c]	F	15-25	Active	X	X	
PZ-7	1/10/12	2	30	28.22	F	15-30	Active	X	X	
PZ-8	1/11/12	2	25	30.07	F	15-25	Active	X	X	
PZ-9	6/12/13	2	25	30.49[c]	F	10-25	Active	X	X	
PZ-10	6/12/13	2	28	30.66[c]	F	13-28	Active	X	X	

Table 1. Well Construction Details

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Installation Date	Well Diameter (inches)	Total Depth (feet bgs)	MP Elevation[a] (feet msl)	Surface Finish[b]	Screen Interval (feet bgs)	Well Status	Quarterly Barrier Wall Monitoring	Semi-Annual Monitoring	Annual Sampling
EW-1	1/12/12	6	33	27.31	F	16-31	Active	X	X	
EW-2	3/6/12	6	33	27.91	F	15-30	Active	X	X	
EW-3	3/6/12	6	34	27.76	F	16.5-31.5	Active	X	X	
EW-4	3/7/12	6	33	28.92	F	15-30	Active	X	X	
EW-5	6/13/13	4	27	29.72[c]	F	7-22	Active	X	X	
EW-6	8/28/14	4	35	28.29	F	15-30	Active	X	X	
EW-7	8/29/14	4	35	29.93	F	15-30	Active	X	X	

Notes:

NA - Information not available

[a] The measuring point (MP) elevation for all wells is on the top of the PVC well casing.

[b] Surface Finish: "F" = flush mount, "S" = above grade, "V" = vault

[c] Well top of casing resurveyed on 12/16/2013 to NAVD88 based on a tie to NGS Benchmark "Linnton."

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
EW1	4/27/2012	27.31	15.47	-	-	11.84
EW1	7/25/2012	27.31	25.78	25.78	sheen	1.53
EW1	10/9/2012	27.31	25.83	25.8	0.03	1.5
EW1	1/28/2013	27.31	13.72	13.7	0.02	13.61
EW1	4/12/2013	27.31	24.4	-	-	2.91
EW1	7/9/2013	27.31	23.05	-	-	4.26
EW1	10/16/2013	27.31	23	-	-	4.31
EW1	1/7/2014	27.31	22.33	22.3	0.03	5
EW1	4/14/2014	27.31	23.15	-	-	4.16
EW1	7/29/2014	27.31	20.62	-	-	6.69
EW1	10/15/2014	27.31	21.95	-	-	5.36
EW1	1/28/2015	27.31	21.90	-	-	5.41
EW1	7/1/2015	27.31	21.80	-	-	5.51
EW2	4/27/2012	27.91	16.5	-	-	11.41
EW2	7/25/2012	27.91	24.26	24.25	0.01	3.66
EW2	10/9/2012	27.91	24.32	-	-	3.59
EW2	1/28/2013	27.91	24.24	-	-	3.67
EW2	4/12/2013	27.91	24.36	-	-	3.55
EW2	7/9/2013	27.91	24.4	-	-	3.51
EW2	10/16/2013	27.91	24.46	-	-	3.45
EW2	1/7/2014	27.91	24.7	-	-	3.21
EW2	4/14/2014	27.91	25.51	-	-	2.4
EW2	7/29/2014	27.91	24.7	-	-	3.21
EW2	10/15/2014	27.91	23.7	-	-	4.21
EW2	1/28/2015	27.91	23.50	-	-	4.41
EW2	7/1/2015	27.91	22.75	-	-	5.16
EW3	4/27/2012	27.76	16.11	-	-	11.65
EW3	7/25/2012	27.76	24.21	24.21	sheen	3.55
EW3	10/9/2012	27.76	24.4	-	-	3.36
EW3	1/28/2013	27.76	24.5	-	-	3.26
EW3	4/12/2013	27.76	24.82	-	-	2.94
EW3	7/9/2013	27.76	24.52	-	-	3.24
EW3	10/16/2013	27.76	24.62	-	-	3.14
EW3	1/7/2014	27.76	24.7	-	-	3.06
EW3	4/14/2014	27.76	24.81	-	-	2.95
EW3	7/29/2014	27.76	24.68	-	-	3.08
EW3	10/15/2014	27.76	23.4	-	-	4.36
EW3	1/28/2015	27.76	22.36	-	-	5.40
EW3	7/1/2015	27.76	23.40	-	-	4.36
EW4	4/27/2012	28.92	19.56	-	-	9.36
EW4	7/25/2012	28.92	24.62	-	-	4.3
EW4	10/9/2012	28.92	24.76	-	-	4.16
EW4	1/28/2013	28.92	24.65	-	-	4.27
EW4	4/12/2013	28.92	24.67	-	-	4.25
EW4	7/9/2013	28.92	24.61	-	-	4.31
EW4	10/16/2013	28.92	24.81	-	-	4.11
EW4	1/7/2014	28.92	24.62	-	-	4.3
EW4	4/14/2014	28.92	24.74	-	-	4.18
EW4	7/29/2014	28.92	24.8	-	-	4.12
EW4	10/15/2014	28.92	23.01	-	-	5.91
EW4	1/28/2015	28.92	23.05	-	-	5.87
EW4	7/1/2015	28.92	23.25	-	-	5.67
EW5	7/9/2013	29.72	5.46	-	-	24.26
EW5	10/16/2013	29.72	6.36	-	-	23.36
EW5	1/7/2014	29.72	7.15	-	-	22.57
EW5	4/14/2014	29.72	6.33	-	-	23.39
EW5	7/29/2014	29.72	14.32	-	-	15.4
EW5	10/15/2014	29.72	22.91	-	-	6.81
EW5	1/28/2015	29.72	20.20	20.19	0.01	9.53
EW5	7/1/2015	29.72	22.75	-	-	6.97
EW6	10/15/2014	28.29	18.2	-	-	10.09

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
EW6	1/28/2015	28.29	22.80	-	-	5.49
EW6	7/1/2015	28.29	23.05	-	-	5.24
EW7	10/15/2014	29.93	22.41	-	-	7.52
EW7	1/28/2015	29.93	24.35	-	-	5.58
EW7	7/1/2015	29.93	24.25	-	-	5.68
MW1	1/25/2012	27.98	12.1	-	-	15.88
MW1	4/27/2012	27.98	8.86	-	-	19.12
MW1	7/25/2012	27.98	12.64	-	-	15.34
MW1	10/9/2012	27.98	17.05	17.04	0.01	10.94
MW1	1/28/2013	27.98	14.26	-	-	13.72
MW1	4/12/2013	27.98	14.06	-	-	13.92
MW1	7/9/2013	27.98	15.02	-	-	12.96
MW1	10/16/2013	27.98	16.48	-	-	11.5
MW1	1/7/2014	27.98	16.68	-	-	11.3
MW1	4/14/2014	27.98	12.7	-	-	15.28
MW1	7/29/2014	27.98	15.47	-	-	12.51
MW1	10/15/2014	27.98	17.24	-	-	10.74
MW1	1/28/2015	27.98	15.02	-	-	12.96
MW1	7/1/2015	27.98	16.87	-	-	11.11
MW10	1/25/2012	30.32	11.45	-	-	18.87
MW10	4/27/2012	30.32	13.07	10.09	2.98	19.63
MW10	7/25/2012	30.32	14.8	14.64	0.16	15.65
MW10	10/9/2012	30.32	19.78	19.67	0.11	10.63
MW10	1/28/2013	30.32	14.85	14.68	0.17	15.61
MW10	4/12/2013	30.32	14.48	14.35	0.13	15.94
MW10	7/9/2013	30.32	16.58	16.45	0.13	13.84
MW10	10/16/2013	30.32	16	15.89	0.11	14.41
MW10	1/7/2014	30.26	18.93	18.85	0.08	11.39
MW10	4/14/2014	30.26	13.03	12.8	0.23	17.41
MW10	7/29/2014	30.26	17.6	17.58	0.02	12.68
MW10	10/15/2014	30.26	20.46	20.45	0.01	9.81
MW10	1/28/2015	30.26	14.90	14.67	0.23	15.54
MW10	7/1/2015	30.26	20.14	20.12	0.02	10.14
MW11	1/25/2012	35.03	-	18.65	[c]	-
MW11	4/27/2012	35.03	15.5	13.01	2.49	21.52
MW11	7/25/2012	35.03	17.99	17.91	0.08	17.1
MW11	10/9/2012	35.03	-	21.2	[c]	-
MW11	1/28/2013	35.03	23.7	22.2	1.5	12.53
MW11	4/12/2013	35.03	-	20.1	[c]	-
MW11	7/9/2013	35.03	-	20.94	[c]	-
MW11	10/16/2013	35.03	-	-	-	-
MW11	1/7/2014	35.03	-	23.1	[c]	-
MW11	4/14/2014	35.03	18.6	18.58	0.02	16.45
MW11	7/29/2014	35.03	-	20.92	[c]	-
MW11	10/15/2014	35.03	-	22.81	[c]	-
MW11	1/28/2015	35.03	-	20.14	[c]	-
MW11	7/1/2015	35.03	-	22.50	[c]	-
MW12	1/25/2012	34.03	16.12	-	-	17.91
MW12	4/27/2012	34.03	13.71	-	-	20.32
MW12	7/25/2012	34.03	16.06	15.58	0.48	18.35
MW12	10/9/2012	34.03	17.75	17.36	0.39	16.59
MW12	1/28/2013	34.03	15.4	15.15	0.25	18.83
MW12	4/12/2013	34.03	15.35	15.11	0.24	18.87
MW12	7/9/2013	34.03	16.8	16.58	0.22	17.41
MW12	10/16/2013	34.03	19	18.8	0.2	15.19
MW12	1/7/2014	34.03	17.43	17.1	0.33	16.86
MW12	4/14/2014	34.03	15.23	15.15	0.08	18.86
MW12	7/29/2014	34.03	16.65	16.37	0.28	17.6
MW12	10/15/2014	34.03	18.1	17.73	0.37	16.23
MW12	1/28/2015	34.03	15.75	15.65	0.10	18.36
MW12	7/1/2015	34.03	17.04	16.85	0.19	17.14

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW12B	1/25/2012	33.87	18.41	-	-	15.46
MW12B	4/27/2012	33.87	14.67	-	-	19.2
MW12B	7/25/2012	33.87	18.53	-	-	15.34
MW12B	10/9/2012	33.87	24.02	-	-	9.85
MW12B	1/28/2013	33.87	21.56	-	-	12.31
MW12B	4/12/2013	33.87	18.94	-	-	14.93
MW12B	7/9/2013	33.87	21.38	-	-	12.49
MW12B	10/16/2013	33.87	23.64	-	-	10.23
MW12B	1/7/2014	33.87	23.3	-	-	10.57
MW12B	4/14/2014	33.87	17.42	-	-	16.45
MW12B	7/29/2014	33.87	22.32	-	-	11.55
MW12B	10/15/2014	33.87	24.1	-	-	9.77
MW12B	1/28/2015	33.87	20.05	-	-	13.82
MW12B	7/1/2015	33.87	23.50	-	-	10.37
MW12C	1/25/2012	33.63	18.2	-	-	15.43
MW12C	4/27/2012	33.63	14.06	-	-	19.57
MW12C	7/25/2012	33.63	19.12	-	-	14.51
MW12C	10/9/2012	33.63	24.2	-	-	9.43
MW12C	1/28/2013	33.63	21.58	-	-	12.05
MW12C	4/12/2013	33.63	19.13	-	-	14.5
MW12C	7/9/2013	33.63	20.55	-	-	13.08
MW12C	10/16/2013	33.63	24.08	-	-	9.55
MW12C	1/7/2014	33.63	23.17	-	-	10.46
MW12C	4/14/2014	33.63	18.78	-	-	14.85
MW12C	7/29/2014	33.63	21.63	-	-	12
MW12C	10/15/2014	33.63	24.14	-	-	9.49
MW12C	1/28/2015	33.63	20.64	-	-	12.99
MW12C	7/1/2015	33.63	23.97	-	-	9.66
MW13	1/25/2012	35.81	19.81	-	-	16
MW13	4/27/2012	35.81	15.11	-	-	20.7
MW13	7/25/2012	35.81	18.67	-	-	17.14
MW13	10/9/2012	35.81	24.01	-	-	11.8
MW13	1/28/2013	35.81	18.93	-	-	16.88
MW13	4/12/2013	35.81	19.22	-	-	16.59
MW13	7/9/2013	35.81	20.48	-	-	15.33
MW13	10/16/2013	35.81	22.34	-	-	13.47
MW13	1/7/2014	35.81	22.51	-	-	13.3
MW13	4/14/2014	35.81	17.48	-	-	18.33
MW13	7/29/2014	35.81	20.78	-	-	15.03
MW13	10/15/2014	35.81	24.52	-	-	11.29
MW13	1/28/2015	35.81	19.33	-	-	16.48
MW13	7/1/2015	35.81	21.78	-	-	14.03
MW14	1/25/2012	36.54	19.53	-	-	17.01
MW14	4/27/2012	36.54	14.56	-	-	21.98
MW14	7/25/2012	36.54	18.56	-	-	17.98
MW14	10/9/2012	36.54	23.27	-	-	13.27
MW14	1/28/2013	36.54	19.06	-	-	17.48
MW14	4/12/2013	36.54	19	-	-	17.54
MW14	7/9/2013	36.54	20.78	-	-	15.76
MW14	10/16/2013	36.54	23.29	-	-	13.25
MW14	1/7/2014	36.54	23.45	-	-	13.09
MW14	4/14/2014	36.54	16.74	-	-	19.8
MW14	7/29/2014	36.54	21.39	-	-	15.15
MW14	10/15/2014	36.54	23.76	-	-	12.78
MW14	1/28/2015	36.54	19.66	-	-	16.88
MW14	7/1/2015	36.54	22.65	-	-	13.89
MW15	1/25/2012	37.15	17.15	-	-	20
MW15	4/27/2012	37.15	12.76	-	-	24.39
MW15	7/25/2012	37.15	17.32	-	-	19.83
MW15	10/9/2012	37.15	21.59	-	-	15.56
MW15	1/28/2013	37.15	16.16	-	-	20.99

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Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW15	4/12/2013	37.15	17.18	-	-	19.97
MW15	7/9/2013	37.15	19.46	-	-	17.69
MW15	10/16/2013	37.15	21.73	-	-	15.42
MW15	1/7/2014	37.15	22.13	-	-	15.02
MW15	4/14/2014	37.15	14.25	-	-	22.9
MW15	7/29/2014	37.15	19.9	-	-	17.25
MW15	10/15/2014	37.15	22.41	-	-	14.74
MW15	1/28/2015	37.15	17.92	-	-	19.23
MW15	7/1/2015	37.15	21.45	-	-	15.70
MW16	1/25/2012	38.95	7.97	7.96	0.01	30.99
MW16	4/27/2012	38.95	9.72	9.7	0.02	29.25
MW16	7/25/2012	38.95	11.63	11.63	sheen	27.32
MW16	10/9/2012	38.95	13.51	12.77	0.74	26.03
MW16	1/28/2013	38.95	10.65	10.63	0.02	28.32
MW16	4/12/2013	38.95	11.01	11	0.01	27.95
MW16	7/9/2013	38.95	11.73	11.61	0.12	27.32
MW16	10/16/2013	38.95	10.85	10.68	0.17	28.24
MW16	1/7/2014	38.92	11.98	11.8	0.18	27.08
MW16	4/14/2014	38.92	9.28	9.26	0.02	29.66
MW16	7/29/2014	38.92	12.1	12.08	0.02	26.84
MW16	10/15/2014	38.92	-	13.15	[c]	-
MW16	1/28/2015	38.92	-	9.97	[c]	-
MW16	7/1/2015	38.92	12.47	12.39	0.08	26.51
MW17	1/25/2012	36.57	18.97	-	-	17.6
MW17	4/27/2012	36.57	14.02	-	-	22.55
MW17	7/25/2012	36.57	17.99	-	-	18.58
MW17	10/9/2012	36.57	22.53	-	-	14.04
MW17	1/28/2013	36.57	18.22	-	-	18.35
MW17	4/12/2013	36.57	18.37	-	-	18.2
MW17	7/9/2013	36.57	20.21	-	-	16.36
MW17	10/16/2013	36.57	22.68	-	-	13.89
MW17	1/7/2014	36.57	22.89	-	-	13.68
MW17	4/14/2014	36.57	16.01	-	-	20.56
MW17	7/29/2014	36.57	20.78	-	-	15.79
MW17	10/15/2014	36.57	23.17	-	-	13.4
MW17	1/28/2015	36.57	19.01	-	-	17.56
MW17	7/1/2015	36.57	22.02	-	-	14.55
MW18	1/25/2012	36.66	21.38	-	-	15.28
MW18	4/27/2012	36.66	15.02	-	-	21.64
MW18	7/25/2012	36.66	19.36	-	-	17.3
MW18	10/9/2012	36.66	24.04	-	-	12.62
MW18	1/28/2013	36.66	19.94	-	-	16.72
MW18	4/12/2013	36.66	19.43	-	-	17.23
MW18	7/9/2013	36.66	21.45	-	-	15.21
MW18	10/16/2013	36.66	23.99	-	-	12.67
MW18	1/7/2014	36.66	23.97	-	-	12.69
MW18	4/14/2014	36.66	17.39	-	-	19.27
MW18	7/29/2014	36.66	22.15	-	-	14.51
MW18	10/15/2014	36.66	24.44	-	-	12.22
MW18	1/28/2015	36.66	20.42	-	-	16.24
MW18	7/1/2015	36.66	-	-	-	-
MW19	1/25/2012	33.29	17.32	17.31	0.01	15.98
MW19	4/27/2012	33.29	13.99	-	-	19.3
MW19	7/25/2012	33.29	17.67	17.65	0.02	15.64
MW19	10/9/2012	33.29	22.34	22.25	0.09	11.02
MW19	1/28/2013	33.29	27	26.9	0.1	6.37
MW19	4/12/2013	33.29	29.1	-	-	4.19
MW19	7/9/2013	33.29	26.1	-	-	7.19
MW19	10/16/2013	33.29	27	26.7	0.3	6.53
MW19	1/7/2014	33.29	29	25	4	7.49
MW19	4/14/2014	33.29	17.7	17.68	0.02	15.61

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW19	7/29/2014	33.29	20.45	-	-	12.84
MW19	10/15/2014	33.29	26.21	24	2.21	8.85
MW19	1/28/2015	33.29	20.70	19.60	1.10	13.47
MW19	7/1/2015	33.29	23.05	-	-	10.24
MW20	1/25/2012	30.25	9.65	-	-	20.6
MW20	4/27/2012	30.25	10.01	10	0.01	20.25
MW20	7/25/2012	30.25	12.81	12.8	0.01	17.45
MW20	10/9/2012	30.25	16.26	16.25	0.01	14
MW20	1/28/2013	30.25	12.65	12.55	0.1	17.68
MW20	4/12/2013	30.25	12.99	12.94	0.05	17.3
MW20	7/9/2013	30.25	13.74	13.6	0.14	16.62
MW20	10/16/2013	30.25	12.88	12.66	0.22	17.55
MW20	1/7/2014	30.2	14.49	14.24	0.25	15.91
MW20	4/14/2014	30.2	11.62	11.54	0.08	18.64
MW20	7/29/2014	30.2	14.56	14.39	0.17	15.78
MW20	10/15/2014	30.2	17.63	17.51	0.12	12.67
MW20	1/28/2015	30.2	12.41	12.22	0.19	17.94
MW20	7/1/2015	30.2	15.26	15.11	0.15	15.06
MW21	1/25/2012	30.62	9.74	-	-	20.88
MW21	4/27/2012	30.62	10.25	10.24	0.01	20.38
MW21	7/25/2012	30.62	13.28	-	-	17.34
MW21	10/9/2012	30.62	18.15	-	-	12.47
MW21	1/28/2013	30.62	14.91	14.87	0.04	15.74
MW21	4/12/2013	30.62	17.74	-	-	12.88
MW21	7/9/2013	30.62	16.8	-	-	13.82
MW21	10/16/2013	30.62	18.77	18.76	0.01	11.86
MW21	1/7/2014	30.6	19.03	-	-	11.57
MW21	4/14/2014	30.6	14.5	14.5	sheen	16.1
MW21	7/29/2014	30.6	16.6	16.59	0.01	14.01
MW21	10/15/2014	30.6	19.15	19.14	0.01	11.46
MW21	1/28/2015	30.6	13.83	13.82	0.01	16.78
MW21	7/1/2015	30.6	18.45	18.45	sheen	12.15
MW22	1/25/2012	30.19	10.6	-	-	19.59
MW22	4/27/2012	30.19	10.3	-	-	19.89
MW22	7/25/2012	30.19	13.17	-	-	17.02
MW22	10/9/2012	30.19	19.08	-	-	11.11
MW22	1/28/2013	30.19	13.84	-	-	16.35
MW22	4/12/2013	30.19	13.25	-	-	16.94
MW22	7/9/2013	30.19	15.17	-	-	15.02
MW22	10/16/2013	30.19	15.37	-	-	14.82
MW22	1/7/2014	30.18	17.84	-	-	12.34
MW22	4/14/2014	30.18	12.33	-	-	17.85
MW22	7/29/2014	30.18	17.4	-	-	12.78
MW22	10/15/2014	30.18	20.44	-	-	9.74
MW22	1/28/2015	30.18	13.61	-	-	16.57
MW22	7/1/2015	30.18	19.59	-	-	10.59
MW23	4/27/2012	37	10.47	-	-	26.53
MW23	7/25/2012	37	12.81	12.8	0.01	24.2
MW23	10/9/2012	37	14.41	14.41	sheen	22.59
MW23	1/28/2013	37	11.2	11.18	0.02	25.82
MW23	4/12/2013	37	12.99	12.99	sheen	24.01
MW23	7/9/2013	37	-	13.35	[c]	-
MW23	10/16/2013	37	12.9	12.9	sheen	24.1
MW23	1/7/2014	36.98	13.93	13.82	0.11	23.14
MW23	4/14/2014	36.98	11.07	11	0.07	25.97
MW23	7/29/2014	36.98	13.64	13.58	0.06	23.39
MW23	10/15/2014	36.98	14.92	14.9	0.02	22.08
MW23	1/28/2015	36.98	11.51	11.50	0.01	25.48
MW23	7/1/2015	36.98	13.97	13.95	0.02	23.03
MW24	1/25/2012	38.06	4.18	4.16	0.02	33.9
MW24	4/27/2012	38.06	10.42	-	-	27.64

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW24	7/25/2012	38.06	8.82	8.81	0.01	29.25
MW24	10/9/2012	38.06	9.01	8.96	0.05	29.09
MW24	1/28/2013	38.06	7.7	7.65	0.05	30.4
MW24	4/12/2013	38.06	7.12	7.1	0.02	30.96
MW24	7/9/2013	38.06	-	7.7	[c]	-
MW24	10/16/2013	38.06	7.05	7	0.05	31.05
MW24	1/7/2014	38.05	7.97	7.95	0.02	30.1
MW24	4/14/2014	38.05	5.64	5.61	0.03	32.43
MW24	7/29/2014	38.05	9.63	9.58	0.05	28.46
MW24	10/15/2014	38.05	10.38	10.36	0.02	27.69
MW24	1/28/2015	38.05	6.53	6.51	0.02	31.54
MW24	7/1/2015	38.05	10.72	10.70	0.02	27.35
MW25	1/25/2012	33.2	17.24	-	-	15.96
MW25	4/27/2012	33.2	13.6	-	-	19.6
MW25	7/25/2012	33.2	16.17	-	-	17.03
MW25	10/9/2012	33.2	19.5	-	-	13.7
MW25	1/28/2013	33.2	16.32	-	-	16.88
MW25	4/12/2013	33.2	17.01	-	-	16.19
MW25	7/9/2013	33.2	17.75	-	-	15.45
MW25	10/16/2013	33.2	18.75	-	-	14.45
MW25	1/7/2014	33.2	19.02	-	-	14.18
MW25	4/14/2014	33.2	15.65	-	-	17.55
MW25	7/29/2014	33.2	17.85	-	-	15.35
MW25	10/15/2014	33.2	19.6	-	-	13.6
MW25	1/28/2015	33.2	16.51	-	-	16.69
MW25	7/1/2015	33.2	18.72	-	-	14.48
MW26	1/25/2012	37.32	25.7	-	-	11.62
MW26	4/27/2012	37.32	16.32	-	-	21
MW26	7/25/2012	37.32	18.89	-	-	18.43
MW26	10/9/2012	37.32	23.03	-	-	14.29
MW26	1/28/2013	37.32	20.37	-	-	16.95
MW26	4/12/2013	37.32	20.87	-	-	16.45
MW26	7/9/2013	37.32	21.82	-	-	15.5
MW26	10/16/2013	37.32	23.42	-	-	13.9
MW26	1/7/2014	37.32	23.92	-	-	13.4
MW26	4/14/2014	37.32	19.2	-	-	18.12
MW26	7/29/2014	37.32	21.62	-	-	15.7
MW26	10/15/2014	37.32	23.74	-	-	13.58
MW26	1/28/2015	37.32	20.81	-	-	16.51
MW26	7/1/2015	37.32	23.16	-	-	14.16
MW27	1/25/2012	36.51	18.42	18.41	0.01	18.1
MW27	4/27/2012	36.51	16.45	-	-	20.06
MW27	7/25/2012	36.51	18.4	18.35	0.05	18.15
MW27	10/9/2012	36.51	18.43	-	-	18.08
MW27	1/28/2013	36.51	18.56	-	-	17.95
MW27	4/12/2013	36.51	18.49	-	-	18.02
MW27	7/9/2013	36.51	18.61	-	-	17.9
MW27	10/16/2013	36.51	18.38	-	-	18.13
MW27	1/7/2014	36.51	18.46	-	-	18.05
MW27	4/14/2014	36.51	18.48	-	-	18.03
MW27	7/29/2014	36.51	-	-	-	-
MW27	10/15/2014	36.51	18.4	-	-	18.11
MW27	1/28/2015	36.51	-	-	-	-
MW27	7/1/2015	36.51	18.56	-	-	17.95
MW28	1/25/2012	31.31	14.65	14.64	0.01	16.67
MW28	4/27/2012	31.31	11.26	-	-	20.05
MW28	7/25/2012	31.31	14.23	14.21	0.02	17.1
MW28	10/9/2012	31.31	18.41	-	-	12.9
MW28	1/28/2013	31.31	16.34	-	-	14.97
MW28	4/12/2013	31.31	16.48	16.48	sheen	14.83
MW28	7/9/2013	31.31	17.42	-	-	13.89

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW28	10/16/2013	31.31	18.9	18.87	0.03	12.43
MW28	1/7/2014	31.31	19.22	19.21	0.01	12.1
MW28	4/14/2014	31.31	14.41	14.41	sheen	16.9
MW28	7/29/2014	31.31	17.16	-	-	14.15
MW28	10/15/2014	31.31	20.16	20.15	0.01	11.16
MW28	1/28/2015	31.31	16.22	-	-	15.09
MW28	7/1/2015	31.31	18.60	-	-	12.71
MW3	1/25/2012	28.97	13.19	-	-	15.78
MW3	4/27/2012	28.97	10.01	-	-	18.96
MW3	7/25/2012	28.97	12.74	-	-	16.23
MW3	10/9/2012	28.97	15.4	15.39	0.01	13.58
MW3	1/28/2013	28.97	13.21	-	-	15.76
MW3	4/12/2013	28.97	13.96	-	-	15.01
MW3	7/9/2013	28.97	14.48	-	-	14.49
MW3	10/16/2013	28.97	14.9	-	-	14.07
MW3	1/7/2014	28.97	15.22	-	-	13.75
MW3	4/14/2014	28.97	12.69	-	-	16.28
MW3	7/29/2014	28.97	14.29	-	-	14.68
MW3	10/15/2014	28.97	15.53	15.52	0.01	13.45
MW3	1/28/2015	28.97	13.72	-	-	15.25
MW3	7/1/2015	28.97	15.01	15.00	0.01	13.97
MW4	1/25/2012	32.88	16.79	-	-	16.09
MW4	4/27/2012	32.88	13.8	-	-	19.08
MW4	7/25/2012	32.88	17.1	-	-	15.78
MW4	10/9/2012	32.88	21.77	-	-	11.11
MW4	1/28/2013	32.88	19.43	-	-	13.45
MW4	4/12/2013	32.88	18.55	-	-	14.33
MW4	7/9/2013	32.88	19.98	-	-	12.9
MW4	10/16/2013	32.88	22	-	-	10.88
MW4	1/7/2014	32.88	21.74	-	-	11.14
MW4	4/14/2014	32.88	17.15	-	-	15.73
MW4	7/29/2014	32.88	19.95	-	-	12.93
MW4	10/15/2014	32.88	22.23	-	-	10.65
MW4	1/28/2015	32.88	19.10	-	-	13.78
MW4	7/1/2015	32.88	21.20	-	-	11.68
MW4B	1/25/2012	33.11	17.25	-	-	15.86
MW4B	4/27/2012	33.11	13.25	-	-	19.86
MW4B	7/25/2012	33.11	16.72	-	-	16.39
MW4B	10/9/2012	33.11	21.11	-	-	12
MW4B	1/28/2013	33.11	18.93	-	-	14.18
MW4B	4/12/2013	33.11	18.63	-	-	14.48
MW4B	7/9/2013	33.11	19.58	-	-	13.53
MW4B	10/16/2013	33.11	21.57	-	-	11.54
MW4B	1/7/2014	33.11	21.51	-	-	11.6
MW4B	4/14/2014	33.11	16.89	-	-	16.22
MW4B	7/29/2014	33.11	19.3	-	-	13.81
MW4B	10/15/2014	33.11	21.47	-	-	11.64
MW4B	1/28/2015	33.11	18.72	-	-	14.39
MW4B	7/1/2015	33.11	21.12	-	-	11.99
MW5	1/25/2012	40.08	22.71	-	-	17.37
MW5	4/27/2012	40.08	18.9	-	-	21.18
MW5	7/25/2012	40.08	21.11	-	-	18.97
MW5	10/9/2012	40.08	-	-	-	-
MW5	1/28/2013	40.08	22.33	-	-	17.75
MW5	4/12/2013	40.08	22.84	-	-	17.24
MW5	7/9/2013	40.08	23.79	-	-	16.29
MW5	10/16/2013	40.08	-	-	-	-
MW5	1/7/2014	40.08	-	-	-	-
MW5	4/14/2014	40.08	21.38	-	-	18.7
MW5	7/29/2014	40.08	23.83	-	-	16.25
MW5	10/15/2014	40.08	-	-	-	-

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW5	1/28/2015	40.08	-	-	-	-
MW5	7/1/2015	40.08	-	-	-	-
MW6	1/25/2012	36.93	18.84	-	-	18.09
MW6	4/27/2012	36.93	13.25	-	-	23.68
MW6	7/25/2012	36.93	18.17	-	-	18.76
MW6	10/9/2012	36.93	-	-	-	-
MW6	1/28/2013	36.93	18.11	-	-	18.82
MW6	4/12/2013	36.93	18.3	-	-	18.63
MW6	7/9/2013	36.93	20.29	-	-	16.64
MW6	10/16/2013	36.93	21.55	-	-	15.38
MW6	1/7/2014	36.93	21.56	-	-	15.37
MW6	4/14/2014	36.93	15.86	-	-	21.07
MW6	7/29/2014	36.93	20.83	-	-	16.1
MW6	10/15/2014	36.93	21.5	-	-	15.43
MW6	1/28/2015	36.93	18.97	-	-	17.96
MW6	7/1/2015	36.93	-	-	-	-
MW7	1/25/2012	32.26	16.55	-	-	15.71
MW7	4/27/2012	32.26	11.95	-	-	20.31
MW7	7/25/2012	32.26	16.81	-	-	15.45
MW7	10/9/2012	32.26	21.87	-	-	10.39
MW7	1/28/2013	32.26	18.24	-	-	14.02
MW7	4/12/2013	32.26	16.52	-	-	15.74
MW7	7/9/2013	32.26	18.65	-	-	13.61
MW7	10/16/2013	32.26	21.46	-	-	10.8
MW7	1/7/2014	32.26	21.03	-	-	11.23
MW7	4/14/2014	32.26	15.48	-	-	16.78
MW7	7/29/2014	32.26	19.54	-	-	12.72
MW7	10/15/2014	32.26	21.95	-	-	10.31
MW7	1/28/2015	32.26	18.02	-	-	14.24
MW7	7/1/2015	32.26	20.76	-	-	11.50
MW8	1/25/2012	30.06	14.28	-	-	15.78
MW8	4/27/2012	30.06	11.23	-	-	18.83
MW8	7/25/2012	30.06	16.22	-	-	13.84
MW8	10/9/2012	30.06	20.47	-	-	9.59
MW8	1/28/2013	30.06	17.62	-	-	12.44
MW8	4/12/2013	30.06	15.83	-	-	14.23
MW8	7/9/2013	30.06	18.13	-	-	11.93
MW8	10/16/2013	30.06	19.88	-	-	10.18
MW8	1/7/2014	30.06	20.16	-	-	9.9
MW8	4/14/2014	30.06	15.77	-	-	14.29
MW8	7/29/2014	30.06	19	-	-	11.06
MW8	10/15/2014	30.06	20.43	-	-	9.63
MW8	1/28/2015	30.06	17.88	-	-	12.18
MW8	7/1/2015	30.06	20.09	-	-	9.97
MW8B	1/25/2012	30.1	14.81	-	-	15.29
MW8B	4/27/2012	30.1	10.97	-	-	19.13
MW8B	7/25/2012	30.1	15.61	-	-	14.49
MW8B	10/9/2012	30.1	19.3	-	-	10.8
MW8B	1/28/2013	30.1	18.57	-	-	11.53
MW8B	4/12/2013	30.1	16.02	-	-	14.08
MW8B	7/9/2013	30.1	17.6	-	-	12.5
MW8B	10/16/2013	30.1	19.52	-	-	10.58
MW8B	1/7/2014	30.1	19.37	-	-	10.73
MW8B	4/14/2014	30.1	15.25	-	-	14.85
MW8B	7/29/2014	30.1	18.46	-	-	11.64
MW8B	10/15/2014	30.1	19.79	-	-	10.31
MW8B	1/28/2015	30.1	17.24	-	-	12.86
MW8B	7/1/2015	30.1	19.51	-	-	10.59
MW9	1/25/2012	30.45	14.81	-	-	15.64
MW9	4/27/2012	30.45	10.81	-	-	19.64
MW9	7/25/2012	30.45	14.16	-	-	16.29

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW9	10/9/2012	30.45	17.81	-	-	12.64
MW9	1/28/2013	30.45	17.71	-	-	12.74
MW9	4/12/2013	30.45	-	-	-	-
MW9	7/9/2013	30.45	16.24	-	-	14.21
MW9	10/16/2013	30.45	17.72	-	-	12.73
MW9	1/7/2014	30.45	18.06	-	-	12.39
MW9	4/14/2014	30.45	14.16	-	-	16.29
MW9	7/29/2014	30.45	16.59	-	-	13.86
MW9	10/15/2014	30.45	18.39	-	-	12.06
MW9	1/28/2015	30.45	15.50	-	-	14.95
MW9	7/1/2015	30.45	17.83	-	-	12.62
P1	1/25/2012	37.89	15.84	-	-	22.05
P1	4/27/2012	37.89	-	-	-	-
P1	7/25/2012	37.89	-	-	-	-
P1	10/9/2012	37.89	19.52	-	-	18.37
P1	1/28/2013	37.89	-	-	-	-
P1	4/12/2013	37.89	-	-	-	-
P1	7/9/2013	37.89	-	-	-	-
P1	10/16/2013	37.89	-	-	-	-
P1	1/7/2014	37.89	-	-	-	-
P1	4/14/2014	37.89	-	-	-	-
P1	7/29/2014	37.89	-	-	-	-
P1	10/15/2014	37.89	-	-	-	-
P1	1/28/2015	37.89	-	-	-	-
P1	7/1/2015	37.89	-	-	-	-
P2	1/25/2012	36.54	16.3	-	-	20.24
P2	4/27/2012	36.54	12.55	-	-	23.99
P2	7/25/2012	36.54	14.37	-	-	22.17
P2	10/9/2012	36.54	15.98	-	-	20.56
P2	1/28/2013	36.54	13.24	-	-	23.3
P2	4/12/2013	36.54	14.96	-	-	21.58
P2	7/9/2013	36.54	15.18	-	-	21.36
P2	10/16/2013	36.54	15.52	-	-	21.02
P2	1/7/2014	36.54	15.67	-	-	20.87
P2	4/14/2014	36.54	13.32	-	-	23.22
P2	7/29/2014	36.54	15.15	-	-	21.39
P2	10/15/2014	36.54	16.34	-	-	20.2
P2	1/28/2015	36.54	13.99	-	-	22.55
P2	7/1/2015	36.54	15.57	-	-	20.97
P3	1/25/2012	33.53	17.27	-	-	16.26
P3	4/27/2012	33.53	14.16	-	-	19.37
P3	7/25/2012	33.53	17.61	17.6	0.01	15.93
P3	10/9/2012	33.53	19.18	-	-	14.35
P3	1/28/2013	33.53	17.69	-	-	15.84
P3	4/12/2013	33.53	17.83	-	-	15.7
P3	7/9/2013	33.53	18.85	-	-	14.68
P3	10/16/2013	33.53	18.86	-	-	14.67
P3	1/7/2014	33.53	19.03	-	-	14.5
P3	4/14/2014	33.53	17.03	-	-	16.5
P3	7/29/2014	33.53	18.56	-	-	14.97
P3	10/15/2014	33.53	19.19	-	-	14.34
P3	1/28/2015	33.53	17.89	-	-	15.64
P3	7/1/2015	33.53	18.76	-	-	14.77
P4	1/25/2012	31.75	15.84	-	-	15.91
P4	4/27/2012	31.75	12.04	-	-	19.71
P4	7/25/2012	31.75	15.28	15.15	0.13	16.57
P4	10/9/2012	31.75	19.61	19.57	0.04	12.17
P4	1/28/2013	31.75	17.75	-	-	14
P4	4/12/2013	31.75	17.85	-	-	13.9
P4	7/9/2013	31.75	18.66	-	-	13.09
P4	10/16/2013	31.75	-	-	-	-

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
P4	1/7/2014	31.75	-	-	-	-
P4	4/14/2014	31.75	15.27	-	-	16.48
P4	7/29/2014	31.75	18.18	-	-	13.57
P4	10/15/2014	31.75	20.37	-	-	11.38
P4	1/28/2015	31.75	17.45	-	-	14.30
P4	7/1/2015	31.75	19.68	-	-	12.07
PZ1	4/27/2012	28.43	9.27	-	-	19.16
PZ1	7/25/2012	28.43	13.32	-	-	15.11
PZ1	10/9/2012	28.43	18.37	-	-	10.06
PZ1	1/28/2013	28.43	15.18	15.16	0.02	13.27
PZ1	4/12/2013	28.43	14.78	-	-	13.65
PZ1	7/9/2013	28.43	16.2	15.93	0.27	12.45
PZ1	10/16/2013	28.43	18.15	17.59	0.56	10.73
PZ1	1/7/2014	28.43	19.22	17.76	1.46	10.38
PZ1	4/14/2014	28.43	13.47	13.44	0.03	14.98
PZ1	7/29/2014	28.43	16.85	16.29	0.56	12.03
PZ1	10/15/2014	28.43	18.73	18.32	0.41	10.03
PZ1	1/28/2015	28.43	16.64	16.13	0.51	12.20
PZ1	7/1/2015	28.43	21.80	18.18	3.62	9.53
PZ10	7/9/2013	30.66	18	-	-	12.66
PZ10	10/16/2013	30.66	19.75	-	-	10.91
PZ10	1/7/2014	30.66	18.84	-	-	11.82
PZ10	4/14/2014	30.66	15.83	-	-	14.83
PZ10	7/29/2014	30.66	18.94	-	-	11.72
PZ10	10/15/2014	30.66	20.34	-	-	10.32
PZ10	1/28/2015	30.66	17.67	-	-	12.99
PZ10	7/1/2015	30.66	19.82	-	-	10.84
PZ2	4/27/2012	28.57	9.25	-	-	19.32
PZ2	7/25/2012	28.57	12.79	-	-	15.78
PZ2	10/9/2012	28.57	17.7	17.68	0.02	10.89
PZ2	1/28/2013	28.57	14.3	-	-	14.27
PZ2	4/12/2013	28.57	15.47	-	-	13.1
PZ2	7/9/2013	28.57	16.18	15.94	0.24	12.58
PZ2	10/16/2013	28.57	17.95	17.03	0.92	11.36
PZ2	1/7/2014	28.57	18.67	17.5	1.17	10.84
PZ2	4/14/2014	28.57	13.5	13.39	0.11	15.16
PZ2	7/29/2014	28.57	16.49	16.21	0.28	12.3
PZ2	10/15/2014	28.57	17.84	17.75	0.09	10.8
PZ2	1/28/2015	28.57	16.46	16.10	0.36	12.40
PZ2	7/1/2015	28.57	18.21	18.11	0.10	10.44
PZ3	4/27/2012	29.03	9.87	9.85	0.02	19.18
PZ3	7/25/2012	29.03	14.8	14.8	sheen	14.23
PZ3	10/9/2012	29.03	19.57	19.57	sheen	9.46
PZ3	1/28/2013	29.03	16.87	-	-	12.16
PZ3	4/12/2013	29.03	15.52	-	-	13.51
PZ3	7/9/2013	29.03	17.15	17.07	0.08	11.94
PZ3	10/16/2013	29.03	18.95	18.81	0.14	10.19
PZ3	1/7/2014	29.03	19.01	19	0.01	10.03
PZ3	4/14/2014	29.03	15.36	14.91	0.45	14.03
PZ3	7/29/2014	29.03	17.87	17.52	0.35	11.44
PZ3	10/15/2014	29.03	19.79	19.47	0.05	9.28
PZ3	1/28/2015	29.03	17.57	16.41	1.16	12.39
PZ3	7/1/2015	29.03	19.53	19.02	0.51	9.91
PZ4	4/27/2012	29.12	10.3	-	-	18.82
PZ4	7/25/2012	29.12	13.15	13.14	0.01	15.98
PZ4	10/9/2012	29.12	17.75	17.68	0.07	11.43
PZ4	1/28/2013	29.12	16.01	-	-	13.11
PZ4	4/12/2013	29.12	15.81	-	-	13.31
PZ4	7/9/2013	29.12	16.43	16.39	0.04	12.72
PZ4	10/16/2013	29.12	17.1	17.07	0.03	12.04
PZ4	1/7/2014	29.12	18.15	17.94	0.21	11.14

Table 2
Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)
Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [(a)]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
PZ4	4/14/2014	29.12	13.66	-	-	15.46
PZ4	7/29/2014	29.12	16.42	-	-	12.7
PZ4	10/15/2014	29.12	18.22	18.15	0.07	10.96
PZ4	1/28/2015	29.12	15.51	-	-	13.61
PZ4	7/1/2015	29.12	18.00	17.93	0.07	11.18
PZ5	4/27/2012	29.87	10.76	-	-	19.11
PZ5	7/25/2012	29.87	15.79	-	-	14.08
PZ5	10/9/2012	29.87	21.31	21.31	sheen	8.56
PZ5	1/28/2013	29.87	17.02	16.9	0.12	12.95
PZ5	4/12/2013	29.87	16.41	16.41	sheen	13.46
PZ5	7/9/2013	29.87	17.38	17.31	0.07	12.55
PZ5	10/16/2013	29.87	18.35	17.72	0.63	12.02
PZ5	1/7/2014	29.87	20.67	19.8	0.87	9.9
PZ5	4/14/2014	29.87	15.48	15.46	0.02	14.41
PZ5	7/29/2014	29.87	18.64	18.25	0.39	11.54
PZ5	10/15/2014	29.87	21.32	21.07	0.25	8.75
PZ5	1/28/2015	29.87	15.14	-	-	14.73
PZ5	7/1/2015	29.87	20.63	20.41	0.22	9.42
PZ6	4/27/2012	29.96	10.73	-	-	19.23
PZ6	7/25/2012	29.96	14.56	14.55	0.01	15.41
PZ6	10/9/2012	29.96	17.44	17.44	sheen	12.52
PZ6	1/28/2013	29.96	14.92	-	-	15.04
PZ6	4/12/2013	29.96	15.52	-	-	14.44
PZ6	7/9/2013	29.96	16	-	-	13.96
PZ6	10/16/2013	29.96	15.56	-	-	14.4
PZ6	1/7/2014	29.96	16.92	-	-	13.04
PZ6	4/14/2014	29.96	13.6	-	-	16.36
PZ6	7/29/2014	29.96	16.63	16.6	0.03	13.35
PZ6	10/15/2014	29.96	18.07	-	-	11.89
PZ6	1/28/2015	29.96	16.97	16.64	0.33	13.25
PZ6	7/1/2015	29.96	17.44	17.34	0.10	12.60
PZ7	4/27/2012	28.22	9.15	-	-	19.07
PZ7	7/25/2012	28.22	12.79	12.78	0.01	15.44
PZ7	10/9/2012	28.22	17.79	17.73	0.06	10.48
PZ7	1/28/2013	28.22	15.57	14.51	1.06	13.5
PZ7	4/12/2013	28.22	14.68	14.68	sheen	13.54
PZ7	7/9/2013	28.22	15.9	15.57	0.33	12.58
PZ7	10/16/2013	28.22	17.62	17.12	0.5	11
PZ7	1/7/2014	28.22	17.37	17.33	0.04	10.88
PZ7	4/14/2014	28.22	13.12	13.05	0.07	15.16
PZ7	7/29/2014	28.22	16.42	15.9	0.52	12.22
PZ7	10/15/2014	28.22	18.09	18.08	0.01	10.14
PZ7	1/28/2015	28.22	17.43	-	-	10.79
PZ7	7/1/2015	28.22	21.03	20.47	0.56	7.64
PZ8	4/27/2012	30.07	10.8	-	-	19.27
PZ8	7/25/2012	30.07	15.84	15.75	0.09	14.3
PZ8	10/9/2012	30.07	20.72	20.66	0.06	9.4
PZ8	1/28/2013	30.07	17.51	17.29	0.22	12.74
PZ8	4/12/2013	30.07	15.97	15.95	0.02	14.12
PZ8	7/9/2013	30.07	17.41	17.15	0.26	12.87
PZ8	10/16/2013	30.07	17.85	17.55	0.3	12.46
PZ8	1/7/2014	30.07	19.49	19.08	0.41	10.91
PZ8	4/14/2014	30.07	15.33	15.08	0.25	14.94
PZ8	7/29/2014	30.07	18.45	17.91	0.54	12.05
PZ8	10/15/2014	30.07	20.96	20.65	0.31	9.36
PZ8	1/28/2015	30.07	17.41	16.93	0.48	13.04
PZ8	7/1/2015	30.07	19.11	18.93	0.18	11.10
PZ9	7/9/2013	30.49	18.28	-	-	12.21
PZ9	10/16/2013	30.49	20.15	-	-	10.34
PZ9	1/7/2014	30.49	20.19	-	-	10.3
PZ9	4/14/2014	30.49	15.06	-	-	15.43

Table 2

Quarterly Groundwater Elevation and LNAPL Data (2012 - 2015)

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Well ID	Date	TOC [a]	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
PZ9	7/29/2014	30.49	17.68	-	-	12.81
PZ9	10/15/2014	30.49	19.9	-	-	10.59
PZ9	1/28/2015	30.49	17.15	-	-	13.34
PZ9	7/1/2015	30.49	19.47	-	-	11.02

Notes:

[a] = Elevation relative to 1988 North American Vertical Datum (NAVD)

[b] = Groundwater elevations corrected for product thickness using formula: GWE = TOC - DTW + (0.8 x (DTW - DTP)), where 0.8 is the density of the LNAPL

[c] = NAPL thickness unknown; unable to measure depth to groundwater due to presence of highly viscous product

- = Not measured, not analyzed, not sampled or not applicable

Table 3

Analytical Results for Groundwater, 2012 through 2015 - BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-1	N	1/26/2012	µg/L	1 U	1 U	1 U	1 U	**280**	**6,500**	**1,300**
MW-1	FD	1/26/2012	µg/L	1 U	1 U	1 U	1 U	**450**	**7,000**	**1,300**
MW-1	N	7/25/2012	µg/L	1 U	1 U	1 U	1 U	**320**	**4,800**	**2,000**
MW-1	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**660**	**1,800**	**870**
MW-1	FD	1/29/2013	µg/L	1 U	1 U	1 U	1 U	**460**	**2,100**	**950**
MW-1	N	7/9/2013	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	500 U	**2,300**	**1,100**
MW-1	N	1/8/2014	µg/L	0.5 U	0.5 U	0.5 U	**0.54**	**790**	**2,500**	500 U
MW-1	FD	1/8/2014	µg/L	1 U	1 U	1 U	1 U	**1,200**	**2,600**	500 U
MW-1	N	7/29/2014	µg/L	1 UJ	1 U	1 U	1 U	**460**	**2,400**	**1,200**
MW-1	N	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	1.5 U	**131**	**6,900**	**1,100**
MW-3	N	1/26/2012	µg/L	1 U	1 U	1 U	1 U	**390**	**6,500**	**1,200**
MW-3	N	7/25/2012	µg/L	1 U	1 U	1 U	1 U	**260**	**4,400**	**1,900**
MW-3	FD	7/25/2012	µg/L	1 U	1 U	1 U	1 U	**320**	**4,900**	**1,600**
MW-3	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**650**	**3,700**	**2,500**
MW-3	N	7/9/2013	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	**570**	**4,300**	**2,100**
MW-3	N	1/8/2014	µg/L	1 U	1 U	1 U	1 U	**990**	**3,000**	500 U
MW-3	N	7/29/2014	µg/L	1 U	1 U	1 U	1 U	**560**	**9,300**	**3,100**
MW-4	N	1/26/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-4	N	1/28/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	FD	1/28/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	N	7/10/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**390**	500 U
MW-4	FD	7/10/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**360**	500 U
MW-4	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**790**	500 U
MW-4	FD	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**700**	500 U
MW-4	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**330**	500 U
MW-4	FD	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**350**	500 U
MW-4	N	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	1.5 U	100 UJ	**7,900**	**1,800**
MW-4	FD	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	1.5 U	**145 J**	**8,100**	**1,800**
MW-5	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	7/30/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**140 J**	500 U
MW-6	N	1/25/2012	µg/L	**17**	**0.9**	0.5 U	**0.59**	**660**	250 U	500 U
MW-6	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-6	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U

Table 3

Analytical Results for Groundwater, 2012 through 2015 - BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-6	N	7/9/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-6	N	7/30/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/28/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/10/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	FD	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	7/26/2012	µg/L	**0.62**	0.5 U	**0.75**	**1.4**	**590**	**700**	500 U
MW-8	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	7/10/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	1/7/2014	µg/L	**4.3**	**1.5**	**2.7**	**2.2**	250 U	**280**	500 U
MW-8	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**160 J**	500 U
MW-8	N	7/1/2015	µg/L	**1.92**	**0.978**	0.5 U	1.5 U	100 U	**480**	**290**
MW-9	N	1/26/2012	µg/L	**84**	**1.9**	**0.92**	**1.2**	**480**	250 U	500 U
MW-9	N	7/26/2012	µg/L	**190**	2 U	2 U	2 U	**570**	250 U	500 U
MW-9	N	1/29/2013	µg/L	**830**	**18**	**18**	**12**	2,000 U	250 U	500 U
MW-9	N	7/10/2013	µg/L	**1,100**	**14**	10 U	**20**	**3,000**	250 U	500 U
MW-9	N	1/8/2014	µg/L	**880**	**13**	5 U	**12**	**4,000**	250 U	500 U
MW-9	N	7/30/2014	µg/L	**600**	10 U	10 U	**10**	2,000 U	**200 J**	500 U
MW-9	N	7/1/2015	µg/L	**508**	**9.15**	**1.59**	**12.6**	**3,650**	**770**	**430**
MW-10	N	1/26/2012	µg/L	**7.2**	**3.4**	**1.4**	**4.9**	**2,500**	**2,300**	500 U
MW-12	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,100**	**3,400**	500 U
MW-13	N	1/25/2012	µg/L	0.5 U	**0.88**	0.5 U	**1.4**	**2,300**	**460**	500 U
MW-13	N	7/25/2012	µg/L	**0.58**	**0.74**	0.5 U	**1.5**	**2,800**	**460**	500 U
MW-13	N	1/28/2013	µg/L	1.5 U	1.5 U	1.5 U	1.5 U	**2,800**	**460**	500 U
MW-13	N	7/9/2013	µg/L	0.5 U	**0.6**	0.5 U	**0.54**	**1,600**	**340**	500 U
MW-13	FD	7/9/2013	µg/L	0.5 U	**0.51**	0.5 U	0.5 U	**1,600**	**390**	500 U
MW-13	N	1/7/2014	µg/L	0.5 U	**0.55**	0.5 U	**0.78**	**1,700**	**360**	500 U
MW-13	N	7/29/2014	µg/L	1 U	1 U	1 U	1 U	**1,700**	**400**	500 U
MW-14	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	1/28/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/9/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U

Table 3

Analytical Results for Groundwater, 2012 through 2015 - BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-14	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/9/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/30/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-16	N	7/26/2012	µg/L	**11**	**4.2**	1 U	**4.1**	**1,100**	**1,200**	500 U
MW-16	FD	7/26/2012	µg/L	**12**	**4.6**	1 U	**4.2**	**1,100**	**1,300**	500 U
MW-17	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/9/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	1/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	1/28/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/9/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	1/8/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-20	N	1/26/2012	µg/L	1 U	**2.3**	1 U	**4.7**	**2,500**	**3,500**	500 U
MW-21	N	1/26/2012	µg/L	1 U	1 U	1 U	**1.4**	**3,100**	**1,900**	500 U
MW-21	N	7/26/2012	µg/L	0.5 U	0.5 U	0.5 U	**0.64**	**2,300**	**2,200**	500 U
MW-21	N	7/10/2013	µg/L	2 U	2 U	2 U	2 U	**1,900**	**3,300**	500 U
MW-21	N	1/8/2014	µg/L	**1.2**	**1**	1 U	**1.2**	**2,900**	**3,000**	500 U
MW-22	N	1/26/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**790**	**270**	500 U
MW-22	N	7/26/2012	µg/L	**1**	**1.6**	0.5 U	**5.7**	**1,400**	**580**	500 U
MW-22	N	1/29/2013	µg/L	**1**	**1.6**	0.5 U	**3.6**	**1,100**	**400**	500 U
MW-22	N	7/10/2013	µg/L	0.5 U	**1.4**	0.5 U	**4.9**	**930**	**510**	500 U
MW-22	N	1/8/2014	µg/L	0.5 U	**0.76**	0.5 U	**2.7**	**1,200**	**570**	500 U
MW-22	N	7/30/2014	µg/L	0.5 U	**0.68**	0.5 U	**3.6**	**790**	**500**	500 U
MW-22	N	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	**2.78**	**783**	**1,400**	**490**
MW-25	N	1/26/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,100**	**1,300**	500 U
MW-25	N	7/25/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,600**	**1,000**	500 U

Table 3

Analytical Results for Groundwater, 2012 through 2015 - BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-25	N	1/28/2013	µg/L	1 U	1 U	1 U	1 U	**1,600**	**810**	500 U
MW-25	N	7/10/2013	µg/L	1 U	1 U	1 U	1 U	**1,100**	**1,000**	500 U
MW-25	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,600**	**720**	500 U
MW-25	N	7/29/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,000**	**980**	**370 J**
MW-25	N	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	1.5 U	**1,050**	**2,400**	**560**
MW-26	N	1/26/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-26	N	7/26/2012	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**410**	**480**	500 U
MW-26	N	1/29/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**260**	**370**	500 U
MW-26	N	7/10/2013	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**410**	500 U
MW-26	N	1/7/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,200**	**720**	500 U
MW-26	N	7/30/2014	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**490**	500 U
MW-26	N	7/1/2015	µg/L	0.5 U	0.5 U	0.5 U	1.5 U	**530**	**1,800**	**1,100**
MW-28	N	1/29/2013	µg/L	**11**	**1.4**	0.5 U	0.5 U	**2,100**	**5,800**	**1,100**
MW-28	N	7/10/2013	µg/L	**23**	5 U	5 U	5 U	**4,400**	**16,000**	**1,500**
MW-28	N	7/30/2014	µg/L	**17**	0.5 UJ	0.5 U	**0.59**	**2,100**	**3,400**	**640**
MW-28	FD	7/30/2014	µg/L	**18**	**4.5 J**	1 U	1 U	**2,000**	**3,800**	**670**
Portland Harbor Joint Source Control Screening Values [1]										
Human Health Drinking Water										
MCL			µg/L	5	1,000	700	10,000	--	--	--
Tap Water PRG			µg/L	1.2	2,300	1,300	200	--	--	--
Human Health Fish Consumption										
EPA's 2004 NRWQC (organism only)			µg/L	51	15,000	2,100	--	--	--	--
DEQ's 2004 AWQC (organism only)			µg/L	51	15,000	2,100	--	--	--	--
Ecological Receptor SLVs										
EPA's 2004 NRWQC (chronic)			µg/L	--	--	--	--	--	--	--
DEQ's 2004 AWQC (chronic)			µg/L	--	--	--	--	--	--	--
Oak Ridge National Laboratory (Tier IISCV)			µg/L	130	9.8	7.3	--	--	--	--

Notes:

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

FD = field duplicate

µg/L = micrograms per liter

SLV = screening level value

Table 3

Analytical Results for Groundwater, 2012 through 2015 - BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil

Bold = Analyte detected in sample.

Shaded - Concentration only exceeds lowest SLVs for drinking water (MCLs and PRGs), but does not exceed SLVs for fish consumption or ecological receptors

Shaded - Concentration exceeds lowest SLV for fish consumption or ecological receptors.

[1] - The source of each Screening Level Value (SLV) is documented in Table 3.1 of the Portland Harbor Joint Source Control Strategy, dated December 2005 and revised in July 2007.

Table 4

Analytical Results for Groundwater, 2012 through 2015 - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
MW-1	N	1/26/2012	µg/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	4 U	0.4 U	4 U	4 U	4 U
MW-1	FD	1/26/2012	µg/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	4 U	0.4 U	4 U	4 U	4 U
MW-1	N	7/25/2012	µg/L	--	--	--	0.44	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	1.9	0.2 U	0.4 U	0.26	0.2 U
MW-1	N	1/29/2013	µg/L	--	--	--	1	0.28	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	4.9	0.2 U	1	1.4	0.2 U
MW-1	FD	1/29/2013	µg/L	--	--	--	0.89	0.24	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	4.3	0.2 U	0.88	1.3	0.2 U
MW-1	N	7/9/2013	µg/L	0.26	--	0.2 U	0.82	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	3.6	0.2 U	0.23	0.35	0.2 U
MW-1	N	1/8/2014	µg/L	0.31	--	0.2 U	1.4	0.29	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	6.2	0.2 U	0.27	1.7	0.2 U
MW-1	FD	1/8/2014	µg/L	0.3	--	0.2 U	1	0.24	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	4.6	0.2 U	0.24	1.3	0.2 U
MW-1	N	7/29/2014	µg/L	0.26	--	0.2 U	0.92	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	4.2	0.2 U	0.2 U	0.95	0.2 U
MW-1	N	7/1/2015	µg/L	0.25 U	0.25 U	0.25 U	1.18	0.173	0.113	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	5.32	0.05 U	0.896	0.84	0.108
MW-3	N	1/26/2012	µg/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	5.9	0.4 U	4 U	4 U	4 U
MW-3	N	7/25/2012	µg/L	--	--	--	0.37	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	2.1	0.2 U	0.4 U	0.69	0.2 U
MW-3	FD	7/25/2012	µg/L	--	--	--	0.21	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	1.3	0.02 U	0.4 U	0.64	0.2 U
MW-3	N	1/29/2013	µg/L	--	--	--	1.1	0.25	0.32	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	6.1	0.2 U	1	3.4	0.2 U
MW-3	N	7/9/2013	µg/L	0.37	--	0.2 U	0.78	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	3.2	0.2 U	0.32	1.2	0.2 U
MW-3	N	1/8/2014	µg/L	0.41	--	0.2 U	1.2	0.28	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	6.3	0.2 U	0.35	2.1	0.2 U
MW-3	N	7/29/2014	µg/L	0.59	--	0.2 U	1.5	0.29	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	6.3	0.2 U	0.3	2.3	0.2 U
MW-4	N	1/26/2012	µg/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-4	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.04 U	0.04 U	0.16 U	0.04 U	0.16 U	0.2 U	0.04 U	0.2 U	0.2 U	0.04 U	0.2 U	0.2 U	0.2 U
MW-4	N	1/28/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.2 U
MW-4	FD	1/28/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.2 U
MW-4	N	7/10/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	FD	7/10/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.21	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.38	0.02 U	0.23	0.2 U	0.26
MW-4	FD	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.44	0.02 U	0.22	0.2 U	0.2 U
MW-4	N	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	FD	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	N	7/1/2015	µg/L	0.25 U	0.25 U	0.25 U	0.127 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0726 J	0.05 U	0.05 U	0.25 U	0.05 U	0.265 J
MW-4	FD	7/1/2015	µg/L	0.25 U	0.25 U	0.25 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.139 J	0.05 U	0.05 U	0.25 U	0.05 U	0.191 J
MW-5	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-5	N	7/30/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.22	0.2 U	0.2 U
MW-6	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	7/30/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/28/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/10/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	1/25/2012	µg/L	--	--	--	25	0.2 U	0.35	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.23	12	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	FD	1/25/2012	µg/L	--	--	--	30	0.2 U	0.39	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.3	15	0.02 U	0.2 U	0.22	0.2 U
MW-8	N	7/26/2012	µg/L	--	--	--	56	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	27	1 U	1 U	1 U	1 U
MW-8	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	7/10/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	1/7/2014	µg/L	4.4	--	0.56	32	0.2 U	0.23	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	13	0.02 U	0.2 U	0.23	0.2 U
MW-8	N	7/29/2014	µg/L	0.22	--	0.1 U	2.7	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.87	0.1 U	0.1 U	0.1 U	0.1 U
MW-8	N	7/1/2015	µg/L	5.47	0.25 U	0.25 U	30.6	0.228	0.0843	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	14.8	0.05 U	0.311	0.186	0.05 U
MW-9	N	1/26/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-9	N	7/26/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-9	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	1.6	0.2 U	0.2 U
MW-9	N	7/10/2013	µg/L	4.8	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.49	0.2 U	0.2 U
MW-9	N	1/8/2014	µg/L	3.7	--	0.2 U	0.25	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.42	0.2 U	0.2 U
MW-9	N	7/30/2014	µg/L	4.6	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.45	0.2 U	0.2 U
MW-9	N	7/1/2015	µg/L	9.05	0.25 U	0.25 U	0.214	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.0998	0.05 U	1.8	0.0668	0.05 U
MW-10	N	1/26/2012	µg/L	--	--	--	4.8	2 U	2 U	0.2 U	0.26	0.4 U	0.21	0.4 U	2 U	0.2 U	2 U	3.4	0.27	2 U	2 U	2 U
MW-12	N	1/25/2012	µg/L	--	--	--	2	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	3.6	0.2 U	2 U	3	2 U
MW-13	N	1/25/2012	µg/L	--	--	--	1.1	0.34	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	1.9	0.02 U	0.64	2.1	0.2 U
MW-13	N	7/25/2012	µg/L	--	--	--	0.96	0.35	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	2.1	0.02 U	2 U	1.9	0.2 U
MW-13	N	1/28/2013	µg/L	--	--	--	1.5	0.48	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	3.1	0.2 U	2.7	3.1	0.2 U
MW-13	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.71	0.2 U	1.6	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	1.3	0.2 U	0.33	1.7	0.2 U
MW-13	FD	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	1.4	0.2 U	0.42	2.1	0.2 U
MW-13	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.66	0.2	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.99	0.1 U	0.47	1.6	0.2 U
MW-13	N	7/29/2014	µg/L	0.1 U	--	0.1 U	0.79	0.23	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	1.4	0.1 U	0.45	1.8	0.1 U
MW-14	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	1/28/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U

Table 4

Analytical Results for Groundwater, 2012 through 2015 - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-14	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/30/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-16	N	7/26/2012	µg/L	--	--	--	**0.89**	0.2 U	0.2 U	**0.022**	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.9**	0.02 U	1.4 U	**1.1**	0.2 U
MW-16	FD	7/26/2012	µg/L	--	--	--	**0.9**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.8**	0.02 U	1.2 U	**0.82**	0.2 U
MW-17	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	1/7/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	1/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/25/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	1/28/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/9/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	1/8/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/29/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-20	N	1/26/2012	µg/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-21	N	1/26/2012	µg/L	--	--	--	**5.9**	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	**5.1**	0.2 U	2 U	**2.9**	2 U
MW-21	N	7/26/2012	µg/L	--	--	--	**3.3**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**2.7**	1 U	4 U	1 U	1 U
MW-21	N	7/10/2013	µg/L	**150**	--	0.2 U	**5.3**	**0.85**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.86**	**5**	0.2 U	**1.7**	**3.1**	**1.1**
MW-21	N	1/8/2014	µg/L	**120**	--	4 U	**5.6**	4 U	4 U	4 U	4 U	8 U	4 U	8 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
MW-22	N	1/26/2012	µg/L	--	--	--	**0.55**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.27**	**0.024**	0.2 U	0.2 U	0.2 U
MW-22	N	7/26/2012	µg/L	--	--	--	**1.1**	0.2 U	0.2 U	0.06 U	0.06 U	0.12 U	0.06 U	0.12 U	0.2 U	0.06 U	**0.29**	**0.56**	0.06 U	1 U	**0.31**	**0.32**
MW-22	N	1/29/2013	µg/L	--	--	--	**1.4**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.38**	**0.72**	0.02 U	**1.1**	**0.49**	**0.41**
MW-22	N	7/10/2013	µg/L	**3.6**	--	0.2 U	**1.6**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.41**	**0.74**	0.02 U	**0.26**	**0.25**	**0.43**
MW-22	N	1/8/2014	µg/L	**1.4**	--	0.2 U	**2.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.48**	**0.83**	0.2 U	**0.39**	**0.35**	**0.58**
MW-22	N	7/30/2014	µg/L	**4.1**	--	0.2 U	**2.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.47**	**1**	0.2 U	**0.33**	**0.71**	**0.53**
MW-22	N	7/1/2015	µg/L	**0.426**	0.25 U	0.25 U	**2.32**	0.05 U	**0.0802**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.503**	**0.593**	0.05 U	**0.89**	0.05 U	**0.629**
MW-25	N	1/26/2012	µg/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-25	N	7/25/2012	µg/L	--	--	--	**0.3**	**0.21**	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.66**	0.02 U	1 U	**1.1**	0.2 U
MW-25	N	1/28/2013	µg/L	--	--	--	**1.3**	**0.43**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**2.5**	0.2 U	**1.5**	**2.6**	0.2 U
MW-25	N	7/10/2013	µg/L	0.2 U	--	0.2 U	**0.77**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**0.81**	0.2 U	**0.29**	**0.69**	0.2 U
MW-25	N	1/7/2014	µg/L	0.2 U	--	0.2 U	**0.86**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.85**	0.02 U	**0.38**	**0.98**	0.2 U
MW-25	N	7/29/2014	µg/L	0.2 U	--	0.2 U	**1.2**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.4**	0.02 U	**0.29**	**0.9**	0.2 U
MW-25	N	7/1/2015	µg/L	0.25 U	0.25 U	0.25 U	**1.2**	**0.0815**	**0.117**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.156**	**1.29**	0.05 U	**1.04**	**0.198**	**0.184**
MW-26	N	1/26/2012	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	**0.026**	**0.031**	**0.063**	**0.027**	**0.063**	0.2 U	0.02 U	0.2 U	0.2 U	**0.039**	0.2 U	0.2 U	0.2 U
MW-26	N	7/26/2012	µg/L	--	--	--	**0.43**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.7**	0.02 U	1.2 U	**0.26**	0.2 U
MW-26	N	1/29/2013	µg/L	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**2.9**	0.2 U	**0.88**	**0.41**	0.2 U
MW-26	N	7/10/2013	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-26	N	1/7/2014	µg/L	0.2 U	--	0.2 U	**0.21**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.49**	0.02 U	**1**	0.2 U	0.2 U
MW-26	N	7/30/2014	µg/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.27**	0.02 U	**0.64**	0.2 U	0.2 U
MW-26	N	7/1/2015	µg/L	0.25 U	0.25 U	0.25 U	**0.408**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.701**	0.05 U	**1.55**	**0.106**	0.05 U
MW-28	N	1/29/2013	µg/L	--	--	--	**2**	**0.67**	**0.49**	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	0.4 U	0.4 U	0.4 U	**4.6**	0.4 U	**4**	**4.1**	0.4 U
MW-28	N	7/10/2013	µg/L	**48**	--	0.4 U	**11**	**2.8**	**0.55**	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	**0.56**	0.4 U	**1.7**	**23**	0.4 U	**21**	**36**	**2.1**
MW-28	N	7/30/2014	µg/L	**6.8**	--	1 U	**1.9**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**3.8 J**	1 U	1 U	**3.1 J**	1 U
MW-28	FD	7/30/2014	µg/L	**6.8**	--	1 U	**1.5**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**2.9 J**	1 U	1 U	**2.1 J**	1 U
Portland Harbor Joint Source Control Screening Values [1]																						
Human Health Drinking Water																						
MCL			µg/L	--	--	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Tap Water PRG			µg/L	--	--	--	370	--	1,800	0.092	0.0092	0.092	--	0.92	9.2	0.0092	1,500	240	0.092	6.2	--	180
Human Health Fish Consumption																						
EPA's 2004 NRWQC (organism only)			µg/L	--	--	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
DEQ's 2004 AWQC (organism only)			µg/L	--	--	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
Ecological Receptor SLVs				--	--																	
EPA's 2004 NRWQC (chronic)			µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEQ's 2004 AWQC (chronic)			µg/L	--	--	--	520	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--
Oak Ridge National Laboratory (Tier IISCV)			µg/L	--	--	2.1	--	--	0.73	0.027	0.014	--	--	--	--	--	--	3.9	--	12	--	--

Notes:

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

Table 4

Analytical Results for Groundwater, 2012 through 2015 - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene

FD = field duplicate

µg/L = micrograms per liter

SLV = Screening Level Value

Bold = Analyte detected in sample.

Shaded - Concentration only exceeds lowest SLVs for drinking water (MCLs and PRGs), but does not exceed SLVs for fish consumption or ecological receptors

Shaded - Concentration exceeds lowest SLV for fish consumption or ecological receptors.

[1] - The source of each Screening Level Value (SLV) is documented in Table 3.1 of the Portland Harbor Joint Source Control

Table 5

Analytical Results for Groundwater, 2012 through 2015 - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-1	N	1/26/2012	mg/L	**0.0066**	**0.11**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/26/2012	mg/L	**0.0062**	**0.1**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/25/2012	mg/L	0.005 U	**0.056**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	1/29/2013	mg/L	0.005 U	**0.072**	0.002 U	**0.017**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/29/2013	mg/L	0.005 U	**0.082**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/9/2013	mg/L	0.005 U	**0.087**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	1/8/2014	mg/L	0.005 U	**0.091**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/8/2014	mg/L	0.005 U	**0.088**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/29/2014	mg/L	**0.0036 J**	**0.08**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/1/2015	mg/L	**0.00561**	**0.0913**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-3	N	1/26/2012	mg/L	**0.029**	**0.1**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/25/2012	mg/L	**0.029**	**0.064**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	FD	7/25/2012	mg/L	**0.034**	**0.072**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	1/29/2013	mg/L	**0.055**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/9/2013	mg/L	**0.045**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	1/8/2014	mg/L	**0.037**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/29/2014	mg/L	**0.059**	**0.099**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	1/26/2012	mg/L	0.005 U	**0.064**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/25/2012	mg/L	0.005 U	**0.03**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	1/28/2013	mg/L	**0.028**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	1/28/2013	mg/L	**0.019**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/10/2013	mg/L	**0.012**	**0.042**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	7/10/2013	mg/L	**0.011**	**0.043**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	1/7/2014	mg/L	**0.0071**	**0.047**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	1/7/2014	mg/L	**0.0083**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/29/2014	mg/L	**0.029 J**	**0.048**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	7/29/2014	mg/L	**0.098 J**	**0.053**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/1/2015	mg/L	**0.0944**	**0.0518**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-4	FD	7/1/2015	mg/L	**0.111**	**0.0538**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-5	N	1/25/2012	mg/L	0.005 U	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-5	N	7/25/2012	mg/L	0.005 U	**0.03**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-5	N	1/29/2013	mg/L	0.005 U	**0.031**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-5	N	7/30/2014	mg/L	0.005 U	**0.032**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	1/25/2012	mg/L	0.005 U	**0.062**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/25/2012	mg/L	**0.03**	**0.041**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	1/29/2013	mg/L	0.005 U	**0.054**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/9/2013	mg/L	**0.02**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/30/2014	mg/L	**0.0046 J**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/25/2012	mg/L	0.005 U	**0.041**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

Table 5

Analytical Results for Groundwater, 2012 through 2015 - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-7	N	7/25/2012	mg/L	0.005 U	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/28/2013	mg/L	0.005 U	**0.032**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	7/10/2013	mg/L	0.005 U	**0.036**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/7/2014	mg/L	0.005 U	**0.038**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	7/29/2014	mg/L	0.005 U	**0.034**	0.002 U	**0.1**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	1/25/2012	mg/L	0.005 U	**0.021**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	FD	1/25/2012	mg/L	0.005 U	**0.021**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/26/2012	mg/L	0.005 U	**0.011**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	1/29/2013	mg/L	0.005 U	**0.033**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/10/2013	mg/L	0.005 U	**0.016**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	1/7/2014	mg/L	0.005 U	**0.034**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/29/2014	mg/L	0.005 U	**0.015**	0.002 U	**0.18**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/1/2015	mg/L	**0.00226**	**0.0297**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-9	N	1/26/2012	mg/L	**0.028**	**0.036**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/26/2012	mg/L	**0.031**	**0.057**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	1/29/2013	mg/L	**0.06**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/10/2013	mg/L	**0.065**	**0.057**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	1/8/2014	mg/L	**0.083**	**0.059**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/30/2014	mg/L	**0.066**	**0.058**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/1/2015	mg/L	**0.0898**	**0.0633**	0.001 U	0.002 U	0.005 U	**0.00282**	0.0002 U	0.002 U	0.002 U	0.025 U
MW-10	N	1/26/2012	mg/L	**0.0064**	**0.014**	0.005 U	0.005 U	0.01 U	**0.0057**	0.001 U	0.005 U	0.005 U	0.1 U
MW-12	N	1/25/2012	mg/L	**0.068**	**0.057**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	**0.15**
MW-13	N	1/25/2012	mg/L	**0.077**	**0.096**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/25/2012	mg/L	**0.017**	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	1/28/2013	mg/L	**0.064**	**0.093**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/9/2013	mg/L	**0.07**	**0.063**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	FD	7/9/2013	mg/L	**0.073**	**0.066**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	1/7/2014	mg/L	**0.089**	**0.072**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/29/2014	mg/L	**0.081**	**0.071**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	1/25/2012	mg/L	0.005 U	**0.029**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/25/2012	mg/L	0.005 U	**0.024**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	1/28/2013	mg/L	0.005 U	**0.024**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/9/2013	mg/L	0.005 U	**0.021**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	1/7/2014	mg/L	0.005 U	**0.025**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/29/2014	mg/L	0.005 U	**0.018**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	1/25/2012	mg/L	0.005 U	**0.022**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/25/2012	mg/L	0.005 U	**0.017**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	1/29/2013	mg/L	0.005 U	**0.019**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/9/2013	mg/L	0.005 U	**0.02**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

Table 5

Analytical Results for Groundwater, 2012 through 2015 - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-15	N	1/7/2014	mg/L	0.005 U	**0.02**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/30/2014	mg/L	0.005 U	**0.019**	0.002 U	**0.0063 J**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-16	N	7/26/2012	mg/L	**0.071**	**0.039**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-16	FD	7/26/2012	mg/L	**0.083**	**0.044**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/25/2012	mg/L	0.005 U	**0.049**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/25/2012	mg/L	**0.013**	**0.047**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/29/2013	mg/L	**0.0098**	**0.05**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/9/2013	mg/L	**0.0055**	**0.042**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/7/2014	mg/L	0.005 U	**0.039**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/29/2014	mg/L	**0.0079**	**0.04**	0.002 U	**0.011**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	1/25/2012	mg/L	0.005 U	**0.033**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	7/25/2012	mg/L	0.005 U	**0.026**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	1/28/2013	mg/L	0.005 U	**0.022**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	7/9/2013	mg/L	0.005 U	**0.02**	0.002 U	**0.01**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	1/8/2014	mg/L	0.005 U	**0.019**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	7/29/2014	mg/L	0.005 U	**0.022**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-20	N	1/26/2012	mg/L	**0.011**	**0.05**	0.005 U	0.005 U	0.01 U	**0.014**	0.001 U	0.005 U	0.005 U	**0.12**
MW-21	N	1/26/2012	mg/L	0.005 U	**0.0081**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	7/26/2012	mg/L	0.005 U	**0.011**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	7/10/2013	mg/L	0.005 U	**0.0086**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	1/8/2014	mg/L	0.005 U	**0.0091**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	1/26/2012	mg/L	0.005 U	**0.0075**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/26/2012	mg/L	0.005 U	**0.0072**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	1/29/2013	mg/L	0.005 U	**0.01**	0.002 U	0.01 U	0.02 U	**0.056**	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/10/2013	mg/L	0.005 U	**0.025**	0.002 U	**0.033**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	1/8/2014	mg/L	0.005 U	**0.021**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/30/2014	mg/L	**0.0037 J**	**0.017**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/1/2015	mg/L	**0.00539**	**0.0341**	0.001 U	0.002 U	**0.0146**	**0.00477**	0.0002 U	0.002 U	0.002 U	0.025 U
MW-25	N	1/26/2012	mg/L	**0.056**	**0.069**	0.005 U	0.005 U	0.01 U	**0.011**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/25/2012	mg/L	**0.038**	**0.045**	0.005 U	0.005 U	0.01 U	**0.0065**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	1/28/2013	mg/L	**0.052**	**0.061**	0.002 U	0.01 U	0.02 U	**0.0085**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/10/2013	mg/L	**0.035**	**0.06**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	**0.32**
MW-25	N	1/7/2014	mg/L	**0.047**	**0.055**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/29/2014	mg/L	**0.048**	**0.066**	0.002 U	0.01 U	0.02 U	**0.0033 J**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/1/2015	mg/L	**0.0434**	**0.0599**	0.001 U	0.002 U	0.005 U	**0.00211**	0.0002 U	0.002 U	0.002 U	0.025 U
MW-26	N	1/26/2012	mg/L	**0.03**	**0.068**	0.005 U	**0.0063**	0.01 U	**0.054**	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/26/2012	mg/L	**0.04**	**0.05**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	1/29/2013	mg/L	**0.02**	**0.054**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/10/2013	mg/L	**0.11**	**0.057**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

Table 5

Analytical Results for Groundwater, 2012 through 2015 - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-26	N	1/7/2014	mg/L	**0.19**	**0.075**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/30/2014	mg/L	**0.12**	**0.06**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/1/2015	mg/L	**0.161**	**0.0596**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-28	N	1/29/2013	mg/L	**0.052**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	N	7/10/2013	mg/L	**0.079**	**0.051**	0.002 U	0.01 U	0.02 U	**0.0091**	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	N	7/30/2014	mg/L	**0.099 J**	**0.054**	0.002 U	**0.14 J**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	FD	7/30/2014	mg/L	**0.027 J**	**0.049**	0.002 U	0.01 UJ	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
Portland Harbor Joint Source Control Screening Values and Oregon DEQ Default Background Values (Bold value is the value applied for screening) [1] **.**													
Human Health Drinking Water													
MCL			mg/L	0.010	--	0.005	**0.1**	1.3	0.015	0.002	0.050	0.100	5.0
Tap Water PRG			mg/L	0.000045	--	0.018	--	1.4	0.015	0.011	0.180	0.180	11.0
Human Health Fish Consumption													
EPA's 2004 NRWQC (organism only)			mg/L	0.00014	--	--	--	--	--		4.2	--	26.0
DEQ's 2004 AWQC (organism only)			mg/L	0.00014	--	--	--	--	--	0.000146	4.2	--	26.0
Ecological Receptor SLVs													
EPA's 2004 NRWQC (chronic)			mg/L	0.150	--	0.000094	--	0.0027	0.00054	0.00077	**0.005**	--	0.036
DEQ's 2004 AWQC (chronic)			mg/L	--	--	0.00038	--	0.0036	0.00054	0.000012	0.035	0.00012	0.033
Oak Ridge National Laboratory (Tier IISCV)			mg/L	--	--	--	--	--	--	0.0013	--	0.00036	--
Oregon DEQ Default Background			mg/L	**0.002**	--	**0.001**	0.001	**0.009**	**0.01330**	**0.0001**	0.0002	**0.001**	**0.038**

Notes:

Total metals analyzed by USEPA Method 6000/7000 Series Method, or SW6020/6020A

Total mercury analyzed by USEPA Method 7470A, SW6020, or SW6020A

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

FD = field duplicate

mg/L = milligrams per liter

SLV = Screening Level Value

Bold = Analyte detected in sample.

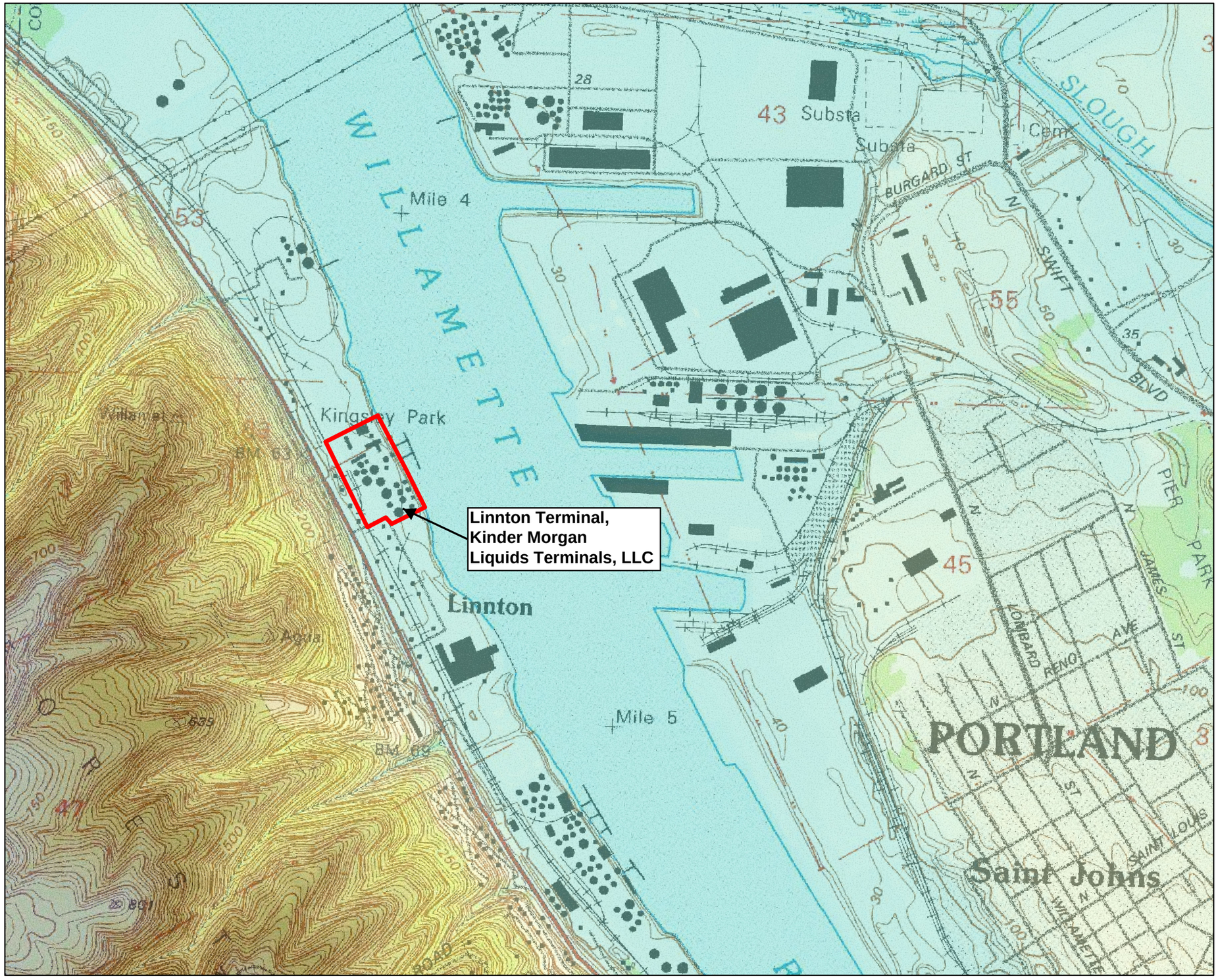
[1] - Screening value is either the default background concentration or lowest SLV, whichever is higher.

Shaded - Concentration exceeds both background and the lowest SLV.

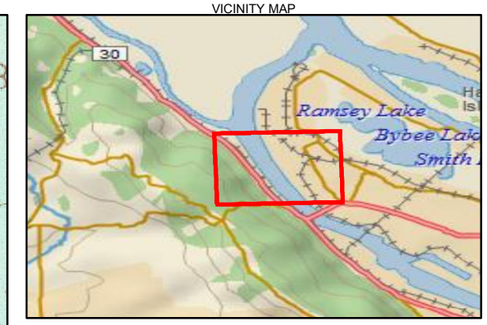
[1] - Screening value is either the default background concentration or lowest SLV, whichever is higher.

Background Metals Levels from Default Background Concentrations for Metals, Oregon Department of

Figures



VICINITY MAP



LEGEND

Site Boundary

Elevation (ft)

High : 1144 ft

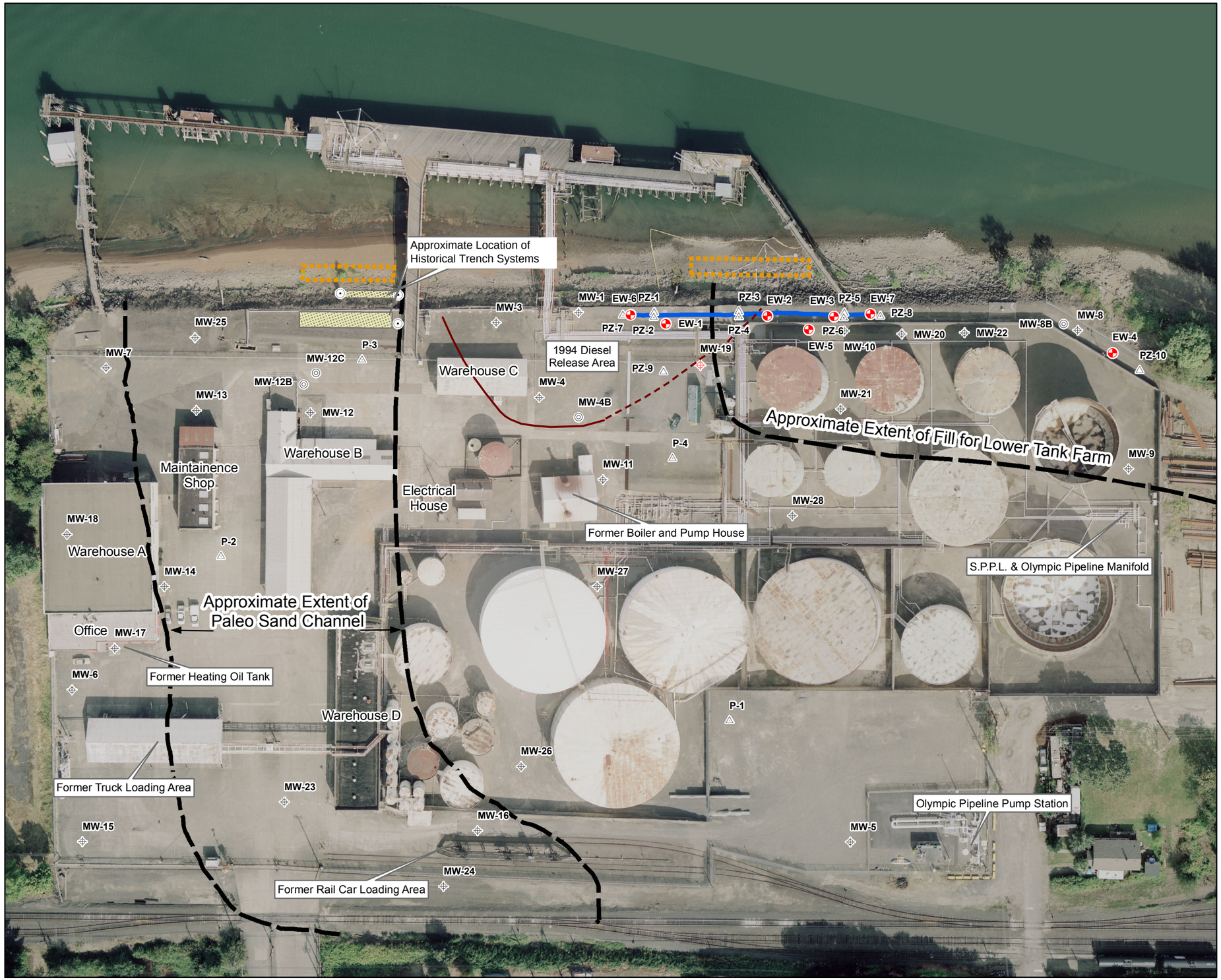
Low : 8 ft

N

0 500 1,000 1,500
Feet

1 inch = 1,000 feet

FIGURE 1
Site Map
Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
11400 NW St. Helens Road
Portland, Oregon



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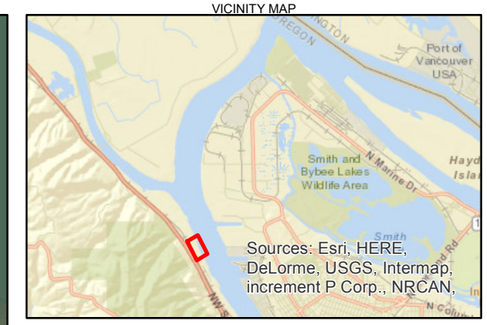


LEGEND

- Barrier Wall
- Historical Trench System
- Approximate Area Where Sheen was Observed
- Approximate Extent of Diesel Release Identified in 1994
- Approximate Extent of Sand Channel/Fill
- Railroad

Linnton Terminal Wells

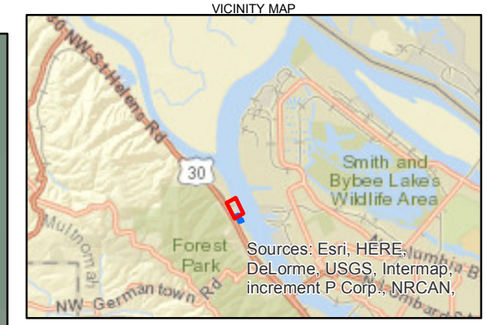
- Hydraulic Control Well
- Shallow Monitoring Well/Extraction Well
- Monitoring Well - Shallow
- Monitoring Well - Deep
- Piezometer
- 3-Foot Diameter Cistern

N

0 125 250
Feet

FIGURE 2
Site Layout
Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
11400 NW St. Helens Road
Portland, Oregon

VICINITY MAP



LEGEND

- Barrier Wall
- Groundwater Elevation (dashed where inferred) (ft msl)

Linnton Terminal Wells

- Hydraulic Control Well
- Shallow Monitoring Well/Extraction Well
- Monitoring Well - Shallow
- Monitoring Well - Deep
- Piezometer
- 3-Foot Diameter Cistern

Well Labels

MW-9 Well ID
12.28 Water Elevation (ft msl), if measured
0.01 LNAPL Thickness (ft), if present

Groundwater Flow Direction

0 35 70 140
Feet

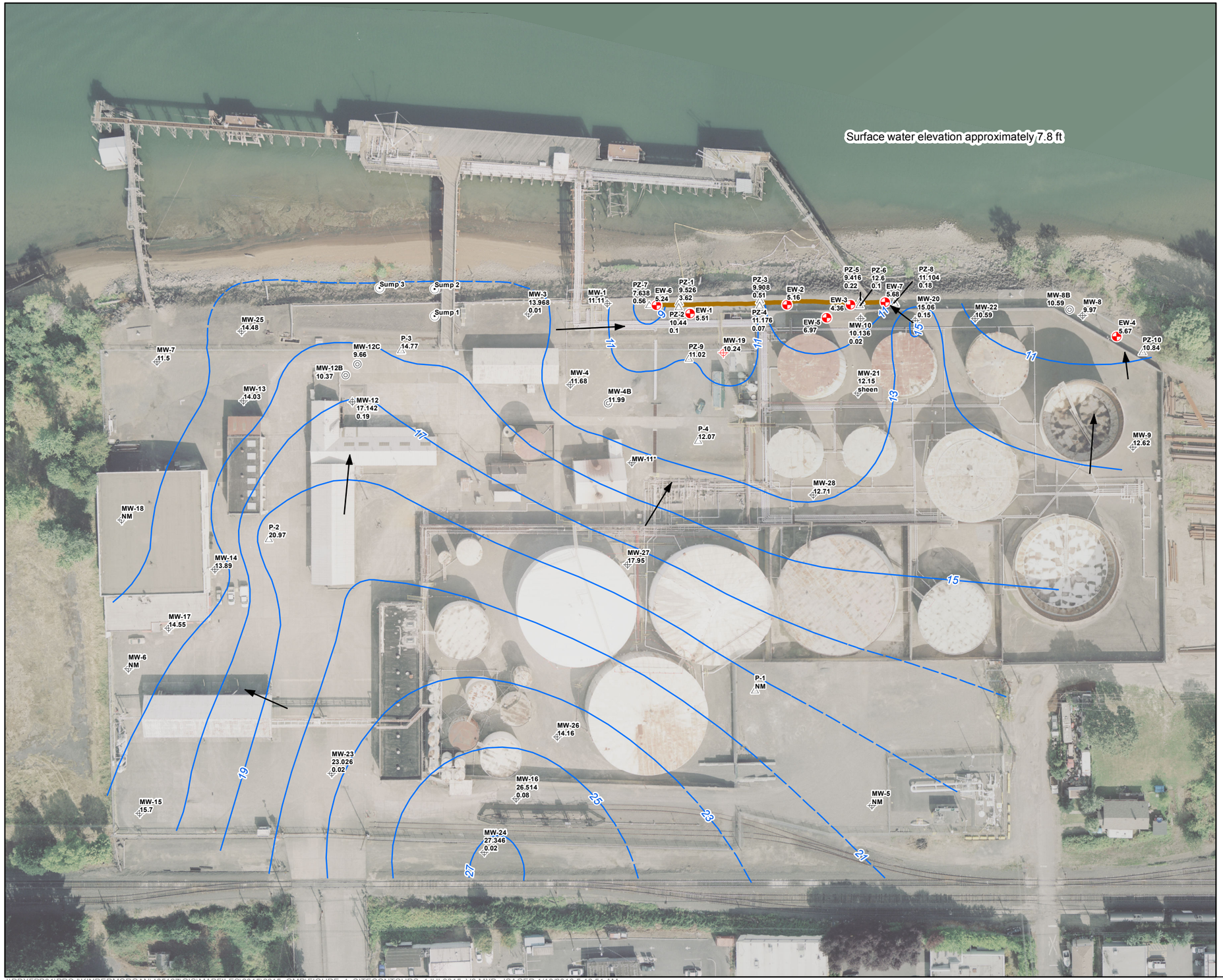
N

FIGURE 3
First Quarter 2015 Site-wide Groundwater Elevations and LNAPL Thickness
January 28, 2015

Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
11400 NW St. Helens Road
Portland, Oregon

CH2MHILL

\\PDXFPP01\PROJ\KINDERMORGAN\405127\GIS\MAPFILES\2015\2015_GMR\FIGURE_3_SITECONTOURS_28JAN2015_V2.MXD JSAGER 1/18/2016 4:46:18 AM



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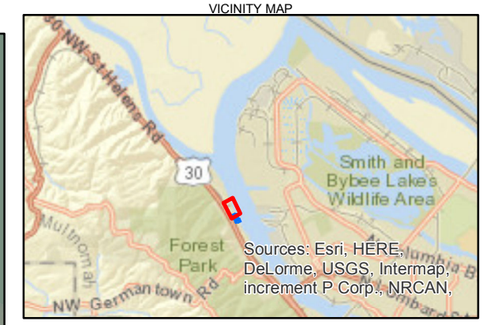

LEGEND

- Barrier Wall
- Groundwater Elevation (dashed where inferred) (ft msl)

Linnton Terminal Wells

- Hydraulic Control Well
- Shallow Monitoring Well/Extraction Well
- Monitoring Well - Shallow
- Monitoring Well - Deep
- Piezometer
- 3-Foot Diameter Cistern

Well Labels

MW-9	Well ID
12.28	Water Elevation (ft msl), if measured
0.01	LNAPL Thickness (ft), if present

Groundwater Flow Direction

Notes:
1. Extraction wells EW-1 through EW-7 and MW-19 operating; not included in contouring
2. MW-26 and PZ-6 not included in contouring
4. Groundwater and NAPL elevations masurements conducted July 1, 2015
5. Deep wells not included in contouring (MW-12B, MW-12C, MW-4B, MW-8B)

ft msl = feet mean sea level (NAVD88)
LNAPL = Light Non-Aqueous Phase Liquid
NM = not measured
* = NAPL thickness unknown; unable to measure depth to groundwater due to presence of highly viscous product

0 35 70 140
Feet

N

FIGURE 4
Third Quarter 2015 - Site-wide Groundwater Elevations and LNAPL Thickness
July 1, 2015

Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
11400 NW St. Helens Road
Portland, Oregon

CH2MHILL

\\PDXFPP01\PROJ\KINDERMORGAN\405127\GIS\MAPFILES\2015\2015_GMR\FIGURE_4_SITECONTOURS_1JUL2015_V3.MXD JSAGER 1/18/2016 5:18:51 AM

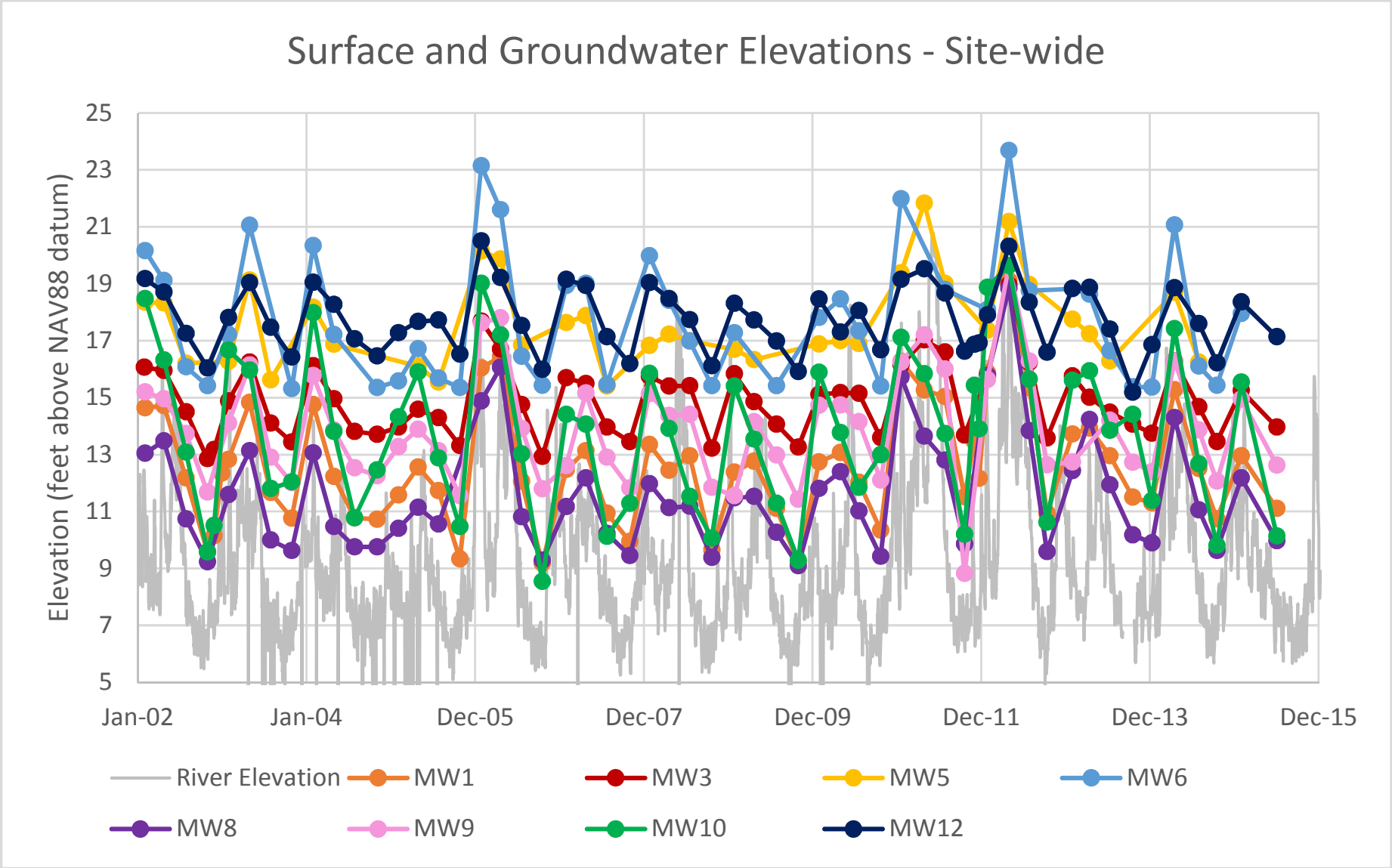

Figure 5
Surface and Groundwater Elevations
Site-wide
Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
Portland, Oregon

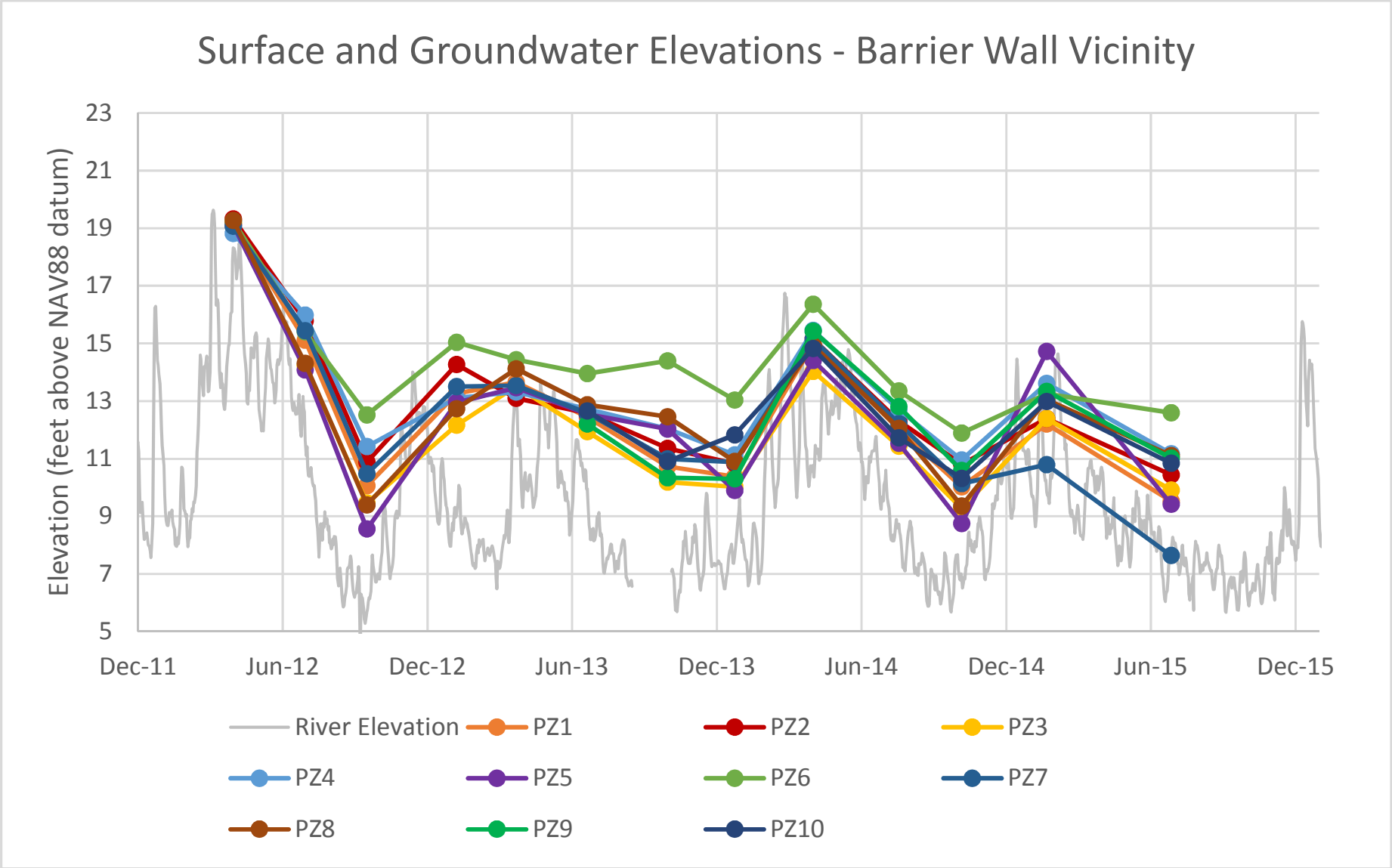

Figure 6
Surface and Groundwater Elevations
Barrier Wall Vicinity
Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
Portland, Oregon

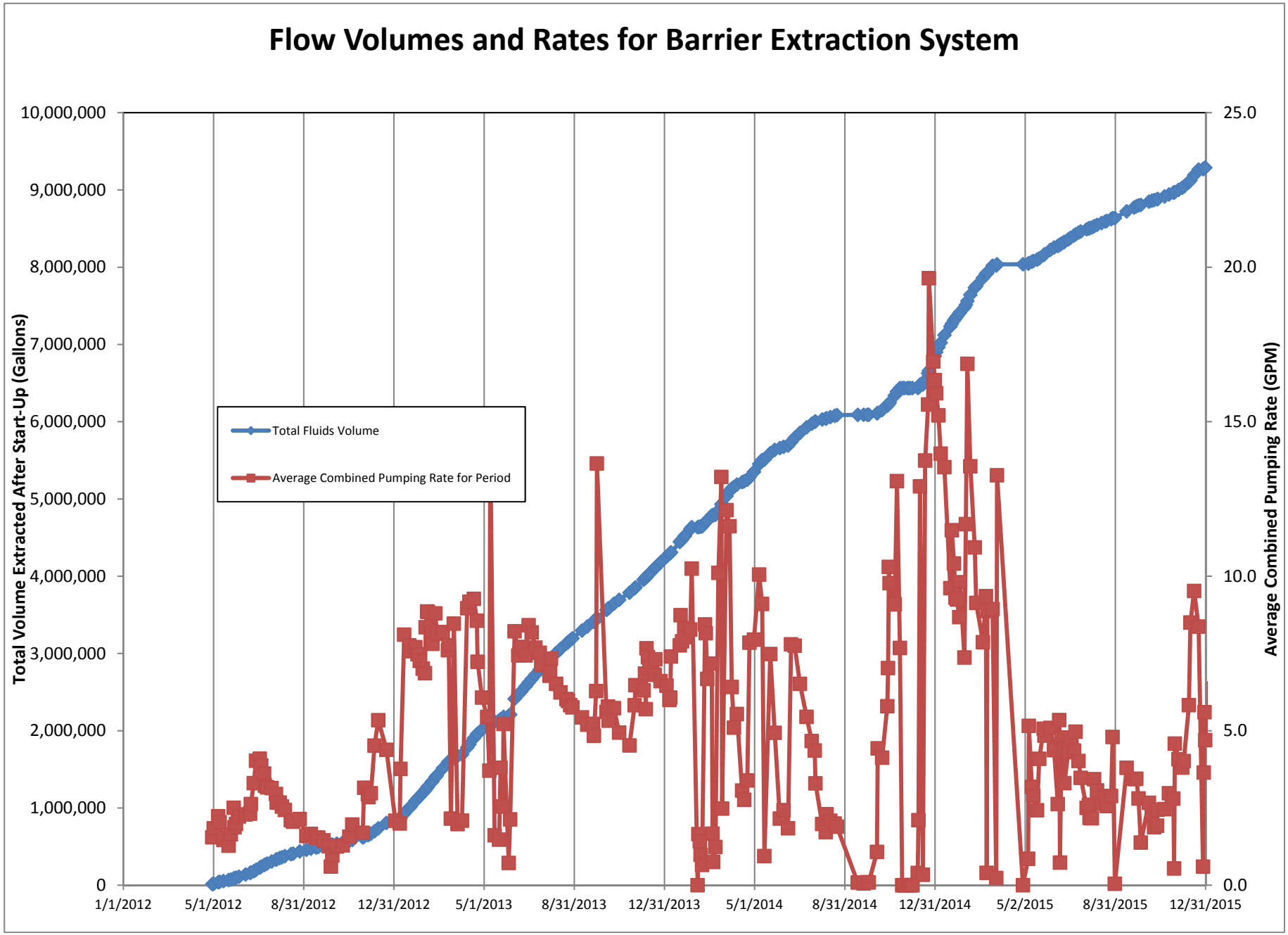

Figure 7
Flow Volumes and Rates for Barrier Extraction System
Kinder Morgan Liquids Terminals, LLC
Linnton Terminal
Portland, Oregon

Appendix A
Field Gauging and LNAPL Removal Field Forms

FIELD SAMPLING RECORD
KMLT Linnton Terminal
Portland, Oregon

Technician(s): KCM / BNL / NWH

Project #: KMLIN-1402

Date: 1/20/15

Well ID	Depth to Product	SPH Thickness	Depth to Water	TOC	Total Depth	Diameter	Notes	Total Fluids Extracted	SPH Extracted
	(ft)	(ft)	(ft)	(ft)	(ft)	(in)		(gal)	(gal)
[redacted]	—	—	15.02	27.98	26.90	4"			
[redacted]	—	—	13.72	28.97		4"			
[redacted]	—	—	19.10	32.88	27.70	2"			
MW-4B	—	—	18.72						
MW-5	Underneath		DROP	~~40.08~~	24.90	2"			
MW-6	—	—	18.97	36.93	22.10	2"			
MW-7	—	—	18.02	32.26	25.20	2"			
MW-8	—	—	17.88	30.06	23.00	2"			
MW-8B	—	—	17.24						
MW-9	—	—	15.50	30.45	27.15	2"			
[redacted]	14.67	0.23	14.90	30.32	24.95	2"			
[redacted]	20.14	?	?	35.03	29.90	2"			
[redacted]	15.65	0.10	15.75	34.03	30.00	2"			
[redacted]	—	—	20.64				MW 12 C		
[redacted]	—	—	20.05				MW 12 B		
MW-13	—	—	19.33	35.81	29.60	2"			
MW-14	—	—	19.66	36.54	27.70	2"			
MW-15	—	—	17.92	37.15	28.00	2"			
[redacted]	9.97	?	?	38.95	19.60	2"			
MW-17	—	—	19.01	36.57	29.90	2"			
MW-18	—	—	20.42	36.66	29.60	2"			
[redacted]	19.60	1.10	20.70			2"	Pump off		
[redacted]	12.22	0.19	12.41		35.20	2"			
[redacted]	13.82	0.01	13.83		34.20	2"			
MW-22	—	—	13.61		29.50	2"	TD=20.3 (7/19/10)		
[redacted]	11.50	0.01	11.51			2"			
[redacted]	6.51	0.02	6.53		19.50	2"			
MW-25	—	—	16.51		29.37	2"			
MW-26	—	—	20.81		27.10	4"			
[redacted]	—	—	DRY		19.08	3/4"			
[redacted]	—	—	16.22			4"			

FIELD SAMPLING RECORD
KMLT Linnton Terminal
Portland, Oregon

Technician(s): KCM / BNL NWH

Project #: KMLIN-1402

Date: 1/28/15

Well ID	Depth to Product	SPH Thickness	Depth to Water	TOC	Total Depth	Diameter	Notes	Total Fluids Extracted	SPH Extracted
	(ft)	(ft)	(ft)	(ft)	(ft)	(in)		(gal)	(gal)
P-1	Underneath Gravel			37.89	--	3/4"			
P-2	—	—	13.99	36.54	--	3/4"			
[redacted]	—	—	17.89	33.53	--	3/4"			
[redacted]	—	—	17.45	31.75	--	3/4"			
Sump-1	—	—	16.85						
Sump-2	—	—	11.90						
Sump-3	—	—	12.71						
[redacted]	—	—	21.90		31.00				
[redacted]	—	—	23.50		31.00				
[redacted]	—	—	22.36		31.00				
[redacted]	—	—	23.05		31.00				
[redacted]	20.19	0.01	20.20				First Time SPH, Black-Brown		
[redacted]	—	—	22.80						
[redacted]	—	—	24.35						
[redacted]	16.13	0.51	16.64						
[redacted]	16.10	0.36	16.46						
[redacted]	16.41	0.16	17.57						
[redacted]	—	—	15.51						
[redacted]	—	—	15.14						
[redacted]	16.64	0.33	16.97						
[redacted]	—	—	17.43						
[redacted]	16.93	0.48	17.41						
PZ-9	—	—	17.15						
PZ-10	—	—	17.67						

[redacted] = gauge with interface probe (possible SPH or sheen)

Sampling Analytes: TPH-G, TPH-Dx, BTEX, PAHs, Metals.

Sample all MWs with no SPH (sheen, measurable, or observable) except deep aquifer wells are not sampled (4B, 8B, 12B, 12C).

Sample after parameters stabilize.

FIELD SAMPLING RECORD
KMLT Linnton Terminal
Portland, Oregon

Technician(s): KCM / BNL/ NWH

Project #: KMLIN-1402

Date: 7/1/15

Well ID	Depth to Product	SPH Thickness	Depth to Water	TOC	Total Depth	Diameter	Notes	Total Fluids Extracted	SPH Extracted
	(ft)	(ft)	(ft)	(ft)	(ft)	(in)		(gal)	(gal)
[redacted]	—	—	16.87	27.98	26.90	4"			
[redacted]	15.00	0.01	15.01	28.97		4"	No sample		
[redacted]	—	—	21.20	32.88	27.70	2"	Duplicate		
MW-4B	—	—	21.12						
MW-5	DRY	—	24.85	40.08	24.90	2"	Dry: depth to bottom = 24.85		
MW-6	DRY	—	21.60	36.93	22.10	2"	Pumped dry, no sample		
MW-7	—	—	20.76	32.26	25.20	2"			
MW-8	—	—	20.09	30.06	23.00	2"			
MW-8B	—	—	19.51						
MW-9	—	—	17.83	30.45	27.15	2"			
[redacted]	20.12	0.02	20.14	30.32	24.95	2"			
[redacted]	22.50	?	?	35.03	29.90	2"	too viscous for DTW		
[redacted]	16.85	·	17.04	34.03	30.00	2"	no sample		
MW-12B	—	—	23.50						
MW-12C	—	—	23.97						
MW-13	—	—	21.78	35.81	29.60	2"			
MW-14	—	—	22.65	36.54	27.70	2"			
MW-15	—	—	21.45	37.15	28.00	2"			
[redacted]	12.39	0.08	12.47	38.95	19.60	2"	No sample		
MW-17	—	—	22.02	36.57	29.90	2"			
MW-18	NG	→	→	36.66	29.60	2"	Under Equipment		
[redacted]	—	—	23.05			2"			
[redacted]	15.11	0.15	15.26		35.20	2"	No sample		
[redacted]	18.45	Sheen	18.45		34.20	2"			
MW-22	—	—	19.59		29.50	2"	TD=20.3 (7/19/10)		
[redacted]	13.95	0.02	13.97			2"			
[redacted]	10.70	0.02	10.72		19.50	2"			
MW-25	—	—	18.72		29.37	2"			
MW-26	—	—	23.16		27.10	4"			
[redacted]	—	—	18.56		19.08	3/4"			
[redacted]	—	—	18.60			4"			

FIELD SAMPLING RECORD
KMLT Linnton Terminal
Portland, Oregon

Technician(s): KCM / BNL/ NWH

Project #: KMLIN-1402

Date: 7/1/15

Well ID	Depth to Product	SPH Thickness	Depth to Water	TOC	Total Depth	Diameter	Notes	Total Fluids Extracted	SPH Extracted
	(ft)	(ft)	(ft)	(ft)	(ft)	(in)		(gal)	(gal)
P-1	NG	→		37.89	--	3/4"	covered by gravel		
P-2	—	—	15.57	36.54	--	3/4"			
	—	—	18.76	33.53	--	3/4"			
	—	—	19.68	31.75	--	3/4"			
Sump-1	—	—	17.42						
Sump-2	—	—	12.02						
Sump-3	—	—	13.10						
	—	—	21.80		31.00		Difficult to gauge		
	—	—	22.75		31.00		Difficult to gauge		
	—	—	23.40		31.00				
	—	—	23.25		31.00				
	—	—	22.75						
	—	—	23.05				difficult to gauge		
	—	—	24.25						
	18.18	3.62	21.80						
	18.11	0.10	18.21						
	19.02	0.51	19.53						
	17.93	0.07	18.00						
	20.41	0.22	20.63						
	17.34	0.10	17.44						
	20.47	0.56	21.03						
	18.93	0.18	19.11						
PZ-9	—	—	19.47						
PZ-10	—	—	19.82						

= gauge with interface probe (possible SPH or sheen)

Sampling Analytes: TPH-G, TPH-Dx, BTEX, PAHs, Metals.

Sample all MWs with no SPH (sheen, measurable, or observable) except deep aquifer wells are not sampled (4B, 8B, 12B, 12C).

Sample after parameters stabilize.

PZ-3

CH2MHILL	PROJECT NUMBER KMLIN1501		
	LNAPL Baildown Test Field Log		
Kinder Morgan Linnton Terminal	Field Crew: BNL		
	Date: 4-21-15	Weather: Overcast	
Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	17.48	2 in / 10 in ✓	0.85 ✓
Initial DTNAPL (ft):	16.17	4 in / 12 in	1.57
Depth to Bottom (ft):		6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):	1.31	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			1.11
Time Start of NAPL Removal:	0938	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	10:10		
Volume NAPL Removed (gal):	1 gal + 500 ml		

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
930	17.48	16.17	Initial, Begin Pump 938. Very Dark Brown
949	17.05	17.55	≈ 0.5 gal pumped at this point
0956	17.56	17.58	sheen water and oil coming in
1001	17.86	17.88	water and oil Mostly water. Total right at gal
1006	18.00	18.00	skimming
1010	18.00	18.00	shut off Pump
1015	17.55	17.55	sheen
1020	17.30	17.30	sheen
1025	17.18	17.18	sheen
1030	17.01	17.01	sheen
1035	16.89	16.88	
1040	16.80	16.79	
1100	16.70	16.67	
1200	16.66	16.53	
1300	16.61	16.41	
1358	16.73	16.52	
1500	16.81	16.57	
1535	16.87	16.58	

Pumping

Notes:

(1.0 gal + 750 ml) total purge

- 250 ml H_2O in Purge

PZ-8

CH2MHILL	PROJECT NUMBER KMLDU1501		
	LNAPL Baildown Test Field Log		
Kinder Morgan Linnton Terminal	Field Crew: BNL		
	Date: 4-21-15	*Weather:* Overcast	
Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	17.34	2 in / 10 in ✓	0.85 ✓
Initial DTNAPL (ft):	16.95	4 in / 12 in	1.57
Depth to Bottom (ft):		6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):	0.39	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			0.33
Time Start of NAPL Removal:	1223	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	1240		
Volume NAPL Removed (gal):	300 ml		

Pumping

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
1211	17.34	16.95	
1223			Start Pump
1227	17.15	17.05	
1231	17.07	17.06	Skimming
1235	17.08	17.07	" , lower pump slightly to 17.25 ft
1240	17.32	17.32	Pump off
1245	17.10	17.11	
1250	17.01	17.00	
1255	16.97	16.96	
1305	16.97	16.96	
1330	16.99	16.98	
1356	17.01	17.00	
1500	17.00	16.97	
1530	17.00	16.97	

Notes:

1100 ml total purge
300 ml NAPL, 800 ml H_2O

EW-1

CH2MHILL

PROJECT NUMBER KMLIN1501

LNAPL Baildown Test Field Log

Kinder Morgan Linnton Terminal

Field Crew: BNL

Date: 4-21-15

Weather: Overcast

Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	14.40	2 in / 10 in	0.85
Initial DTNAPL (ft):	12.72	4 in / 12 in	1.57
Depth to Bottom (ft):		6 in / 12 in ✓	2.24 ✓
Initial NAPL Layer Thickness (ft):	1.68	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			3.76
Time Start of NAPL Removal:	1041	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	1135		
Volume NAPL Removed (gal):	2.30		0.61

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
1032	14.40	12.72	Some
1041			Begin Pump Very Dark Brown
1052		12.90	Mix of Water & Oil. Pull up inlet slightly
1103	13.70	12.80	1 gal purged 99% ~~NAPL~~ oil. Pump Inlet at 13.20
1115	13.30	12.90	
1120	13.05	12.90	2 gal. Some Water showing up
1122	13.05	12.90	Set pump inlet at ≈13.00
1125	12.99	12.90	Raise Pump slightly
1127	12.95	12.93	
1130	12.96	12.95	skimming surface
1135	12.96	12.96	Shut off Pump, sheen
1140	12.90	12.89	
1145	12.90	12.89	
1150	12.90	12.89	
1155	12.87	12.83	
1200	12.81	12.80	
1210	12.82	12.80	
1230	12.82	12.80	
1300	12.82	12.81	
1400	12.96	12.95	
1500	13.00	12.98	
1540	13.02	13.00	

Pumping

Notes:

Note. Pump and Associated hoses are in well. Pump set much lower than DTW. Hoses within water column include (one, 1" hose)(2, ½" hoses)(1, ¼" hose

3.00 gal Total, 2.30 NAPL

EW-6

CH2MHILL

PROJECT NUMBER KMCIN1501

LNAPL Baildown Test Field Log

Kinder Morgan Linnton Terminal	Field Crew: BNL		
	Date: 4-21-15	*Weather:* Overcast	
Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	16.15	2 in / 10 in	0.85
Initial DTNAPL (ft):	14.94	4 in / 12 in ✓	1.57 ✓
Depth to Bottom (ft):	~~17.21~~ BNL	6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):	1.21	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			1.89
Time Start of NAPL Removal:	1316	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	1355		
Volume NAPL Removed (gal):	1.60 gal		0.85

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
1310	16.15	14.94	Attempt Pump set @ 16.00' BGS
1316			Pump Start, Black, Viscous
1320	16.00	15.03	Approx 0.25 gallons, 100% NAPL
1327	16.00	15.05	Approx 0.50 gallons, Pulled Pump Inlet up.
1332	15.76	15.07	
1337	15.50	15.10	
1345	15.16	15.15	started getting some water, adjust & speed up
1348	15.18	15.17	Pull pump up very slightly in order to skim pump
1350	15.11	15.11	skimming
1355	15.11	15.11	Shut off pump
1400	15.14	15.10	
1405	15.16	15.09	
1410	15.18	15.09	
1420	15.25	15.10	
1430	15.31	15.10	
1440	15.40	15.11	
1450	15.44	15.12	
1500	15.47	15.12	
1530	15.54	15.13	
1545	15.59	15.14	

Pumping

Notes:
IRAM Pump bellow DTW
In water column = One, 1" hose and two, ½" hoses

1.70 gal Total Purge, 1.60 gal NAPL

CH2MHILL

PROJECT NUMBER KMLIN1501 PZ-1

LNAPL Baildown Test Field Log

Kinder Morgan Linnton Terminal

Field Crew: BNL

Date: 7/13/15

Weather: Partly Cloudy 70-80°

Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	21.92	2 in / 10 in	0.85
Initial DTNAPL (ft):	18.41	4 in / 12 in	1.57
Depth to Bottom (ft):		6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):	3.51	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			2.98
Time Start of NAPL Removal:	13:10	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	1420		
Volume NAPL Removed (gal):	1.273		0.42

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
1307	21.92	18.41	initial gauge
1310	21.92	18.41	Begin Pumping. Pump Inlet @ 20' BTOC
1315	21.85	18.80	Dark Brown NAPL
1317			600 ml NAPL
1320	21.64	19.00	Turned pump rate down slightly
1325	21.34	19.07	Turn pump down slightly, +1100 ml
1330	21.00	19.11	
1335	20.55	19.60	600 ml @ 13:32, Turn pump down slightly
1340	20.25	19.08	move pump inlet to 19.5' BTOC
1350	19.55	19.15	move pump inlet to 19.25' BTOC +1600
1400	19.25	19.21	slight water in NAPL, +500 NAPL +200 H_2O
1410	19.20	19.10	+500 H_2O +200 NAPL
1420	19.20	19.18	+500 H_2O +220 NAPL
1420			Shut down pump
1425	19.00	18.86	Rebound Measurements
1430	19.05	18.80	
1440	19.14	18.73	
1500	19.39	18.66	
1520	19.54	18.60	
1540	19.60	18.42	
1600	19.60	18.36	End Test

PUMP ON

OFF

Notes:
NAPL 600 + 1100 + 600 + 1600 ml + 500 + 200 + 220 = 4820 NAPL ml

H_2O 200 + 500 + 500 = 1200 H_2O ml

6020 Total ml

CH2MHILL

PROJECT NUMBER PZ-1

LNAPL Baildown Test Field Log

Kinder Morgan Linnton Terminal

Field Crew: BNC

Date: 7/27/15

Weather: Cloudy → Part Sunny

Well Depth (ft):	30.25	*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):	23.82	2 in / 10 in	0.85
Initial DTNAPL (ft):	18.68	4 in / 12 in	1.57
Depth to Bottom (ft):	30.25	6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):	5.14	Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			4.369
Time Start of NAPL Removal:	11:00	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	13:15		
Volume NAPL Removed (gal):	2.969		0.679

Correction: total NAPL is 1.99 US gal (2.69 is is the total water and NAPL)

Correction: actual fraction is 0.46

Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed)
1100	23.82	18.68	start pump
1105	23.72	19.10	Lower Pump Inlet to 20' BTOC
1110	23.48	19.17	
1115	23.40	19.25	
1120	23.13	19.29	1500 ml NAPL
1125	22.79	19.40	
1130	22.45	19.41	770 ml NAPL
1140	21.95	19.55	
1150	21.35	19.60	1500 ml NAPL
1200	20.82	19.74	770 ml NAPL
1210	20.50	19.80	
1220	20.29	19.82	1350 ml NAPL
1230	20.28	19.85	400+300 ml, ~~lower~~ speed pump up ~~start~~
			getting more H_2O but NAPL thickness same
1240	20.30	19.97	500+500, Lower pump inlet slightly
1250	20.38	20.05	600+200, Move pump inlet to 20'
1300	20.28	20.18	Turn pump up, skim oil off top attempt
			500+250
1310	20.32	20.24	(Tygon swap, pump off ten seconds)
			300+1100
1315	20.32	20.34	Stop Pump 100+600
1320	19.95	19.90	
1325	19.73	19.68	
1330	19.65	19.56	
1335	19.55	19.44	

Pump ON

Pump OFF

Notes: Pump start exactly @ 11:00 AM, Initial Inlet @ 19' BTOC.

NAPL	1500	770	1500	770	1350	300	500	200	250	300	100	Total	7540
H_2O	∅	∅	∅	∅	∅	400	500	600	500	1100	600	Total	3700

11240

CH2MHILL

PROJECT NUMBER PZ-1

LNAPL Baildown Test Field Log

Kinder Morgan Linnton Terminal	Field Crew:		
	Date: 7/27/15	*Weather:*	
Well Depth (ft):		*Circle One:* Well Diameter (in) / Borehole Diameter (in)	*Factor:*
Initial DTW (ft):		2 in / 10 in	0.85
Initial DTNAPL (ft):		4 in / 12 in	1.57
Depth to Bottom (ft):		6 in / 12 in	2.24
Initial NAPL Layer Thickness (ft):		Effective NAPL Well Volume (gal):	Initial NAPL Thickness * Factor
			4.369
Time Start of NAPL Removal:	11:00	Fraction of NAPL removed	Volume NAPL Recovered / Effective NAPL Well Volume
Time End of NAPL Removal:	13:15		
Volume NAPL Removed (gal):	2.969		0.679

	Time (hr:min)	DTW (TOC)	Depth to NAPL (using probe)	Notes (pump on/off, int. volume removed):
Pump off	1345	19.50	19.35	
	1355	19.44	19.26	
	1405	19.46	19.15	
	1435	19.40	19.01	
	1505	19.52	18.88	
				Depart
7/28/15	10:10	19.96	18.78	

Notes:

CH2MHILL

PROJECT NUMBER KMLin 1501

NAPL Removal Field Log

Kinder Morgan Linnton Terminal

Field Crew: NWH / MKT

Well ID	Date	Time (hr:min)	Initial DTW (ft btoc)	Initial Depth to NAPL (ft btoc)	Final DTW (ft btoc)	Final Depth to NAPL (ft btoc)	Purge Time (min)	Volume NAPL Removed (gal)	Volume Water Removed (gal)	Notes:
PZ-1	9/29/15	13:25	23.78	18.86	20.00	19.91	10	2.75	1.25	Purged w/ air diaphragm pump. Approx. 1 ft max drawdown
PZ-3	9/29/15	13:40	19.89	19.79	21.20	—	5	0.1	1.4	Sheen after pumping
PZ-5	9/29/15	13:55	21.71	21.41	22.24	22.23	7	0.15	1.35	

Notes:

CH2MHILL

PROJECT NUMBER KMLIN

NAPL Removal Field Log

Kinder Morgan Linnton Terminal

Field Crew: BVL + NWH

Well ID	Date	Time (hr:min)	Initial DTW (ft btoc)	Initial Depth to NAPL (ft btoc)	Final DTW (ft btoc)	Final Depth to NAPL (ft btoc)	Purge Time (min)	Volume NAPL Removed (gal)	Volume Water Removed (gal)	Notes:
PZ 1	11/6/15	1200	24.92	18.65	20.42	20.30	3 & 2	2	1.5	
PZ 2			24.85	19.11	22.15	22.10	2 & 1	1.5	1	
PZ 7			23.94	22.08	22.42	22.18	2.5	.5	.5	
PZ 4			18.73	18.77	NA	→			→	0.04'
PZ-5			19.38	19.23	20.91	20.90	2	.25	.5	
PZ 6			18.39	18.22	19.61	19.60	2	.25	.5	
PZ 3		↓	19.12	19.10	NA	→			→	0.02'
PZ 8	11/6/15	1300	21.40	21.37	NA	→			→	0.03' Lighter colored

Notes:

CH2MHILL

PROJECT NUMBER

NAPL Removal Field Log

Kinder Morgan Linnton Terminal

Field Crew: BNL

Well ID	Date	Time (hr:min)	Initial DTW (ft btoc)	Initial Depth to NAPL (ft btoc)	Final DTW (ft btoc)	Final Depth to NAPL (ft btoc)	Purge Time (min)	Volume NAPL Removed (gal)	Volume Water Removed (gal)	Notes:
PZ-7	12/30/15	12:15	16.17	15.60	15.89	15.89	12	0.5	0.5	P-Pump
PZ-1	"	12:30	14.44	14.26	15.50	15.49	7	0.1	0.25	P-Pump
PZ-2	"	12:40	13.48	13.28	13.49	13.49	5	0.1	0.1	P-Pump
PZ-3	"	12:55	16.00	14.83	16.35	16.30	15	0.75	2.25	P-Pump
PZ-4	"	13:15	12.27	12.26	—	—	—	—	—	Not pumped
PZ-5	"	13:25	14.87	14.76	—	—	—	—	—	Not pumped
PZ-6	"	13:27	12.65	12.63	—	—	—	—	—	Not pumped
PZ-8	"	13:30	15.84	14.97	15.67	15.66	10	0.5	0.2	P-Pump

Notes:

Appendix B
Historical Data

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW1	27.98	02/01/02	13.34	13.34	sheen	14.64
MW1	27.98	04/24/02	13.26	13.26	sheen	14.72
MW1	27.98	07/29/02	15.82	15.80	0.02	12.18
MW1	27.98	10/29/02	18.41	18.40	0.01	9.58
MW1	27.98	11/26/02	17.91	17.81	0.10	10.15
MW1	27.98	12/30/02	15.63	15.63	sheen	12.35
MW1	27.98	01/28/03	15.15	-	-	12.83
MW1	27.98	04/29/03	13.15	-	-	14.83
MW1	27.98	07/29/03	16.31	16.31	sheen	11.67
MW1	27.98	10/28/03	17.35	17.18	0.17	10.77
MW1	27.98	01/29/04	13.30	13.20	0.10	14.76
MW1	27.98	04/28/04	15.84	15.73	0.11	12.23
MW1	27.98	07/26/04	17.33	17.18	0.15	10.77
MW1	27.98	11/01/04	17.72	17.14	0.58	10.72
MW1	27.98	02/01/05	16.65	16.34	0.31	11.58
MW1	27.98	04/28/05	15.47	15.41	0.06	12.56
MW1	27.98	07/25/05	16.27	16.25	0.02	11.73
MW1	27.98	10/25/05	19.00	18.55	0.45	9.34
MW1	27.98	01/26/06	11.94	11.94	sheen	16.04
MW1	27.98	04/20/06	11.54	-	-	16.44
MW1	27.98	07/19/06	15.92	15.92	sheen	12.06
MW1	27.98	10/17/06	18.89	18.78	0.11	9.18
MW1	27.98	01/29/07	15.51	15.51	sheen	12.47
MW1	27.98	04/24/07	14.85	14.85	sheen	13.13
MW1	27.98	07/23/07	17.04	17.04	sheen	10.94
MW1	27.98	10/31/07	18.05	18.03	0.02	9.95
MW1	27.98	01/23/08	14.63	-	-	13.35
MW1	27.98	04/17/08	15.53	15.53	sheen	12.45
MW1	27.98	07/16/08	15.02	15.02	sheen	12.96
MW1	27.98	10/20/08	18.32	18.32	sheen	9.66
MW1	27.98	01/26/09	15.60	15.60	sheen	12.38
MW1	27.98	04/21/09	15.22	15.22	sheen	12.76
MW1	27.98	07/27/09	16.87	16.87	sheen	11.11
MW1	27.98	10/29/09	18.77	18.77	sheen	9.21
MW1	27.98	01/26/10	15.24	15.24	sheen	12.74
MW1	27.98	04/29/10	14.91	14.91	sheen	13.07
MW1	27.98	07/19/10	15.96	15.96	sheen	12.02
MW1	27.98	10/20/10	17.64	-	-	10.34
MW1	27.98	01/17/11	11.71	-	-	16.27
MW1	27.98	04/27/11	12.71	-	-	15.27
MW1	27.98	07/26/11	12.97	12.94	0.03	15.03
MW1	27.98	10/19/11	16.46	16.46	sheen	11.52
MW1	27.98	11/30/11	14.53	-	-	13.45
MW1	27.98	12/21/11	15.82	-	-	12.16
MW1	27.98	01/25/12	12.10	-	-	15.88
MW1	27.98	04/27/12	8.86	-	-	19.12
MW1	27.98	07/25/12	12.64	-	-	15.34
MW1	27.98	10/09/12	17.05	17.04	0.01	10.94
MW1	27.98	01/28/13	14.26	-	-	13.72
MW1	27.98	04/12/13	14.06	-	-	13.92
MW1	27.98	07/09/13	15.02	-	-	12.96
MW1	27.98	10/16/13	16.48	-	-	11.50
MW1	27.98	01/07/14	16.68	-	-	11.30
MW1	27.98	04/14/14	12.70	-	-	15.28
MW1	27.98	07/29/14	15.47	-	-	12.51
MW1	27.98	10/15/14	17.24	-	-	10.74

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW1	27.98	1/28/2015	15.02	-	-	12.96
MW1	27.98	7/1/2015	16.87	-	-	11.11
MW2	28.47	01/29/02	14.27	13.60	0.67	14.74
MW2	28.47	04/24/02	13.96	13.37	0.59	14.98
MW2	28.47	07/29/02	16.50	16.16	0.34	12.24
MW2	28.47	10/29/02	18.93	18.92	0.01	9.55
MW2	28.47	11/26/02	18.82	18.52	0.30	9.89
MW2	28.47	12/30/02	16.81	16.33	0.48	12.04
MW2	28.47	01/28/03	16.04	15.70	0.34	12.70
MW2	28.47	04/29/03	13.81	13.27	0.54	15.09
MW2	28.47	07/29/03	17.23	16.92	0.31	11.49
MW2	28.47	10/28/03	19.53	17.58	1.95	10.50
MW2	28.47	01/29/04	14.48	13.31	1.17	14.93
MW2	28.47	07/26/04	15.34	15.05	0.29	13.36
MW2	28.47	11/01/04	17.03	14.86	2.17	13.18
MW2	28.47	02/01/05	14.08	14.00	0.08	14.45
MW2	28.47	04/28/05	17.82	16.91	0.91	11.38
MW2	28.47	07/25/05	-	14.35	[c]	-
MW2	28.47	10/25/05	-	16.42	[c]	-
MW2	28.47	01/26/06	9.62	9.44	0.18	18.99
MW2	28.47	04/20/06	-	13.15	[c]	-
MW2	28.47	07/19/06	-	17.20	[c]	-
MW2	28.47	10/17/06	-	20.45	[c]	-
MW2	28.47	01/29/07	17.46	17.22	0.24	11.20
MW2	28.47	04/24/07	17.16	17.04	0.12	11.41
MW2	28.47	07/23/07	19.01	18.95	0.06	9.51
MW2	28.47	10/31/07	-	19.60	[c]	-
MW2	28.47	01/23/08	16.50	16.00	0.50	12.37
MW2	28.47	04/17/08	17.21	16.63	0.58	11.72
MW2	28.47	07/16/08	16.50	16.48	0.02	11.99
MW2	28.47	10/20/08	20.26	20.24	0.02	8.23
MW2	28.47	01/26/09	16.27	16.09	0.18	12.34
MW2	28.47	04/21/09	17.53	17.53	sheen	10.94
MW2	28.47	07/27/09	18.71	18.71	sheen	9.76
MW2	28.47	10/29/09	19.52	16.91	2.61	11.04
MW2	28.47	01/26/10	-	-	-	-
MW2	28.47	04/29/10	-	-	-	-
MW2	28.47	07/19/10	-	-	-	-
MW2	28.47	10/20/10	16.09	16.08	0.01	12.39
MW2	28.47	01/17/11	10.47	9.35	1.12	18.90
MW2	28.47	04/27/11	-	-	-	-
MW2	28.47	07/26/11	-	-	-	-
MW3	28.97	01/29/02	13.04	12.86	0.18	16.07
MW3	28.97	04/24/02	13.11	13.00	0.11	15.95
MW3	28.97	07/29/02	14.69	14.42	0.27	14.50
MW3	28.97	10/29/02	16.11	16.11	sheen	12.86
MW3	28.97	11/26/02	16.08	15.72	0.36	13.18
MW3	28.97	01/28/03	14.15	14.07	0.08	14.88
MW3	28.97	04/29/03	12.75	12.71	0.04	16.25
MW3	28.97	07/29/03	15.03	14.83	0.20	14.10
MW3	28.97	10/28/03	15.58	15.51	0.07	13.45
MW3	28.97	01/29/04	12.87	12.84	0.03	16.12
MW3	28.97	04/28/04	14.05	14.00	0.05	14.96
MW3	28.97	07/26/04	15.24	15.14	0.10	13.81
MW3	28.97	11/01/04	15.29	15.25	0.04	13.71
MW3	28.97	02/01/05	15.04	15.00	0.04	13.96

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW3	28.97	04/28/05	14.38	14.38	sheen	14.59
MW3	28.97	07/25/05	14.67	14.67	sheen	14.30
MW3	28.97	10/25/05	15.71	15.65	0.06	13.31
MW3	28.97	01/26/06	11.28	11.28	sheen	17.69
MW3	28.97	04/20/06	12.27	12.27	sheen	16.70
MW3	28.97	07/19/06	14.21	14.21	sheen	14.76
MW3	28.97	10/17/06	16.09	16.03	0.06	12.93
MW3	28.97	01/29/07	13.28	13.27	0.01	15.70
MW3	28.97	04/24/07	13.48	13.48	sheen	15.49
MW3	28.97	07/23/07	15.00	15.00	sheen	13.97
MW3	28.97	10/31/07	15.52	-	-	13.45
MW3	28.97	01/23/08	13.22	13.22	sheen	15.75
MW3	28.97	04/17/08	13.57	13.56	0.01	15.41
MW3	28.97	07/16/08	13.61	13.53	0.08	15.42
MW3	28.97	10/20/08	15.74	15.74	sheen	13.23
MW3	28.97	01/26/09	13.13	13.13	sheen	15.84
MW3	28.97	04/21/09	14.11	-	-	14.86
MW3	28.97	07/27/09	14.90	14.90	sheen	14.07
MW3	28.97	10/29/09	15.71	-	-	13.26
MW3	28.97	01/26/10	13.86	-	-	15.11
MW3	28.97	04/29/10	13.80	-	-	15.17
MW3	28.97	07/19/10	13.82	13.82	sheen	15.15
MW3	28.97	10/20/10	15.38	15.38	sheen	13.59
MW3	28.97	01/17/11	12.83	-	-	16.14
MW3	28.97	04/27/11	11.94	-	-	17.03
MW3	28.97	07/26/11	12.37	-	-	16.60
MW3	28.97	10/19/11	15.30	15.29	0.01	13.68
MW3	28.97	11/30/11	-	-	-	-
MW3	28.97	12/21/11	-	-	-	-
MW3	28.97	01/25/12	13.19	-	-	15.78
MW3	28.97	04/27/12	10.01	-	-	18.96
MW3	28.97	07/25/12	12.74	-	-	16.23
MW3	28.97	10/09/12	15.40	15.39	0.01	13.58
MW3	28.97	01/28/13	13.21	-	-	15.76
MW3	28.97	04/12/13	13.96	-	-	15.01
MW3	28.97	07/09/13	14.48	-	-	14.49
MW3	28.97	10/16/13	14.90	-	-	14.07
MW3	28.97	01/07/14	15.22	-	-	13.75
MW3	28.97	04/14/14	12.69	-	-	16.28
MW3	28.97	07/29/14	14.29	-	-	14.68
MW3	28.97	10/15/14	15.53	15.52	0.01	13.45
MW3	28.97	1/28/2015	13.72	-	-	15.25
MW3	28.97	7/1/2015	15.01	15.00	0.01	13.97
MW4	32.88	02/01/02	17.74	-	-	15.14
MW4	32.88	04/24/02	17.49	-	-	15.39
MW4	32.88	07/29/02	20.19	-	-	12.69
MW4	32.88	10/29/02	22.72	-	-	10.16
MW4	32.88	01/28/03	19.82	-	-	13.06
MW4	32.88	04/29/03	17.29	-	-	15.59
MW4	32.88	07/29/03	20.54	-	-	12.34
MW4	32.88	10/28/03	21.67	-	-	11.21
MW4	32.88	01/29/04	17.71	-	-	15.17
MW4	32.88	04/28/04	20.21	-	-	12.67
MW4	32.88	07/26/04	21.74	-	-	11.14

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW4	32.88	11/01/04	21.75	-	-	11.13
MW4	32.88	02/01/05	21.03	-	-	11.85
MW4	32.88	04/28/05	19.69	-	-	13.19
MW4	32.88	07/25/05	20.89	-	-	11.99
MW4	32.88	10/25/05	23.05	-	-	9.83
MW4	32.88	01/26/06	15.36	-	-	17.52
MW4	32.88	04/20/06	15.88	15.88	sheen	17.00
MW4	32.88	07/19/06	20.08	20.08	sheen	12.80
MW4	32.88	10/17/06	23.04	23.04	sheen	9.84
MW4	32.88	01/29/07	19.86	19.86	sheen	13.02
MW4	32.88	04/24/07	18.93	18.93	sheen	13.95
MW4	32.88	07/23/07	21.47	21.47	sheen	11.41
MW4	32.88	10/31/07	22.80	-	-	10.08
MW4	32.88	01/23/08	19.40	19.40	sheen	13.48
MW4	32.88	04/17/08	19.89	-	-	12.99
MW4	32.88	07/16/08	19.60	19.60	sheen	13.28
MW4	32.88	10/20/08	22.52	-	-	10.36
MW4	32.88	01/26/09	19.81	19.81	sheen	13.07
MW4	32.88	04/21/09	19.80	-	-	13.08
MW4	32.88	07/27/09	21.32	21.32	sheen	11.56
MW4	32.88	10/29/09	23.21	23.21	sheen	9.67
MW4	32.88	01/26/10	20.07	20.07	sheen	12.81
MW4	32.88	04/29/10	19.22	19.22	sheen	13.66
MW4	32.88	07/19/10	20.56	20.56	sheen	12.32
MW4	32.88	10/20/10	22.12	-	-	10.76
MW4	32.88	01/17/11	15.91	-	-	16.97
MW4	32.88	04/27/11	16.06	-	-	16.82
MW4	32.88	07/26/11	16.99	-	-	15.89
MW4	32.88	10/19/11	20.48	-	-	12.40
MW4	32.88	11/30/11	19.95	-	-	12.93
MW4	32.88	12/21/11	21.50	-	-	11.38
MW4	32.88	01/25/12	16.79	-	-	16.09
MW4	32.88	04/27/12	13.80	-	-	19.08
MW4	32.88	07/25/12	17.10	-	-	15.78
MW4	32.88	10/09/12	21.77	-	-	11.11
MW4	32.88	01/28/13	19.43	-	-	13.45
MW4	32.88	04/12/13	18.55	-	-	14.33
MW4	32.88	07/09/13	19.98	-	-	12.90
MW4	32.88	10/16/13	22.00	-	-	10.88
MW4	32.88	01/07/14	21.74	-	-	11.14
MW4	32.88	04/14/14	17.15	-	-	15.73
MW4	32.88	07/29/14	19.95	-	-	12.93
MW4	32.88	10/15/14	22.23	-	-	10.65
MW4	32.88	1/28/2015	19.10	-	-	13.78
MW4	32.88	7/1/2015	21.20	-	-	11.68
MW4B	33.11	10/20/08	22.03	-	-	11.08
MW4B	33.11	12/18/08	20.87	-	-	12.24
MW4B	33.11	01/26/09	19.38	-	-	13.73
MW4B	33.11	04/21/09	19.53	-	-	13.58
MW4B	33.11	07/30/09	21.88	-	-	11.23
MW4B	33.11	10/29/09	22.50	-	-	10.61
MW4B	33.11	01/26/10	19.56	-	-	13.55
MW4B	33.11	04/29/10	18.95	-	-	14.16

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW4B	33.11	07/19/10	19.91	-	-	13.20
MW4B	33.11	10/20/10	21.65	-	-	11.46
MW4B	33.11	01/17/11	15.88	-	-	17.23
MW4B	33.11	04/27/11	15.71	-	-	17.40
MW4B	33.11	07/26/11	17.36	-	-	15.75
MW4B	33.11	10/19/11	20.89	-	-	12.22
MW4B	33.11	11/30/11	-	-	-	-
MW4B	33.11	12/21/11	-	-	-	-
MW4B	33.11	01/25/12	17.25	-	-	15.86
MW4B	33.11	04/27/12	13.25	-	-	19.86
MW4B	33.11	07/25/12	16.72	-	-	16.39
MW4B	33.11	10/09/12	21.11	-	-	12.00
MW4B	33.11	01/28/13	18.93	-	-	14.18
MW4B	33.11	04/12/13	18.63	-	-	14.48
MW4B	33.11	07/09/13	19.58	-	-	13.53
MW4B	33.11	10/16/13	21.57	-	-	11.54
MW4B	33.11	01/07/14	21.51	-	-	11.60
MW4B	33.11	04/14/14	16.89	-	-	16.22
MW4B	33.11	07/29/14	19.30	-	-	13.81
MW4B	33.11	10/15/14	21.47	-	-	11.64
MW4B	33.11	1/28/2015	18.72	-	-	14.39
MW4B	33.11	7/1/2015	21.12	-	-	11.99
MW5	40.08	01/31/02	21.73	-	-	18.35
MW5	40.08	04/24/02	21.76	-	-	18.32
MW5	40.08	07/29/02	23.87	-	-	16.21
MW5	40.08	10/29/02	-	-	-	-
MW5	40.08	01/28/03	23.81	-	-	16.27
MW5	40.08	04/29/03	20.95	-	-	19.13
MW5	40.08	07/29/03	24.46	-	-	15.62
MW5	40.08	10/28/03	-	-	-	-
MW5	40.08	01/29/04	21.91	-	-	18.17
MW5	40.08	04/28/04	23.21	-	-	16.87
MW5	40.08	07/26/04	-	-	-	-
MW5	40.08	11/01/04	-	-	-	-
MW5	40.08	02/01/05	-	-	-	-
MW5	40.08	04/28/05	23.98	-	-	16.10
MW5	40.08	07/25/05	24.54	-	-	15.54
MW5	40.08	10/25/05	-	-	-	-
MW5	40.08	01/26/06	19.93	-	-	20.15
MW5	40.08	04/20/06	20.21	-	-	19.87
MW5	40.08	07/19/06	23.23	-	-	16.85
MW5	40.08	10/17/06	-	-	-	-
MW5	40.08	01/29/07	22.44	-	-	17.64
MW5	40.08	04/24/07	22.20	-	-	17.88
MW5	40.08	07/23/07	24.68	-	-	15.40
MW5	40.08	10/31/07	-	-	-	-
MW5	40.08	01/23/08	23.25	-	-	16.83
MW5	40.08	04/17/08	22.85	-	-	17.23
MW5	40.08	07/16/08	23.08	-	-	17.00
MW5	40.08	10/20/08	-	-	-	-
MW5	40.08	01/26/09	23.39	-	-	16.69
MW5	40.08	04/21/09	23.74	-	-	16.34
MW5	40.08	07/27/09	-	-	-	-

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW5	40.08	10/29/09	-	-	-	-
MW5	40.08	01/26/10	23.20	-	-	16.88
MW5	40.08	04/29/10	23.08	-	-	17.00
MW5	40.08	07/19/10	23.18	-	-	16.90
MW5	40.08	10/20/10	-	-	-	-
MW5	40.08	01/17/11	20.70	-	-	19.38
MW5	40.08	04/27/11	18.25	-	-	21.83
MW5	40.08	07/26/11	21.06	-	-	19.02
MW5	40.08	10/19/11	-	-	-	-
MW5	40.08	11/30/11	-	-	-	-
MW5	40.08	12/21/11	-	-	-	-
MW5	40.08	01/25/12	22.71	-	-	17.37
MW5	40.08	04/27/12	18.90	-	-	21.18
MW5	40.08	07/25/12	21.11	-	-	18.97
MW5	40.08	10/09/12	-	-	-	-
MW5	40.08	01/28/13	22.33	-	-	17.75
MW5	40.08	04/12/13	22.84	-	-	17.24
MW5	40.08	07/09/13	23.79	-	-	16.29
MW5	40.08	10/16/13	-	-	-	-
MW5	40.08	01/07/14	-	-	-	-
MW5	40.08	04/14/14	21.38	-	-	18.70
MW5	40.08	07/29/14	23.83	-	-	16.25
MW5	40.08	10/15/14	-	-	-	-
MW5	40.08	1/28/2015	-	-	-	-
MW5	40.08	7/1/2015	-	-	-	-
MW6	36.93	02/01/02	16.77	-	-	20.16
MW6	36.93	04/24/02	17.82	-	-	19.11
MW6	36.93	07/29/02	20.85	-	-	16.08
MW6	36.93	10/29/02	21.51	-	-	15.42
MW6	36.93	01/28/03	19.72	-	-	17.21
MW6	36.93	04/29/03	15.88	-	-	21.05
MW6	36.93	07/29/03	-	-	-	-
MW6	36.93	10/28/03	21.61	-	-	15.32
MW6	36.93	01/29/04	16.59	-	-	20.34
MW6	36.93	04/28/04	19.72	-	-	17.21
MW6	36.93	07/26/04	-	-	-	-
MW6	36.93	11/01/04	21.58	-	-	15.35
MW6	36.93	02/01/05	21.35	-	-	15.58
MW6	36.93	04/28/05	20.21	-	-	16.72
MW6	36.93	07/25/05	21.24	-	-	15.69
MW6	36.93	10/25/05	21.58	-	-	15.35
MW6	36.93	01/26/06	13.78	-	-	23.15
MW6	36.93	04/20/06	15.33	-	-	21.60
MW6	36.93	07/19/06	20.48	-	-	16.45
MW6	36.93	10/17/06	21.50	-	-	15.43
MW6	36.93	01/29/07	17.99	-	-	18.94
MW6	36.93	04/24/07	17.91	-	-	19.02
MW6	36.93	07/23/07	21.48	-	-	15.45
MW6	36.93	10/31/07	-	-	-	-
MW6	36.93	01/23/08	16.95	-	-	19.98
MW6	36.93	04/17/08	18.52	-	-	18.41
MW6	36.93	07/16/08	19.95	-	-	16.98
MW6	36.93	10/20/08	21.51	-	-	15.42

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW6	36.93	01/26/09	19.65	-	-	17.28
MW6	36.93	04/21/09	-	-	-	-
MW6	36.93	07/27/09	21.51	-	-	15.42
MW6	36.93	10/29/09	-	-	-	-
MW6	36.93	01/26/10	19.12	-	-	17.81
MW6	36.93	04/29/10	18.47	-	-	18.46
MW6	36.93	07/19/10	19.59	-	-	17.34
MW6	36.93	10/20/10	21.52	-	-	15.41
MW6	36.93	01/17/11	14.95	-	-	21.98
MW6	36.93	04/27/11	-	-	-	-
MW6	36.93	07/26/11	18.13	-	-	18.80
MW6	36.93	10/19/11	-	-	-	-
MW6	36.93	11/30/11	-	-	-	-
MW6	36.93	12/21/11	-	-	-	-
MW6	36.93	01/25/12	18.84	-	-	18.09
MW6	36.93	04/27/12	13.25	-	-	23.68
MW6	36.93	07/25/12	18.17	-	-	18.76
MW6	36.93	10/09/12	-	-	-	-
MW6	36.93	01/28/13	18.11	-	-	18.82
MW6	36.93	04/12/13	18.30	-	-	18.63
MW6	36.93	07/09/13	20.29	-	-	16.64
MW6	36.93	10/16/13	21.55	-	-	15.38
MW6	36.93	01/07/14	21.56	-	-	15.37
MW6	36.93	04/14/14	15.86	-	-	21.07
MW6	36.93	07/29/14	20.83	-	-	16.10
MW6	36.93	10/15/14	21.50	-	-	15.43
MW6	36.93	1/28/2015	18.97	-	-	17.96
MW6	36.93	7/1/2015	-	-	-	-
MW7	32.26	01/31/02	17.74	-	-	14.52
MW7	32.26	04/24/02	17.81	-	-	14.45
MW7	32.26	07/29/02	20.06	-	-	12.20
MW7	32.26	10/29/02	22.40	-	-	9.86
MW7	32.26	01/28/03	19.02	-	-	13.24
MW7	32.26	04/29/03	16.23	-	-	16.03
MW7	32.26	07/29/03	20.52	-	-	11.74
MW7	32.26	10/28/03	21.41	-	-	10.85
MW7	32.26	01/29/04	16.49	-	-	15.77
MW7	32.26	04/28/04	19.78	-	-	12.48
MW7	32.26	07/26/04	21.30	-	-	10.96
MW7	32.26	11/01/04	21.31	-	-	10.95
MW7	32.26	02/01/05	20.42	-	-	11.84
MW7	32.26	04/28/05	19.01	-	-	13.25
MW7	32.26	07/25/05	20.09	-	-	12.17
MW7	32.26	10/25/05	22.27	-	-	9.99
MW7	32.26	01/26/06	14.28	-	-	17.98
MW7	32.26	04/20/06	14.09	-	-	18.17
MW7	32.26	07/19/06	19.77	-	-	12.49
MW7	32.26	10/17/06	22.13	-	-	10.13
MW7	32.26	01/29/07	18.64	-	-	13.62
MW7	32.26	04/24/07	17.57	-	-	14.69
MW7	32.26	07/23/07	20.59	-	-	11.67
MW7	32.26	10/31/07	22.01	-	-	10.25
MW7	32.26	01/23/08	17.86	-	-	14.40

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW7	32.26	04/17/08	18.69	-	-	13.57
MW7	32.26	07/16/08	19.10	-	-	13.16
MW7	32.26	10/20/08	21.99	-	-	10.27
MW7	32.26	01/26/09	19.27	-	-	12.99
MW7	32.26	04/21/09	18.63	-	-	13.63
MW7	32.26	07/27/09	20.81	-	-	11.45
MW7	32.26	10/29/09	22.43	-	-	9.83
MW7	32.26	01/26/10	19.47	-	-	12.79
MW7	32.26	04/29/10	17.79	-	-	14.47
MW7	32.26	07/19/10	19.63	-	-	12.63
MW7	32.26	10/20/10	21.85	-	-	10.41
MW7	32.26	01/17/11	14.11	-	-	18.15
MW7	32.26	04/27/11	14.90	-	-	17.36
MW7	32.26	07/26/11	17.48	-	-	14.78
MW7	32.26	10/19/11	21.41	-	-	10.85
MW7	32.26	11/30/11	-	-	-	-
MW7	32.26	12/21/11	-	-	-	-
MW7	32.26	01/25/12	16.55	-	-	15.71
MW7	32.26	04/27/12	11.95	-	-	20.31
MW7	32.26	07/25/12	16.81	-	-	15.45
MW7	32.26	10/09/12	21.87	-	-	10.39
MW7	32.26	01/28/13	18.24	-	-	14.02
MW7	32.26	04/12/13	16.52	-	-	15.74
MW7	32.26	07/09/13	18.65	-	-	13.61
MW7	32.26	10/16/13	21.46	-	-	10.80
MW7	32.26	01/07/14	21.03	-	-	11.23
MW7	32.26	04/14/14	15.48	-	-	16.78
MW7	32.26	07/29/14	19.54	-	-	12.72
MW7	32.26	10/15/14	21.95	-	-	10.31
MW7	32.26	1/28/2015	18.02	-	-	14.24
MW7	32.26	7/1/2015	20.76	-	-	11.50
MW8	30.06	02/01/02	17.01	-	-	13.05
MW8	30.06	04/24/02	16.58	-	-	13.48
MW8	30.06	07/29/02	19.32	-	-	10.74
MW8	30.06	10/29/02	20.83	-	-	9.23
MW8	30.06	01/28/03	18.47	-	-	11.59
MW8	30.06	04/29/03	16.93	-	-	13.13
MW8	30.06	07/29/03	20.06	-	-	10.00
MW8	30.06	10/28/03	20.43	-	-	9.63
MW8	30.06	01/29/04	17.00	-	-	13.06
MW8	30.06	04/28/04	19.59	-	-	10.47
MW8	30.06	07/26/04	20.31	-	-	9.75
MW8	30.06	11/01/04	20.30	-	-	9.76
MW8	30.06	02/01/05	19.65	-	-	10.41
MW8	30.06	04/28/05	18.91	-	-	11.15
MW8	30.06	07/25/05	19.50	-	-	10.56
MW8	30.06	10/25/05	-	-	-	-
MW8	30.06	01/26/06	15.18	-	-	14.88
MW8	30.06	04/20/06	13.99	-	-	16.07
MW8	30.06	07/19/06	19.25	-	-	10.81
MW8	30.06	10/17/06	20.78	-	-	9.28
MW8	30.06	01/29/07	18.89	-	-	11.17
MW8	30.06	04/24/07	17.88	-	-	12.18

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW8	30.06	07/23/07	19.83	-	-	10.23
MW8	30.06	10/31/07	20.61	-	-	9.45
MW8	30.06	01/23/08	18.09	-	-	11.97
MW8	30.06	04/17/08	18.93	-	-	11.13
MW8	30.06	07/16/08	18.88	-	-	11.18
MW8	30.06	10/20/08	20.67	-	-	9.39
MW8	30.06	01/26/09	18.58	-	-	11.48
MW8	30.06	04/21/09	18.53	-	-	11.53
MW8	30.06	07/27/09	19.79	-	-	10.27
MW8	30.06	10/29/09	20.97	-	-	9.09
MW8	30.06	01/26/10	18.25	-	-	11.81
MW8	30.06	04/29/10	17.66	-	-	12.40
MW8	30.06	07/19/10	19.04	-	-	11.02
MW8	30.06	10/20/10	20.63	-	-	9.43
MW8	30.06	01/17/11	14.34	-	-	15.72
MW8	30.06	04/27/11	16.41	-	-	13.65
MW8	30.06	07/26/11	17.26	-	-	12.80
MW8	30.06	10/19/11	20.20	-	-	9.86
MW8	30.06	11/30/11	-	-	-	-
MW8	30.06	12/21/11	-	-	-	-
MW8	30.06	01/25/12	14.28	-	-	15.78
MW8	30.06	04/27/12	11.23	-	-	18.83
MW8	30.06	07/25/12	16.22	-	-	13.84
MW8	30.06	10/09/12	20.47	-	-	9.59
MW8	30.06	01/28/13	17.62	-	-	12.44
MW8	30.06	04/12/13	15.83	-	-	14.23
MW8	30.06	07/09/13	18.13	-	-	11.93
MW8	30.06	10/16/13	19.88	-	-	10.18
MW8	30.06	01/07/14	20.16	-	-	9.90
MW8	30.06	04/14/14	15.77	-	-	14.29
MW8	30.06	07/29/14	19.00	-	-	11.06
MW8	30.06	10/15/14	20.43	-	-	9.63
MW8	30.06	1/28/2015	17.88	-	-	12.18
MW8	30.06	7/1/2015	20.09	-	-	9.97
MW8B	30.10	10/20/08	20.16	-	-	9.94
MW8B	30.10	12/18/08	19.35	-	-	10.75
MW8B	30.10	01/26/09	18.01	-	-	12.09
MW8B	30.10	04/21/09	19.98	-	-	10.12
MW8B	30.10	07/27/09	19.02	-	-	11.08
MW8B	30.10	10/29/09	20.28	-	-	9.82
MW8B	30.10	01/26/10	17.73	-	-	12.37
MW8B	30.10	04/29/10	17.33	-	-	12.77
MW8B	30.10	07/19/10	18.43	-	-	11.67
MW8B	30.10	10/20/10	20.08	-	-	10.02
MW8B	30.10	01/17/11	13.70	-	-	16.40
MW8B	30.10	04/27/11	15.47	-	-	14.63
MW8B	30.10	07/26/11	16.77	-	-	13.33
MW8B	30.10	10/19/11	19.51	-	-	10.59
MW8B	30.10	11/30/11	-	-	-	-
MW8B	30.10	12/21/11	-	-	-	-
MW8B	30.10	01/25/12	14.81	-	-	15.29
MW8B	30.10	04/27/12	10.97	-	-	19.13
MW8B	30.10	07/25/12	15.61	-	-	14.49

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW8B	30.10	10/09/12	19.30	-	-	10.80
MW8B	30.10	01/28/13	18.57	-	-	11.53
MW8B	30.10	04/12/13	16.02	-	-	14.08
MW8B	30.10	07/09/13	17.60	-	-	12.50
MW8B	30.10	10/16/13	19.52	-	-	10.58
MW8B	30.10	01/07/14	19.37	-	-	10.73
MW8B	30.10	04/14/14	15.25	-	-	14.85
MW8B	30.10	07/29/14	12.46	-	-	17.64
MW8B	30.10	10/15/14	19.79	-	-	10.31
MW8B	30.1	1/28/2015	17.24	-	-	12.86
MW8B	30.1	7/1/2015	19.51	-	-	10.59
MW9	30.45	02/01/02	15.25	-	-	15.20
MW9	30.45	04/24/02	15.49	-	-	14.96
MW9	30.45	07/29/02	16.71	-	-	13.74
MW9	30.45	10/29/02	18.77	-	-	11.68
MW9	30.45	01/28/03	16.35	-	-	14.10
MW9	30.45	04/29/03	14.31	-	-	16.14
MW9	30.45	07/29/03	17.55	-	-	12.90
MW9	30.45	10/28/03	18.44	-	-	12.01
MW9	30.45	01/29/04	14.67	-	-	15.78
MW9	30.45	04/28/04	16.59	-	-	13.86
MW9	30.45	07/26/04	17.91	-	-	12.54
MW9	30.45	11/01/04	18.20	-	-	12.25
MW9	30.45	02/01/05	17.18	-	-	13.27
MW9	30.45	04/28/05	16.56	-	-	13.89
MW9	30.45	07/25/05	17.31	-	-	13.14
MW9	30.45	10/26/05	18.90	-	-	11.55
MW9	30.45	01/26/06	12.83	-	-	17.62
MW9	30.45	04/20/06	12.65	-	-	17.80
MW9	30.45	07/19/06	16.54	-	-	13.91
MW9	30.45	10/17/06	18.66	-	-	11.79
MW9	30.45	01/29/07	17.84	-	-	12.61
MW9	30.45	04/24/07	15.29	-	-	15.16
MW9	30.45	07/23/07	17.54	-	-	12.91
MW9	30.45	10/31/07	18.63	-	-	11.82
MW9	30.45	01/23/08	15.31	-	-	15.14
MW9	30.45	04/17/08	16.08	-	-	14.37
MW9	30.45	07/16/08	16.04	-	-	14.41
MW9	30.45	10/20/08	18.60	-	-	11.85
MW9	30.45	01/26/09	18.89	-	-	11.56
MW9	30.45	04/21/09	16.30	-	-	14.15
MW9	30.45	07/27/09	17.47	-	-	12.98
MW9	30.45	10/29/09	19.02	-	-	11.43
MW9	30.45	01/26/10	15.72	-	-	14.73
MW9	30.45	04/29/10	15.71	-	-	14.74
MW9	30.45	07/19/10	16.29	-	-	14.16
MW9	30.45	10/20/10	18.35	-	-	12.10
MW9	30.45	01/17/11	14.20	-	-	16.25
MW9	30.45	04/27/11	13.25	-	-	17.20
MW9	30.45	07/26/11	14.44	-	-	16.01
MW9	30.45	10/19/11	21.63	-	-	8.82
MW9	30.45	11/30/11	-	-	-	-
MW9	30.45	12/21/11	-	-	-	-

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW9	30.45	01/25/12	14.81	-	-	15.64
MW9	30.45	04/27/12	10.81	-	-	19.64
MW9	30.45	07/25/12	14.16	-	-	16.29
MW9	30.45	10/09/12	17.81	-	-	12.64
MW9	30.45	01/28/13	17.71	-	-	12.74
MW9	30.45	04/12/13	-	-	-	-
MW9	30.45	07/09/13	16.24	-	-	14.21
MW9	30.45	10/16/13	17.72	-	-	12.73
MW9	30.45	01/07/14	18.06	-	-	12.39
MW9	30.45	04/14/14	14.16	-	-	16.29
MW9	30.45	07/29/14	16.59	-	-	13.86
MW9	30.45	10/15/14	18.39	-	-	12.06
MW9	30.45	1/28/2015	15.50	-	-	14.95
MW9	30.45	7/1/2015	17.83	-	-	12.62
MW10	30.32	02/01/02	11.84	-	-	18.48
MW10	30.32	04/24/02	14.00	-	-	16.32
MW10	30.32	07/29/02	18.08	17.03	1.05	13.08
MW10	30.32	10/29/02	20.86	20.72	0.14	9.57
MW10	30.32	11/26/02	19.82	19.81	0.01	10.51
MW10	30.32	01/28/03	13.84	13.61	0.23	16.66
MW10	30.32	04/29/03	14.36	-	-	15.96
MW10	30.32	07/29/03	18.51	-	-	11.81
MW10	30.32	10/28/03	18.28	-	-	12.04
MW10	30.32	01/29/04	12.59	12.28	0.31	17.98
MW10	30.32	04/28/04	16.51	16.51	sheen	13.81
MW10	30.32	07/26/04	19.55	19.55	sheen	10.77
MW10	30.32	11/01/04	17.89	17.85	0.04	12.46
MW10	30.32	02/01/05	16.08	15.98	0.10	14.32
MW10	30.32	04/28/05	14.43	14.41	0.02	15.91
MW10	30.32	07/25/05	17.45	17.44	0.01	12.88
MW10	30.32	10/25/05	19.87	19.85	0.02	10.47
MW10	30.32	01/26/06	11.35	11.30	0.05	19.01
MW10	30.32	04/20/06	13.12	13.12	sheen	17.20
MW10	30.32	07/19/06	17.33	17.30	0.03	13.01
MW10	30.32	10/17/06	21.80	21.77	0.03	8.54
MW10	30.32	01/29/07	15.91	-	-	14.41
MW10	30.32	04/24/07	16.26	16.26	sheen	14.06
MW10	30.32	07/23/07	20.20	20.20	sheen	10.12
MW10	30.32	10/31/07	19.04	-	-	11.28
MW10	30.32	01/23/08	14.47	14.47	sheen	15.85
MW10	30.32	04/17/08	16.41	-	-	13.91
MW10	30.32	07/16/08	18.79	18.79	sheen	11.53
MW10	30.32	10/20/08	20.26	20.25	0.01	10.07
MW10	30.32	01/26/09	14.91	14.91	sheen	15.41
MW10	30.32	04/21/09	16.78	16.78	sheen	13.54
MW10	30.32	07/27/09	19.04	19.04	sheen	11.28
MW10	30.32	10/29/09	21.05	21.04	0.01	9.28
MW10	30.32	01/26/10	14.48	14.42	0.06	15.89
MW10	30.32	04/29/10	16.56	16.55	0.01	13.77
MW10	30.32	07/19/10	18.47	18.47	sheen	11.85
MW10	30.32	10/20/10	17.33	-	-	12.99
MW10	30.32	01/17/11	13.24	13.20	0.04	17.11
MW10	30.32	04/27/11	14.48	14.48	sheen	15.84

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW10	30.32	07/26/11	16.59	-	-	13.73
MW10	30.32	10/19/11	20.12	-	-	10.20
MW10	30.32	11/30/11	14.89	-	-	15.43
MW10	30.32	12/21/11	16.42	-	-	13.90
MW10	30.32	01/25/12	11.45	-	-	18.87
MW10	30.32	04/27/12	13.07	10.09	2.98	19.63
MW10	30.32	07/25/12	14.80	14.64	0.16	15.65
MW10	30.32	10/09/12	19.78	19.67	0.11	10.63
MW10	30.32	01/28/13	14.85	14.68	0.17	15.61
MW10	30.32	04/12/13	14.48	14.35	0.13	15.94
MW10	30.32	07/09/13	16.58	16.45	0.13	13.84
MW10	30.32	10/16/13	16.00	15.89	0.11	14.41
MW10	30.26	01/07/14	18.93	18.85	0.08	11.39
MW10	30.26	04/14/14	13.03	12.80	0.23	17.41
MW10	30.26	07/29/14	17.60	17.58	0.02	12.68
MW10	30.26	10/15/14	20.46	20.45	0.01	9.81
MW10	30.26	1/28/2015	14.90	14.67	0.23	15.54
MW10	30.26	7/1/2015	20.14	20.12	0.02	10.14
MW11	35.03	01/29/02	19.06	-	-	15.97
MW11	35.03	04/24/02	18.91	18.48	0.43	16.46
MW11	35.03	07/29/02	22.02	20.75	1.27	14.03
MW11	35.03	10/29/02	25.50	23.20	2.30	11.37
MW11	35.03	11/26/02	25.10	23.05	2.05	11.57
MW11	35.03	01/28/03	21.00	20.65	0.35	14.31
MW11	35.03	04/29/03	20.06	18.55	1.51	16.18
MW11	35.03	07/29/03	-	21.15	[c]	-
MW11	35.03	10/28/03	-	22.30	[c]	-
MW11	35.03	01/29/04	-	18.99	[c]	-
MW11	35.03	04/28/04	-	19.42	[c]	-
MW11	35.03	07/26/04	-	21.41	[c]	-
MW11	35.03	11/01/04	-	22.55	[c]	-
MW11	35.03	02/01/05	-	21.72	[c]	-
MW11	35.03	04/28/05	-	20.41	[c]	-
MW11	35.03	07/25/05	-	21.75	[c]	-
MW11	35.03	10/25/05	-	23.85	[c]	-
MW11	35.03	01/26/06	-	17.54	[c]	-
MW11	35.03	04/20/06	-	17.28	[c]	-
MW11	35.03	07/19/06	-	20.55	[c]	-
MW11	35.03	10/17/06	-	23.30	[c]	-
MW11	35.03	01/29/07	-	20.20	[c]	-
MW11	35.03	04/24/07	-	19.30	[c]	-
MW11	35.03	07/23/07	-	-	-	-
MW11	35.03	10/31/07	-	-	sheen	-
MW11	35.03	01/23/08	-	19.10	[c]	-
MW11	35.03	04/17/08	-	-	sheen	-
MW11	35.03	07/16/08	-	-	sheen	-
MW11	35.03	10/20/08	-	-	-	-
MW11	35.03	01/26/09	-	-	sheen	-
MW11	35.03	04/21/09	-	-	sheen	-
MW11	35.03	07/27/09	-	-	sheen	-
MW11	35.03	10/29/09	-	22.37	[c]	-
MW11	35.03	01/26/10	21.55	20.75	0.80	14.12
MW11	35.03	04/29/10	-	19.23	[c]	-

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW11	35.03	07/19/10	-	20.89	[c]	-
MW11	35.03	10/20/10	-	22.89	[c]	-
MW11	35.03	01/17/11	16.29	16.25	0.04	18.77
MW11	35.03	04/27/11	-	16.90	[c]	-
MW11	35.03	07/26/11	-	18.38	[c]	-
MW11	35.03	10/19/11	-	-	-	-
MW11	35.03	11/30/11	-	20.90	[c]	-
MW11	35.03	12/21/11	-	19.22	[c]	-
MW11	35.03	01/25/12	-	18.65	[c]	-
MW11	35.03	04/27/12	15.50	13.01	2.49	21.52
MW11	35.03	07/25/12	17.99	17.91	0.08	17.10
MW11	35.03	10/09/12	-	21.20	[c]	-
MW11	35.03	01/28/13	23.70	22.20	1.50	12.53
MW11	35.03	04/12/13	-	20.10	[c]	-
MW11	35.03	07/09/13	-	20.94	[c]	-
MW11	35.03	10/16/13	-	-	-	-
MW11	35.03	01/07/14	-	23.10	[c]	-
MW11	35.03	04/14/14	18.60	18.58	0.02	16.45
MW11	35.03	07/29/14	-	20.92	[c]	-
MW11	35.03	10/15/14	-	22.81	[c]	-
MW11	35.03	1/28/2015	-	20.14	[c]	-
MW11	35.03	7/1/2015	-	22.50	[c]	-
MW12	34.03	01/31/02	14.85	-	-	19.18
MW12	34.03	04/24/02	15.32	-	-	18.71
MW12	34.03	07/29/02	16.77	-	-	17.26
MW12	34.03	10/29/02	17.99	-	-	16.04
MW12	34.03	01/28/03	16.21	-	-	17.82
MW12	34.03	04/29/03	14.99	-	-	19.04
MW12	34.03	07/29/03	16.56	-	-	17.47
MW12	34.03	10/28/03	17.61	17.60	0.01	16.43
MW12	34.03	01/29/04	14.98	-	-	19.05
MW12	34.03	04/28/04	15.76	-	-	18.27
MW12	34.03	07/26/04	16.97	-	-	17.06
MW12	34.03	11/01/04	17.57	-	-	16.46
MW12	34.03	02/01/05	16.75	-	-	17.28
MW12	34.03	04/28/05	16.36	-	-	17.67
MW12	34.03	07/25/05	16.30	-	-	17.73
MW12	34.03	10/25/05	17.50	-	-	16.53
MW12	34.03	01/26/06	13.53	-	-	20.50
MW12	34.03	04/20/06	15.35	14.68	0.67	19.22
MW12	34.03	07/19/06	17.20	16.32	0.88	17.53
MW12	34.03	10/17/06	18.57	17.90	0.67	16.00
MW12	34.03	01/29/07	14.87	14.87	sheen	19.16
MW12	34.03	04/24/07	15.09	15.09	sheen	18.94
MW12	34.03	07/23/07	16.95	16.87	0.08	17.14
MW12	34.03	10/31/07	17.84	-	-	16.19
MW12	34.03	01/23/08	14.99	14.99	sheen	19.04
MW12	34.03	04/17/08	15.55	-	-	18.48
MW12	34.03	07/16/08	16.29	16.29	sheen	17.74
MW12	34.03	10/20/08	17.93	17.91	0.02	16.12
MW12	34.03	01/26/09	15.72	15.72	sheen	18.31
MW12	34.03	04/21/09	16.30	16.30	sheen	17.73
MW12	34.03	07/27/09	17.04	17.04	sheen	16.99

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW12	34.03	10/29/09	18.18	18.10	0.08	15.91
MW12	34.03	01/26/10	15.57	15.57	sheen	18.46
MW12	34.03	04/29/10	16.78	16.71	0.07	17.31
MW12	34.03	07/19/10	16.05	15.95	0.10	18.06
MW12	34.03	10/20/10	17.37	17.34	0.03	16.68
MW12	34.03	01/17/11	14.88	14.88	sheen	19.15
MW12	34.03	04/27/11	14.51	-	-	19.52
MW12	34.03	07/26/11	15.39	15.36	0.03	18.66
MW12	34.03	10/19/11	17.40	-	-	16.63
MW12	34.03	11/30/11	17.16	-	-	16.87
MW12	34.03	12/21/11	17.11	-	-	16.92
MW12	34.03	01/25/12	16.12	-	-	17.91
MW12	34.03	04/27/12	13.71	-	-	20.32
MW12	34.03	07/25/12	16.06	15.58	0.48	18.35
MW12	34.03	10/09/12	17.75	17.36	0.39	16.59
MW12	34.03	01/28/13	15.40	15.15	0.25	18.83
MW12	34.03	04/12/13	15.35	15.11	0.24	18.87
MW12	34.03	07/09/13	16.80	16.58	0.22	17.41
MW12	34.03	10/16/13	19.00	18.80	0.20	15.19
MW12	34.03	01/07/14	17.43	17.10	0.33	16.86
MW12	34.03	04/14/14	15.23	15.15	0.08	18.86
MW12	34.03	07/29/14	16.65	16.37	0.28	17.60
MW12	34.03	10/15/14	18.10	17.73	0.37	16.23
MW12	34.03	1/28/2015	15.75	15.65	0.10	18.36
MW12	34.03	7/1/2015	17.04	16.85	0.19	17.14
MW12B	33.87	10/20/08	24.75	-	-	9.12
MW12B	33.87	12/18/08	24.04	-	-	9.83
MW12B	33.87	01/26/09	21.51	-	-	12.36
MW12B	33.87	04/21/09	21.92	-	-	11.95
MW12B	33.87	07/27/09	26.04	-	-	7.83
MW12B	33.87	10/29/09	25.77	-	-	8.10
MW12B	33.87	01/26/10	22.09	-	-	11.78
MW12B	33.87	04/29/10	21.68	-	-	12.19
MW12B	33.87	07/19/10	23.89	-	-	9.98
MW12B	33.87	10/20/10	23.99	-	-	9.88
MW12B	33.87	01/17/11	17.24	-	-	16.63
MW12B	33.87	04/27/11	17.33	-	-	16.54
MW12B	33.87	07/26/11	17.15	-	-	16.72
MW12B	33.87	10/19/11	23.74	-	-	10.13
MW12B	33.87	11/30/11	-	-	-	-
MW12B	33.87	12/21/11	-	-	-	-
MW12B	33.87	01/25/12	18.41	-	-	15.46
MW12B	33.87	04/27/12	14.67	-	-	19.20
MW12B	33.87	07/25/12	18.53	-	-	15.34
MW12B	33.87	10/09/12	24.02	-	-	9.85
MW12B	33.87	01/28/13	21.56	-	-	12.31
MW12B	33.87	04/12/13	18.94	-	-	14.93
MW12B	33.87	07/09/13	21.38	-	-	12.49
MW12B	33.87	10/16/13	23.64	-	-	10.23
MW12B	33.87	01/07/14	23.30	-	-	10.57
MW12B	33.87	04/14/14	17.42	-	-	16.45
MW12B	33.87	07/29/14	22.32	-	-	11.55
MW12B	33.87	10/15/14	24.10	-	-	9.77

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW12B	33.87	1/28/2015	20.05	-	-	13.82
MW12B	33.87	7/1/2015	23.50	-	-	10.37
MW12C	33.63	10/20/08	24.33	-	-	9.30
MW12C	33.63	12/18/08	22.70	-	-	10.93
MW12C	33.63	01/26/09	22.27	-	-	11.36
MW12C	33.63	04/21/09	21.38	-	-	12.25
MW12C	33.63	07/27/09	23.20	-	-	10.43
MW12C	33.63	10/29/09	24.74	-	-	8.89
MW12C	33.63	01/26/10	21.96	-	-	11.67
MW12C	33.63	04/29/10	20.47	-	-	13.16
MW12C	33.63	07/19/10	23.12	-	-	10.51
MW12C	33.63	10/20/10	24.40	-	-	9.23
MW12C	33.63	01/17/11	16.70	-	-	16.93
MW12C	33.63	04/27/11	18.21	-	-	15.42
MW12C	33.63	07/26/11	19.99	-	-	13.64
MW12C	33.63	10/19/11	23.81	-	-	9.82
MW12C	33.63	11/30/11	-	-	-	-
MW12C	33.63	12/21/11	-	-	-	-
MW12C	33.63	01/25/12	18.20	-	-	15.43
MW12C	33.63	04/27/12	14.06	-	-	19.57
MW12C	33.63	07/25/12	19.12	-	-	14.51
MW12C	33.63	10/09/12	24.20	-	-	9.43
MW12C	33.63	01/28/13	21.58	-	-	12.05
MW12C	33.63	04/12/13	19.13	-	-	14.50
MW12C	33.63	07/09/13	20.55	-	-	13.08
MW12C	33.63	10/16/13	24.08	-	-	9.55
MW12C	33.63	01/07/14	23.17	-	-	10.46
MW12C	33.63	04/14/14	18.78	-	-	14.85
MW12C	33.63	07/29/14	21.63	-	-	12.00
MW12C	33.63	10/15/14	24.14	-	-	9.49
MW12C	33.63	1/28/2015	20.64	-	-	12.99
MW12C	33.63	7/1/2015	23.97	-	-	9.66
MW13	35.81	01/31/02	17.67	-	-	18.14
MW13	35.81	04/24/02	18.35	-	-	17.46
MW13	35.81	07/29/02	19.35	-	-	16.46
MW13	35.81	10/29/02	25.42	-	-	10.39
MW13	35.81	01/28/03	20.52	-	-	15.29
MW13	35.81	04/29/03	17.41	-	-	18.40
MW13	35.81	07/29/03	21.47	-	-	14.34
MW13	35.81	10/28/03	24.25	-	-	11.56
MW13	35.81	01/29/04	17.97	-	-	17.84
MW13	35.81	04/28/04	20.22	-	-	15.59
MW13	35.81	07/26/04	22.07	-	-	13.74
MW13	35.81	11/01/04	23.90	-	-	11.91
MW13	35.81	02/01/05	21.43	-	-	14.38
MW13	35.81	04/28/05	20.65	-	-	15.16
MW13	35.81	07/25/05	20.96	-	-	14.85
MW13	35.81	10/25/05	24.95	-	-	10.86
MW13	35.81	01/26/06	14.92	-	-	20.89
MW13	35.81	04/20/06	16.53	-	-	19.28
MW13	35.81	07/19/06	20.75	-	-	15.06
MW13	35.81	10/17/06	25.02	-	-	10.79
MW13	35.81	01/29/07	18.27	-	-	17.54

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW13	35.81	04/24/07	18.95	-	-	16.86
MW13	35.81	07/23/07	21.53	-	-	14.28
MW13	35.81	10/31/07	25.00	-	-	10.81
MW13	35.81	01/23/08	18.29	-	-	17.52
MW13	35.81	04/17/08	19.68	-	-	16.13
MW13	35.81	07/16/08	20.40	-	-	15.41
MW13	35.81	10/20/08	24.99	-	-	10.82
MW13	35.81	01/26/09	19.85	-	-	15.96
MW13	35.81	04/21/09	20.13	-	-	15.68
MW13	35.81	07/27/09	21.68	-	-	14.13
MW13	35.81	10/29/09	25.69	-	-	10.12
MW13	35.81	01/26/10	19.60	-	-	16.21
MW13	35.81	04/29/10	19.54	-	-	16.27
MW13	35.81	07/19/10	20.15	-	-	15.66
MW13	35.81	10/20/10	24.46	-	-	11.35
MW13	35.81	01/17/11	17.13	-	-	18.68
MW13	35.81	04/27/11	16.05	-	-	19.76
MW13	35.81	07/26/11	18.83	-	-	16.98
MW13	35.81	10/19/11	22.67	-	-	13.14
MW13	35.81	11/30/11	-	-	-	-
MW13	35.81	12/21/11	-	-	-	-
MW13	35.81	01/25/12	19.81	-	-	16.00
MW13	35.81	04/27/12	15.11	-	-	20.70
MW13	35.81	07/25/12	18.67	-	-	17.14
MW13	35.81	10/09/12	24.01	-	-	11.80
MW13	35.81	01/28/13	18.93	-	-	16.88
MW13	35.81	04/12/13	19.22	-	-	16.59
MW13	35.81	07/09/13	20.48	-	-	15.33
MW13	35.81	10/16/13	22.34	-	-	13.47
MW13	35.81	01/07/14	22.51	-	-	13.30
MW13	35.81	04/14/14	17.48	-	-	18.33
MW13	35.81	07/29/14	20.78	-	-	15.03
MW13	35.81	10/15/14	24.52	-	-	11.29
MW13	35.81	1/28/2015	19.33	-	-	16.48
MW13	35.81	7/1/2015	21.78	-	-	14.03
MW14	36.54	01/31/02	17.71	-	-	18.83
MW14	36.54	04/24/02	18.42	-	-	18.12
MW14	36.54	07/29/02	21.47	-	-	15.07
MW14	36.54	10/29/02	23.99	-	-	12.55
MW14	36.54	01/28/03	20.62	-	-	15.92
MW14	36.54	04/29/03	16.91	-	-	19.63
MW14	36.54	07/29/03	22.26	-	-	14.28
MW14	36.54	10/28/03	23.68	-	-	12.86
MW14	36.54	01/29/04	17.79	-	-	18.75
MW14	36.54	04/28/04	19.94	-	-	16.60
MW14	36.54	07/26/04	22.72	-	-	13.82
MW14	36.54	11/01/04	23.45	-	-	13.09
MW14	36.54	02/01/05	22.05	-	-	14.49
MW14	36.54	04/28/05	20.99	-	-	15.55
MW14	36.54	07/25/05	21.86	-	-	14.68
MW14	36.54	10/25/05	24.00	-	-	12.54
MW14	36.54	01/26/06	14.57	-	-	21.97
MW14	36.54	04/20/06	16.63	-	-	19.91

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW14	36.54	07/19/06	21.12	-	-	15.42
MW14	36.54	10/17/06	23.89	-	-	12.65
MW14	36.54	01/29/07	18.47	-	-	18.07
MW14	36.54	04/24/07	17.91	-	-	18.63
MW14	36.54	07/23/07	22.16	-	-	14.38
MW14	36.54	10/31/07	23.97	-	-	12.57
MW14	36.54	01/23/08	18.02	-	-	18.52
MW14	36.54	04/17/08	19.48	-	-	17.06
MW14	36.54	07/16/08	20.22	-	-	16.32
MW14	36.54	10/20/08	23.96	-	-	12.58
MW14	36.54	01/26/09	21.38	-	-	15.16
MW14	36.54	04/21/09	20.40	-	-	16.14
MW14	36.54	07/27/09	22.46	-	-	14.08
MW14	36.54	10/29/09	24.45	-	-	12.09
MW14	36.54	01/26/10	19.31	-	-	17.23
MW14	36.54	04/29/10	19.48	-	-	17.06
MW14	36.54	07/19/10	20.33	-	-	16.21
MW14	36.54	10/20/10	23.65	-	-	12.89
MW14	36.54	01/17/11	16.32	-	-	20.22
MW14	36.54	04/27/11	15.20	-	-	21.34
MW14	36.54	07/26/11	18.55	-	-	17.99
MW14	36.54	10/19/11	22.95	-	-	13.59
MW14	36.54	11/30/11	-	-	-	-
MW14	36.54	12/21/11	-	-	-	-
MW14	36.54	01/25/12	19.53	-	-	17.01
MW14	36.54	04/27/12	14.56	-	-	21.98
MW14	36.54	07/25/12	18.56	-	-	17.98
MW14	36.54	10/09/12	23.27	-	-	13.27
MW14	36.54	01/28/13	19.06	-	-	17.48
MW14	36.54	04/12/13	19.00	-	-	17.54
MW14	36.54	07/09/13	20.78	-	-	15.76
MW14	36.54	10/16/13	23.29	-	-	13.25
MW14	36.54	01/07/14	23.45	-	-	13.09
MW14	36.54	04/14/14	16.74	-	-	19.80
MW14	36.54	07/29/14	21.39	-	-	15.15
MW14	36.54	10/15/14	23.76	-	-	12.78
MW14	36.54	1/28/2015	19.66	-	-	16.88
MW14	36.54	7/1/2015	22.65	-	-	13.89
MW15	37.15	01/31/02	15.12	-	-	22.03
MW15	37.15	04/24/02	16.13	-	-	21.02
MW15	37.15	07/29/02	19.93	-	-	17.22
MW15	37.15	10/29/02	22.59	-	-	14.56
MW15	37.15	01/28/03	18.26	-	-	18.89
MW15	37.15	04/29/03	14.28	-	-	22.87
MW15	37.15	07/29/03	20.63	-	-	16.52
MW15	37.15	10/28/03	22.41	-	-	14.74
MW15	37.15	01/29/04	14.80	-	-	22.35
MW15	37.15	04/28/04	18.42	-	-	18.73
MW15	37.15	07/26/04	21.19	-	-	15.96
MW15	37.15	11/01/04	22.10	-	-	15.05
MW15	37.15	02/01/05	20.35	-	-	16.80
MW15	37.15	04/28/05	19.90	-	-	17.25
MW15	37.15	07/25/05	20.24	-	-	16.91

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW15	37.15	10/25/05	22.66	-	-	14.49
MW15	37.15	01/26/06	12.50	-	-	24.65
MW15	37.15	04/20/06	14.20	-	-	22.95
MW15	37.15	07/19/06	19.47	-	-	17.68
MW15	37.15	10/17/06	22.50	-	-	14.65
MW15	37.15	01/29/07	16.64	-	-	20.51
MW15	37.15	04/24/07	16.65	-	-	20.50
MW15	37.15	07/23/07	20.09	-	-	17.06
MW15	37.15	10/31/07	21.83	-	-	15.32
MW15	37.15	01/23/08	15.32	-	-	21.83
MW15	37.15	04/17/08	17.05	-	-	20.10
MW15	37.15	07/16/08	18.98	-	-	18.17
MW15	37.15	10/20/08	22.52	-	-	14.63
MW15	37.15	01/26/09	18.66	-	-	18.49
MW15	37.15	04/21/09	18.63	-	-	18.52
MW15	37.15	07/27/09	20.90	-	-	16.25
MW15	37.15	10/29/09	23.09	-	-	14.06
MW15	37.15	01/26/10	16.14	-	-	21.01
MW15	37.15	04/29/10	16.83	-	-	20.32
MW15	37.15	07/19/10	18.59	-	-	18.56
MW15	37.15	10/20/10	22.09	-	-	15.06
MW15	37.15	01/17/11	13.07	-	-	24.08
MW15	37.15	04/27/11	12.35	-	-	24.80
MW15	37.15	07/26/11	17.03	-	-	20.12
MW15	37.15	10/19/11	21.50	-	-	15.65
MW15	37.15	11/30/11	-	-	-	-
MW15	37.15	12/21/11	-	-	-	-
MW15	37.15	01/25/12	17.15	-	-	20.00
MW15	37.15	04/27/12	12.76	-	-	24.39
MW15	37.15	07/25/12	17.32	-	-	19.83
MW15	37.15	10/09/12	21.59	-	-	15.56
MW15	37.15	01/28/13	16.16	-	-	20.99
MW15	37.15	04/12/13	17.18	-	-	19.97
MW15	37.15	07/09/13	19.46	-	-	17.69
MW15	37.15	10/16/13	21.73	-	-	15.42
MW15	37.15	01/07/14	22.13	-	-	15.02
MW15	37.15	04/14/14	14.25	-	-	22.90
MW15	37.15	07/29/14	19.90	-	-	17.25
MW15	37.15	10/15/14	22.41	-	-	14.74
MW15	37.15	1/28/2015	17.92	-	-	19.23
MW15	37.15	7/1/2015	21.45	-	-	15.70
MW16	38.95	01/31/02	8.91	-	-	30.04
MW16	38.95	04/24/02	11.04	-	-	27.91
MW16	38.95	07/29/02	11.93	-	-	27.02
MW16	38.95	10/29/02	12.85	12.75	0.10	26.18
MW16	38.95	11/26/02	12.05	12.00	0.05	26.94
MW16	38.95	01/28/03	10.11	-	-	28.84
MW16	38.95	04/29/03	9.85	-	-	29.10
MW16	38.95	07/29/03	12.14	-	-	26.81
MW16	38.95	10/28/03	11.83	-	-	27.12
MW16	38.95	01/29/04	9.23	-	-	29.72
MW16	38.95	04/28/04	11.12	-	-	27.83
MW16	38.95	07/26/04	12.17	12.17	sheen	26.78

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW16	38.95	11/01/04	11.51	-	-	27.44
MW16	38.95	02/01/05	11.05	11.04	0.01	27.91
MW16	38.95	04/28/05	10.75	10.75	sheen	28.20
MW16	38.95	07/25/05	16.71	16.68	0.03	22.26
MW16	38.95	10/25/05	11.90	11.89	0.01	27.06
MW16	38.95	01/26/06	6.72	6.71	0.01	32.24
MW16	38.95	04/20/06	10.72	10.72	sheen	28.23
MW16	38.95	07/19/06	11.90	11.90	sheen	27.05
MW16	38.95	10/17/06	13.48	12.85	0.63	25.97
MW16	38.95	01/29/07	10.92	10.92	sheen	28.03
MW16	38.95	04/24/07	11.06	11.06	sheen	27.89
MW16	38.95	07/23/07	12.13	12.13	sheen	26.82
MW16	38.95	10/31/07	11.40	11.40	sheen	27.55
MW16	38.95	01/23/08	9.05	-	-	29.90
MW16	38.95	04/17/08	10.87	10.87	sheen	28.08
MW16	38.95	07/16/08	11.83	11.83	sheen	27.12
MW16	38.95	10/20/08	12.50	12.50	sheen	26.45
MW16	38.95	01/26/09	10.00	10.00	sheen	28.95
MW16	38.95	04/21/09	11.11	11.11	sheen	27.84
MW16	38.95	07/27/09	11.86	11.86	sheen	27.09
MW16	38.95	10/29/09	12.09	12.09	sheen	26.86
MW16	38.95	01/26/10	9.16	9.13	0.03	29.81
MW16	38.95	04/29/10	10.76	10.75	0.01	28.20
MW16	38.95	07/19/10	11.42	11.42	sheen	27.53
MW16	38.95	10/20/10	11.34	11.34	sheen	27.61
MW16	38.95	01/17/11	9.24	9.24	sheen	29.71
MW16	38.95	04/27/11	9.75	9.75	sheen	29.20
MW16	38.95	07/26/11	11.89	-	-	27.06
MW16	38.95	10/19/11	12.80	12.72	0.08	26.21
MW16	38.95	11/30/11	9.48	9.46	0.02	29.49
MW16	38.95	12/21/11	11.30	11.23	0.07	27.71
MW16	38.95	01/25/12	7.97	7.96	0.01	30.99
MW16	38.95	04/27/12	9.72	9.70	0.02	29.25
MW16	38.95	07/25/12	11.63	11.63	sheen	27.32
MW16	38.95	10/09/12	13.51	12.77	0.74	26.03
MW16	38.95	01/28/13	10.65	10.63	0.02	28.32
MW16	38.95	04/12/13	11.01	11.00	0.01	27.95
MW16	38.95	07/09/13	11.73	11.61	0.12	27.32
MW16	38.95	10/16/13	10.85	10.68	0.17	28.24
MW16	38.92	01/07/14	11.98	11.80	0.18	27.08
MW16	38.92	04/14/14	9.28	9.26	0.02	29.66
MW16	38.92	07/29/14	12.10	12.08	0.02	26.84
MW16	38.92	10/15/14	-	13.15	[c]	-
MW16	38.92	1/28/2015	-	9.97	[c]	-
MW16	38.92	7/1/2015	12.47	12.39	0.08	26.51
MW17	36.57	01/31/02	16.93	-	-	19.64
MW17	36.57	04/24/02	17.83	-	-	18.74
MW17	36.57	07/29/02	20.83	-	-	15.74
MW17	36.57	10/29/02	23.38	-	-	13.19
MW17	36.57	01/28/03	19.87	-	-	16.70
MW17	36.57	04/29/03	16.04	-	-	20.53
MW17	36.57	07/29/03	21.59	-	-	14.98
MW17	36.57	10/28/03	23.15	-	-	13.42

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW17	36.57	01/29/04	16.16	-	-	20.41
MW17	36.57	04/28/04	19.80	-	-	16.77
MW17	36.57	07/26/04	22.08	-	-	14.49
MW17	36.57	11/01/04	22.91	-	-	13.66
MW17	36.57	02/01/05	21.40	-	-	15.17
MW17	36.57	04/28/05	20.30	-	-	16.27
MW17	36.57	07/25/05	21.21	-	-	15.36
MW17	36.57	10/25/05	23.45	-	-	13.12
MW17	36.57	01/26/06	14.02	-	-	22.55
MW17	36.57	04/20/06	15.55	-	-	21.02
MW17	36.57	07/19/06	20.44	-	-	16.13
MW17	36.57	10/17/06	23.28	-	-	13.29
MW17	36.57	01/29/07	17.94	-	-	18.63
MW17	36.57	04/24/07	17.85	-	-	18.72
MW17	36.57	07/23/07	21.46	-	-	15.11
MW17	36.57	10/31/07	23.30	-	-	13.27
MW17	36.57	01/23/08	17.15	-	-	19.42
MW17	36.57	04/17/08	18.68	-	-	17.89
MW17	36.57	07/16/08	19.91	-	-	16.66
MW17	36.57	10/20/08	23.32	-	-	13.25
MW17	36.57	01/26/09	19.71	-	-	16.86
MW17	36.57	04/21/09	19.69	-	-	16.88
MW17	36.57	07/27/09	21.82	-	-	14.75
MW17	36.57	10/29/09	23.88	-	-	12.69
MW17	36.57	01/26/10	18.37	-	-	18.20
MW17	36.57	04/29/10	18.62	-	-	17.95
MW17	36.57	07/19/10	19.61	-	-	16.96
MW17	36.57	10/20/10	22.99	-	-	13.58
MW17	36.57	01/17/11	15.49	-	-	21.08
MW17	36.57	04/27/11	14.10	-	-	22.47
MW17	36.57	07/26/11	17.73	-	-	18.84
MW17	36.57	10/19/11	22.25	-	-	14.32
MW17	36.57	11/30/11	-	-	-	-
MW17	36.57	12/21/11	-	-	-	-
MW17	36.57	01/25/12	18.97	-	-	17.60
MW17	36.57	04/27/12	14.02	-	-	22.55
MW17	36.57	07/25/12	17.99	-	-	18.58
MW17	36.57	10/09/12	22.53	-	-	14.04
MW17	36.57	01/28/13	18.22	-	-	18.35
MW17	36.57	04/12/13	18.37	-	-	18.20
MW17	36.57	07/09/13	20.21	-	-	16.36
MW17	36.57	10/16/13	22.68	-	-	13.89
MW17	36.57	01/07/14	22.89	-	-	13.68
MW17	36.57	04/14/14	16.01	-	-	20.56
MW17	36.57	07/29/14	20.78	-	-	15.79
MW17	36.57	10/15/14	23.17	-	-	13.40
MW17	36.57	1/28/2015	19.01	-	-	17.56
MW17	36.57	7/1/2015	22.02	-	-	14.55
MW18	36.66	04/24/02	19.41	-	-	17.25
MW18	36.66	07/30/02	22.21	-	-	14.45
MW18	36.66	10/29/02	24.71	-	-	11.95
MW18	36.66	01/28/03	21.20	-	-	15.46
MW18	36.66	04/29/03	17.85	-	-	18.81

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW18	36.66	07/29/03	23.02	-	-	13.64
MW18	36.66	10/28/03	24.28	-	-	12.38
MW18	36.66	01/29/04	18.45	-	-	18.21
MW18	36.66	04/28/04	21.51	-	-	15.15
MW18	36.66	07/26/04	23.46	-	-	13.20
MW18	36.66	11/01/04	24.04	-	-	12.62
MW18	36.66	02/01/05	22.75	-	-	13.91
MW18	36.66	04/28/05	21.64	-	-	15.02
MW18	36.66	07/25/05	22.58	-	-	14.08
MW18	36.66	10/25/05	24.72	-	-	11.94
MW18	36.66	01/26/06	15.77	-	-	20.89
MW18	36.66	04/20/06	16.55	-	-	20.11
MW18	36.66	07/19/06	22.09	-	-	14.57
MW18	36.66	10/17/06	24.58	-	-	12.08
MW18	36.66	01/29/07	20.00	-	-	16.66
MW18	36.66	04/24/07	19.58	-	-	17.08
MW18	36.66	07/23/07	22.85	-	-	13.81
MW18	36.66	10/31/07	24.64	-	-	12.02
MW18	36.66	01/23/08	19.03	-	-	17.63
MW18	36.66	04/17/08	20.41	-	-	16.25
MW18	36.66	07/16/08	21.41	-	-	15.25
MW18	36.66	10/20/08	24.62	-	-	12.04
MW18	36.66	01/26/09	21.24	-	-	15.42
MW18	36.66	04/21/09	21.50	-	-	15.16
MW18	36.66	07/27/09	23.17	-	-	13.49
MW18	36.66	10/29/09	25.11	-	-	11.55
MW18	36.66	01/26/10	20.16	-	-	16.50
MW18	36.66	04/29/10	20.16	-	-	16.50
MW18	36.66	07/19/10	21.31	-	-	15.35
MW18	36.66	10/20/10	24.38	-	-	12.28
MW18	36.66	01/17/11	16.87	-	-	19.79
MW18	36.66	04/27/11	16.19	-	-	20.47
MW18	36.66	07/26/11	19.72	-	-	16.94
MW18	36.66	10/19/11	23.78	-	-	12.88
MW18	36.66	11/30/11	-	-	-	-
MW18	36.66	12/21/11	-	-	-	-
MW18	36.66	01/25/12	21.38	-	-	15.28
MW18	36.66	04/27/12	15.02	-	-	21.64
MW18	36.66	07/25/12	19.36	-	-	17.30
MW18	36.66	10/09/12	24.04	-	-	12.62
MW18	36.66	01/28/13	19.94	-	-	16.72
MW18	36.66	04/12/13	19.43	-	-	17.23
MW18	36.66	07/09/13	21.45	-	-	15.21
MW18	36.66	10/16/13	23.99	-	-	12.67
MW18	36.66	01/07/14	23.97	-	-	12.69
MW18	36.66	04/14/14	17.39	-	-	19.27
MW18	36.66	07/29/14	22.15	-	-	14.51
MW18	36.66	10/15/14	24.44	-	-	12.22
MW18	36.66	1/28/2015	20.42	-	-	16.24
MW18	36.66	7/1/2015	-	-	-	-
MW19	30.34	04/29/03	14.88	14.80	0.08	15.52
MW19	30.34	07/29/03	19.75	17.94	1.81	12.04
MW19	30.34	10/28/03	20.08	18.88	1.20	11.22
MW19	30.34	01/29/04	13.71	13.47	0.24	16.82
MW19	30.34	04/28/04	18.65	17.48	1.17	12.63

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW19	30.34	07/26/04	16.70	16.44	0.26	13.85
MW19	30.34	11/01/04	16.99	16.58	0.41	13.68
MW19	30.34	02/01/05	-	15.17	[c]	-
MW19	30.34	04/28/05	-	18.61	[c]	-
MW19	30.34	07/25/05	-	16.03	[c]	-
MW19	30.34	10/25/05	-	17.81	[c]	-
MW19	30.34	01/26/06	-	11.17	[c]	-
MW19	30.34	04/20/06	-	14.43	[c]	-
MW19	30.34	07/19/06	-	18.33	[c]	-
MW19	30.34	10/17/06	-	21.65	[c]	-
MW19	30.34	01/29/07	18.82	18.37	0.45	11.88
MW19	30.34	04/24/07	18.25	17.95	0.30	12.33
MW19	30.34	07/23/07	20.55	20.25	0.30	10.03
MW19	30.34	10/31/07	21.42	21.10	0.32	9.18
MW19	30.34	01/23/08	19.77	19.73	0.04	10.60
MW19	30.34	04/17/08	18.93	18.62	0.31	11.66
MW19	30.34	07/16/08	17.92	17.91	0.01	12.43
MW19	30.34	10/20/08	21.26	21.24	0.02	9.10
MW19	30.34	01/26/09	18.38	18.31	0.07	12.02
MW19	30.34	04/21/09	18.43	18.42	0.01	11.92
MW19	30.34	07/27/09	19.75	19.73	0.02	10.61
MW19	30.34	10/29/09	20.80	20.78	0.02	9.56
MW19	30.34	01/26/10	21.39	21.11	0.28	9.17
MW19	30.34	04/29/10	21.01	20.65	0.36	9.62
MW19	30.34	07/19/10	21.62	21.30	0.32	8.98
MW19	30.34	10/20/10	22.75	22.62	0.13	7.69
MW19	33.29	01/17/11	16.73	16.71	0.02	16.58
MW19	33.29	04/27/11	17.80	17.53	0.27	15.71
MW19	33.29	07/26/11	18.49	18.41	0.08	14.86
MW19	33.29	10/19/11	22.23	22.18	0.05	11.10
MW19	33.29	11/30/11	15.40	15.36	0.04	17.92
MW19	33.29	12/21/11	21.80	21.72	0.08	11.55
MW19	33.29	01/25/12	17.32	17.31	0.01	15.98
MW19	33.29	04/27/12	13.99	-	-	19.30
MW19	33.29	07/25/12	17.67	17.65	0.02	15.64
MW19	33.29	10/09/12	22.34	22.25	0.09	11.02
MW19	33.29	01/28/13	27.00	26.90	0.10	6.37
MW19	33.29	04/12/13	29.10	-	-	4.19
MW19	33.29	07/09/13	26.10	-	-	7.19
MW19	33.29	10/16/13	27.00	26.70	0.30	6.53
MW19	33.29	01/07/14	29.00	25.00	4.00	7.49
MW19	33.29	04/14/14	17.70	17.68	0.02	15.61
MW19	33.29	07/29/14	20.45	-	-	12.84
MW19	33.29	10/15/14	26.21	24.00	2.21	8.85
MW19	33.29	1/28/2015	20.70	19.60	1.10	13.47
MW19	33.29	7/1/2015	23.05	-	-	10.24
MW20	30.25	04/29/03	13.42	-	-	16.83
MW20	30.25	07/29/03	18.26	-	-	11.99
MW20	30.25	10/28/03	19.60	19.49	0.11	10.74
MW20	30.25	01/29/04	13.75	12.42	1.33	17.56
MW20	30.25	04/28/04	16.51	16.01	0.50	14.14
MW20	30.25	07/26/04	18.65	18.32	0.33	11.86
MW20	30.25	11/01/04	18.30	18.07	0.23	12.13

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW20	30.25	02/01/05	15.39	14.89	0.50	15.26
MW20	30.25	04/28/05	15.22	13.82	1.40	16.15
MW20	30.25	07/25/05	17.15	16.55	0.60	13.58
MW20	30.25	10/25/05	20.30	19.70	0.60	10.43
MW20	30.25	01/26/06	10.03	10.00	0.03	20.24
MW20	30.25	04/20/06	12.34	12.34	sheen	17.91
MW20	30.25	07/19/06	14.13	14.11	0.02	16.14
MW20	30.25	10/17/06	20.85	20.78	0.07	9.46
MW20	30.25	01/29/07	12.68	-	-	17.57
MW20	30.25	04/24/07	13.19	13.19	sheen	17.06
MW20	30.25	07/23/07	16.16	16.16	sheen	14.09
MW20	30.25	10/31/07	16.10	-	-	14.15
MW20	30.25	01/23/08	11.70	11.70	sheen	18.55
MW20	30.25	04/17/08	12.68	-	-	17.57
MW20	30.25	07/16/08	13.56	13.56	sheen	16.69
MW20	30.25	10/20/08	18.42	18.42	sheen	11.83
MW20	30.25	01/26/09	12.10	12.08	0.02	18.17
MW20	30.25	04/21/09	12.95	12.95	sheen	17.30
MW20	30.25	07/27/09	13.99	13.99	sheen	16.26
MW20	30.25	10/29/09	17.71	17.71	sheen	12.54
MW20	30.25	01/26/10	11.64	11.64	sheen	18.61
MW20	30.25	04/29/10	12.99	12.99	sheen	17.26
MW20	30.25	07/19/10	13.60	-	-	16.65
MW20	30.25	10/20/10	15.10	-	-	15.15
MW20	30.25	01/17/11	11.70	11.62	0.08	18.61
MW20	30.25	04/27/11	11.84	11.84	sheen	18.41
MW20	30.25	07/26/11	13.12	13.02	0.10	17.21
MW20	30.25	10/19/11	16.26	16.24	0.02	14.01
MW20	30.25	11/30/11	12.47	-	-	17.78
MW20	30.25	12/21/11	13.05	-	-	17.20
MW20	30.25	01/25/12	9.65	-	-	20.60
MW20	30.25	04/27/12	10.01	10.00	0.01	20.25
MW20	30.25	07/25/12	12.81	12.80	0.01	17.45
MW20	30.25	10/09/12	16.26	16.25	0.01	14.00
MW20	30.25	01/28/13	12.65	12.55	0.10	17.68
MW20	30.25	04/12/13	12.99	12.94	0.05	17.30
MW20	30.25	07/09/13	13.74	13.60	0.14	16.62
MW20	30.25	10/16/13	12.88	12.66	0.22	17.55
MW20	30.20	01/07/14	14.49	14.24	0.25	15.91
MW20	30.20	04/14/14	11.62	11.54	0.08	18.64
MW20	30.20	07/29/14	14.56	14.39	0.17	15.78
MW20	30.20	10/15/14	17.63	17.51	0.12	12.67
MW20	30.2	1/28/2015	12.41	12.22	0.19	17.94
MW20	30.2	7/1/2015	15.26	15.11	0.15	15.06
MW21	30.62	04/29/03	8.12	-	-	22.50
MW21	30.62	07/29/03	17.02	-	-	13.60
MW21	30.62	10/28/03	18.62	18.36	0.26	12.21
MW21	30.62	01/29/04	9.98	9.78	0.20	20.80
MW21	30.62	04/28/04	15.72	15.67	0.05	14.94
MW21	30.62	07/26/04	17.84	17.83	0.01	12.79
MW21	30.62	11/01/04	16.93	16.89	0.04	13.72
MW21	30.62	02/01/05	15.55	15.53	0.02	15.09
MW21	30.62	04/28/05	14.95	14.95	sheen	15.67

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW21	30.62	07/25/05	17.48	17.47	0.01	13.15
MW21	30.62	10/25/05	19.26	19.25	0.01	11.37
MW21	30.62	01/26/06	9.29	9.29	sheen	21.33
MW21	30.62	04/20/06	13.02	13.00	0.02	17.62
MW21	30.62	07/19/06	16.32	16.32	sheen	14.30
MW21	30.62	10/17/06	19.73	-	-	10.89
MW21	30.62	01/29/07	15.81	15.80	0.01	14.82
MW21	30.62	04/24/07	15.06	15.05	0.01	15.57
MW21	30.62	07/23/07	18.15	18.15	sheen	12.47
MW21	30.62	10/31/07	18.37	18.37	sheen	12.25
MW21	30.62	01/23/08	13.96	13.96	sheen	16.66
MW21	30.62	04/17/08	14.97	-	-	15.65
MW21	30.62	07/16/08	15.97	15.97	sheen	14.65
MW21	30.62	10/20/08	19.38	-	-	11.24
MW21	30.62	01/26/09	14.96	14.96	sheen	15.66
MW21	30.62	04/21/09	16.30	16.30	sheen	14.32
MW21	30.62	07/27/09	18.85	18.85	sheen	11.77
MW21	30.62	10/29/09	19.74	19.74	sheen	10.88
MW21	30.62	01/26/10	12.94	12.93	0.01	17.69
MW21	30.62	04/29/10	15.56	15.56	sheen	15.06
MW21	30.62	07/19/10	16.24	-	-	14.38
MW21	30.62	10/20/10	17.31	17.31	sheen	13.31
MW21	30.62	01/17/11	10.36	10.36	sheen	20.26
MW21	30.62	04/27/11	12.01	12.01	sheen	18.61
MW21	30.62	07/26/11	14.73	14.71	0.02	15.91
MW21	30.62	10/19/11	18.22	-	-	12.40
MW21	30.62	11/30/11	14.14	-	-	16.48
MW21	30.62	12/21/11	16.73	-	-	13.89
MW21	30.62	01/25/12	9.74	-	-	20.88
MW21	30.62	04/27/12	10.25	10.24	0.01	20.38
MW21	30.62	07/25/12	13.28	-	-	17.34
MW21	30.62	10/09/12	18.15	-	-	12.47
MW21	30.62	01/28/13	14.91	14.87	0.04	15.74
MW21	30.62	04/12/13	17.74	-	-	12.88
MW21	30.62	07/09/13	16.80	-	-	13.82
MW21	30.62	10/16/13	18.77	18.76	0.01	11.86
MW21	30.60	01/07/14	19.03	-	-	11.57
MW21	30.60	04/14/14	14.50	14.50	sheen	16.10
MW21	30.60	07/29/14	16.60	16.59	0.01	14.01
MW21	30.60	10/15/14	19.15	19.14	0.01	11.46
MW21	30.6	1/28/2015	13.83	13.82	0.01	16.78
MW21	30.6	7/1/2015	18.45	18.45	sheen	12.15
MW22	30.19	04/29/03	15.61	-	-	14.58
MW22	30.19	07/29/03	19.75	-	-	10.44
MW22	30.19	10/28/03	20.33	-	-	9.86
MW22	30.19	01/29/04	14.88	-	-	15.31
MW22	30.19	04/28/04	18.69	-	-	11.50
MW22	30.19	07/26/04	20.14	-	-	10.05
MW22	30.19	11/01/04	20.11	-	-	10.08
MW22	30.19	02/01/05	18.47	-	-	11.72
MW22	30.19	04/28/05	17.25	17.25	sheen	12.94
MW22	30.19	07/25/05	18.89	-	-	11.30
MW22	30.19	10/26/05	20.77	-	-	9.42

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW22	30.19	01/26/06	12.90	-	-	17.29
MW22	30.19	04/20/06	13.46	-	-	16.73
MW22	30.19	07/19/06	18.54	-	-	11.65
MW22	30.19	10/17/06	20.84	-	-	9.35
MW22	30.19	01/29/07	16.82	-	-	13.37
MW22	30.19	04/24/07	15.84	-	-	14.35
MW22	30.19	07/23/07	19.69	-	-	10.50
MW22	30.19	10/31/07	20.33	20.33	sheen	9.86
MW22	30.19	01/23/08	15.39	-	-	14.80
MW22	30.19	04/17/08	14.68	-	-	15.51
MW22	30.19	07/16/08	17.63	-	-	12.56
MW22	30.19	10/20/08	20.62	-	-	9.57
MW22	30.19	01/26/09	14.31	-	-	15.88
MW22	30.19	04/21/09	14.31	-	-	15.88
MW22	30.19	07/27/09	-	-	-	-
MW22	30.19	10/29/09	-	-	-	-
MW22	30.19	01/26/10	13.34	-	-	16.85
MW22	30.19	04/29/10	13.33	-	-	16.86
MW22	30.19	07/19/10	14.62	-	-	15.57
MW22	30.19	10/20/10	20.43	-	-	9.76
MW22	30.19	01/17/11	11.65	-	-	18.54
MW22	30.19	04/27/11	12.91	-	-	17.28
MW22	30.19	07/26/11	13.72	-	-	16.47
MW22	30.19	10/19/11	18.63	-	-	11.56
MW22	30.19	11/30/11	-	-	-	-
MW22	30.19	12/21/11	-	-	-	-
MW22	30.19	01/25/12	10.60	-	-	19.59
MW22	30.19	04/27/12	10.30	-	-	19.89
MW22	30.19	07/25/12	13.17	-	-	17.02
MW22	30.19	10/09/12	19.08	-	-	11.11
MW22	30.19	01/28/13	13.84	-	-	16.35
MW22	30.19	04/12/13	13.25	-	-	16.94
MW22	30.19	07/09/13	15.17	-	-	15.02
MW22	30.19	10/16/13	15.37	-	-	14.82
MW22	30.18	01/07/14	17.84	-	-	12.34
MW22	30.18	04/14/14	12.33	-	-	17.85
MW22	30.18	07/29/14	17.40	-	-	12.78
MW22	30.18	10/15/14	20.44	-	-	9.74
MW22	30.18	1/28/2015	13.61	-	-	16.57
MW22	30.18	7/1/2015	19.59	-	-	10.59
MW23	37.00	07/26/04	13.83	-	-	23.17
MW23	37.00	11/01/04	14.15	-	-	22.85
MW23	37.00	02/01/05	13.09	13.08	0.01	23.92
MW23	37.00	04/28/05	12.78	12.51	0.27	24.44
MW23	37.00	07/25/05	-	12.88	[c]	-
MW23	37.00	10/25/05	-	13.80	[c]	-
MW23	37.00	01/26/06	-	8.85	[c]	-
MW23	37.00	04/20/06	11.70	11.60	0.10	25.38
MW23	37.00	07/19/06	13.37	12.80	0.57	24.09
MW23	37.00	10/17/06	14.75	14.75	sheen	22.25
MW23	37.00	01/29/07	10.33	10.32	0.01	26.68
MW23	37.00	04/24/07	12.04	12.04	sheen	24.96
MW23	37.00	07/23/07	13.68	13.68	sheen	23.32

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW23	37.00	10/31/07	14.33	14.33	sheen	22.67
MW23	37.00	01/23/08	10.34	-	-	26.66
MW23	37.00	04/17/08	12.14	-	-	24.86
MW23	37.00	07/16/08	13.46	13.46	sheen	23.54
MW23	37.00	10/20/08	14.70	-	-	22.30
MW23	37.00	01/26/09	10.11	10.11	sheen	26.89
MW23	37.00	04/21/09	12.93	12.93	sheen	24.07
MW23	37.00	07/27/09	13.81	13.81	sheen	23.19
MW23	37.00	10/29/09	14.91	-	-	22.09
MW23	37.00	01/26/10	11.02	11.02	sheen	25.98
MW23	37.00	04/29/10	12.23	12.10	0.13	24.87
MW23	37.00	07/19/10	12.84	12.67	0.17	24.30
MW23	37.00	10/20/10	14.18	14.16	0.02	22.84
MW23	37.00	01/17/11	10.62	10.61	0.01	26.39
MW23	37.00	04/27/11	9.70	9.68	0.02	27.32
MW23	37.00	07/26/11	12.94	12.90	0.04	24.09
MW23	37.00	10/19/11	14.42	14.40	0.02	22.60
MW23	37.00	11/30/11	13.61	13.61	sheen	23.39
MW23	37.00	12/21/11	13.41	-	-	23.59
MW23	37.00	04/27/12	10.47	-	-	26.53
MW23	37.00	07/25/12	12.81	12.80	0.01	24.20
MW23	37.00	10/09/12	14.41	14.41	sheen	22.59
MW23	37.00	01/28/13	11.20	11.18	0.02	25.82
MW23	37.00	04/12/13	12.99	12.99	sheen	24.01
MW23	37.00	07/09/13	-	13.35	[c]	-
MW23	37.00	10/16/13	12.90	12.90	sheen	24.10
MW23	36.98	01/07/14	13.93	13.82	0.11	23.14
MW23	36.98	04/14/14	11.07	11.00	0.07	25.97
MW23	36.98	07/29/14	13.64	13.58	0.06	23.39
MW23	36.98	10/15/14	14.92	14.90	0.02	22.08
MW23	36.98	1/28/2015	11.51	11.50	0.01	25.48
MW23	36.98	7/1/2015	13.97	13.95	0.02	23.03
MW24	38.06	07/26/04	10.18	-	-	27.88
MW24	38.06	11/01/04	9.22	9.22	sheen	28.84
MW24	38.06	02/01/05	8.85	-	-	29.21
MW24	38.06	04/28/05	8.51	-	-	29.55
MW24	38.06	07/25/05	-	8.89	[c]	-
MW24	38.06	10/25/05	-	8.84	[c]	-
MW24	38.06	01/26/06	5.44	-	-	32.62
MW24	38.06	04/20/06	7.68	-	-	30.38
MW24	38.06	07/19/06	9.41	9.41	sheen	28.65
MW24	38.06	10/17/06	8.97	-	-	29.09
MW24	38.06	01/29/07	7.76	7.76	sheen	30.30
MW24	38.06	04/24/07	8.11	8.11	sheen	29.95
MW24	38.06	07/23/07	9.44	9.44	sheen	28.62
MW24	38.06	10/31/07	9.07	-	-	28.99
MW24	38.06	01/23/08	7.20	7.20	sheen	30.86
MW24	38.06	04/17/08	8.32	-	-	29.74
MW24	38.06	07/16/08	9.13	-	-	28.93
MW24	38.06	10/20/08	9.46	-	-	28.60
MW24	38.06	01/26/09	7.84	7.84	sheen	30.22
MW24	38.06	04/21/09	8.28	-	-	29.78
MW24	38.06	07/27/09	9.50	-	-	28.56

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW24	38.06	10/29/09	8.93	8.91	0.02	29.15
MW24	38.06	01/26/10	6.25	6.25	sheen	31.81
MW24	38.06	04/29/10	8.38	8.37	0.01	29.69
MW24	38.06	07/19/10	8.78	8.74	0.04	29.31
MW24	38.06	10/20/10	8.86	-	-	29.20
MW24	38.06	01/17/11	5.55	5.55	sheen	32.51
MW24	38.06	04/27/11	6.97	6.96	0.01	31.10
MW24	38.06	07/26/11	8.97	8.95	0.02	29.11
MW24	38.06	10/19/11	9.82	9.80	0.02	28.26
MW24	38.06	11/30/11	6.72	6.71	0.01	31.35
MW24	38.06	12/21/11	7.35	7.32	0.03	30.73
MW24	38.06	01/25/12	4.18	4.16	0.02	33.90
MW24	38.06	04/27/12	10.42	-	-	27.64
MW24	38.06	07/25/12	8.82	8.81	0.01	29.25
MW24	38.06	10/09/12	9.01	8.96	0.05	29.09
MW24	38.06	01/28/13	7.70	7.65	0.05	30.40
MW24	38.06	04/12/13	7.12	7.10	0.02	30.96
MW24	38.06	07/09/13	-	7.70	[c]	-
MW24	38.06	10/16/13	7.05	7.00	0.05	31.05
MW24	38.05	01/07/14	7.97	7.95	0.02	30.10
MW24	38.05	04/14/14	5.64	5.61	0.03	32.43
MW24	38.05	07/29/14	9.63	9.58	0.05	28.46
MW24	38.05	10/15/14	10.38	10.36	0.02	27.69
MW24	38.05	1/28/2015	6.53	6.51	0.02	31.54
MW24	38.05	7/1/2015	10.72	10.70	0.02	27.35
MW25	33.20	04/28/05	18.38	-	-	14.82
MW25	33.20	07/25/05	18.78	-	-	14.42
MW25	33.20	10/25/05	20.03	-	-	13.17
MW25	33.20	01/26/06	13.39	-	-	19.81
MW25	33.20	04/20/06	15.18	-	-	18.02
MW25	33.20	07/19/06	18.23	-	-	14.97
MW25	33.20	10/17/06	20.22	-	-	12.98
MW25	33.20	01/29/07	15.91	-	-	17.29
MW25	33.20	04/24/07	16.41	-	-	16.79
MW25	33.20	07/23/07	18.78	-	-	14.42
MW25	33.20	10/31/07	19.82	-	-	13.38
MW25	33.20	01/23/08	16.24	-	-	16.96
MW25	33.20	04/17/08	16.93	-	-	16.27
MW25	33.20	07/16/08	17.32	-	-	15.88
MW25	33.20	10/20/08	19.92	-	-	13.28
MW25	33.20	01/26/09	17.10	-	-	16.10
MW25	33.20	04/21/09	17.52	-	-	15.68
MW25	33.20	07/27/09	18.82	-	-	14.38
MW25	33.20	10/29/09	22.08	-	-	11.12
MW25	33.20	01/26/10	16.74	-	-	16.46
MW25	33.20	04/29/10	16.84	-	-	16.36
MW25	33.20	07/19/10	17.17	-	-	16.03
MW25	33.20	10/20/10	19.49	-	-	13.71
MW25	33.20	01/17/11	15.57	-	-	17.63
MW25	33.20	04/27/11	14.36	-	-	18.84
MW25	33.20	07/26/11	15.67	-	-	17.53
MW25	33.20	10/19/11	19.36	-	-	13.84
MW25	33.20	11/30/11	-	-	-	-

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW25	33.20	12/21/11	-	-	-	-
MW25	33.20	01/25/12	17.24	-	-	15.96
MW25	33.20	04/27/12	13.60	-	-	19.60
MW25	33.20	07/25/12	16.17	-	-	17.03
MW25	33.20	10/09/12	19.50	-	-	13.70
MW25	33.20	01/28/13	16.32	-	-	16.88
MW25	33.20	04/12/13	17.01	-	-	16.19
MW25	33.20	07/09/13	17.75	-	-	15.45
MW25	33.20	10/16/13	18.75	-	-	14.45
MW25	33.20	01/07/14	19.02	-	-	14.18
MW25	33.20	04/14/14	15.65	-	-	17.55
MW25	33.20	07/29/14	17.85	-	-	15.35
MW25	33.20	10/15/14	19.60	-	-	13.60
MW25	33.2	1/28/2015	16.51	-	-	16.69
MW25	33.2	7/1/2015	18.72	-	-	14.48
MW26	37.32	04/28/05	21.95	-	-	15.37
MW26	37.32	07/25/05	22.48	-	-	14.84
MW26	37.32	10/25/05	24.45	24.45	sheen	12.87
MW26	37.32	01/26/06	17.23	17.23	sheen	20.09
MW26	37.32	04/20/06	18.03	-	-	19.29
MW26	37.32	07/19/06	21.35	-	-	15.97
MW26	37.32	10/17/06	24.16	-	-	13.16
MW26	37.32	01/29/07	20.37	-	-	16.95
MW26	37.32	04/24/07	20.40	20.40	sheen	16.92
MW26	37.32	07/23/07	22.89	-	-	14.43
MW26	37.32	10/31/07	24.32	-	-	13.00
MW26	37.32	01/23/08	19.98	-	-	17.34
MW26	37.32	04/17/08	20.92	-	-	16.40
MW26	37.32	07/16/08	21.19	-	-	16.13
MW26	37.32	10/20/08	24.21	-	-	13.11
MW26	37.32	01/26/09	21.16	-	-	16.16
MW26	37.32	04/21/09	21.68	-	-	15.64
MW26	37.32	07/27/09	22.94	-	-	14.38
MW26	37.32	10/29/09	24.68	-	-	12.64
MW26	37.32	01/26/10	21.25	-	-	16.07
MW26	37.32	04/29/10	21.08	-	-	16.24
MW26	37.32	07/19/10	21.41	-	-	15.91
MW26	37.32	10/20/10	23.77	-	-	13.55
MW26	37.32	01/17/11	18.58	-	-	18.74
MW26	37.32	04/27/11	16.68	-	-	20.64
MW26	37.32	07/26/11	-	-	-	-
MW26	37.32	10/19/11	-	-	-	-
MW26	37.32	11/30/11	-	-	-	-
MW26	37.32	12/21/11	-	-	-	-
MW26	37.32	01/25/12	25.70	-	-	11.62
MW26	37.32	04/27/12	16.32	-	-	21.00
MW26	37.32	07/25/12	18.89	-	-	18.43
MW26	37.32	10/09/12	23.03	-	-	14.29
MW26	37.32	01/28/13	20.37	-	-	16.95
MW26	37.32	04/12/13	20.87	-	-	16.45
MW26	37.32	07/09/13	21.82	-	-	15.50
MW26	37.32	10/16/13	23.42	-	-	13.90
MW26	37.32	01/07/14	23.92	-	-	13.40
MW26	37.32	04/14/14	19.20	-	-	18.12

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
MW26	37.32	07/29/14	21.62	-	-	15.70
MW26	37.32	10/15/14	23.74	-	-	13.58
MW26	37.32	1/28/2015	20.81	-	-	16.51
MW26	37.32	7/1/2015	23.16	-	-	14.16
MW27	36.51	04/28/05	18.65	-	-	17.86
MW27	36.51	07/25/05	18.60	-	-	17.91
MW27	36.51	10/25/05	-	-	-	-
MW27	36.51	01/26/06	18.32	-	-	18.19
MW27	36.51	04/20/06	-	-	sheen	-
MW27	36.51	07/19/06	18.82	18.65	0.17	17.83
MW27	36.51	10/17/06	18.67	18.67	sheen	17.84
MW27	36.51	01/29/07	18.82	18.82	sheen	17.69
MW27	36.51	04/24/07	18.75	18.75	sheen	17.76
MW27	36.51	07/23/07	18.80	18.80	sheen	17.71
MW27	36.51	10/31/07	18.81	18.81	sheen	17.70
MW27	36.51	01/23/08	18.85	-	-	17.66
MW27	36.51	04/17/08	19.85	-	-	16.66
MW27	36.51	07/16/08	18.84	-	-	17.67
MW27	36.51	10/20/08	18.90	-	-	17.61
MW27	36.51	01/26/09	18.89	-	-	17.62
MW27	36.51	04/21/09	18.86	-	-	17.65
MW27	36.51	07/27/09	18.85	-	-	17.66
MW27	36.51	10/29/09	18.83	-	-	17.68
MW27	36.51	01/26/10	18.89	-	-	17.62
MW27	36.51	04/29/10	18.51	-	-	18.00
MW27	36.51	07/19/10	18.43	-	-	18.08
MW27	36.51	10/20/10	18.68	-	-	17.83
MW27	36.51	01/17/11	18.57	-	-	17.94
MW27	36.51	04/27/11	17.42	-	-	19.09
MW27	36.51	07/26/11	-	18.40	[c]	-
MW27	36.51	10/19/11	18.42	-	-	18.09
MW27	36.51	11/30/11	-	-	-	-
MW27	36.51	12/21/11	-	-	-	-
MW27	36.51	01/25/12	18.42	18.41	0.01	18.10
MW27	36.51	04/27/12	16.45	-	-	20.06
MW27	36.51	07/25/12	18.40	18.35	0.05	18.15
MW27	36.51	10/09/12	18.43	-	-	18.08
MW27	36.51	01/28/13	18.56	-	-	17.95
MW27	36.51	04/12/13	18.49	-	-	18.02
MW27	36.51	07/09/13	18.61	-	-	17.90
MW27	36.51	10/16/13	18.38	-	-	18.13
MW27	36.51	01/07/14	18.46	-	-	18.05
MW27	36.51	04/14/14	18.48	-	-	18.03
MW27	36.51	07/29/14	-	-	-	-
MW27	36.51	10/15/14	18.40	-	-	18.11
MW27	36.51	1/28/2015	-	-	-	-
MW27	36.51	7/1/2015	18.56	-	-	17.95
MW28	31.31	04/28/05	17.29	17.29	sheen	14.02
MW28	31.31	07/25/05	17.98	-	-	13.33
MW28	31.31	10/25/05	20.18	19.86	0.32	11.39
MW28	31.31	01/26/06	13.25	13.25	sheen	18.06
MW28	31.31	04/20/06	13.55	13.55	sheen	17.76
MW28	31.31	07/19/06	16.90	16.90	sheen	14.41

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
MW28	31.31	10/17/06	19.79	19.71	0.08	11.58
MW28	31.31	01/29/07	16.47	-	-	14.84
MW28	31.31	04/24/07	16.00	-	-	15.31
MW28	31.31	07/23/07	18.46	-	-	12.85
MW28	31.31	10/31/07	19.94	-	-	11.37
MW28	31.31	01/23/08	16.11	15.90	0.21	15.37
MW28	31.31	04/17/08	17.89	17.77	0.12	13.52
MW28	31.31	07/16/08	16.68	16.67	0.01	14.64
MW28	31.31	10/20/08	19.64	19.62	0.02	11.69
MW28	31.31	01/26/09	16.74	16.74	sheen	14.57
MW28	31.31	04/21/09	17.20	17.20	sheen	14.11
MW28	31.31	07/27/09	18.30	18.30	sheen	13.01
MW28	31.31	10/29/09	20.39	20.10	0.29	11.15
MW28	31.31	01/26/10	16.89	16.88	0.01	14.43
MW28	31.31	04/29/10	16.78	16.77	0.01	14.54
MW28	31.31	07/19/10	17.09	17.09	sheen	14.22
MW28	31.31	10/20/10	19.00	18.99	0.01	12.32
MW28	31.31	01/17/11	14.07	14.07	sheen	17.24
MW28	31.31	04/27/11	13.11	-	-	18.20
MW28	31.31	07/26/11	14.81	-	-	16.50
MW28	31.31	10/19/11	18.25	18.25	sheen	13.06
MW28	31.31	11/30/11	16.94	-	-	14.37
MW28	31.31	12/21/11	18.10	18.10	sheen	13.21
MW28	31.31	01/25/12	14.65	14.64	0.01	16.67
MW28	31.31	04/27/12	11.26	-	-	20.05
MW28	31.31	07/25/12	14.23	14.21	0.02	17.10
MW28	31.31	10/09/12	18.41	-	-	12.90
MW28	31.31	01/28/13	16.34	-	-	14.97
MW28	31.31	04/12/13	16.48	16.48	sheen	14.83
MW28	31.31	07/09/13	17.42	-	-	13.89
MW28	31.31	10/16/13	18.90	18.87	0.03	12.43
MW28	31.31	01/07/14	19.22	19.21	0.01	12.10
MW28	31.31	04/14/14	14.41	14.41	sheen	16.90
MW28	31.31	07/29/14	17.16	-	-	14.15
MW28	31.31	10/15/14	20.16	20.15	0.01	11.16
MW28	31.31	1/28/2015	16.22	-	-	15.09
MW28	31.31	7/1/2015	18.60	-	-	12.71
P1	37.89	01/31/02	-	-	-	-
P1	37.89	04/24/02	19.31	-	-	18.58
P1	37.89	07/30/02	19.72	-	-	18.17
P1	37.89	10/29/02	-	-	-	-
P1	37.89	01/28/03	19.67	-	-	18.22
P1	37.89	04/29/03	17.71	-	-	20.18
P1	37.89	07/29/03	19.94	-	-	17.95
P1	37.89	10/28/03	19.97	-	-	17.92
P1	37.89	01/29/04	17.36	-	-	20.53
P1	37.89	04/28/04	19.95	-	-	17.94
P1	37.89	07/26/04	20.20	-	-	17.69
P1	37.89	11/01/04	19.60	-	-	18.29
P1	37.89	02/01/05	-	-	-	-
P1	37.89	04/28/05	19.80	-	-	18.09
P1	37.89	07/25/05	19.68	-	-	18.21
P1	37.89	10/25/05	18.45	-	-	19.44

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
P1	37.89	01/26/06	15.55	-	-	22.34
P1	37.89	04/20/06	15.86	-	-	22.03
P1	37.89	07/19/06	19.80	-	-	18.09
P1	37.89	10/17/06	19.60	-	-	18.29
P1	37.89	01/29/07	19.31	-	-	18.58
P1	37.89	04/24/07	18.72	-	-	19.17
P1	37.89	07/23/07	19.65	-	-	18.24
P1	37.89	10/31/07	19.59	-	-	18.30
P1	37.89	01/23/08	18.78	-	-	19.11
P1	37.89	04/17/08	19.50	-	-	18.39
P1	37.89	07/16/08	19.70	-	-	18.19
P1	37.89	10/20/08	-	-	-	-
P1	37.89	01/26/09	19.72	-	-	18.17
P1	37.89	04/21/09	19.55	-	-	18.34
P1	37.89	07/27/09	19.50	-	-	18.39
P1	37.89	10/29/09	-	-	-	-
P1	37.89	01/26/10	17.22	-	-	20.67
P1	37.89	04/29/10	16.35	-	-	21.54
P1	37.89	07/19/10	19.54	-	-	18.35
P1	37.89	10/20/10	19.65	-	-	18.24
P1	37.89	01/17/11	15.17	-	-	22.72
P1	37.89	04/27/11	-	-	-	-
P1	37.89	07/26/11	-	-	-	-
P1	37.89	10/19/11	19.59	-	-	18.30
P1	37.89	11/30/11	-	-	-	-
P1	37.89	12/21/11	-	-	-	-
P1	37.89	01/25/12	15.84	-	-	22.05
P1	37.89	04/27/12	-	-	-	-
P1	37.89	07/25/12	-	-	-	-
P1	37.89	10/09/12	19.52	-	-	18.37
P1	37.89	01/28/13	-	-	-	-
P1	37.89	04/12/13	-	-	-	-
P1	37.89	07/09/13	-	-	-	-
P1	37.89	10/16/13	-	-	-	-
P1	37.89	01/07/14	-	-	-	-
P1	37.89	04/14/14	-	-	-	-
P1	37.89	07/29/14	-	-	-	-
P1	37.89	10/15/14	-	-	-	-
P1	37.89	1/28/2015	-	-	-	-
P1	37.89	7/1/2015	-	-	-	-
P2	36.54	01/31/02	-	-	-	-
P2	36.54	04/24/02	13.99	-	-	22.55
P2	36.54	07/30/02	15.55	-	-	20.99
P2	36.54	10/29/02	16.52	-	-	20.02
P2	36.54	01/28/03	14.66	-	-	21.88
P2	36.54	04/29/03	12.98	-	-	23.56
P2	36.54	07/29/03	15.10	-	-	21.44
P2	36.54	10/28/03	11.15	-	-	25.39
P2	36.54	01/29/04	13.00	-	-	23.54
P2	36.54	04/28/04	14.17	-	-	22.37
P2	36.54	07/26/04	15.70	-	-	20.84
P2	36.54	11/01/04	16.27	-	-	20.27
P2	36.54	02/01/05	15.65	-	-	20.89

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
P2	36.54	04/28/05	15.09	-	-	21.45
P2	36.54	07/25/05	15.00	-	-	21.54
P2	36.54	10/25/05	20.20	-	-	16.34
P2	36.54	01/26/06	11.65	-	-	24.89
P2	36.54	04/20/06	13.55	-	-	22.99
P2	36.54	07/19/06	15.17	-	-	21.37
P2	36.54	10/17/06	16.41	-	-	20.13
P2	36.54	01/29/07	13.01	-	-	23.53
P2	36.54	04/24/07	13.80	-	-	22.74
P2	36.54	07/23/07	15.57	-	-	20.97
P2	36.54	10/31/07	16.52	-	-	20.02
P2	36.54	01/23/08	12.90	-	-	23.64
P2	36.54	04/17/08	14.08	-	-	22.46
P2	36.54	07/16/08	15.27	-	-	21.27
P2	36.54	10/20/08	16.46	-	-	20.08
P2	36.54	01/26/09	13.74	-	-	22.80
P2	36.54	04/21/09	14.99	-	-	21.55
P2	36.54	07/27/09	15.71	-	-	20.83
P2	36.54	10/29/09	16.61	-	-	19.93
P2	36.54	01/26/10	13.83	-	-	22.71
P2	36.54	04/29/10	14.03	-	-	22.51
P2	36.54	07/19/10	14.56	-	-	21.98
P2	36.54	10/20/10	16.05	-	-	20.49
P2	36.54	01/17/11	12.78	-	-	23.76
P2	36.54	04/27/11	13.59	-	-	22.95
P2	36.54	07/26/11	14.04	-	-	22.50
P2	36.54	10/19/11	15.90	-	-	20.64
P2	36.54	11/30/11	-	-	-	-
P2	36.54	12/21/11	-	-	-	-
P2	36.54	01/25/12	16.30	-	-	20.24
P2	36.54	04/27/12	12.55	-	-	23.99
P2	36.54	07/25/12	14.37	-	-	22.17
P2	36.54	10/09/12	15.98	-	-	20.56
P2	36.54	01/28/13	13.24	-	-	23.30
P2	36.54	04/12/13	14.96	-	-	21.58
P2	36.54	07/09/13	15.18	-	-	21.36
P2	36.54	10/16/13	15.52	-	-	21.02
P2	36.54	01/07/14	15.67	-	-	20.87
P2	36.54	04/14/14	13.32	-	-	23.22
P2	36.54	07/29/14	15.15	-	-	21.39
P2	36.54	10/15/14	16.34	-	-	20.20
P2	36.54	1/28/2015	13.99	-	-	22.55
P2	36.54	7/1/2015	15.57	-	-	20.97
P3	33.53	01/29/02	16.93	-	-	16.60
P3	33.53	04/24/02	17.58	-	-	15.95
P3	33.53	07/30/02	18.90	-	-	14.63
P3	33.53	10/29/02	19.68	-	-	13.85
P3	33.53	01/28/03	18.16	-	-	15.37
P3	33.53	04/29/03	17.29	-	-	16.24
P3	33.53	07/29/03	18.81	-	-	14.72
P3	33.53	10/28/03	19.26	-	-	14.27
P3	33.53	01/29/04	17.24	-	-	16.29
P3	33.53	04/28/04	18.21	-	-	15.32

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
P3	33.53	07/26/04	19.01	-	-	14.52
P3	33.53	11/01/04	-	-	-	-
P3	33.53	02/01/05	18.83	-	-	14.70
P3	33.53	04/28/05	18.49	-	-	15.04
P3	33.53	07/25/05	18.52	-	-	15.01
P3	33.53	10/25/05	19.20	-	-	14.33
P3	33.53	01/26/06	15.82	15.62	0.20	17.87
P3	33.53	04/20/06	16.10	-	-	17.43
P3	33.53	07/19/06	18.63	-	-	14.90
P3	33.53	10/17/06	19.24	-	-	14.29
P3	33.53	01/29/07	17.32	-	-	16.21
P3	33.53	04/24/07	17.81	17.81	sheen	15.72
P3	33.53	07/23/07	18.94	18.94	sheen	14.59
P3	33.53	10/31/07	19.30	19.30	sheen	14.23
P3	33.53	01/23/08	17.52	17.52	sheen	16.01
P3	33.53	04/17/08	17.90	-	-	15.63
P3	33.53	07/16/08	18.50	-	-	15.03
P3	33.53	10/20/08	19.40	-	-	14.13
P3	33.53	01/26/09	17.89	-	-	15.64
P3	33.53	04/21/09	18.48	-	-	15.05
P3	33.53	07/27/09	18.94	-	-	14.59
P3	33.53	10/29/09	19.55	-	-	13.98
P3	33.53	01/26/10	18.89	-	-	14.64
P3	33.53	04/29/10	17.81	-	-	15.72
P3	33.53	07/19/10	18.20	-	-	15.33
P3	33.53	10/20/10	19.10	-	-	14.43
P3	33.53	01/17/11	16.38	-	-	17.15
P3	33.53	04/27/11	16.47	16.45	0.02	17.08
P3	33.53	07/26/11	17.53	17.50	0.03	16.02
P3	33.53	10/19/11	19.13	-	-	14.40
P3	33.53	11/30/11	-	-	-	-
P3	33.53	12/21/11	-	-	-	-
P3	33.53	01/25/12	17.27	-	-	16.26
P3	33.53	04/27/12	14.16	-	-	19.37
P3	33.53	07/25/12	17.61	17.60	0.01	15.93
P3	33.53	10/09/12	19.18	-	-	14.35
P3	33.53	01/28/13	17.69	-	-	15.84
P3	33.53	04/12/13	17.83	-	-	15.70
P3	33.53	07/09/13	18.85	-	-	14.68
P3	33.53	10/16/13	18.86	-	-	14.67
P3	33.53	01/07/14	19.03	-	-	14.50
P3	33.53	04/14/14	17.03	-	-	16.50
P3	33.53	07/29/14	18.56	-	-	14.97
P3	33.53	10/15/14	19.19	-	-	14.34
P3	33.53	1/28/2015	17.89	-	-	15.64
P3	33.53	7/1/2015	18.76	-	-	14.77
P4	31.75	01/29/02	16.60	-	-	15.15
P4	31.75	04/24/02	15.91	-	-	15.84
P4	31.75	07/30/02	17.18	16.90	0.28	14.79
P4	31.75	10/29/02	22.26	-	-	9.49
P4	31.75	01/28/03	18.08	17.98	0.10	13.75
P4	31.75	04/29/03	15.55	-	-	16.20
P4	31.75	07/29/03	18.73	-	-	13.02

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
P4	31.75	10/28/03	19.48	19.40	0.08	12.33
P4	31.75	01/29/04	16.99	16.87	0.12	14.86
P4	31.75	04/28/04	17.94	-	-	13.81
P4	31.75	07/26/04	19.43	-	-	12.32
P4	31.75	11/01/04	19.98	19.97	0.01	11.78
P4	31.75	02/01/05	-	19.11	[c]	-
P4	31.75	04/28/05	-	21.81	[c]	-
P4	31.75	07/25/05	-	19.05	[c]	-
P4	31.75	10/25/05	-	20.81	[c]	-
P4	31.75	01/26/06	-	14.45	[c]	-
P4	31.75	04/20/06	14.90	-	-	16.85
P4	31.75	07/19/06	17.92	17.85	0.07	13.89
P4	31.75	10/17/06	20.49	20.47	0.02	11.28
P4	31.75	01/29/07	17.67	17.67	sheen	14.08
P4	31.75	04/24/07	18.10	18.10	sheen	13.65
P4	31.75	07/23/07	19.51	19.51	sheen	12.24
P4	31.75	10/31/07	19.48	19.48	sheen	12.27
P4	31.75	01/23/08	17.25	17.23	0.02	14.52
P4	31.75	04/17/08	18.07	18.06	0.01	13.69
P4	31.75	07/16/08	17.52	17.52	sheen	14.23
P4	31.75	10/20/08	20.50	-	-	11.25
P4	31.75	01/26/09	17.74	17.72	0.02	14.03
P4	31.75	04/21/09	18.30	18.28	0.02	13.47
P4	31.75	07/27/09	19.42	19.42	sheen	12.33
P4	31.75	10/29/09	20.42	20.41	0.01	11.34
P4	31.75	01/26/10	18.19	18.19	sheen	13.56
P4	31.75	04/29/10	17.95	-	-	13.80
P4	31.75	07/19/10	18.28	-	-	13.47
P4	31.75	10/20/10	20.15	20.15	sheen	11.60
P4	31.75	01/17/11	15.47	-	-	16.28
P4	31.75	04/27/11	14.46	-	-	17.29
P4	31.75	07/26/11	15.74	-	-	16.01
P4	31.75	10/19/11	18.85	-	-	12.90
P4	31.75	11/30/11	-	-	-	-
P4	31.75	12/21/11	-	-	-	-
P4	31.75	01/25/12	15.84	-	-	15.91
P4	31.75	04/27/12	12.04	-	-	19.71
P4	31.75	07/25/12	15.28	15.15	0.13	16.57
P4	31.75	10/09/12	19.61	19.57	0.04	12.17
P4	31.75	01/28/13	17.75	-	-	14.00
P4	31.75	04/12/13	17.85	-	-	13.90
P4	31.75	07/09/13	18.66	-	-	13.09
P4	31.75	10/16/13	-	-	-	-
P4	31.75	01/07/14	-	-	-	-
P4	31.75	04/14/14	15.27	-	-	16.48
P4	31.75	07/29/14	18.18	-	-	13.57
P4	31.75	10/15/14	20.37	-	-	11.38
P4	31.75	1/28/2015	17.45	-	-	14.30
P4	31.75	7/1/2015	19.68	-	-	12.07
P5	29.75	01/29/02	14.41	-	-	15.34
P5	29.75	04/24/02	14.40	-	-	15.35
P5	29.75	07/30/02	16.35	16.31	0.04	13.43
P5	29.75	10/29/02	18.17	18.09	0.08	11.64

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
P5	29.75	01/28/03	14.96	14.95	0.01	14.80
P5	29.75	04/29/03	14.61	14.60	0.01	15.15
P5	29.75	07/29/03	19.98	17.96	2.02	11.39
P5	29.75	10/28/03	18.48	18.15	0.33	11.53
P5	29.75	01/29/04	14.00	-	-	15.75
P5	29.75	04/28/04	16.73	-	-	13.02
P5	29.75	07/26/04	-	-	-	-
P5	29.75	11/01/04	18.39	17.43	0.96	12.13
P5	29.75	02/01/05	17.22	16.99	0.23	12.71
P5A	29.85	04/28/05	17.14	-	-	12.71
P5A	29.85	07/25/05	-	18.78	[c]	-
P5A	29.85	10/25/05	-	-	-	-
P5A	29.85	01/26/06	-	13.25	[c]	-
P5A	29.85	04/20/06	-	13.60	[c]	-
P5A	29.85	07/19/06	19.85	17.55	2.30	11.84
P5A	29.85	10/17/06	22.50	21.29	1.21	8.32
P5A	29.85	01/29/07	20.70	17.05	3.65	12.07
P5A	29.85	04/24/07	18.15	17.20	0.95	12.46
P5A	29.85	07/23/07	21.16	20.41	0.75	9.29
P5A	29.85	10/31/07	22.49	20.49	2.00	8.96
P5A	29.85	01/23/08	17.66	16.04	1.62	13.49
P5A	29.85	04/17/08	18.43	17.37	1.06	12.27
P5A	29.85	07/16/08	18.91	17.79	1.12	11.84
P5A	29.85	10/20/08	21.17	20.79	0.38	8.98
P5A	29.85	01/26/09	18.35	17.60	0.75	12.10
P5A	29.85	04/21/09	18.58	17.62	0.96	12.04
P5A	29.85	07/27/09	19.43	18.62	0.81	11.07
P5A	29.85	10/29/09	21.89	21.56	0.33	8.22
P5A	29.85	01/26/10	17.08	16.10	0.98	13.55
P5A	29.85	04/29/10	17.75	16.98	0.77	12.72
P5A	29.85	07/19/10	18.49	17.83	0.66	11.89
P5A	29.85	10/20/10	19.61	19.07	0.54	10.67
P5A	29.85	01/17/11	14.18	13.40	0.78	16.29
P5A	29.85	04/27/11	16.70	15.18	1.52	14.37
P5A	29.85	07/26/11	17.62	16.79	0.83	12.89
RW1	28.66	10/30/02	19.36	-	-	9.30
RW1	28.66	11/26/02	18.92	18.58	0.34	10.01
RW1	28.66	01/28/03	16.19	15.94	0.25	12.67
RW1	28.66	04/29/03	14.13	13.67	0.46	14.90
RW1	28.66	07/29/03	18.70	17.04	1.66	11.29
RW1	28.66	10/28/03	18.70	17.80	0.90	10.68
RW1	28.66	01/29/04	19.20	13.10	6.10	14.34
RW1	28.66	07/26/04	18.20	17.58	0.62	10.96
RW1	28.66	11/01/04	26.35	23.88	2.47	4.29
RW1	28.66	02/01/05	-	21.60	[c]	-
RW1	28.66	02/01/05	-	21.60	[c]	-
RW1	25.85	04/28/05	-	21.30	[c]	-
RW1	25.85	07/25/05	-	14.69	[c]	-
RW1	25.85	10/25/05	-	25.88	[c]	-
RW1	25.85	01/26/06	-	13.94	[c]	-
RW1	25.85	04/20/06	-	13.60	[c]	-
RW1	25.85	01/17/11	10.74	9.37	1.37	16.21
RW2	28.97	10/30/02	19.48	-	-	9.49

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
RW2	28.97	11/26/02	18.93	18.82	0.11	10.13
RW2	28.97	01/28/03	19.77	15.86	3.91	12.33
RW2	28.97	04/29/03	17.36	13.73	3.63	14.51
RW2	28.97	07/29/03	19.54	17.23	2.31	11.28
RW2	28.97	10/28/03	18.47	18.23	0.24	10.69
RW2	28.97	01/29/04	19.37	13.57	5.80	14.24
RW2	28.97	07/26/04	-	17.00	[c]	-
RW2	28.97	11/01/04	22.17	20.35	1.82	8.26
RW2	28.97	02/01/05	-	19.18	[c]	-
RW2	28.97	02/01/05	-	19.18	[c]	-
RW2	26.04	04/28/05	-	19.11	[c]	-
RW2	26.04	07/25/05	-	24.75	[c]	-
RW2	26.04	10/25/05	-	24.75	[c]	-
RW2	26.04	01/26/06	-	16.27	[c]	-
RW2	26.04	04/20/06	-	22.08	[c]	-
RW2	26.04	01/17/11	10.05	9.40	0.65	16.51
RW3	29.23	10/30/02	22.11	19.50	2.61	9.21
RW3	29.23	11/26/02	22.96	18.81	4.15	9.59
RW3	29.23	01/28/03	22.58	15.98	6.60	11.93
RW3	29.23	04/29/03	18.11	13.97	4.14	14.43
RW3	29.23	07/29/03	19.63	16.66	2.97	11.98
RW3	29.23	10/28/03	19.03	18.49	0.54	10.63
RW3	29.23	01/29/04	18.33	14.03	4.30	14.34
RW3	29.23	04/28/04	22.87	16.6	6.27	11.38
RW3	29.23	07/26/04	24.44	17.34	7.10	10.47
RW3	29.23	11/01/04	20.68	20.37	0.31	8.80
RW3	29.23	02/01/05	20.38	19.4	0.98	9.63
RW3	26.28	04/28/05	-	18.90	[c]	-
RW3	26.28	07/25/05	-	24.32	[c]	-
RW3	26.28	10/25/05	-	24.32	[c]	-
RW3	26.28	01/26/06	-	14.85	[c]	-
RW3	26.28	04/20/06	-	22.41	[c]	-
RW3	26.28	01/17/11	10.73	10.70	0.03	15.57
RW4	29.69	10/30/02	20.27	-	-	9.42
RW4	29.69	01/28/03	18.00	16.58	1.42	12.83
RW4	29.69	04/29/03	16.96	14.59	2.37	14.63
RW4	29.69	07/29/03	18.76	18.50	0.26	11.14
RW4	29.69	10/28/03	18.98	-	-	10.71
RW4	29.69	01/29/04	17.90	14.07	3.83	14.85
RW4	29.69	04/28/04	18.56	17.41	1.15	12.05
RW4	29.69	07/26/04	17.50	17.2	0.30	12.43
RW4	29.69	11/01/04	22.27	21.98	0.29	7.65
RW4	29.69	02/01/05	21.55	21.2	0.35	8.42
RW4	26.82	04/28/05	21.02	20.51	0.51	6.21
RW4	26.82	07/25/05	-	25.83	[c]	-
RW4	26.82	10/25/05	-	25.82	[c]	-
RW4	26.82	01/26/06	-	15.91	[c]	-
RW4	26.82	04/20/06	-	23.14	[c]	-
RW4	26.82	01/17/11	11.73	10.20	1.53	16.31
RW5	29.83	10/30/02	20.32	-	-	9.51
RW5	29.83	01/28/03	15.95	15.95	sheen	13.88
RW5	29.83	04/29/03	15.31	15.31	sheen	14.52
RW5	29.83	07/29/03	19.17	19.10	0.07	10.72

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
RW5	29.83	10/28/03	19.38	19.36	0.02	10.47
RW5	29.83	01/29/04	15.41	14.50	0.91	15.15
RW5	29.83	04/28/04	18.45	17.80	0.65	11.90
RW5	29.83	07/26/04	17.52	17.50	0.02	12.33
RW5	29.83	11/01/04	20.52	20.43	0.09	9.38
RW5	29.83	02/01/05	20.91	19.35	1.56	10.17
RW5	26.81	04/28/05	-	18.65	[c]	-
RW5	26.81	07/25/05	-	16.55	[c]	-
RW5	26.81	10/25/05	18.32	18.10	0.22	8.67
RW5	26.81	01/26/06	-	12.83	[c]	-
RW5	26.81	04/20/06	-	14.12	[c]	-
RW5	26.81	01/17/11	10.58	10.56	0.02	16.25
EW1	27.31	04/27/12	15.47	-	-	11.84
EW1	27.31	07/25/12	25.78	25.78	sheen	1.53
EW1	27.31	10/09/12	25.83	25.80	0.03	1.50
EW1	27.31	01/28/13	13.72	13.70	0.02	13.61
EW1	27.31	04/12/13	24.40	-	-	2.91
EW1	27.31	07/09/13	23.05	-	-	4.26
EW1	27.31	10/16/13	23.00	-	-	4.31
EW1	27.31	01/07/14	22.33	22.30	0.03	5.00
EW1	27.31	04/14/14	23.15	-	-	4.16
EW1	27.31	07/29/14	20.62	-	-	6.69
EW1	27.31	10/15/14	21.95	-	-	5.36
EW1	27.31	1/28/2015	21.90	-	-	5.41
EW1	27.31	7/1/2015	21.80	-	-	5.51
EW2	27.91	04/27/12	16.50	-	-	11.41
EW2	27.91	07/25/12	24.26	24.25	0.01	3.66
EW2	27.91	10/09/12	24.32	-	-	3.59
EW2	27.91	01/28/13	24.24	-	-	3.67
EW2	27.91	04/12/13	24.36	-	-	3.55
EW2	27.91	07/09/13	24.40	-	-	3.51
EW2	27.91	10/16/13	24.46	-	-	3.45
EW2	27.91	01/07/14	24.70	-	-	3.21
EW2	27.91	04/14/14	25.51	-	-	2.40
EW2	27.91	07/29/14	24.70	-	-	3.21
EW2	27.91	10/15/14	23.70	-	-	4.21
EW2	27.91	1/28/2015	23.50	-	-	4.41
EW2	27.91	7/1/2015	22.75	-	-	5.16
EW3	27.76	04/27/12	16.11	-	-	11.65
EW3	27.76	07/25/12	24.21	24.21	sheen	3.55
EW3	27.76	10/09/12	24.40	-	-	3.36
EW3	27.76	01/28/13	24.50	-	-	3.26
EW3	27.76	04/12/13	24.82	-	-	2.94
EW3	27.76	07/09/13	24.52	-	-	3.24
EW3	27.76	10/16/13	24.62	-	-	3.14
EW3	27.76	01/07/14	24.70	-	-	3.06
EW3	27.76	04/14/14	24.81	-	-	2.95
EW3	27.76	07/29/14	24.68	-	-	3.08
EW3	27.76	10/15/14	23.40	-	-	4.36
EW3	27.76	1/28/2015	22.36	-	-	5.40
EW3	27.76	7/1/2015	23.40	-	-	4.36
EW4	28.92	04/27/12	19.56	-	-	9.36
EW4	28.92	07/25/12	24.62	-	-	4.30

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
EW4	28.92	10/09/12	24.76	-	-	4.16
EW4	28.92	01/28/13	24.65	-	-	4.27
EW4	28.92	04/12/13	24.67	-	-	4.25
EW4	28.92	07/09/13	24.61	-	-	4.31
EW4	28.92	10/16/13	24.81	-	-	4.11
EW4	28.92	01/07/14	24.62	-	-	4.30
EW4	28.92	04/14/14	24.74	-	-	4.18
EW4	28.92	07/29/14	24.80	-	-	4.12
EW4	28.92	10/15/14	23.01	-	-	5.91
EW4	28.92	1/28/2015	23.05	-	-	5.87
EW4	28.92	7/1/2015	23.25	-	-	5.67
EW5	29.72	07/09/13	5.46	-	-	24.26
EW5	29.72	10/16/13	6.36	-	-	23.36
EW5	29.72	01/07/14	7.15	-	-	22.57
EW5	29.72	04/14/14	6.33	-	-	23.39
EW5	29.72	07/29/14	14.32	-	-	15.40
EW5	29.72	10/15/14	22.91	-	-	6.81
EW5	29.72	1/28/2015	20.20	20.19	0.01	9.53
EW5	29.72	7/1/2015	22.75	-	-	6.97
EW6	28.29	10/15/14	18.20	-	-	10.09
EW6	28.29	1/28/2015	22.80	-	-	5.49
EW6	28.29	7/1/2015	23.05	-	-	5.24
EW7	29.93	10/15/14	22.41	-	-	7.52
EW7	29.93	1/28/2015	24.35	-	-	5.58
EW7	29.93	7/1/2015	24.25	-	-	5.68
PZ1	28.43	04/27/12	9.27	-	-	19.16
PZ1	28.43	07/25/12	13.32	-	-	15.11
PZ1	28.43	10/09/12	18.37	-	-	10.06
PZ1	28.43	01/28/13	15.18	15.16	0.02	13.27
PZ1	28.43	04/12/13	14.78	-	-	13.65
PZ1	28.43	07/09/13	16.20	15.93	0.27	12.45
PZ1	28.43	10/16/13	18.15	17.59	0.56	10.73
PZ1	28.43	01/07/14	19.22	17.76	1.46	10.38
PZ1	28.43	04/14/14	13.47	13.44	0.03	14.98
PZ1	28.43	07/29/14	16.85	16.29	0.56	12.03
PZ1	28.43	10/15/14	18.73	18.32	0.41	10.03
PZ1	28.43	1/28/2015	16.64	16.13	0.51	12.20
PZ1	28.43	7/1/2015	21.80	18.18	3.62	9.53
PZ2	28.57	04/27/12	9.25	-	-	19.32
PZ2	28.57	07/25/12	12.79	-	-	15.78
PZ2	28.57	10/09/12	17.70	17.68	0.02	10.89
PZ2	28.57	01/28/13	14.30	-	-	14.27
PZ2	28.57	04/12/13	15.47	-	-	13.10
PZ2	28.57	07/09/13	16.18	15.94	0.24	12.58
PZ2	28.57	10/16/13	17.95	17.03	0.92	11.36
PZ2	28.57	01/07/14	18.67	17.50	1.17	10.84
PZ2	28.57	04/14/14	13.50	13.39	0.11	15.16
PZ2	28.57	07/29/14	16.49	16.21	0.28	12.30
PZ2	28.57	10/15/14	17.84	17.75	0.09	10.80
PZ2	28.57	1/28/2015	16.46	16.10	0.36	12.40
PZ2	28.57	7/1/2015	18.21	18.11	0.10	10.44
PZ3	29.03	04/27/12	9.87	9.85	0.02	19.18
PZ3	29.03	07/25/12	14.80	14.80	sheen	14.23

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [(a)] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [(a), (b)] (ft)
PZ3	29.03	10/09/12	19.57	19.57	sheen	9.46
PZ3	29.03	01/28/13	16.87	-	-	12.16
PZ3	29.03	04/12/13	15.52	-	-	13.51
PZ3	29.03	07/09/13	17.15	17.07	0.08	11.94
PZ3	29.03	10/16/13	18.95	18.81	0.14	10.19
PZ3	29.03	01/07/14	19.01	19.00	0.01	10.03
PZ3	29.03	04/14/14	15.36	14.91	0.45	14.03
PZ3	29.03	07/29/14	17.87	17.52	0.35	11.44
PZ3	29.03	10/15/14	19.79	19.47	0.05	9.28
PZ3	29.03	1/28/2015	17.57	16.41	1.16	12.39
PZ3	29.03	7/1/2015	19.53	19.02	0.51	9.91
PZ4	29.12	04/27/12	10.30	-	-	18.82
PZ4	29.12	07/25/12	13.15	13.14	0.01	15.98
PZ4	29.12	10/09/12	17.75	17.68	0.07	11.43
PZ4	29.12	01/28/13	16.01	-	-	13.11
PZ4	29.12	04/12/13	15.81	-	-	13.31
PZ4	29.12	07/09/13	16.43	16.39	0.04	12.72
PZ4	29.12	10/16/13	17.10	17.07	0.03	12.04
PZ4	29.12	01/07/14	18.15	17.94	0.21	11.14
PZ4	29.12	04/14/14	13.66	-	-	15.46
PZ4	29.12	07/29/14	16.42	-	-	12.70
PZ4	29.12	10/15/14	18.22	18.15	0.07	10.96
PZ4	29.12	1/28/2015	15.51	-	-	13.61
PZ4	29.12	7/1/2015	18.00	17.93	0.07	11.18
PZ5	29.87	04/27/12	10.76	-	-	19.11
PZ5	29.87	07/25/12	15.79	-	-	14.08
PZ5	29.87	10/09/12	21.31	21.31	sheen	8.56
PZ5	29.87	01/28/13	17.02	16.90	0.12	12.95
PZ5	29.87	04/12/13	16.41	16.41	sheen	13.46
PZ5	29.87	07/09/13	17.38	17.31	0.07	12.55
PZ5	29.87	10/16/13	18.35	17.72	0.63	12.02
PZ5	29.87	01/07/14	20.67	19.80	0.87	9.90
PZ5	29.87	04/14/14	15.48	15.46	0.02	14.41
PZ5	29.87	07/29/14	18.64	18.25	0.39	11.54
PZ5	29.87	10/15/14	21.32	21.07	0.25	8.75
PZ5	29.87	1/28/2015	15.14	-	-	14.73
PZ5	29.87	7/1/2015	20.63	20.41	0.22	9.42
PZ6	29.96	04/27/12	10.73	-	-	19.23
PZ6	29.96	07/25/12	14.56	14.55	0.01	15.41
PZ6	29.96	10/09/12	17.44	17.44	sheen	12.52
PZ6	29.96	01/28/13	14.92	-	-	15.04
PZ6	29.96	04/12/13	15.52	-	-	14.44
PZ6	29.96	07/09/13	16.00	-	-	13.96
PZ6	29.96	10/16/13	15.56	-	-	14.40
PZ6	29.96	01/07/14	16.92	-	-	13.04
PZ6	29.96	04/14/14	13.60	-	-	16.36
PZ6	29.96	07/29/14	16.63	16.60	0.03	13.35
PZ6	29.96	10/15/14	18.07	-	-	11.89
PZ6	29.96	1/28/2015	16.97	16.64	0.33	13.25
PZ6	29.96	7/1/2015	17.44	17.34	0.10	12.60
PZ7	28.22	04/27/12	9.15	-	-	19.07
PZ7	28.22	07/25/12	12.79	12.78	0.01	15.44
PZ7	28.22	10/09/12	17.79	17.73	0.06	10.48
PZ7	28.22	01/28/13	15.57	14.51	1.06	13.50

TABLE B-1

Historical Groundwater Elevation and LNAPL Data

Kinder Morgan Liquid Terminals, Linnton Terminal

WellID	TOC Elev [a] (ft amsl)	Date Gauged	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPl Thickness (ft)	Groundwater Elevation [a], [b] (ft)
PZ7	28.22	04/12/13	14.68	14.68	sheen	13.54
PZ7	28.22	07/09/13	15.90	15.57	0.33	12.58
PZ7	28.22	10/16/13	17.62	17.12	0.50	11.00
PZ7	28.22	01/07/14	17.37	17.33	0.04	10.88
PZ7	28.22	04/14/14	13.12	13.05	0.07	15.16
PZ7	28.22	07/29/14	16.42	15.90	0.52	12.22
PZ7	28.22	10/15/14	18.09	18.08	0.01	10.14
PZ7	28.22	1/28/2015	17.43	-	-	10.79
PZ7	28.22	7/1/2015	21.03	20.47	0.56	7.64
PZ8	30.07	04/27/12	10.80	-	-	19.27
PZ8	30.07	07/25/12	15.84	15.75	0.09	14.30
PZ8	30.07	10/09/12	20.72	20.66	0.06	9.40
PZ8	30.07	01/28/13	17.51	17.29	0.22	12.74
PZ8	30.07	04/12/13	15.97	15.95	0.02	14.12
PZ8	30.07	07/09/13	17.41	17.15	0.26	12.87
PZ8	30.07	10/16/13	17.85	17.55	0.30	12.46
PZ8	30.07	01/07/14	19.49	19.08	0.41	10.91
PZ8	30.07	04/14/14	15.33	15.08	0.25	14.94
PZ8	30.07	07/29/14	18.45	17.91	0.54	12.05
PZ8	30.07	10/15/14	20.96	20.65	0.31	9.36
PZ8	30.07	1/28/2015	17.41	16.93	0.48	13.04
PZ8	30.07	7/1/2015	19.11	18.93	0.18	11.10
PZ9	30.49	07/09/13	18.28	-	-	12.21
PZ9	30.49	10/16/13	20.15	-	-	10.34
PZ9	30.49	01/07/14	20.19	-	-	10.30
PZ9	30.49	04/14/14	15.06	-	-	15.43
PZ9	30.49	07/29/14	17.68	-	-	12.81
PZ9	30.49	10/15/14	19.90	-	-	10.59
PZ9	30.49	1/28/2015	17.15	-	-	13.34
PZ9	30.49	7/1/2015	19.47	-	-	11.02
PZ10	30.66	07/09/13	18.00	-	-	12.66
PZ10	30.66	10/16/13	19.75	-	-	10.91
PZ10	30.66	01/07/14	18.84	-	-	11.82
PZ10	30.66	04/14/14	15.83	-	-	14.83
PZ10	30.66	07/29/14	18.94	-	-	11.72
PZ10	30.66	10/15/14	20.34	-	-	10.32
PZ10	30.66	1/28/2015	17.67	-	-	12.99
PZ10	30.66	7/1/2015	19.82	-	-	10.84

Notes:

[a] = Elevation relative to 1988 North American Vertical Datum (NAVD)

[b] = Groundwater elevations corrected for product thickness using formula: GWE = TOC - DTW + (0.8 x (DTW - DTP)), where 0.8 is the density of the LNAPL

[c] = NAPL thickness unknown; unable to measure depth to groundwater due to presence of highly viscous product

- = Not measured, not analyzed, not sampled or not applicable

System - Indicates that this well was being pumped during the period and LNAPL removal was part of the IRAM or barrier wall extraction system.

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-1	N	2/1/2002	ug/L	2.5 U	2.5 U	2.5 U	5 U	**2,610**	--	--
MW-1	N	11/26/2002	ug/L	1 U	1 U	1 U	3 U	**797**	**30,000**	**3,700**
MW-1	N	1/29/2003	ug/L	1 M	1 M	1 M	2 M	**3,610**	**118,000**	**13,700**
MW-1	N	4/30/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	**1,390**	**129,000**	**14,100**
MW-1	N	1/18/2011	ug/L	1 M	1 M	1 M	1 M	**310**	**7,700**	**1,500**
MW-1	N	1/26/2012	ug/L	1 U	1 U	1 U	1 U	**280**	**6,500**	**1,300**
MW-1	FD	1/26/2012	ug/L	1 U	1 U	1 U	1 U	**450**	**7,000**	**1,300**
MW-1	N	7/25/2012	ug/L	1 U	1 U	1 U	1 U	**320**	**4,800**	**2,000**
MW-1	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**660**	**1,800**	**870**
MW-1	FD	1/29/2013	ug/L	1 U	1 U	1 U	1 U	**460**	**2,100**	**950**
MW-1	N	7/9/2013	ug/L	2.5 U	2.5 U	2.5 U	2.5 U	500 U	**2,300**	**1,100**
MW-1	N	1/8/2014	ug/L	0.5 U	0.5 U	0.5 U	**0.54**	**790**	**2,500**	500 U
MW-1	FD	1/8/2014	ug/L	1 U	1 U	1 U	1 U	**1,200**	**2,600**	500 U
MW-1	N	7/29/2014	ug/L	1 UJ	1 U	1 U	1 U	**460**	**2,400**	**1,200**
MW-1	N	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	1.5 U	**131**	**6,900**	**1,100**
MW-2	N	11/26/2002	ug/L	1 U	1 U	1 U	3 U	**1,350**	**148,000**	**14,100**
MW-3	N	11/26/2002	ug/L	1 U	1 U	1 U	3 U	**1,280**	**198,000**	500 U
MW-3	N	1/18/2011	ug/L	2.5 M	2.5 M	2.5 M	2.5 M	**530**	**9,900**	**1,300**
MW-3	N	7/27/2011	ug/L	1 M	1 M	1 M	1 M	250 M	**5,900**	**1,500**
MW-3	N	1/26/2012	ug/L	1 U	1 U	1 U	1 U	**390**	**6,500**	**1,200**
MW-3	N	7/25/2012	ug/L	1 U	1 U	1 U	1 U	**260**	**4,400**	**1,900**
MW-3	FD	7/25/2012	ug/L	1 U	1 U	1 U	1 U	**320**	**4,900**	**1,600**
MW-3	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**650**	**3,700**	**2,500**
MW-3	N	7/9/2013	ug/L	2.5 U	2.5 U	2.5 U	2.5 U	**570**	**4,300**	**2,100**
MW-3	N	1/8/2014	ug/L	1 U	1 U	1 U	1 U	**990**	**3,000**	500 U
MW-3	N	7/29/2014	ug/L	1 U	1 U	1 U	1 U	**560**	**9,300**	**3,100**
MW-4	N	2/1/2002	ug/L	0.5 U	0.5 U	0.5 U	1 M	**884**	--	--
MW-4	N	4/25/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	**414**	**2,110**	500 U
MW-4	N	5/1/2002	ug/L	2.5 U	2.5 U	2.5 U	5 U	**2,610**	--	--
MW-4	N	7/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	**169**	**12,600**	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-4	N	10/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	**479**	**33,000**	500 M
MW-4	N	1/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	**326**	**16,900**	500 M
MW-4	N	4/30/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	**119**	**10,800**	500 M
MW-4	N	7/29/2003	ug/L	0.5 M	**0.504**	**0.764**	**4.39**	**125**	**50,100**	2,500 M
MW-4	N	10/28/2003	ug/L	0.5 M	**0.757**	0.5 M	**2.51**	**1,180**	**120,000**	10,000 M
MW-4	N	1/30/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	**81.7**	**82,600**	1,000 M
MW-4	N	4/29/2004	ug/L	0.5 M	**0.986**	0.5 M	1 M	80 M	**16,900**	500 M
MW-4	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	**150**	**17,400**	500 M
MW-4	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	**193**	**16,500**	2,500 M
MW-4	N	2/2/2005	ug/L	0.5 M	0.5 M	0.5 M	**1.62**	**2,060**	**300,000**	500 M
MW-4	N	4/28/2005	ug/L	0.5 M	0.5 M	**0.792**	**5.34**	**3,150**	**223,000**	2,500 M
MW-4	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**106**	**52,300**	**1,890**
MW-4	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	**644**	**32,600**	485 M
MW-4	N	1/26/2006	ug/L	0.5 M	0.5 M	0.5 M	**1.41**	**1,030**	**26,200**	495 M
MW-4	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**13,000**	**1,800**
MW-4	N	1/18/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**550**	500 M
MW-4	FD	1/18/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**390**	500 M
MW-4	N	7/27/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-4	FD	7/27/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-4	N	1/26/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-4	N	1/28/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	FD	1/28/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**520**	500 U
MW-4	N	7/10/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**390**	500 U
MW-4	FD	7/10/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**360**	500 U
MW-4	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**790**	500 U
MW-4	FD	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**700**	500 U
MW-4	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**330**	500 U
MW-4	FD	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**350**	500 U
MW-4	N	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	1.5 U	100 UJ	**7,900**	**1,800**

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-4	FD	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	1.5 U	**145 J**	**8,100**	**1,800**
MW-4B	N	9/25/2008	ug/L	0.045 M	0.048 M	0.042 M	0.115 M	**14**	**120**	**77**
MW-4B	N	12/18/2008	ug/L	0.045 M	**0.14**	0.042 M	0.115 M	250 M	250 M	**30**
MW-4B	N	7/30/2009	ug/L	0.038 U	0.052 U	0.05 U	0.165 U	**14 J**	**72 J**	**210 J**
MW-4B	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	2/1/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	--	--
MW-5	N	4/24/2002	ug/L	0.5 U	0.5 U	0.5 U	1 M	80 U	250 U	500 U
MW-5	N	7/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	50 M	--	--
MW-5	N	1/28/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**563**	500 M
MW-5	N	4/30/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**472**	500 M
MW-5	N	1/29/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**713**	500 M
MW-5	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**905**	500 M
MW-5	N	1/26/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**667**	526 M
MW-5	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**771**	500 M
MW-5	N	7/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**709**	505 M
MW-5	N	1/29/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	4/25/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	7/18/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	1/18/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-5	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-5	N	7/30/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**140 J**	500 U
MW-6	N	2/1/2002	ug/L	**30.6**	**12**	**12.4**	**11.3**	**2,270**	--	--
MW-6	N	4/24/2002	ug/L	**37.1**	**6.34**	**6.03**	**8.45**	**2,140**	250 U	500 U

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-6	N	7/30/2002	ug/L	**16.6**	**1.51**	**1.92**	**5.86**	**1,730**	--	--
MW-6	N	1/29/2003	ug/L	**6.84**	**1.52**	**1.22**	**2.39**	**1,800**	250 M	500 M
MW-6	N	4/29/2003	ug/L	**31.3**	**4.34**	**2.3**	**1.51**	**2,080**	250 M	500 M
MW-6	N	1/29/2004	ug/L	**53.7**	**3.51**	**3.52**	**6.98**	**2,610**	**1,350**	500 M
MW-6	N	4/28/2004	ug/L	**53.8**	**4.63**	**1.25**	**3.22**	**2,620**	**1,200**	500 M
MW-6	N	4/28/2005	ug/L	**8.88**	**2.21**	**0.642**	**1.61**	**718**	**1,340**	500 M
MW-6	N	1/26/2006	ug/L	**9.32**	**1.54**	**3.04**	**1.29**	**2,040**	**906**	526 M
MW-6	N	4/20/2006	ug/L	**52.9**	**7.72**	**4.8**	**7.89**	**1,500**	**837**	495 M
MW-6	N	7/20/2006	ug/L	**22.8**	**6.21**	**2.23**	**7.39**	**950**	**740**	485 M
MW-6	N	1/31/2007	ug/L	**1.7**	0.5 M	0.5 M	0.5 M	**640**	250 M	500 M
MW-6	N	4/26/2007	ug/L	**3.4**	0.5 M	0.5 M	0.5 M	**810**	250 M	500 M
MW-6	N	1/29/2008	ug/L	**1.6**	**0.67**	0.5 M	0.5 M	**600**	250 M	500 M
MW-6	N	7/17/2008	ug/L	**1.4**	0.5 M	0.5 M	0.5 M	**860**	250 M	500 M
MW-6	N	1/27/2009	ug/L	**2.8**	**0.85**	0.5 M	0.5 M	**880**	250 M	500 M
MW-6	N	1/26/2010	ug/L	**1.4**	0.5 M	0.5 M	0.5 M	**790**	250 M	500 M
MW-6	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**370**	250 M	500 M
MW-6	N	1/17/2011	ug/L	**5.7**	0.5 M	0.5 M	0.5 M	**760**	250 M	500 M
MW-6	N	7/26/2011	ug/L	**0.54**	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-6	N	1/25/2012	ug/L	**17**	**0.9**	0.5 U	**0.59**	**660**	250 U	500 U
MW-6	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-6	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-6	N	7/9/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-6	N	7/30/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/31/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	--	--
MW-7	N	4/24/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	250 U	500 U
MW-7	N	7/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	50 M	250 M	500 M
MW-7	N	10/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	**98.7**	250 M	500 M
MW-7	N	1/28/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	4/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	7/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-7	N	10/28/2003	ug/L	0.5 M	**2.11**	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	1/29/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	2/1/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	4/28/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	**121**	245 M	490 M
MW-7	N	1/26/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	263 M	526 M
MW-7	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	7/19/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-7	N	10/18/2006	ug/L	0.5 M	0.5 M	0.5 M	**1.5**	80 M	250 M	500 M
MW-7	N	1/31/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	4/25/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	7/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	7/19/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	1/17/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-7	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/28/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/10/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-7	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-8	N	2/1/2002	ug/L	**10.8**	**10**	**22.3**	**8.31**	**2,350**	--	--
MW-8	N	4/25/2002	ug/L	**2.85**	**4.45**	**13.4**	**4.52**	**1,190**	250 U	500 U
MW-8	N	7/29/2002	ug/L	**10.2**	**4.02**	**27.8**	**14.8**	**1,900**	**3,340**	500 M
MW-8	N	10/30/2002	ug/L	**1.88**	**0.691**	**3.89**	**9.86**	**764**	**1,170**	500 M
MW-8	N	1/29/2003	ug/L	**15.8**	**4.8**	**27.6**	**8.76**	**2,340**	**3,390**	500 M
MW-8	N	4/30/2003	ug/L	**11.8**	**2.11**	**30.1**	**10.4**	**1,810**	**2,250**	500 M
MW-8	N	7/29/2003	ug/L	**8.38**	**2.5**	**5.23**	**5.8**	**887**	**961**	500 M
MW-8	N	10/28/2003	ug/L	**0.93**	**1.97**	**1.25**	**4.18**	**623**	**571**	500 M
MW-8	N	1/30/2004	ug/L	**8.34**	**1.73**	**29**	**19.4**	**1,920**	**1,810**	500 M
MW-8	N	4/29/2004	ug/L	**2.69**	0.5 M	**1.62**	1 M	**618**	**1,020**	500 M
MW-8	N	7/26/2004	ug/L	**3.24**	**1.73**	**1.09**	**2.45**	**376**	**1,300**	500 M
MW-8	N	11/1/2004	ug/L	**1.3**	0.5 M	**2.45**	1 M	**391**	**422**	500 M
MW-8	N	2/2/2005	ug/L	0.5 M	**0.637**	**0.79**	1 M	**317**	**693**	500 M
MW-8	N	4/29/2005	ug/L	**1.86**	**0.701**	0.5 M	**2.53**	**421**	**1,160**	500 M
MW-8	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	**226**	**827**	500 M
MW-8	N	1/26/2006	ug/L	0.5 M	**0.86**	**0.97**	**5.22**	**390**	**1,380**	500 M
MW-8	N	4/20/2006	ug/L	**5.81**	**1.23**	**4.87**	**8.83**	**478**	**1,210**	500 M
MW-8	N	7/20/2006	ug/L	**5.52**	**2.43**	**11**	**8.68**	**533**	**1,940**	505 M
MW-8	N	10/18/2006	ug/L	**0.932**	0.5 M	**1.45**	**3.59**	**136**	**364**	490 M
MW-8	N	1/31/2007	ug/L	**4.7**	**2.5**	**28**	**5.4**	**1,700**	**630**	500 M
MW-8	N	4/25/2007	ug/L	**4.9**	**2.5**	**32**	**9**	**1,600**	**580**	500 M
MW-8	N	7/24/2007	ug/L	**0.64**	0.5 M	**0.7**	**0.5**	**500**	**290**	500 M
MW-8	N	1/24/2008	ug/L	**2.3**	**2.4**	**8.6**	**7.9**	**700**	**2,100**	**920**
MW-8	N	7/16/2008	ug/L	**0.82**	0.5 M	**5.7**	**2.6**	**690**	**460**	500 M
MW-8	N	1/27/2009	ug/L	**0.79**	**0.74**	**2.6**	**3**	**840**	**480**	500 M
MW-8	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-8	N	1/27/2010	ug/L	**1.1**	**0.8**	**1.4**	**2.2**	**900**	**590**	500 M
MW-8	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	**0.52**	250 M	250 M	500 M
MW-8	N	1/19/2011	ug/L	0.5 M	0.5 M	**1.1**	**0.79**	**480**	250 M	500 M
MW-8	FD	1/19/2011	ug/L	0.5 M	0.5 M	**1.1**	**0.75**	**420**	250 M	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-8	N	7/27/2011	ug/L	0.5 M	0.5 M	**1.2**	**1.8**	**660**	**750**	500 M
MW-8	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	FD	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	7/26/2012	ug/L	**0.62**	0.5 U	**0.75**	**1.4**	**590**	**700**	500 U
MW-8	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	7/10/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-8	N	1/7/2014	ug/L	**4.3**	**1.5**	**2.7**	**2.2**	250 U	**280**	500 U
MW-8	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**160 J**	500 U
MW-8	N	7/1/2015	ug/L	**1.92**	**0.978**	0.5 U	1.5 U	100 U	**480**	**290**
MW-8B	N	9/26/2008	ug/L	**0.05**	0.048 M	0.042 M	0.115 M	**57**	**15**	**24**
MW-8B	N	12/18/2008	ug/L	**0.05**	0.048 M	0.042 M	0.115 M	**47**	250 M	500 M
MW-8B	N	7/30/2009	ug/L	0.038 U	0.052 U	0.05 U	0.165 U	13 U	**66 J**	**200 J**
MW-8B	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-9	N	2/1/2002	ug/L	**357**	**4.48**	2.5 M	5 M	**1,730**	--	--
MW-9	N	4/25/2002	ug/L	**312**	**6.84**	**5.47**	**9.44**	**1,360**	250 U	500 U
MW-9	N	7/29/2002	ug/L	**727**	**7.44**	**6.54**	**12.2**	**2,850**	250 M	500 M
MW-9	N	10/30/2002	ug/L	**511**	**11.4**	**6.14**	10 M	**1,420**	**486**	500 M
MW-9	N	1/29/2003	ug/L	**193**	**2.66**	2.5 M	5 M	**1,390**	**402**	500 M
MW-9	N	4/30/2003	ug/L	**663**	**9.36**	**11.6**	**11.1**	**3,440**	250 M	500 M
MW-9	N	7/30/2003	ug/L	**519**	**10.8**	**8.51**	**17.3**	**2,060**	**457**	500 M
MW-9	N	10/29/2003	ug/L	**32.6**	**0.576**	**4.94**	1 M	**1,790**	**680**	500 M
MW-9	N	1/30/2004	ug/L	**49**	**7.3**	**6.52**	**11.8**	**1,970**	**693**	500 M
MW-9	N	4/29/2004	ug/L	**792**	**13.8**	**16.9**	**17.6**	**3,100**	**903**	500 M
MW-9	N	7/26/2004	ug/L	**850**	**13.8**	**7.77**	**18.3**	**3,800**	**1,600**	**601**
MW-9	N	11/1/2004	ug/L	**423**	**8.08**	2.5 M	**8.36**	**1,870**	**471**	500 M
MW-9	N	2/2/2005	ug/L	**502**	**9.58**	**2.01**	**12.2**	**2,660**	**1,440**	500 M
MW-9	N	4/29/2005	ug/L	**436**	**8.18**	2.5 M	**10.9**	**1,960**	**1,400**	500 M
MW-9	N	7/26/2005	ug/L	**420**	**9.18**	2.5 M	**12.5**	**1,870**	**3,440**	500 M
MW-9	N	10/26/2005	ug/L	**357**	**4.54**	2.5 M	**8.18**	**1,870**	**991**	485 M
MW-9	N	1/26/2006	ug/L	**90.8**	**1.95**	0.5 M	**3.31**	**608**	248 M	495 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-9	N	4/20/2006	ug/L	**203**	**3.47**	**1.32**	**5.11**	**662**	**815**	500 M
MW-9	N	7/20/2006	ug/L	**314**	**5.61**	**3.16**	**8.49**	**1,100**	**502**	485 M
MW-9	N	10/18/2006	ug/L	**288**	**7.34**	**5.98**	**11.1**	**1,430**	**499**	500 M
MW-9	N	1/30/2007	ug/L	**260**	**5**	**6.5**	**5.7**	**1,300**	250 M	500 M
MW-9	N	4/25/2007	ug/L	**180**	**3.8**	**6.1**	**3.2**	**840**	250 M	500 M
MW-9	N	7/24/2007	ug/L	**500**	**9.6**	**9.8**	**9.5**	**2,600**	250 M	500 M
MW-9	N	1/24/2008	ug/L	**350**	**5.9**	2.5 M	**4.6**	**1,200**	250 M	500 M
MW-9	N	7/16/2008	ug/L	**260**	**4.5**	**1.8**	**2.8**	**1,000**	250 M	500 M
MW-9	N	1/28/2009	ug/L	**640**	**5.9**	2.5 M	**2.9**	**3,100**	250 M	500 M
MW-9	N	7/28/2009	ug/L	**410**	**11**	5 U	**8.8**	**3,300**	250 M	500 M
MW-9	N	1/27/2010	ug/L	**65**	**1.1**	0.5 M	**0.97**	**320**	250 M	500 M
MW-9	N	7/20/2010	ug/L	**440**	**7.7**	2.5 M	**5.2**	**2,400**	250 M	500 M
MW-9	N	1/18/2011	ug/L	**71**	**2.3**	**1.3**	**2.7**	**700**	**480**	500 M
MW-9	N	7/27/2011	ug/L	**230**	**3.3**	**1.4**	**3.5**	**730**	250 M	500 M
MW-9	N	1/26/2012	ug/L	**84**	**1.9**	**0.92**	**1.2**	**480**	250 U	500 U
MW-9	N	7/26/2012	ug/L	**190**	2 U	2 U	2 U	**570**	250 U	500 U
MW-9	N	1/29/2013	ug/L	**830**	**18**	**18**	**12**	2,000 U	250 U	500 U
MW-9	N	7/10/2013	ug/L	**1,100**	**14**	10 U	**20**	**3,000**	250 U	500 U
MW-9	N	1/8/2014	ug/L	**880**	**13**	5 U	**12**	**4,000**	250 U	500 U
MW-9	N	7/30/2014	ug/L	**600**	10 U	10 U	**10**	2,000 U	**200 J**	500 U
MW-9	N	7/1/2015	ug/L	**508**	**9.15**	**1.59**	**12.6**	**3,650**	**770**	**430**
MW-10	FD	2/1/2002	ug/L	**18**	**8.7**	**7.83**	**6.7**	**4,010**	--	--
MW-10	N	4/25/2002	ug/L	**16.7**	**8.48**	**7.65**	**9.13**	**4,470**	**3,850**	500 U
MW-10	N	11/27/2002	ug/L	**3.17**	**2.41**	1 U	**2.49**	**3,630**	**15,200**	500 U
MW-10	N	4/30/2003	ug/L	**15.4**	**9.14**	**6.63**	5 M	**3,630**	**483,000**	5,000 M
MW-10	N	7/30/2003	ug/L	**9.23**	**6.6**	**5.95**	**8.52**	**3,320**	**99,100**	10,000 M
MW-10	N	10/29/2003	ug/L	**10.6**	**5.88**	**4.94**	**7.06**	**4,120**	**146,000**	2,500 M
MW-10	N	7/27/2011	ug/L	**5.4**	**2.2**	**3.1**	**4.9**	**1,700**	**2,500**	500 M
MW-10	N	1/26/2012	ug/L	**7.2**	**3.4**	**1.4**	**4.9**	**2,500**	**2,300**	500 U
MW-12	N	1/31/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	**1,320**	--	--

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-12	N	4/25/2002	ug/L	1 U	1 U	1 U	2 U	**1,970**	**4,030**	500 U
MW-12	N	7/29/2002	ug/L	**0.721**	**0.526**	0.5 M	**5.6**	**1,110**	**11,100**	500 M
MW-12	N	10/29/2002	ug/L	1 M	**6.61**	**13.6**	**3.11**	**3,630**	**5,540**	500 M
MW-12	N	1/28/2003	ug/L	0.5 M	**0.534**	0.5 M	1 M	**1,250**	**110,000**	10,000 M
MW-12	N	4/29/2003	ug/L	0.5 M	**0.547**	0.5 M	**2.55**	**740**	**14,500**	500 M
MW-12	N	7/29/2003	ug/L	**0.94**	**0.717**	**1.5**	**3.57**	**832**	**2,000**	500 M
MW-12	N	10/28/2003	ug/L	**0.933**	**1.51**	**1.31**	**2.65**	**1,110**	**25,300**	500 M
MW-12	N	1/29/2004	ug/L	**2.05**	0.5 M	**1.17**	**6.78**	**835**	**12,700**	500 M
MW-12	N	4/29/2004	ug/L	0.5 M	0.5 M	**0.839**	**1.79**	**669**	**8,030**	500 M
MW-12	N	7/26/2004	ug/L	**1.17**	**1.03**	**2.69**	**9.47**	**1,720**	**12,500**	500 M
MW-12	N	11/1/2004	ug/L	0.5 M	**4.8**	**1.03**	**4.53**	**1,330**	**37,200**	2,500 M
MW-12	N	2/2/2005	ug/L	**1.29**	**0.536**	**1.39**	**5.96**	**1,480**	**27,700**	500 M
MW-12	N	4/28/2005	ug/L	**1.06**	**0.815**	**1.07**	**4.26**	**682**	**8,630**	**598**
MW-12	N	7/26/2005	ug/L	**0.977**	0.5 M	**0.842**	**3.19**	**454**	**6,770**	**556**
MW-12	N	10/25/2005	ug/L	0.5 M	**3.56**	**1.29**	**8.76**	**1,290**	**8,970**	500 M
MW-12	N	1/26/2006	ug/L	0.5 M	0.5 M	**1.75**	1 M	**1,190**	**11,000**	495 M
MW-12	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,100**	**170,000**	**27,000**
MW-12	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,100**	**3,400**	500 U
MW-12B	N	9/25/2008	ug/L	0.045 M	**0.08**	0.042 M	0.115 M	**25**	**110**	**42**
MW-12B	N	12/18/2008	ug/L	**0.05**	**0.09**	0.042 M	0.115 M	**14**	**64**	**25**
MW-12B	N	7/30/2009	ug/L	0.038 U	**0.06 J**	0.05 U	0.165 U	**15 J**	**86 J**	**190 J**
MW-12B	N	7/19/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-12C	N	9/25/2008	ug/L	0.045 M	**0.05**	0.042 M	0.115 M	**23**	11 U	**21**
MW-12C	N	12/18/2008	ug/L	0.045 M	0.048 M	0.042 M	0.115 M	250 M	250 M	500 M
MW-12C	N	7/30/2009	ug/L	0.038 U	**0.13 J**	0.05 U	0.165 U	13 U	--	--
MW-12C	N	7/19/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-13	N	1/31/2002	ug/L	**109**	**6.74**	**8.9**	5 M	**6,150**	--	--
MW-13	N	4/25/2002	ug/L	**48.5**	**7.56**	**9.14**	5 U	**5,700**	250 U	500 U
MW-13	N	7/29/2002	ug/L	**2.63**	**1.6**	**2.88**	**7.76**	**3,330**	**2,690**	500 M
MW-13	N	10/29/2002	ug/L	**4.68**	**3.35**	**2.38**	**6.37**	**2,320**	**2,180**	**762**

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-13	N	1/28/2003	ug/L	**2.71**	**3.22**	**2.56**	**6.52**	**2,220**	**2,230**	500 M
MW-13	N	4/29/2003	ug/L	**107**	**3.56**	**5.72**	5 M	**6,160**	833 M	1,670 M
MW-13	N	7/29/2003	ug/L	**3.23**	**2.48**	**1.84**	**4.91**	**2,130**	**546**	500 M
MW-13	N	10/28/2003	ug/L	**2.18**	**3.9**	**1.5**	**4.43**	**2,210**	**1,780**	500 M
MW-13	N	1/29/2004	ug/L	**16.8**	**1.32**	**4.19**	**7.76**	**3,390**	**3,240**	500 M
MW-13	N	4/28/2004	ug/L	**1.86**	**1.84**	**1.11**	**3.68**	**2,570**	**1,940**	500 M
MW-13	N	7/26/2004	ug/L	**1.21**	**0.768**	**1.97**	**5.05**	**1,580**	**2,020**	**825**
MW-13	N	11/1/2004	ug/L	**2.71**	0.5 M	**1.62**	1 M	**1,910**	**507**	500 M
MW-13	N	2/1/2005	ug/L	**1.77**	**0.953**	**1.27**	**4.49**	**1,380**	**2,640**	500 M
MW-13	N	4/28/2005	ug/L	**2.25**	**1.33**	**1.15**	**4.79**	**1,340**	**2,650**	500 M
MW-13	N	7/26/2005	ug/L	**2.32**	**0.662**	**1.31**	**5.09**	**995**	**2,720**	500 M
MW-13	N	10/25/2005	ug/L	**1.43**	0.5 M	**2.31**	**2.88**	**1,570**	**1,870**	472 M
MW-13	N	1/26/2006	ug/L	**4.01**	**2**	**3.96**	**2.29**	**4,390**	**4,080**	495 M
MW-13	N	4/20/2006	ug/L	**12.4**	**3.76**	**8.66**	**13.1**	**1,840**	**3,570**	500 M
MW-13	N	7/19/2006	ug/L	**6.17**	**2.39**	**3.36**	**6.87**	**1,070**	**1,790**	485 M
MW-13	N	10/18/2006	ug/L	**5.42**	**2.54**	**4.93**	**11.4**	**1,020**	**1,790**	**685**
MW-13	N	1/31/2007	ug/L	**2.7**	1 M	1 M	1 M	**2,600**	**710**	500 M
MW-13	N	4/25/2007	ug/L	**1.9**	**1.1**	**1.5**	1 M	**2,900**	**680**	500 M
MW-13	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	**0.76**	**1,500**	**290**	500 M
MW-13	N	1/28/2008	ug/L	**1.2**	**1.4**	**1.1**	**2.6**	**1,800**	**1,900**	500 M
MW-13	N	7/17/2008	ug/L	1 M	1 M	1 M	1 M	**2,500**	**1,800**	500 M
MW-13	N	1/27/2009	ug/L	1 M	1 M	1 M	1 M	**3,400**	**1,000**	500 M
MW-13	N	7/27/2009	ug/L	0.5 M	0.5 M	0.5 M	**0.68**	**2,400**	**3,700**	**950**
MW-13	N	1/26/2010	ug/L	0.5 M	**0.89**	0.5 M	**1.7**	**2,800**	**3,300**	500 M
MW-13	N	7/19/2010	ug/L	0.5 M	**0.58**	0.5 M	**0.62**	**2,000**	**420**	500 M
MW-13	N	1/17/2011	ug/L	**0.68**	**1**	0.5 M	**1.5**	**3,200**	**540**	500 M
MW-13	FD	1/17/2011	ug/L	**0.61**	**0.96**	0.5 M	**1.4**	**2,700**	**590**	500 M
MW-13	N	7/26/2011	ug/L	1.5 M	1.5 M	1.5 M	1.5 M	**2,900**	**820**	500 M
MW-13	N	1/25/2012	ug/L	0.5 U	**0.88**	0.5 U	**1.4**	**2,300**	**460**	500 U
MW-13	N	7/25/2012	ug/L	**0.58**	**0.74**	0.5 U	**1.5**	**2,800**	**460**	500 U

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-13	N	1/28/2013	ug/L	1.5 U	1.5 U	1.5 U	1.5 U	**2,800**	**460**	500 U
MW-13	N	7/9/2013	ug/L	0.5 U	**0.6**	0.5 U	**0.54**	**1,600**	**340**	500 U
MW-13	FD	7/9/2013	ug/L	0.5 U	**0.51**	0.5 U	0.5 U	**1,600**	**390**	500 U
MW-13	N	1/7/2014	ug/L	0.5 U	**0.55**	0.5 U	**0.78**	**1,700**	**360**	500 U
MW-13	N	7/29/2014	ug/L	1 U	1 U	1 U	1 U	**1,700**	**400**	500 U
MW-14	N	1/31/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	--	--
MW-14	N	4/24/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 M	250 U	500 U
MW-14	N	7/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	50 M	305 M	610 M
MW-14	N	10/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	1/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	4/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	**160**	250 M	500 M
MW-14	N	7/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	10/28/2003	ug/L	0.5 M	**0.792**	0.5 M	1 M	80 M	287 M	500 M
MW-14	N	1/29/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	2/1/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	4/28/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	240 M	481 M
MW-14	N	1/27/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-14	N	7/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	253 M	505 M
MW-14	N	10/18/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	226 M	532 M
MW-14	N	1/31/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	4/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	7/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-14	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	7/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	1/17/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-14	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	1/28/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/9/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-14	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/31/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	--	--
MW-15	N	4/24/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	250 U	500 U
MW-15	N	7/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	50 M	250 M	500 M
MW-15	N	10/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	1/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	4/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	7/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	10/28/2003	ug/L	0.5 M	**1.01**	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	1/29/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	286 M	571 M
MW-15	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**250**	500 M
MW-15	N	2/1/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	4/28/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	243 M	485 M
MW-15	N	1/27/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	263 M	526 M
MW-15	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	240 M	481 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-15	N	7/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-15	N	10/17/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	243 M	485 M
MW-15	N	1/31/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	4/25/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	--
MW-15	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	1/29/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	7/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	1/17/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-15	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/9/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-15	N	7/30/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-16	N	2/1/2002	ug/L	**49.1**	**12.6**	**4.42**	**7.61**	**3,620**	--	--
MW-16	N	4/25/2002	ug/L	**46**	**14**	2.5 U	**8.73**	**3,570**	**4,040**	**1,050**
MW-16	N	7/30/2002	ug/L	**83.6**	**14**	**2.73**	**11**	**1,920**	**4,740**	1,000 M
MW-16	N	11/27/2002	ug/L	**79.9**	**11.3**	1 U	**3.84**	**2,000**	**2,660**	**1,160**
MW-16	N	1/28/2003	ug/L	**40.5**	**13.4**	**4.35**	**10.6**	**2,930**	**30,400**	**17,600**
MW-16	N	4/29/2003	ug/L	**43.7**	**13**	**3.06**	**8.68**	**2,300**	**12,900**	**5,160**
MW-16	N	7/29/2003	ug/L	**65.7**	**10.1**	**2.91**	**6.98**	**1,420**	**11,100**	**5,870**
MW-16	N	10/28/2003	ug/L	**77.9**	**12.8**	**2.16**	**7.95**	**1,910**	**7,520**	**3,440**
MW-16	N	4/28/2004	ug/L	**26.5**	**8.74**	**1.28**	**5.73**	**1,860**	**74,200**	**37,600**
MW-16	N	7/26/2004	ug/L	**107**	**16.2**	**5.19**	**14.6**	**2,890**	**28,100**	**15,400**
MW-16	N	11/1/2004	ug/L	**39.1**	**11.1**	**3.51**	**9.36**	**2,440**	**15,100**	**8,500**

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-16	N	7/27/2011	ug/L	**18**	**3.9**	0.5 M	**2.2**	**1,200**	**1,500**	500 M
MW-16	N	7/26/2012	ug/L	**11**	**4.2**	1 U	**4.1**	**1,100**	**1,200**	500 U
MW-16	FD	7/26/2012	ug/L	**12**	**4.6**	1 U	**4.2**	**1,100**	**1,300**	500 U
MW-17	N	1/31/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	**93.8**	--	--
MW-17	N	4/24/2002	ug/L	0.5 U	0.5 U	0.5 U	1 M	**126**	**360**	500 U
MW-17	N	7/30/2002	ug/L	0.5 M	0.5 M	**0.702**	**2.72**	**199**	**352**	500 M
MW-17	N	10/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	1/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	4/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	**118**	**256**	500 M
MW-17	N	7/29/2003	ug/L	0.5 M	**0.749**	0.5 M	1 M	**109**	**553**	500 M
MW-17	N	10/28/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**324**	500 M
MW-17	N	1/29/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**423**	500 M
MW-17	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**272**	500 M
MW-17	N	2/1/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	4/28/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-17	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**282**	490 M
MW-17	N	1/27/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	245 M	490 M
MW-17	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	245 M	490 M
MW-17	N	7/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	**258**	485 M
MW-17	N	10/17/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	243 M	485 M
MW-17	N	1/31/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	4/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	1/29/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	7/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-17	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	1/17/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	FD	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-17	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/9/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-17	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	4/25/2002	ug/L	0.5 U	0.5 U	0.5 U	1 U	80 U	250 U	500 U
MW-18	N	7/29/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	50 M	250 M	500 M
MW-18	N	10/30/2002	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	1/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	4/29/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	7/30/2003	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	10/29/2003	ug/L	0.5 M	**2.02**	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	1/30/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	4/28/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	7/26/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	11/1/2004	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	2/1/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	4/28/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	7/26/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	10/25/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	245 M	490 M
MW-18	N	1/27/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	248 M	495 M
MW-18	N	4/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	238 M	476 M
MW-18	N	7/20/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	250 M	500 M
MW-18	N	10/18/2006	ug/L	0.5 M	0.5 M	0.5 M	1 M	80 M	263 M	526 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-18	N	1/29/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	4/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	7/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	1/26/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	7/19/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	1/17/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	7/26/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-18	N	1/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	1/28/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/9/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	1/8/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-18	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-20	N	5/1/2003	ug/L	**36.5**	**7.12**	**5.15**	**7.2**	**3,460**	**5,850**	500 M
MW-20	N	7/30/2003	ug/L	**45.7**	**7.59**	**8.15**	**8.07**	**2,680**	**7,200**	500 M
MW-20	N	7/20/2010	ug/L	**2.8**	**2.8**	1 M	**4.1**	**2,700**	**3,100**	500 M
MW-20	N	1/26/2012	ug/L	1 U	**2.3**	1 U	**4.7**	**2,500**	**3,500**	500 U
MW-21	N	5/1/2003	ug/L	**3.15**	**4.92**	**2.92**	**3.51**	**2,260**	**6,040**	500 M
MW-21	N	7/30/2003	ug/L	**4.15**	**5.45**	**4.08**	**10.8**	**3,730**	**4,830**	500 M
MW-21	N	7/20/2010	ug/L	1 M	1 M	1 M	**1.2**	**2,300**	**5,700**	500 M
MW-21	N	1/26/2012	ug/L	1 U	1 U	1 U	**1.4**	**3,100**	**1,900**	500 U
MW-21	N	7/26/2012	ug/L	0.5 U	0.5 U	0.5 U	**0.64**	**2,300**	**2,200**	500 U
MW-21	N	7/10/2013	ug/L	2 U	2 U	2 U	2 U	**1,900**	**3,300**	500 U
MW-21	N	1/8/2014	ug/L	**1.2**	**1**	1 U	**1.2**	**2,900**	**3,000**	500 U
MW-22	N	5/1/2003	ug/L	**11.7**	**3.54**	**2.43**	**4.52**	**1,330**	**2,570**	500 M
MW-22	N	7/30/2003	ug/L	**10.4**	**7.04**	**1.67**	**7.3**	**1,080**	**2,650**	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-22	N	10/29/2003	ug/L	0.5 M	**1.18**	0.5 M	1 M	**138**	**1,330**	500 M
MW-22	N	1/30/2004	ug/L	**6.88**	**0.95**	**3.03**	**12.3**	**2,550**	**2,130**	500 M
MW-22	N	4/29/2004	ug/L	**13.7**	**3.56**	**1.81**	**4.68**	**1,670**	**3,470**	**510**
MW-22	N	7/26/2004	ug/L	**0.817**	**5.2**	**1.59**	**5.75**	**1,210**	**3,340**	**776**
MW-22	N	11/1/2004	ug/L	**0.956**	0.5 M	**0.938**	1 M	**715**	**2,430**	**512**
MW-22	N	2/2/2005	ug/L	**2.23**	**1.72**	**2.18**	**8.02**	**1,440**	**2,950**	**629**
MW-22	N	7/26/2005	ug/L	**2.38**	**1.54**	**1.8**	**7.63**	**978**	**3,280**	500 M
MW-22	N	10/26/2005	ug/L	**0.69**	**3.01**	**1.43**	**2.85**	**680**	**2,430**	500 M
MW-22	N	1/26/2006	ug/L	**6.78**	**1.91**	**3.49**	**1.74**	**1,480**	**1,740**	495 M
MW-22	N	4/20/2006	ug/L	**9.75**	**4.03**	**4.47**	**11.2**	**1,010**	**1,750**	481 M
MW-22	N	7/20/2006	ug/L	**1.11**	**1.48**	**2.3**	**8.89**	**555**	**2,900**	500 M
MW-22	N	10/18/2006	ug/L	0.5 M	**0.711**	0.5 M	**3.45**	**103**	**2,010**	490 M
MW-22	N	1/30/2007	ug/L	**4.8**	**2**	0.5 M	**2.2**	**860**	**390**	500 M
MW-22	N	4/25/2007	ug/L	**2.1**	**1**	**0.5**	**1.4**	**870**	**460**	500 M
MW-22	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**600**	**380**	500 M
MW-22	N	1/24/2008	ug/L	**2.3**	**1.5**	0.5 M	**1.3**	**510**	**590**	500 M
MW-22	N	7/16/2008	ug/L	**0.78**	**0.56**	0.5 M	**1.3**	**770**	**530**	500 M
MW-22	N	1/28/2009	ug/L	**3.2**	**1.9**	0.5 M	**1.6**	**1,300**	**570**	500 M
MW-22	N	1/27/2010	ug/L	0.5 M	0.5 M	0.5 M	**0.77**	**1,100**	**410**	500 M
MW-22	N	7/20/2010	ug/L	**1.5**	**1.8**	0.5 M	**1.6**	**880**	**430**	500 M
MW-22	N	1/18/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**610**	**290**	500 M
MW-22	N	7/27/2011	ug/L	**1.1**	**1.8**	**0.5**	**2.9**	**870**	**600**	500 M
MW-22	N	1/26/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**790**	**270**	500 U
MW-22	N	7/26/2012	ug/L	**1**	**1.6**	0.5 U	**5.7**	**1,400**	**580**	500 U
MW-22	N	1/29/2013	ug/L	**1**	**1.6**	0.5 U	**3.6**	**1,100**	**400**	500 U
MW-22	N	7/10/2013	ug/L	0.5 U	**1.4**	0.5 U	**4.9**	**930**	**510**	500 U
MW-22	N	1/8/2014	ug/L	0.5 U	**0.76**	0.5 U	**2.7**	**1,200**	**570**	500 U
MW-22	N	7/30/2014	ug/L	0.5 U	**0.68**	0.5 U	**3.6**	**790**	**500**	500 U
MW-22	N	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	**2.78**	**783**	**1,400**	**490**
MW-23	N	7/26/2004	ug/L	**0.844**	**2.96**	**3.25**	**9.65**	**1,750**	**11,400**	**687**

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-23	N	11/1/2004	ug/L	**1.34**	**2.07**	**2.84**	**8.28**	**1,670**	**17,600**	**8,780**
MW-24	N	7/26/2004	ug/L	**0.976**	**1.19**	**2.4**	**10**	**1,850**	**14,400**	**13,100**
MW-24	N	11/1/2004	ug/L	0.5 M	**1.97**	**0.827**	**3.35**	**1,190**	**11,000**	**9,640**
MW-24	N	2/2/2005	ug/L	0.5 M	0.5 M	0.5 M	1 M	**317**	**6,720**	**7,930**
MW-24	N	4/28/2005	ug/L	0.5 M	**0.631**	**0.723**	**5.03**	**854**	**26,400**	**25,800**
MW-24	N	1/27/2006	ug/L	0.5 M	0.5 M	0.5 M	**1.34**	**132**	**2,350**	**3,280**
MW-24	N	4/20/2006	ug/L	0.5 M	**0.633**	**0.922**	**4.68**	**396**	**7,710**	**5,410**
MW-24	N	1/29/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**290**	**5,600**	**7,900**
MW-24	N	7/26/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**1,600**	**2,700**
MW-24	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**3,400**	**4,200**
MW-24	N	7/16/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**320**	**9,100**	**13,000**
MW-24	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**700**	**660**
MW-24	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	**2,100**	**2,600**
MW-25	N	4/28/2005	ug/L	**1.66**	**1.19**	**1.71**	**12.1**	**1,010**	**2,180**	556 M
MW-25	N	7/26/2005	ug/L	**1.5**	**0.613**	**1.58**	**11.7**	**749**	**2,110**	500 M
MW-25	N	10/25/2005	ug/L	0.5 M	0.5 M	**1.09**	**12.1**	**1,220**	**3,190**	495 M
MW-25	N	1/26/2006	ug/L	0.5 M	0.5 M	**2.17**	**13.2**	**1,770**	**10,500**	**1,100**
MW-25	N	4/20/2006	ug/L	**1.34**	**0.959**	**3.56**	**21.9**	**770**	**3,590**	490 M
MW-25	N	7/19/2006	ug/L	**2.49**	**3**	**3.34**	**13.1**	**704**	**3,510**	500 M
MW-25	N	10/18/2006	ug/L	**2.33**	**1.17**	**2.82**	**14.8**	**464**	**3,650**	556 M
MW-25	N	1/30/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,300**	**480**	500 M
MW-25	N	4/25/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,300**	**370**	500 M
MW-25	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,200**	**400**	500 M
MW-25	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**870**	**2,800**	500 M
MW-25	N	7/17/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,800**	**960**	500 M
MW-25	N	1/27/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**2,000**	**1,400**	500 M
MW-25	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,300**	**470**	500 M
MW-25	N	1/27/2010	ug/L	1 M	1 M	1 M	1 M	**1,100**	**2,100**	**520**
MW-25	N	7/19/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**1,300**	**1,300**	500 M
MW-25	N	1/17/2011	ug/L	1 M	1 M	1 M	1 M	**1,300**	**2,400**	500 M

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-25	N	7/27/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**480**	**1,400**	500 M
MW-25	N	1/26/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,100**	**1,300**	500 U
MW-25	N	7/25/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,600**	**1,000**	500 U
MW-25	N	1/28/2013	ug/L	1 U	1 U	1 U	1 U	**1,600**	**810**	500 U
MW-25	N	7/10/2013	ug/L	1 U	1 U	1 U	1 U	**1,100**	**1,000**	500 U
MW-25	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,600**	**720**	500 U
MW-25	N	7/29/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,000**	**980**	**370 J**
MW-25	N	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	1.5 U	**1,050**	**2,400**	**560**
MW-26	N	4/28/2005	ug/L	**1.22**	**0.985**	**0.813**	**5.65**	**676**	**1,870**	500 M
MW-26	N	7/26/2005	ug/L	**0.86**	**0.843**	**0.541**	**3.72**	**540**	**1,620**	500 M
MW-26	N	4/20/2006	ug/L	0.5 M	**0.85**	**1.54**	**6.18**	**480**	**2,170**	**505**
MW-26	N	7/19/2006	ug/L	**1.01**	**1.43**	**1.32**	**8.99**	**392**	**2,520**	**734**
MW-26	N	1/30/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**560**	**520**	500 M
MW-26	N	7/24/2007	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**570**	**460**	500 M
MW-26	N	1/28/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**460**	**900**	500 M
MW-26	N	7/18/2008	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**710**	**720**	500 M
MW-26	N	1/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**630**	**590**	500 M
MW-26	N	7/28/2009	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**500**	**620**	500 M
MW-26	N	1/27/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**570**	**680**	500 M
MW-26	N	7/20/2010	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	**440**	**620**	500 M
MW-26	N	1/18/2011	ug/L	0.5 M	0.5 M	0.5 M	0.5 M	250 M	250 M	500 M
MW-26	N	1/26/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	250 U	500 U
MW-26	N	7/26/2012	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**410**	**480**	500 U
MW-26	N	1/29/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**260**	**370**	500 U
MW-26	N	7/10/2013	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**410**	500 U
MW-26	N	1/7/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	**1,200**	**720**	500 U
MW-26	N	7/30/2014	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	250 U	**490**	500 U
MW-26	N	7/1/2015	ug/L	0.5 U	0.5 U	0.5 U	1.5 U	**530**	**1,800**	**1,100**
MW-28	N	4/28/2005	ug/L	**23.8**	**2.67**	**3.46**	**11**	**3,570**	**9,060**	**511**
MW-28	N	7/26/2005	ug/L	**39**	**3.86**	**4.14**	**8.74**	**3,140**	**11,200**	**503**

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil
MW-28	N	7/27/2011	ug/L	**11**	**1.5**	0.5 M	0.5 M	**1,700**	**4,400**	**630**
MW-28	N	1/29/2013	ug/L	**11**	**1.4**	0.5 U	0.5 U	**2,100**	**5,800**	**1,100**
MW-28	N	7/10/2013	ug/L	**23**	5 U	5 U	5 U	**4,400**	**16,000**	**1,500**
MW-28	N	7/30/2014	ug/L	**17**	0.5 UJ	0.5 U	**0.59**	**2,100**	**3,400**	**640**
MW-28	FD	7/30/2014	ug/L	**18**	**4.5 J**	1 U	1 U	**2,000**	**3,800**	**670**
RW-1	N	11/26/2002	ug/L	**7.68**	2 U	**16.1**	**15.5**	**3,930**	**998,000**	**45,000**
RW-2	N	11/26/2002	ug/L	**30.3**	1 U	**21**	**16.7**	**1,690**	**243,000**	**57,700**
RW-3	N	11/26/2002	ug/L	**3.8**	1 U	**7.51**	3 U	**1,430**	**678,000**	50 U
Portland Harbor Joint Source Control Screening Values [1]										
Human Health Drinking Water										
MCL			ug/L	5	1,000	700	10,000	--	--	--
Tap Water PRG			ug/L	1.2	2,300	1,300	200	--	--	--
Human Health Fish Consumption										
EPA's 2004 NRWQC (organism only)			ug/L	51	15,000	2,100	--	--	--	--
DEQ's 2004 AWQC (organism only)			ug/L	51	15,000	2,100	--	--	--	--
Ecological Receptor SLVs										
EPA's 2004 NRWQC (chronic)			ug/L	--	--	--	--	--	--	--
DEQ's 2004 AWQC (chronic)			ug/L	--	--	--	--	--	--	--
Oak Ridge National Laboratory (Tier IISCV)			ug/L	130	9.8	7.3	--	--	--	--

Notes:

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

FD = field duplicate

ug/L = micrograms per liter

SLV = screening level value

Bold = Analyte detected in sample.

TABLE B-2

Analytical Results for Groundwater -- BTEX and TPH

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Benzene	Toluene	Ethyl benzene	Xylene (total)	TPH-Gasoline	TPH-Diesel	TPH-Heavy Oil

[1] - The source of each Screening Level Value (SLV) is documented in Table 3.1 of the Portland Harbor Joint Source Control Strategy, dated December 2005 and revised in July 2007.

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-1	N	2/1/2002	ug/L	--	--	--	5 U	2.5 U	**2.74**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 M	1 U	0.5 U	**20.9**	0.5 U	12.5 U	**13.3**	**2.23**
MW-1	N	11/26/2002	ug/L	--	--	--	**2.26**	0.5 U	**1.98**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	**13.9**	0.5 U	5 U	**11**	**1.48**
MW-1	N	1/29/2003	ug/L	--	--	--	10 M	5 M	**10.8**	**0.284**	**0.394**	**0.322**	0.2 M	**0.266**	**1.46**	0.4 M	5 M	**60.6**	0.2 M	20 M	**54.7**	**6.98**
MW-1	N	4/30/2003	ug/L	--	--	--	**2.74**	1 M	**2.48**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**16.5**	1 M	2 M	**12.7**	**2**
MW-1	N	1/18/2011	ug/L	--	--	--	**0.65**	0.2 M	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.08 M	0.2 M	**3.1**	0.08 M	**0.25**	**0.53**	**0.23**
MW-1	N	1/26/2012	ug/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	4 U	0.4 U	4 U	4 U	4 U
MW-1	FD	1/26/2012	ug/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	4 U	0.4 U	4 U	4 U	4 U
MW-1	N	7/25/2012	ug/L	--	--	--	**0.44**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**1.9**	0.2 U	0.4 U	**0.26**	0.2 U
MW-1	N	1/29/2013	ug/L	--	--	--	**1**	**0.28**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**4.9**	0.2 U	**1**	**1.4**	0.2 U
MW-1	FD	1/29/2013	ug/L	--	--	--	**0.89**	**0.24**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**4.3**	0.2 U	**0.88**	**1.3**	0.2 U
MW-1	N	7/9/2013	ug/L	**0.26**	--	0.2 U	**0.82**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**3.6**	0.2 U	**0.23**	**0.35**	0.2 U
MW-1	N	1/8/2014	ug/L	**0.31**	--	0.2 U	**1.4**	**0.29**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**6.2**	0.2 U	**0.27**	**1.7**	0.2 U
MW-1	FD	1/8/2014	ug/L	**0.3**	--	0.2 U	**1**	**0.24**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**4.6**	0.2 U	**0.24**	**1.3**	0.2 U
MW-1	N	7/29/2014	ug/L	**0.26**	--	0.2 U	**0.92**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**4.2**	0.2 U	0.2 U	**0.95**	0.2 U
MW-1	N	7/1/2015	ug/L	0.25 U	0.25 U	0.25 U	**1.18**	**0.173**	**0.113**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**5.32**	0.05 U	**0.896**	**0.84**	**0.108**
MW-2	N	11/26/2002	ug/L	--	--	--	**4.44**	1 U	**2.72**	1 U	1 U	1 U	1 U	1 U	1 U	2 U	**1.16**	**14.8**	1 U	**21.1**	**15.4**	**2.24**
MW-3	N	11/26/2002	ug/L	--	--	--	10 U	10 U	**3.99**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	33 U	0.5 U	10 U	**22.1**	**2.98**
MW-3	N	1/18/2011	ug/L	--	--	--	**0.9**	**0.25**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**3.3**	0.2 M	**0.37**	**1.8**	0.2 M
MW-3	N	7/27/2011	ug/L	--	--	--	0.8 M	0.8 M	0.8 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.8 M	0.08 M	0.8 M	**2**	0.08 M	0.8 M	0.8 M	0.8 M
MW-3	N	1/26/2012	ug/L	--	--	--	4 U	4 U	4 U	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	4 U	0.4 U	4 U	**5.9**	0.4 U	4 U	4 U	4 U
MW-3	N	7/25/2012	ug/L	--	--	--	**0.37**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**2.1**	0.2 U	0.4 U	**0.69**	0.2 U
MW-3	FD	7/25/2012	ug/L	--	--	--	**0.21**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.3**	0.02 U	0.4 U	**0.64**	0.2 U
MW-3	N	1/29/2013	ug/L	--	--	--	**1.1**	**0.25**	**0.32**	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**6.1**	0.2 U	**1**	**3.4**	0.2 U
MW-3	N	7/9/2013	ug/L	**0.37**	--	0.2 U	**0.78**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**3.2**	0.2 U	**0.32**	**1.2**	0.2 U
MW-3	N	1/8/2014	ug/L	**0.41**	--	0.2 U	**1.2**	**0.28**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**6.3**	0.2 U	**0.35**	**2.1**	0.2 U
MW-3	N	7/29/2014	ug/L	**0.59**	--	0.2 U	**1.5**	**0.29**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**6.3**	0.2 U	**0.3**	**2.3**	0.2 U
MW-4	N	2/1/2002	ug/L	--	--	--	0.5 U	0.1 U	**0.257**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**2.32**	0.1 U	1 U	**0.725**	**0.17**
MW-4	N	4/25/2002	ug/L	--	--	--	0.5 U	0.1 U	**0.368**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**2.21**	0.1 U	0.5 U	**0.618**	**0.192**
MW-4	N	7/29/2002	ug/L	--	--	--	**0.405**	0.1 M	0.5 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**1.75**	0.1 M	0.5 M	0.5 M	**0.313**
MW-4	N	10/30/2002	ug/L	--	--	--	2.5 M	0.5 M	**4.26**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	8 M	0.5 M	3.5 M	**7.64**	**3.09**
MW-4	N	1/29/2003	ug/L	--	--	--	0.8 M	0.4 M	**0.86**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.8 M	0.4 M	**2.97**	0.4 M	1.2 M	**2.23**	**0.6**
MW-4	N	4/30/2003	ug/L	--	--	--	2.5 M	2.5 M	2.5 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	2.5 M	**4.88**	0.1 M	2.5 M	**2.74**	**0.774**
MW-4	N	7/29/2003	ug/L	--	--	--	1 M	0.75 M	**1.79**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**5.12**	0.5 M	**3.25**	**4.4**	**1.35**
MW-4	N	10/28/2003	ug/L	--	--	--	3 M	2 M	4 M	2 M	2 M	2 M	2 M	2 M	2 M	4 M	2 M	11 M	2 M	3 M	**8.85**	**4**
MW-4	N	1/30/2004	ug/L	--	--	--	3 M	2.5 M	**5.9**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	11.5 M	1 M	4.5 M	**10.3**	**4.41**
MW-4	N	4/29/2004	ug/L	--	--	--	1 M	0.75 M	1.75 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**4.04**	0.5 M	2.25 M	2.5 M	**1.32**
MW-4	N	7/26/2004	ug/L	--	--	--	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**1.74**	1 M	1.5 M	1 M	1 M
MW-4	N	11/1/2004	ug/L	--	--	--	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**1.46**	1 M	1 M	**1.11**	1 M
MW-4	N	2/2/2005	ug/L	--	--	--	5 M	5 M	22.5 M	5 M	5 M	5 M	5 M	5 M	5 M	10 M	5 M	**18.8**	5 M	5 M	20 M	**8.18**
MW-4	N	3/25/2005	ug/L	--	--	--	1.5 M	1 M	1.5 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	4 M	1 M	1.5 M	**4.63**	**1.26**
MW-4	N	4/28/2005	ug/L	--	--	--	6.5 M	2.5 M	31.5 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1.5 M	17 M	1 M	4.5 M	16 M	**7.26**
MW-4	N	7/26/2005	ug/L	--	--	--	3 M	3 M	12 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	**0.53**	1 M	1 M	12 M	0.5 M	5 M	**12**	**5.5**
MW-4	N	10/25/2005	ug/L	--	--	--	2.4 M	1.44 M	5.29 M	0.962 M	0.962 M	0.962 M	0.962 M	0.962 M	0.962 M	1.92 M	0.962 M	4.33 M	0.962 M	1.44 M	5.77 M	**2.08**
MW-4	N	1/26/2006	ug/L	--	--	--	2.02 M	2.02 M	9.09 M	2.02 M	2.02 M	2.02 M	2.02 M	2.02 M	2.02 M	4.04 M	2.02 M	7.07 M	2.02 M	2.02 M	8.08 M	**4.18**
MW-4	N	7/24/2007	ug/L	--	--	--	0.2 M	0.2 M	**0.3**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.5**	0.2 M	0.2 M	0.2 M	**0.22**
MW-4	N	1/18/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-4	FD	1/18/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	**0.4**	0.02 M	0.2 M	0.2 M	0.2 M
MW-4	N	7/27/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-4	FD	7/27/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-4	N	1/26/2012	ug/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-4	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.04 U	0.04 U	0.16 U	0.04 U	0.16 U	0.2 U	0.04 U	0.2 U	0.2 U	0.04 U	0.2 U	0.2 U	0.2 U
MW-4	N	1/28/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.2 U
MW-4	FD	1/28/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	0.2 U	0.2 U
MW-4	N	7/10/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	FD	7/10/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	N	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	**0.21**	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.38**	0.02 U	**0.23**	0.2 U	**0.26**

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-4	FD	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.44**	0.02 U	**0.22**	0.2 U	0.2 U
MW-4	N	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	FD	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-4	N	7/1/2015	ug/L	0.25 U	0.25 U	0.25 U	**0.127 J**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0726 J**	0.05 U	0.05 U	0.25 U	0.05 U	**0.265 J**
MW-4	FD	7/1/2015	ug/L	0.25 U	0.25 U	0.25 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.139 J**	0.05 U	0.05 U	0.25 U	0.05 U	**0.191 J**
MW-4B	N	9/25/2008	ug/L	--	--	--	--	0.0036 M	--	0.0028 M	0.0045 M		0.0031 M	0.0027 M	0.0036 M	0.0027 M	--	0.004 M	0.0028 M	**0.016**	--	0.0037 M
MW-4B	N	12/18/2008	ug/L	--	--	--	0.0044 M	0.0034 M	**0.012**	**0.0069**	0.0043 M	0.0023 M	0.0029 M	0.0025 M	**0.0052**	0.0025 M	**0.0075**	0.0038 M	0.0026 M	**0.15**	**0.019**	**0.0081**
MW-4B	N	7/30/2009	ug/L	--	--	--	0.0044 U	0.0034 U	0.0036 U	0.0026 U	0.0043 U	0.0023 U	0.0029 U	0.0025 U	0.0034 U	0.0025 U	0.0044 U	0.0038 U	0.0026 U	**0.25**	**0.037**	0.0035 U
MW-4B	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-5	N	2/1/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-5	N	4/24/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 M	0.1 U	0.1 U
MW-5	N	1/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-5	N	4/30/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M
MW-5	N	1/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.15 M	0.1 M	0.1 M
MW-5	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.15 M	0.1 M	0.1 M
MW-5	N	1/26/2006	ug/L	--	--	--	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.202 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M
MW-5	N	4/20/2006	ug/L	--	--	--	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.189 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M	0.0943 M
MW-5	N	7/20/2006	ug/L	--	--	--	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.194 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M
MW-5	N	1/29/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-5	N	4/25/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.2 M	0.08 M	0.2 M	0.2 M	0.08 M	0.2 M	0.2 M	0.2 M
MW-5	N	1/28/2008	ug/L	--	--	--	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M
MW-5	N	7/18/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-5	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.06 M	0.06 M	0.06 M	0.06 M	0.2 M	0.2 M	0.06 M	0.2 M	0.2 M	0.06 M	0.2 M	0.2 M	0.2 M
MW-5	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.08 M	0.04 M	0.08 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-5	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-5	N	1/18/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-5	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-5	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-5	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-5	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-5	N	7/30/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	2/1/2002	ug/L	--	--	--	**0.153**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**0.131**	0.1 U	5 U	**0.225**	0.1 U
MW-6	N	4/24/2002	ug/L	--	--	--	**0.151**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**0.101**	0.1 U	2 U	**0.214**	0.1 U
MW-6	N	1/29/2003	ug/L	--	--	--	**0.129**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.2 M	0.1 M	2 M	**0.128**	0.1 M
MW-6	N	4/29/2003	ug/L	--	--	--	**0.107**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.7 M	**0.11**	0.1 M
MW-6	N	1/29/2004	ug/L	--	--	--	**0.115**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**0.14**	0.1 M	1.95 M	**0.146**	0.1 M
MW-6	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**0.104**	0.1 M	1.35 M	**0.11**	0.1 M
MW-6	N	4/28/2005	ug/L	--	--	--	0.15 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.15 M	0.1 M	1.5 M	0.1 M	0.1 M
MW-6	N	1/26/2006	ug/L	--	--	--	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.202 M	0.101 M	**0.105**	0.101 M	0.758 M	0.101 M	0.101 M
MW-6	N	4/20/2006	ug/L	--	--	--	0.19 M	0.19 M	0.19 M	0.19 M	0.19 M	0.19 M	0.19 M	0.19 M	0.19 M	0.381 M	0.19 M	0.19 M	0.19 M	0.762 M	0.19 M	0.19 M
MW-6	N	7/20/2006	ug/L	--	--	--	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.396 M	0.198 M	0.198 M	0.198 M	0.99 M	0.198 M	0.198 M
MW-6	N	1/31/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	0.2 M
MW-6	N	4/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	0.2 M	0.01 M	0.5 M	0.2 M	0.2 M
MW-6	N	1/29/2008	ug/L	--	--	--	**0.087**	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	**0.086**	0.04 M	0.4 M	**0.046**	0.04 M
MW-6	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-6	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.4 M	0.2 M	0.2 M
MW-6	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.4 M	0.2 M	0.2 M
MW-6	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-6	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	**0.032**	0.2 M	**0.022**	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	**0.39**	0.2 M	0.2 M
MW-6	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-6	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	**0.22**	0.2 U	0.2 U
MW-6	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-6	N	7/30/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/31/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-7	N	4/24/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-7	N	7/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	10/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	1/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	4/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.25 M	0.1 M	0.1 M
MW-7	N	7/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	10/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	1/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	7/26/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	2/1/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	4/28/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	7/26/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	10/25/2005	ug/L	--	--	--	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.194 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M
MW-7	N	1/26/2006	ug/L	--	--	--	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.202 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M
MW-7	N	4/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-7	N	7/19/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-7	N	10/18/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-7	N	1/31/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-7	N	4/25/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	7/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	1/28/2008	ug/L	--	--	--	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M
MW-7	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	7/28/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	7/19/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-7	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/28/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/10/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-7	N	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	2/1/2002	ug/L	--	--	--	**18.9**	2 U	**0.759**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	**1.03**	**12.4**	0.1 U	**2.56**	**11.2**	**1.19**
MW-8	N	4/25/2002	ug/L	--	--	--	**40.5**	0.5 M	**0.606**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.139**	0.2 U	**1.69**	**18.6**	0.1 U	**8.36**	**7.73**	**1.72**
MW-8	N	7/29/2002	ug/L	--	--	--	**57.1**	0.1 M	**0.629**	**0.117**	0.1 M	0.1 M	0.1 M	0.1 M	**0.178**	0.2 M	**1.36**	**22.3**	0.1 M	**41**	**7.78**	**2.34**
MW-8	N	10/30/2002	ug/L	--	--	--	**90.3**	1 M	**1.31**	**0.568**	**0.723**	**0.529**	**0.675**	0.5 M	**0.733**	1 M	**2.65**	**43.4**	0.5 M	**0.772**	**9.42**	**3.34**
MW-8	N	1/29/2003	ug/L	--	--	--	**18.9**	1 M	**0.429**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.697**	**9.94**	0.1 M	**5.89**	**4.72**	**0.798**
MW-8	N	4/30/2003	ug/L	--	--	--	**27.1**	5 M	**0.78**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.854**	**13.4**	0.1 M	**23.1**	**4.21**	**1.3**
MW-8	N	7/29/2003	ug/L	--	--	--	**70.6**	**0.303**	**0.688**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.208**	0.4 M	**1.32**	**33.6**	0.2 M	**2.94**	**10**	**1.73**
MW-8	N	10/28/2003	ug/L	--	--	--	**51.7**	0.25 M	**0.527**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.114**	0.2 M	**0.917**	**26.7**	0.1 M	**0.322**	**4.84**	**1.17**
MW-8	N	1/30/2004	ug/L	--	--	--	**32.1**	0.4 M	**0.618**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	**0.777**	**13.3**	0.2 M	**10.5**	**6.37**	**0.879**
MW-8	N	4/29/2004	ug/L	--	--	--	**58.5**	0.3 M	**0.743**	**0.167**	**0.138**	**0.124**	**0.183**	**0.119**	**0.224**	0.2 M	**1.43**	**25.9**	**0.126**	2 M	**12.5**	**1.54**
MW-8	N	7/26/2004	ug/L	--	--	--	**51.4**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.06**	**26.8**	1 M	1 M	**3.67**	**1.09**
MW-8	N	11/1/2004	ug/L	--	--	--	**99.6**	2.5 M	**1.15**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.716**	**50.6**	0.1 M	2.5 M	**8.63**	**0.871**
MW-8	N	2/2/2005	ug/L	--	--	--	**83.9**	2 M	**1.85**	**0.105**	**0.141**	**0.117**	**0.145**	**0.0901**	**0.138**	0.2 M	**1.17**	**49.5**	**0.104**	0.55 M	**21.6**	**1.36**
MW-8	N	3/25/2005	ug/L	--	--	--	**84.6**	1 M	**1.55**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.26**	**55.3**	1 M	1 M	**20.7**	**1.43**
MW-8	N	4/29/2005	ug/L	--	--	--	**58.5**	1 M	**1.25**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.18**	**27.3**	1 M	**1.4**	**11.3**	**1.24**
MW-8	N	7/26/2005	ug/L	--	--	--	**71**	1 M	**1.51**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.18**	**39.7**	1 M	1 M	**12.7**	**1.19**
MW-8	N	1/26/2006	ug/L	--	--	--	**2.42**	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.196 M	0.098 M	**1.68**	0.098 M	0.196 M	**0.825**	0.098 M
MW-8	N	4/20/2006	ug/L	--	--	--	**56.6**	0.297 M	**1.03**	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	**1.05**	**34.5**	0.099 M	0.99 M	**13.7**	**0.869**
MW-8	N	7/20/2006	ug/L	--	--	--	**43.2**	0.505 M	**0.65**	0.0505 M	0.0505 M	0.0505 M	0.0505 M	0.0505 M	0.0505 M	1.01 M	**1.37**	**20.3**	0.505 M	**0.962**	**8.14**	**1.05**
MW-8	N	10/18/2006	ug/L	--	--	--	**48.2**	5 M	**0.416**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.353**	**21.1**	0.1 M	5 M	**3.03**	**0.497**

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-8	N	1/30/2007	ug/L	--	--	--	**77**	2 M	2 M	2 M	2 M	2 M	2 M	2 M	2 M	2 M	2 M	**30**	2 M	**11**	**14**	2 M
MW-8	N	4/25/2007	ug/L	--	--	--	**79**	**1.2**	**1.2**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	**1.3**	**38**	0.01 M	**22**	**9.3**	**1.2**
MW-8	N	7/24/2007	ug/L	--	--	--	**53**	**0.76**	**0.45**	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.2 M	0.08 M	**0.67**	**24**	0.08 M	0.2 M	**0.87**	**0.74**
MW-8	N	1/24/2008	ug/L	--	--	--	**53**	**0.71**	**0.4**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**21**	0.2 M	**16**	**3.8**	0.2 M
MW-8	N	7/16/2008	ug/L	--	--	--	**51**	**1.8**	**0.42**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	**0.32**	**16**	0.01 M	**1.9**	**0.72**	**0.29**
MW-8	N	1/27/2009	ug/L	--	--	--	**61**	**1.4**	**0.37**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	**0.22**	**28**	0.01 M	**2.3**	**1.3**	**0.23**
MW-8	N	7/28/2009	ug/L	--	--	--	**10**	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	**3.2**	0.02 M	0.2 M	0.2 M	0.2 M
MW-8	N	1/27/2010	ug/L	--	--	--	**58**	**0.98**	0.4 M	0.4 M	0.4 M	0.8 M	0.4 M	0.8 M	0.4 M	0.4 M	**0.58**	**19**	0.4 M	**0.82**	**0.79**	0.4 M
MW-8	N	7/20/2010	ug/L	--	--	--	**9.4**	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	**0.88**	0.02 M	0.2 M	0.2 M	0.2 M
MW-8	N	1/19/2011	ug/L	--	--	--	**28**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	**10**	0.4 M	**0.43**	**0.56**	0.4 M
MW-8	FD	1/19/2011	ug/L	--	--	--	**31**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	**11**	1 M	1 M	1 M	1 M
MW-8	N	7/27/2011	ug/L	--	--	--	**85**	20 M	20 M	2 M	2 M	2 M	2 M	2 M	20 M	2 M	20 M	20 M	2 M	20 M	20 M	20 M
MW-8	N	1/25/2012	ug/L	--	--	--	**25**	0.2 U	**0.35**	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.23**	**12**	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	FD	1/25/2012	ug/L	--	--	--	**30**	0.2 U	**0.39**	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.3**	**15**	0.02 U	0.2 U	**0.22**	0.2 U
MW-8	N	7/26/2012	ug/L	--	--	--	**56**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**27**	1 U	1 U	1 U	1 U
MW-8	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	7/10/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-8	N	1/7/2014	ug/L	**4.4**	--	**0.56**	**32**	0.2 U	**0.23**	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**13**	0.02 U	0.2 U	**0.23**	0.2 U
MW-8	N	7/29/2014	ug/L	**0.22**	--	0.1 U	**2.7**	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	**0.87**	0.1 U	0.1 U	0.1 U	0.1 U
MW-8	N	7/1/2015	ug/L	**5.47**	0.25 U	0.25 U	**30.6**	**0.228**	**0.0843**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**14.8**	0.05 U	**0.311**	**0.186**	0.05 U
MW-8B	N	9/25/2008	ug/L	--	--	--	--	0.0035 M	--	**0.0094**	**0.0071**		**0.0074**	**0.0031**	**0.011**	0.0026 M	--	**0.097**	**0.0056**	--	--	**0.055**
MW-8B	N	12/18/2008	ug/L	--	--	--	**0.13**	0.0034 M	**0.0054**	**0.0042**	0.0043 M	0.0023 M	0.0029 M	0.0025 M	0.0034 M	0.0025 M	**0.011**	**0.052**	0.0026 M	**0.03**	**0.043**	**0.014**
MW-8B	N	7/30/2009	ug/L	--	--	--	**0.026**	**0.0045 J**	**0.0068 J**	**0.013 J**	**0.0098 J**	**0.012 J**	**0.011 J**	**0.0037 J**	**0.014 J**	0.0025 U	**0.042**	**0.018 J**	**0.0072 J**	**0.03**	**0.037**	**0.069**
MW-8B	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-9	N	2/1/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 M
MW-9	N	4/25/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	1 U	0.1 U	0.1 U
MW-9	N	7/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M
MW-9	N	10/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M
MW-9	N	1/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.5 M	0.1 M	0.1 M
MW-9	N	4/30/2003	ug/L	--	--	--	**0.112**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	2.3 M	0.1 M	0.1 M
MW-9	N	7/30/2003	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	0.2 M	0.2 M	2 M	0.2 M	0.2 M
MW-9	N	10/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.55 M	0.1 M	0.1 M
MW-9	N	1/30/2004	ug/L	--	--	--	**0.116**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.65 M	0.1 M	0.1 M
MW-9	N	4/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.6 M	0.1 M	0.1 M
MW-9	N	7/26/2004	ug/L	--	--	--	**0.114**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	3.5 M	0.1 M	0.1 M
MW-9	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.3 M	0.1 M	0.1 M
MW-9	N	2/2/2005	ug/L	--	--	--	**0.136**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.5 M	0.1 M	0.1 M
MW-9	N	4/28/2005	ug/L	--	--	--	**0.143**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1.75 M	0.1 M	0.1 M
MW-9	N	7/26/2005	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	0.2 M	0.2 M	1.6 M	0.2 M	0.2 M
MW-9	N	10/26/2005	ug/L	--	--	--	0.194 M	0.194 M	0.194 M	0.194 M	0.194 M	0.194 M	0.194 M	0.194 M	0.194 M	0.388 M	0.194 M	0.194 M	0.194 M	1.36 M	0.194 M	0.194 M
MW-9	N	1/26/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.3 M	0.1 M	0.1 M
MW-9	N	4/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.594 M	0.099 M	0.099 M
MW-9	N	7/20/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.35 M	0.1 M	0.1 M
MW-9	N	10/18/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M
MW-9	N	1/30/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**1.3**	0.2 M	0.2 M
MW-9	N	4/25/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	**0.71**	0.2 M	0.2 M
MW-9	N	7/24/2007	ug/L	--	--	--	**0.49**	0.2 M	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.2 M	0.08 M	0.2 M	**0.26**	0.08 M	0.3 M	0.2 M	0.2 M
MW-9	N	1/24/2008	ug/L	--	--	--	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.5 M	0.04 M	0.04 M
MW-9	N	7/16/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.4 M	0.2 M	0.2 M
MW-9	N	1/28/2009	ug/L	--	--	--	**0.41**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.21**	0.01 M	0.75 M	0.2 M	0.2 M
MW-9	N	7/28/2009	ug/L	--	--	--	0.2 M	0.05 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-9	N	1/27/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-9	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.5 M	0.2 M	0.2 M
MW-9	N	1/18/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	**0.32**	**0.32**	0.2 M
MW-9	N	7/27/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-9	N	1/26/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-9	N	7/26/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-9	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	**1.6**	0.2 U	0.2 U
MW-9	N	7/10/2013	ug/L	**4.8**	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	**0.49**	0.2 U	0.2 U
MW-9	N	1/8/2014	ug/L	**3.7**	--	0.2 U	**0.25**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.42**	0.2 U	0.2 U
MW-9	N	7/30/2014	ug/L	**4.6**	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.45**	0.2 U	0.2 U
MW-9	N	7/1/2015	ug/L	**9.05**	0.25 U	0.25 U	**0.214**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.0998**	0.05 U	**1.8**	**0.0668**	0.05 U
MW-10	N	2/1/2002	ug/L	--	--	--	**7.81**	0.1 U	**0.304**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 M	0.2 U	**0.447**	**5.21**	0.1 U	5 U	**1.41**	**0.512**
MW-10	N	4/25/2002	ug/L	--	--	--	**4.39**	0.1 U	**0.367**	**0.123**	**0.108**	0.1 M	0.1 M	0.1 M	**0.142**	0.2 U	**0.784**	**3.21**	0.1 M	2.5 U	**0.903**	**0.933**
MW-10	N	11/27/2002	ug/L	--	--	--	**10.8**	0.5 U	**1.56**	0.5 U	**0.678**	0.5 U	**0.695**	0.5 U	**0.605**	1 U	**1.77**	**10.7**	0.5 U	17 U	**9.62**	**2.2**
MW-10	N	4/30/2003	ug/L	--	--	--	**150**	100 M	**23.1**	**12**	**10.6**	**6.9**	**5**	**7.08**	**14.9**	2 M	**73.6**	**163**	**4**	100 M	**176**	**76.1**
MW-10	N	7/30/2003	ug/L	--	--	--	**29.4**	6 M	**5.16**	**3.4**	**4.07**	**3.09**	**3.24**	2 M	**4.16**	4 M	**10.5**	**25.5**	**2.18**	32 M	**22.9**	**18.8**
MW-10	N	10/29/2003	ug/L	--	--	--	**19.8**	3.5 M	**4.02**	**2.17**	**2.12**	**1.44**	**1.35**	**1.22**	**2.92**	2 M	**9.99**	**19.6**	1 M	12.5 M	**20.6**	**14.3**
MW-10	N	7/27/2011	ug/L	--	--	--	0.8 M	0.8 M	0.8 M	0.08 M	**0.1**	0.08 M	0.08 M	0.08 M	0.8 M	0.08 M	0.8 M	0.8 M	0.08 M	0.8 M	0.8 M	0.8 M
MW-10	N	1/26/2012	ug/L	--	--	--	**4.8**	2 U	2 U	0.2 U	**0.26**	0.4 U	**0.21**	0.4 U	2 U	0.2 U	2 U	**3.4**	**0.27**	2 U	2 U	2 U
MW-12	N	1/31/2002	ug/L	--	--	--	**2.05**	0.5 U	**0.212**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**4.34**	0.1 U	2.5 U	**4.11**	0.1 M
MW-12	N	4/25/2002	ug/L	--	--	--	**1.52**	0.1 U	**0.349**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 M	**3.32**	0.1 U	1 U	**4.55**	**0.143**
MW-12	N	7/29/2002	ug/L	--	--	--	5 M	0.5 M	**0.593**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.5 M	**5.33**	0.1 M	2.5 M	**7.29**	**0.26**
MW-12	N	10/29/2002	ug/L	--	--	--	**1.72**	0.1 M	**0.353**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.5 M	**3.89**	0.1 M	2.5 M	**5.97**	**0.123**
MW-12	N	1/28/2003	ug/L	--	--	--	**3.33**	0.5 M	**1.01**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**6.96**	0.5 M	3 M	**10.5**	**0.566**
MW-12	N	4/29/2003	ug/L	--	--	--	**4**	1 M	**1.18**	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**9.45**	1 M	1.5 M	**10.9**	1 M
MW-12	N	7/29/2003	ug/L	--	--	--	**2.23**	0.7 M	**0.254**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**4.77**	0.2 M	2.2 M	**5.09**	0.2 M
MW-12	N	10/28/2003	ug/L	--	--	--	**5.26**	1.6 M	2.2 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.8 M	**0.452**	**10.1**	0.4 M	3.8 M	**18**	**1.29**
MW-12	N	1/29/2004	ug/L	--	--	--	**3.36**	1.5 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**7.12**	1 M	3 M	**7.44**	1 M
MW-12	N	4/29/2004	ug/L	--	--	--	**1.98**	0.8 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.8 M	0.4 M	**4.05**	0.4 M	0.4 M	**4.44**	0.4 M
MW-12	N	7/26/2004	ug/L	--	--	--	**3.11**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**6.4**	1 M	4.6 M	**5.93**	1 M
MW-12	N	11/1/2004	ug/L	--	--	--	**3.4**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**7.54**	1 M	1 M	**9.25**	1 M
MW-12	N	2/2/2005	ug/L	--	--	--	**3.28**	1 M	**0.627**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**6.21**	0.5 M	2.25 M	**8.2**	**0.364**
MW-12	N	4/28/2005	ug/L	--	--	--	**2.83**	0.8 M	**0.456**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.8 M	0.4 M	**5.92**	0.4 M	2.4 M	**6.9**	0.4 M
MW-12	N	7/26/2005	ug/L	--	--	--	**2.46**	1 M	1 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**5.55**	0.5 M	2 M	**6.08**	0.5 M
MW-12	N	10/25/2005	ug/L	--	--	--	**3.33**	1.53 M	1.53 M	1.02 M	1.02 M	1.02 M	1.02 M	1.02 M	1.02 M	2.04 M	1.02 M	**7.21**	1.02 M	3.06 M	**9.49**	1.02 M
MW-12	N	1/26/2006	ug/L	--	--	--	**1.75**	0.495 M	0.495 M	0.495 M	0.495 M	0.495 M	0.495 M	0.495 M	0.495 M	0.99 M	0.495 M	**3.94**	0.495 M	1.24 M	**4.45**	0.495 M
MW-12	N	7/24/2007	ug/L	--	--	--	**2.8**	0.4 M	**0.98**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	**6.1**	0.4 M	1.1 M	**3.4**	**0.45**
MW-12	N	1/25/2012	ug/L	--	--	--	**2**	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	**3.6**	0.2 U	2 U	**3**	2 U
MW-12B	N	9/25/2008	ug/L	--	--	--	--	0.014 M	--	**0.0045**	0.0043 M		**0.0034**	0.0025 M	**0.0043**	0.0025 M	--	**0.064**	**0.0029**	**0.032**	--	**0.0063**
MW-12B	N	12/18/2008	ug/L	--	--	--	**0.0095**	0.0034 M	**0.004**	**0.0063**	0.0043 M	**0.0038**	0.0029 M	0.0025 M	**0.0044**	0.0025 M	**0.012**	**0.019**	0.0026 M	**0.015**	**0.032**	**0.011**
MW-12B	N	7/30/2009	ug/L	--	--	--	**0.014 J**	0.0043 U	0.0036 U	**0.0047 J**	0.0043 U	0.0023 U	0.0029 U	0.0025 U	0.0034 U	0.0025 U	0.0044 U	**0.022**	0.0026 U	**0.035**	**0.025**	**0.0052 J**
MW-12B	N	7/19/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-12C	N	9/25/2008	ug/L	--	--	--	--	0.0045 M	--	0.0026 M	0.0043 M		0.0029 M	0.0025 M	0.0034 M	0.0025 M	--	**0.025**	0.0026 M	**0.027**	--	0.0035 M
MW-12C	N	12/18/2008	ug/L	--	--	--	**0.0046**	0.0034 M	0.0036 M	0.0026 M	0.0043 M	0.0023 M	0.0029 M	0.0025 M	0.0034 M	0.0025 M	0.0044 M	**0.012**	0.0026 M	**0.0045**	**0.013**	0.019 M
MW-12C	N	7/30/2009	ug/L	--	--	--	0.0044 U	0.0034 U	0.0036 U	**0.0052 J**	0.0043 U	**0.0034 J**	0.0029 U	0.0025 U	**0.004 J**	0.0025 U	**0.0054 J**	0.0038 U	0.0026 U	**0.049**	**0.015 J**	**0.0063 J**
MW-12C	N	7/19/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-13	N	1/31/2002	ug/L	--	--	--	**1.62**	0.1 U	**0.16**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 M	**3.23**	0.1 U	5 U	**2.61**	0.1 M
MW-13	N	4/25/2002	ug/L	--	--	--	**1.25**	0.1 U	**0.203**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 M	**2.75**	0.1 U	2 U	**2.63**	0.1 M
MW-13	N	7/29/2002	ug/L	--	--	--	**0.858**	0.1 M	**0.172**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**1.9**	0.1 M	0.1 M	**3.61**	**0.157**
MW-13	N	10/29/2002	ug/L	--	--	--	**1.31**	0.5 M	1 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**2.75**	0.5 M	4 M	**4.91**	**0.515**
MW-13	N	1/28/2003	ug/L	--	--	--	**0.596**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**1.15**	0.1 M	1.2 M	**1.13**	0.1 M
MW-13	N	4/29/2003	ug/L	--	--	--	**2.69**	2.5 M	**0.223**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**5.57**	0.1 M	2.5 M	**2.94**	**0.12**
MW-13	N	7/29/2003	ug/L	--	--	--	**0.806**	0.3 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**1.69**	0.2 M	2.2 M	**2.86**	0.2 M
MW-13	N	10/28/2003	ug/L	--	--	--	**0.843**	0.25 M	**0.112**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**1.69**	0.1 M	1.45 M	**2.42**	0.1 M
MW-13	N	1/29/2004	ug/L	--	--	--	**1.85**	0.5 M	**0.236**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**3.88**	0.2 M	4.4 M	**5.12**	0.2 M
MW-13	N	4/28/2004	ug/L	--	--	--	**0.991**	0.3 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**1.92**	0.1 M	4 M	**3.42**	0.1 M
MW-13	N	7/26/2004	ug/L	--	--	--	2.5 M	2.5 M	**0.211**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	2.5 M	0.1 M	4.25 M	**3.73**	0.1 M
MW-13	N	11/1/2004	ug/L	--	--	--	**0.95**	0.1 M	**0.152**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**2.06**	0.1 M	2.5 M	**2.85**	**0.164**
MW-13	N	2/1/2005	ug/L	--	--	--	**0.748**	0.3 M	**0.139**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**1.39**	0.2 M	1.5 M	**2.17**	**0.105**
MW-13	N	4/28/2005	ug/L	--	--	--	**0.872**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.8 M	0.4 M	**1.75**	0.4 M	1.8 M	**2.53**	0.4 M
MW-13	N	7/26/2005	ug/L	--	--	--	0.8 M	0.3 M	0.7 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	**0.217**	**1.5**	0.2 M	1.6 M	**3.02**	**0.318**

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-13	N	10/25/2005	ug/L	--	--	--	**0.625**	0.3 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**1.19**	0.2 M	1.9 M	**2.1**	0.2 M
MW-13	N	1/26/2006	ug/L	--	--	--	**1.35**	0.3 M	**0.215**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**2.68**	0.2 M	1.9 M	**3.26**	0.2 M
MW-13	N	4/20/2006	ug/L	--	--	--	**1.47**	0.392 M	0.196 M	0.196 M	0.196 M	0.196 M	0.196 M	0.196 M	0.196 M	0.392 M	0.196 M	**3.22**	0.196 M	2.35 M	**3.91**	0.196 M
MW-13	N	7/19/2006	ug/L	--	--	--	**1.29**	0.392 M	**0.199**	0.196 M	0.196 M	0.196 M	0.196 M	0.196 M	0.196 M	0.392 M	0.196 M	**2.75**	0.196 M	1.76 M	**3.83**	0.196 M
MW-13	N	10/18/2006	ug/L	--	--	--	**0.814**	0.32 M	**0.14**	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.0971 M	0.194 M	0.0971 M	**1.65**	0.0971 M	2.33 M	**3.58**	**0.111**
MW-13	N	1/31/2007	ug/L	--	--	--	**2.8**	1.5 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	**6.6**	0.4 M	4 M	**5.2**	0.4 M
MW-13	N	4/25/2007	ug/L	--	--	--	**1.8**	0.2 M	**0.34**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**4.5**	0.01 M	2.5 M	**4.3**	0.2 M
MW-13	N	7/24/2007	ug/L	--	--	--	**0.53**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.7**	0.01 M	1 M	0.2 M	0.2 M
MW-13	N	1/28/2008	ug/L	--	--	--	**2.3**	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	0.01 M	**4.9**	0.01 M	2.5 M	**4.4**	0.01 M
MW-13	N	7/17/2008	ug/L	--	--	--	**1.3**	0.6 M	**0.35**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**3.1**	0.2 M	2 M	**3.2**	0.2 M
MW-13	N	1/27/2009	ug/L	--	--	--	**1.5**	0.2 M	**0.32**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**3.8**	0.01 M	2.1 M	**3.3**	0.2 M
MW-13	N	7/27/2009	ug/L	--	--	--	**0.6**	0.4 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	**1.4**	0.02 M	0.2 M	**2.4**	0.2 M
MW-13	N	1/26/2010	ug/L	--	--	--	**2**	**1**	0.4 M	0.4 M	0.4 M	0.04 M	0.4 M	0.04 M	0.8 M	0.4 M	0.4 M	**3.6**	0.4 M	1 M	**3.9**	**0.51**
MW-13	N	7/19/2010	ug/L	--	--	--	**0.51**	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	**0.9**	0.02 M	0.5 M	**1.6**	0.2 M
MW-13	N	1/17/2011	ug/L	--	--	--	**1.6**	**0.44**	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.08 M	0.2 M	**2.7**	0.08 M	**0.88**	**3.3**	0.2 M
MW-13	FD	1/17/2011	ug/L	--	--	--	**1.5**	**0.37**	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.08 M	0.2 M	**2.4**	0.08 M	**0.73**	**2.9**	0.2 M
MW-13	N	7/26/2011	ug/L	--	--	--	**1.1**	0.8 M	0.8 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.8 M	0.08 M	0.8 M	**2.6**	0.08 M	0.8 M	**2**	0.8 M
MW-13	N	1/25/2012	ug/L	--	--	--	**1.1**	**0.34**	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.9**	0.02 U	**0.64**	**2.1**	0.2 U
MW-13	N	7/25/2012	ug/L	--	--	--	**0.96**	**0.35**	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**2.1**	0.02 U	2 U	**1.9**	0.2 U
MW-13	N	1/28/2013	ug/L	--	--	--	**1.5**	**0.48**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**3.1**	0.2 U	**2.7**	**3.1**	0.2 U
MW-13	N	7/9/2013	ug/L	0.2 U	--	0.2 U	**0.71**	0.2 U	**1.6**	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**1.3**	0.2 U	**0.33**	**1.7**	0.2 U
MW-13	FD	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**1.4**	0.2 U	**0.42**	**2.1**	0.2 U
MW-13	N	1/7/2014	ug/L	0.2 U	--	0.2 U	**0.66**	**0.2**	0.2 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.2 U	**0.99**	0.1 U	**0.47**	**1.6**	0.2 U
MW-13	N	7/29/2014	ug/L	0.1 U	--	0.1 U	**0.79**	**0.23**	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	**1.4**	0.1 U	**0.45**	**1.8**	0.1 U
MW-14	N	1/31/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 M
MW-14	N	4/24/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-14	N	7/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	10/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	1/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	4/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	7/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	10/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	1/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.105**	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	7/26/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	2/1/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	4/28/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	7/26/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	10/25/2005	ug/L	--	--	--	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.19 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M
MW-14	N	1/27/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-14	N	4/20/2006	ug/L	--	--	--	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.192 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M	0.0962 M
MW-14	N	7/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-14	N	10/18/2006	ug/L	--	--	--	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.202 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M
MW-14	N	1/31/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-14	N	4/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-14	N	7/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	1/28/2008	ug/L	--	--	--	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M
MW-14	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	7/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-14	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-14	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	1/28/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-14	N	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/31/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-15	N	4/24/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-15	N	7/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	10/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	1/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	4/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	**0.137**	0.1 M	0.1 M
MW-15	N	7/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	10/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	1/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	7/26/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M	0.1 M	0.1 M	1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	1 M
MW-15	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	2/1/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	4/28/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	7/26/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	10/25/2005	ug/L	--	--	--	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.196 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M	0.098 M
MW-15	N	1/27/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-15	N	4/20/2006	ug/L	--	--	--	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.19 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M
MW-15	N	7/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-15	N	10/17/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-15	N	1/31/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-15	N	4/25/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	7/24/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	1/29/2008	ug/L	--	--	--	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M
MW-15	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	7/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-15	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-15	N	7/30/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-16	N	2/1/2002	ug/L	--	--	--	**1.4**	0.2 U	0.2 M	0.2 M	0.2 M	0.2 M	0.2 U	0.2 U	0.2 M	0.4 U	**0.358**	**2.97**	0.2 U	4 U	**1.71**	**0.342**
MW-16	N	4/25/2002	ug/L	--	--	--	**1.16**	0.1 U	**0.256**	**0.255**	**0.218**	**0.208**	**0.158**	**0.183**	**0.273**	0.2 U	**0.642**	**2.84**	**0.138**	1.5 U	**2.49**	**0.626**
MW-16	N	7/30/2002	ug/L	--	--	--	**1.34**	0.2 M	**0.409**	**0.312**	**0.231**	**0.266**	0.2 M	0.2 M	**0.476**	0.4 M	**0.676**	**2.65**	0.2 M	2.5 M	**2.97**	**0.942**
MW-16	N	11/27/2002	ug/L	--	--	--	**4.12**	1 U	**2.41**	**1.27**	**1.47**	**2.35**	1 U	1 U	**3.15**	2 U	**2.99**	**11.9**	1 U	7.4 U	**13.5**	**3.27**
MW-16	N	1/28/2003	ug/L	--	--	--	**1.24**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**2.37**	0.2 M	1.8 M	**1.74**	**0.235**
MW-16	N	4/29/2003	ug/L	--	--	--	**2.78**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**5.86**	1 M	2 M	**4.86**	1 M
MW-16	N	7/29/2003	ug/L	--	--	--	**2**	0.5 M	**0.614**	**0.64**	**0.633**	**1.06**	0.5 M	0.5 M	**1.1**	1 M	**1.08**	**4.16**	0.5 M	4.5 M	**3.05**	**1.42**
MW-16	N	10/28/2003	ug/L	--	--	--	**1.53**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**3.05**	0.5 M	1.75 M	**2.17**	0.5 M
MW-16	N	4/28/2004	ug/L	--	--	--	**1.47**	1 M	1 M	2 M	1 M	2.5 M	1 M	2.5 M	2 M	2 M	1 M	**3.22**	1 M	4 M	**2.17**	1 M
MW-16	N	7/26/2004	ug/L	--	--	--	2.5 M	2.5 M	2.5 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	2.5 M	**2.78**	1 M	4 M	2.5 M	1 M
MW-16	N	11/1/2004	ug/L	--	--	--	**2.24**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**4.54**	1 M	1.5 M	**3.56**	1 M
MW-16	N	7/27/2011	ug/L	--	--	--	**1.2**	0.2 M	0.2 M	0.02 M	**0.028**	**0.022**	0.02 M	**0.022**	0.2 M	0.02 M	0.2 M	**2.4**	0.02 M	0.2 M	**0.93**	0.2 M
MW-16	N	7/26/2012	ug/L	--	--	--	**0.89**	0.2 U	0.2 U	**0.022**	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.9**	0.02 U	1.4 U	**1.1**	0.2 U
MW-16	FD	7/26/2012	ug/L	--	--	--	**0.9**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.8**	0.02 U	1.2 U	**0.82**	0.2 U

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-17	N	1/31/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	**0.214**	0.1 U	0.2 U	**0.301**	0.1 U
MW-17	N	4/24/2002	ug/L	--	--	--	0.1 U	0.1 U	0.21 M	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.187**	0.1 U
MW-17	N	7/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M
MW-17	N	10/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M
MW-17	N	1/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	4/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.3 M	0.1 M	0.1 M
MW-17	N	7/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.25 M	0.1 M	0.1 M
MW-17	N	10/28/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	1/29/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	7/26/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	1 M	0.1 M	0.1 M	0.1 M	0.1 M	1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	1 M
MW-17	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	2/1/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	4/28/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	7/26/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-17	N	10/25/2005	ug/L	--	--	--	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.19 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M
MW-17	N	1/27/2006	ug/L	--	--	--	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.206 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M
MW-17	N	4/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-17	N	7/20/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-17	N	10/17/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-17	N	1/31/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-17	N	4/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-17	N	7/24/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	0.2 M	0.2 M
MW-17	N	1/29/2008	ug/L	--	--	--	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M
MW-17	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	7/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	FD	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-17	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	1/7/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-17	N	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	4/25/2002	ug/L	--	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-18	N	7/29/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	10/30/2002	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	1/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	4/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	7/30/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	10/29/2003	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	1/30/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	**0.251**	0.1 M	0.1 M
MW-18	N	4/28/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	7/26/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	11/1/2004	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	2/1/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	4/28/2005	ug/L	--	--	--	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.971 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M	0.485 M
MW-18	N	7/26/2005	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M
MW-18	N	10/25/2005	ug/L	--	--	--	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.204 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M	0.102 M
MW-18	N	1/27/2006	ug/L	--	--	--	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.103 M	0.206 M	0.103 M	0.103 M	0.103 M	**3.39**	0.103 M	0.103 M
MW-18	N	4/20/2006	ug/L	--	--	--	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.19 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M	0.0952 M
MW-18	N	7/20/2006	ug/L	--	--	--	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-18	N	10/18/2006	ug/L	--	--	--	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M
MW-18	N	1/29/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M
MW-18	N	4/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	7/26/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	1/28/2008	ug/L	--	--	--	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	**0.066**	0.02 M	0.02 M
MW-18	N	7/17/2008	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	1/27/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	7/28/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	1/26/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	7/19/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	1/17/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	7/26/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-18	N	1/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/25/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	1/28/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/9/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	1/8/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-18	N	7/29/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-20	N	5/1/2003	ug/L	--	--	--	**11.7**	2.5 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.368**	**6.24**	0.1 M	5 M	**0.82**	**0.495**
MW-20	N	7/30/2003	ug/L	--	--	--	**21.8**	1 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	**0.979**	**9.16**	0.5 M	8 M	**3.61**	**1.31**
MW-20	N	7/20/2010	ug/L	--	--	--	**2.1**	**0.29**	0.2 M	0.2 M	0.01 M	0.2 M	0.01 M	0.2 M	0.2 M	0.01 M	**0.24**	**1.2**	0.01 M	1 M	**0.36**	**0.32**
MW-20	N	1/26/2012	ug/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-21	N	5/1/2003	ug/L	--	--	--	**6.08**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**6.13**	1 M	3 M	**2.59**	1 M
MW-21	N	7/30/2003	ug/L	--	--	--	5.25 M	0.75 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**4.59**	0.5 M	6.5 M	**2.23**	**0.704**
MW-21	N	7/20/2010	ug/L	--	--	--	**6.9**	**0.93**	**0.76**	0.4 M	0.4 M	0.8 M	0.4 M	0.8 M	0.4 M	0.4 M	**1.6**	**6.8**	0.4 M	2 M	**3.9**	**2.3**
MW-21	N	1/26/2012	ug/L	--	--	--	**5.9**	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	**5.1**	0.2 U	2 U	**2.9**	2 U
MW-21	N	7/26/2012	ug/L	--	--	--	**3.3**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**2.7**	1 U	4 U	1 U	1 U
MW-21	N	7/10/2013	ug/L	**150**	--	0.2 U	**5.3**	**0.85**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.86**	**5**	0.2 U	**1.7**	**3.1**	**1.1**
MW-21	N	1/8/2014	ug/L	**120**	--	4 U	**5.6**	4 U	4 U	4 U	4 U	8 U	4 U	8 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
MW-22	N	5/1/2003	ug/L	--	--	--	**2.67**	0.1 M	**0.158**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.726**	**1.15**	0.1 M	1.7 M	**0.146**	**1.09**
MW-22	N	7/30/2003	ug/L	--	--	--	**6.14**	0.3 M	**0.362**	**0.223**	**0.219**	0.2 M	0.2 M	0.2 M	**0.28**	0.4 M	**1.68**	**1.7**	0.2 M	2.6 M	**2.22**	**2.31**
MW-22	N	10/29/2003	ug/L	--	--	--	**0.286**	0.1 M	0.15 M	**0.123**	**0.138**	0.1 M	**0.125**	0.1 M	**0.153**	0.2 M	**0.835**	**0.11**	0.1 M	0.4 M	0.15 M	**1.19**
MW-22	N	1/30/2004	ug/L	--	--	--	**1.9**	0.3 M	**0.276**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	**0.936**	**1.78**	0.2 M	1.7 M	**1.25**	**1.28**
MW-22	N	4/29/2004	ug/L	--	--	--	**4.73**	0.3 M	**0.332**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.119**	0.2 M	**1.16**	**1.75**	0.1 M	3.5 M	**3.09**	**1.41**
MW-22	N	7/26/2004	ug/L	--	--	--	**6.24**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.46**	**1.67**	1 M	4.5 M	**2.59**	**1.47**
MW-22	N	11/1/2004	ug/L	--	--	--	**3.49**	0.1 M	**0.218**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.127**	0.2 M	**0.968**	**1.12**	0.1 M	1.7 M	**1.2**	**1.65**
MW-22	N	2/2/2005	ug/L	--	--	--	**6.34**	0.3 M	**0.389**	**0.144**	**0.124**	0.2 M	0.2 M	0.2 M	**0.166**	0.4 M	**1.51**	**2.28**	0.2 M	2 M	**2.81**	**2.03**
MW-22	N	3/25/2005	ug/L	--	--	--	**7.09**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	**1.83**	**2.41**	1 M	2.5 M	**3.26**	**2.19**
MW-22	N	7/26/2005	ug/L	--	--	--	**5.45**	0.3 M	**0.37**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	**1.76**	**2.19**	0.2 M	2.4 M	**2.85**	**2.07**
MW-22	N	10/26/2005	ug/L	--	--	--	**3.81**	0.2 M	**0.225**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	**1.2**	**1.16**	0.2 M	1.1 M	**1.69**	**1.4**
MW-22	N	1/26/2006	ug/L	--	--	--	**1.53**	0.2 M	**0.25**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	**0.11**	0.2 M	**0.838**	**1.42**	0.1 M	0.85 M	**1.73**	**0.873**
MW-22	N	4/20/2006	ug/L	--	--	--	**2.6**	0.288 M	**0.249**	0.192 M	0.192 M	0.192 M	0.192 M	0.192 M	0.192 M	0.385 M	**1.1**	**1.46**	0.192 M	2.02 M	**0.944**	**1.36**
MW-22	N	7/20/2006	ug/L	--	--	--	**4.32**	0.198 M	**0.272**	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.396 M	**1.24**	**1.58**	0.198 M	1.29 M	**1.02**	**1.54**
MW-22	N	10/18/2006	ug/L	--	--	--	**0.325**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.362**	**0.116**	0.1 M	0.22 M	0.1 M	**0.8**
MW-22	N	1/30/2007	ug/L	--	--	--	**2.3**	0.2 M	**0.2**	**0.22**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.86**	**1.4**	0.2 M	1 M	**0.26**	**1.1**
MW-22	N	4/25/2007	ug/L	--	--	--	**2.4**	0.2 M	**0.23**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	**0.74**	**1.2**	**0.12**	0.9 M	**0.36**	**0.98**
MW-22	N	7/24/2007	ug/L	--	--	--	**3.3**	0.2 M	**0.34**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.73**	**1.1**	0.2 M	0.5 M	0.2 M	**0.93**
MW-22	N	1/24/2008	ug/L	--	--	--	**1.2**	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	**0.46**	**0.73**	0.04 M	0.6 M	0.04 M	**0.76**
MW-22	N	7/16/2008	ug/L	--	--	--	**1.9**	0.2 M	**0.21**	**0.13**	**0.11**	**0.12**	0.01 M	0.2 M	0.2 M	0.01 M	**0.85**	**0.7**	**0.15**	0.6 M	0.2 M	**1.1**
MW-22	N	1/28/2009	ug/L	--	--	--	**1.5**	0.2 M	**0.24**	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	**0.73**	**1.2**	0.01 M	0.7 M	**0.39**	**0.86**
MW-22	N	1/27/2010	ug/L	--	--	--	**1.2**	**0.21**	**0.11**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.48**	**0.77**	0.2 M	0.2 M	**0.33**	**0.66**
MW-22	N	7/20/2010	ug/L	--	--	--	**0.7**	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	**0.23**	**0.3**	0.02 M	0.2 M	0.2 M	**0.28**
MW-22	N	1/18/2011	ug/L	--	--	--	**0.57**	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	**0.029**	0.02 M	0.2 M	0.02 M	0.2 M	**0.6**	**0.023**	**0.29**	**0.32**	0.2 M
MW-22	N	7/27/2011	ug/L	--	--	--	**1.3**	0.2 M	0.2 M	**0.023**	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	**0.49**	**0.77**	0.02 M	0.2 M	**0.2**	**0.56**
MW-22	N	1/26/2012	ug/L	--	--	--	**0.55**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.27**	**0.024**	0.2 U	0.2 U	0.2 U
MW-22	N	7/26/2012	ug/L	--	--	--	**1.1**	0.2 U	0.2 U	0.06 U	0.06 U	0.12 U	0.06 U	0.12 U	0.2 U	0.06 U	**0.29**	**0.56**	0.06 U	1 U	**0.31**	**0.32**

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-22	N	1/29/2013	ug/L	--	--	--	**1.4**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.38**	**0.72**	0.02 U	**1.1**	**0.49**	**0.41**
MW-22	N	7/10/2013	ug/L	**3.6**	--	0.2 U	**1.6**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	**0.41**	**0.74**	0.02 U	**0.26**	**0.25**	**0.43**
MW-22	N	1/8/2014	ug/L	**1.4**	--	0.2 U	**2.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.48**	**0.83**	0.2 U	**0.39**	**0.35**	**0.58**
MW-22	N	7/30/2014	ug/L	**4.1**	--	0.2 U	**2.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	**0.47**	**1**	0.2 U	**0.33**	**0.71**	**0.53**
MW-22	N	7/1/2015	ug/L	**0.426**	0.25 U	0.25 U	**2.32**	0.05 U	**0.0802**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.503**	**0.593**	0.05 U	**0.89**	0.05 U	**0.629**
MW-23	N	7/26/2004	ug/L	--	--	--	**1.15**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**1.95**	1 M	3 M	**1.2**	1 M
MW-23	N	11/1/2004	ug/L	--	--	--	**1.39**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**2.47**	0.5 M	1 M	**2.02**	0.5 M
MW-24	N	7/26/2004	ug/L	--	--	--	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**1.55**	1 M	2 M	**1.35**	1 M
MW-24	N	11/1/2004	ug/L	--	--	--	**0.506**	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	0.5 M	1 M	0.5 M	**1.2**	0.5 M	0.5 M	0.5 M	0.5 M
MW-24	N	2/2/2005	ug/L	--	--	--	**0.527**	0.1 M	0.2 M	**0.0766**	0.1 M	0.1 M	0.1 M	0.1 M	**0.225**	0.2 M	**0.133**	**1.15**	0.1 M	0.55 M	0.2 M	**0.26**
MW-24	N	4/28/2005	ug/L	--	--	--	**0.829**	0.556 M	1.94 M	**0.805**	0.556 M	**0.647**	0.556 M	0.556 M	**2.11**	1.11 M	**0.943**	**1.68**	0.556 M	1.67 M	1.11 M	**2.29**
MW-24	N	1/27/2006	ug/L	--	--	--	**0.18**	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	**0.102**	0.198 M	0.099 M	**0.361**	0.099 M	0.149 M	**0.133**	**0.107**
MW-24	N	4/20/2006	ug/L	--	--	--	0.5 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.225**	0.2 M	0.2 M	**0.297**	0.4 M	0.2 M	**0.998**	0.2 M	0.5 M	0.2 M	**0.264**
MW-24	N	1/29/2007	ug/L	--	--	--	**0.46**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.97**	0.2 M	0.2 M	0.2 M	0.2 M
MW-24	N	7/26/2007	ug/L	--	--	--	**0.29**	0.2 M	**0.22**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.5**	0.2 M	0.2 M	0.2 M	0.2 M
MW-24	N	1/28/2008	ug/L	--	--	--	**0.43**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.8**	0.2 M	0.2 M	0.2 M	**0.23**
MW-24	N	7/16/2008	ug/L	--	--	--	**0.27**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.47**	0.01 M	0.2 M	0.2 M	0.2 M
MW-24	N	1/27/2009	ug/L	--	--	--	**0.24**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.48**	0.01 M	0.2 M	0.2 M	0.2 M
MW-24	N	7/28/2009	ug/L	--	--	--	0.2 M	**0.37**	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.2 M	0.08 M	0.2 M	**0.71**	0.08 M	0.2 M	0.2 M	0.2 M
MW-25	N	4/28/2005	ug/L	--	--	--	**0.596**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	**0.29**	0.2 M	1.2 M	0.2 M	0.2 M
MW-25	N	7/26/2005	ug/L	--	--	--	0.6 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.175**	**0.413**	0.1 M	1.2 M	**0.281**	**0.269**
MW-25	N	10/25/2005	ug/L	--	--	--	**0.319**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	0.1 M	**0.162**	0.1 M	0.95 M	**0.109**	0.1 M
MW-25	N	1/26/2006	ug/L	--	--	--	**1.21**	0.505 M	0.505 M	0.505 M	0.505 M	0.505 M	0.505 M	0.505 M	0.505 M	1.01 M	0.505 M	**2.01**	0.505 M	1.26 M	**1.26**	0.505 M
MW-25	N	4/20/2006	ug/L	--	--	--	**1.44**	0.297 M	**0.207**	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.396 M	**0.263**	**2.67**	0.198 M	1.58 M	**2.16**	**0.297**
MW-25	N	7/19/2006	ug/L	--	--	--	**0.874**	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.198 M	0.396 M	0.198 M	**1.11**	0.198 M	1.09 M	**0.827**	0.198 M
MW-25	N	10/18/2006	ug/L	--	--	--	**0.875**	0.297 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	**0.457**	0.099 M	1.34 M	**0.681**	**0.103**
MW-25	N	1/30/2007	ug/L	--	--	--	**2.4**	1 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	**4.8**	0.4 M	2 M	**2.9**	0.4 M
MW-25	N	4/25/2007	ug/L	--	--	--	**1.1**	0.2 M	**0.22**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**1.6**	0.2 M	0.9 M	**0.41**	0.2 M
MW-25	N	7/24/2007	ug/L	--	--	--	**0.68**	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	0.4 M	**0.67**	0.4 M	0.6 M	0.4 M	0.4 M
MW-25	N	1/28/2008	ug/L	--	--	--	**1.1**	0.5 M	**0.26**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.23**	**1.7**	0.2 M	1 M	**1.5**	**0.24**
MW-25	N	7/17/2008	ug/L	--	--	--	**1**	0.3 M	**0.3**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**1.4**	0.2 M	0.9 M	**0.5**	**0.21**
MW-25	N	1/27/2009	ug/L	--	--	--	**1.3**	0.2 M	**0.28**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.3**	**2**	0.2 M	0.9 M	**1**	**0.33**
MW-25	N	7/28/2009	ug/L	--	--	--	**0.74**	0.2 M	0.2 M	0.04 M	0.04 M	0.04 M	0.04 M	0.2 M	0.2 M	0.04 M	0.2 M	**0.79**	0.04 M	0.2 M	**0.78**	0.2 M
MW-25	N	1/27/2010	ug/L	--	--	--	0.2 M	**0.4**	**0.23**	0.2 M	0.2 M	0.4 M	0.2 M	0.4 M	0.2 M	0.2 M	0.2 M	**1.5**	0.2 M	0.6 M	**0.61**	**0.4**
MW-25	N	7/19/2010	ug/L	--	--	--	**0.44**	0.2 M	0.2 M	0.2 M	0.01 M	0.2 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.39**	0.01 M	0.5 M	0.2 M	0.2 M
MW-25	N	1/17/2011	ug/L	--	--	--	**0.81**	**0.27**	0.2 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.2 M	0.08 M	0.2 M	**1.2**	0.08 M	**0.41**	**1.6**	0.2 M
MW-25	N	7/27/2011	ug/L	--	--	--	0.8 M	0.8 M	0.8 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.8 M	0.08 M	0.8 M	0.8 M	0.08 M	0.8 M	**0.85**	0.8 M
MW-25	N	1/26/2012	ug/L	--	--	--	2 U	2 U	2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	2 U	0.2 U	2 U	2 U	0.2 U	2 U	2 U	2 U
MW-25	N	7/25/2012	ug/L	--	--	--	**0.3**	**0.21**	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.66**	0.02 U	1 U	**1.1**	0.2 U
MW-25	N	1/28/2013	ug/L	--	--	--	**1.3**	**0.43**	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**2.5**	0.2 U	**1.5**	**2.6**	0.2 U
MW-25	N	7/10/2013	ug/L	0.2 U	--	0.2 U	**0.77**	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**0.81**	0.2 U	**0.29**	**0.69**	0.2 U
MW-25	N	1/7/2014	ug/L	0.2 U	--	0.2 U	**0.86**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.85**	0.02 U	**0.38**	**0.98**	0.2 U
MW-25	N	7/29/2014	ug/L	0.2 U	--	0.2 U	**1.2**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.4**	0.02 U	**0.29**	**0.9**	0.2 U
MW-25	N	7/1/2015	ug/L	0.25 U	0.25 U	0.25 U	**1.2**	**0.0815**	**0.117**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.156**	**1.29**	0.05 U	**1.04**	**0.198**	**0.184**
MW-26	N	4/28/2005	ug/L	--	--	--	**0.729**	0.49 M	0.49 M	0.49 M	0.49 M	0.49 M	0.49 M	0.49 M	0.49 M	0.98 M	0.49 M	**2.19**	0.49 M	2.94 M	**1.05**	0.49 M
MW-26	N	7/26/2005	ug/L	--	--	--	**0.412**	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.1 M	0.2 M	**0.121**	**1.08**	0.1 M	1.8 M	**0.22**	**0.165**
MW-26	N	4/20/2006	ug/L	--	--	--	**1.2**	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.099 M	0.198 M	0.099 M	**3.83**	0.099 M	2.13 M	**0.444**	0.099 M
MW-26	N	7/19/2006	ug/L	--	--	--	**0.77**	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.101 M	0.202 M	0.101 M	**3.03**	0.101 M	1.57 M	**0.523**	0.101 M
MW-26	N	1/30/2007	ug/L	--	--	--	**2.3**	0.2 M	**1.7**	0.2 M	0.2 M	**0.31**	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**8.3**	0.2 M	2 M	**1.3**	0.2 M
MW-26	N	7/24/2007	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	**0.8**	0.2 M	0.3 M	0.2 M	0.2 M
MW-26	N	1/24/2008	ug/L	--	--	--	**1.7**	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	0.04 M	**5.8**	0.04 M	1.5 M	**0.79**	0.04 M
MW-26	N	7/18/2008	ug/L	--	--	--	**0.5**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**0.99**	0.01 M	0.8 M	0.2 M	0.2 M
MW-26	N	1/28/2009	ug/L	--	--	--	**0.59**	0.2 M	0.2 M	0.01 M	0.01 M	0.01 M	0.01 M	0.2 M	0.2 M	0.01 M	0.2 M	**1.9**	0.01 M	0.6 M	**0.35**	0.2 M
MW-26	N	7/28/2009	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.06 M	0.06 M	0.06 M	0.06 M	0.2 M	0.2 M	0.06 M	0.2 M	**0.35**	0.06 M	0.2 M	0.2 M	0.2 M
MW-26	N	1/27/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.2 M	0.2 M	0.4 M	0.2 M	0.4 M	0.2 M	0.2 M	0.2 M	**0.36**	0.2 M	0.4 M	0.2 M	**0.24**
MW-26	N	7/20/2010	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.04 M	0.02 M	0.04 M	0.2 M	0.02 M	0.2 M	**0.44**	0.02 M	0.8 M	0.2 M	0.2 M

TABLE B-3

Analytical Results for Groundwater - PAHs

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
MW-26	N	1/18/2011	ug/L	--	--	--	0.2 M	0.2 M	0.2 M	0.02 M	0.02 M	0.02 M	0.02 M	0.02 M	0.2 M	0.02 M	0.2 M	0.2 M	0.02 M	0.2 M	0.2 M	0.2 M
MW-26	N	1/26/2012	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	**0.026**	**0.031**	**0.063**	**0.027**	**0.063**	0.2 U	0.02 U	0.2 U	0.2 U	**0.039**	0.2 U	0.2 U	0.2 U
MW-26	N	7/26/2012	ug/L	--	--	--	**0.43**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**1.7**	0.02 U	1.2 U	**0.26**	0.2 U
MW-26	N	1/29/2013	ug/L	--	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	**2.9**	0.2 U	**0.88**	**0.41**	0.2 U
MW-26	N	7/10/2013	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	0.2 U	0.02 U	0.2 U	0.2 U	0.2 U
MW-26	N	1/7/2014	ug/L	0.2 U	--	0.2 U	**0.21**	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.49**	0.02 U	**1**	0.2 U	0.2 U
MW-26	N	7/30/2014	ug/L	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U	0.02 U	0.02 U	0.04 U	0.02 U	0.04 U	0.2 U	0.02 U	0.2 U	**0.27**	0.02 U	**0.64**	0.2 U	0.2 U
MW-26	N	7/1/2015	ug/L	0.25 U	0.25 U	0.25 U	**0.408**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.701**	0.05 U	**1.55**	**0.106**	0.05 U
MW-28	N	4/28/2005	ug/L	--	--	--	**3.48**	1 M	1 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**6.69**	1 M	3.5 M	**1.44**	1 M
MW-28	N	7/26/2005	ug/L	--	--	--	4.5 M	1.5 M	1.5 M	1 M	1 M	1 M	1 M	1 M	1 M	2 M	1 M	**10.5**	1 M	9.5 M	**11.1**	1 M
MW-28	N	7/27/2011	ug/L	--	--	--	**0.82**	0.8 M	0.8 M	0.08 M	0.08 M	0.08 M	0.08 M	0.08 M	0.8 M	0.08 M	0.8 M	**2.1**	0.08 M	0.8 M	**2.6**	0.8 M
MW-28	N	1/29/2013	ug/L	--	--	--	**2**	**0.67**	**0.49**	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	0.4 U	0.4 U	0.4 U	**4.6**	0.4 U	**4**	**4.1**	0.4 U
MW-28	N	7/10/2013	ug/L	**48**	--	0.4 U	**11**	**2.8**	**0.55**	0.4 U	0.4 U	0.8 U	0.4 U	0.8 U	**0.56**	0.4 U	**1.7**	**23**	0.4 U	**21**	**36**	**2.1**
MW-28	N	7/30/2014	ug/L	**6.8**	--	1 U	**1.9**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**3.8 J**	1 U	1 U	**3.1 J**	1 U
MW-28	FD	7/30/2014	ug/L	**6.8**	--	1 U	**1.5**	1 U	1 U	1 U	1 U	2 U	1 U	2 U	1 U	1 U	1 U	**2.9 J**	1 U	1 U	**2.1 J**	1 U
RW-1	N	11/26/2002	ug/L	--	--	--	30 U	25 U	**14.3**	**1.41**	1 U	**1.7**	1 U	1 U	**4.19**	2 U	**4.57**	130 U	1 U	**224**	**87**	**16.1**
RW-2	N	11/26/2002	ug/L	--	--	--	**6.3**	0.1 U	**2.42**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**1.83**	2 U	**1.21**	**14.7**	1 U	**56.2**	**17.7**	**1.75**
RW-3	N	11/26/2002	ug/L	--	--	--	70 U	57.1 U	**19.5**	**2.48**	**2.02**	**1.43**	1.14 U	**1.45**	**5.45**	2.29 U	**6.02**	186 U	1.14 U	100 U	**231**	**18.8**
Portland Harbor Joint Source Control Screening Values [1]																						
Human Health Drinking Water																						
MCL			ug/L	--	--	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Tap Water PRG			ug/L	--	--	--	370	--	1,800	0.092	0.0092	0.092	--	0.92	9.2	0.0092	1,500	240	0.092	6.2	--	180
Human Health Fish Consumption																						
EPA's 2004 NRWQC (organism only)			ug/L	--	--	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
DEQ's 2004 AWQC (organism only)			ug/L	--	--	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
Ecological Receptor SLVs				--	--																	
EPA's 2004 NRWQC (chronic)			ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEQ's 2004 AWQC (chronic)			ug/L	--	--	--	520	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--
Oak Ridge National Laboratory (Tier IISCV)			ug/L	--	--	2.1	--	--	0.73	0.027	0.014	--	--	--	--	--	--	3.9	--	12	--	--

Notes:

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

FD = field duplicate

ug/L = micrograms per liter

SLV = Screening Level Value

Bold = Analyte detected in sample.

[1] - The source of each Screening Level Value (SLV) is documented in Table 3.1 of the Portland Harbor Joint Source Control Strategy, dated December 2005 and revised in July 2007.

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-1	N	2/1/2002	mg/L	**0.0051**	**0.137 J**	0.001 U	**0.0019**	**0.0035**	0.001 M	0.0002 U	0.001 M	0.001 U	**0.00863**
MW-1	N	11/26/2002	mg/L	**0.00576**	**0.192**	0.001 U	**0.00638**	**0.0165**	**0.0058**	0.0002 U	**0.00111**	0.001 U	**0.0278**
MW-1	N	1/29/2003	mg/L	**0.00408**	**0.142**	0.001 M	**0.00216**	**0.00657**	**0.00293**	0.0004 M	0.001 M	0.001 M	**0.0113**
MW-1	N	4/30/2003	mg/L	**0.00451**	**0.102**	0.001 M	**0.00108**	0.002 M	0.001 M	0.0002 M	**0.00123**	0.001 M	0.005 M
MW-1	N	1/18/2011	mg/L	**0.0055**	**0.09**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-1	N	1/26/2012	mg/L	**0.0066**	**0.11**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/26/2012	mg/L	**0.0062**	**0.1**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/25/2012	mg/L	0.005 U	**0.056**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	1/29/2013	mg/L	0.005 U	**0.072**	0.002 U	**0.017**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/29/2013	mg/L	0.005 U	**0.082**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/9/2013	mg/L	0.005 U	**0.087**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	1/8/2014	mg/L	0.005 U	**0.091**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	FD	1/8/2014	mg/L	0.005 U	**0.088**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/29/2014	mg/L	**0.0036 J**	**0.08**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-1	N	7/1/2015	mg/L	**0.00561**	**0.0913**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-2	N	11/26/2002	mg/L	**0.041**	**0.119**	0.001 U	**0.00132**	**0.00345**	**0.00497**	0.0002 U	0.001 U	0.001 U	**0.0077**
MW-3	N	11/26/2002	mg/L	**0.0196**	**0.152**	0.001 U	**0.00303**	**0.00599**	**0.00247**	0.0002 U	**0.0014**	0.001 U	**0.0144**
MW-3	N	1/18/2011	mg/L	**0.045**	**0.12**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-3	N	7/27/2011	mg/L	**0.054**	**0.085**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-3	N	1/26/2012	mg/L	**0.029**	**0.1**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/25/2012	mg/L	**0.029**	**0.064**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	FD	7/25/2012	mg/L	**0.034**	**0.072**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	1/29/2013	mg/L	**0.055**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/9/2013	mg/L	**0.045**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	1/8/2014	mg/L	**0.037**	**0.1**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-3	N	7/29/2014	mg/L	**0.059**	**0.099**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	2/1/2002	mg/L	**0.00554**	**0.0916**	0.001 U	0.001 M	**0.00248**	0.001 M	0.0002 U	**0.00113**	0.001 U	0.005 M
MW-4	N	4/25/2002	mg/L	--	--	--	--	--	0.001 U	--	--	--	--
MW-4	N	7/29/2002	mg/L	--	--	--	--	--	0.001 M	--	--	--	--
MW-4	N	10/30/2002	mg/L	--	--	--	--	--	**0.00438**	--	--	--	--
MW-4	N	1/29/2003	mg/L	**0.00503**	**0.0791**	0.001 M	**0.00102**	0.002 M	0.001 M	0.0002 M	0.001 M	0.001 M	0.005 M
MW-4	N	4/30/2003	mg/L	**0.00511**	**0.0759**	0.001 M	0.001 M	0.002 M	0.001 M	0.0002 M	**0.00137**	0.001 M	**0.0054**
MW-4	N	7/29/2003	mg/L	**0.0388**	**0.107**	0.005 M	**0.00733**	**0.00679**	**0.00177**	0.0002 M	0.005 M	0.005 M	**0.0196**
MW-4	N	10/28/2003	mg/L	**0.0734**	**0.202**	0.001 M	**0.0197**	**0.0219**	**0.00898**	0.0002 M	0.001 M	0.001 M	**0.0735**
MW-4	N	1/30/2004	mg/L	**0.0123**	**0.095**	0.001 M	**0.00132**	**0.00221**	0.001 M	0.0002 M	**0.00117**	0.001 M	**0.0168**
MW-4	N	4/29/2004	mg/L	**0.0301**	**0.109**	0.001 M	**0.00616**	**0.00666**	**0.00242**	0.0002 M	**0.00199**	0.001 M	**0.0226**
MW-4	N	7/26/2004	mg/L	**0.146**	**0.285**	0.00653 M	**0.0345**	**0.0528**	**0.0156**	0.0002 M	**0.00192**	0.001 M	**0.156**
MW-4	N	11/1/2004	mg/L	**0.207**	**0.56**	0.001 M	**0.0745**	**0.0917**	**0.0296**	**0.000328**	**0.0019**	0.001 M	**0.285**
MW-4	N	2/2/2005	mg/L	**0.11**	**0.25**	0.001 M	**0.0293**	**0.0366**	**0.0134**	0.0002 M	0.002 M	0.001 M	**0.105**
MW-4	N	4/28/2005	mg/L	**0.0228**	**0.0921**	**0.00019**	**0.00443**	**0.00616**	**0.00203**	0.0002 M	**0.00048**	0.001 M	**0.0246**
MW-4	N	7/26/2005	mg/L	**0.0721**	**0.214**	0.001 M	**0.0178**	**0.0188**	**0.00971**	0.0002 M	**0.00162**	0.001 M	**0.0874**
MW-4	N	10/25/2005	mg/L	**0.136**	**0.439**	0.01 M	**0.0471**	**0.0709**	**0.0246**	0.0002 M	0.02 M	0.01 M	**0.0233**

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-4	N	1/26/2006	mg/L	**0.0114**	**0.0401**	0.001 M	0.001 M	0.002 M	0.001 M	0.0002 M	0.002 M	0.001 M	0.005 M
MW-4	N	7/24/2007	mg/L	**0.049**	**0.27**	0.005 M	**0.023**	**0.02**	**0.012**	0.001 M	0.005 M	0.005 M	**0.13**
MW-4	N	1/18/2011	mg/L	**0.0082**	**0.054**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-4	FD	1/18/2011	mg/L	**0.0084**	**0.053**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-4	N	7/27/2011	mg/L	0.005 M	**0.032**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-4	FD	7/27/2011	mg/L	0.005 M	**0.033**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-4	N	1/26/2012	mg/L	0.005 U	**0.064**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/25/2012	mg/L	0.005 U	**0.03**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	1/28/2013	mg/L	**0.028**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	1/28/2013	mg/L	**0.019**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/10/2013	mg/L	**0.012**	**0.042**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	7/10/2013	mg/L	**0.011**	**0.043**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	1/7/2014	mg/L	**0.0071**	**0.047**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	1/7/2014	mg/L	**0.0083**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/29/2014	mg/L	**0.029 J**	**0.048**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	FD	7/29/2014	mg/L	**0.098 J**	**0.053**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-4	N	7/1/2015	mg/L	**0.0944**	**0.0518**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-4	FD	7/1/2015	mg/L	**0.111**	**0.0538**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-4B	N	9/25/2008	mg/L	**0.0031**	**0.0861**	**0.00014**	**0.00447**	**0.00852**	**0.00618**	0.00005 M	0.0004 M	**0.000048**	**0.0239**
MW-4B	N	12/18/2008	mg/L	**0.0024**	**0.0373**	**0.000065**	**0.00008**	**0.00165**	**0.000109**	0.00005 M	**0.0005**	0.000009 M	**0.0041**
MW-4B	N	7/30/2009	mg/L	**0.002**	**0.0418**	**0.000064**	**0.00054**	**0.00189**	**0.000635**	0.00002 M	0.0003 M	0.000004 M	**0.0038**
MW-4B	N	7/20/2010	mg/L	0.005 M	**0.033**	0.005 M	0.005 M	**0.013**	**0.018**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	2/1/2002	mg/L	**0.00342**	**0.14**	0.001 M	**0.00611**	**0.0161**	**0.00809**	0.0002 U	0.001 M	0.001 U	**0.0356**
MW-5	N	4/24/2002	mg/L	--	--	--	--	--	**0.00976**	--	--	--	--
MW-5	N	7/30/2002	mg/L	--	--	--	--	--	**0.00722**	--	--	--	--
MW-5	N	1/28/2003	mg/L	**0.00246**	**0.0801**	0.001 M	**0.00316**	**0.00675**	**0.00475**	0.0008 M	0.001 M	0.001 M	**0.0222**
MW-5	N	4/30/2003	mg/L	**0.00195**	**0.0637**	0.001 M	**0.0021**	**0.00662**	**0.00387**	0.0002 M	0.001 M	0.001 M	**0.017**
MW-5	N	1/29/2004	mg/L	**0.00243**	**0.0855**	0.001 M	**0.00218**	**0.00646**	**0.00463**	0.0002 M	**0.0011**	0.001 M	**0.0243**
MW-5	N	4/28/2004	mg/L	**0.00188**	**0.0729**	0.001 M	**0.00244**	**0.0056**	**0.00305**	0.0002 M	**0.00105**	0.001 M	**0.0152**
MW-5	N	1/26/2006	mg/L	**0.00209**	**0.055**	0.001 M	0.001 M	**0.00368**	**0.00299**	0.0002 M	0.002 M	0.001 M	**0.00774**
MW-5	N	4/20/2006	mg/L	**0.00336**	**0.0843**	0.001 M	**0.0026**	**0.00641**	**0.00484**	0.0002 M	0.002 M	0.001 M	**0.02**
MW-5	N	7/20/2006	mg/L	**0.00622**	**0.144**	0.001 M	**0.00962**	**0.0171**	**0.00806**	0.0002 M	0.002 M	0.001 M	**0.0571**
MW-5	N	1/29/2007	mg/L	0.005 M	**0.074**	0.005 M	**0.0055**	**0.018**	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	4/25/2007	mg/L	0.005 M	**0.14**	0.005 M	**0.0085**	**0.012**	**0.0069**	0.001 M	0.005 M	0.005 M	**0.13**
MW-5	N	1/28/2008	mg/L	**0.0051**	**0.26**	0.005 M	**0.01**	**0.015**	**0.0083**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	7/18/2008	mg/L	**0.0071**	**0.21**	0.005 M	**0.014**	**0.017**	**0.01**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	1/27/2009	mg/L	0.005 M	**0.22**	0.005 M	**0.011**	**0.013**	**0.0081**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	1/26/2010	mg/L	0.005 M	**0.11**	0.005 M	0.005 M	0.01 M	**0.005**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	7/20/2010	mg/L	0.005 M	**0.029**	0.005 M	**0.0085**	**0.11**	**0.21**	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	1/18/2011	mg/L	0.005 M	**0.032**	0.005 M	0.005 M	**0.012**	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	7/26/2011	mg/L	0.005 M	**0.034**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-5	N	1/25/2012	mg/L	0.005 U	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-5	N	7/25/2012	mg/L	0.005 U	**0.03**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-5	N	1/29/2013	mg/L	0.005 U	**0.031**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-5	N	7/30/2014	mg/L	0.005 U	**0.032**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	2/1/2002	mg/L	**0.0403**	**0.204**	**0.00189**	**0.00163**	**0.0069**	**0.00265**	0.0002 U	0.001 M	0.001 U	**0.0486**
MW-6	N	4/24/2002	mg/L	--	--	--	--	--	**0.00143**	--	--	--	--
MW-6	N	1/29/2003	mg/L	**0.0465**	**0.182**	0.001 M	**0.00253**	**0.00724**	**0.00651**	0.0002 M	0.001 M	0.001 M	**0.0617**
MW-6	N	4/29/2003	mg/L	**0.0391**	**0.0961**	0.001 M	0.001 M	**0.002**	0.001 M	0.0002 M	0.001 M	0.001 M	**0.00619**
MW-6	N	1/29/2004	mg/L	**0.0551**	**0.129**	0.001 M	0.001 M	**0.0043**	**0.00206**	0.0002 M	0.001 M	0.001 M	**0.0178**
MW-6	N	4/28/2004	mg/L	**0.0587**	**0.109**	0.001 M	**0.00106**	**0.00379**	**0.00137**	0.0002 M	**0.00234**	0.001 M	**0.013**
MW-6	N	4/28/2005	mg/L	**0.0484**	**0.136**	**0.00032**	**0.00258**	**0.0126**	**0.00612**	0.0002 M	**0.0006**	0.001 M	**0.0658**
MW-6	N	1/26/2006	mg/L	**0.0468**	**0.101**	0.001 M	0.001 M	0.002 M	0.001 M	0.0002 M	0.002 M	0.001 M	**0.0207**
MW-6	N	4/20/2006	mg/L	**0.0494**	**0.0892**	0.001 M	0.001 M	**0.00258**	**0.00126**	0.0002 M	0.002 M	0.001 M	**0.0091**
MW-6	N	7/20/2006	mg/L	**0.0427**	**0.0764**	0.001 M	0.001 M	**0.00248**	0.001 M	0.0002 M	0.002 M	0.001 M	**0.00898**
MW-6	N	1/31/2007	mg/L	**0.045**	**0.1**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	4/26/2007	mg/L	**0.054**	**0.094**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	1/28/2008	mg/L	**0.043**	**0.085**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	7/17/2008	mg/L	**0.038**	**0.08**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	1/27/2009	mg/L	**0.0055**	**0.21**	0.005 M	**0.0067**	**0.011**	**0.0073**	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	1/26/2010	mg/L	**0.021**	**0.075**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	7/20/2010	mg/L	**0.038**	**0.051**	0.005 M	0.005 M	**0.058**	**0.13**	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	1/17/2011	mg/L	**0.034**	**0.064**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	7/26/2011	mg/L	**0.037**	**0.046**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-6	N	1/25/2012	mg/L	0.005 U	**0.062**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/25/2012	mg/L	**0.03**	**0.041**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	1/29/2013	mg/L	0.005 U	**0.054**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/9/2013	mg/L	**0.02**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-6	N	7/30/2014	mg/L	**0.0046 J**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/31/2002	mg/L	**0.00339**	**0.0786**	0.001 M	**0.00294**	**0.00673**	**0.00214**	0.0002 U	0.001 M	0.001 U	**0.014**
MW-7	N	4/24/2002	mg/L	--	--	--	--	--	**0.0024**	--	--	--	--
MW-7	N	7/29/2002	mg/L	--	--	--	--	--	**0.00735**	--	--	--	--
MW-7	N	10/29/2002	mg/L	--	--	--	--	--	**0.0346**	--	--	--	--
MW-7	N	1/28/2003	mg/L	**0.00161**	**0.0574**	0.001 M	0.001 M	**0.00318**	**0.00106**	0.0002 M	0.001 M	0.001 M	**0.00763**
MW-7	N	4/29/2003	mg/L	**0.00171**	**0.0629**	0.001 M	**0.00174**	**0.00396**	**0.00219**	0.0002 M	0.001 M	0.001 M	**0.0135**
MW-7	N	7/29/2003	mg/L	0.005 M	**0.0735**	0.005 M	**0.00676**	**0.00675**	**0.00223**	0.0002 M	0.005 M	0.005 M	**0.0166**
MW-7	N	10/28/2003	mg/L	**0.0018**	**0.0516**	0.001 M	0.001 M	**0.00292**	0.001 M	0.0002 M	0.001 M	0.001 M	**0.00595**
MW-7	N	1/29/2004	mg/L	**0.00239**	**0.0769**	0.001 M	**0.00286**	**0.00563**	**0.00249**	0.0002 M	0.001 M	0.001 M	**0.0201**
MW-7	N	4/28/2004	mg/L	**0.00219**	**0.105**	0.001 M	**0.00347**	**0.00848**	**0.00411**	0.0002 M	**0.001**	0.001 M	**0.0214**
MW-7	N	7/26/2004	mg/L	**0.00705**	**0.176**	0.0066 M	**0.00895**	**0.0221**	**0.00779**	0.0002 M	0.001 M	0.001 M	**0.0554**
MW-7	N	11/1/2004	mg/L	**0.0134**	**0.255**	0.001 M	**0.0196**	**0.0372**	**0.0159**	0.0002 M	0.001 M	0.001 M	**0.101**
MW-7	N	2/1/2005	mg/L	**0.0074**	**0.14**	0.001 M	**0.00826**	**0.0165**	**0.00758**	0.0002 M	0.002 M	0.001 M	**0.0426**
MW-7	N	4/28/2005	mg/L	**0.00305**	**0.085**	**0.00016**	**0.00241**	**0.00592**	**0.00263**	0.0002 M	**0.00042**	0.001 M	**0.017**
MW-7	N	7/26/2005	mg/L	**0.00564**	**0.123**	0.001 M	**0.00568**	**0.0113**	**0.00607**	0.0002 M	0.001 M	0.001 M	**0.0382**

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-7	N	10/25/2005	mg/L	**0.0777**	**0.77**	0.01 M	**0.126**	**0.242**	**0.0685**	0.0002 M	0.02 M	0.01 M	**0.674**
MW-7	N	1/26/2006	mg/L	**0.00315**	**0.075**	0.001 M	**0.00179**	**0.00516**	**0.00275**	0.0002 M	0.002 M	0.001 M	**0.0169**
MW-7	N	4/20/2006	mg/L	**0.00318**	**0.0757**	0.001 M	**0.00232**	**0.00507**	**0.00261**	0.0002 M	0.002 M	0.001 M	**0.0165**
MW-7	N	7/19/2006	mg/L	**0.00804**	**0.128**	0.001 M	**0.00846**	**0.0164**	**0.00728**	0.0002 M	0.002 M	0.001 M	**0.0432**
MW-7	N	10/18/2006	mg/L	**0.00361**	**0.406**	**0.00278**	**0.00656**	**0.0204**	**0.00974**	0.0002 M	**0.00129**	0.001 M	**0.0688**
MW-7	N	1/31/2007	mg/L	0.005 M	**0.072**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	4/25/2007	mg/L	0.005 M	**0.057**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	7/26/2007	mg/L	0.005 M	**0.11**	0.005 M	**0.008**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	1/28/2008	mg/L	0.005 M	**0.1**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	7/17/2008	mg/L	0.005 M	**0.073**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	1/27/2009	mg/L	0.005 M	**0.082**	0.005 M	**0.0055**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	7/28/2009	mg/L	**0.009**	**0.25**	0.005 M	**0.013**	**0.017**	**0.011**	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	1/26/2010	mg/L	0.005 M	**0.071**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	7/19/2010	mg/L	0.005 M	**0.045**	0.005 M	**0.016**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	1/17/2011	mg/L	0.005 M	**0.044**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	7/26/2011	mg/L	0.005 M	**0.014**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-7	N	1/25/2012	mg/L	0.005 U	**0.041**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	7/25/2012	mg/L	0.005 U	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/28/2013	mg/L	0.005 U	**0.032**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	7/10/2013	mg/L	0.005 U	**0.036**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	1/7/2014	mg/L	0.005 U	**0.038**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-7	N	7/29/2014	mg/L	0.005 U	**0.034**	0.002 U	**0.1**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	2/1/2002	mg/L	**0.00884**	**0.0396**	0.001 M	0.001 M	0.001 M	**0.0116**	0.0002 U	0.001 M	0.001 U	0.005 M
MW-8	N	4/25/2002	mg/L	--	--	--	--	--	**0.00761**	--	--	--	--
MW-8	N	7/29/2002	mg/L	--	--	--	--	--	**0.0051**	--	--	--	--
MW-8	N	10/30/2002	mg/L	--	--	--	--	--	**0.00495**	--	--	--	--
MW-8	N	1/29/2003	mg/L	**0.0053**	**0.0348**	0.001 M	0.001 M	0.002 M	**0.0147**	0.0002 M	0.001 M	0.001 M	**0.00979**
MW-8	N	4/30/2003	mg/L	**0.0056**	**0.0265**	0.001 M	0.001 M	0.002 M	**0.009**	0.0002 M	0.001 M	0.001 M	**0.0121**
MW-8	N	7/29/2003	mg/L	**0.00922**	**0.106**	0.005 M	0.005 M	0.005 M	**0.00355**	0.0002 M	0.005 M	0.005 M	**0.0172**
MW-8	N	10/28/2003	mg/L	**0.00284**	**0.0502**	0.001 M	**0.00156**	**0.00316**	**0.00373**	0.0002 M	**0.00104**	0.001 M	**0.00704**
MW-8	N	1/30/2004	mg/L	**0.00333**	**0.0318**	0.001 M	0.001 M	0.002 M	**0.0109**	0.0002 M	0.001 M	0.001 M	**0.00743**
MW-8	N	4/29/2004	mg/L	**0.00204**	**0.0414**	0.001 M	**0.00214**	**0.00742**	**0.00864**	0.0002 M	0.001 M	0.001 M	**0.0144**
MW-8	N	7/26/2004	mg/L	**0.00184**	**0.05**	0.001 M	**0.00169**	**0.00317**	**0.00461**	0.0002 M	**0.00113**	0.001 M	**0.011**
MW-8	N	11/1/2004	mg/L	0.001 M	**0.0347**	0.001 M	0.001 M	0.002 M	**0.00133**	0.0002 M	0.001 M	0.001 M	0.005 M
MW-8	N	2/2/2005	mg/L	**0.00308**	**0.0554**	**0.00206**	**0.0021**	**0.00786**	**0.00899**	0.0002 M	0.002 M	0.001 M	**0.023**
MW-8	N	4/29/2005	mg/L	**0.00194**	**0.0362**	**0.00041**	**0.00073**	**0.00334**	**0.0064**	0.0002 M	0.001 M	0.001 M	**0.00967**
MW-8	N	7/26/2005	mg/L	**0.00157**	**0.0394**	0.001 M	0.001 M	**0.00175**	**0.00407**	0.0002 M	0.001 M	0.001 M	**0.0113**
MW-8	N	1/26/2006	mg/L	**0.00244**	**0.0262**	0.001 M	0.001 M	**0.00268**	**0.00285**	0.0002 M	0.002 M	0.001 M	0.005 M
MW-8	N	4/20/2006	mg/L	**0.00278**	**0.0302**	0.001 M	0.001 M	**0.00261**	**0.00316**	0.0002 M	0.002 M	0.001 M	0.005 M
MW-8	N	7/20/2006	mg/L	**0.00346**	**0.024**	0.001 M	0.001 M	0.002 M	**0.00228**	0.0002 M	0.002 M	0.001 M	0.005 M
MW-8	N	10/18/2006	mg/L	**0.00126**	**0.0333**	0.001 M	0.001 M	**0.00156**	**0.00123**	0.0002 M	0.001 M	0.001 M	0.01 M
MW-8	N	1/31/2007	mg/L	**0.0095**	**0.024**	0.005 M	0.005 M	0.01 M	**0.01**	0.001 M	0.005 M	0.005 M	0.01 M

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-8	N	4/25/2007	mg/L	**0.0071**	**0.02**	0.005 M	0.005 M	0.01 M	**0.0087**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	7/24/2007	mg/L	0.005 M	**0.041**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	1/24/2008	mg/L	0.005 M	**0.023**	0.005 M	0.005 M	0.01 M	**0.011**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	7/16/2008	mg/L	0.005 M	**0.02**	0.005 M	0.005 M	0.01 M	**0.0074**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	1/27/2009	mg/L	0.005 M	**0.022**	0.005 M	0.005 M	0.01 M	**0.0077**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	7/28/2009	mg/L	0.005 M	**0.031**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	1/27/2010	mg/L	0.005 M	**0.027**	0.005 M	0.005 M	0.01 M	**0.011**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	7/20/2010	mg/L	0.005 M	**0.016**	0.005 M	**0.0078**	**0.043**	**0.093**	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	1/19/2011	mg/L	0.005 M	**0.018**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	FD	1/19/2011	mg/L	0.005 M	**0.019**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	7/27/2011	mg/L	0.005 M	**0.014**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-8	N	1/25/2012	mg/L	0.005 U	**0.021**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	FD	1/25/2012	mg/L	0.005 U	**0.021**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/26/2012	mg/L	0.005 U	**0.011**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	1/29/2013	mg/L	0.005 U	**0.033**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/10/2013	mg/L	0.005 U	**0.016**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	1/7/2014	mg/L	0.005 U	**0.034**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/29/2014	mg/L	0.005 U	**0.015**	0.002 U	**0.18**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-8	N	7/1/2015	mg/L	**0.00226**	**0.0297**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-8B	N	9/26/2008	mg/L	**0.0062**	**0.173**	**0.000367**	**0.0155**	**0.032**	**0.0182**	0.00005 M	**0.0004**	**0.00014**	**0.0715**
MW-8B	N	12/18/2008	mg/L	**0.002**	**0.035**	**0.000018**	**0.00005**	**0.00063**	**0.000199**	0.00005 M	**0.0007**	**0.000025**	**0.0032**
MW-8B	N	7/30/2009	mg/L	**0.0022**	**0.0734**	**0.00023**	**0.00341**	**0.00752**	**0.00384**	0.00002 M	0.0003 M	**0.000032**	**0.0157**
MW-8B	N	7/20/2010	mg/L	0.005 M	**0.039**	0.005 M	0.005 M	0.01 M	**0.0056**	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	2/1/2002	mg/L	**0.0384**	**0.288**	0.001 M	**0.0228**	**0.048**	**0.0239**	0.0002 U	**0.00133**	0.001 M	**0.106**
MW-9	N	4/25/2002	mg/L	--	--	--	--	--	**0.00102**	--	--	--	--
MW-9	N	7/29/2002	mg/L	--	--	--	--	--	**0.0384**	--	--	--	--
MW-9	N	10/30/2002	mg/L	--	--	--	--	--	**0.0802**	--	--	--	--
MW-9	N	1/29/2003	mg/L	**0.0308**	**0.0806**	0.001 M	**0.00265**	**0.00462**	**0.00273**	0.0002 M	0.001 M	0.001 M	**0.0162**
MW-9	N	4/30/2003	mg/L	**0.0352**	**0.0889**	0.001 M	**0.00306**	**0.0053**	**0.0039**	0.0002 M	0.001 M	0.001 M	**0.0199**
MW-9	N	7/30/2003	mg/L	**0.057**	**0.351**	0.005 M	**0.0359**	**0.0645**	**0.0351**	0.0002 M	0.005 M	0.005 M	**0.177**
MW-9	N	10/29/2003	mg/L	**0.0455**	**0.352**	0.001 M	**0.0284**	**0.0616**	**0.0339**	0.0002 M	0.001 M	0.001 M	**0.154**
MW-9	N	1/30/2004	mg/L	**0.0527**	**0.143**	0.001 M	**0.00629**	**0.0118**	**0.0082**	0.0002 M	0.001 M	0.001 M	**0.0601**
MW-9	N	4/29/2004	mg/L	**0.0468**	**0.0915**	0.001 M	**0.00374**	**0.00723**	**0.00392**	0.0002 M	**0.00169**	0.001 M	**0.0284**
MW-9	N	7/26/2004	mg/L	**0.065**	**0.276**	0.00624 M	**0.00772**	**0.0147**	**0.00961**	0.0002 M	**0.00192**	0.001 M	**0.0708**
MW-9	N	11/1/2004	mg/L	**0.118**	**1.8**	**0.00154**	**0.223**	**0.366**	**0.142**	**0.000546**	**0.00318**	**0.00117**	**0.959**
MW-9	N	2/2/2005	mg/L	**0.11**	**0.937**	**0.0015**	**0.0868**	**0.174**	**0.11**	0.0002 M	0.002 M	0.001 M	**0.469**
MW-9	N	4/28/2005	mg/L	**0.0789**	**0.489**	**0.00117**	**0.0402**	**0.0693**	**0.0428**	0.0002 M	**0.00136**	0.001 M	**0.232**
MW-9	N	7/26/2005	mg/L	**0.0856**	**0.596**	**0.00149**	**0.0493**	**0.092**	**0.0574**	0.0002 M	**0.00195**	0.001 M	**0.294**
MW-9	N	10/26/2005	mg/L	**0.117**	**1.58**	0.01 M	**0.159**	**0.298**	**0.174**	**0.000244**	0.02 M	0.01 M	**0.794**
MW-9	N	1/26/2006	mg/L	**0.0363**	**0.117**	0.001 M	**0.00501**	**0.0102**	**0.00887**	0.0002 M	0.002 M	0.001 M	**0.0541**
MW-9	N	4/20/2006	mg/L	**0.0231**	**0.064**	0.001 M	**0.0014**	**0.002**	**0.00175**	0.0002 M	0.002 M	0.001 M	**0.0146**
MW-9	N	7/20/2006	mg/L	**0.0323**	**0.0588**	0.001 M	**0.00252**	**0.00342**	**0.00193**	0.0002 M	0.002 M	0.001 M	**0.0166**

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-9	N	10/18/2006	mg/L	**0.0361**	**0.304**	0.001 M	**0.00598**	**0.0145**	**0.022**	0.0002 M	**0.00141**	0.001 M	**0.0837**
MW-9	N	1/30/2007	mg/L	**0.034**	**0.11**	0.005 M	**0.0094**	**0.01**	**0.012**	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	4/25/2007	mg/L	**0.03**	**0.12**	0.005 M	**0.012**	**0.011**	**0.017**	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	7/24/2007	mg/L	**0.069**	**0.4**	0.005 M	**0.031**	**0.049**	**0.047**	0.001 M	0.005 M	0.005 M	**0.22**
MW-9	N	1/24/2008	mg/L	**0.014**	**0.06**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	**0.11**
MW-9	N	7/16/2008	mg/L	**0.028**	**0.12**	0.005 M	**0.0081**	**0.018**	**0.022**	0.001 M	0.005 M	0.005 M	**0.17**
MW-9	N	1/28/2009	mg/L	**0.025**	**0.12**	0.005 M	0.005 M	**0.016**	**0.051**	0.001 M	0.005 M	0.005 M	**0.14**
MW-9	N	7/28/2009	mg/L	**0.051**	**0.26**	0.005 M	**0.018**	**0.029**	**0.027**	0.001 M	0.005 M	0.005 M	**0.12**
MW-9	N	1/27/2010	mg/L	**0.0077**	**0.081**	0.005 M	**0.0057**	**0.015**	**0.046**	0.001 M	0.005 M	0.005 M	**0.13**
MW-9	N	7/20/2010	mg/L	**0.069**	**0.058**	0.005 M	0.005 M	**0.02**	**0.023**	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	1/18/2011	mg/L	**0.044**	**0.048**	0.005 M	0.005 M	0.01 M	**0.051**	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	7/27/2011	mg/L	**0.033**	**0.046**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-9	N	1/26/2012	mg/L	**0.028**	**0.036**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/26/2012	mg/L	**0.031**	**0.057**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	1/29/2013	mg/L	**0.06**	**0.046**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/10/2013	mg/L	**0.065**	**0.057**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	1/8/2014	mg/L	**0.083**	**0.059**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/30/2014	mg/L	**0.066**	**0.058**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-9	N	7/1/2015	mg/L	**0.0898**	**0.0633**	0.001 U	0.002 U	0.005 U	**0.00282**	0.0002 U	0.002 U	0.002 U	0.025 U
MW-10	N	2/1/2002	mg/L	**0.00576**	**0.0204**	0.001 U	**0.00149**	0.002 M	**0.00308**	0.0002 U	0.001 M	0.001 U	**0.00563**
MW-10	N	4/25/2002	mg/L	--	--	--	--	--	**0.00648**	--	--	--	--
MW-10	N	11/27/2002	mg/L	**0.0187**	**0.553**	**0.00286**	**0.107**	**0.167**	**0.153**	0.0002 U	**0.00208**	**0.00122**	**0.465**
MW-10	N	4/30/2003	mg/L	**0.00672**	**0.06**	0.001 M	**0.00661**	**0.0116**	**0.0477**	0.0002 M	0.001 M	0.001 M	**0.0421**
MW-10	N	7/30/2003	mg/L	0.005 M	**0.0254**	0.005 M	**0.0052**	0.005 M	**0.0123**	0.0002 M	0.005 M	0.005 M	**0.0155**
MW-10	N	10/29/2003	mg/L	**0.00496**	**0.0273**	0.001 M	0.001 M	0.002 M	**0.00941**	0.0002 M	0.001 M	0.001 M	0.005 M
MW-10	N	7/27/2011	mg/L	**0.0055**	**0.0078**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-10	N	1/26/2012	mg/L	**0.0064**	**0.014**	0.005 U	0.005 U	0.01 U	**0.0057**	0.001 U	0.005 U	0.005 U	0.1 U
MW-12	N	1/31/2002	mg/L	**0.0594**	**0.0804**	0.001 U	**0.00138**	0.002 M	**0.00175**	0.0002 U	0.001 M	0.001 U	0.005 M
MW-12	N	4/25/2002	mg/L	--	--	--	--	--	**0.00444**	--	--	--	--
MW-12	N	7/29/2002	mg/L	--	--	--	--	--	**0.0086**	--	--	--	--
MW-12	N	10/29/2002	mg/L	--	--	--	--	--	**0.0208**	--	--	--	--
MW-12	N	1/28/2003	mg/L	**0.0576**	**0.0886**	0.001 M	**0.00337**	**0.00396**	**0.00618**	0.0002 M	0.001 M	0.001 M	**0.0115**
MW-12	N	4/29/2003	mg/L	**0.0624**	**0.0836**	0.001 M	**0.00219**	**0.003**	**0.00496**	0.0002 M	0.001 M	0.001 M	**0.0144**
MW-12	N	7/29/2003	mg/L	**0.0636**	**0.0476**	0.005 M	0.005 M	0.005 M	**0.00187**	0.0002 M	0.005 M	0.005 M	0.005 M
MW-12	N	10/28/2003	mg/L	**0.0704**	**0.13**	0.001 M	**0.00992**	**0.0132**	**0.0188**	0.0002 M	0.002 M	0.001 M	**0.0318**
MW-12	N	1/29/2004	mg/L	**0.0736**	**0.0938**	0.001 M	**0.00358**	**0.00456**	**0.00918**	0.0002 M	0.001 M	0.001 M	**0.0172**
MW-12	N	4/29/2004	mg/L	**0.0778**	**0.0683**	0.001 M	**0.00136**	0.002 M	**0.00192**	0.0002 M	0.001 M	0.001 M	0.005 M
MW-12	N	7/26/2004	mg/L	**0.0698**	**0.101**	0.001 M	**0.00449**	**0.00645**	**0.00694**	0.0002 M	0.001 M	0.001 M	**0.017**
MW-12	N	11/1/2004	mg/L	**0.0702**	**0.226**	0.001 M	**0.0223**	**0.03**	**0.0218**	0.0002 M	0.001 M	0.001 M	**0.0657**
MW-12	N	2/2/2005	mg/L	**0.0875**	**0.137**	0.001 M	**0.00834**	**0.00986**	**0.0115**	0.0002 M	0.002 M	0.001 M	**0.026**
MW-12	N	4/28/2005	mg/L	**0.0698**	**0.0787**	0.001 M	**0.00201**	**0.00259**	**0.00378**	0.0002 M	0.001 M	0.001 M	**0.0087**
MW-12	N	7/26/2005	mg/L	**0.0692**	**0.0709**	0.001 M	**0.00105**	0.001 M	**0.0025**	0.002 M	0.001 M	0.001 M	0.01 M

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-12	N	10/25/2005	mg/L	**0.0934**	**0.15**	0.01 M	**0.0172**	0.02 M	**0.012**	0.0002 M	0.02 M	0.01 M	0.05 M
MW-12	N	1/26/2006	mg/L	**0.0624**	**0.0688**	0.001 M	**0.00167**	**0.00226**	**0.00553**	0.0002 M	0.002 M	0.001 M	**0.0129**
MW-12	N	7/24/2007	mg/L	**0.076**	**0.07**	0.005 M	0.005 M	0.01 M	**0.014**	0.001 M	0.005 M	0.005 M	0.01 M
MW-12	N	1/25/2012	mg/L	**0.068**	**0.057**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	**0.15**
MW-12B	N	9/25/2008	mg/L	**0.0142**	**0.349**	**0.0012**	**0.108**	**0.0576**	**0.0246**	**0.00007**	**0.0015**	**0.000207**	**0.16**
MW-12B	N	12/18/2008	mg/L	**0.0119**	**0.385**	**0.000532**	**0.0401**	**0.0253**	**0.0236**	0.00005 M	**0.0028**	**0.000229**	**0.0892**
MW-12B	N	7/30/2009	mg/L	**0.0139**	**0.291**	**0.000493**	**0.0413**	**0.0192**	**0.00988**	0.00002 U	0.0006 U	**0.000072**	**0.045**
MW-12B	N	7/19/2010	mg/L	**0.014**	**0.13**	0.005 M	0.005 M	**0.022**	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-12C	N	9/25/2008	mg/L	**0.0052**	**0.0614**	**0.000011**	**0.000534**	**0.00077**	**0.000259**	0.00005 M	0.0004 M	**0.000005**	**0.0027**
MW-12C	N	12/18/2008	mg/L	**0.0104**	**0.0594**	0.000005 M	0.00005 M	**0.00036**	**0.000008**	0.00005 M	**0.0013**	0.000009 M	**0.0007**
MW-12C	N	7/30/2009	mg/L	**0.0057**	**0.0602**	**0.000484**	**0.00035**	**0.00206**	**0.00056**	0.00002 M	0.0003 M	0.000004 M	**0.0217**
MW-12C	N	7/19/2010	mg/L	**0.018**	**0.055**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	1/31/2002	mg/L	**0.0551**	**0.254**	0.001 U	**0.0156**	**0.0259**	**0.0138**	0.0002 U	0.001 M	0.001 U	**0.0648**
MW-13	N	4/25/2002	mg/L	--	--	--	--	--	**0.0109**	--	--	--	--
MW-13	N	7/29/2002	mg/L	--	--	--	--	--	**0.417**	--	--	--	--
MW-13	N	10/29/2002	mg/L	--	--	--	--	--	**2.59**	--	--	--	--
MW-13	N	1/28/2003	mg/L	**0.0608**	**0.0951**	0.001 M	**0.0028**	**0.00422**	**0.00451**	0.0002 M	0.001 M	0.001 M	**0.0233**
MW-13	N	4/29/2003	mg/L	**0.0511**	**0.214**	0.001 M	**0.0112**	**0.0174**	**0.016**	0.0002 M	0.001 M	0.001 M	**0.195**
MW-13	N	7/29/2003	mg/L	**0.0397**	**0.0919**	0.005 M	**0.0051**	0.005 M	**0.00221**	0.0002 M	0.005 M	0.005 M	**0.022**
MW-13	N	10/28/2003	mg/L	**0.105**	**0.721**	0.001 M	**0.0586**	**0.115**	**0.0725**	0.0002 M	**0.00113**	0.001 M	**0.268**
MW-13	N	1/29/2004	mg/L	**0.072**	**0.216**	0.001 M	**0.00948**	**0.014**	**0.0139**	0.0002 M	0.001 M	0.001 M	**0.237**
MW-13	N	4/28/2004	mg/L	**0.0838**	**0.272**	0.001 M	**0.0134**	**0.0257**	**0.0226**	0.0002 M	**0.00125**	0.001 M	**0.0781**
MW-13	N	7/28/2004	mg/L	**0.0895**	**0.483**	0.0063 M	**0.0458**	**0.0771**	**0.0459**	0.0002 M	0.001 M	0.001 M	**0.201**
MW-13	N	11/1/2004	mg/L	**0.224**	**5.29**	0.01 M	**0.628**	**1.03**	**0.767**	**0.000981**	0.01 M	0.01 M	**2.58**
MW-13	N	2/1/2005	mg/L	**0.102**	**0.303**	0.001 M	**0.0246**	**0.042**	**0.0321**	0.0002 M	0.002 M	0.001 M	**0.112**
MW-13	N	4/28/2005	mg/L	**0.0917**	**0.401**	**0.00038**	**0.0332**	**0.0485**	**0.0319**	0.0002 M	**0.00099**	0.001 M	**0.156**
MW-13	N	7/26/2005	mg/L	**0.0938**	**0.536**	0.001 M	**0.0404**	**0.0671**	**0.0435**	0.0002 M	**0.00168**	0.001 M	**0.205**
MW-13	N	10/25/2005	mg/L	**0.221**	**5.75**	0.01 M	**0.567**	**0.876**	**0.735**	**0.000353**	**0.0234**	0.01 M	**2.56**
MW-13	N	1/26/2006	mg/L	**0.0531**	**0.186**	0.001 M	**0.0032**	**0.00664**	**0.0114**	0.0002 M	0.002 M	0.001 M	**0.0505**
MW-13	N	4/20/2006	mg/L	**0.0571**	**0.194**	0.001 M	**0.00663**	**0.00909**	**0.011**	0.0002 M	0.002 M	0.001 M	**0.108**
MW-13	N	7/19/2006	mg/L	**0.0787**	**0.254**	0.001 M	**0.016**	**0.0234**	**0.0152**	0.0002 M	0.002 M	0.001 M	**0.0665**
MW-13	N	10/18/2006	mg/L	**0.118**	**7.76**	**0.00511**	**0.131**	**0.171**	**0.249**	**0.00331**	**0.00827**	0.001 M	**1.07**
MW-13	N	1/31/2007	mg/L	**0.067**	**0.22**	0.005 M	**0.015**	**0.015**	**0.013**	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	4/25/2007	mg/L	**0.068**	**0.11**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	7/24/2007	mg/L	**0.084**	**0.66**	0.005 M	**0.044**	**0.056**	**0.06**	0.001 M	0.005 M	0.005 M	**0.19**
MW-13	N	1/28/2008	mg/L	**0.066**	**0.15**	0.005 M	**0.0059**	0.01 M	**0.0063**	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	7/17/2008	mg/L	**0.073**	**0.23**	0.005 M	**0.0061**	**0.012**	**0.011**	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	1/27/2009	mg/L	**0.074**	**0.18**	0.005 M	**0.0066**	0.01 M	**0.0096**	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	7/27/2009	mg/L	**0.1**	**1.2**	0.005 M	**0.085**	**0.082**	**0.084**	0.001 M	0.005 M	0.005 M	**0.29**
MW-13	N	1/26/2010	mg/L	**0.071**	**0.25**	0.005 M	**0.009**	**0.015**	**0.019**	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	7/19/2010	mg/L	**0.067**	**0.059**	0.005 M	0.005 M	**0.013**	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	1/17/2011	mg/L	**0.061**	**0.11**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-13	FD	1/17/2011	mg/L	**0.062**	**0.11**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	7/26/2011	mg/L	**0.065**	**0.095**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-13	N	1/25/2012	mg/L	**0.077**	**0.096**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/25/2012	mg/L	**0.017**	**0.032**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	1/28/2013	mg/L	**0.064**	**0.093**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/9/2013	mg/L	**0.07**	**0.063**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	FD	7/9/2013	mg/L	**0.073**	**0.066**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	1/7/2014	mg/L	**0.089**	**0.072**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-13	N	7/29/2014	mg/L	**0.081**	**0.071**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	1/31/2002	mg/L	**0.0165**	**0.456**	0.001 M	**0.0402**	**0.078**	**0.0332**	0.0002 U	0.001 M	0.001 M	**0.108**
MW-14	N	4/24/2002	mg/L	--	--	--	--	--	**0.014**	--	--	--	--
MW-14	N	7/30/2002	mg/L	--	--	--	--	--	**0.252**	--	--	--	--
MW-14	N	10/29/2002	mg/L	--	--	--	--	--	**0.103**	--	--	--	--
MW-14	N	1/29/2003	mg/L	**0.0149**	**0.341**	0.001 M	**0.0364**	**0.0604**	**0.0269**	0.0002 M	0.001 M	0.001 M	**0.168**
MW-14	N	4/29/2003	mg/L	**0.00954**	**0.328**	0.001 M	**0.0228**	**0.0466**	**0.0231**	0.0002 M	0.001 M	0.001 M	**0.186**
MW-14	N	7/29/2003	mg/L	0.005 M	**0.0485**	0.005 M	0.005 M	**0.0052**	0.001 M	0.0002 M	0.005 M	0.005 M	**0.0148**
MW-14	N	10/28/2003	mg/L	**0.00451**	**0.13**	0.001 M	**0.00703**	**0.015**	**0.0059**	0.0002 M	0.001 M	0.001 M	**0.0382**
MW-14	N	1/29/2004	mg/L	**0.00456**	**0.162**	0.001 M	**0.00888**	**0.018**	**0.00797**	0.0002 M	0.001 M	0.001 M	**0.0495**
MW-14	N	4/28/2004	mg/L	**0.0146**	**0.349**	0.001 M	**0.0294**	**0.0566**	**0.0269**	0.0002 M	**0.00173**	0.001 M	**0.146**
MW-14	N	7/26/2004	mg/L	**0.00836**	**0.998**	0.0063 M	**0.00866**	**0.0327**	**0.00606**	**0.000238**	**0.00103**	0.001 M	**0.0954**
MW-14	N	11/1/2004	mg/L	**0.101**	**2.6**	0.01 M	**0.243**	**0.436**	**0.192**	**0.000223**	0.01 M	0.01 M	**1.29**
MW-14	N	2/1/2005	mg/L	**0.0248**	**0.567**	0.001 M	**0.044**	**0.0895**	**0.0542**	0.0002 M	0.002 M	0.001 M	**0.242**
MW-14	N	4/28/2005	mg/L	**0.0186**	**0.357**	**0.00057**	**0.0329**	**0.0541**	**0.0271**	**0.000069**	**0.00096**	0.001 M	**0.176**
MW-14	N	7/26/2005	mg/L	**0.023**	**0.452**	0.001 M	**0.0387**	**0.068**	**0.0344**	0.002 M	**0.00163**	0.001 M	**0.222**
MW-14	N	10/25/2005	mg/L	**0.0516**	**1.48**	0.01 M	**0.0656**	**0.159**	**0.0548**	0.0002 M	0.02 M	0.01 M	**0.454**
MW-14	N	1/27/2006	mg/L	**0.00177**	**0.0714**	0.001 M	**0.00134**	**0.0036**	**0.00163**	0.0002 M	0.002 M	0.001 M	**0.0357**
MW-14	N	4/20/2006	mg/L	**0.00488**	**0.107**	0.001 M	**0.00669**	**0.0128**	**0.00634**	0.0002 M	0.002 M	0.001 M	**0.0386**
MW-14	N	7/20/2006	mg/L	**0.00543**	**0.126**	0.001 M	**0.0089**	**0.0162**	**0.00625**	0.0002 M	0.002 M	0.001 M	**0.0506**
MW-14	N	10/18/2006	mg/L	**0.00743**	**1.13**	**0.00178**	**0.0129**	**0.0355**	**0.0103**	**0.000408**	**0.0031**	0.001 M	**0.141**
MW-14	N	1/31/2007	mg/L	**0.021**	**0.48**	0.005 M	**0.042**	**0.059**	**0.031**	0.001 M	0.005 M	0.005 M	**0.2**
MW-14	N	4/26/2007	mg/L	0.005 M	**0.12**	0.005 M	**0.0074**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	7/26/2007	mg/L	**0.037**	**1.5**	0.005 M	**0.094**	**0.15**	**0.08**	0.001 M	0.005 M	0.005 M	**0.51**
MW-14	N	1/28/2008	mg/L	**0.015**	**0.46**	0.005 M	**0.027**	**0.044**	**0.023**	0.001 M	0.005 M	0.005 M	**0.16**
MW-14	N	7/17/2008	mg/L	**0.0086**	**0.24**	0.005 M	**0.013**	**0.022**	**0.01**	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	1/27/2009	mg/L	**0.009**	**0.25**	0.005 M	**0.016**	**0.022**	**0.012**	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	7/27/2009	mg/L	**0.028**	**0.92**	0.005 M	**0.066**	**0.074**	**0.046**	0.001 M	0.005 M	0.005 M	**0.25**
MW-14	N	1/26/2010	mg/L	**0.0062**	**0.16**	0.005 M	**0.0096**	**0.016**	**0.0084**	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	7/20/2010	mg/L	0.005 M	**0.017**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	1/17/2011	mg/L	0.005 M	**0.021**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	7/26/2011	mg/L	0.005 M	**0.028**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-14	N	1/25/2012	mg/L	0.005 U	**0.029**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/25/2012	mg/L	0.005 U	**0.024**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-14	N	1/28/2013	mg/L	0.005 U	**0.024**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/9/2013	mg/L	0.005 U	**0.021**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	1/7/2014	mg/L	0.005 U	**0.025**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-14	N	7/29/2014	mg/L	0.005 U	**0.018**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	1/31/2002	mg/L	**0.00951**	**0.262**	0.001 M	**0.0224**	**0.0355**	**0.0133**	0.0002 U	**0.0011**	0.001 U	**0.0936**
MW-15	N	4/24/2002	mg/L	--	--	--	--	--	**0.0754**	--	--	--	--
MW-15	N	7/30/2002	mg/L	--	--	--	--	--	**0.227**	--	--	--	--
MW-15	N	10/29/2002	mg/L	--	--	--	--	--	**0.019**	--	--	--	--
MW-15	N	1/29/2003	mg/L	**0.0113**	**0.299**	0.001 M	**0.0329**	**0.0464**	**0.0197**	0.0002 M	0.001 M	0.001 M	**0.142**
MW-15	N	4/29/2003	mg/L	**0.00359**	**0.0986**	0.001 M	**0.00965**	**0.0109**	**0.00529**	0.0002 M	0.001 M	0.001 M	**0.0331**
MW-15	N	7/29/2003	mg/L	**0.0361**	**1.34**	0.05 M	**0.0858**	**0.145**	**0.0798**	0.0002 M	0.05 M	0.05 M	**0.553**
MW-15	N	10/28/2003	mg/L	**0.0135**	**1.57**	0.001 M	**0.0466**	**0.0792**	**0.0155**	0.0002 M	**0.00246**	0.001 M	**0.302**
MW-15	N	1/29/2004	mg/L	**0.00322**	**0.0942**	0.001 M	**0.00874**	**0.00883**	**0.00374**	0.0002 M	0.001 M	0.001 M	**0.0288**
MW-15	N	4/28/2004	mg/L	**0.00343**	**0.279**	0.001 M	**0.0115**	**0.0167**	**0.0046**	0.0002 M	0.001 M	0.001 M	**0.0556**
MW-15	N	7/26/2004	mg/L	**0.0081**	**0.186**	0.001 M	**0.0147**	**0.0286**	**0.0112**	0.0002 M	0.001 M	0.001 M	**0.079**
MW-15	N	11/1/2004	mg/L	**0.078**	**2.28**	0.001 M	**0.261**	**0.37**	**0.11**	**0.000237**	**0.00477**	**0.00155**	**1.1**
MW-15	N	2/1/2005	mg/L	**0.0124**	**0.301**	0.001 M	**0.0278**	**0.0448**	**0.0239**	0.0002 M	0.002 M	0.001 M	**0.129**
MW-15	N	4/28/2005	mg/L	**0.0131**	**0.304**	**0.00028**	**0.0303**	**0.0396**	**0.019**	0.0002 M	**0.00099**	0.001 M	**0.14**
MW-15	N	7/26/2005	mg/L	**0.0147**	**0.341**	0.001 M	**0.0308**	**0.0439**	**0.0217**	0.0002 M	**0.0013**	0.001 M	**0.156**
MW-15	N	10/25/2005	mg/L	**0.0448**	**0.924**	0.01 M	**0.069**	**0.132**	**0.0534**	0.0002 M	0.02 M	0.01 M	**0.376**
MW-15	N	1/27/2006	mg/L	**0.005**	**0.106**	0.001 M	**0.00819**	**0.0105**	**0.00616**	0.0002 M	0.002 M	0.001 M	**0.0521**
MW-15	N	4/20/2006	mg/L	**0.00352**	**0.082**	0.001 M	**0.00729**	**0.00656**	**0.00322**	0.0002 M	0.002 M	0.001 M	**0.0237**
MW-15	N	7/20/2006	mg/L	**0.00631**	**0.144**	0.001 M	**0.0138**	**0.0168**	**0.00689**	0.0002 M	0.002 M	0.001 M	**0.0515**
MW-15	N	10/17/2006	mg/L	**0.0268**	**1.42**	**0.00247**	**0.061**	**0.0996**	**0.0422**	0.0002 M	**0.00356**	0.001 M	**0.344**
MW-15	N	1/31/2007	mg/L	**0.0062**	**0.13**	0.005 M	**0.013**	**0.014**	**0.0063**	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	4/25/2007	mg/L	**0.0095**	**0.27**	0.005 M	**0.021**	**0.024**	**0.014**	0.001 M	0.005 M	**0.017**	0.01 M
MW-15	N	7/24/2007	mg/L	**0.011**	**0.39**	0.005 M	**0.031**	**0.031**	**0.018**	0.001 M	0.005 M	0.005 M	**0.14**
MW-15	N	1/29/2008	mg/L	**0.0072**	**0.19**	0.005 M	**0.012**	**0.019**	**0.0092**	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	7/17/2008	mg/L	**0.011**	**0.29**	0.005 M	**0.02**	**0.03**	**0.013**	0.001 M	0.005 M	0.005 M	**0.12**
MW-15	N	1/27/2009	mg/L	**0.012**	**0.39**	0.005 M	**0.024**	**0.03**	**0.021**	0.001 M	0.005 M	0.005 M	**0.11**
MW-15	N	7/27/2009	mg/L	**0.0066**	**0.37**	0.005 M	**0.011**	**0.014**	**0.0084**	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	1/26/2010	mg/L	0.005 M	**0.14**	0.005 M	**0.0061**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	7/20/2010	mg/L	0.005 M	**0.013**	0.005 M	**0.0064**	**0.024**	**0.041**	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	1/17/2011	mg/L	0.005 M	**0.017**	0.005 M	**0.0055**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	7/26/2011	mg/L	0.005 M	**0.021**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-15	N	1/25/2012	mg/L	0.005 U	**0.022**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/25/2012	mg/L	0.005 U	**0.017**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	1/29/2013	mg/L	0.005 U	**0.019**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/9/2013	mg/L	0.005 U	**0.02**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	1/7/2014	mg/L	0.005 U	**0.02**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-15	N	7/30/2014	mg/L	0.005 U	**0.019**	0.002 U	**0.0063 J**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-16	N	2/1/2002	mg/L	**0.116**	**0.354**	0.001 M	**0.0465**	**0.0508**	**0.0312**	0.0002 U	0.001 M	0.001 M	**0.144**

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-16	N	4/25/2002	mg/L	--	--	--	--	--	**0.00998**	--	--	--	--
MW-16	N	7/30/2002	mg/L	--	--	--	--	--	**0.12**	--	--	--	--
MW-16	N	11/27/2002	mg/L	**0.12**	**3.69**	0.001 U	**0.61**	**0.546**	**0.323**	**0.000265**	0.001 U	0.001 U	**1.4**
MW-16	N	1/28/2003	mg/L	**0.0908**	**0.104**	0.001 M	**0.00704**	**0.00652**	**0.00702**	0.0004 M	0.001 M	0.001 M	**0.0216**
MW-16	N	4/29/2003	mg/L	**0.0895**	**0.0885**	0.001 M	**0.00696**	**0.00764**	**0.00828**	0.0002 M	0.001 M	0.001 M	**0.0247**
MW-16	N	7/29/2003	mg/L	**0.116**	**5.83**	0.1 M	**0.718**	**0.764**	**0.466**	**0.000854**	0.1 M	0.1 M	**2.18**
MW-16	N	10/28/2003	mg/L	**0.112**	**0.397**	0.001 M	**0.0498**	**0.0511**	**0.0355**	0.0002 U	0.001 M	0.001 M	**0.13**
MW-16	N	4/28/2004	mg/L	**0.106**	**0.0996**	0.001 M	**0.00673**	**0.00614**	**0.00712**	0.0002 M	0.001 M	0.001 M	**0.0175**
MW-16	N	7/26/2004	mg/L	**0.12**	**0.336**	0.0063 M	**0.0166**	**0.0139**	**0.0152**	0.0002 M	0.001 M	0.001 M	**0.069**
MW-16	N	11/1/2004	mg/L	**0.111**	**0.188**	0.001 M	**0.0119**	**0.0112**	**0.00843**	0.0002 M	0.001 M	0.001 M	**0.0334**
MW-16	N	7/27/2011	mg/L	**0.1**	**0.079**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-16	N	7/26/2012	mg/L	**0.071**	**0.039**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-16	FD	7/26/2012	mg/L	**0.083**	**0.044**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/31/2002	mg/L	**0.00574**	**0.209**	0.001 U	**0.00604**	**0.00954**	**0.00374**	0.0002 U	0.001 U	0.001 U	**0.0242**
MW-17	N	4/24/2002	mg/L	--	--	--	--	--	**0.0106**	--	--	--	--
MW-17	N	7/30/2002	mg/L	--	--	--	--	--	**0.0801**	--	--	--	--
MW-17	N	10/30/2002	mg/L	--	--	--	--	--	**0.115**	--	--	--	--
MW-17	N	1/29/2003	mg/L	**0.00858**	**0.161**	0.001 M	**0.0116**	**0.0177**	**0.0106**	0.0002 M	0.001 M	0.001 M	**0.0558**
MW-17	N	4/29/2003	mg/L	**0.0109**	**0.133**	0.001 M	**0.00694**	**0.011**	**0.00589**	0.0002 M	**0.00117**	0.001 M	**0.0358**
MW-17	N	7/29/2003	mg/L	**0.0338**	**0.477**	0.005 M	**0.0461**	**0.0865**	**0.0465**	0.0002 M	0.005 M	0.005 M	**0.218**
MW-17	N	10/28/2003	mg/L	**0.0308**	**0.82**	**0.00359**	**0.0802**	**0.164**	**0.0757**	0.0002 M	**0.00141**	0.001 M	**0.401**
MW-17	N	1/29/2004	mg/L	**0.00429**	**0.125**	0.001 M	**0.0051**	**0.00895**	**0.00484**	0.0002 M	0.001 M	0.001 M	**0.0295**
MW-17	N	4/28/2004	mg/L	**0.0136**	**0.216**	0.001 M	**0.0137**	**0.0257**	**0.0123**	0.0002 M	**0.00129**	0.001 M	**0.0736**
MW-17	N	7/28/2004	mg/L	**0.0235**	**0.268**	0.001 M	**0.0213**	**0.0391**	**0.0178**	0.0002 M	**0.00128**	0.001 M	**0.106**
MW-17	N	11/1/2004	mg/L	**0.0218**	**0.411**	0.001 M	**0.0464**	**0.0866**	**0.0362**	0.0002 M	**0.00142**	0.001 M	**0.223**
MW-17	N	2/1/2005	mg/L	**0.0112**	**0.259**	**0.00116**	**0.0188**	**0.0353**	**0.0198**	0.0002 M	0.002 M	0.001 M	**0.0906**
MW-17	N	4/28/2005	mg/L	**0.00658**	**0.162**	**0.00016**	**0.0103**	**0.0152**	**0.00914**	0.0002 M	**0.00055**	0.001 M	**0.0525**
MW-17	N	7/26/2005	mg/L	**0.0139**	**0.149**	0.001 M	**0.00691**	**0.0116**	**0.00713**	0.0002 M	0.001 M	0.001 M	**0.0428**
MW-17	N	10/25/2005	mg/L	**0.0306**	**0.642**	0.01 M	**0.0586**	**0.15**	**0.0612**	0.0002 M	0.02 M	0.01 M	**0.345**
MW-17	N	1/27/2006	mg/L	**0.00828**	**0.086**	0.001 M	**0.00121**	**0.00331**	**0.00184**	0.0002 M	0.002 M	0.001 M	**0.018**
MW-17	N	4/20/2006	mg/L	**0.0143**	**0.102**	0.001 M	**0.00226**	**0.00378**	**0.00242**	0.0002 M	0.002 M	0.001 M	**0.0188**
MW-17	N	7/20/2006	mg/L	**0.018**	**0.116**	0.001 M	**0.00477**	**0.00991**	**0.00461**	0.0002 M	0.002 M	0.001 M	**0.0251**
MW-17	N	10/17/2006	mg/L	**0.017**	**0.449**	**0.00354**	**0.0365**	**0.0785**	**0.0418**	0.0002 M	**0.00142**	0.001 M	**0.202**
MW-17	N	1/31/2007	mg/L	**0.013**	**0.11**	0.005 M	**0.0059**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	4/26/2007	mg/L	**0.018**	**0.088**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	**0.23**	0.01 M
MW-17	N	7/24/2007	mg/L	**0.011**	**0.15**	0.005 M	**0.01**	**0.011**	**0.0066**	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	1/29/2008	mg/L	**0.009**	**0.078**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	7/17/2008	mg/L	**0.017**	**0.13**	0.005 M	**0.006**	**0.014**	**0.0061**	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	1/27/2009	mg/L	**0.0062**	**0.077**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	7/27/2009	mg/L	**0.015**	**0.27**	0.005 M	**0.017**	**0.034**	**0.015**	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	1/26/2010	mg/L	**0.006**	**0.11**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	7/20/2010	mg/L	**0.014**	**0.05**	0.005 M	0.005 M	**0.015**	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-17	N	1/17/2011	mg/L	0.005 M	**0.049**	0.005 M	**0.0052**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	7/26/2011	mg/L	**0.02**	**0.055**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	FD	7/26/2011	mg/L	**0.02**	**0.055**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-17	N	1/25/2012	mg/L	0.005 U	**0.049**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/25/2012	mg/L	**0.013**	**0.047**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/29/2013	mg/L	**0.0098**	**0.05**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/9/2013	mg/L	**0.0055**	**0.042**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	1/7/2014	mg/L	0.005 U	**0.039**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-17	N	7/29/2014	mg/L	**0.0079**	**0.04**	0.002 U	**0.011**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	4/25/2002	mg/L	--	--	--	--	--	**0.0362**	--	--	--	--
MW-18	N	7/29/2002	mg/L	--	--	--	--	--	**0.0094**	--	--	--	--
MW-18	N	10/30/2002	mg/L	--	--	--	--	--	**0.046**	--	--	--	--
MW-18	N	1/29/2003	mg/L	**0.00255**	**0.093**	0.001 M	**0.0034**	**0.00593**	**0.00269**	0.0002 M	0.001 M	0.001 M	**0.0178**
MW-18	N	4/29/2003	mg/L	**0.00935**	**0.329**	0.001 M	**0.0248**	**0.0363**	**0.023**	0.0002 M	0.001 M	0.001 M	**0.118**
MW-18	N	7/30/2003	mg/L	**0.0386**	**0.758**	0.005 M	**0.0734**	**0.121**	**0.0655**	0.0002 M	0.005 M	0.005 M	**0.342**
MW-18	N	10/29/2003	mg/L	**0.0348**	**0.781**	0.001 M	**0.0787**	**0.132**	**0.0694**	0.0002 M	0.001 M	0.001 M	**0.364**
MW-18	N	1/30/2004	mg/L	**0.00295**	**0.159**	0.001 M	**0.0054**	**0.00916**	**0.00384**	0.0002 M	0.001 M	0.001 M	**0.0284**
MW-18	N	4/28/2004	mg/L	**0.00482**	**0.112**	0.001 M	**0.00702**	**0.0095**	**0.00487**	0.0002 M	0.001 M	0.001 M	**0.0287**
MW-18	N	7/26/2004	mg/L	**0.00359**	**0.227**	0.001 M	**0.00532**	**0.0124**	**0.00328**	0.0002 M	0.001 M	0.001 M	**0.038**
MW-18	N	11/1/2004	mg/L	**0.0374**	**0.67**	0.001 M	**0.0903**	**0.152**	**0.0565**	0.0002 M	**0.00189**	0.001 M	**0.427**
MW-18	N	2/1/2005	mg/L	**0.0188**	**0.553**	0.001 M	**0.036**	**0.0581**	**0.0353**	0.0002 M	0.002 M	0.001 M	**0.176**
MW-18	N	4/28/2005	mg/L	**0.00857**	**0.174**	0.001 M	**0.0161**	**0.0208**	**0.011**	0.0002 M	**0.00036**	0.001 M	**0.0747**
MW-18	N	7/26/2005	mg/L	**0.0087**	**0.187**	0.001 M	**0.0159**	**0.0219**	**0.0116**	0.0002 M	0.001 M	0.001 M	**0.0774**
MW-18	N	10/25/2005	mg/L	**0.0506**	**0.855**	0.01 M	**0.0733**	**0.148**	**0.0657**	0.0002 M	0.02 M	0.01 M	**0.435**
MW-18	N	1/27/2006	mg/L	**0.00402**	**0.104**	0.001 M	**0.00374**	**0.00687**	**0.0044**	0.0002 M	0.002 M	0.001 M	**0.0218**
MW-18	N	4/20/2006	mg/L	**0.00606**	**0.144**	0.001 M	**0.00856**	**0.0109**	**0.00702**	0.0002 M	0.002 M	0.001 M	**0.0389**
MW-18	N	7/20/2006	mg/L	**0.00421**	**0.0831**	0.001 M	**0.00472**	**0.00812**	**0.00355**	0.0002 M	0.002 M	0.001 M	**0.0383**
MW-18	N	10/18/2006	mg/L	**0.0171**	**0.487**	**0.0013**	**0.0303**	**0.0516**	**0.0255**	0.0002 M	**0.00137**	0.001 M	**0.174**
MW-18	N	1/30/2007	mg/L	0.005 M	**0.096**	0.005 M	**0.0062**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	4/26/2007	mg/L	0.005 M	**0.071**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	7/26/2007	mg/L	**0.0075**	**0.25**	0.005 M	**0.022**	**0.018**	**0.0094**	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	1/28/2008	mg/L	0.005 M	**0.13**	0.005 M	**0.0061**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	7/17/2008	mg/L	0.005 M	**0.054**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	1/27/2009	mg/L	0.005 M	**0.086**	0.005 M	**0.0062**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	7/28/2009	mg/L	0.005 M	**0.11**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	1/26/2010	mg/L	0.005 M	**0.099**	0.005 M	**0.0057**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	7/19/2010	mg/L	0.005 M	**0.028**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	1/17/2011	mg/L	0.005 M	**0.033**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	7/26/2011	mg/L	0.005 M	**0.022**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-18	N	1/25/2012	mg/L	0.005 U	**0.033**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	7/25/2012	mg/L	0.005 U	**0.026**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	1/28/2013	mg/L	0.005 U	**0.022**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-18	N	7/9/2013	mg/L	0.005 U	**0.02**	0.002 U	**0.01**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	1/8/2014	mg/L	0.005 U	**0.019**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-18	N	7/29/2014	mg/L	0.005 U	**0.022**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-20	N	5/1/2003	mg/L	**0.00887**	**0.029**	0.001 M	**0.00156**	**0.00213**	**0.0023**	0.0002 M	0.001 M	0.001 M	**0.00834**
MW-20	N	7/30/2003	mg/L	**0.0149**	**0.107**	0.005 M	**0.0131**	**0.0226**	**0.00896**	0.0002 M	0.005 M	0.005 M	**0.0442**
MW-20	N	7/20/2010	mg/L	**0.012**	**0.013**	0.005 M	0.005 M	**0.012**	**0.026**	0.001 M	0.005 M	0.005 M	**0.16**
MW-20	N	1/26/2012	mg/L	**0.011**	**0.05**	0.005 U	0.005 U	0.01 U	**0.014**	0.001 U	0.005 U	0.005 U	**0.12**
MW-21	N	5/1/2003	mg/L	**0.00571**	**0.108**	0.001 M	**0.0123**	**0.0237**	**0.0297**	0.0002 M	0.001 M	0.001 M	**0.0641**
MW-21	N	7/30/2003	mg/L	**0.0119**	**0.12**	0.005 M	**0.0134**	**0.0621**	**0.0269**	0.0002 M	0.005 M	0.005 M	**0.0467**
MW-21	N	7/20/2010	mg/L	0.005 M	**0.0074**	0.005 M	**0.0055**	**0.019**	**0.019**	0.001 M	0.005 M	0.005 M	0.01 M
MW-21	N	1/26/2012	mg/L	0.005 U	**0.0081**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	7/26/2012	mg/L	0.005 U	**0.011**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	7/10/2013	mg/L	0.005 U	**0.0086**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-21	N	1/8/2014	mg/L	0.005 U	**0.0091**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	5/1/2003	mg/L	**0.00377**	**0.0146**	0.001 M	0.001 M	0.002 M	0.001 M	0.0002 M	0.001 M	0.001 M	0.005 M
MW-22	N	7/30/2003	mg/L	**0.0148**	**0.114**	0.005 M	**0.0143**	**0.0195**	**0.0121**	0.0002 M	0.005 M	0.005 M	**0.0493**
MW-22	N	10/29/2003	mg/L	**0.00751**	**0.27**	0.001 M	**0.0172**	**0.0354**	**0.0193**	0.0002 M	0.001 M	0.001 M	**0.0924**
MW-22	N	1/30/2004	mg/L	0.001 M	**0.0116**	0.001 M	**0.00105**	0.002 M	0.001 M	0.0002 M	0.001 M	0.001 M	**0.00575**
MW-22	N	4/29/2004	mg/L	**0.00861**	**0.0244**	0.001 M	**0.00126**	**0.0245**	**0.00119**	0.0002 M	0.001 M	0.001 M	**0.0136**
MW-22	N	7/26/2004	mg/L	**0.0137**	**0.164**	0.00631 M	**0.0147**	**0.0311**	**0.0143**	0.0002 M	**0.00114**	0.001 M	**0.0785**
MW-22	N	11/1/2004	mg/L	**0.116**	**0.0818**	0.001 M	**0.00467**	**0.00903**	**0.00431**	0.0002 M	0.001 M	0.001 M	**0.0236**
MW-22	N	2/2/2005	mg/L	**0.00933**	**0.0291**	0.001 M	0.001 M	0.002 M	**0.00104**	0.0002 M	0.002 M	0.001 M	0.005 M
MW-22	N	7/26/2005	mg/L	**0.00967**	**0.0254**	0.001 M	0.001 M	0.001 M	**0.00161**	0.0002 M	0.001 M	0.001 M	**0.0139**
MW-22	N	10/26/2005	mg/L	**0.0394**	**0.0338**	0.01 M	**0.0116**	0.02 M	0.01 M	0.0002 M	0.02 M	0.01 M	0.05 M
MW-22	N	1/26/2006	mg/L	**0.00109**	**0.00698**	0.001 M	0.001 M	0.002 M	0.001 M	0.0002 M	0.002 M	0.001 M	0.005 M
MW-22	N	4/20/2006	mg/L	**0.00533**	**0.0221**	0.001 M	**0.00172**	**0.00338**	**0.00208**	0.0002 M	0.002 M	0.001 M	**0.00895**
MW-22	N	7/20/2006	mg/L	**0.00518**	**0.0174**	0.001 M	0.001 M	0.002 M	**0.00262**	0.0002 M	0.002 M	0.001 M	**0.017**
MW-22	N	10/18/2006	mg/L	**0.0135**	**0.0395**	0.001 M	0.001 M	**0.00119**	**0.00161**	0.0002 M	0.001 M	0.001 M	**0.0125**
MW-22	N	1/30/2007	mg/L	**0.0056**	**0.011**	0.005 M	**0.0052**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	4/25/2007	mg/L	**0.011**	**0.085**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	7/24/2007	mg/L	**0.009**	**0.039**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	1/24/2008	mg/L	0.005 M	**0.012**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	7/16/2008	mg/L	**0.074**	**2.8**	0.005 M	**0.013**	**0.042**	**0.014**	0.001 M	0.005 M	0.005 M	**0.12**
MW-22	N	1/28/2009	mg/L	0.005 M	**0.066**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	1/27/2010	mg/L	**0.0089**	**0.1**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	7/20/2010	mg/L	0.005 M	**0.028**	0.005 M	0.005 M	**0.012**	**0.027**	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	1/18/2011	mg/L	0.005 M	**0.01**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	7/27/2011	mg/L	0.005 M	**0.0091**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-22	N	1/26/2012	mg/L	0.005 U	**0.0075**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/26/2012	mg/L	0.005 U	**0.0072**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	1/29/2013	mg/L	0.005 U	**0.01**	0.002 U	0.01 U	0.02 U	**0.056**	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/10/2013	mg/L	0.005 U	**0.025**	0.002 U	**0.033**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-22	N	1/8/2014	mg/L	0.005 U	**0.021**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/30/2014	mg/L	**0.0037 J**	**0.017**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-22	N	7/1/2015	mg/L	**0.00539**	**0.0341**	0.001 U	0.002 U	**0.0146**	**0.00477**	0.0002 U	0.002 U	0.002 U	0.025 U
MW-23	N	7/26/2004	mg/L	**0.0559**	**0.551**	0.00663 M	**0.0442**	**0.0498**	**0.0165**	0.0002 M	**0.00156**	0.001 M	**0.152**
MW-23	N	11/1/2004	mg/L	**0.0562**	**0.755**	**0.00936**	**0.177**	**0.188**	**0.0641**	**0.000455**	**0.00132**	0.001 M	**0.406**
MW-24	N	7/26/2004	mg/L	**0.118**	**2.64**	0.0318 M	**0.394**	**0.508**	**0.341**	**0.000243**	**0.00805**	0.005 M	**1.31**
MW-24	N	11/1/2004	mg/L	**0.0616**	**2.48**	0.001 M	**0.393**	**0.48**	**0.268**	**0.000372**	**0.00183**	**0.00135**	**1.29**
MW-24	N	2/2/2005	mg/L	**0.0118**	**0.975**	0.001 M	**0.0463**	**0.062**	**0.0731**	0.0002 M	0.001 M	0.001 M	**0.158**
MW-24	N	4/28/2005	mg/L	**0.0475**	**0.564**	**0.00048**	**0.0492**	**0.062**	**0.0706**	0.0002 M	**0.00132**	0.001 M	**0.168**
MW-24	N	1/27/2006	mg/L	**0.011**	**0.14**	0.001 M	**0.00621**	**0.0137**	**0.0299**	0.0002 M	0.002 M	0.001 M	**0.0707**
MW-24	N	4/20/2006	mg/L	**0.017**	**0.338**	0.001 M	**0.0252**	**0.0399**	**0.0547**	0.0002 M	0.002 M	0.001 M	**0.108**
MW-24	N	1/29/2007	mg/L	**0.017**	**0.2**	0.005 M	**0.018**	**0.016**	**0.019**	0.001 M	0.005 M	0.005 M	0.01 M
MW-24	N	7/26/2007	mg/L	**0.012**	**0.2**	0.005 M	**0.013**	**0.015**	**0.019**	0.001 M	0.005 M	0.005 M	0.01 M
MW-24	N	1/28/2008	mg/L	0.005 M	**0.091**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-24	N	7/16/2008	mg/L	**0.012**	**0.3**	0.005 M	**0.022**	**0.035**	**0.04**	0.001 M	0.005 M	0.005 M	0.01 M
MW-24	N	1/27/2009	mg/L	**0.0083**	**0.19**	0.005 M	**0.012**	**0.019**	**0.024**	0.001 M	0.005 M	0.005 M	0.01 M
MW-24	N	7/28/2009	mg/L	**0.012**	**0.54**	0.005 M	**0.026**	**0.041**	**0.041**	0.001 M	0.005 M	0.005 M	**0.13**
MW-25	N	4/28/2005	mg/L	**0.241**	**5.04**	**0.00618**	**0.467**	**0.733**	**0.408**	**0.000586**	**0.0122**	**0.00194**	**2.25**
MW-25	N	7/26/2005	mg/L	**0.0234**	**0.096**	0.001 M	**0.00184**	**0.00271**	**0.00519**	0.0002 M	0.001 M	0.001 M	**0.0186**
MW-25	N	10/25/2005	mg/L	**0.0964**	**1.32**	0.01 M	**0.134**	**0.231**	**0.108**	0.0002 M	0.02 M	0.01 M	**0.62**
MW-25	N	1/26/2006	mg/L	**0.0525**	**0.227**	0.001 M	**0.0105**	**0.0198**	**0.0369**	0.0002 M	0.002 M	0.001 M	**0.0721**
MW-25	N	4/20/2006	mg/L	**0.0545**	**0.337**	0.001 M	**0.0227**	**0.0381**	**0.0376**	0.0002 M	0.002 M	0.001 M	**0.107**
MW-25	N	7/19/2006	mg/L	**0.0573**	**0.648**	0.001 M	**0.0476**	**0.0759**	**0.0459**	0.0002 M	0.002 M	0.001 M	**0.209**
MW-25	N	10/18/2006	mg/L	**0.058**	**0.906**	**0.00164**	**0.0556**	**0.0969**	**0.0598**	0.0002 M	**0.00221**	0.001 M	**0.298**
MW-25	N	1/30/2007	mg/L	**0.05**	**0.098**	0.005 M	**0.0067**	0.01 M	**0.012**	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	4/25/2007	mg/L	**0.044**	**0.15**	0.005 M	**0.0079**	0.01 M	**0.012**	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	7/24/2007	mg/L	**0.066**	**1**	0.005 M	**0.075**	**0.12**	**0.071**	0.001 M	0.005 M	0.005 M	**0.35**
MW-25	N	1/28/2008	mg/L	**0.054**	**0.45**	0.005 M	**0.025**	**0.035**	**0.035**	0.001 M	0.005 M	0.005 M	**0.12**
MW-25	N	7/17/2008	mg/L	**0.052**	**0.44**	0.005 M	**0.021**	**0.042**	**0.025**	0.001 M	0.005 M	0.005 M	**0.13**
MW-25	N	1/27/2009	mg/L	**0.053**	**0.65**	0.005 M	**0.03**	**0.066**	**0.051**	0.001 M	0.005 M	0.005 M	**0.18**
MW-25	N	7/28/2009	mg/L	**0.062**	**1.4**	0.005 M	**0.084**	**0.093**	**0.065**	0.001 M	0.005 M	0.005 M	**0.33**
MW-25	N	1/27/2010	mg/L	**0.054**	**0.28**	0.005 M	**0.015**	**0.019**	**0.023**	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	7/19/2010	mg/L	**0.048**	**0.067**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	1/17/2011	mg/L	**0.047**	**0.066**	0.005 M	0.005 M	0.01 M	**0.0075**	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	7/27/2011	mg/L	**0.047**	**0.057**	0.005 M	0.005 M	0.01 M	**0.0066**	0.001 M	0.005 M	0.005 M	0.01 M
MW-25	N	1/26/2012	mg/L	**0.056**	**0.069**	0.005 U	0.005 U	0.01 U	**0.011**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/25/2012	mg/L	**0.038**	**0.045**	0.005 U	0.005 U	0.01 U	**0.0065**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	1/28/2013	mg/L	**0.052**	**0.061**	0.002 U	0.01 U	0.02 U	**0.0085**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/10/2013	mg/L	**0.035**	**0.06**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	**0.32**
MW-25	N	1/7/2014	mg/L	**0.047**	**0.055**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/29/2014	mg/L	**0.048**	**0.066**	0.002 U	0.01 U	0.02 U	**0.0033 J**	0.001 U	0.005 U	0.005 U	0.1 U
MW-25	N	7/1/2015	mg/L	**0.0434**	**0.0599**	0.001 U	0.002 U	0.005 U	**0.00211**	0.0002 U	0.002 U	0.002 U	0.025 U

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
MW-26	N	4/28/2005	mg/L	**0.276**	**6.78**	**0.0121**	**0.507**	**1.04**	**0.468**	**0.000697**	**0.0158**	**0.0024**	**3.02**
MW-26	N	7/26/2005	mg/L	**0.152**	**0.698**	**0.00127**	**0.049**	**0.116**	**0.0593**	0.0002 M	**0.00248**	0.001 M	**0.448**
MW-26	N	4/20/2006	mg/L	**0.122**	**0.666**	0.001 M	**0.0383**	**0.0834**	**0.0463**	0.0002 M	0.002 M	0.001 M	**0.242**
MW-26	N	7/19/2006	mg/L	**0.121**	**0.188**	0.001 M	**0.00815**	**0.0153**	**0.0103**	0.0002 M	0.002 M	0.001 M	**0.0491**
MW-26	N	1/29/2007	mg/L	**0.12**	**0.21**	0.005 M	**0.013**	**0.02**	**0.012**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	7/24/2007	mg/L	**0.14**	**0.92**	0.005 M	**0.055**	**0.095**	**0.053**	0.001 M	0.005 M	0.005 M	**0.29**
MW-26	N	1/24/2008	mg/L	**0.1**	**0.24**	0.005 M	**0.007**	**0.02**	**0.015**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	7/18/2008	mg/L	**0.11**	**0.15**	0.005 M	**0.0063**	**0.012**	**0.0069**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	1/28/2009	mg/L	**0.061**	**0.31**	0.005 M	**0.015**	**0.029**	**0.015**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	7/28/2009	mg/L	**0.27**	**2.4**	0.005 M	**0.21**	**0.31**	**0.17**	0.001 M	**0.0059**	0.005 M	**1**
MW-26	N	1/27/2010	mg/L	**0.11**	**0.36**	0.005 M	**0.021**	**0.031**	**0.018**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	7/20/2010	mg/L	**0.11**	**0.061**	0.005 M	0.005 M	**0.014**	**0.021**	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	1/18/2011	mg/L	0.005 M	**0.036**	0.005 M	0.005 M	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-26	N	1/26/2012	mg/L	**0.03**	**0.068**	0.005 U	**0.0063**	0.01 U	**0.054**	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/26/2012	mg/L	**0.04**	**0.05**	0.005 U	0.005 U	0.01 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	1/29/2013	mg/L	**0.02**	**0.054**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/10/2013	mg/L	**0.11**	**0.057**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	1/7/2014	mg/L	**0.19**	**0.075**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/30/2014	mg/L	**0.12**	**0.06**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-26	N	7/1/2015	mg/L	**0.161**	**0.0596**	0.001 U	0.002 U	0.005 U	0.002 U	0.0002 U	0.002 U	0.002 U	0.025 U
MW-28	N	4/28/2005	mg/L	**0.126**	**1.01**	**0.00388**	**0.0788**	**0.153**	**0.0992**	**0.0000859**	**0.00295**	**0.00036**	**0.552**
MW-28	N	7/26/2005	mg/L	**0.118**	**0.638**	**0.00269**	**0.0528**	**0.112**	**0.0764**	**0.000349**	**0.00216**	0.001 M	**0.344**
MW-28	N	7/27/2011	mg/L	**0.057**	**0.061**	0.005 M	**0.0057**	0.01 M	0.005 M	0.001 M	0.005 M	0.005 M	0.01 M
MW-28	N	1/29/2013	mg/L	**0.052**	**0.041**	0.002 U	0.01 U	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	N	7/10/2013	mg/L	**0.079**	**0.051**	0.002 U	0.01 U	0.02 U	**0.0091**	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	N	7/30/2014	mg/L	**0.099 J**	**0.054**	0.002 U	**0.14 J**	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
MW-28	FD	7/30/2014	mg/L	**0.027 J**	**0.049**	0.002 U	0.01 UJ	0.02 U	0.005 U	0.001 U	0.005 U	0.005 U	0.1 U
RW-1	N	11/26/2002	mg/L	**0.0168**	**0.183**	0.001 U	**0.00852**	**0.0199**	**0.00798**	0.0002 U	0.001 U	0.001 U	**0.0868**
RW-2	N	11/26/2002	mg/L	**0.0076**	**0.206**	**0.00385**	**0.0104**	**0.0226**	**0.0105**	0.0002 U	0.001 U	0.001 U	**0.0795**
RW-3	N	11/26/2002	mg/L	**0.00444**	**0.132**	0.001 U	**0.00276**	**0.00711**	**0.0027**	0.0002 U	**0.00133**	0.001 U	**0.0129**
Portland Harbor Joint Source Control Screening Values and Oregon DEQ Default Background Values (Bold value is the value applied for screening)[1].													
Human Health Drinking Water													
MCL			mg/L	0.010	--	0.005	**0.1**	1.3	0.015	0.002	0.050	0.100	5.0
Tap Water PRG			mg/L	0.000045	--	0.018	--	1.4	0.015	0.011	0.180	0.180	11.0
Human Health Fish Consumption													
EPA's 2004 NRWQC (organism only)			mg/L	0.00014	--	--	--	--	--		4.2	--	26.0
DEQ's 2004 AWQC (organism only)			mg/L	0.00014	--	--	--	--	--	0.000146	4.2	--	26.0
Ecological Receptor SLVs													
EPA's 2004 NRWQC (chronic)			mg/L	0.150	--	0.000094	--	0.0027	0.00054	0.00077	**0.005**	--	0.036
DEQ's 2004 AWQC (chronic)			mg/L	--	--	0.00038	--	0.0036	0.00054	0.000012	0.035	0.00012	0.033
Oak Ridge National Laboratory (Tier IISCV)			mg/L	--	--	--	--	--	--	0.0013	--	0.00036	--
Oregon DEQ Default Background			mg/L	**0.002**	--	**0.001**	0.001	**0.009**	**0.01330**	**0.0001**	0.0002	**0.001**	**0.038**

TABLE B-4

Analytical Results for Groundwater - Total Metals

Kinder Morgan Liquids Terminals, LLC - Linnton Terminal

Sample ID	Sample Type	Date	Units	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc

Notes:

Total metals analyzed by USEPA Method 6000/7000 Series Method, or SW6020/6020A

Total mercury analyzed by USEPA Method 7470A, SW6020, or SW6020A

U = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

UJ = non-detect value with estimated quantitation limit

M = Analyte not detected above laboratory method detection limits. Value shown is the reporting limit.

J = Indicates an estimated concentration when the value is less than the calculated reporting limit.

N = normal sample

FD = field duplicate

mg/L = milligrams per liter

SLV = Screening Level Value

Bold = Analyte detected in sample.

[1] - Screening value is either the default background concentration or lowest SLV, whichever is higher. Background Metals Levels from Default Background Concentrations for Metals, Oregon Department of Environmental Quality. October 28, 2002.

Appendix C
Groundwater Sampling Field Forms

Fieldwork Daily Log

antea group

Site number/name: Linnton Terminal Annual GW Sampling

Location: KMLT Linnton Terminal
Portland, OR

Date: 7/1/15 Recorded by: MT

(if found, please call 1-800-888-1331)

Page: 1 of 1

Fieldwork Assignment

Time	Activity Description
0700	Antea Group arrives on site - Nolan Lewis and Missy Tracy
	Review HASP, begin opening up wells. Atleast 15 mins allowed prior
	to gauging.
0730	Begin gauging and sampling
	wells to be sampled — Sampled? — Notes
	MW-1 — Y
	MW-3 — N — Product
	MW-4 — Y — Duplicate collected
	MW-6 — N — Dry
	MW-8 — Y
	MW-9 — Y
	MW-12 — N — Product
	MW-16 — N — Product
	MW-20 — N — Product
	MW-22 — Y
	MW-23 — N — Product
	MW-24 — N — Product
	MW-25 — Y
	MW-26 — Y
1615	Finish sampling, depart site

Remaining scope:

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-1

Sample Time: 1050

Weather Conditions: Wind: (Clear) Overcast Raining Temp: 20 30 40 50 60 70 80 (90)

Depth to Water Prior to Purging (DTW): 16.87

Total Depth of Well (TD): 27.40

Feet of Water in Well Casing (TD-DTW): 10.53

2 inch casing = 0.167 gal/ft	4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft

Volume of Water in Well Casing: 6.87 gal **Purging Method:** low flow

Sample Depth (feet bgs): 20 **Total Actual Purge Volume:** ~1 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (µS/cm)	DO (mg/L)	Temp (°C)	Comments
1026	16.91	-128.9	6.45	686		17.85	large DO fluctuations initially
1031	16.98	-134.6	6.37	694	0.64	15.88	
1036	17.10	-129.1	6.36	692	0.41	15.79	flow decreased
1041	17.15	-118.4	6.37	692	0.42	15.82	
1045	17.21	-112.3	6.39	690	0.40	16.10	
1048	17.26	-119.3	6.40	693	0.31	16.13	
1053	17.31	-131.5	6.41	693	0.29	16.22	
1057	17.35	-127.1	6.41	692	0.31	16.27	Actual sample collected 1100

Analysis	Method	Contianer
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

VSI 556

Actual sample collected 1100 due to parameter change after labels were written. Labeled @ 1050.

DUPLICATE SAMPLE

Y or (N)

Field Techician/Sampler: MT/NL

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-4

Sample Time: 0945

Weather Conditions: Wind: (Clear) Overcast Raining Temp: 20 30 40 50 60 70 (80) 90

Depth to Water Prior to Purging (DTW): 21.20

Total Depth of Well (TD): 27.50

Feet of Water in Well Casing (TD-DTW): 6.30

2 inch casing = 0.167 gal/ft	**4 inch casing = 0.652 gal/ft**
6 inch casing = 1.469 gal/ft	**8 inch casing = 2.611 gal/ft**
Volume of Water in Well Casing: 1.05 gal	**Purging Method:** low flow
Sample Depth (feet bgs): 23.50	**Total Actual Purge Volume:** ~1 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (uS/cm)	DO (mg/L)	Temp (°C)	Comments
0920	21.28	-129.9	6.31	463	0.72	23.15	decreased flow
0925	21.39	-145.3	6.45	625	0.57	17.09	decreased flow
0930	21.43	-134.9	6.38	616	0.30	18.11	
0935	21.50	-133.6	6.41	622	0.29	17.95	
0938	21.54	-134.0	6.42	626	0.29	17.17	
0942	21.59	-135.1	6.37	620	0.23	17.34	
0945	21.65	-142.3	6.40	622	0.22	17.40	

Analysis	Method	Container
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YSI 556

DUPLICATE SAMPLE

(Y) or N

Field Techician/Sampler: MT / NL

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-6

Sample Time: no sample – Dry

Weather Conditions: Wind: ~~Clear~~ Overcast Raining Temp: 20 30 40 50 60 70 80 90

Depth to Water Prior to Purging (DTW): 21.60

Total Depth of Well (TD): ~~21.60~~ 22.10

Feet of Water in Well Casing (TD-DTW): 0.50

2 inch casing = 0.167 gal/ft	4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft

Volume of Water in Well Casing:	**Purging Method:** low flow
Sample Depth (feet bgs): n/a	**Total Actual Purge Volume:** n/a

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (/)	DO (mg/L)	Temp (°C)	Comments

Analysis	Method	Contianer
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YSI 556

0855 – started pumping, well went dry after ~1min

0905 – No recharge, no sample

DUPLICATE SAMPLE

Y or N

Field Techician/Sampler: MT / NL

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-8

Sample Time: 1250

Weather Conditions: Wind: Clear Overcast Raining Temp: 20 30 40 50 60 70 80 90

Depth to Water Prior to Purging (DTW): 20.09

Total Depth of Well (TD): ~~22~~ 23.00

Feet of Water in Well Casing (TD-DTW): 2.91

2 inch casing = 0.167 gal/ft	**4 inch casing = 0.652 gal/ft**
6 inch casing = 1.469 gal/ft	**8 inch casing = 2.611 gal/ft**
Volume of Water in Well Casing: 0.49 gal	**Purging Method:** low flow
Sample Depth (feet bgs): 22	**Total Actual Purge Volume:** ~1 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (uS/cm)	DO (mg/L)	Temp (°C)	Comments
1230	20.13	-129.2	6.60	368	0.86	15.66	
1236	20.14	-122.1	6.51	372	0.50	15.37	
1240	20.13	-116.1	6.50	375	0.32	15.32	
1244	20.14	-115.1	6.53	377	0.32	15.27	
1248	20.14	-106.6	6.53	377	0.32	15.17	

Analysis	Method	Contianer
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

451 550

DUPLICATE SAMPLE

Y or N

Field Techician/Sampler: MT / NL

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-9

Sample Time: 1350

Weather Conditions: Wind: (Clear) Overcast Raining Temp: 20 30 40 50 60 70 80 (90)

Depth to Water Prior to Purging (DTW): 17.83

Total Depth of Well (TD): 26.80

Feet of Water in Well Casing (TD-DTW): 8.97

2 inch casing = 0.167 gal/ft	4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft

Volume of Water in Well Casing: 1.5 gal **Purging Method:** low-flow

Sample Depth (feet bgs): 21.80 **Total Actual Purge Volume:** ~1 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (uS/cm)	DO (mg/L)	Temp (°C)	Comments
1330	17.95	-167.3	6.74	667	1.11	16.52	clear
1333	17.95	-157.0	6.73	664	0.24	16.25	
1337	17.96	-153.0	6.73	662	0.21	15.96	
1340	17.96	-152.7	6.75	661	0.16	16.02	
1344	17.97	-148.9	6.77	662	0.16	16.07	
1347	17.97	-150.4	6.78	659	0.15	16.21	

Analysis	Method	Container
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YSI 556

DUPLICATE SAMPLE

Y or (N)

Field Techician/Sampler: MT/BJ

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW 22

Sample Time: 1425

Weather Conditions: Wind: Clear Overcast Raining Temp: 20 30 40 50 60 70 80 90

Depth to Water Prior to Purging (DTW): 19.59

Total Depth of Well (TD): 27.50

Feet of Water in Well Casing (TD-DTW): 7.91

2 inch casing = 0.167 gal/ft	✓ 4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft
Volume of Water in Well Casing: 5.2 gal	Purging Method: P-Pump
Sample Depth (feet bgs): ~23	Total Actual Purge Volume: ≈1.0 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (uS/cm)	DO (mg/L)	Temp (°C)	Comments
1400	19.59	-83.3	6.28	246	0.82	17.60	clear
1405	19.90	-88.4	6.19	236	0.25	17.11	"
1407	19.96	-86.8	6.14	234	0.22	16.69	"
1410	20.02	-85.6	6.11	232	0.23	16.72	"
1413	20.04	-84.7	6.10	232	0.23	16.79	"

Analysis	Method	Contianer
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YSI 556

DUPLICATE SAMPLE

Y or N

Field Technician/Sampler: BNL/[illegible]

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-25

Sample Time: 0828

Weather Conditions: Wind: (Clear) Overcast Raining Temp: 20 30 40 50 60 (70) 80 90

Depth to Water Prior to Purging (DTW): 18.72

Total Depth of Well (TD): ~~29.257~~ 28.40

Feet of Water in Well Casing (TD-DTW): ~~11.05~~ 9.68

(2 inch casing = 0.167 gal/ft)	4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft

Volume of Water in Well Casing: 1.6 gal **Purging Method:** low flow

Sample Depth (feet bgs): 24.0 **Total Actual Purge Volume:** ≈ 1.0 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP mV	pH (SU)	Specific Conductivity (MS/cm)	DO (mg/L)	Temp (°C)	Comments
0800	18.72	-93.5	6.40	465	5.50	16.49	running clear
0805	18.86	-99.3	6.15	460	0.80	16.62	
0808	18.91	-107.4	6.12	459	0.66	16.77	
0811	18.94	-111.9	6.14	455	0.60	16.79	decreased flow rate
0814	18.97	-108.0	6.19	453	0.51	16.92	decreased flow rate
0818	19.00	-102.0	6.24	452	0.50	17.15	
0821	19.00	-115.4	6.27	451	0.39	17.21	
0824	19.01	-123.1	6.28	451	0.40	17.19	
0827	19.03	-126.1	6.28	451	~~0.38~~	17.24	DO = 0.37

Analysis	Method	Container
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YST 556

DUPLICATE SAMPLE

Y or (N)

Field Techician/Sampler: MT / NL

FIELD RECORD OF WELL PURGING AND SAMPLING

Date: 7/1/15 **Facility:** KMLT - Linnton Terminal **Well I.D.:** MW-2le

Sample Time: 1505

Weather Conditions: Wind: Clear Overcast Raining Temp: 20 30 40 50 60 70 80 90

Depth to Water Prior to Purging (DTW): 23.16

Total Depth of Well (TD): 27.00

Feet of Water in Well Casing (TD-DTW): 3.84

2 inch casing = 0.167 gal/ft	4 inch casing = 0.652 gal/ft
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft

Volume of Water in Well Casing: 2.5 gal **Purging Method:** low flow

Sample Depth (feet bgs): 25 **Total Actual Purge Volume:** ~1 gal

FIELD PARAMETERS

Time	DTW Feet BTOC	ORP	pH (SU)	Specific Conductivity (uS / cm)	DO (mg/L)	Temp (°C)	Comments
1444	23.30	-104.1	6.49	458	1.36	17.94	
1447	23.32	-105.4	6.47	457	0.43	17.50	
~~1450~~	~~23.35~~						
1453	23.37	-112.1	6.48	476	0.22	17.52	
1456	23.40	-124.6	6.51	489	0.18	17.43	
1459	23.41	-132.8	6.56	498	0.18	17.43	
1502	23.41	-136.3	6.59	503	0.17	17.37	

Analysis	Method	Container
BTEX	8260B	(3) HCl VOA
TPH-Gx	NWTPH-Gx	(2) HCl VOA
PAHs	8270C-SIM	(3) NP VOA
TPH-Dx	NWTPH-Dx	(2) HCl Amber
Total Metals	SW6020/6020A	(1) HNO Poly

COMMENTS

YSI 556

DUPLICATE SAMPLE

Y or N

Field Techician/Sampler: MT / NL

Company Name/Address:
Kinder Morgan - Orange, CA
1100 Town and Country Rd
Orange, CA 92868

Billing Information:
Accounts Payable
1100 Town and Country Rd
Orange, CA 92868

Report to: Nolan Lewis and Rob Truedinger

Email To: nolan.lewis@anteagroup.com

Project Description: Annual GW sampling

City/State Collected: Portland, OR

Phone: 415-335-8280
Fax:

Client Project # KMLIN1502

Lab Project # KINMOROCA-ANTEALL

Collected by (print):

Site/Facility ID # 11400 NW ST HELENS

P.O. #

Collected by (signature):

Immediately Packed on ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABS
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #
Table #
Acctnum: KINMOROCA
Template: T103546
Prelogin: P514989
TSR: 358-Jarred Willis
PB:
Shipped Via: FedEX Exp

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8260 low level 40mlAmb-HCl	BTEX 8260 low level 40mlAmb-HCl-Blk	NWTPHGx 40 mlAmb-HCl	NWTPHDx 100mlAmb-HCl	PAHs 8270D-SIM 40mlAmb-NoPres-WT	RCRA8+ Cu, Zn (6020) 500 mlHDPE-HNO3					Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		7/1/15	1050	11	X		X	X	X	X						
MW-4	Grab	GW		7/1/15	0945	11	X		X	X	X	X						
MW-8	Grab	GW		7/1/15	1250	11	X		X	X	X	X						
MW-9	Grab	GW		7/1/15	1350	11	X		X	X	X	X						
MW-22	Grab	GW		7/1/15	1425	11	X		X	X	X	X						
MW-25	Grab	GW		7/1/15	0828	11	X		X	X	X	X						
MW-26	Grab	GW		7/1/15	1505	11	X		X	X	X	X						
Dup	Grab	GW		7/1/15		11	X		X	X	X	X						
Trip Blank				7/1/15		1		X										

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Remarks: **Also email to: robert_truedinger@kindermorgan.com; katy.mcquinn@anteagroup.com**

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Missy Tu	7/2/15	1200			
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:

Appendix D
Laboratory Report

ANALYTICAL REPORT

July 14, 2015

Kinder Morgan- Orange, CA

Sample Delivery Group:	L774969
Samples Received:	07/03/2015
Project Number:	KMLIN1502
Description:	Linnton - 11400 NW St Helens, Portland, OR
Site:	11400 NW ST HELENS
Report To:	Nolan Lewis and Rob Truedinger 1100 Town and Country Rd Orange, CA 92868

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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MW-1 L774969-01 GW

Collected by	Collected date/time	Received date/time
	07/01/15 10:50	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:33	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 17:36	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 01:12	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 01:12	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	5	07/06/15 07:15	07/07/15 11:40	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801711	1	07/11/15 23:33	07/11/15 23:33	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG800878	1	07/08/15 17:41	07/08/15 17:41	MCB

MW-4 L774969-02 GW

Collected by	Collected date/time	Received date/time
	07/01/15 09:45	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:36	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 17:39	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 01:33	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 01:29	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	5	07/06/15 07:15	07/07/15 11:57	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801711	1	07/11/15 23:56	07/11/15 23:56	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801181	1	07/09/15 19:21	07/09/15 19:21	MCB

MW-8 L774969-03 GW

Collected by	Collected date/time	Received date/time
	07/01/15 12:50	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:38	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 17:42	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 01:55	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 01:47	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG802086	1	07/14/15 01:16	07/14/15 01:16	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801181	1	07/09/15 19:41	07/09/15 19:41	MCB

MW-9 L774969-04 GW

Collected by	Collected date/time	Received date/time
	07/01/15 13:50	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:40	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 17:44	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 02:16	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 02:05	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801708	1	07/11/15 18:14	07/11/15 18:14	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801181	1	07/09/15 20:00	07/09/15 20:00	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801804	10	07/12/15 12:18	07/12/15 12:18	MCB

MW-22 L774969-05 GW

Collected by	Collected date/time	Received date/time
	07/01/15 14:25	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:42	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 18:29	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 02:38	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 02:22	JNS

MW-22 L774969-05 GW

Collected by	Collected date/time	Received date/time
	07/01/15 14:25	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801708	1	07/11/15 18:39	07/11/15 18:39	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801181	1	07/09/15 20:20	07/09/15 20:20	MCB

MW-25 L774969-06 GW

Collected by	Collected date/time	Received date/time
	07/01/15 08:28	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:44	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 18:32	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 03:00	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 02:40	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801708	1	07/11/15 19:04	07/11/15 19:04	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801804	1	07/12/15 11:57	07/12/15 11:57	MCB

MW-26 L774969-07 GW

Collected by	Collected date/time	Received date/time
	07/01/15 15:05	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:47	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 18:34	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 03:21	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 02:57	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801708	1	07/11/15 19:29	07/11/15 19:29	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801804	1	07/12/15 12:39	07/12/15 12:39	MCB

DUP L774969-08 GW

Collected by	Collected date/time	Received date/time
	07/01/15 00:00	07/03/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7470A	WG800479	1	07/06/15 22:19	07/07/15 11:49	CHM
Metals (ICPMS) by Method 6020	WG800469	1	07/07/15 07:59	07/07/15 18:37	VSS
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG800816	1	07/07/15 18:32	07/08/15 03:43	FMB
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	1	07/06/15 07:15	07/07/15 03:15	JNS
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX	WG800434	5	07/06/15 07:15	07/07/15 12:15	JNS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG801708	1	07/11/15 19:58	07/11/15 19:58	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG801804	1	07/12/15 12:59	07/12/15 12:59	MCB

1 Cp
2 Tc
3 Ss
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 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

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:33	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	5.61		2.00	1	07/07/2015 17:36	WG800469
Barium	91.3		5.00	1	07/07/2015 17:36	WG800469
Cadmium	ND		1.00	1	07/07/2015 17:36	WG800469
Chromium	ND		2.00	1	07/07/2015 17:36	WG800469
Copper	ND		5.00	1	07/07/2015 17:36	WG800469
Lead	ND		2.00	1	07/07/2015 17:36	WG800469
Selenium	ND		2.00	1	07/07/2015 17:36	WG800469
Silver	ND		2.00	1	07/07/2015 17:36	WG800469
Zinc	ND		25.0	1	07/07/2015 17:36	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	131		100	1	07/11/2015 23:33	WG801711
(S) α,α,α-Trifluorotoluene(FID)	*100*		*62.0-128*		*07/11/2015 23:33*	WG801711

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.500	1	07/08/2015 17:41	WG800878
Ethylbenzene	ND		0.500	1	07/08/2015 17:41	WG800878
Toluene	ND		0.500	1	07/08/2015 17:41	WG800878
Xylenes, Total	ND		1.50	1	07/08/2015 17:41	WG800878
(S) Toluene-d8	*101*		*87.0-114*		*07/08/2015 17:41*	WG800878
(S) Dibromofluoromethane	*86.3*		*79.0-125*		*07/08/2015 17:41*	WG800878
(S) 4-Bromofluorobenzene	*101*		*75.0-128*		*07/08/2015 17:41*	WG800878

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6900		500	5	07/07/2015 11:40	WG800434
Residual Range Organics (RRO)	1100		250	1	07/07/2015 01:12	WG800434
(S) o-Terphenyl	*52.7*		*50.0-150*		*07/07/2015 01:12*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.113		0.0500	1	07/08/2015 01:12	WG800816
Acenaphthene	1.18		0.0500	1	07/08/2015 01:12	WG800816
Acenaphthylene	0.173		0.0500	1	07/08/2015 01:12	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 01:12	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 01:12	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 01:12	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 01:12	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 01:12	WG800816
Chrysene	ND		0.0500	1	07/08/2015 01:12	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 01:12	WG800816
Fluoranthene	ND		0.0500	1	07/08/2015 01:12	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	5.32		0.0500	1	07/08/2015 01:12	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 01:12	WG800816
Naphthalene	0.896		0.250	1	07/08/2015 01:12	WG800816
Phenanthrene	0.840		0.0500	1	07/08/2015 01:12	WG800816
Pyrene	0.108		0.0500	1	07/08/2015 01:12	WG800816
1-Methylnaphthalene	ND		0.250	1	07/08/2015 01:12	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 01:12	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 01:12	WG800816
(S) Nitrobenzene-d5	*65.5*		*31.0-121*		*07/08/2015 01:12*	WG800816
(S) 2-Fluorobiphenyl	*91.2*		*10.0-139*		*07/08/2015 01:12*	WG800816
(S) p-Terphenyl-d14	*93.5*		*21.0-136*		*07/08/2015 01:12*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:36	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	94.4		2.00	1	07/07/2015 17:39	WG800469
Barium	51.8		5.00	1	07/07/2015 17:39	WG800469
Cadmium	ND		1.00	1	07/07/2015 17:39	WG800469
Chromium	ND		2.00	1	07/07/2015 17:39	WG800469
Copper	ND		5.00	1	07/07/2015 17:39	WG800469
Lead	ND		2.00	1	07/07/2015 17:39	WG800469
Selenium	ND		2.00	1	07/07/2015 17:39	WG800469
Silver	ND		2.00	1	07/07/2015 17:39	WG800469
Zinc	ND		25.0	1	07/07/2015 17:39	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	07/11/2015 23:56	WG801711
(S) α,α,α-Trifluorotoluene(FID)	*97.4*		*62.0-128*		*07/11/2015 23:56*	WG801711

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.500	1	07/09/2015 19:21	WG801181
Ethylbenzene	ND		0.500	1	07/09/2015 19:21	WG801181
Toluene	ND		0.500	1	07/09/2015 19:21	WG801181
Xylenes, Total	ND		1.50	1	07/09/2015 19:21	WG801181
(S) Toluene-d8	*104*		*87.0-114*		*07/09/2015 19:21*	WG801181
(S) Dibromofluoromethane	*95.2*		*79.0-125*		*07/09/2015 19:21*	WG801181
(S) 4-Bromofluorobenzene	*103*		*75.0-128*		*07/09/2015 19:21*	WG801181

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7900		500	5	07/07/2015 11:57	WG800434
Residual Range Organics (RRO)	1800		250	1	07/07/2015 01:29	WG800434
(S) o-Terphenyl	*88.1*		*50.0-150*		*07/07/2015 01:29*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	07/08/2015 01:33	WG800816
Acenaphthene	0.127		0.0500	1	07/08/2015 01:33	WG800816
Acenaphthylene	ND		0.0500	1	07/08/2015 01:33	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 01:33	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 01:33	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 01:33	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 01:33	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 01:33	WG800816
Chrysene	ND		0.0500	1	07/08/2015 01:33	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 01:33	WG800816
Fluoranthene	0.0726		0.0500	1	07/08/2015 01:33	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	ND		0.0500	1	07/08/2015 01:33	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 01:33	WG800816
Naphthalene	ND		0.250	1	07/08/2015 01:33	WG800816
Phenanthrene	ND		0.0500	1	07/08/2015 01:33	WG800816
Pyrene	0.265		0.0500	1	07/08/2015 01:33	WG800816
1-Methylnaphthalene	ND		0.250	1	07/08/2015 01:33	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 01:33	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 01:33	WG800816
(S) Nitrobenzene-d5	*55.6*		*31.0-121*		*07/08/2015 01:33*	WG800816
(S) 2-Fluorobiphenyl	*100*		*10.0-139*		*07/08/2015 01:33*	WG800816
(S) p-Terphenyl-d14	*96.2*		*21.0-136*		*07/08/2015 01:33*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:38	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	2.26		2.00	1	07/07/2015 17:42	WG800469
Barium	29.7		5.00	1	07/07/2015 17:42	WG800469
Cadmium	ND		1.00	1	07/07/2015 17:42	WG800469
Chromium	ND		2.00	1	07/07/2015 17:42	WG800469
Copper	ND		5.00	1	07/07/2015 17:42	WG800469
Lead	ND		2.00	1	07/07/2015 17:42	WG800469
Selenium	ND		2.00	1	07/07/2015 17:42	WG800469
Silver	ND		2.00	1	07/07/2015 17:42	WG800469
Zinc	ND		25.0	1	07/07/2015 17:42	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	ND		100	1	07/14/2015 01:16	WG802086
(S) α,α,α-Trifluorotoluene(FID)	*93.3*		*62.0-128*		*07/14/2015 01:16*	WG802086

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	1.92		0.500	1	07/09/2015 19:41	WG801181
Ethylbenzene	ND		0.500	1	07/09/2015 19:41	WG801181
Toluene	0.978		0.500	1	07/09/2015 19:41	WG801181
Xylenes, Total	ND		1.50	1	07/09/2015 19:41	WG801181
(S) Toluene-d8	*103*		*87.0-114*		*07/09/2015 19:41*	WG801181
(S) Dibromofluoromethane	*97.0*		*79.0-125*		*07/09/2015 19:41*	WG801181
(S) 4-Bromofluorobenzene	*99.9*		*75.0-128*		*07/09/2015 19:41*	WG801181

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	480		100	1	07/07/2015 01:47	WG800434
Residual Range Organics (RRO)	290		250	1	07/07/2015 01:47	WG800434
(S) o-Terphenyl	*98.4*		*50.0-150*		*07/07/2015 01:47*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0843		0.0500	1	07/08/2015 01:55	WG800816
Acenaphthene	30.6		0.0500	1	07/08/2015 01:55	WG800816
Acenaphthylene	0.228		0.0500	1	07/08/2015 01:55	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 01:55	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 01:55	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 01:55	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 01:55	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 01:55	WG800816
Chrysene	ND		0.0500	1	07/08/2015 01:55	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 01:55	WG800816
Fluoranthene	ND		0.0500	1	07/08/2015 01:55	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	14.8		0.0500	1	07/08/2015 01:55	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 01:55	WG800816
Naphthalene	0.311		0.250	1	07/08/2015 01:55	WG800816
Phenanthrene	0.186		0.0500	1	07/08/2015 01:55	WG800816
Pyrene	ND		0.0500	1	07/08/2015 01:55	WG800816
1-Methylnaphthalene	5.47		0.250	1	07/08/2015 01:55	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 01:55	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 01:55	WG800816
(S) Nitrobenzene-d5	*80.7*		*31.0-121*		*07/08/2015 01:55*	WG800816
(S) 2-Fluorobiphenyl	*106*		*10.0-139*		*07/08/2015 01:55*	WG800816
(S) p-Terphenyl-d14	*96.9*		*21.0-136*		*07/08/2015 01:55*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:40	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	89.8		2.00	1	07/07/2015 17:44	WG800469
Barium	63.3		5.00	1	07/07/2015 17:44	WG800469
Cadmium	ND		1.00	1	07/07/2015 17:44	WG800469
Chromium	ND		2.00	1	07/07/2015 17:44	WG800469
Copper	ND		5.00	1	07/07/2015 17:44	WG800469
Lead	2.82		2.00	1	07/07/2015 17:44	WG800469
Selenium	ND		2.00	1	07/07/2015 17:44	WG800469
Silver	ND		2.00	1	07/07/2015 17:44	WG800469
Zinc	ND		25.0	1	07/07/2015 17:44	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	3650		100	1	07/11/2015 18:14	WG801708
(S) α,α,α-Trifluorotoluene(FID)	*103*		*62.0-128*		*07/11/2015 18:14*	WG801708

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	508		5.00	10	07/12/2015 12:18	WG801804
Ethylbenzene	1.59		0.500	1	07/09/2015 20:00	WG801181
Toluene	9.15		0.500	1	07/09/2015 20:00	WG801181
Xylenes, Total	12.6		1.50	1	07/09/2015 20:00	WG801181
(S) Toluene-d8	*104*		*87.0-114*		*07/09/2015 20:00*	WG801181
(S) Dibromofluoromethane	*93.0*		*79.0-125*		*07/09/2015 20:00*	WG801181
(S) 4-Bromofluorobenzene	*97.0*		*75.0-128*		*07/09/2015 20:00*	WG801181

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	770		100	1	07/07/2015 02:05	WG800434
Residual Range Organics (RRO)	430		250	1	07/07/2015 02:05	WG800434
(S) o-Terphenyl	*94.8*		*50.0-150*		*07/07/2015 02:05*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	07/08/2015 02:16	WG800816
Acenaphthene	0.214		0.0500	1	07/08/2015 02:16	WG800816
Acenaphthylene	ND		0.0500	1	07/08/2015 02:16	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 02:16	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 02:16	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 02:16	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 02:16	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 02:16	WG800816
Chrysene	ND		0.0500	1	07/08/2015 02:16	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 02:16	WG800816
Fluoranthene	ND		0.0500	1	07/08/2015 02:16	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	0.0998		0.0500	1	07/08/2015 02:16	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 02:16	WG800816
Naphthalene	1.80		0.250	1	07/08/2015 02:16	WG800816
Phenanthrene	0.0668		0.0500	1	07/08/2015 02:16	WG800816
Pyrene	ND		0.0500	1	07/08/2015 02:16	WG800816
1-Methylnaphthalene	9.05		0.250	1	07/08/2015 02:16	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 02:16	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 02:16	WG800816
(S) Nitrobenzene-d5	*62.6*		*31.0-121*		*07/08/2015 02:16*	WG800816
(S) 2-Fluorobiphenyl	*108*		*10.0-139*		*07/08/2015 02:16*	WG800816
(S) p-Terphenyl-d14	*98.9*		*21.0-136*		*07/08/2015 02:16*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:42	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	5.39		2.00	1	07/07/2015 18:29	WG800469
Barium	34.1		5.00	1	07/07/2015 18:29	WG800469
Cadmium	ND		1.00	1	07/07/2015 18:29	WG800469
Chromium	ND		2.00	1	07/07/2015 18:29	WG800469
Copper	14.6		5.00	1	07/07/2015 18:29	WG800469
Lead	4.77		2.00	1	07/07/2015 18:29	WG800469
Selenium	ND		2.00	1	07/07/2015 18:29	WG800469
Silver	ND		2.00	1	07/07/2015 18:29	WG800469
Zinc	ND		25.0	1	07/07/2015 18:29	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	783		100	1	07/11/2015 18:39	WG801708
(S) α,α,α-Trifluorotoluene(FID)	*95.4*		*62.0-128*		*07/11/2015 18:39*	WG801708

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.500	1	07/09/2015 20:20	WG801181
Ethylbenzene	ND		0.500	1	07/09/2015 20:20	WG801181
Toluene	ND		0.500	1	07/09/2015 20:20	WG801181
Xylenes, Total	2.78		1.50	1	07/09/2015 20:20	WG801181
(S) Toluene-d8	*104*		*87.0-114*		*07/09/2015 20:20*	WG801181
(S) Dibromofluoromethane	*96.2*		*79.0-125*		*07/09/2015 20:20*	WG801181
(S) 4-Bromofluorobenzene	*102*		*75.0-128*		*07/09/2015 20:20*	WG801181

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1400		100	1	07/07/2015 02:22	WG800434
Residual Range Organics (RRO)	490		250	1	07/07/2015 02:22	WG800434
(S) o-Terphenyl	*98.7*		*50.0-150*		*07/07/2015 02:22*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0802		0.0500	1	07/08/2015 02:38	WG800816
Acenaphthene	2.32		0.0500	1	07/08/2015 02:38	WG800816
Acenaphthylene	ND		0.0500	1	07/08/2015 02:38	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 02:38	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 02:38	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 02:38	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 02:38	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 02:38	WG800816
Chrysene	ND		0.0500	1	07/08/2015 02:38	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 02:38	WG800816
Fluoranthene	0.503		0.0500	1	07/08/2015 02:38	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	0.593		0.0500	1	07/08/2015 02:38	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 02:38	WG800816
Naphthalene	0.890		0.250	1	07/08/2015 02:38	WG800816
Phenanthrene	ND		0.0500	1	07/08/2015 02:38	WG800816
Pyrene	0.629		0.0500	1	07/08/2015 02:38	WG800816
1-Methylnaphthalene	0.426		0.250	1	07/08/2015 02:38	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 02:38	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 02:38	WG800816
(S) Nitrobenzene-d5	*65.9*		*31.0-121*		*07/08/2015 02:38*	WG800816
(S) 2-Fluorobiphenyl	*103*		*10.0-139*		*07/08/2015 02:38*	WG800816
(S) p-Terphenyl-d14	*100*		*21.0-136*		*07/08/2015 02:38*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:44	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	43.4		2.00	1	07/07/2015 18:32	WG800469
Barium	59.9		5.00	1	07/07/2015 18:32	WG800469
Cadmium	ND		1.00	1	07/07/2015 18:32	WG800469
Chromium	ND		2.00	1	07/07/2015 18:32	WG800469
Copper	ND		5.00	1	07/07/2015 18:32	WG800469
Lead	2.11		2.00	1	07/07/2015 18:32	WG800469
Selenium	ND		2.00	1	07/07/2015 18:32	WG800469
Silver	ND		2.00	1	07/07/2015 18:32	WG800469
Zinc	ND		25.0	1	07/07/2015 18:32	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	1050		100	1	07/11/2015 19:04	WG801708
(S) α,α,α-Trifluorotoluene(FID)	*93.8*		*62.0-128*		*07/11/2015 19:04*	WG801708

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND	J3	0.500	1	07/12/2015 11:57	WG801804
Ethylbenzene	ND	J3	0.500	1	07/12/2015 11:57	WG801804
Toluene	ND	J3	0.500	1	07/12/2015 11:57	WG801804
Xylenes, Total	ND	J3	1.50	1	07/12/2015 11:57	WG801804
(S) Toluene-d8	*101*		*87.0-114*		*07/12/2015 11:57*	WG801804
(S) Dibromofluoromethane	*87.3*		*79.0-125*		*07/12/2015 11:57*	WG801804
(S) 4-Bromofluorobenzene	*95.4*		*75.0-128*		*07/12/2015 11:57*	WG801804

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2400		100	1	07/07/2015 02:40	WG800434
Residual Range Organics (RRO)	560		250	1	07/07/2015 02:40	WG800434
(S) o-Terphenyl	*97.9*		*50.0-150*		*07/07/2015 02:40*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.117		0.0500	1	07/08/2015 03:00	WG800816
Acenaphthene	1.20		0.0500	1	07/08/2015 03:00	WG800816
Acenaphthylene	0.0815		0.0500	1	07/08/2015 03:00	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 03:00	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 03:00	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 03:00	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 03:00	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 03:00	WG800816
Chrysene	ND		0.0500	1	07/08/2015 03:00	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 03:00	WG800816
Fluoranthene	0.156		0.0500	1	07/08/2015 03:00	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	1.29		0.0500	1	07/08/2015 03:00	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 03:00	WG800816
Naphthalene	1.04		0.250	1	07/08/2015 03:00	WG800816
Phenanthrene	0.198		0.0500	1	07/08/2015 03:00	WG800816
Pyrene	0.184		0.0500	1	07/08/2015 03:00	WG800816
1-Methylnaphthalene	ND		0.250	1	07/08/2015 03:00	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 03:00	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 03:00	WG800816
(S) Nitrobenzene-d5	*64.1*		*31.0-121*		*07/08/2015 03:00*	WG800816
(S) 2-Fluorobiphenyl	*106*		*10.0-139*		*07/08/2015 03:00*	WG800816
(S) p-Terphenyl-d14	*108*		*21.0-136*		*07/08/2015 03:00*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:47	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	161		2.00	1	07/07/2015 18:34	WG800469
Barium	59.6		5.00	1	07/07/2015 18:34	WG800469
Cadmium	ND		1.00	1	07/07/2015 18:34	WG800469
Chromium	ND		2.00	1	07/07/2015 18:34	WG800469
Copper	ND		5.00	1	07/07/2015 18:34	WG800469
Lead	ND		2.00	1	07/07/2015 18:34	WG800469
Selenium	ND		2.00	1	07/07/2015 18:34	WG800469
Silver	ND		2.00	1	07/07/2015 18:34	WG800469
Zinc	ND		25.0	1	07/07/2015 18:34	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	530		100	1	07/11/2015 19:29	WG801708
(S) α,α,α-Trifluorotoluene(FID)	*95.4*		*62.0-128*		*07/11/2015 19:29*	WG801708

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.500	1	07/12/2015 12:39	WG801804
Ethylbenzene	ND		0.500	1	07/12/2015 12:39	WG801804
Toluene	ND		0.500	1	07/12/2015 12:39	WG801804
Xylenes, Total	ND		1.50	1	07/12/2015 12:39	WG801804
(S) Toluene-d8	*102*		*87.0-114*		*07/12/2015 12:39*	WG801804
(S) Dibromofluoromethane	*87.5*		*79.0-125*		*07/12/2015 12:39*	WG801804
(S) 4-Bromofluorobenzene	*97.6*		*75.0-128*		*07/12/2015 12:39*	WG801804

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1800		100	1	07/07/2015 02:57	WG800434
Residual Range Organics (RRO)	1100		250	1	07/07/2015 02:57	WG800434
(S) o-Terphenyl	*95.8*		*50.0-150*		*07/07/2015 02:57*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	07/08/2015 03:21	WG800816
Acenaphthene	0.408		0.0500	1	07/08/2015 03:21	WG800816
Acenaphthylene	ND		0.0500	1	07/08/2015 03:21	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 03:21	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 03:21	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 03:21	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 03:21	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 03:21	WG800816
Chrysene	ND		0.0500	1	07/08/2015 03:21	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 03:21	WG800816
Fluoranthene	ND		0.0500	1	07/08/2015 03:21	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	0.701		0.0500	1	07/08/2015 03:21	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 03:21	WG800816
Naphthalene	1.55		0.250	1	07/08/2015 03:21	WG800816
Phenanthrene	0.106		0.0500	1	07/08/2015 03:21	WG800816
Pyrene	ND		0.0500	1	07/08/2015 03:21	WG800816
1-Methylnaphthalene	ND		0.250	1	07/08/2015 03:21	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 03:21	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 03:21	WG800816
(S) Nitrobenzene-d5	*61.5*		*31.0-121*		*07/08/2015 03:21*	WG800816
(S) 2-Fluorobiphenyl	*111*		*10.0-139*		*07/08/2015 03:21*	WG800816
(S) p-Terphenyl-d14	*103*		*21.0-136*		*07/08/2015 03:21*	WG800816

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.200	1	07/07/2015 11:49	WG800479

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	111		2.00	1	07/07/2015 18:37	WG800469
Barium	53.8		5.00	1	07/07/2015 18:37	WG800469
Cadmium	ND		1.00	1	07/07/2015 18:37	WG800469
Chromium	ND		2.00	1	07/07/2015 18:37	WG800469
Copper	ND		5.00	1	07/07/2015 18:37	WG800469
Lead	ND		2.00	1	07/07/2015 18:37	WG800469
Selenium	ND		2.00	1	07/07/2015 18:37	WG800469
Silver	ND		2.00	1	07/07/2015 18:37	WG800469
Zinc	ND		25.0	1	07/07/2015 18:37	WG800469

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	145		100	1	07/11/2015 19:58	WG801708
(S) α,α,α-Trifluorotoluene(FID)	*94.7*		*62.0-128*		*07/11/2015 19:58*	WG801708

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.500	1	07/12/2015 12:59	WG801804
Ethylbenzene	ND		0.500	1	07/12/2015 12:59	WG801804
Toluene	ND		0.500	1	07/12/2015 12:59	WG801804
Xylenes, Total	ND		1.50	1	07/12/2015 12:59	WG801804
(S) Toluene-d8	*103*		*87.0-114*		*07/12/2015 12:59*	WG801804
(S) Dibromofluoromethane	*88.9*		*79.0-125*		*07/12/2015 12:59*	WG801804
(S) 4-Bromofluorobenzene	*98.7*		*75.0-128*		*07/12/2015 12:59*	WG801804

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	8100		500	5	07/07/2015 12:15	WG800434
Residual Range Organics (RRO)	1800		250	1	07/07/2015 03:15	WG800434
(S) o-Terphenyl	*79.2*		*50.0-150*		*07/07/2015 03:15*	WG800434

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0500	1	07/08/2015 03:43	WG800816
Acenaphthene	ND		0.0500	1	07/08/2015 03:43	WG800816
Acenaphthylene	ND		0.0500	1	07/08/2015 03:43	WG800816
Benzo(a)anthracene	ND		0.0500	1	07/08/2015 03:43	WG800816
Benzo(a)pyrene	ND		0.0500	1	07/08/2015 03:43	WG800816
Benzo(b)fluoranthene	ND		0.0500	1	07/08/2015 03:43	WG800816
Benzo(g,h,i)perylene	ND		0.0500	1	07/08/2015 03:43	WG800816
Benzo(k)fluoranthene	ND		0.0500	1	07/08/2015 03:43	WG800816
Chrysene	ND		0.0500	1	07/08/2015 03:43	WG800816
Dibenz(a,h)anthracene	ND		0.0500	1	07/08/2015 03:43	WG800816
Fluoranthene	0.139		0.0500	1	07/08/2015 03:43	WG800816

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Fluorene	ND		0.0500	1	07/08/2015 03:43	WG800816
Indeno(1,2,3-cd)pyrene	ND		0.0500	1	07/08/2015 03:43	WG800816
Naphthalene	ND		0.250	1	07/08/2015 03:43	WG800816
Phenanthrene	ND		0.0500	1	07/08/2015 03:43	WG800816
Pyrene	0.191		0.0500	1	07/08/2015 03:43	WG800816
1-Methylnaphthalene	ND		0.250	1	07/08/2015 03:43	WG800816
2-Methylnaphthalene	ND		0.250	1	07/08/2015 03:43	WG800816
2-Chloronaphthalene	ND		0.250	1	07/08/2015 03:43	WG800816
(S) Nitrobenzene-d5	*62.1*		*31.0-121*		*07/08/2015 03:43*	WG800816
(S) 2-Fluorobiphenyl	*91.0*		*10.0-139*		*07/08/2015 03:43*	WG800816
(S) p-Terphenyl-d14	*98.2*		*21.0-136*		*07/08/2015 03:43*	WG800816

QUALITY CONTROL SUMMARY

L774969-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) 07/07/15 11:13

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Mercury	ND		0.000200

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

(LCS) 07/07/15 11:16 • (LCSD) 07/07/15 11:18

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	0.00272	0.00268	91	89	80-120			1	20

L775041-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/07/15 11:20 • (MS) 07/07/15 11:22 • (MSD) 07/07/15 11:25

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	0.00215	0.00262	72	87	1	75-125	J6		20	20

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

Method Blank (MB)

(MB) 07/07/15 16:30

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
Copper	ND		0.00500
Lead	ND		0.00200
Selenium	ND		0.00200
Silver	ND		0.00200
Zinc	ND		0.0250

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

(LCS) 07/07/15 16:33 • (LCSD) 07/07/15 16:35

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	0.0532	0.0536	106	107	80-120			1	20
Barium	0.0500	0.0498	0.0471	100	94	80-120			6	20
Cadmium	0.0500	0.0505	0.0513	101	103	80-120			2	20
Chromium	0.0500	0.0528	0.0530	106	106	80-120			0	20
Copper	0.0500	0.0531	0.0529	106	106	80-120			0	20
Lead	0.0500	0.0503	0.0506	101	101	80-120			1	20
Selenium	0.0500	0.0524	0.0525	105	105	80-120			0	20
Silver	0.0500	0.0527	0.0528	105	106	80-120			0	20
Zinc	0.0500	0.0512	0.0505	102	101	80-120			1	20

L774721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/07/15 16:38 • (MS) 07/07/15 16:43 • (MSD) 07/07/15 16:46

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	0.000174	0.0536	0.0544	107	108	1	75-125			1	20
Barium	0.0500	0.0254	0.0725	0.0721	94	93	1	75-125			1	20
Cadmium	0.0500	0.0000186	0.0510	0.0516	102	103	1	75-125			1	20
Chromium	0.0500	0.000948	0.0510	0.0514	100	101	1	75-125			1	20
Copper	0.0500	0.000583	0.0508	0.0504	100	100	1	75-125			1	20

L774721-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/07/15 16:38 • (MS) 07/07/15 16:43 • (MSD) 07/07/15 16:46

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	0.000310	0.0505	0.0507	100	101	1	75-125			0	20
Selenium	0.0500	0.000152	0.0520	0.0520	104	104	1	75-125			0	20
Silver	0.0500	0.0000577	0.0521	0.0522	104	104	1	75-125			0	20
Zinc	0.0500	ND	0.0480	0.0481	96	96	1	75-125			0	20

Method Blank (MB)

(MB) 07/11/15 08:01

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
TPHG C6 - C12	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.1*		*62.0-128*

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

(LCS) 07/11/15 06:47 • (LCSD) 07/11/15 07:12

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 %
TPHG C6 - C12	5.50	5.11	5.62	92.9	102	66.0-123			9.57	20
(S) a,a,a-Trifluorotoluene(FID)				*103*	*103*	*62.0-128*				

L774689-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/11/15 09:41 • (MS) 07/11/15 08:27 • (MSD) 07/11/15 08:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	ND	5.63	5.74	102	104	1	47.5-136			2.02	20
(S) a,a,a-Trifluorotoluene(FID)					*104*	*103*		*62.0-128*				

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

(LCS) 07/11/15 20:30 • (LCSD) 07/11/15 20:53

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 %
TPHG C6 - C12	5.50	5.26	5.60	95.6	102	66.0-123			6.22	20
(S) a,a,a-Trifluorotoluene(FID)				*96.4*	*96.9*	*62.0-128*				

L774964-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/11/15 23:10 • (MS) 07/11/15 22:02 • (MSD) 07/11/15 22:25

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 %
TPHG C6 - C12	5.50	ND	5.30	5.52	96.4	100	1	47.5-136			4.07	20
(S) a,a,a-Trifluorotoluene(FID)					*95.2*	*96.2*		*62.0-128*				

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

(LCS) 07/13/15 13:35 • (LCSD) 07/13/15 14:00

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 %
TPHG C6 - C12	5.50	4.25	4.13	77.2	75.0	66.0-123			2.86	20
(S) a,a,a-Trifluorotoluene(FID)				*101*	*100*	*62.0-128*				

L774619-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/13/15 20:59 • (MS) 07/13/15 22:13 • (MSD) 07/13/15 22:38

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 %
TPHG C6 - C12	5.50	0.483	4.23	5.91	68.2	98.7	1	47.5-136		J3	33.1	20
(S) a,a,a-Trifluorotoluene(FID)					*101*	*104*		*62.0-128*				

Method Blank (MB)

(MB) 07/08/15 09:11

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.000500
Ethylbenzene	ND		0.000500
Toluene	ND		0.000500
Xylenes, Total	ND		0.00150
(S) Toluene-d8	*101*		*88.5-111*
(S) Dibromofluoromethane	*92.9*		*78.3-121*
(S) 4-Bromofluorobenzene	*95.4*		*71.0-126*

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

(LCS) 07/08/15 07:49 • (LCSD) 07/08/15 08:10

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	0.0249	100	99.4	74.8-121			0.790	20
Ethylbenzene	0.0250	0.0256	0.0254	102	102	78.8-122			0.730	20
Toluene	0.0250	0.0252	0.0253	101	101	79.7-116			0.460	20
Xylenes, Total	0.0750	0.0768	0.0759	102	101	78.7-121			1.12	20
(S) Toluene-d8				*101*	*102*	*88.5-111*				
(S) Dibromofluoromethane				*89.9*	*88.7*	*78.3-121*				
(S) 4-Bromofluorobenzene				*94.1*	*92.9*	*71.0-126*				

L774810-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/08/15 10:23 • (MS) 07/08/15 10:51 • (MSD) 07/08/15 11:12

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	0.0229	0.0232	91.7	92.8	1	54.3-133			1.16	20
Ethylbenzene	0.0250	ND	0.0234	0.0234	93.8	93.7	1	61.4-133			0.0400	20
Toluene	0.0250	ND	0.0231	0.0234	92.6	93.5	1	61.4-130			1.02	20
Xylenes, Total	0.0750	ND	0.0710	0.0712	94.7	95.0	1	63.3-131			0.310	20
(S) Toluene-d8					*101*	*101*		*88.5-111*				
(S) Dibromofluoromethane					*87.6*	*87.7*		*78.3-121*				
(S) 4-Bromofluorobenzene					*95.4*	*93.1*		*71.0-126*				

Method Blank (MB)

(MB) 07/09/15 16:28

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.000500
Ethylbenzene	ND		0.000500
Toluene	ND		0.000500
Xylenes, Total	ND		0.00150
(S) Toluene-d8	*104*		*88.5-111*
(S) Dibromofluoromethane	*94.4*		*78.3-121*
(S) 4-Bromofluorobenzene	*101*		*71.0-126*

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

(LCS) 07/09/15 15:08 • (LCSD) 07/09/15 15:28

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 %
Benzene	0.0250	0.0238	0.0220	95.4	88.0	74.8-121			7.99	20
Ethylbenzene	0.0250	0.0246	0.0231	98.3	92.5	78.8-122			6.12	20
Toluene	0.0250	0.0233	0.0219	93.4	87.7	79.7-116			6.32	20
Xylenes, Total	0.0750	0.0746	0.0697	99.5	92.9	78.7-121			6.89	20
(S) Toluene-d8				*104*	*105*	*88.5-111*				
(S) Dibromofluoromethane				*96.0*	*95.3*	*78.3-121*				
(S) 4-Bromofluorobenzene				*101*	*97.1*	*71.0-126*				

L774359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/09/15 18:02 • (MS) 07/09/15 18:22 • (MSD) 07/09/15 18:41

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 %
Benzene	0.0250	ND	0.0206	0.0202	82.4	81.0	1	54.3-133			1.78	20
Ethylbenzene	0.0250	ND	0.0224	0.0219	89.6	87.6	1	61.4-133			2.30	20
Toluene	0.0250	ND	0.0212	0.0209	85.0	83.5	1	61.4-130			1.74	20
Xylenes, Total	0.0750	ND	0.0680	0.0671	90.6	89.4	1	63.3-131			1.29	20
(S) Toluene-d8					*103*	*104*		*88.5-111*				
(S) Dibromofluoromethane					*95.2*	*96.2*		*78.3-121*				
(S) 4-Bromofluorobenzene					*102*	*100*		*71.0-126*				

Method Blank (MB)

(MB) 07/12/15 10:15

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Benzene	ND		0.000500
Ethylbenzene	ND		0.000500
Toluene	ND		0.000500
Xylenes, Total	ND		0.00150
(S) Toluene-d8	*103*		*88.5-111*
(S) Dibromofluoromethane	*90.3*		*78.3-121*
(S) 4-Bromofluorobenzene	*94.4*		*71.0-126*

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

(LCS) 07/12/15 08:52 • (LCSD) 07/12/15 09:13

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	0.0253	0.0250	101	100	74.8-121			1.08	20
Ethylbenzene	0.0250	0.0256	0.0257	102	103	78.8-122			0.590	20
Toluene	0.0250	0.0266	0.0253	106	101	79.7-116			5.07	20
Xylenes, Total	0.0750	0.0772	0.0765	103	102	78.7-121			0.940	20
(S) Toluene-d8				*103*	*102*	*88.5-111*				
(S) Dibromofluoromethane				*89.2*	*90.7*	*78.3-121*				
(S) 4-Bromofluorobenzene				*93.2*	*94.1*	*71.0-126*				

L774969-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 07/12/15 11:57 • (MS) 07/12/15 10:35 • (MSD) 07/12/15 10:56

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 %
Benzene	0.0250	ND	0.0184	0.0227	73.6	90.7	1	54.3-133		J3	20.8	20
Ethylbenzene	0.0250	ND	0.0188	0.0237	75.0	94.9	1	61.4-133		J3	23.5	20
Toluene	0.0250	ND	0.0189	0.0234	75.5	93.7	1	61.4-130		J3	21.4	20
Xylenes, Total	0.0750	ND	0.0561	0.0710	74.7	94.6	1	63.3-131		J3	23.5	20
(S) Toluene-d8					*102*	*103*		*88.5-111*				
(S) Dibromofluoromethane					*90.7*	*89.8*		*78.3-121*				
(S) 4-Bromofluorobenzene					*96.9*	*101*		*71.0-126*				

Method Blank (MB)

(MB) 07/06/15 23:27

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
(S) o-Terphenyl	*97.9*		*50.0-150*

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

(LCS) 07/06/15 23:45 • (LCSD) 07/07/15 00:02

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	0.672	0.755	89.7	101	50.0-150			11.6	20
Residual Range Organics (RRO)	0.750	0.738	0.722	98.4	96.2	50.0-150			2.22	20
(S) o-Terphenyl				*99.1*	*99.5*	*50.0-150*				

Method Blank (MB)

(MB) 07/08/15 00:50

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Anthracene	ND		0.0000500
Acenaphthene	ND		0.0000500
Acenaphthylene	ND		0.0000500
Benzo(a)anthracene	ND		0.0000500
Benzo(a)pyrene	ND		0.0000500
Benzo(b)fluoranthene	ND		0.0000500
Benzo(g,h,i)perylene	ND		0.0000500
Benzo(k)fluoranthene	ND		0.0000500
Chrysene	ND		0.0000500
Dibenz(a,h)anthracene	ND		0.0000500
Fluoranthene	ND		0.0000500
Fluorene	ND		0.0000500
Indeno(1,2,3-cd)pyrene	ND		0.0000500
Naphthalene	ND		0.000250
Phenanthrene	ND		0.0000500
Pyrene	ND		0.0000500
1-Methylnaphthalene	ND		0.000250
2-Methylnaphthalene	ND		0.000250
2-Chloronaphthalene	ND		0.0000500
(S) Nitrobenzene-d5	*65.6*		*45.1-170*
(S) 2-Fluorobiphenyl	*111*		*57.7-153*
(S) p-Terphenyl-d14	*96.8*		*53.2-156*

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

(LCS) 07/08/15 00:07 • (LCSD) 07/08/15 00:29

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 %
Anthracene	0.00200	0.00242	0.00232	121	116	68.9-153			4.22	20
Acenaphthene	0.00200	0.00218	0.00210	109	105	67.7-141			3.45	20
Acenaphthylene	0.00200	0.00219	0.00210	110	105	66.9-141			4.60	20
Benzo(a)anthracene	0.00200	0.00223	0.00210	111	105	63.1-147			6.08	20
Benzo(a)pyrene	0.00200	0.00240	0.00231	120	116	62.2-150			3.72	20
Benzo(b)fluoranthene	0.00200	0.00254	0.00209	127	104	58.4-148			19.3	20
Benzo(g,h,i)perylene	0.00200	0.00215	0.00206	108	103	57.4-152			4.54	20
Benzo(k)fluoranthene	0.00200	0.00226	0.00201	113	101	60.5-154			11.7	20

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

(LCS) 07/08/15 00:07 • (LCSD) 07/08/15 00:29

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 %
Chrysene	0.00200	0.00239	0.00231	120	115	64.8-155			3.55	20
Dibenz(a,h)anthracene	0.00200	0.00220	0.00206	110	103	53.5-153			6.69	20
Fluoranthene	0.00200	0.00271	0.00257	136	129	68.6-153			5.27	20
Fluorene	0.00200	0.00236	0.00226	118	113	67.3-141			4.48	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00218	0.00205	109	103	57.0-155			5.95	20
Naphthalene	0.00200	0.00216	0.00208	108	104	66.7-135			3.79	20
Phenanthrene	0.00200	0.00208	0.00202	104	101	64.3-143			3.35	20
Pyrene	0.00200	0.00203	0.00204	101	102	60.2-154			0.460	20
1-Methylnaphthalene	0.00200	0.00236	0.00226	118	113	68.3-144			4.23	20
2-Methylnaphthalene	0.00200	0.00237	0.00226	118	113	67.6-143			4.55	20
2-Chloronaphthalene	0.00200	0.00229	0.00220	115	110	69.7-144			4.24	20
(S) Nitrobenzene-d5				*67.3*	*64.9*	*45.1-170*				
(S) 2-Fluorobiphenyl				*113*	*108*	*57.7-153*				
(S) p-Terphenyl-d14				*92.7*	*92.8*	*53.2-156*				

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.

ACCREDITATIONS & LOCATIONS

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.**

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Alabama	40660
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Arizona	AZ0612
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Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

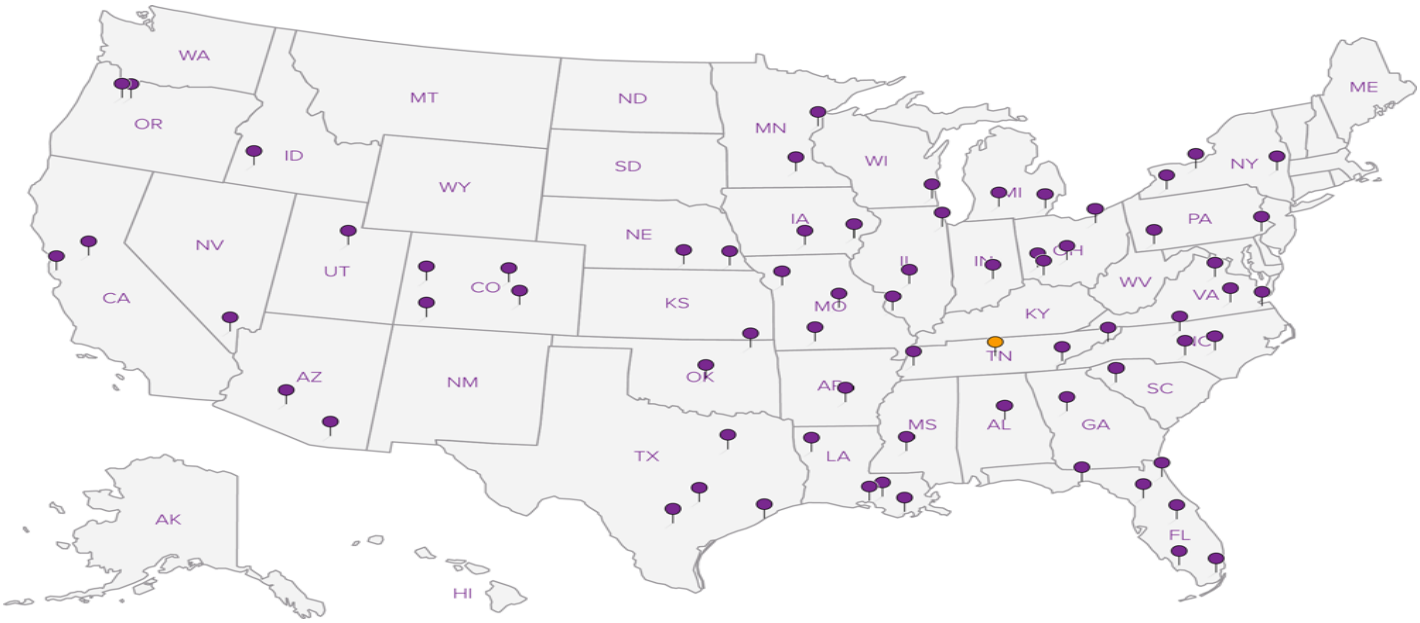
[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
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.**



Company Name/Address:
Kinder Morgan - Orange, CA
1100 Town and Country Rd
Orange, CA 92868

Billing Information:
Accounts Payable
1100 Town and Country Rd
Orange, CA 92868

Report to: Nolan Lewis and Rob Truedinger

Email To: nolan.lewis@anteagroup.com

Project Description: Annual GW sampling

City/State Collected: Portland, OR

Phone: 415-335-8280
Fax:

Client Project #: KMLIN1502

Lab Project #: KINMOROCA-ANTEALL

Collected by (print):

Site/Facility ID #: 11400 NW ST HELENS

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L774969
E204
Acctnum: KINMOROCA
Template: T103546
Prelogin: P514989
TSR: 358-Jarred Willis
PB:
Shipped Via: FedEX Exp

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX 8260 low level 40mlAmb-HCl	BTEX 8260 low level 40mlAmb-HCl-Blk	NWTPHGx 40 mlAmb-HCl	NWTPHDx 100mlAmb-HCl	PAHs 8270D-SIM 40mlAmb-NoPres-WT	RCRA8+ Cu, Zn (6020) 500 mlHDPE-HNO3	Rem./Contaminant	Sample # (lab only)
MW-1	Grab	GW		7/1/15	1050	11	X		X	X	X	X		-01
MW-4	Grab	GW		7/1/15	0945	11	X		X	X	X	X		02
MW-8	Grab	GW		7/1/15	1250	11	X		X	X	X	X		03
MW-9	Grab	GW		7/1/15	1350	11	X		X	X	X	X		04
MW-22	Grab	GW		7/1/15	1425	11	X		X	X	X	X		05
MW-25	Grab	GW		7/1/15	0828	11	X		X	X	X	X		06
MW-26	Grab	GW		7/1/15	1505	11	X		X	X	X	X		07
Dup	Grab	GW		7/1/15		11	X		X	X	X	X		08
Trip Blank				7/1/15		0 ~~1~~		X						

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Hold # 638730331882 1893

Remarks: Also email to: robert_truedinger@kindermorgan.com; katy.mcquinn@anteagroup.com

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Missy Tu	7/2/15	1200	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 88

Date: 7/3/15 Time: 0900

Condition: (lab use only) MJ

COC Seal Intact: ___Y ___N ___NA

pH Checked:

NCF: ✓

Andy Vann

ESC Lab Sciences
Non-Conformance Form

Login #: L774969	Client: KINMOROCA	Date: 7/3/15	Evaluated by: Nikki

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	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 / Courie
	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.	x	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: Did not received Trip Blank

Client informed by:		Call X		Email		Voice Mail		Date: 7/6/15	Time: 1135
TSR Initials: JW	Client Contact: Nolan Lewis								

Login Instructions: **Client informed.**

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Appendix E
Data Validation Report

Data Usability Review for KMEP Linnton Terminal

Collected July 1, 2015

Summary

This memorandum summarizes the review of the QA/QC data associated with the analysis of eight water samples collected on July 1, 2015 from the Kinder Morgan Linnton Terminal site.

Metals including mercury, volatile organic hydrocarbons: benzene, toluene, ethylbenzene, and xylenes, polynuclear aromatic hydrocarbons, total petroleum hydrocarbon (TPH) diesel, TPH-motor oil, and TPH-gasoline analyses were performed by ESC Lab Sciences located in Mount Juliet, TN. Data was reported in analytical batch L774969.

EPA Contract Laboratory Program (CLP) *National Functional Guidelines (NFG) for Organic Data Review* (June 2008), and *National Functional Guidelines (NFG) for Inorganic Data Review* (January 2010) provided guidelines for data qualification, where applicable.

The intent of this review was to assess the appropriate use or "usability" of the analytical data based on the QA/QC data reported by the laboratory. This QA review focuses on criteria for the following QA/QC parameters and their overall effect on the data:

- Sample custody, handling, and preservation
- Holding time compliance
- Method blanks
- Field duplicates (FD)
- Precision and accuracy (laboratory control samples and spike/spike duplicates)

Only summary QA/QC information were reviewed for each analytical parameter. Analytical results and QA/QC summary information were provided by ESC Lab Sciences for all sample analyses. The data set is usable when used in conjunction with information discussed below and any flags applied to the hard copy data by the laboratory or during the review.

Sample Custody and Handling

Chain-of-custody (COC) forms and laboratory sample receiving checklists were reviewed.

No exceptions were found on the COC's.

Holding Times

Extraction and analysis holding times were met for all samples and analytes.

Method Blanks

Method blanks were provided for all analyses. All method blanks met QC acceptance criteria.

Surrogate Recovery

All surrogate recoveries met acceptance criteria.

Laboratory Control Samples

Percent recovery and relative percent difference (RPD) values for the laboratory control samples (LCS) and LCS duplicates met frequency criteria and QC control limits.

Field Duplicates

One FD set was collected and all precision criteria were met with the following exceptions.

The RPD of TPH-gasoline was greater than the upper control limit in FD set MW-4_070115/DUP_070115 for Method SW8015-P. One associated detected result was qualified as estimated and flagged "J"; one associated nondetected result was qualified as estimated and flagged "UJ".

The RPDs of fluoranthene, acenaphthene and pyrene were greater than the upper control limit in FD set MW-4_070115/DUP_070115 for Method SW8270C-SIM. Five associated detected results were qualified as estimated and flagged "J"; one associated nondetected result was qualified as estimated and flagged "UJ".

Matrix Spike Samples

The MS/MSD percent recovery and RPD values met the frequency criteria and QC control limits with the following exception.

The RPDs of benzene, ethylbenzene, toluene and total xylenes were greater than the control limit in the MS/MSD set of sample MW-25_070115. The associated nondetected results in the parent sample were unaffected because results were nondetect; no data were qualified.

Overall Assessment

The data set is usable when used in conjunction with information discussed above and any flags applied to the hard copy data by the laboratory or during this review.

Appendix F
LNAPL Transmissivity Model Fits

Well Designation:	PZ-1	PZ-1 Baildown Testing
Date:	27-Jul-15	

Ground Surface Elev (ft msl)	0.0	Enter These Data	**Drawdown Adjustment (ft)**
Top of Casing Elev (ft msl)	0.0		
Well Casing Radius, r_c (ft):	0.083	r_{e1}	
Well Radius, r_w (ft):	0.417		0
LNAPL Specific Yield, S_y:	0.175		
LNAPL Density Ratio, ρ_r:	0.909		
Top of Screen (ft bgs):	15.0		
Bottom of Screen (ft bgs):	30.0		
LNAPL Baildown Vol. (gal.):	2.0		
Effective Radius, r_{e3} (ft):	0.190	Calculated Parameters	
Effective Radius, r_{e2} (ft):	0.183	Eff NAPL Well Vo	Fract NAPL Removed
Initial Casing LNAPL Vol. (gal.):	0.84	4.36	0.46
Initial Filter LNAPL Vol. (gal.):	3.52		

LNAPL Transmissivity (ft2/day)

B&R	C&J	CB&P	Average T
0.05	0.07	0.06	0.06

Enter Data Here

Date and Time	Time (min)	DTP (ft btoc)	DTW (ft btoc)	DTP (ft bgs)	DTW (ft bgs)	Water Table Depth (ft)	LNAPL Drawdown s_n (ft)	Average Time (min)	LNAPL Discharge Q_n (ft^3/d)	s_n (ft)	b_n (ft)	r_e (ft)
7/27/15 11:00	0	18.68	23.82	18.68	23.82	19.15					5.14	
7/27/15 13:15	0.01	20.32	20.34	20.32	20.34	20.32	0.47				0.02	
7/27/15 13:20	5.0	19.90	19.95	19.90	19.95	19.90	0.46	2.5	0.982	0.46	0.05	0.190
7/27/15 13:25	10.0	19.68	19.73	19.68	19.73	19.68	0.46	7.5	0.000	0.46	0.05	0.190
7/27/15 13:30	15.0	19.56	19.65	19.56	19.65	19.57	0.46	12.5	1.307	0.46	0.09	0.190
7/27/15 13:35	20.0	19.44	19.55	19.44	19.55	19.45	0.46	17.5	0.653	0.46	0.11	0.190
7/27/15 13:45	30.0	19.35	19.50	19.35	19.50	19.36	0.45	25.0	0.653	0.46	0.15	0.190
7/27/15 13:55	40.0	19.26	19.44	19.26	19.44	19.28	0.45	35.0	0.490	0.45	0.18	0.190
7/27/15 14:05	50.0	19.15	19.46	19.15	19.46	19.18	0.44	45.0	2.124	0.45	0.31	0.190
7/27/15 14:35	80.0	19.01	19.40	19.01	19.40	19.05	0.43	65.0	0.436	0.44	0.39	0.190
7/27/15 15:05	110.0	18.88	19.52	18.88	19.52	18.94	0.41	95.0	1.361	0.42	0.64	0.190
7/28/15 10:10	1255.0	18.78	19.96	18.78	19.96	18.89	0.36	682.5	0.077	0.38	1.18	0.190
7/28/15 15:15	1560.0	18.87	20.12	18.87	20.12	18.98	0.35	1407.5	0.037	0.36	1.25	0.190
7/29/15 15:00	2985.0	18.94	20.55	18.94	20.55	19.09	0.32	2272.5	0.041	0.34	1.61	0.190
7/30/15 10:50	4175.0	18.52	20.45	18.52	20.45	18.70	0.29	3580.0	0.044	0.31	1.93	0.190
8/3/15 11:18	9963.0	18.25	21.10	18.25	21.10	18.51	0.21	7069.0	0.026	0.25	2.85	0.190
8/13/15 14:00	24565.0	18.67	22.38	18.67	22.38	19.01	0.13	17264.0	0.010	0.17	3.71	0.190
8/14/15 12:00	25845.0	18.48	22.29	18.48	22.29	18.83	0.12	25205.0	0.013	0.13	3.81	0.190
8/18/15 12:00	31605.0	18.51	23.12	18.51	23.12	18.93	0.05	28725.0	0.023	0.08	4.61	0.190
8/20/15 15:00	34665.0	18.63	23.52	18.63	23.52	19.07	0.02	33135.0	0.015	0.04	4.89	0.190
				#N/A	#N/A	#N/A	#N/A	0.0	#N/A	#N/A	#N/A	0.000
				#N/A	#N/A	#N/A	#N/A	0.0	#N/A	#N/A	#N/A	0.000

Figure 1

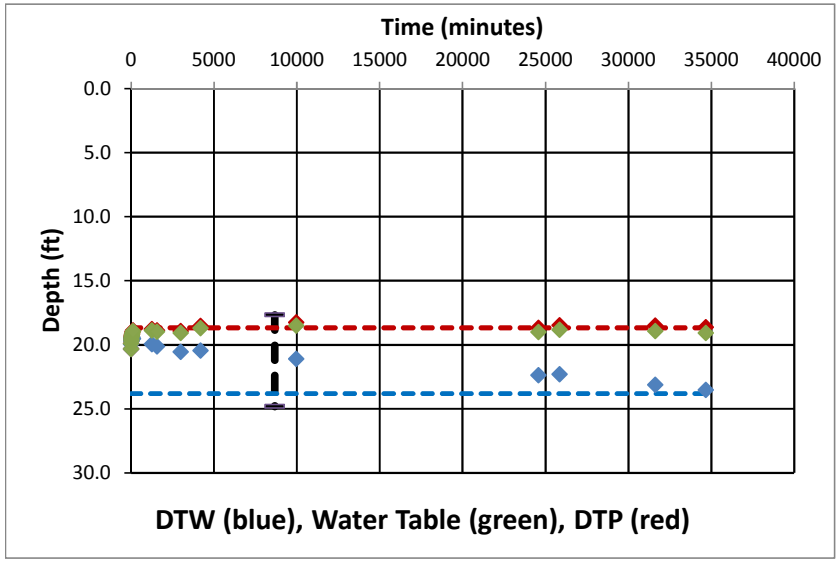


Figure 2

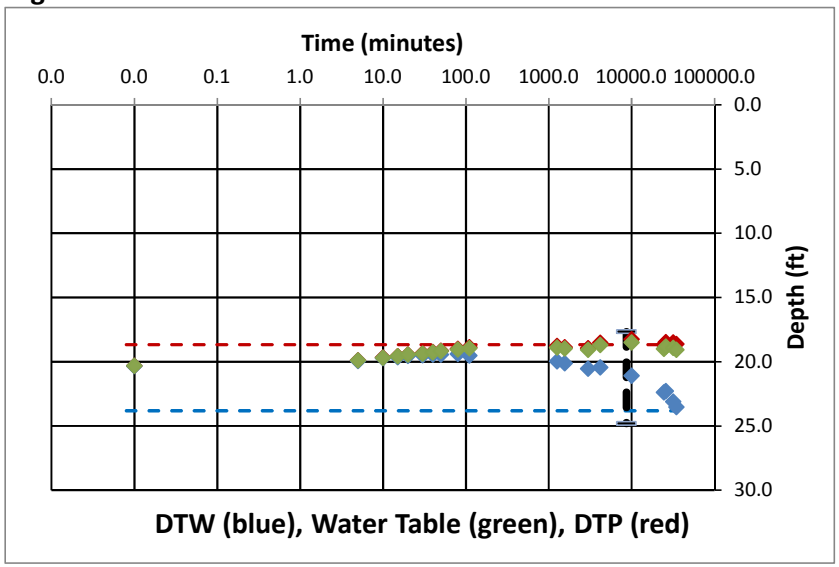


Figure 3

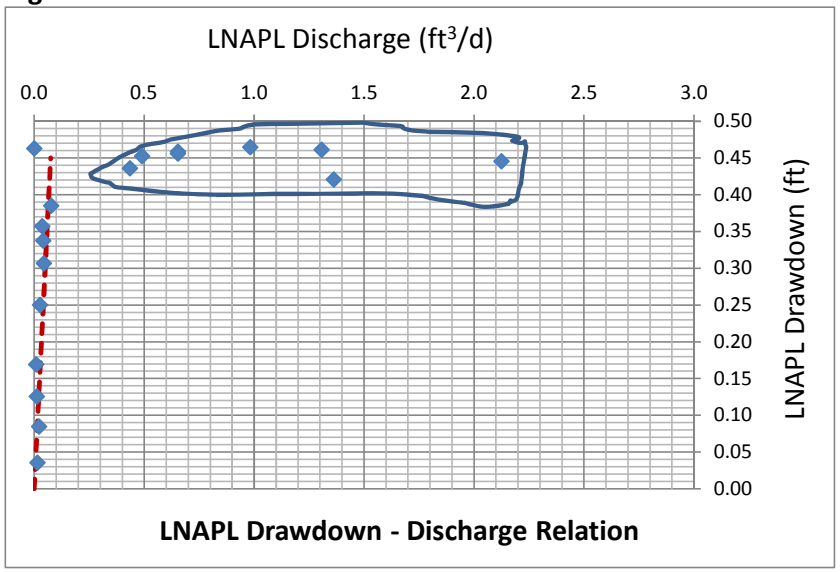


Figure 4

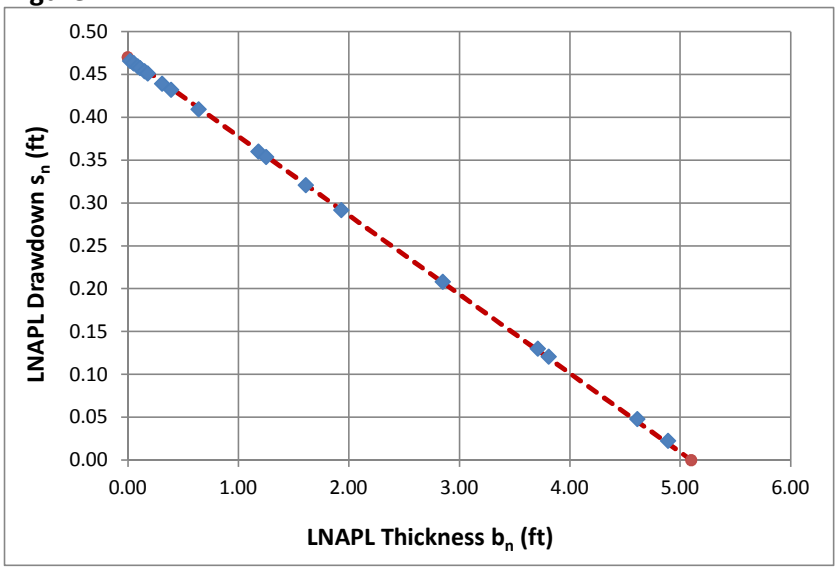


Figure 5

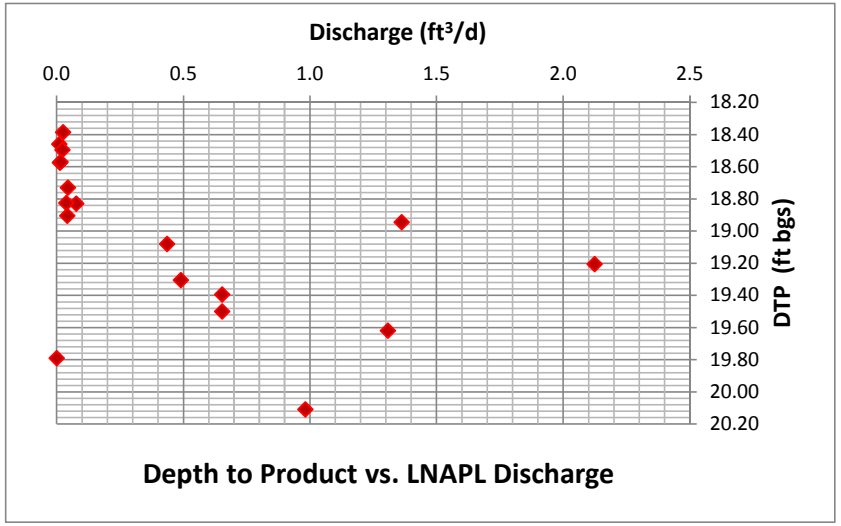


Figure 6

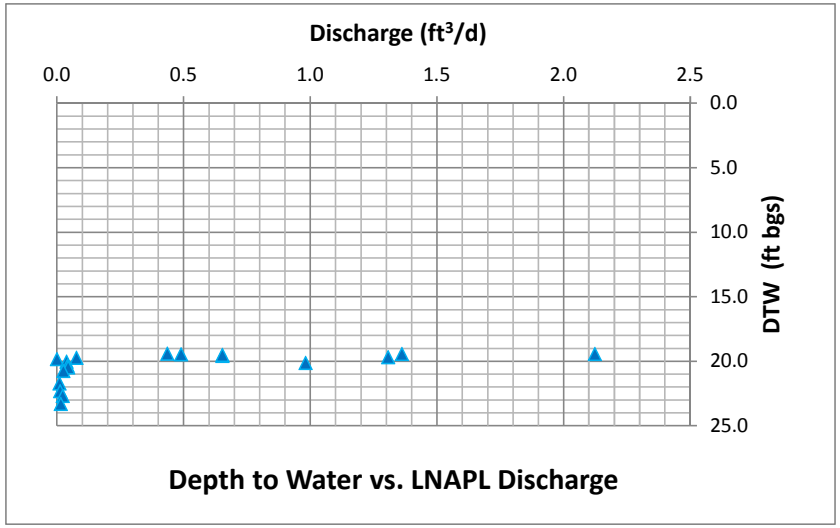


Figure 7

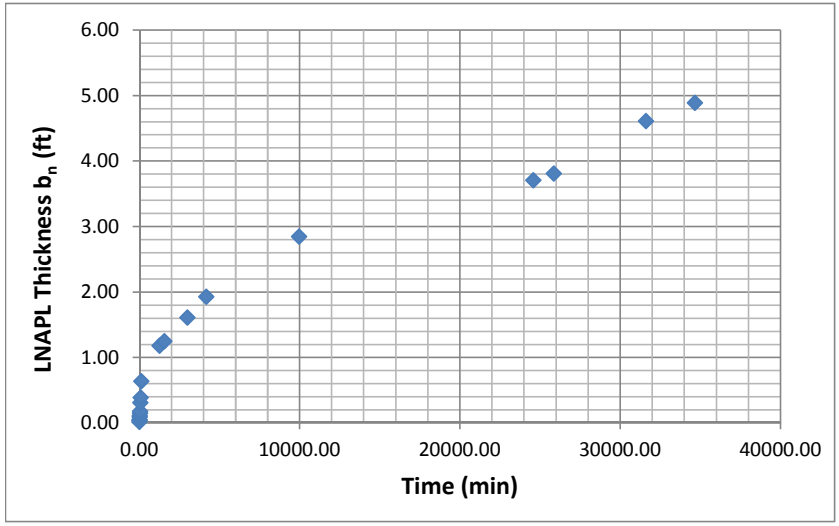


Figure 8

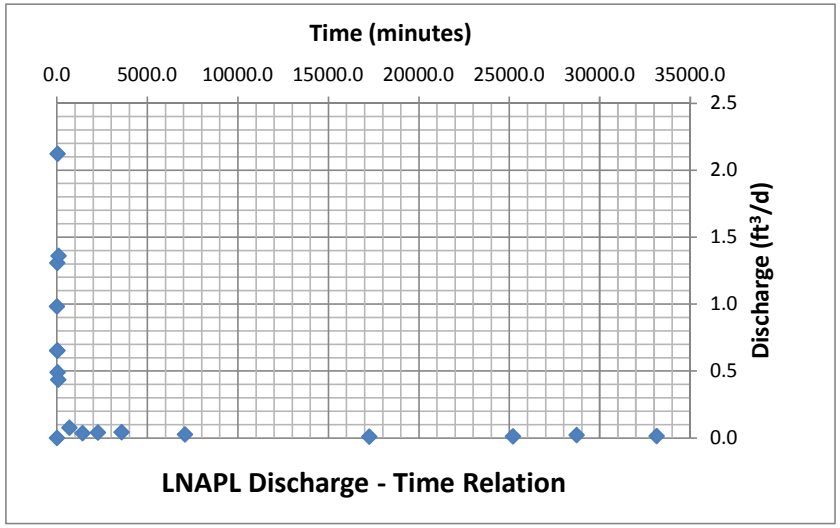


Figure 9

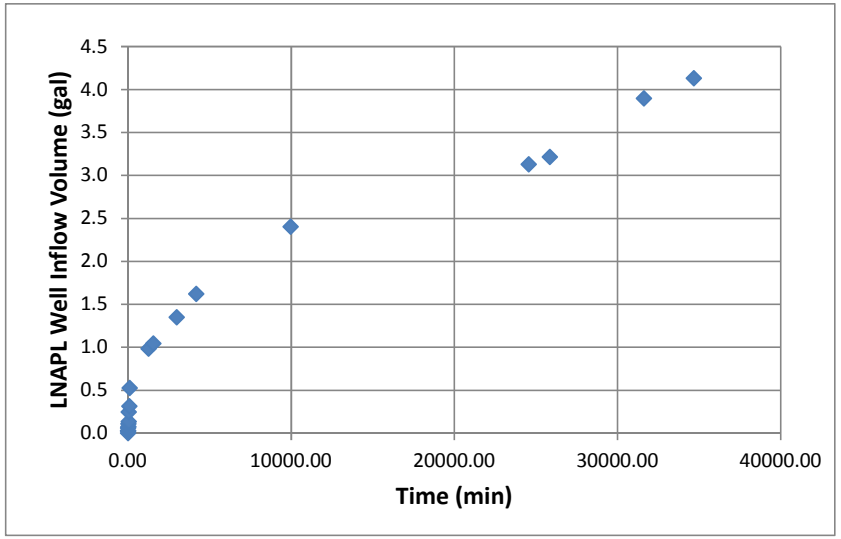
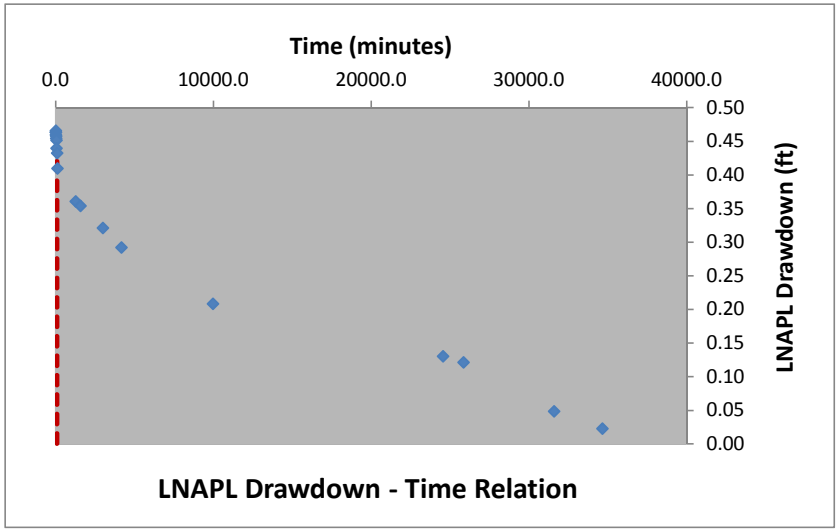


Figure 10



Generalized Bouwer and Rice (1976)

Well Designation:	PZ-1
Date:	27-Jul-15

$$T_n = \frac{r_e^{\,2} \ln(R/r_e) \ln(s_n(t_1)/s_n(t))}{2(-J)(t - t_1)}$$

Enter early time cut-off for least-squares model fit

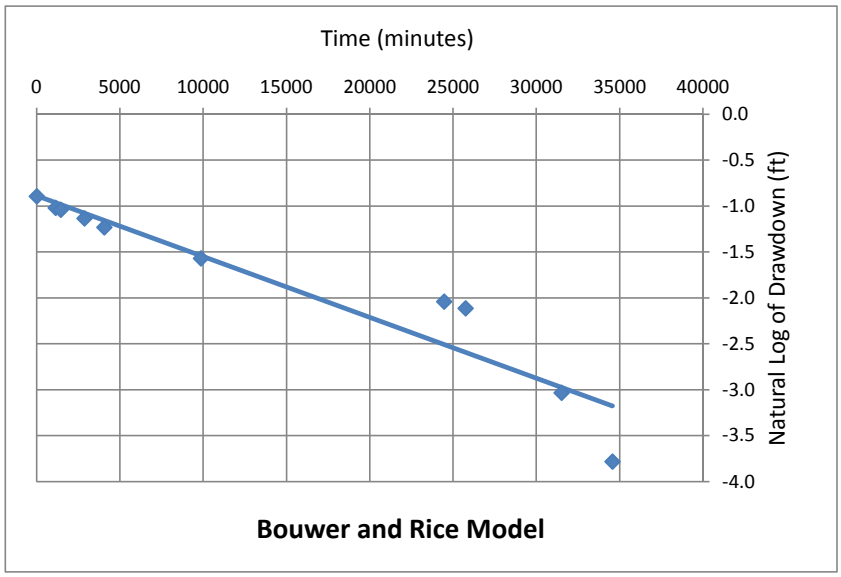
$Time_{cut}$	100	<- Enter or change value here

Model Results: T_n (ft^2/d) = 0.05 +/- 0.01 ft^2/d

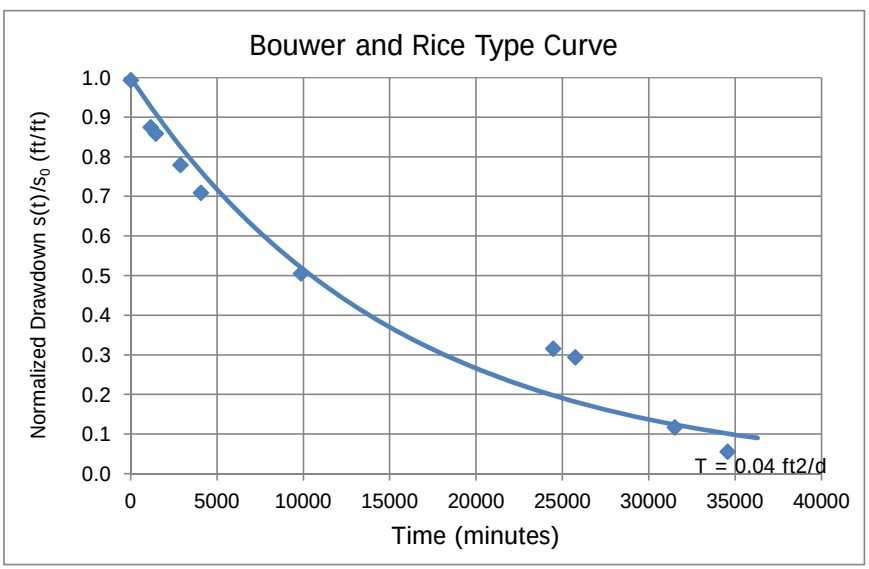
L_e/r_e
27.0
C
1.87
R/r_e
11.97

J-Ratio
-0.092

Coef. Of Variation
0.12



C coefficient calculated from Eq. 6.5(c) of Butler, The Design, Performance, and Analysis of Slug Tests, CRC Press, 2000.



Cooper and Jacob (1946)

Well Designation:	PZ-1
Date:	27-Jul-15

$$V_n(t_i) = \sum_j^i \frac{4\pi T_n s_j}{\ln\left(\frac{2.25 T_n t_j}{r_e^2 S_n}\right)} \Delta t_j$$

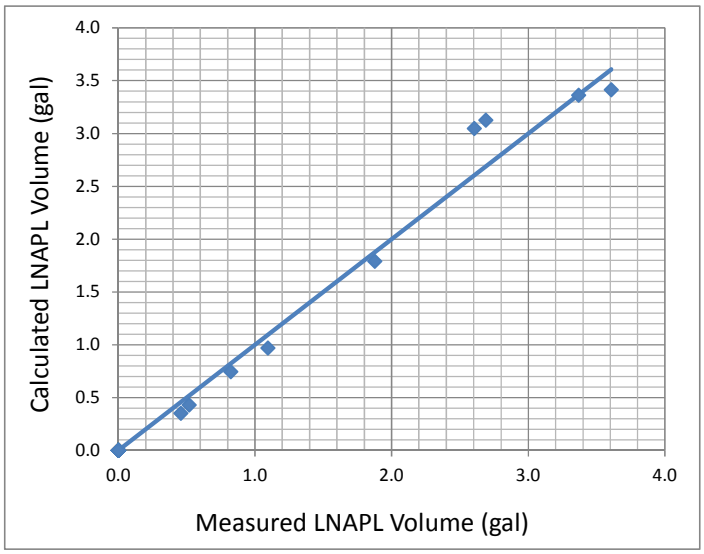
Enter early time cut-off for least-squares model fit

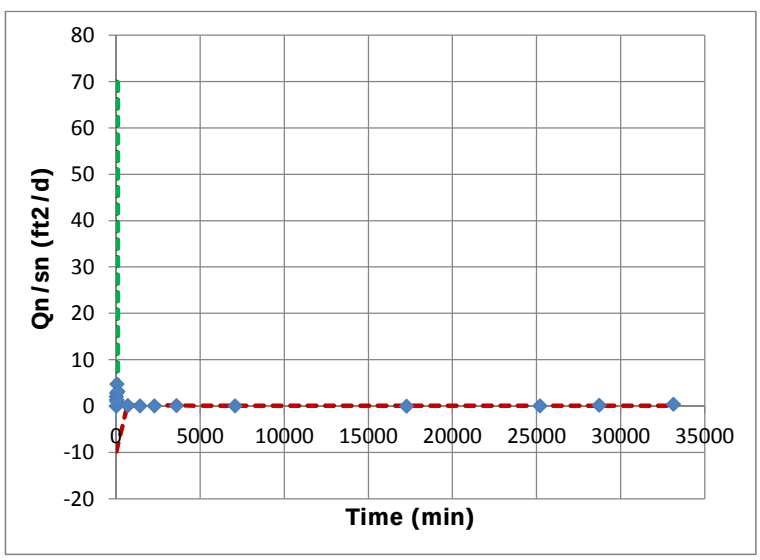
$Time_{cut}$ (min):	100	<- Enter or change values here
Time Adjustment (min):	0	

Trial S_n:	d	<-- Enter d for default or enter S_n value
Root-Mean-Square Error:	0.687	<-- Minimize this using "Solver"
	0.007	<-- Working S_n
Trial T_n (ft^2/d):	0.070	<-- By changing T_n through "Solver"

Add constraint T_n > 0.00001

Model Result: T_n (ft^2/d) = **0.07**





Height
70

Cooper, Bredehoeft and Papadopulos (1967)

Well Designation:	PZ-1
Date:	27-Jul-15

Enter early time cut-off for least-squares model fit

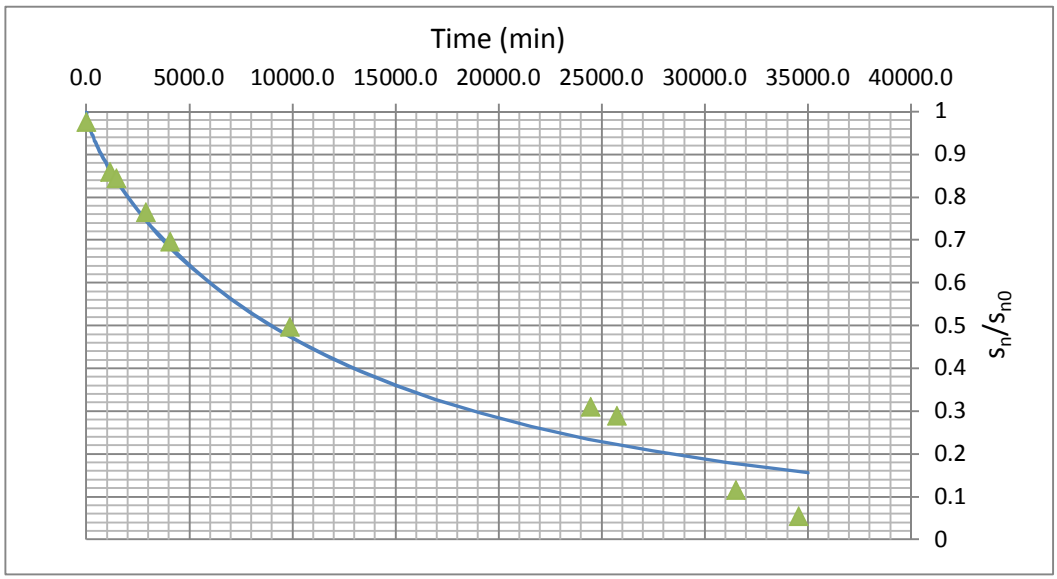
$Time_{cut}$ (min):	100	<- Enter or change values here
Initial Drawdown s_n (ft):	0.42	

Trial S_n:	d	<-- Enter d for default
Root-Mean-Square Error:	0.162	<-- Minimize this using "Solver"
Trial T_n (ft^2/d):	0.060	<-- By changing T_n through "Solver"
	0.006	<-- Working S_n

Add constraint Tn > 0.00001

Model Result: T_n (ft^2/d) = **0.06**

T_{min}	0.2
T_{max}	35000



J-Ratio
-0.092