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Bureau of Land and Waste Management
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Subject: **Fourth Quarter 2018 Monitoring Report**
Plantation Pipe Line Company
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693, "Kinder Morgan Belton Pipeline Release"

Dear Ms. Coleman,

On behalf of Plantation Pipe Line Company (Plantation), CH2M HILL Engineers, Inc. (CH2M), now part of Jacobs Engineering Group Inc. (Jacobs), is submitting the attached Fourth Quarter 2018 Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between October 1, 2018, and December 31, 2018. If you have any questions or concerns, please call me at 919-859-5789 or Mr. Jerry Aycock/Plantation at 770-751-4165.

Regards,

William M. Waldron, P.E.
Program Manager

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Plantation Pipe Line Company
Lewis Drive Remediation Site
Belton, South Carolina
Site ID Number 18693
"Kinder Morgan Belton Pipeline Release"

Fourth Quarter 2018 Monitoring Report

Final

March 28, 2019

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

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The material and data presented in this report were prepared consistent with current and generally accepted consulting principles and practices. This work was supervised by the following Jacobs licensed professional.

Jonathan Grimes, P.G.
South Carolina Registered Professional Geologist No. 2235

March 28, 2019
Date

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Acronyms and Abbreviations

µg/L	microgram(s) per liter
1,2-DCA	1,2-dichloroethane
BCPZ	Brown's Creek Protection Zone
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CCPZ	Cupboard Creek Protection Zone
CH2M	CH2M HILL Engineers, Inc., now part of Jacobs Engineering Group Inc.
COC	chain-of-custody
DHEC	South Carolina Department of Health and Environmental Control
DO	dissolved oxygen
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
HAS	horizontal air sparging
HSA	hollow-stem auger
ID	identification
Jacobs	Jacobs Engineering Group Inc.
mg/L	milligram(s) per liter
MTBE	methyl tertiary butyl ether
O&M	operation and maintenance
PID	photoionization detector
Plantation	Plantation Pipe Line Company
QAPP	Quality Assurance Project Plan
SBZ	Shallow Bedrock Zone
scfm	standard cubic feet per minute
scfm/ft	standard cubic feet per minute per foot
TSL	Target Screening Level
UIC	underground injection control
UST	underground storage tank
VAS	vertical air sparging

1. Introduction

On behalf of Plantation Pipe Line Company (Plantation), CH2M HILL Engineers, Inc. (CH2M), now part of Jacobs Engineering Group Inc. (Jacobs), is submitting this Fourth Quarter 2018 Monitoring Report for the Lewis Drive Remediation Site in Belton, South Carolina. This report summarizes the work performed at the site between October 1, 2018, and December 31, 2018.

On December 8, 2014, a release of an estimated 8,800 barrels (369,600 gallons) of gasoline and a small amount of diesel fuel (Plantation, 2015) was discovered from Plantation's 26-inch product pipeline near Lewis Drive in Belton, South Carolina (Figure 1). The release point is located on the pipeline right-of-way between Lewis Drive, a rural two-lane undivided asphalt road to the south, and a hayfield to the north. The release location and site features (including the location of monitoring wells, recovery sumps, temporary wells [piezometers], recovery trenches, recovery wells, vertical air sparging [VAS] wells, and horizontal air sparging [HAS] wells) are shown on Figure 1.

This site has been designated by the South Carolina Department of Health and Environmental Control (DHEC) as Site Number 18693 "Kinder Morgan Belton Pipeline Release." This Fourth Quarter 2018 Monitoring Report was prepared in accordance with the Corrective Action Plan (CAP) (CH2M, 2016b), CAP Addendum, Revision 1 (CH2M, 2017a), CAP Addendum, Revision 2 (CH2M, 2017c), Comprehensive Site Assessment Report (CH2M, 2016a), and project Quality Assurance Project Plan (QAPP), Revision 4 (CH2M-Jacobs, 2018b). Correspondence between Plantation and DHEC during this reporting period is summarized below:

- October 5, 2018 – Plantation submitted its response to the DHEC request for revised 1903 water well record forms in DHEC's Letter titled "Completed Well Forms Request" dated September 26, 2018 (CH2M-Jacobs, 2018e).
- November 28, 2018 – Plantation submitted a letter to DHEC titled "Request for Well Permit to Install Additional Monitoring Wells, Advance and Soil Boring, and Abandon Select Product Recovery Features" dated November 28, 2018 (CH2M-Jacobs, 2018f).
- December 3, 2018 – Plantation submitted Lewis Drive Spill Clean Up Stormwater Management and Sediment Control Application, Major Modification 5 - SWPPP Permit No. STW0315-09 (with Notice of Intent [NOI] Form 2617) to Anderson County (CH2M-Jacobs, 2018g).
- December 18, 2018 – DHEC provided *Reviews of Misc. Reports, Annual Report and Response to Comments,* dated December 11, 2018 (DHEC. 2018b).

2. Work Activities

The following remedial activities were performed during the fourth quarter 2018 in accordance with the CAP (CH2M, 2016b), CAP Addendum, Revision 1 (CH2M, 2017a), CAP Addendum, Revision 2 (CH2M, 2017c), and project QAPP, Revision 4 (CH2M-Jacobs, 2018b):

- Performed continuous free product recovery from canisters and petroleum-absorbent socks in 18 wells at the site. Canisters were emptied quarterly, recording the volume of product collected from each well. Product recovered from the absorbent socks was measured by weighing the absorbent socks before and after placement in each well.
- Collected groundwater samples in October 2018 from the four newly installed monitoring wells: MW-51, MW-52, MW-53, and MW-54.
- Conducted two limited and one sitewide groundwater sampling events and one surface water sampling event. This included select gauging in November 2018 and sitewide gauging in December 2018, as well as inspections of surface water features at Brown's Creek and Cupboard Creek during each site visit.
- Recorded changes in groundwater levels and barometric pressures in eight monitoring wells using In Situ Rugged Troll 100 data loggers. Six monitoring well locations (MW-02, MW-12, MW-25, MW-29, MW-39, and MW-40) contained water level data loggers and two monitoring well locations (MW-01 and MW-10) contained barometric pressure loggers.
- Operated VAS wells in the areas of Brown's Creek and Cupboard Creek (Figure 1).
- Operated stream aerators in Brown's Creek.
- Operated three HAS wells in the Hayfield Zone (Figure 1).
- Performed routine operation and maintenance (O&M) on the air sparging system.
- Initiated construction of a biosparging system expansion, including 13 new VAS wells along with the respective trenching and piping necessary to connect the new wells to the existing biosparging system.

3. Work Procedures

3.1 Gauging Events

Monitoring wells, surface water locations, piezometers, and product recovery features (recovery sumps, trenches, and wells) were gauged during the December 2018 quarterly event. Recovery features and select monitoring wells were gauged during the October and November 2018 monthly events. During the quarterly sitewide gauging event, dissolved oxygen (DO) measurements were recorded for select wells using an in-well YSI ProODO meter. Field observations made during this reporting period are summarized in Table 1. Field forms and notes for this reporting period are included in Appendix A.

3.2 Product Recovery

Product recovery was performed continuously in the Brown's Creek Protection Zone (BCPZ) and Cupboard Creek Protection Zone (CCPZ) in recovery wells, sumps, and trenches (Table 2) in accordance with the *Free-Product Recovery Plan – Revision 4* (CH2M-Jacobs, 2018a). Recovery features have either product recovery canisters, absorbent socks, or skimmers for optimum product recovery and quantification at each recovery feature. During each monthly recovery event, the field team recorded the product recovered from each recovery device (Table 2). The amount of recovered product from the canisters was tracked by measuring the fluid volume from the skimmers in a stainless-steel measuring cup and placing the fluid in a metal 5-gallon bucket. The amount of recovered product from the absorbent socks was measured by weighing the absorbent socks before and after deployment into the recovery feature. Recovered fluids from the skimmers were placed into the onsite poly tanks for temporary storage, separation, and eventual offsite disposal. Used absorbent socks were placed in a Department of Transportation (DOT)-approved, 55-gallon steel drum for offsite disposal.

3.3 Surface Water

Inspections of surface water features were performed during the December 2018 monitoring event. The inspection route used is illustrated on Figures 1, 2A, and 2B. The air sparging system, including the stream aerators, was operating during this reporting period.

Surface water samples were collected in December 2018 at locations shown on Figure 2A. Surface water samples during this reporting period were scheduled to be collected from 17 locations. However, further sampling was discontinued at location SW-06 in Cupboard Creek and locations FP-01, FP-02, and FP-03 in Brown's Creek as agreed upon by DHEC (DHEC, 2018b).

Surface water samples were collected in accordance with the project QAPP, Revision 4 (CH2M-Jacobs, 2018b), and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), naphthalene, and methyl tertiary butyl ether (MTBE) using U.S. Environmental Protection Agency (EPA) Method 8260B (see Table 3). The samples were packed in wet ice and transported by FedEx under standard chain-of-custody (COC) procedures to Pace Analytical Services in Mount Juliet, Tennessee. Field notes are included in Appendix A. Laboratory reports for surface water samples and COC records for this reporting period are included in Appendix B. Laboratory results are summarized in Table 3.

3.4 Groundwater Sampling Events

Three groundwater sampling events were performed during this reporting period:

- October 5, 2018 (Event 1, for newly installed monitoring wells only – MW-51, MW-52, MW-53, and MW-54)
- November 2, 2018 (Event 2, select wells – MW-17B, MW-23, MW-34, MW-40, and MW-46 following purging)
- December 5 through 7, 2018 (Event 3, sitewide quarterly event)

The air sparging system, including the stream aerators, was operating during these monitoring events.

A comprehensive round of groundwater gauging was conducted prior to the quarterly sampling event, and select wells were gauged during the October and November 2018 events using an oil-water interface probe to measure the depth to water and test for the presence and thickness (if present) of product. The oil-water interface probe was decontaminated before each use and after the final measurement. Decontamination was performed in accordance with the DHEC *Programmatic Quality Assurance Program Plan, Revision 3.1* (Programmatic QAPP) or project QAPP, Revision 4 (CH2M-Jacobs, 2018b) as applicable. Groundwater elevation and product thickness data are summarized in Table 4. Gauging sheets and field notes for this reporting period are included in Appendix A. Figures 2A and 2B show residuum and bedrock groundwater elevations, respectively. Figure 3 presents measurable product data for the site.

Monitoring wells without free product were sampled using either a HydraSleeve, a peristaltic pump using low-flow purge, or a submersible pump (Event 2 only). Purge logs for wells that were sampled with a pump are provided in Appendix A. With the exception of the wells sampled during Event 2, the height of the water column in the well dictated using either a HydraSleeve or a peristaltic pump according to the following:

- Water column greater than 3 feet: A HydraSleeve was used to collect an undisturbed groundwater sample from the well, in accordance with the project QAPP, Revision 4 (CH2M-Jacobs, 2018b). A HydraSleeve was installed to the midpoint of the screened interval and immediately recovered. The water in the HydraSleeve was then used to fill the sample containers.
- Water column less than 3 feet but greater than 0.5 foot: A peristaltic pump was used to purge the well, while field parameters (including DO concentrations) were measured using a YSI 6920 V2-2 Multi-Parameter Water Quality Sonde meter to confirm stabilization of the groundwater, in accordance with the Programmatic QAPP (South Carolina UST Management Division, 2016). After the water quality parameters stabilized, a sample was collected from the well using the straw method in accordance with the Programmatic QAPP. Upon stabilization, the field parameters were recorded on a separate purge log. DO measurements are summarized in Table 5.
- Water column less than 0.5 foot: The well was reported and documented in the field logbook as insufficient water, was not sampled, and DO measurements were not collected.

Samples were labeled, packed with wet ice, and transported by FedEx under standard COC procedures to Pace Analytical Services in Mount Juliet, Tennessee. Samples were analyzed for BTEX, 1,2-dichloroethane (1,2-DCA), MTBE, and naphthalene using EPA Method 8260B. Field notes and purge logs are included in Appendix A. Laboratory reports for groundwater samples and COC records are included in Appendix B. Laboratory results are summarized in Table 6.

3.5 Air Sparging System Operation and Maintenance

Routine O&M activities and inspections were performed during this reporting period. O&M logs for October through December 2018 are provided in Appendix C. Air sparging activities are summarized by remediation area below. When air sparging rates were increased in zones of the site, air monitoring was performed with a photoionization detector (PID) and visual observations were made in the areas where flow rates were adjusted.

- BCPZ: Air sparging in the BCPZ was performed using 26 VAS wells screened from 13.0 to 71.5 feet below ground surface (bgs). The flow rates in these wells averaged 6.89 standard cubic feet per minute (scfm) per sparge well during the reporting period. Additionally, air was injected into two submersible diffusion aerators installed in Brown's Creek. The flow rates in these aerators averaged 10.94 scfm each during this reporting period.
- CCPZ: Air sparging in the CCPZ was performed using a curtain of 19 VAS wells screened from 9.5 to 31.2 feet bgs. The flow rates in these wells averaged 6.49 scfm per sparge well during this reporting period.

- Hayfield Zone: Air sparging in the Hayfield Zone was performed using three horizontal wells (HAS-01, HAS-02, and HAS-03), which have screen lengths of approximately 752, 715, and 377 feet, respectively. The flow rates in each of the three horizontal wells (HAS-1, HAS-2, and HAS-3) were maintained at approximately 0.69 scfm per foot of screen (scfm/ft) during this reporting period, resulting in the following approximate flows: 513, 488, and 263 scfm per well, respectively.

Groundwater levels were measured in the BCPZ, CCPZ, and Hayfield Zone to evaluate the influence of the air sparging system on the residuum aquifer. Water level data loggers (In Situ Rugged Troll 100) have measured groundwater elevations continuously at various locations around the site. During this reporting period, data loggers were positioned in MW-02, MW-12, MW-25, MW-29, MW-39, and MW-40, and two barometric pressure loggers were positioned in MW-01 and MW-10.

3.6 Additional Activities

During the previous reporting period (third quarter 2018), 13 VAS wells were installed at the site, as approved by DHEC in a letter dated June 26, 2018 (DHEC, 2018b). Specifically, 13 additional VAS wells were installed to the top of bedrock (VAS-47 through VAS-59) between August 14 and September 7, 2018, in the BCPZ, CCPZ, and Shallow Bedrock Zone (SBZ). Eight of the 13 additional VAS wells (VAS-47 through VAS-54) were installed upgradient of the existing air sparging curtain along the west bank of Brown's Creek to address contamination in this area of the BCPZ and SBZ. The remaining five VAS wells (VAS-55 through VAS-59) were installed northwest of the air sparging curtain located north of Cupboard Creek to treat contamination in this area of the CCPZ. For this reporting period, the 13 VAS wells were connected to the existing sparging system between November 2018 and January 2019.

Jacobs submitted a letter to the DHEC Bureau of Air Quality on October 12, 2018, requesting an exemption from a DHEC air permit for the biosparging system. On February 26, 2019, Jacobs submitted a follow-up letter to the Bureau of Air Quality for confirmation that the proposed emissions related to the biosparging system operation would be exempt from a DHEC air permit. Additionally, on March 26, 2019, Jacobs submitted a letter to the DHEC Bureau of Water, Water Monitoring Assessment and Protection Division requesting that the existing underground injection control (UIC) permit-to-construct (No. SCHE03020469M2) be updated to a final permit-to-operate; attached to the letter was a DHEC Form 1903 providing the VAS well construction details for AS-47 through AS-59.

Upon receipt of the final permit-to-operate, Jacobs will prepare a startup plan and VAS well operations schedule compliant with the allowable emissions specified in the South Carolina Code of Regulations, Chapter 61, Article 62 for discharge of volatile organic compounds and toxic air pollutants. Upon air sparging startup, Jacobs will conduct a phased startup of the 13 air sparging wells over the course of approximately 2 weeks to monitor emissions associated with the additional air sparging wells.

4. Discussion of Results

4.1 Product Recovery

During this fourth quarter 2018 reporting period, only 1.53 gallons of product were recovered at the site, with 75 percent of that recovered from RW-05 and RS-08. The overall product recovery across the site decreased by 0.91 gallon compared to the previous quarter as noted in Table 2. Product thicknesses continue to be minimal across the site. Measurable thicknesses in December 2018 ranged from 0.01 foot (at RS-02 and RW-14) to 0.55 foot (at RS-05). Measurable product thicknesses were observed at only 8 of the 161 features monitored. Free product levels are presented alongside well gauging data in Table 4.

In December 2018, no recovery wells/features within the BCPZ or the CCPZ contained measurable product.

Table 2 shows the dates and quantities of product that was recovered. Table 7 shows the dates and quantities of product that was shipped offsite for disposal. Field notes for this reporting period are included in Appendix A.

4.2 Surface Water

No signs of distressed vegetation, hydrocarbon sheens, or odors were observed during the surface water inspections for this reporting period. Observations made during this reporting period are summarized in Table 1. Field notes for this reporting period are included in Appendix A.

During this reporting period, dissolved hydrocarbons were detected in surface water at 3 of the 15 locations sampled: SW-02, SW-13, and SW-14 (Table 3). Benzene at SW-02 was the only constituent that exceeded the surface water standard for protection of human health for consumption of water and organisms (DHEC, 2014) and will continue to be monitored. Plantation has contracted Environmental Standards, Inc., to perform a forensic review of the detections at SW-02 and SW-12 as was conducted in early 2018 (Environmental Standards, Inc., 2018). The chemical profiles of SW-02 and SW-12 will be compared to determine if the chemical profiles are still unrelated.

Surface water sample results are summarized in Table 3. Trends for surface water sampling locations SW-01, SW-02, SW-04, SW-12, SW-13, and SW-14 are presented in Appendix D. Construction details for the stream gauges are presented in Table 8. Field notes for this reporting period are included in Appendix A. Analytical data sheets and COC records are included in Appendix B.

4.3 Groundwater Flow

Water level data from the December 2018 gauging event were used to create potentiometric surface maps for the site (Figures 2A and 2B). Groundwater flow in both the residuum (Figure 2A) and bedrock (Figure 2B) aquifers mimics the topography of the site and generally flows from topographic highs to topographic lows. Cupboard Creek flows intermittently, indicating the primary direction of groundwater flow is northeast toward Brown's Creek. The December 2018 water table configurations and direction of groundwater flow are consistent with previous findings.

Stream elevations are tabulated in Table 4 and are presented with groundwater elevations on Figure 2A. Construction details for recovery and nonrecovery features are presented in Table 9.

Gauging sheets for this reporting period are included in Appendix A. Hydrographs for nonrecovery (monitoring wells and piezometers) and recovery features representative of general product thickness trends are presented in Appendix E.

4.4 Dissolved Oxygen Distribution

Overall during this reporting period, the average DO concentration stabilized in the residuum and bedrock wells with minor variations noted at each of the site's remediation zones. Overall trends in each remediation zone are discussed below. DO measurements in groundwater are provided in Table 5. Field notes for this reporting period are included in Appendix A.

4.4.1 Brown's Creek Protection Zone

The average DO levels in the BCPZ decreased from 4.03 mg/L in September 2018 to 3.14 mg/L in December 2018.

4.4.2 Cupboard Creek Protection Zone

The average DO concentrations in the CCPZ increased from 3.74 mg/L in September 2018 to 4.57 mg/L in December 2018.

4.4.3 Hayfield Zone

The average DO concentrations in the Hayfield Zone were stable at 8.36 mg/L in September 2018 to 8.13 mg/L in December 2018.

4.4.4 Shallow Bedrock Zone

DO levels in this zone (partially weathered bedrock or competent bedrock proximal to ground surface) decreased from 3.13 mg/L in September 2018 to 1.52 mg/L in December 2018.

4.5 Groundwater Monitoring Results

Groundwater monitoring results for this reporting period indicate significant decreases in dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone, as well as stable trends in the SBZ, bedrock wells, and other locations outside the direct influence of the air sparging systems. Table 6 presents analytical results for all groundwater samples that have been collected at the site since July 2015. Laboratory analytical reports for the sampling events for this reporting period are provided in Appendix B. Groundwater analytical results are screened against the risk-based screening levels listed in the Programmatic QAPP, Table D1 (South Carolina UST Management Division, 2016), referred to as Target Screening Levels (TSLs), and are provided at the top of Table 6. The December 2018 results, along with the two previous quarterly results, are shown on Figures 4A and 4B. The December 2018 results are summarized in the following sections. Trend plots for select groundwater monitoring wells are provided in Appendix F. The gray shaded area on the trend charts notes the operational period of the air sparging system. Trends plots for monitoring wells that have been nondetect since sampling began are not presented on the trend charts. Field notes and purge logs for this reporting period are included in Appendix A.

4.5.1 Brown's Creek Protection Zone

Dissolved concentrations continue to show an overall decreasing trend in the residuum groundwater of the BCPZ aquifer. For example, in monitoring wells MW-15, MW-34, MW-40, and MW-42, benzene concentrations have decreased by one to three orders of magnitude and benzene is now nondetect for the first time at MW-34 and MW-40, and for the first time at MW-15 since December 2017. Concentrations of BTEX constituents in MW-12 that were stable from September 2017 to March 2018, have decreased since June 2018 with only benzene above its TSL.

Benzene concentrations show a slight decrease in MW-12B and MW-15B. Benzene was nondetect in the other bedrock monitoring wells in December 2018.

Benzene was detected above TSLs in 4 of 15 residuum monitoring wells in the BCPZ (MW-12, MW-28, MW-38, and MW-39), ranging from 5.81 micrograms per liter (µg/L) to 412 µg/L. MTBE was detected

above its TSL in MW-34, MW-38, and MW-39, ranging from 89.7 µg/L to 156 µg/L. All constituents are nondetect in cross-gradient monitoring wells MW-37 (to the north) and MW-35 (to the south). All constituent concentrations in monitoring wells MW-24, MW-25, MW-41, MW-42, MW-43, and MW-49 have been nondetect since mid-2018.

4.5.2 Cupboard Creek Protection Zone

Since air sparging was initiated in March 2017, dissolved concentrations in the CCPZ have stabilized in residuum wells (MW-19, MW-20, MW-23, MW-26, MW-29, and MW-46). MW-19 has not been sampled on a regular frequency due to insufficient water; however, it was sampled in July 2018 with no detections above TSLs. Since the installation of MW-46 in September 2017, benzene concentrations had been increasing from 4.97 µg/L in December 2017 to 1,790 µg/L in November 2018; however, it has since decreased to 1,250 µg/L in December 2018. Additionally, MTBE concentrations had also increased from 85.5 µg/L in December 2017 to 299 µg/L in November 2018, but showed a slight decrease in December 2018. The December 2018 concentrations for benzene and MTBE were above their respective TSLs (5 µg/L and 40 µg/L) but showed a decrease from the November 2018 sampling event.

MW-20 has not been sampled since its installation in July 2015 to June 2018 due to the presence of free product. However, it was sampled in July 2018 with exceedances for BTEX and MTBE. During the December 2018 event, product sheen was observed to be present in MW-20 and was confirmed via bailer inspection. Downgradient monitoring wells MW-23, MW-26, and MW-29 were nondetect for all constituents.

No constituents were detected above TSLs in bedrock monitoring wells (MW-23B and MW-26B) in the CCPZ.

4.5.3 Hayfield Zone

A significant decreasing trend of TSLs was observed in the residuum groundwater of the Hayfield Zone, with reduced concentrations and reduced number of detected constituents exceeding TSLs. For example, 25 of the 36 monitoring wells sampled in the Hayfield Zone are below their respective TSLs, and dissolved constituent concentrations have decreased by three orders of magnitude since the initialization of the horizontal sparging wells in 2017.

In the Hayfield Zone, 5 of the 22 residuum monitoring wells had benzene detected above the TSL. Toluene concentrations exceeded the TSL in MW-07, and naphthalene concentrations exceeded the TSL in MW-16. TSL exceedances for residuum monitoring wells are shown in the table below.

Well	Date	Units	Benzene	Toluene	MTBE	Naphthalene
		TSL	**5**	**1,000**	**40**	**25**
MW-07	12/6/2018	µg/L	4,850	13,400	1 U	500 U
MW-09	12/6/2018	µg/L	6.39	48.3	5.68	6.79
MW-13	12/7/2018	µg/L	83.4	158	1 U	5 U
MW-16	12/6/2018	µg/L	10.3	132	5 U	460
MW-36	12/6/2018	µg/L	143	175	1 U	5 U

Gray shading indicates the analyte exceeded TSL

U = analyte was not detected above the reported sample quantitation limit

Three residuum monitoring wells in the Hayfield Zone were not sampled because of insufficient water (MW-17) and the presence of product (MW-08 and MW-18). The thickness of product at MW-18 was measured at 0.02 foot; product could not be measured at MW-08 with the interface probe, but product sheen was confirmed with a bailer. The analytical results for MW-51, MW-52, MW-53, and MW-54 installed in late August / early September 2018 have remained below the TSLs as of this monitoring event.

In bedrock wells, benzene was detected above its TSL in 3 of 10 wells, ranging in concentration from 27.4 µg/L in MW-50B to 6,860 µg/L in MW-17B during the December 2018 event. Concentrations of ethylbenzene, toluene, and MTBE exceeded the TSLs at MW-17B. MTBE also exceeded its TSL in MW-13B and MW-50B. At bedrock wells outside the direct influence of the air sparging system, only MW-07, MW-13, MW-13B, MW-17B, and MW-36 have had concentrations of BTEX, MTBE, and/or naphthalene significantly above TSLs since their installation to the December 2018 event. These wells will continue to be evaluated.

4.5.4 Shallow Bedrock Zone

In the SBZ of the residuum aquifer, MW-11 was not sampled due to confirmation of product sheen with a sample bailer. All other residuum wells in the SBZ had constituent concentrations below TSLs. In bedrock wells, benzene was detected above its TSL only in MW-1B, which is one of three wells in the SBZ, at a concentration of 8.3 µg/L.

4.6 Air Sparging System Operating Efficiency and Performance Data

Between October 1 and December 31, 2018, the air sparging system operated a total of 4,348.3 hours, with an operating uptime of 63 percent. Overall, the air sparging system operating uptime was lower than previous quarters because the air sparging system was not operating while the VAS expansion was under construction; however, the HAS system continued operation without any unscheduled downtime during the VAS expansion and this reporting period.

Since the air sparging system uses two compressors, system maintenance activities are conducted with no scheduled O&M system downtime. Air sparging flow rates for this reporting period in the stream aerators, horizontal wells, and vertical wells were at 73 percent, 92 percent, and 45 percent of design flow capacity, respectively.

5. Conclusions

The following conclusions are based on data analysis for work performed between October 1, 2018, and December 31, 2018:

- Since starting the air sparging system at the site on March 6, 2017 (VAS in the BCPZ and CCPZ areas) and in May 2017 (horizontal sparging system in the Hayfield Zone), product thickness values have substantially declined in both recovery and nonrecovery features across the site. The number of locations with product thicknesses greater than 0.5 foot has decreased from seven locations in March 2018, to one location in June 2018 through December 2018. The site features that have measurable product thickness are not adjacent to any surface water bodies at the site.
- The volume of product recovered between October and December 2018 was 1.53 gallons, which is 0.91 gallon less than that of the previous quarter. The majority of the product (75 percent) came from RW-05 and RS-08.
- One surface water sampling event was performed during this quarter (December 2018). The benzene exceedance at SW-02 will continue to be monitored and is being reviewed by Environmental Standards, Inc., to determine if the chemical profiles of SW-02 and SW-12 are still unrelated.
- The average DO concentration in residuum and bedrock wells has remained stable for this reporting period. This demonstrates the effectiveness of the air sparging system at introducing air into the subsurface. Air sparging in the VAS wells and stream aerator locations will be increased to design flow rates during the next quarter because the VAS wells were shut down during the VAS system expansion. The design flow rates have been met and sustained at the horizontal wells.
- The remedial efforts are protecting potential receptors as planned. Groundwater monitoring results for this reporting period indicate that the air sparging system continues to decrease dissolved concentrations of hydrocarbons in the BCPZ, CCPZ, and Hayfield Zone, while creating stable trends in the SBZ, bedrock wells, and at other site feature locations outside the direct influence of the air sparging system. For example, concentrations in MW-34 and MW-40 dropped significantly during the December 2018 event and are nondetect for the first time since sampling began at these locations. Concentrations in MW-15, MW-19, MW-23, and MW-27 are now below TSLs.
- The analytical results for new monitoring wells MW-51 and MW-52 have been below the TSLs for all constituents since they were installed in late August / early September 2018. These two monitoring wells delineate the dissolved phase plume to the northwest and southwest of Brown's Creek.
- The analytical results for new monitoring wells MW-53 and MW-54 have been below the TSLs for all constituents since they were installed in late August / early September 2018. These two monitoring wells delineate the dissolved phase plume to the north of the HAS system. Additionally, MW-54 improves monitoring in the area of MW-30, which can have periods of insufficient water for sample collection.
- During this reporting period, the air sparging system had an operating uptime of 63 percent. Operating flows in the stream aerators, horizontal wells, and vertical wells were at 73 percent, 92 percent, and 45 percent of design flow capacity, respectively. Overall, the air sparging system operating uptime was lower than previous quarters because the VAS system was not operating during the VAS expansion construction; however, the HAS system continued operation without any unscheduled downtime during the VAS expansion and this reporting period.

6. Future Activities

This section describes future activities planned for the site.

6.1 Groundwater and Surface Water Monitoring

- Continue gauging of monitoring wells and surface water sampling locations in accordance with the CAP Addendum, Revision 2 (CH2M, 2017c) submitted to DHEC on October 12, 2017, and with the revised groundwater monitoring plan table requested in the January 22, 2019, DHEC letter and included in this report as Table 10.
- Sample groundwater and surface water on a quarterly basis in accordance with Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017c), and Table 10 of this report.
- Collect groundwater from select monitoring wells and surface water sampling locations according to the mid-quarter schedule proposed in letters to DHEC dated January 16, 2019, and February 20, 2019. The wells and sampling locations are listed in Table 10.
- Collect DO measurements on a quarterly basis in accordance with Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017c).
- Submit quarterly reports in accordance with Section 3 and Table 2 of the CAP Addendum, Revision 2 (CH2M, 2017c).
- Continue routine visual inspection of Brown's Creek and Cupboard Creek as outlined in the CAP Addendum, Revision 2 (CH2M, 2017c).
- Continue to sample the newly installed monitoring wells (MW-51, MW-52, MW-53, and MW-54) as part of the quarterly gauging and sampling events.
- Install additional monitoring wells MW-55 (west of MW-36), MW-56, and MW-57 (southwest and west of MW-46, respectively), and advance one soil boring to the top of bedrock (east side of Brown's Creek near SW-02) to better define top of bedrock in this area of the site.
- Abandon the remaining 1-inch-diameter wells (piezometers) at the site. These 1-inch piezometers were installed initially during the emergency response for defining the potentiometric surface at the site and they are not representative for gauging product thickness measurements. The existing 2-inch monitoring well network is representative for gauging groundwater elevation and product thickness measurements, rendering the 1-inch wells no longer necessary.
- Abandon monitoring wells MW-17 and MW-19 without replacement. These wells have consistently demonstrated insufficient groundwater for sample collection, and additional downgradient and cross-gradient wells have since been installed in the vicinity that provide sufficient water for groundwater sampling purposes.
- Analyze concentration trends in the monitoring well network to identify areas for additional remediation, if necessary, and to optimize the monitoring well network.

6.2 System Operation and Maintenance

- Begin operation of the 13 new VAS wells installed during the expansion of the VAS biosparging system, following approval from the DHEC Bureau of Air Quality. (Note that this expansion of the air sparging system requires an air permit exemption and a final UIC permit-to-operate prior to system startup.)
- Continue scheduled O&M activities for the air sparging system to optimize performance.
- Continue air sparging in the BCPZ and CCPZ up to the maximum design flow rate of 15 scfm per well.
- Continue air sparging in the horizontal wells in the Hayfield Zone up to the maximum design flow rate of 0.75 scfm/ft.

- Continue operating the stream diffusion aerators at the design flow rate of 15 scfm if sufficient surface water is available.
- Remove the 43 site features in accordance with South Carolina Well Standards, Regulation R.61-71, of the Official Code of South Carolina, as presented in the letter sent to DHEC on November 28, 2018.

7. References

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South Carolina Department of Health and Environmental Control (DHEC). 2016. *R. 61-71, Well Standards*. May 27.

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Tables

Table 1. Field Observation Log

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Date	Inspect Wetlands South of Calhoun Road (Any odor, sheen or distressed vegetation? Describe.)	Inspect Brown's Creek Upstream and Downstream of the Culvert Under Lewis Drive (Any odor, sheen or distressed vegetation? Describe.)
12/3/2018	No odors, sheens, or distressed vegetation observed in wetlands South of Calhoun Road.	No odors, sheens, or distressed vegetation observed in wetlands either upstream or downstream of Culvert under Lewis Drive.

Note:

ID = identification

RT = recovery trench

Table 2. Product Recovery Results
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Well Identifier	Week 1 Volume Recovered (gal)	Week 2 Volume Recovered (gal)	Week 3 Volume Recovered (gal)	Week 4 Volume Recovered (gal)	Week 5 Volume Recovered (gal)	Week 6 Volume Recovered (gal)	Week 7 Volume Recovered (gal)	Week 8 Volume Recovered (gal)	Week 9 Volume Recovered (gal)	Week 10 Volume Recovered (gal)	Week 11 Volume Recovered (gal)	Week 12 Volume Recovered (gal)	Week 13 Volume Recovered (gal)	Total Recovered to Date (gal)
Date	**2/20/2018**	**2/26/2018**	**3/9/2018**	**3/15/2018**	**4/6/2018**	**5/3/2018**	**6/7/2018**	**7/13/2018**	**8/1/2018**	**9/11/2018**	**10/5/2018**	**11/1/2018**	**12/4/2018**	
Product Skimmers														
MW-08	-	-	-	-	0.001	-	-	-	-	-	-	-	-	**0.001**
MW-15	-	-	0.023	0.004	-	-	-	-	-	-	-	-	-	**0.027**
MW-20	0.004	0.017	0.016	-	0.002	-	0.008	-	-	-	-	-	-	**0.046**
RS-01	NA	NA	0.031	0.008	-	-	-	0.031	0.016	0.008	-	0.002	-	**0.095**
RS-02	-	-	0.001	-	-	-	0.008	0.016	0.016	-	-	0.002	-	**0.041**
RS-05	0.844	0.813	1.094	1.125	0.031	0.002	0.008	0.004	0.023	0.016	0.004	0.002	0.002	**3.966**
RS-10	0.002	-	-	-	0.008	-	-	-	0.004	0.002	0.000	-	-	**0.016**
RS-14	0.016	-	-	-	-	-	0.008	0.002	0.004	-	-	-	-	**0.029**
RS-17	-	-	0.001	-	-	-	0.008	0.002	-	-	-	-	-	**0.010**
RW-02	-	0.090	0.047	-	0.033	-	0.008	0.001	0.016	0.023	-	-	0.002	**0.219**
RW-03	-	-	0.008	0.008	0.002	-	0.008	0.001	0.004	0.006	0.000	-	-	**0.036**
RW-04	-	0.008	0.016	-	0.001	-	0.016	0.023	0.008	-	0.000	-	-	**0.071**
RW-05	-	0.016	0.016	0.656	-	0.001	0.018	-	0.047	0.031	0.508	0.000	0.156	**1.449**
RW-07	0.002	-	0.008	-	-	-	-	-	0.004	0.001	-	-	-	**0.014**
RW-08	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
RW-15	0.078	-	-	0.117	0.031	0.002	-	0.008	-	0.002	0.000	-	-	**0.238**
RW-10								0.234	0.004	-	-	-	0.002	**0.240**
											-	-		
Petroleum-Absorbent Socks														
MW-11	0.200	0.224	-	0.256	0.200	0.008	0.221	-	-	-	-	-	-	**1.109**
RS-08	-	-	-	-	0.243	0.040	0.016	0.224	-	-	0.211	0.125	0.144	**1.004**
RT-2K	-	-	-	-	0.006	0.006	0.209	0.152	0.187	-	0.051	0.021	0.004	**0.635**
RT-1A	-	-	-	-	0.228	0.036	0.254	0.205	0.233	0.131	0.039	-	0.120	**1.245**
RT-1B	-	-	-	-	0.251	0.038	0.244	0.235	0.212	-	-	0.009	0.021	**1.009**
RT-1C	-	-	-	-	0.255	0.039	0.231	0.201	0.069	0.041	-	0.102	-	**0.938**
Total:	**1.145**	**1.167**	**1.259**	**2.174**	**1.291**	**0.171**	**1.263**	**1.337**	**0.845**	**0.259**	**0.815**	**0.262**	**0.450**	**12.439**

Notes:
- = no product recovered
gal = gallons
ID = identification
MW = monitoring well
NA = not applicable
RS - recovery sump
RT = recovery trench
RW = recovery well

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-RELEASE	SW-RELEASE	1/20/2015	µg/L	**330**		**490**		**2,400**		**2,100**		**940**		**140**		**5.7**	**J**
SW-01	SW01-121114	12/11/2014	µg/L	0.5	U	1	U	1	U	2	U	1	U	1	U	1	U
	SW01-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-033115	3/31/2015	µg/L	5	U[c]	5	U	**17.6**		10	U	5	U	5	U	NA	
	SW01-042215	4/22/2015	µg/L	5	U[c]	5	U	**14.9**		10	U	5	U	5	U	NA	
	SW01-050715	5/7/2015	µg/L	5	U[c]	5	U	**7.0**		10	U	5	U	5	U	NA	
	SW01-051915	5/19/2015	µg/L	5	U[c]	5	U	**8.8**		**10.6**		**6.4**		5	U	NA	
	SW01-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW01-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW01-112415	11/24/2015	µg/L	**7.8**		**1.5**		**13.0**		**9.3**		**4.6**		1	U	NA	
	SW01-122215	12/22/2015	µg/L	**4.6**		1	U	**8.8**		**5.5**		**3.1**		1	U	NA	
	SW01-012516	1/25/2016	µg/L	**17.6**		**2.3**		**36.0**		**11.3**		**6.3**		1	U	NA	
	SW01-021816	2/18/2016	µg/L	**23.4**		**3.0**		**55.6**		**15.0**		**9.1**		1	U	NA	
	SW01-031616	3/16/2016	µg/L	**20.1**		**2.4**		**42.3**		**13.3**		**7.6**		1	U	NA	
	SW01-042716	4/27/2016	µg/L	**20.8**		1	U	**30.6**		**2.9**		**2.0**		1	U	NA	
	SW01-050916	5/9/2016	µg/L	**16.5**		**1.4**		**16.3**		**7.0**		**4.8**		1	U	NA	
	SW01-062716	6/27/2016	µg/L	**9**		1	U	**3.3**		2	U	1	U	1	U	NA	
	SW01-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW01-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW01-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW01-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW01-112816	11/28/2016	µg/L	**5.0**		1	U	**10.4**		**4.9**		**8.3**		1	U	NA	
	SW01-122916	12/29/2016	µg/L	**12.6**		1	U	**22.1**		**11.2**		**13.5**		1	U	NA	
	SW01-012017	1/20/2017	µg/L	**1.0**		1	U	**2.3**		2	U	**3.5**		1	U	NA	
	SW01-022817	2/28/2017	µg/L	**18.5**		**1.93**		**37.0**		**13.8**		**10.2**		5	U	NA	
	SW01-031517	3/15/2017	µg/L	**3.02**		1	U	**5.13**		**2.16**		**1.74**		5	U	NA	
	SW01-032117	3/21/2017	µg/L	1	U	1	U	**1.57**		2	U	1	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-01	SW01-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW01-040517	4/5/2017	µg/L	1	U	1	U	**2.25**		2	U	1	U	5	U	NA	
	SW01-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW01-061317	6/13/2017	µg/L	1	U	1	U	**1.90**		2	U	1	U	5	U	NA	
	SW01-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW01-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW01-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW01-120517	12/5/2017	µg/L	**1.5**		1	U	**1.15**		2	U	**2.14**		5	U	NA	
	SW01-121417	12/14/2017	µg/L	**4.52**		1	U	**4.52**		**3.48**		**3.2**		5	U	NA	
	SW01-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	**1.15**		5	U	NA	
	SW01-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW01-030918	3/9/2018	µg/L	**1.15**		1	U	1	U	2	U	1	U	5	U	1	U
	SW01-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.1**	
	SW01-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW01-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.43**	
	SW01-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.09**	
	SW01-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.51**	
	SW01-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-02	SW02-121114	12/11/2014	µg/L	0.5	U	1	U	1	U	2	U	1	U	1	U	1	U
	SW02-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-033115	3/31/2015	µg/L	5	U[c]	5	U	**6.0**		10	U	5	U	5	U	NA	
	SW02-042215	4/22/2015	µg/L	5	U[c]	5	U	**13.0**		10	U	5	U	5	U	NA	
	SW02-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW02-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-112415	11/24/2015	µg/L	**6**		**1.3**		**10.0**		**7.8**		**4.0**		1	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-02	SW02-122215	12/22/2015	µg/L	**4.1**		1	U	**7.6**		**5.1**		**3.1**		1	U	NA	
	SW02-012516	1/25/2016	µg/L	**12**		**1.5**		**25.0**		**8.4**		**4.6**		1	U	NA	
	SW02-021816	2/18/2016	µg/L	**15.5**		**1.8**		**35.3**		**10.1**		**5.9**		1	U	NA	
	SW02-031616	3/16/2016	µg/L	**8**		**1.0**		**17.5**		**5.8**		**3.9**		1	U	NA	
	SW02-042716	4/27/2016	µg/L	**5.6**		1	U	**7.1**		2	U	1	U	1	U	NA	
	SW02-050916	5/9/2016	µg/L	**7.1**		1	U	**4.5**		**2.2**		**1.6**		1	U	NA	
	SW02-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-112816	11/28/2016	µg/L	**5.4**		1	U	**1.6**		**2.6**		**4.8**		1	U	NA	
	SW02-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	**1.4**		1	U	NA	
	SW02-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW02-022817	2/28/2017	µg/L	**10.7**		1	U	**11.0**		**4.14**		**4.23**		5	U	NA	
	SW02-031517	3/15/2017	µg/L	**11.4**		1	U	**8.6**		**4.45**		**3.6**		5	U	NA	
	SW02-032117	3/21/2017	µg/L	**8.42**		1	U	**2.45**		**2.48**		**2.68**		5	U	NA	
	SW02-033017	3/30/2017	µg/L	**2.18**		1	U	1	U	2	U	1	U	5	U	NA	
	SW02-040517	4/5/2017	µg/L	**2.87**		1	U	**1.12**		2	U	**1.14**		5	U	NA	
	SW02-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW02-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW02-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW02-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW02-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW02-120517	12/5/2017	µg/L	**26.6**		**1.8**		**8.39**		**10.2**		**7.17**		5	U	NA	
	SW02-121417	12/14/2017	µg/L	**21.1**		**1.53**		**9.4**		**9.74**		**7.32**		5	U	NA	
	SW02-010918	1/9/2018	µg/L	**25.0**		**1.56**		**12.4**		**11**		**8.24**		5	U	NA	
	SW02-020618	2/6/2018	µg/L	**6.69**		**1**	U	**2.65**		**2.75**		**1.87**		5	U	1	U
	SW02-030918	3/9/2018	µg/L	**3.19**		1	U	**1.39**		2	U	**1.11**		5	U	1	U
	SW02-040618	4/6/2018	µg/L	**2.23**		1	U	1	U	2	U	1	U	5	U	**2.13**	
	SW02-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**2.25**	
	SW02-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.92**	
	SW02-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.15**	
	SW02-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**2.94**	
	SW02-120418	12/4/2018	µg/L	**11.9**		1	U	**1.32**		**4.40**		**3.75**		5	U	**2.23**	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-03	SW-Upgradient	1/20/2015	µg/L	0.5	U	1	U	**0.23 J**		2	U	1	U	1	U	1	U
	SW03-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW03-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW03-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	--	8/19/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW03-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW03-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-03	SW03-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW03-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	--	1/9/2018	--	NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS	
	SW03-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW03-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-04	SW-Downgradient	1/20/2015	µg/L	**95**		**27**		**310**		**110**		**63**		**94**		**2.7**	
	SW04-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW04-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-112415	11/24/2015	µg/L	**1.7**		1	U	**2.7**		**2.9**		**1.6**		1	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-04	SW04-122215	12/22/2015	µg/L	**3.3**		1	U	**7.3**		**5.2**		**2.7**		1	U	NA	
	SW04-012516	1/25/2016	µg/L	**6.9**		1	U	**14.0**		**4.9**		**2.8**		1	U	NA	
	SW04-021816	2/18/2016	µg/L	**10.9**		**1.1**		**25.4**		**7.0**		**4.3**		1	U	NA	
	SW04-031616	3/16/2016	µg/L	1	U	1	U	**2.0**		2	U	**1.8**		1	U	NA	
	SW04-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-062716	6/27/2016	µg/L	1	U	1	U	**1.1**		2	U	1	U	1	U	NA	
	SW04-072816	7/28/2016	µg/L	1	U	1	U	**23.5**		2	U	1	U	1	U	NA	
	SW04-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW04-022817	2/28/2017	µg/L	1	U	1	U	**1.13**		2	U	1	U	5	U	NA	
	SW04-031517	3/15/2017	µg/L	1	U	1	U	**2.90**		2	U	1	U	5	U	NA	
	SW04-032117	3/21/2017	µg/L	1	U	1	U	**3.28**		2	U	1	U	5	U	NA	
	SW04-033017	3/30/2017	µg/L	1	U	1	U	**6.15**		2	U	1	U	5	U	NA	
	SW04-040517	4/5/2017	µg/L	1	U	1	U	**9.47**		2	U	1	U	5	U	NA	
	SW04-050417	5/4/2017	µg/L	1	U	1	U	**13.8**		2	U	1	U	5	U	NA	
	SW04-061317	6/13/2017	µg/L	1	U	1	U	**1.37**		2	U	1	U	5	U	NA	
	SW04-071817	7/18/2017	µg/L	1	U	1	U	**1.92**		2	U	1	U	5	U	NA	
	SW04-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW04-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW04-120517	12/5/2017	µg/L	1	U	1	U	**5.53**		2	U	1	U	5	U	NA	
	SW04-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW04-010918	1/9/2018	µg/L	1	U	1	U	**4.09**		2	U	1	U	5	U	NA	
	SW04-020618	2/6/2018	µg/L	**3.04**		1	U	**1.73**		2	U	**1.12**		5	U	1	U
	SW04-030918	3/9/2018	µg/L	1	U	1	U	**1.37**		2	U	1	U	5	U	1	U
	SW04-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW04-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.2**	
	SW04-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.31**	
	SW04-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW04-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.13**	
	SW04-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-05	SW05-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	SW05-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA			
	--	5/19/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	6/3/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	6/18/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	7/15/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	8/13/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	10/22/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	SW05-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW05-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW05-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW05-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	SW05-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	--	4/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	5/9/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	6/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	7/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	8/19/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	9/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	10/31/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	12/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	1/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	2/28/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	3/15/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	3/21/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	3/30/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	4/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			
	--	5/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW			

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-05	--	6/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/18/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/2/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/14/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	1/9/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW05-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW05-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	--	4/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW05-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	--	6/7/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/12/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/14/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW05-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-06	SW06-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW06-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	3/31/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW06-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	5/7/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/19/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/3/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/18/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/15/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/13/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/22/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	11/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW06-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW06-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-06	SW06-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	--	3/16/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	4/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/9/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/19/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/31/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	1/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	2/28/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/15/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/21/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/30/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	4/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/18/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/2/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/14/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	1/9/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	2/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	3/9/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	4/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	5/3/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	6/7/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/12/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/14/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-07	SW07-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW07-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	--	8/13/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/24/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW07-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW07-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	--	6/27/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	7/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	8/19/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	10/31/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	12/29/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	1/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	2/28/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW07-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	

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Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-07	SW07-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	--	8/2/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	--	9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW07-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW07-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW07-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	--	9/14/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	SW07-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-08	SW08-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW08-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-122215	12/22/2015	µg/L	**1.6**		1	U	**3.8**		**2.5**		**1.6**		1	U	NA	
	SW08-012516	1/25/2016	µg/L	**2.4**		1	U	**5.6**		**2**		**1.3**		1	U	NA	
	SW08-021816	2/18/2016	µg/L	**2.9**		1	U	**7.6**		**2.3**		**1.5**		1	U	NA	
	SW08-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-08	SW08-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW08-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW08-010918	1/9/2018	µg/L	**1.16**		1	U	1	U	2	U	**1.87**		5	U	NA	
	SW08-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW08-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-09	SW09-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW09-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-122215	12/22/2015	µg/L	**2.1**		1	U	**4.8**		**3.3**		**2.1**		1	U	NA	
	SW09-012516	1/25/2016	µg/L	**3.3**		1	U	**7.1**		**2.4**		**1.5**		1	U	NA	
	SW09-021816	2/18/2016	µg/L	**2.2**		1	U	**5.9**		2	U	**1.2**		1	U	NA	
	SW09-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW09-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-09	SW09-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW09-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW09-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-10	SW10-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW10-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-10	SW10-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW10-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-10-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-10-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-10-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW10-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW10-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-11	SW11-022515	2/25/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-030215	3/2/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-031115	3/11/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-031815	3/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-033115	3/31/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-042215	4/22/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
SW-11	SW11-050715	5/7/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-051915	5/19/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-060315	6/3/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-061815	6/18/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-071515	7/15/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-081315	8/13/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-092415	9/24/2015	µg/L	5	U[c]	5	U	5	U	10	U	5	U	5	U	NA	
	SW11-102215	10/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-112415	11/24/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-122215	12/22/2015	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-012516	1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-021816	2/18/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW11-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-11-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-11-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW-11-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-11	SW11-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW11-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW11-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-12	SW12-081916	8/19/2016	µg/L	**6,430**		**764**		**15,400**		**3,360**		**1,730**		**128**		NA	
	SW12-092916	9/29/2016	µg/L	**7,850**		**1,030**		**19,000**		**3,910**		**1,940**		**143**		NA	
	SW12-103116	10/31/2016	µg/L	**165**		**17.7**		**302**		**103**		**58.2**		**4.7**		NA	
	SW12-112816	11/28/2016	µg/L	**486**		**59.6**		**976**		**351**		**181**		**14.2**		NA	
	SW12-122916	12/29/2016	µg/L	**707**		**97.3**		**1,790**		**408**		**213**		**16.8**		NA	
	SW12-012017	1/20/2017	µg/L	**212**		**19.8**		**396**		**104**		**58**		**3.8**		NA	
	SW12-022817	2/28/2017	µg/L	**26.1**		**4.04**		**62.3**		**18.0**		**9.73**		5	U	NA	
	SW12-031517	3/15/2017	µg/L	**125**		**15.3**		**185**		**67.9**		**35.5**		5	U	NA	
	SW12-032117	3/21/2017	µg/L	**134**		**12.1**		**45.0**		**60.8**		**33.6**		5	U	NA	
	SW12-033017	3/30/2017	µg/L	**48.5**		**5.69**		**86.3**		**27.7**		**15.8**		5	U	NA	
	SW12-040517	4/5/2017	µg/L	**67.1**		**9.24**		**127.0**		**43.6**		**23.7**		5	U	NA	
	SW12-050417	5/4/2017	µg/L	**52.8**		**7.96**		**91.7**		**42**		**23.2**		5	U	NA	
	SW12-061317	6/13/2017	µg/L	**102**		**16.6**		**166**		**85.1**		**46.2**		5	U	NA	
	SW12-071817	7/18/2017	µg/L	**65**		**5.8**		**116**		**43.3**		**24.8**		5	U	NA	
	SW12-080217	8/2/2017	µg/L	**125**		**14.7**		**204**		**102**		**67**		5	U	NA	
	SW12-090517	9/5/2017	µg/L	**46.7**		**4.72**		**72**		**39**		**26.2**		5	U	NA	
	SW12-120517	12/5/2017	µg/L	**16.6**		**2.91**		**12.6**		**20.1**		**13.3**		5	U	NA	
	SW12-121417	12/14/2017	µg/L	**9.19**		**2.66**		**8.26**		**18**		**12.1**		5	U	NA	
	SW12-010918	1/9/2018	µg/L	**12.3**		**2.16**		**5.65**		**14.6**		**11.1**		5	U	NA	
	SW12-020618	2/6/2018	µg/L	**2.53**		1	U	**1.20**		**4.04**		**2.44**		5	U	1	U
	SW12-030918	3/9/2018	µg/L	**3.24**		**1.79**		**12.2**		**9.75**		**4.28**		5	U	1	U
	SW12-040618	4/6/2018	µg/L	**1.88**		1	U	1	U	**5.05**		**2.82**		5	U	1	U
	SW12-050318	5/3/2018	µg/L	1	U	1	U	1	U	**4.18**		**2.72**		5	U	1	U
	SW12-060718	6/7/2018	µg/L	**1.85**		1	U	1	U	**3.24**		**1.64**		5	U	1	U

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
SW-12	SW12-071218	7/12/2018	µg/L	**1.79**		1	U	1	U	**3.81**		**2.15**		5	U	1	U
	SW12-091418	9/14/2018	µg/L	**1.34**		1	U	1	U	**3.20**		**2.00**		5	U	1	U
	SW12-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
SW-13	SW13-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW13-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW13-103116	10/31/2016	µg/L	1	U	1	U	**2.0**		2	U	1	U	1	U	NA	
	SW13-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW13-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW13-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	SW13-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-040517	4/5/2017	µg/L	1	U	1	U	**1.21**		2	U	1	U	5	U	NA	
	SW13-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW13-020618	2/6/2018	µg/L	**1.78**		1	U	1	U	2	U	1	U	5	U	**4.26**	
	SW13-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**2.07**	
	SW13-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.4**	
	SW13-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**3.67**	
	SW13-060718	6/7/2018	µg/L	**2.99**		1	U	**2.48**		2	U	1	U	5	U	**8.08**	
	SW13-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW13-081318	8/13/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW13-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	SW13-120418	12/4/2018	µg/L	1	U	1	U	**1.84**		2	U	1	U	5	U	**3.49**	
SW-14	SW14-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW14-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	SW14-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte															
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE			
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b		
SW-14	SW14-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	--	12/14/2017	--	NS-DW		NS-DW		NS-DW		NS-DW		NS-DW		NS-DW		NS-DW			
	SW14-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	SW14-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	SW14-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	SW14-040618	4/6/2018	µg/L	1	U	1	U	**1.43**		2	U	1	U	5	U	1	U		
	SW14-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	SW14-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.18**			
	SW14-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.33**			
	SW14-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U		
	SW14-120418	12/4/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	**1.62**			
FP-01	FP01-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA			
	FP01-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP01-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			
	FP-01-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA			

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
FP-01	FP01-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP01-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP01-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
FP-02	FP02-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-081916	8/19/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP02-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP02-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-040517	4/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-02-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP02-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP02-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP02-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	a	530	a	1,000	a	NA	b	NA	b	NA	b	NA	b
FP-02	FP02-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP02-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP02-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP02-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP02-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
FP-03	FP03-031616	3/16/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-042716	4/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-050916	5/9/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-062716	6/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-072816	7/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	--	8/19/2016	--	NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS	
	FP03-092916	9/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-103116	10/31/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-112816	11/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-122916	12/29/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-012017	1/20/2017	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	NA	
	FP03-022817	2/28/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP03-031517	3/15/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-032117	3/21/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-033017	3/30/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	--	4/5/2017	--	NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS	
	FP-03-050417	5/4/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-061317	6/13/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-071817	7/18/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-080217	8/2/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-090517	9/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-120517	12/5/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP-03-121417	12/14/2017	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP03-010918	1/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	NA	
	FP03-020618	2/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP03-030918	3/9/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP03-040618	4/6/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP03-050318	5/3/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP03-060718	6/7/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U

Table 3. Analytical Results for Surface Water

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Sample ID	Date Collected	Units	Analyte													
				Benzene		Ethylbenzene		Toluene		m&p-Xylene		o-Xylene		Naphthalene		MTBE	
		Screening Value (µg/L):		2.2	[a]	530	[a]	1,000	[a]	NA	[b]	NA	[b]	NA	[b]	NA	[b]
FP-03	FP03-071218	7/12/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U
	FP03-091418	9/14/2018	µg/L	1	U	1	U	1	U	2	U	1	U	5	U	1	U

Notes:

[a] South Carolina Department of Health and Environmental Control (SCDHEC) R.61-68, Water Classifications and Standards, Human Health for consumption of water and organism, June 27, 2014.

[b] Screening levels for these analytes are not specified in SCDHEC R. 61-68.

[c] The analyte was analyzed for, but was not detected above the laboratory reporting/quantitation limit. However, the laboratory reporting/quantitation limit is above the screening criteria. The actual absence or presence of this analyte between the screening criteria and the laboratory reporting/quantitation limit cannot be determined.

Samples analyzed by EPA Method SW 8260B

Bold indicates the analyte was detected above the method detection limit.

Gray shading indicates the analyte exceeded its screening value.

µg/L = microgram(s) per liter

FP = fishing pond

ID = identification

J = estimated

MTBE = methyl tertiary butyl ether

NA = not applicable

NS-DW = sample not collected due to location being in a different watershed

NS-HS = sample not collected due to health and safety concerns

NS-IW = sample not collected due to insufficient volume of water in well

SW = surface water

U = analyte was not detected above the reported sample quantitation limit

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-01*					853.07			
	12/3/2018	-	3.91	-		849.16	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-01B*					852.99			
	12/3/2018	-	7.62	-		845.37	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-02*					841.04			
	12/3/2018	-	3.58	-		837.46	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-02B*					841.19			
	12/3/2018	-	12.92	-		828.27	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-03					838.36			
	12/3/2018	-	14.00	-		824.36	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-04					844.42			
	12/3/2018	-	7.55	-		836.87	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-05					851.11			
	12/3/2018	-	12.39	-		838.72	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-06					852.92			
	12/3/2018	-	11.24	-		841.68	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-06B*					852.57			
	12/3/2018	-	11.39	-		841.18	-	
	11/1/2018	-	NM	-		-	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-06B (cont'd)	10/5/2018	-	NM	-		-	-	
MW-07					853.02			
	12/3/2018	-	10.99	-		842.03	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-08					844.72			
	12/3/2018	-	19.18	-		825.54	-	
	11/1/2018	-	19.29	-		825.43	-	
	10/5/2018	13.10	13.11	0.01		831.61	831.62	
MW-09*					843.63			
	12/3/2018	-	-	-		843.63	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-09B*					843.92			
	12/3/2018	-	3.90	-		840.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-10*					845.41			
	12/3/2018	-	7.35	-		838.06	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-11*					855.63			
	12/3/2018	-	28.17	-		827.46	-	
	11/1/2018	30.66	30.77	0.11		824.86	824.94	
	10/5/2018	29.56	29.62	0.06		826.01	826.05	
MW-12					834.53			
	12/3/2018	-	12.02	-		822.51	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-12B*					834.98			
	12/3/2018	-	12.49	-		822.49	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-13					848.84			
	12/3/2018	-	20.87	-		827.97	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-13 (cont'd)	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-13B*					849.82			
	12/3/2018	-	21.69	-		828.13	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-14					838.70			
	12/3/2018	-	14.88	-		823.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-14B*					840.20			
	12/3/2018	-	16.60	-		823.60	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-15					831.03			
	12/4/2018	-	10.37	-		820.66	-	
	11/1/2018	-	11.70	-		819.33	-	
	10/5/2018	11.41	11.42	0.01		819.61	819.62	
MW-15B*					831.29			
	12/4/2018	-	14.44	-		816.85	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-16					847.67			
	12/3/2018	-	4.98	-		842.69	-	Sparge system on
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	6.20	-		841.47	-	
MW-17					855.35			
	12/3/2018	-	10.85	-		844.50	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-17B*					855.37			
	12/3/2018	-	13.22	-		842.15	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-18					846.89			

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-18 (cont'd)	12/3/2018	17.83	17.85	0.02		829.04	829.05	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	16.11	18.57	**2.46**		828.32	830.11	
MW-19					853.94			
	12/3/2018	-	9.94	-		844.00	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-20					852.89			
	12/3/2018	-	9.99	-		842.90	-	
	11/1/2018	11.23	12.00	**0.77**		840.89	841.45	
	10/5/2018	-	11.22	-		841.67	-	
MW-21					855.77			
	12/3/2018	-	13.41	-		842.36	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-22					854.60			
	12/3/2018	-	7.37	-		847.23	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-23*					849.57			
	12/3/2018	-	6.97	-		842.60	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-23B*					849.69			
	12/3/2018	-	8.73	-		840.96	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-24*					817.92			
	12/3/2018	-	4.78	-		813.14	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-24B*					818.72			
	12/3/2018	-	5.59	-		813.13	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-25*					826.18			
	12/3/2018	-	7.13	-		819.05	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-25B*					823.81			
	12/3/2018	-	3.70	-		820.11	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-26*					847.56			
	12/3/2018	-	2.36	-		845.20	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-26B*					847.81			
	12/3/2018	-	5.55	-		842.26	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-27*					854.11			
	12/3/2018	-	24.96	-		829.15	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-27B					857.14			
	12/3/2018	-	29.34	-		827.80	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-28					844.31			
	12/3/2018	-	21.17	-		823.14	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-29*					852.20			
	12/3/2018	-	3.11	-		849.09	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-30					841.28			
	12/3/2018	-	12.77	-		828.51	-	
	11/1/2018	-	NM	-		-	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-30 (cont'd)	10/5/2018	-	NM	-		-	-	
MW-31					845.04			
	12/3/2018	-	19.47	-		825.57	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-31B*					844.94			
	12/3/2018	-	20.53	-		824.41	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-32*					842.93			
	12/3/2018	-	11.85	-		831.08	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-33					849.20			
	12/3/2018	-	25.37	-		823.83	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-33T*					849.11			
	12/3/2018	-	26.29	-		822.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-34*					816.35			
	12/4/2018	-	2.87	-		813.48	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-35*					829.40			
	12/3/2018	-	7.45	-		821.95	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-36					858.47			
	12/4/2018	-	16.65	-		841.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-36B*					858.15			
	12/4/2018	-	16.32	-		841.83	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-36B* (cont'd)	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-37*					813.92			
	12/3/2018	-	3.01	-		810.91	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-38*					813.28			
	12/3/2018	-	1.12	-		812.16	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-39*					819.90			
	12/4/2018	-	4.45	-		815.45	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-40*					817.79			
	12/4/2018	-	2.27	-		815.52	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-41*					819.68			
	12/3/2018	-	3.66	-		816.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-42*					820.33			
	12/3/2018	-	4.37	-		815.96	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-43*					818.12			
	12/3/2018	-	4.24	-		813.88	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-43B*					818.80			
	12/3/2018	-	2.30	-		816.50	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-44*					853.67			

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-44* (cont'd)	12/3/2018	-	3.22	-		850.45	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-44B*					853.38			
	12/3/2018	-	11.36	-		842.02	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-45					852.47			
	12/3/2018	-	10.94	-		841.53	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-45B*					852.85			
	12/3/2018	-	13.13	-		839.72	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-46*					845.47			
	12/3/2018	-	5.25	-		840.22	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-47					842.98			
	12/3/2018	-	18.88	-		824.10	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-48B*					832.34			
	12/3/2018	-	16.40	-		815.94	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-49					846.78			
	12/3/2018	-	17.49	-		829.29	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
MW-50B*					850.34			
	12/3/2018	-	26.06	-		824.28	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
MW-51					828.77			
	12/3/2018	-	17.38	-		811.39	-	
	10/5/2018	-	18.84	-		809.93	-	
MW-52					826.72			
	12/3/2018	-	15.80	-		810.92	-	
	10/5/2018	-	16.90	-		809.82	-	
MW-53					837.37			
	12/3/2018	-	6.81	-		830.56	-	
	10/5/2018	-	11.54	-		825.83	-	
MW-54					840.79			
	12/3/2018	-	12.95	-		827.84	-	
	10/5/2018	-	11.57	-		829.22	-	Bubbling in well
RS-01					849.13			
	12/4/2018	8.83	8.85	0.02		840.28	840.29	
	11/1/2018	10.22	10.24	0.02		838.89	838.90	
	10/5/2018	-	11.10	-		838.03	-	
RS-02					849.52			
	12/4/2018	6.17	6.18	0.01		843.34	843.35	
	11/1/2018	-	9.80	-		839.72	-	
	10/5/2018	-	11.25	-		838.27	-	
RS-04					851.47			
	12/3/2018	-	6.33	-		845.14	-	
	11/1/2018	-	9.77	-		841.70	-	
	10/5/2018	-	9.72	-		841.75	-	
RS-05					848.31			
	12/4/2018	9.40	9.95	**0.55**		838.36	838.76	
	11/1/2018	9.21	9.23	0.02		839.08	839.09	
	10/5/2018	9.85	9.98	0.13		838.33	838.42	
RS-06					849.47			
	12/3/2018	-	8.19	-		841.28	-	
	11/1/2018	-	9.99	-		839.48	-	
	10/5/2018	-	10.50	-		838.97	-	
RS-07					855.08			
	12/3/2018	-	11.74	-		843.34	-	
	11/1/2018	-	12.69	-		842.39	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
RS-07 (cont'd)	10/5/2018	-	12.68	-		842.40	-	
RS-08					854.24			
	12/3/2018	-	11.51	-		842.73	-	
	11/1/2018	-	12.84	-		841.40	-	
	10/5/2018	-	12.97	-		841.27	-	
RS-09					847.60			
	12/3/2018	-	5.69	-		841.91	-	
	11/1/2018	-	8.25	-		839.35	-	
	10/5/2018	-	10.19	-		837.41	-	
RS-10					847.42			
	12/4/2018	-	8.59	-		838.83	-	
	11/1/2018	-	7.28	-		840.14	-	
	10/5/2018	-	8.19	-		839.23	-	
RS-11					847.44			
	12/3/2018	-	7.30	-		840.14	-	
	11/1/2018	-	7.28	-		840.16	-	
	10/5/2018	-	7.86	-		839.58	-	
RS-12					847.74			
	12/3/2018	-	8.71	-		839.03	-	
	11/1/2018	-	7.62	-		840.12	-	
	10/5/2018	-	8.20	-		839.54	-	
RS-13*					845.98			
	12/3/2018	-	1.46	-		844.52	-	
	11/1/2018	-	5.87	-		840.11	-	
	10/5/2018	-	10.01	-		835.97	-	
RS-14					845.97			
	12/4/2018	3.89	3.90	0.01		842.07	842.08	
	11/1/2018	5.25	5.27	0.02		840.70	840.71	
	10/5/2018	-	8.50	-		837.47	-	
RS-15*					846.41			
	12/3/2018	-	2.18	-		844.23	-	
	11/1/2018	-	5.73	-		840.68	-	
	10/5/2018	-	8.37	-		838.04	-	
RS-16*					845.44			
	12/3/2018	-	1.87	-		843.57	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
RS-16* (cont'd)	11/1/2018	-	6.42	-		839.02	-	
	10/5/2018	-	7.88	-		837.56	-	
RS-17					844.22			
	12/4/2018	-	2.74	-		841.48	-	
	11/1/2018	5.14	5.16	0.02		839.06	839.07	
	10/5/2018	-	8.19	-		836.03	-	
RS-18					847.89			
	12/3/2018	-	3.61	-		844.28	-	
	11/1/2018	-	9.25	-		838.64	-	
	10/5/2018	-	10.20	-		837.69	-	
RS-20					842.69			
	12/3/2018	-	2.73	-		839.96	-	
	11/1/2018	-	6.62	-		836.07	-	
	10/5/2018	-	9.40	-		833.29	-	
RT-1A					854.06			
	12/3/2018	-	11.26	-		842.80	-	
	11/1/2018	-	13.12	-		840.94	-	
	10/5/2018	-	12.64	-		841.42	-	
RT-1B					854.15			
	12/3/2018	-	11.24	-		842.91	-	
	11/1/2018	-	12.54	-		841.61	-	
	10/5/2018	-	12.63	-		841.52	-	
RT-1C					854.55			
	12/3/2018	-	11.82	-		842.73	-	
	11/1/2018	-	12.56	-		841.99	-	
	10/5/2018	-	13.22	-		841.33	-	
RT-2A*					817.48			
	12/3/2018	-	0.50	-		816.98	-	
	11/1/2018	-	0.82	-		816.66	-	
	10/5/2018	-	0.70	-		816.78	-	
RT-2B*					817.61			
	12/3/2018	-	0.80	-		816.81	-	
	11/1/2018	-	0.91	-		816.70	-	
	10/5/2018	-	0.60	-		817.01	-	
RT-2C*					818.06			

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
RT-2C* (cont'd)	12/3/2018	-	1.17	-		816.89	-	
	11/1/2018	-	1.13	-		816.93	-	
	10/5/2018	-	1.50	-		816.56	-	
RT-2D*					818.12			
	12/3/2018	-	1.17	-		816.95	-	
	11/1/2018	-	1.13	-		816.99	-	
	10/5/2018	-	1.66	-		816.46	-	
RT-2E*					818.25			
	12/3/2018	-	1.28	-		816.97	-	
	11/1/2018	-	1.15	-		817.10	-	
	10/5/2018	-	1.74	-		816.51	-	
RT-2F*					818.57			
	12/3/2018	-	1.79	-		816.78	-	
	11/1/2018	-	2.93	-		815.64	-	
	10/5/2018	-	2.10	-		816.47	-	
RT-2G*					820.07			
	12/3/2018	-	1.30	-		818.77	-	
	11/1/2018	-	3.56	-		816.51	-	
	10/5/2018	-	2.68	-		817.39	-	
RT-2I*					819.51			
	12/3/2018	-	1.29	-		818.22	-	
	11/1/2018	-	2.84	-		816.67	-	
	10/5/2018	-	2.44	-		817.07	-	
RT-2J*					817.63			
	12/3/2018	-	0.10	-		817.53	-	
	11/1/2018	-	1.09	-		816.54	-	
	10/5/2018	-	0.92	-		816.71	-	
RT-2K*					817.40			
	12/3/2018	-	0.60	-		816.80	-	
	11/1/2018	-	0.94	-		816.46	-	
	10/5/2018	-	1.18	-		816.22	-	
RT-2L*					819.54			
	12/3/2018	-	1.08	-		818.46	-	
	11/1/2018	-	2.38	-		817.16	-	
	10/5/2018	-	2.61	-		816.93	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
RW-01					851.92			
	12/3/2018	8.51	8.72	0.21		843.20	843.36	
	11/1/2018	-	13.83	-		838.09	-	
	10/5/2018	-	16.12	-		835.80	-	
RW-02					852.69			
	12/4/2018	-	22.02	-		830.67	-	
	11/1/2018	23.38	23.39	0.01		829.30	829.31	
	10/5/2018	-	23.38	-		829.31	-	
RW-03					852.34			
	12/4/2018	-	23.09	-		829.25	-	
	11/1/2018	24.11	24.12	0.01		828.22	828.23	
	10/5/2018	23.97	23.99	0.02		828.35	828.36	
RW-04					853.93			
	12/4/2018	28.34	28.52	0.18		825.41	825.54	
	11/1/2018	29.59	29.70	0.11		824.23	824.31	
	10/5/2018	25.59	29.70	**4.11**		824.23	827.23	
RW-05					853.53			
	12/4/2018	31.75	31.81	0.06		821.72	821.77	
	11/1/2018	33.45	33.46	0.01		820.07	820.08	
	10/5/2018	33.06	33.09	0.03		820.44	820.47	
RW-06					846.21			
	12/3/2018	-	24.79	-		821.42	-	
	11/1/2018	-	26.36	-		819.85	-	
	10/5/2018	-	26.31	-		819.90	-	
RW-07					843.19			
	12/4/2018	-	21.42	-		821.77	-	
	11/1/2018	-	11.70	-		831.49	-	
	10/5/2018	-	23.18	-		820.01	-	
RW-08					835.48			
	12/3/2018	-	14.27	-		821.21	-	
	11/1/2018	-	16.55	-		818.93	-	
	10/5/2018	-	16.22	-		819.26	-	
RW-09*					835.12			
	12/3/2018	-	11.46	-		823.66	-	
	11/1/2018	14.28	14.46	0.18		820.66	820.79	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
RW-09* (cont'd)	10/5/2018	-	13.88	-		821.24	-	
RW-10					848.53			
	12/4/2018	-	13.53	-		835.00	-	
	11/1/2018	-	10.97	-		837.56	-	
	10/5/2018	-	9.95	-		838.58	-	
RW-11					852.97			
	12/3/2018	-	10.33	-		842.64	-	
	11/1/2018	11.39	11.40	0.01		841.57	841.57	
	10/5/2018	-	12.50	-		840.47	-	
RW-12					854.49			
	12/3/2018	-	11.59	-		842.90	-	
	11/1/2018	13.59	13.61	0.02		840.88	840.89	
	10/5/2018	-	13.03	-		841.46	-	
RW-13					847.97			
	12/3/2018	-	NM	-		-	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
RW-14					827.54			
	12/4/2018	-	10.18	-		817.36	-	
	11/1/2018	-	11.47	-		816.07	-	Sparge system on
	10/5/2018	-	9.88	-		817.66	-	Sparge system on
RW-15					851.64			
	12/4/2018	-	12.20	-		839.44	-	
	11/1/2018	-	13.08	-		838.56	-	
	10/5/2018	-	13.61	-		838.03	-	
SW-01					812.82			
	12/3/2018	-	-	-		812.82	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
SW-02					808.65			
	12/3/2018	-	(1.86)	-		810.51	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
SW-03					815.09			
	12/3/2018	-	(0.58)	-		815.67	-	

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
SW-03 (cont'd)	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
SW-05					838.75			
	12/3/2018	-	(0.39)	-		839.14	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
SW-08					802.04			
	12/3/2018	-	(0.40)	-		802.44	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
SW-10					778.09			
	12/3/2018	-	(0.50)	-		778.59	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-55*					845.93			
	12/3/2018	-	-	-		845.93	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-59					834.78			
	12/4/2018	-	12.29	-		822.49	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-60					828.03			
	12/4/2018	-	7.00	-		821.03	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-64					845.88			
	12/3/2018	-	18.59	-		827.29	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-66*					820.31			
	12/3/2018	-	0.30	-		820.01	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-67					852.71			

Table 4. Groundwater Elevation and Product Thickness Data

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Date	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Product Thickness (ft)	Top of Casing Elevation[a,b] (ft amsl)	Groundwater Elevation (ft amsl)	Corrected[c] Groundwater Elevation (ft amsl)	Notes
TW-67 (cont'd)	12/3/2018	-	10.47	-		842.24	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-73*					850.53			
	12/3/2018	-	4.36	-		846.17	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	
TW-96*					840.40			
	12/3/2018	-	2.79	-		837.61	-	
	11/1/2018	-	NM	-		-	-	
	10/5/2018	-	NM	-		-	-	

Notes:

[a] Elevation of zero mark (ft amsl) for surface water staff gauges.

[b] "RS-" and "RT-" features were trimmed to less than 12 inches above ground surface on March 14, 2017. Only the resurveyed top of casing elevation after trimming is displayed. Groundwater elevation calculations are based on the true top of casing elevation at the time of gauging.

[c] Calculated based on an oil: water density ratio of 0.73.

Bold indicates the gauged product thickness was greater than 0.5 foot.

DRY = well contained no measurable water or product

"B" designation in the location ID indicates bedrock well.

* = well is not bracketing the water table

amsl = above mean sea level
BTOC = below top of casing
ft = feet
ID = identification
MW = monitoring well
NM = not measured
RS = recovery sump
RT = recovery trench
RW = recovery well
SW = surface water
TW = temporary piezometer well

The following features are no longer reliable for calculating groundwater elevation:

- RS-19 was damaged on or about January 20, 2017.
- RT-2H was covered over on or about January 17, 2017, due to construction efforts in the vicinity.
- TW-46 was damaged on or about December 8, 2016.
- RW-13 is no longer accessible due to health and safety issues.

Table 5. Dissolved Oxygen Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Site Area	Nearest Sparge Well	Distance to Nearest Sparge Well (feet)	DO (mg/L) 12/3/2018
MW-02	Hayfield	HAS-02	33	9.48
MW-02B	Hayfield	HAS-02	24	9.58
MW-03	Hayfield	HAS-02	12	9.46
MW-04	Hayfield	HAS-01	82	8.80
MW-08	Hayfield	HAS-03	12	FP
MW-09	Hayfield	HAS-01	37	9.00
MW-10	Hayfield	HAS-03	27	9.72
MW-16	Hayfield	HAS-01	24	8.62
MW-18	Hayfield	HAS-03	2	FP
MW-30	Hayfield	HAS-01	15	6.90
TW-55	Hayfield	HAS-01	40	9.60
TW-59	Hayfield	VAS-38	6	9.71
TW-60	Hayfield	VAS-25	10	3.42
TW-64	Hayfield	HAS-03	132	8.80
TW-66	Hayfield	VAS-28	49	8.75
TW-67	Hayfield	VAS-11	14	7.48
TW-73	Hayfield	VAS-19	11	0.96
TW-96	Hayfield	HAS-03	78	9.78
			Average Hayfield Zone Values	8.13
MW-12	Brown's Creek	VAS-37	18	1.26
MW-12B	Brown's Creek	VAS-37	9	1.02
MW-15	Brown's Creek	VAS-21	14	7.54
MW-15B	Brown's Creek	VAS-22	13	1.24
MW-25	Brown's Creek	VAS-29	54	8.86
MW-25B	Brown's Creek	VAS-29	56	1.15
MW-28	Brown's Creek	VAS-46	26	0.89
			Average Brown's Creek Protection Zone Values	3.14
MW-19	Cupboard Creek	VAS-08	17	5.45
MW-20	Cupboard Creek	VAS-03	23	0.91
MW-29	Cupboard Creek	VAS-19	111	7.35
			Average Cupboard Creek Protection Zone Values	4.57
MW-01	Shallow Bedrock	VBS-01	147	2.40
MW-01B	Shallow Bedrock	VBS-01	152	0.92
MW-11	Shallow Bedrock	VBS-01	368	NM
MW-22	Shallow Bedrock	VBS-03	115	1.23
			Average Shallow Bedrock Zone Values	1.52
			Average Residuum	6.52
			Average Bedrock Values	2.78

Table 5. Dissolved Oxygen Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Site Area	Nearest Sparge Well	Distance to Nearest Sparge Well (feet)	DO (mg/L) 12/3/2018
Monitoring Wells Outside Reasonable Expectation of ZOI:				
MW-32	Hayfield	HAS-02	75	
MW-34	Brown's		67	
MW-35	Brown's		62	
MW-39	Brown's		48	
MW-40	Brown's		58	
MW-41	Brown's		87	
MW-42	Brown's		95	
TW-45	Brown's	VAS-41	27	

Notes:

DO = dissolved oxygen

DRY = well did not contain water

FP = measurement not collected due to the presence of free product in the well

ft = feet

HAS = Hayfield air sparging well

ID = identification

mg/L = milligrams per liter

MW = monitoring well

TW = temporary well

VAS = vertical air sparging well

VBS = vertical bedrock sparging well

ZOI = zone of influence

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-01	SBZ	MW-01-072715			7/27/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	06/2015	MW-01-012716			1/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-01-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-120517	12/4/2017	9.85	12/5/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-030818	3/5/2018	3.80	3/8/2018	µg/L	**1.85**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-060518	6/4/2018	3.83	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-091118	9/10/2018	6.72	9/11/2018	µg/L	**2.02**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01-120518	12/3/2018	3.91	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-01B	SBZ	MW-01B-080415			8/4/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	06/2015	MW-01B-012716			1/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-01B-120116			12/1/2016	µg/L	1	U	1	U	**1.4**		**5.6**		1	U	1	U	**1.3**		--	
		MW-01B-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-062817-FD			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-120517	12/4/2017	10.24	12/5/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-030818	3/5/2018	7.40	3/8/2018	µg/L	**3.51**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-060518	6/4/2018	6.47	6/5/2018	µg/L	**8.96**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-091118	9/10/2018	9.28	9/11/2018	µg/L	**11.1**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-01B-120518	12/3/2018	7.62	12/5/2018	µg/L	**8.30**		1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-02	Hayfield	MW-02-072715			7/27/2015	µg/L	**4,320**		625	U	**9,670**		**2,460**		5	U[b]	**171**		**74.7**		0.02	U
	06/2015	MW-02-012616			1/26/2016	µg/L	**9,500**		**1,160**		**25,000**		**6,310**		50	U[b]	**285**		**139**		0.019	U
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-02-062917			6/29/2017	µg/L	**8,040**		**833**		**27,100**		**9,890**		250	U[b]	250	U[b]	1,250	U[b]	--	
		MW-02-090817			9/8/2017	µg/L	**2,340**		**181**		**7,120**		**8,510**		50	U[b]	50	U[b]	**389**		--	
		MW-02-100417	10/3/2017	16.03	10/4/2017	µg/L	**3,510**		**306**		**11,900**		**11,200**		50	U[b]	**53.9**		250	U[b]	--	
		MW-02-110817	11/7/2017	4.20	11/8/2017	µg/L	**850**		100	U	**1,370**		**3,520**		100	U[b]	100	U[b]	500	U[b]	--	
		MW-02-120717	12/4/2017	2.54	12/7/2017	µg/L	**153**		**15.1**		**313**		**441**		1	U	**70.9**		**12.8**		--	
		MW-02-010918	1/8/2018	14.26	1/9/2018	µg/L	**307**		10	U	**878**		**1,300**		10	U[b]	**61.8**		**63.7**		--	
		MW-02-020618	2/5/2018	0.00	2/6/2018	µg/L	**30.5**		**1.09**		**29.6**		**88**		1	U	**32.0**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-02	Hayfield 06/2015	MW-02-030718	3/5/2018	3.00	3/7/2018	µg/L	**131**		**34.1**		**594**		**442**		1	U	**27.6**		**34.5**		--	
		MW-02-040618	4/5/2018	4.79	4/6/2018	µg/L	**72.5**		**8.96**		**94.7**		**501**		1	U	**18.4**		5	U	--	
		MW-02-050318	5/2/2018	10.85	5/3/2018	µg/L	**35.4**		**7.50**		**14.9**		**163**		1	U	**8.0**		5	U	--	
		MW-02-060618	6/4/2018	0.00	6/6/2018	µg/L	1	U	1	U	**3.19**		**3.7**		1	U	**1.25**		5	U	--	
		MW-02-071218	7/11/2018	15.25	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02-091218	9/11/2018	12.1	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02-120618	12/3/2018	3.58	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-02B	Hayfield 06/2015	MW-02B-080415			8/4/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-02B-D-080415			8/4/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-02B-030116			3/1/2016	µg/L	1	U	1	U	**4.8**		**4.6**		1	U	1	U	1	U	0.019	U
		MW-02B-D-030116			3/1/2016	µg/L	1	U	1	U	**4.8**		**5.3**		1	U	1	U	1	U	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-02B-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-120717	12/4/2017	24.56	12/7/2017	µg/L	1	U	1	U	**1.11**		3	U	1	U	1	U	5	U	--	
		MW-02B-030718	3/5/2018	1.50	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-060618	6/4/2018	4.23	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-091218	9/11/2018	18.65	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-02B-120618	12/3/2018	12.92	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-03	Hayfield 06/2015	MW-03-072715			7/27/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-03-012516			1/25/2016	µg/L	**108**		**20.1**		**958**		**598**		1	U	1	U	**11.1**		0.02	U
		MW-03-120616			12/6/2016	µg/L	**61.1**		**25.1**		**229**		**330**		2	U	2	U	**3.6**		--	
		MW-03-062917			6/29/2017	µg/L	**10.9**		1	U	**24.6**		**6.98**		1	U	**2.34**		5	U	--	
		--			9/5/2017	--	NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS		NS-HS	
		--	10/3/2017	19.87	10/3/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-03-110817	11/7/2017	--[c]	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-120517	12/4/2017	18.00	12/5/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		--	1/8/2018	19.98	1/8/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-03-020618	2/5/2018	--[c]	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-03	Hayfield 06/2015	MW-03-030718	3/5/2018	4.12	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-040618	4/5/2018	15.40	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-050318	5/2/2018	0	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-060618	6/4/2018	16.5	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-071218	7/11/2018	0	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-091318	9/11/2018	17.3	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-03-120618	12/3/2018	14	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-04	Hayfield 06/2015	MW-04-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		MW-04-012516			1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-04-120616			12/6/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-04-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-090817-DUP			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-120717	12/4/2017	10.07	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-030718	3/5/2018	10.70	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-060618	6/4/2018	6.23	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-091318	9/11/2018	13.31	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-04-120618	12/3/2018	7.55	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-05	Hayfield (outside sparging system limits) 06/2015	MW-05-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		MW-05-012516			1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-05-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-100417	10/3/2017	17.03	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-110817	11/7/2017	17.18	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-120717	12/4/2017	16.55	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-010918	1/8/2018	16.57	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-020618	2/5/2018	15.87	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-05	Hayfield (outside sparging system limits) 06/2015	MW-05-030718	3/5/2018	13.06	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-040618	4/5/2018	11.80	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-050318	5/2/2018	11.13	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-060718	6/4/2018	10.47	6/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-071318	7/11/2018	11.7	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-091318	9/11/2018	14.18	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-05-120618	12/3/2018	12.39	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-06	Hayfield (outside sparging system limits) 06/2015	MW-06-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-06-012116			1/21/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-06-120216			12/2/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-06-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-120717	12/4/2017	15.45	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-030718	3/5/2018	13.25	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-060718	6/4/2018	10.32	6/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-091318	9/11/2018	12.69	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06-120618	12/3/2018	11.24	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-06B	Hayfield (outside sparging system limits) 10/2017	MW-06B-120717	12/4/2017	16.14	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-06B-D-120717	12/4/2017	16.14	12/7/2017	µg/L	1	U	1	U	**1.82**		3	U	1	U	1	U	5	U	--	
		MW-06B-030718	3/5/2018	4.12	3/7/2018	µg/L	1	U	1	U	**3.63**		3	U	1	U	1	U	5	U	--	
		MW-06B-060718	6/4/2018	10.15	6/7/2018	µg/L	1	U	1	U	**4.69**		3	U	1	U	1	U	5	U	--	
		MW-06B-091318	9/11/2018	12.5	9/13/2018	µg/L	1	U	1	U	**1.17**		3	U	1	U	1	U	5	U	--	
		MW-06B-120618	12/3/2018	11.39	12/6/2018	µg/L	1	U	1	U	**1.89**		3	U	1	U	1	U	5	U	--	
MW-07	Hayfield (outside sparging system limits) 06/2015	--			7/27/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-07-012116			1/21/2016	µg/L	**1,060**		**389**		**5,210**		**2,620**		40	U[b]	40	U[b]	40	U[b]	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-07-062917			6/29/2017	µg/L	**4,290**		**629**		**17,700**		**4,990**		250	U[b]	250	U[b]	1,250	U[b]	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	10/3/2017	13.20	10/3/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	13.20	11/7/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	13.21	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-07	Hayfield (outside	--	1/8/2018	13.21	1/8/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	sparging system	--	2/5/2018	13.19	2/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	limits)	MW-07-030818	3/5/2018	11.77	3/8/2018	µg/L	**4,550**		**802**		**14,100**		**7,520**		50	U[b]	50	U[b]	250	U[b]	--	
	06/2015	--	4/5/2018	11.39	4/6/2018	µg/L	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-07-050318	5/2/2018	10.35	5/3/2018	µg/L	**6,330**		**662**		**16,500**		**9,060**		250	U[b]	250	U[b]	1,250	U[b]	--	
		--	6/4/2018	9.44	6/4/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-07-091218	9/11/2018	11.4	9/12/2018	µg/L	**4,620**		**639**		**13,600**		**6,180**		1	U	1	U	**82.5**		--	
		MW-07-120618	12/3/2018	10.99	12/6/2018	µg/L	**4,850**		**574**		**13,400**		**9,890**		100	U[b]	100	U[b]	500	U[b]	--	
MW-08	Hayfield	MW-08-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	06/2015	MW-08-012616			1/26/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-08-120616			12/6/2016	µg/L	1	U	1	U	**14.4**		**7.1**		1	U	1	U	1	U	--	
		MW-08-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-08-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-08-120717	12/4/2017	10.47	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-08-030718	3/5/2018	7.50	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-08-060618	6/4/2018	5.63	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-08-091318	9/11/2018	16.85	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		--	12/3/2018	19.18	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
MW-09	Hayfield	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
	06/2015	--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-09-062917			6/29/2017	µg/L	**3,860**		**517**		**13,000**		**8,680**		200	U[b]	200	U[b]	1,000	U[b]	--	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-09-120717	12/4/2017	3.05	12/7/2017	µg/L	**54.3**		**3.44**		**19.6**		**64.8**		1	U	**27.5**		5	U	--	
		MW-09-030718	3/5/2018	0.50	3/7/2018	µg/L	**3.3**		1	U	**11.0**		**3.92**		1	U	**8.74**		5	U	--	
		MW-09D-030718	3/5/2018	0.50	3/7/2018	µg/L	1	U	1	U	**1.32**		3	U	1	U	**8.74**		5	U	--	
		MW-09-060618	6/4/2018	could not ope	6/6/2018	µg/L	**2.25**		1	U	**6.06**		**4.75**		1	U	**3.65**		5	U	--	
		MW-09-091318	9/11/2018	10.56	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.14**		5	U	--	
		MW-09-D-091318	9/11/2018	10.56	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.00**		5	U	--	
		MW-09-120618	12/3/2018	0	12/6/2018	µg/L	**6.39**		**2.61**		**48.3**		**39.8**		1	U	**5.68**		**6.79**		--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-09B	Hayfield 10/2017	MW-09B-120717	12/4/2017	9.15	12/7/2017	µg/L	**21.8**		**24.7**		**82.1**		**179**		1	U	**4.72**		**11.9**		--	
		MW-09B-030718	3/5/2018	0.00	3/7/2018	µg/L	**4.36**		**4.5**		**18.1**		**33.3**		1	U	**1.37**		5	U	--	
		MW-09B-060618	6/4/2018	5.7	6/6/2018	µg/L	**17.1**		**16.5**		**66.5**		**139**		1	U	**3.61**		**8.09**		--	
		MW-09B-091318	9/11/2018	18.5	9/13/2018	µg/L	1	U	1	U	**5.90**		**4.44**		1	U	1	U	5	U	--	
		MW-09B-120618	12/3/2018	3.9	12/6/2018	µg/L	**2.19**		**2.14**		**8.22**		**16.8**		1	U	1	U	5	U	--	
MW-10	Hayfield 06/2015	MW-10-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		MW-10-012616			1/26/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-10-120616			12/6/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-10-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-050317-FD			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-100417	10/3/2017	17.33	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-110817	11/7/2017	12.64	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-120717	12/4/2017	10.85	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-010918	1/8/2018	15.08	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-020618	2/5/2018	6.81	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-D-020618	2/5/2018	6.81	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-030718	3/5/2018	5.11	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-040618	4/5/2018	8.21	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-050318	5/2/2018	6.97	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-060618	6/4/2018	6.43	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-071318	7/11/2018	10.75	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-D-071318	7/11/2018	10.75	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-091218	9/11/2018	16.41	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-10-120618	12/3/2018	7.35	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-11	SBZ 07/2015	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-11-012616			1/26/2016	µg/L	**10,600**		**948**		**24,400**		**4,700**		10	U[b]	**432**		**123**		0.019	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-11	SBZ	MW-11-062817			6/28/2017	µg/L	**10,900**		**2,140**		**29,600**		**11,700**		100	U[b]	**147**		500	U[b]	--	
	07/2015	--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/4/2017	29.86	12/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	3/5/2018	28.10	3/5/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	6/4/2018	26.29	6/4/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	9/10/2018	29.03	9/10/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/3/2018	28.17	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
MW-12	BCPZ	MW-12-072815			7/28/2015	µg/L	**51.3**		5	U	**22.9**		**39.2**		5	U[b]	5	U	5	U	0.02	U
	06/2015	--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/13/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/20/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/31/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			4/6/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-12-062817			6/28/2017	µg/L	**1,190**		**467**		**7,910**		**5,100**		50	U[b]	50	U[b]	250	U[b]	--	
		MW-12-090817			9/8/2017	µg/L	**648**		**436**		**3,470**		**4,440**		100	U[b]	100	U[b]	500	U[b]	--	
		MW-12-120617	12/4/2017	15.55	12/6/2017	µg/L	**367**		**137**		**1,540**		**4,660**		10	U[b]	10	U	**54.4**		--	
		MW-12-030818	3/5/2018	12.83	3/8/2018	µg/L	**486**		**25.2**		**1,880**		**1,980**		10	U[b]	10	U	50	U[b]	--	
		MW-12-060518	6/4/2018	9.2	6/5/2018	µg/L	**16.3**		**2.51**		**181**		**249**		1	U	1	U	5	U	--	
		MW-12-091118	9/10/2018	13.19	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12-120518	12/3/2018	12.02	12/5/2018	µg/L	**5.81**		**2.75**		**9.08**		**72.0**		1	U	1	U	5	U	--	
MW-12B	BCPZ	MW-12B-012616			1/26/2016	µg/L	**228**		**31.4**		**193**		**532**		1	U	**5.4**		**14.6**		0.019	U
	12/2015	MW-12B-113016			11/30/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-12B-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-031417-FD			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-062817			6/28/2017	µg/L	**30.1**		1	U	**7.28**		**14.3**		1	U	**11.8**		5	U	--	
		MW-12B-090817			9/8/2017	µg/L	**126**		**3.81**		**16.8**		**256**		1	U	1	U	**12**		--	
		MW-12B-120617	12/4/2017	16.12	12/6/2017	µg/L	**1.01**		1	U	1	U	3	U	1	U	1	U	5	U	--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-12B	BCPZ 12/2015	MW-12B-030818	3/5/2018	12.92	3/8/2018	µg/L	**3.06**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-12B-060518	6/4/2018	9.83	6/5/2018	µg/L	**275**		**58.7**		**20.9**		**171**		1	U	1	U	**22.5**		--	
		MW-12B-091118	9/10/2018	14.07	9/11/2018	µg/L	**246**		**39.8**		**2.87**		**68**		1	U	1	U	**18.7**		--	
		MW-12B-120518	12/3/2018	12.49	12/5/2018	µg/L	**240**		**57.7**		**29.5**		**160**		1	U	1	U	**17.7**		--	
MW-13	Hayfield (outside sparging system limits) 06/2015	--			7/27/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-13-012816			1/28/2016	µg/L	**2**		1	U	**12.5**		**6.9**		1	U	1	U	1	U	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-13-062917			6/29/2017	µg/L	**1.18**		1	U	**3.39**		3	U	1	U	1	U	5	U	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	21.87	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-13-030618	3/5/2018	20.40	3/6/2018	µg/L	**6.98**		**1.14**		**15.3**		**4.55**		1	U	1	U	5	U	--	
		MW-13-060618	6/4/2018	18.8	6/6/2018	µg/L	**44.2**		**4.25**		**86.2**		**19.9**		1	U	1	U	5	U	--	
		--	9/10/2018	21.85	9/10/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-13-120718	12/3/2018	20.87	12/7/2018	µg/L	**83.4**		**9.62**		**158**		**23.6**		1	U	1	U	5	U	--	
MW-13B	Hayfield (outside sparging system limits) 12/2015	MW-13B-012816			1/28/2016	µg/L	**367**		1	U	**5.6**		**59.5**		1	U	**119**		1	U	0.02	U
		MW-13B-D-012816			1/28/2016	µg/L	**405**		1	U	**6.1**		**59.1**		1	U	**108**		1	U	0.02	U
		MW-13B-113016			11/30/2016	µg/L	**550**		**5.1**		**21.2**		**140**		5	U[b]	**158**		**7.9**		--	
		MW-13B-062817			6/28/2017	µg/L	**308**		**3.09**		**10.3**		**103**		1	U	**121**		**5.13**		--	
		MW-13B-090817			9/8/2017	--	NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL		NS-SL	
		MW-13B-110817	11/7/2017	23.08	11/8/2017	µg/L	**325**		**3.42**		**19**		**91.6**		1	U	**173**		**5.55**		--	
		MW-13B-D-110817	11/7/2017	23.08	11/8/2017	µg/L	**356**		**3.85**		**20.8**		**100**		1	U	**168**		**6.61**		--	
		MW-13B-120617	12/4/2017	22.66	12/6/2017	µg/L	**269**		**3.97**		**24.4**		**100**		1	U	**140**		**8.83**		--	
		MW-13B-030718	3/5/2018	21.00	3/7/2018	µg/L	**252**		**3.13**		**12.1**		**60.2**		1	U	**175**		**6.44**		--	
		MW-13B-060618	6/4/2018	19.56	6/6/2018	µg/L	**498**		**47.7**		**469**		**282**		1	U	**148**		**8.47**		--	
		MW-13B-091218	9/10/2018	21.81	9/12/2018	µg/L	**402**		**42.5**		**503**		**271**		1	U	**141**		5	U	--	
		MW-13B-120618	12/3/2018	21.69	12/6/2018	µg/L	**614**		**93.5**		**823**		**516**		1	U	**139**		**10.8**		--	
MW-14	Hayfield (outside sparging system limits) 06/2015	MW-14-072815			7/28/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-14-012816			1/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-14-113016			11/30/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-14-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-14	Hayfield (outside sparging system limits) 06/2015	MW-14-120617	12/4/2017	17.62	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-030718	3/5/2018	15.11	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-060618	6/4/2018	17.48	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-091218	9/10/2018	16.64	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-14-120618	12/3/2018	14.88	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-14B	Hayfield (outside sparging system limits) 05/2016	MW-14B-052516			5/25/2016	µg/L	**5**		1	U	1	U	**4.4**		1	U	**17.2**		1	U	0.02	U
		MW-14B-052516-FD			5/25/2016	µg/L	**4.6**		1	U	1	U	**4.1**		1	U	**23.6**		1	U	0.02	U
		MW-14B-113016			11/30/2016	µg/L	**10.5**		1	U	**1.1**		**5.5**		1	U	**19.7**		1	U	--	
		MW-14B-062817			6/28/2017	µg/L	**38.1**		**1.34**		**2.56**		**19.1**		1	U	**36.2**		5	U	--	
		MW-14B-090817			9/8/2017	µg/L	**6.81**		1	U	1	U	**6.67**		1	U	**18.7**		5	U	--	
		MW-14B-120617	12/4/2017	19.22	12/6/2017	µg/L	**8.82**		1	U	1	U	**6.91**		1	U	**24.4**		5	U	--	
		MW-14B-030718	3/5/2018	16.95	3/7/2018	µg/L	**3.57**		1	U	1	U	**5.6**		1	U	**9.28**		5	U	--	
		MW-14B-0604B18	6/4/2018	15.09	6/6/2018	µg/L	**8.63**		1	U	1	U	**5.77**		1	U	**22.1**		5	U	--	
		MW-14B-091218	9/10/2018	17.59	9/12/2018	µg/L	**3.32**		1	U	1	U	**3.61**		1	U	**7.86**		5	U	--	
		MW-14B-120618	12/3/2018	16.6	12/6/2018	µg/L	**3.56**		1	U	**1.40**		**6.34**		1	U	**6.56**		5	U	--	
MW-15	BCPZ 06/2015	MW-15-080415			8/4/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
		MW-15-012816			1/28/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-15-120716			12/7/2016	µg/L	**3,680**		**139**		**422**		**2,280**		25	U[b]	**188**		**43.8**		--	
		MW-15-031417			3/14/2017	µg/L	**1,960**		**72**		**324**		**1,320**		25	U[b]	**161**		125	U[b]	--	
		MW-15-031417-FD			3/14/2017	µg/L	**1,820**		**61**		**286**		**1,120**		25	U[b]	**153**		125	U[b]	--	
		MW-15-032017			3/20/2017	µg/L	**3,390**		**103**		**505**		**2,460**		50	U[b]	**194**		250	U[b]	--	
		MW-15-033117			3/31/2017	µg/L	**2,850**		**65.4**		**444**		**1,860**		20	U[b]	**221**		100	U[b]	--	
		MW-15-040617			4/6/2017	µg/L	**1,790**		**60.6**		**465**		**886**		25	U[b]	**181**		125	U[b]	--	
		MW-15-062817			6/28/2017	µg/L	**73**		25	U	**29**		**110**		25	U[b]	**91.8**		125	U[b]	--	
		MW-15-090817			9/8/2017	µg/L	**454**		**24**		**567**		**338**		5	U[b]	**193**		25	U[b]	--	
		MW-15-120617	12/4/2017	13.66	12/6/2017	µg/L	1	U	1	U	**2**		**5**		1	U	**140**		5	U	--	
		MW-15-030818	3/5/2018	10.04	3/8/2018	µg/L	**53.1**		**2.75**		**89.9**		**53.1**		1	U	**85**		5	U	--	
		MW-15-060618	6/4/2018	Skimmer	6/6/2018	µg/L	**52.2**		**4.11**		**81.4**		**46.5**		1	U	**63.8**		5	U	--	
		MW-15-091218	9/10/2018	11.35	9/12/2018	µg/L	**14.6**		1	U	**27.9**		**16.0**		1	U	**72.2**		5	U	--	
		MW-15-120618	12/3/2018	10.37	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**15.9**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-15B	BCPZ	MW-15B-080415			8/4/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.019	U
	07/2015	MW-15B-012816			1/28/2016	µg/L	**4.8**		1	U	**2**		**3.9**		1	U	1	U	1	U	0.02	U
		MW-15B-113016			11/30/2016	µg/L	**337**		**34**		**565**		**194**		5	U[b]	**26.7**		**5**		--	
		MW-15B-031417			3/14/2017	µg/L	**2,160**		**248**		**4,580**		**1,500**		100	U[b]	**118**		500	U[b]	--	
		MW-15B-032017			3/20/2017	µg/L	**615**		**88.6**		**1,270**		**555**		25	U[b]	**67.5**		125	U[b]	--	
		MW-15B-033117			3/31/2017	µg/L	**1,630**		**205**		**3,240**		**1,180**		50	U[b]	**115**		250	U[b]	--	
		MW-15B-040617			4/6/2017	µg/L	**1,020**		**132**		**2,020**		**789**		25	U[b]	**84.7**		125	U[b]	--	
		MW-15B-040617-FD			4/6/2017	µg/L	**973**		**124**		**1,910**		**742**		25	U[b]	**82.9**		125	U[b]	--	
		MW-15B-062817			6/28/2017	µg/L	**1,510**		**145**		**3,520**		**1,280**		100	U[b]	100	U[b]	500	U[b]	--	
		MW-15B-090817			9/8/2017	µg/L	**1,820**		**164**		**3,560**		**1,210**		50	U[b]	**133**		250	U[b]	--	
		MW-15B-120617	12/4/2017	16.25	12/6/2017	µg/L	**1,760**		**239**		**3,630**		**1,380**		1	U	**135**		**37.6**		--	
		MW-15B-D-120617	12/4/2017	16.25	12/6/2017	µg/L	**491**		**56**		**1,050**		**408**		1	U	**117**		**35.4**		--	
		MW-15B-030818	3/5/2018	14.66	3/8/2018	µg/L	**1,290**		**151**		**3,140**		**1,070**		25	U[b]	**93.2**		125	U[b]	--	
		MW-15B-060618	6/4/2018	13.84	6/6/2018	µg/L	**968**		**82.8**		**1,990**		**791**		1	U	**109**		**12.8**		--	
		MW-15B-091218	9/10/2018	15.19	9/12/2018	µg/L	**947**		**122**		**2,270**		**820**		1	U	**111**		**15.9**		--	
		MW-15B-120618	12/3/2018	14.44	12/6/2018	µg/L	**725**		**96.4**		**1,890**		**777**		1	U	**71.8**		**11.7**		--	
MW-16	Hayfield	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
	06/2015	--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-16-062917			6/29/2017	µg/L	**12,900**		**1,770**		**36,400**		**12,500**		500	U[b]	**1,740**		2,500	U[b]	--	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/4/2017	7.00	12/7/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-16-030718	3/5/2018	3.00	3/7/2018	µg/L	**130**		**295**		**1,370**		**2,470**		10	U[b]	**132**		**618**		--	
		--	6/4/2018	--	6/4/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-16-091318	9/11/2018	12.35	9/13/2018	µg/L	**150**		**200**		**2,100**		**2,730**		1	U	**21.5**		**635**		--	
		MW-16-120618	12/3/2018	4.98	12/6/2018	µg/L	**10.3**		**38.7**		**132**		**398**		5	U	5	U	**460**		--	
MW-17	Hayfield (outside	--			7/27/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	sparging system	--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
	limits)	--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	06/2015	--			3/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-17	Hayfield (outside sparging system limits) 06/2015	--			3/31/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			4/6/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			6/26/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	10.85	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	3/5/2018	10.85	3/5/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	6/4/2018	10.80	6/4/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	9/10/2018	10.86	9/10/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/3/2018	10.85	12/3/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
MW-17B	Hayfield (outside sparging system limits) 01/2016	MW-17B-030116			3/1/2016	µg/L	**6,480**		**488**		**11,900**		**2,870**		**5**		**742**		**104**		0.019	U
		MW-17B-120116			12/1/2016	µg/L	**9,370**		**761**		**16,900**		**4,500**		100	U[b]	**954**		**112**		--	
		MW-17B-031317			3/13/2017	µg/L	**7,350**		**770**		**14,100**		**4,510**		200	U[b]	**944**		1,000	U[b]	--	
		MW-17B-032017			3/20/2017	µg/L	**10,700**		**1,360**		**21,400**		**7,910**		**323**		**1,210**		1,000	U[b]	--	
		MW-17B-033117			3/31/2017	µg/L	**9,190**		**900**		**17,500**		**5,910**		100	U[b]	**1,200**		500	U[b]		
		MW-17B-033117FD			3/31/2017	µg/L	**9,190**		**956**		**18,200**		**6,330**		100	U[b]	**1,210**		500	U[b]	--	
		MW-17B-040617			4/6/2017	µg/L	**7,780**		**833**		**14,900**		**5,330**		200	U[b]	**991**		1,000	U[b]	--	
		MW-17B-062817			6/28/2017	µg/L	**11,200**		**704**		**21,600**		**5,650**		200	U[b]	**1,150**		1,000	U[b]	--	
		MW-17B-090817			9/8/2017	µg/L	**11,400**		**1,240**		**23,900**		**8,460**		20	U[b]	**1,330**		**201**		--	
		MW-17B-120717	12/4/2017	17.05	12/7/2017	µg/L	**10,600**		**1,060**		**14,900**		**9,210**		10	U[b]	**1,140**		**178**		--	
		MW-17B-030718	3/5/2018	14.80	3/7/2018	µg/L	**8,830**		**1,110**		**20,200**		**8,220**		50	U[b]	**960**		250	U[b]	--	
		MW-17BD-030718	3/5/2018	14.80	3/7/2018	µg/L	**8,700**		**1,080**		**19,400**		**7,770**		50	U[b]	**983**		250	U[b]	--	
		MW-17B-060718	6/4/2018	12.05	6/7/2018	µg/L	**8,910**		**1,250**		**20,200**		**9,130**		20	U[b]	**1,230**		**206**		--	
		MW-17B-D-060718	6/4/2018	12.05	6/7/2018	µg/L	**9,630**		**1,200**		**21,000**		**8,850**		20	U[b]	**1,230**		**223**		--	
		MW-17B-080218	8/1/2018	12.56	8/2/2018	µg/L	**9,470**		**1,190**		**23,200**		**8,530**		200	U[b]	**863**		1,000	U[b]		
		MW-17B-D-080218	8/1/2018	12.56	8/2/2018	µg/L	**9,530**		**1,230**		**23,900**		**8,630**		200	U[b]	**864**		1,000	U[b]		
		MW-17B-091118	9/10/2018	13.74	9/11/2018	µg/L	**8,180**		**1,370**		**20,200**		**9,660**		50	U[b]	**832**		250	U[b]		
		MW-17B-110218	11/2/2018	14.67	11/2/2018	µg/L	**7,770**		**1,080**		**12,700**		**7,380**		20	U[b]	**841**		**113**			
		MW-17B-D-110218	11/2/2018	14.67	11/2/2018	µg/L	**7,670**		**1,070**		**12,900**		**5,130**		10	U[b]	**888**		**126**			
		MW-17B-120518	12/3/2018	13.22	12/5/2018	µg/L	**6,860**		**1,010**		**24,400**		**8,550**		50	U[b]	**690**		250	U[b]		

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-18	Hayfield 06/2015	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			6/26/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/4/2017	11.64	12/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	3/5/2018	18.25	3/5/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	6/4/2018	12.12	6/4/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	9/11/2018	19.56	9/11/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/3/2018	17.85	12/3/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
MW-19	CCPZ 06/2015	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-19-012116			1/21/2016	µg/L	**22.8**		**18.5**		**256**		**437**		1	U	1	U	**10.7**		0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			3/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
					3/31/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-19-040617			4/6/2017	µg/L	**9,810**		**1,030**		**25,000**		**10,300**		250	U[b]	250	U[b]	1,250	U[b]	--	
		MW-19-062917			6/29/2017	µg/L	**9,410**		**683**		**27,200**		**9,580**		200	U[b]	**320**		1,000	U[b]	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	11.77	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	3/5/2018	11.75	3/5/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-19-060618	6/4/2018	7.81	6/6/2018	µg/L	**8.15**		**149**		**385**		**1260**		**1.53**		1	U	250	U[b]	--	
		MW-19-071318	7/11/2018	10.5	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-19-091318	9/10/2018	10.05	9/13/2018	µg/L	**3.31**		**3.53**		**16**		**96.5**		1	U	1	U	**6.55**		--	
		MW-19-120518	12/3/2018	9.94	12/5/2018	µg/L	5	U	**8.23**		**13.7**		**217**		5	U	5	U	25	U	--	
MW-20	CCPZ 06/2015	--			7/27/2015	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			1/19/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			11/28/2016	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/13/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/20/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			3/31/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			4/6/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			5/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-20	CCPZ 06/2015	--			6/26/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			7/17/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			8/1/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--			9/5/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	10/3/2017	13.79	10/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	11/7/2017	13.61	11/8/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/4/2017	14.64	12/4/2017	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	1/8/2018	14.04	1/8/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	2/5/2018	12.57	2/6/2018	µg/L	NS-OL		NS-OL		NS-OL		NS-OL		NS-OL		NS-OL		NS-OL		NS-OL	
		--	3/5/2018	10.90	3/6/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	4/5/2018	9.37	4/6/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	5/2/2018	9.7	5/3/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	6/4/2018	8.5	6/4/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		MW-20-071218	7/11/2018	8.83	7/12/2018	µg/L	**5,740**		**1350**		**18100**		**14500**		100	U[b]	**351**		500	U[b]	--	
		--	9/10/2018	10.59	9/10/2018	--	NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP		NS-FP	
		--	12/3/2018	9.99	12/3/2018	--	NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS		NS-PS	
MW-21	Hayfield (outside sparging system limits) 06/2015	MW-21-072715			7/27/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
		MW-21-012116			1/21/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-21-D-012116			1/21/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-21-112916			11/29/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-21-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-032117			3/21/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-062817-FD			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-120717	12/4/2017	17.42	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-030718	3/5/2018	8.05	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-060718	6/4/2018	12.43	6/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-091118	9/10/2018	14.51	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-21-120518	12/3/2018	13.41	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-22	SBZ	--			7/27/2015	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	07/2015	MW-22-012116			1/21/2016	µg/L	**19.8**		**3.4**		**47.2**		**37.4**		1	U	1	U	1	U	0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			5/3/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-22-062917			6/29/2017	µg/L	**234**		10	U	**125**		30	U	10	U[b]	10	U	50	U[b]	--	
		--			7/17/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			8/1/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	10/3/2017	9.94	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	9.96	11/8/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	9.99	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	1/8/2018	10.01	1/8/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	2/5/2018	9.81	2/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-22-030618	3/5/2018	8.05	3/6/2018	µg/L	1	U	1	U	**1.03**		3	U	1	U	1	U	5	U	--	
		MW-22-040618	4/5/2018	7.27	4/6/2018	µg/L	1	U	1	U	**1.76**		**46.6**		1	U	1	U	5	U	--	
		MW-22-050318	5/2/2018	7.19	5/3/2018	µg/L	**1.43**		**1.79**		**33.1**		**426**		1	U	1	U	1	U	--	
		MW-22-060518	6/4/2018	5.72	6/5/2018	µg/L	1	U	1	U	**4.27**		**41.6**		1	U	1	U	5	U	--	
		MW-22-071218	7/11/2018	7.9	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-22-091318	9/10/2018	9.57	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-22-120518	12/3/2018	7.37	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-23	CCPZ (outside	MW-23-072715			7/27/2015	µg/L	5	U[b]	5	U	**7.5**		10	U	5	U[b]	5	U	5	U	0.02	U
	sparging system	MW-23D-072715			7/27/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	limits)	MW-23-012016			1/20/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
	07/2015	MW-23-120216			12/2/2016	µg/L	**450**		5	U	**14.6**		**336**		5	U[b]	**46.4**		**5.9**		--	
		MW-23-031317			3/13/2017	µg/L	**709**		5	U	**23.1**		**548**		5	U[b]	**127**		25	U[b]	--	
		MW-23-032017			3/20/2017	µg/L	**642**		10	U	**12.7**		**579**		10	U[b]	**108**		50	U[b]	--	
		MW-23-032017-FD			3/20/2017	µg/L	**620**		10	U	**12.0**		**548**		10	U[b]	**110**		50	U[b]	--	
		MW-23-033117			3/31/2017	µg/L	**685**		10	U	**16.5**		**624**		10	U[b]	**130**		50	U[b]	--	
		MW-23-040617			4/6/2017	µg/L	**432**		1	U	**6.6**		**254**		1	U	**76.5**		5	U	--	

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Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-23	CCPZ (outside sparging system limits) 07/2015	MW-23-062817			6/28/2017	µg/L	**131**		10	U	10	U	**117**		10	U[b]	**19.1**		5	U	--	
		MW-23-071717			7/17/2017	µg/L	**1.2**		1	U	1	U	3	U	1	U	**1**	U	5	U	--	
		MW-23-080117			8/1/2017	µg/L	**132**		1	U	**6.2**		**252**		1	U	**48.1**		5	U	--	
		MW-23-090717			9/7/2017	µg/L	**1,110**		**9.25**		**43.1**		**999**		5	U[b]	**141**		25	U[b]	--	
		MW-23-100417	10/3/2017	11.52	10/4/2017	µg/L	**703**		10	U	**17.5**		**515**		10	U[b]	**90.1**		50	U[b]	--	
		MW-23-100417-DUP	10/3/2017	11.52	10/4/2017	µg/L	**543**		**2.65**		**11.5**		**424**		1	U	**69.2**		5	U	--	
		MW-23-110817	11/7/2017	11.10	11/8/2017	µg/L	**788**		10	U	**21.5**		**580**		10	U[b]	**118**		50	U[b]	--	
		MW-23-120617	12/4/2017	11.13	12/6/2017	µg/L	**693**		10	U	**17.0**		**408**		10	U[b]	**99.5**		50	U[b]	--	
		MW-23-010918	1/8/2018	11.02	1/9/2018	µg/L	**127**		10	U	10	U	**137**		10	U[b]	**69.6**		50	U[b]	--	
		MW-23-020618	2/5/2018	9.76	2/6/2018	µg/L	**1.1**		1	U	1	U	3	U	1	U	**33.8**		5	U	--	
		MW-23-030618	3/5/2018	8.27	3/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**17.5**		5	U	--	
		MW-23-040618	4/5/2018	7.52	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**32**		5	U	--	
		MW-23-050318	5/2/2018	7.12	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**19.1**		5	U	--	
		MW-23-D-050318	5/2/2018	7.12	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**16.9**		5	U	--	
		MW-23-060518	6/4/2018	6.33	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**5.28**		5	U	--	
		MW-23-071218	7/11/2018	7.15	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**7.05**		5	U	--	
		MW-23-080218	8/1/2018	7.56	8/2/2018	µg/L	**17.9**		1	U	1	U	**10.4**		1	U	**5.01**		5	U	--	
		MW-23-091118	9/10/2018	5.94	9/11/2018	µg/L	**2.3**		1	U	1	U	3	U	1	U	**11.0**		5	U	--	
		MW-23-110218	11/2/2018	9.19	11/2/2018	µg/L	**11.1**		1	U	**2.48**		**4.85**		1	U	**8.35**		5	U	--	
		MW-23-120518	12/3/2018	6.97	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.08**		5	U	--	
		MW-23-D-120518	12/3/2018	6.97	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.03**		5	U	--	
MW-23B	CCPZ (outside sparging system limits) 07/2015	MW-23B-080515			8/5/2015	µg/L	5	U[b]	5	U	**7.0**		10	U	5	U[b]	5	U	5	U	0.02	U
		MW-23B-012016			1/20/2016	µg/L	1	U	1	U	**3.9**		**7.1**		1	U	1	U	1	U	0.02	U
		MW-23B-120216			12/2/2016	µg/L	1	U	**1.4**		**3.5**		**11.0**		1	U	1	U	**1.3**		--	
		MW-23B-031317			3/13/2017	µg/L	1	U	**1.11**		**2.63**		**8.86**		1	U	1	U	5	U	--	
		MW-23B-032017			3/20/2017	µg/L	1	U	**1.55**		**2.98**		**11.7**		1	U	1	U	5	U	--	
		MW-23B-033117			3/31/2017	µg/L	1	U	**1.24**		**2.41**		**8.86**		1	U	1	U	5	U	--	
		MW-23B-040617			4/6/2017	µg/L	1	U	**1.21**		**2.41**		**9.23**		1	U	1	U	5	U	--	
		MW-23B-062817			6/28/2017	µg/L	1	U	1	U	**1.73**		**6.20**		1	U	1	U	5	U	--	
		MW-23B-090717			9/7/2017	µg/L	1	U	1	U	**1.65**		**5.40**		1	U	1	U	5	U	--	
		MW-23B-120617	12/4/2017	11.45	12/6/2017	µg/L	1	U	**1.2**		**2.48**		**7.93**		1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-23B	CCPZ (outside	MW-23B-030618	3/5/2018	10.88	3/6/2018	µg/L	1	U	**1.2**		**4.57**		**9.14**		1	U	1	U	5	U	--	
	sparging system	MW-23B-060518	6/4/2018	6.06	6/5/2018	µg/L	1	U	1	U	**1.08**		**4.21**		1	U	1	U	5	U	--	
	limits)	MW-23B-091118	9/10/2018	5.4	9/11/2018	µg/L	1	U	1	U	**1.24**		3	U	1	U	1	U	5	U	--	
	07/2015	MW-23B-120518	12/3/2018	8.73	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-24	BCPZ (outside	MW-24-080515			8/5/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	sparging system	MW-24-012616			1/26/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
	limits)	MW-24-120716			12/7/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
	07/2015	MW-24-062817			6/28/2017	µg/L	**28.8**		**3.96**		**1.7**		**22.2**		1	U	1	U	5	U	--	
		MW-24-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-120617	12/4/2017	4.51	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-030818	3/5/2018	4.15	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-060618	6/4/2018	4.45	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-091218	9/10/2018	5.22	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24-120618	12/3/2018	4.78	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-24B	BCPZ (outside	MW-24B-080515			8/5/2015	µg/L	5	U[b]	5	U	5	U	10	U	5	U[b]	5	U	5	U	0.02	U
	sparging system	MW-24B-012616			1/26/2016	µg/L	1	U	1	U	**3.3**		**6.8**		1	U	1	U	1	U	0.019	U
	limits)	MW-24B-120716			12/7/2016	µg/L	1	U	1	U	**2.9**		**1.6**		1	U	1	U	1	U	--	
	07/2015	MW-24B-062817			6/28/2017	µg/L	**28.9**		**3.89**		**1.77**		**20.7**		1	U	1	U	5	U	--	
		MW-24B-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-120617	12/4/2017	5.69	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-030818	3/5/2018	5.03	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-060618	6/4/2018	5.12	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-091218	9/10/2018	5.85	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-24B-120618	12/3/2018	5.59	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-25	BCPZ	MW-25-012716			1/27/2016	µg/L	**101**		1	U	1	U	**115**		1	U	1	U	**1.8**		0.02	U
		MW-25-012716			12/1/2016	µg/L	**675**		**30.2**		**15.3**		**619**		5	U[b]	**5.9**		**29.7**		--	
		MW-25-031417			3/14/2017	µg/L	**627**		**28.6**		**10.1**		**668**		10	U[b]	10	U	50	U[b]	--	
		MW-25-032017			3/20/2017	µg/L	**604**		**20.4**		20	U	**680**		20	U[b]	20	U	100	U[b]	--	
		MW-25-033117			3/31/2017	µg/L	**673**		**30.1**		**12**		**736**		10	U[b]	10	U	50	U[b]	--	
		MW-25-033117FD			3/31/2017	µg/L	**790**		**35.4**		**12.5**		**861**		10	U[b]	10	U	50	U[b]	--	
		MW-25-040617			4/6/2017	µg/L	**558**		**24.3**		10	U	**682**		10	U[b]	10	U	50	U[b]	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-25	BCPZ	MW-25-050317			5/3/2017	µg/L	**519**		**49.3**		**10.1**		**614**		1	U	1	U	**43.2**		--	
	01/2016	MW-25-062817			6/28/2017	µg/L	**431**		**34.8**		10	U	**520**		10	U[b]	10	U	50	U[b]	--	
		MW-25-071717			7/17/2017	µg/L	**230**		**13.4**		10	U	**264**		10	U[b]	10	U	50	U[b]	--	
		MW-25-080117			8/1/2017	µg/L	**234**		**14.4**		10	U	**277**		10	U[b]	10	U	50	U[b]	--	
		MW-25-090817			9/8/2017	µg/L	**200**		**12.2**		**1.27**		**214**		1	U	1	U	**10.6**		--	
		MW-25-100417	10/3/2017	8.52	10/4/2017	µg/L	**173**		**16.2**		**1.73**		**276**		1	U	**1.1**		**6.77**		--	
		MW-25-110817	11/7/2017	8.35	11/8/2017	µg/L	**82.9**		**7.21**		1	U	**143**		1	U	1	U	**7.74**		--	
		MW-25-120617	12/4/2017	7.10	12/6/2017	µg/L	**23.8**		**1.84**		1	U	**60.5**		1	U	1	U	5	U	--	
		MW-25-010918	1/8/2018	8.80	1/9/2018	µg/L	**72**		**2.74**		1	U	**111**		1	U	1	U	5	U	--	
		MW-25-020618	2/5/2018	8.15	2/6/2018	µg/L	**10.8**		1	U	1	U	**19.3**		1	U	1	U	5	U	--	
		MW-25-030818	3/5/2018	7.84	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-040618	4/5/2018	7.46	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-050318	5/2/2018	7.02	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-060518	6/4/2018	6.73	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-071218	7/11/2018	7.7	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-091218	9/10/2018	7.88	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25-120518	12/3/2018	7.13	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-25B	BCPZ	MW-25B-012716			1/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
	01/2016	MW-25B-120116			12/1/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-25B-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-090817-DUP			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-120617	12/4/2017	5.30	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-030818	3/5/2018	4.12	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-060518	6/4/2018	3.41	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-091218	9/10/2018	4.76	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-25B-120518	12/3/2018	3.7	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-26	CCPZ (outside sparging system limits) 01/2016	MW-26-012016			1/20/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		MW-26-120116			12/1/2016	µg/L	1	U	1	U	**2.3**		1	U	1	U	1	U	1	U	--	
		MW-26-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-040617-FD			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-100417	10/3/2017	7.71	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-110817	11/7/2017	6.56	11/8/2017	µg/L	1	U	1	U	**1.17**		3	U	1	U	1	U	5	U	--	
		MW-26-120617	12/4/2017	6.83	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-010918	1/8/2018	6.68	1/9/2018	µg/L	1	U	**1.79**		**6.2**		**13.8**		1	U	1	U	5	U	--	
		MW-26-020618	2/5/2018	4.37	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-030618	3/5/2018	2.94	3/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-040618	4/5/2018	2.88	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-050318	5/2/2018	2.71	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-060518	6/4/2018	2.01	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-071218	7/11/2018	3.67	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-091118	9/10/2018	2.65	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26-120518	12/3/2018	2.36	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-26B	CCPZ (outside sparging system limits) 01/2016	MW-26B-012016			1/20/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
		MW-26B-120116			12/1/2016	µg/L	1	U	1	U	1	U	**1.3**		1	U	1	U	1	U	--	
		MW-26B-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

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Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-26B	CCPZ (outside sparging system limits) 01/2016	MW-26B-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-090717-DUP			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-120617	12/4/2017	9.17	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-030618	3/5/2018	6.30	3/6/2018	µg/L	1	U	1	U	**1.03**		3	U	1	U	1	U	5	U	--	
		MW-26B-060518	6/4/2018	3.66	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-091118	9/10/2018	4.55	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-D-091118	9/10/2018	4.55	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-26B-120518	12/3/2018	5.55	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-27	SBZ (outside sparging system limits) 01/2016	MW-27-012716			1/27/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.019	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-27-062817			6/28/2017	µg/L	**2.69**		**4.06**		**3.88**		**35.9**		1	U	1	U	5	U	--	
		MW-27-090817			9/8/2017	µg/L	**4.96**		**5.75**		**2.13**		**14.8**		1	U	1	U	5	U	--	
		MW-27-120517	12/4/2017	27.46	12/5/2017	µg/L	**6.48**		**8.23**		**12.5**		**20.5**		1	U	1	U	5	U	--	
		MW-27-030818	3/5/2018	25.29	3/8/2018	µg/L	**14.5**		**29.7**		**62.3**		**227**		1	U	1	U	5	U	--	
		MW-27-060518	6/4/2018	22.55	6/5/2018	µg/L	**5.74**		**7.74**		**22.6**		**70.3**		1	U	1	U	5	U	--	
		MW-27-091118	9/10/2018	25.17	9/11/2018	µg/L	**2.06**		**2.94**		**7.44**		**25.6**		1	U	1	U	5	U	--	
		MW-27-120518	12/3/2018	24.96	12/5/2018	µg/L	**2.96**		**9.03**		**23.1**		**50.3**		1	U	1	U	5	U	--	
MW-27B	SBZ (outside sparging system limits) 04/2016	MW-27B-051216			5/12/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
		MW-27B-120216			12/2/2016	µg/L	1	U	**5.3**		**9.1**		**45.7**		1	U	1	U	**8.9**		--	
		MW-27B-062817			6/28/2017	µg/L	1	U	**4.04**		**4.04**		**32.7**		1	U	1	U	**6.09**		--	
		MW-27B-090717			9/7/2017	µg/L	1	U	**3.73**		**6.35**		**30.3**		1	U	1	U	**7.54**		--	
		MW-27B-120517	12/4/2017	30.70	12/5/2017	µg/L	1	U	**3.1**		**5.91**		**24.8**		1	U	1	U	**5.81**		--	
		MW-27B-D-120517	12/4/2017	30.70	12/5/2017	µg/L	1	U	**3.96**		**7.24**		**31.6**		1	U	1	U	**7.09**		--	
		MW-27B-030818	3/5/2018	3.20	3/8/2018	µg/L	1	U	**3.44**		**6.82**		**28.8**		1	U	1	U	5	U	--	
		MW-27BD-030818	3/5/2018	3.20	3/8/2018	µg/L	1	U	**4.02**		**7.97**		**30.7**		1	U	1	U	5	U	--	
		MW-27B-060518	6/4/2018	28.42	6/5/2018	µg/L	1	U	**3.38**		**6.18**		**26.8**		1	U	1	U	**5.1**		--	
		MW-27B-091118	9/10/2018	28.49	9/11/2018	µg/L	1	U	**2.98**		**5.65**		**25**		1	U	1	U	5	U	--	
		MW-27B-120518	12/3/2018	29.34	12/5/2018	µg/L	1	U	**2.47**		**4.97**		**21.1**		1	U	1	U	5	U	--	
MW-28	BCPZ	MW-28-012716			1/27/2016	µg/L	**542**		**430**		**3,850**		**3,370**		1	U	**4.8**		**96.3**		0.02	U
		--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-28-031517			3/15/2017	µg/L	**1,120**		**68.9**		**3,350**		**1,370**		50	U[b]	50	U[b]	250	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-28	BCPZ	--			3/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	01/2016	--			3/31/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			4/6/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-28-050317			5/3/2017	µg/L	**65.9**		**14.5**		**263**		**1,010**		1	U	**2.94**		**9.33**		--	
		MW-28-062817			6/28/2017	µg/L	**199**		**55**		**108**		**546**		1	U	1	U	**10.1**		--	
		MW-28-071717			7/17/2017	µg/L	**219**		**64.2**		**85.8**		**422**		1	U	1	U	**14.7**		--	
		MW-28-080217			8/2/2017	µg/L	**219**		**48.7**		**52.7**		**187**		1	U	**3.46**		**11.9**		--	
		MW-28-090817			9/8/2017	µg/L	**130**		**16.2**		**175**		**388**		1	U	**4.77**		**13.6**		--	
		--	10/3/2017	23.80	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	23.78	11/7/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	23.94	12/7/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	1/8/2018	24.15	1/9/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-28-020618	2/5/2018	22.60	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-28-030818	3/5/2018	21.65	3/8/2018	µg/L	**10.1**		**9.92**		**5.27**		**21.2**		1	U	1	U	5	U	--	
		MW-28-040618	4/5/2018	20.68	4/6/2018	µg/L	**16.1**		**11.6**		**4**		**23.4**		1	U	1	U	5	U	--	
		MW-28-050318	5/2/2018	20.81	5/3/2018	µg/L	**8.25**		**8.8**		**1.55**		**24.5**		1	U	1	U	5	U	--	
		MW-28-060518	6/4/2018	19.82	6/5/2018	µg/L	**3.81**		**3.8**		**1.01**		**16.0**		1	U	1	U	5	U	--	
		MW-28-071218	7/11/2018	20.92	7/12/2018	µg/L	**3.91**		**5.19**		**1.05**		**8.82**		1	U	1	U	5	U	--	
		MW-28-091118	9/10/2018	22	9/11/2018	µg/L	**28.0**		**25.2**		**3.66**		**4.89**		1	U	1	U	5	U	--	
		MW-28-120518	12/3/2018	21.17	12/5/2018	µg/L	**13.7**		**8.04**		**1.47**		3	U	1	U	1	U	5	U	--	
MW-29	CCPZ	MW-29-012116			1/21/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
	01/2016	MW-29-112916			11/29/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-29-031317			3/13/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-090717			9/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-29	CCPZ	MW-29-100417	10/3/2017	10.85	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	01/2016	MW-29-110817	11/7/2017	10.06	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-120617	12/4/2017	10.39	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-010918	1/8/2018	10.36	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-020618	2/5/2018	7.80	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-030718	3/5/2018	4.20	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-040618	4/5/2018	5.28	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-D-040618	4/5/2018	5.28	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-050318	5/2/2018	4.72	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-060518	6/4/2018	3.23	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-071218	7/11/2018	6.35	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-091118	9/10/2018	8.36	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-29-120518	12/3/2018	3.11	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-30	Hayfield	MW-30-012516			1/25/2016	µg/L	1	U	1	U	1	U	2	U	1	U	1	U	1	U	0.02	U
	01/2016	--			11/28/2016	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-30-050417			5/4/2017	µg/L	**104**		**3.98**		**341**		**161**		1	U	1	U	5	U	--	
		MW-30-062917			6/29/2017	µg/L	**646**		25	U	**1,630**		**736**		25	U[b]	25	U	125	U[b]	--	
		MW-30-071717			7/17/2017	µg/L	**922**		25	U	**2,050**		**1,320**		25	U[b]	25	U	125	U[b]	--	
		MW-30-080217			8/2/2017	µg/L	**1,240**		**25.9**		**1,020**		**2,230**		25	U[b]	25	U	125	U[b]	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	10/3/2017	14.58	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	14.60	11/8/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	14.47	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	1/8/2018	14.59	1/8/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-30-020518	2/5/2018	13.11	2/5/2018	µg/L	**2.2**		1	U	**1.86**		**4.1**		1	U	1	U	5	U	--	
		MW-30-030718	3/5/2018	11.43	3/7/2018	µg/L	**22.1**		1	U	**8.94**		**19.1**		1	U	**2.25**		5	U	--	
		MW-30-040618	4/5/2018	11.92	4/6/2018	µg/L	**1.9**		1	U	**7.38**		**5.95**		1	U	**2.22**		5	U	--	
		MW-30-050318	5/2/2018	11.49	5/3/2018	µg/L	**1.19**		1	U	**3.7**		3	U	1	U	**2.29**		5	U	--	
		MW-30-060618	6/4/2018	10.47	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.58**		5	U	--	
		MW-30-071218	7/11/2018	12.26	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.79**		5	U	--	
		--	9/11/2018	14.60	9/11/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-30-120718	12/3/2018	12.77	12/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**1.94**		**9.22**		--	
		MW-30-D-120718	12/3/2018	12.77	12/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.05**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-31	Hayfield (outside	MW-31-051016			5/10/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
	sparging system	MW-31-112916			11/29/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
	limits)	MW-31-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	04/2016	MW-31-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-D-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-100417	10/3/2017	22.70	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-110817	11/7/2017	20.81	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-120617	12/4/2017	20.05	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-010918	1/8/2018	22.55	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-020618	2/5/2018	18.90	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-030718	3/5/2018	18.01	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-040618	4/5/2018	18.59	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-050318	5/2/2018	17.35	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-D-050318	5/2/2018	17.35	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-060618	6/4/2018	17.25	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-071318	7/11/2018	18.37	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-091218	9/10/2018	21.88	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-D-091218	9/10/2018	21.88	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-31-120618	12/3/2018	19.47	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-31B	Hayfield (outside s	MW-31B-051116			5/11/2016	µg/L	1	U	1	U	**2.7**		1	U	1	U	1	U	1	U	0.02	U
MW-32	Hayfield	MW-32-051016			5/10/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
	04/2016	MW-32-120616			12/6/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-32-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-120717	12/4/2017	10.02	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-030718	3/5/2018	6.82	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-060618	6/4/2018	7.16	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-091218	9/10/2018	21.07	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-32-120618	12/3/2018	11.85	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte															
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-33	Hayfield (outside s	MW-33-051016			5/10/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
MW-33T	Hayfield (outside	MW-33T-051016			5/10/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
	sparging system	MW-33T-120617	12/4/2017	27.12	12/6/2017	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
	limits)	MW-33T-030718	3/5/2018	25.23	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	04/2016	MW-33T-060618	6/4/2018	23.56	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-33T-091218	9/10/2018	25.91	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-33T-120618	12/3/2018	26.29	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-34	BCPZ	MW-34-031517			3/15/2017	--	**978**		**33.0**		**143**		**218**		10	U[b]	**157**		50	U[b]	--	
	03/2017	MW-34-032017			3/20/2017	µg/L	**801**		10.0	U	**113**		**305**		10	U[b]	**149**		50	U[b]	--	
		MW-34-033117			3/31/2017	µg/L	**728**		10.0	U	**81.4**		**224**		10	U[b]	**152**		50	U[b]	--	
		MW-34-040617			4/6/2017	µg/L	**860**		**1.7**		**58.6**		**181**		1	U	**123**		5	U	--	
		MW-34-050317			5/3/2017	µg/L	**287**		**2.62**		**27.2**		**130**		1	U	**124**		5	U	--	
		MW-34-062817			6/28/2017	µg/L	**167**		**4.59**		**9.3**		**39.2**		1	U	**68.3**		5	U	--	
		MW-34-071717			7/17/2017	µg/L	**137**		**5.83**		**19.8**		**69.5**		1	U	**73.8**		5	U	--	
		MW-34-080117			8/1/2017	µg/L	**517**		10	U	**31.7**		**110**		10	U[b]	**98.3**		50	U[b]	--	
		MW-34-090817			9/8/2017	µg/L	**1,430**		**6.01**		**98.0**		**264**		1	U	**191**		**7.33**		--	
		MW-34-100417	10/3/2017	2.76	10/4/2017	µg/L	**919**		10	U	**36.8**		**157**		10	U[b]	**151**		50	U[b]	--	
		MW-34-100417-DUP	10/3/2017	2.76	10/4/2017	µg/L	**846**		**1.49**		**40.8**		**186**		1	U	**148**		5	U	--	
		MW-34-110817	11/7/2017	2.48	11/8/2017	µg/L	**338**		10	U	**15.3**		**140**		10	U[b]	**266**		50	U[b]	--	
		MW-34-120617	12/4/2017	2.52	12/6/2017	µg/L	**169**		10	U	**29.7**		**69.9**		10	U[b]	**218**		50	U[b]	--	
		MW-34-010918	1/8/2018	2.48	1/9/2018	µg/L	**147**		10	U	**13.1**		**79.8**		10	U[b]	**246**		50	U[b]	--	
		MW-34-020618	2/5/2018	2.27	2/6/2018	µg/L	**249**		10	U	**19.2**		**88.3**		10	U[b]	**191**		50	U[b]	--	
		MW-34-030818	3/5/2018	2.23	3/8/2018	µg/L	**696**		**7.35**		**51.6**		**180**		1	U	**229**		**5.84**		--	
		MW-34-040618	4/5/2018	2.25	4/6/2018	µg/L	**619**		**2.22**		**31.9**		**150**		1	U	**281**		**7.77**		--	
		MW-34-050318	5/2/2018	2.31	5/3/2018	µg/L	**342**		10	U	**18.1**		**99.7**		10	U[b]	**278**		50	U[b]	--	
		MW-34-060518	6/4/2018	2.34	6/5/2018	µg/L	**63.1**		1	U	**3.28**		**19.2**		1	U	**247**		5	U	--	
		MW-34-071218	7/11/2018	2.6	7/12/2018	µg/L	**186**		**2.41**		**9.34**		**33.7**		1	U	**153**		5	U	--	
		MW-34-D-071218	7/11/2018	2.6	7/12/2018	µg/L	**303**		**3.82**		**14.9**		**51.3**		1	U	**199**		5	U	--	
		MW-34-080218	8/1/2018	2.48	8/2/2018	µg/L	**414**		**5.27**		**32.6**		**53.6**		1	U	**147**		5	U	--	
		MW-34-091218	9/10/2018	3.18	9/12/2018	µg/L	**21.8**		1	U	1	U	3	U	1	U	**209**		5	U	--	
		MW-34-110218	11/2/2018	2.9	11/2/2018	µg/L	**75.1**		1	U	**1.53**		**8.16**		1	U	**302**		5	U	--	
		MW-34-120618	12/3/2018	2.87	12/6/2018	µg/L	1	U	1	U	1	U	**6.63**		1	U	**271**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-35	BCPZ 04/2016	MW-35-051016			5/10/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
		MW-35-120116			12/1/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-35-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-100417	10/3/2017	10.34	10/4/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-110817	11/7/2017	8.94	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-120617	12/4/2017	10.41	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-010918	1/8/2018	10.57	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-D-010918	1/8/2018	10.57	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-020618	2/5/2018	9.00	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-030818	3/5/2018	8.33	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-040618	4/5/2018	8.39	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-050318	5/2/2018	8.37	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-060618	6/4/2018	8.15	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-071218	7/11/2018	7.22	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-091118	9/10/2018	9.14	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-35-120518	12/3/2018	7.45	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-36	Hayfield (outside sparging system limits) 04/2016	MW-36-051116			5/11/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	0.02	U
		MW-36-112916			11/29/2016	µg/L	**1.3**		1	U	**6.5**		**1.1**		1	U	1	U	1	U	--	
		MW-36-D-112916			11/29/2016	µg/L	1	U	1	U	**5.4**		1	U	1	U	1	U	1	U	--	
		MW-36-062917			6/29/2017	µg/L	**2.11**		1	U	**2.28**		3	U	1	U	1	U	5	U	--	
		MW-36-090817			9/8/2017	µg/L	**4.75**		1	U	**6.16**		**4.62**		1	U	1	U	5	U	--	
		MW-36-120717	12/4/2017	20.14	12/7/2017	µg/L	**17.5**		1	U	**30.2**		**14.4**		1	U	1	U	5	U	--	
		MW-36-030718	3/5/2018	18.11	3/7/2018	µg/L	**44.2**		10	U	**75.2**		**38.4**		10	U[b]	10	U	50	U[b]	--	
		MW-36-060718	6/4/2018	15.21	6/7/2018	µg/L	**184**		1	U	**208**		**134**		1	U	**2.06**		5	U	--	
		MW-36-091318	9/11/2018	16.68	9/13/2018	µg/L	**238**		1	U	**326**		**238**		1	U	1	U	5	U	--	
		MW-36-120618	12/3/2018	16.65	12/6/2018	µg/L	**146**		1	U	**181**		**142**		1	U	1	U	5	U	--	
		MW-36-D-120618	12/3/2018	16.65	12/6/2018	µg/L	**143**		1	U	**175**		**134**		1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-36B	Hayfield (outside sparging system limits) 04/2016	MW-36B-051116			5/11/2016	µg/L	1	U	1	U	**7.2**		1	U	1	U	1	U	1	U	0.02	U
		MW-36B-112916			11/29/2016	µg/L	1	U	1	U	**1.6**		1	U	1	U	1	U	1	U	--	
		MW-36B-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-062917-FD			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-120717	12/4/2017	20.90	12/7/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-030718	3/5/2018	17.81	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		7W-36B-060618	6/4/2018	14.84	6/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-091318	9/11/2018	16.39	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-36B-120618	12/3/2018	16.32	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-37	BCPZ (outside sparging system limits) 08/2016	MW-37-113016			11/30/2016	µg/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	--	
		MW-37-062817			6/28/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**1.44**		5	U	--	
		MW-37-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**1.5**		5	U	--	
		MW-37-120617	12/4/2017	3.47	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**2.93**		5	U	--	
		MW-37-030818	3/5/2018	3.28	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**3.71**		5	U	--	
		MW-37-060518	6/4/2018	3.26	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**5.06**		5	U	--	
		MW-37-091218	9/10/2018	3.29	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**4.30**		5	U	--	
		MW-37-120618	12/3/2018	3.01	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-38	BCPZ (outside sparging system limits) 08/2016	MW-38-113016			11/30/2016	µg/L	1	U	1	U	1	U	1	U	1	U	**5.5**		1	U	--	
		MW-38-031417			3/14/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**9.14**		5	U	--	
		MW-38-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**7.55**		5	U	--	
		MW-38-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**10.2**		5	U	--	
		MW-38-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**8.06**		5	U	--	
		MW-38-050317			5/3/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**9.08**		5	U	--	
		MW-38-062817			6/28/2017	µg/L	**9.71**		**1.17**		1	U	**6.63**		1	U	1	U	5	U	--	
		MW-38-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**8.59**		5	U	--	
		MW-38-071717-FD			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**9.78**		5	U	--	
		MW-38-080117			8/1/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**7.25**		5	U	--	
		MW-38-090817			9/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**12.9**		5	U	--	
		MW-38-100417	10/3/2017	2.23	10/4/2017	µg/L	**1.75**		1	U	1	U	3	U	1	U	**11.2**		5	U	--	
		MW-38-110817	11/7/2017	1.88	11/8/2017	µg/L	**4.48**		1	U	1	U	**12.4**		1	U	**29.2**		5	U	--	
		MW-38-120617	12/4/2017	2.01	12/6/2017	µg/L	**102**		1	U	1	U	**86.1**		1	U	**38**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-38	BCPZ (outside sparging system limits) 08/2016	MW-38-010918	1/8/2018	1.95	1/9/2018	µg/L	**311**		1	U	**2.31**		**158**		1	U	**49.4**		5	U	--	
		MW-38-020618	2/5/2018	1.58	2/6/2018	µg/L	**389**		5	U	5	U	**208**		5	U	**48.8**		25	U	--	
		MW-38-030818	3/5/2018	1.25	3/8/2018	µg/L	**364**		5	U	5	U	**202**		5	U	**54.8**		25	U	--	
		MW-38-040618	4/5/2018	1.50	4/6/2018	µg/L	**347**		1	U	**2.95**		**221**		1	U	**68.8**		**10.4**		--	
		MW-38-D-040618	4/5/2018	1.50	4/6/2018	µg/L	**371**		1	U	**2.61**		**190**		1	U	**67.6**		**9.46**		--	
		MW-38-050318	5/2/2018	1.7	5/3/2018	µg/L	**378**		10	U	10	U	**212**		10	U[b]	**62.1**		50	U[b]	--	
		MW-38-060518	6/4/2018	1.2	6/5/2018	µg/L	**373**		1	U	**2.49**		**222**		1	U	**75.5**		**9**		--	
		MW-38-071218	7/11/2018	1.45	7/12/2018	µg/L	**268**		1	U	**1.27**		**138**		1	U	**52.5**		**7.26**		--	
		MW-38-091218	9/10/2018	2.17	9/12/2018	µg/L	**157**		1	U	**1.19**		**66.5**		1	U	**38.8**		5	U	--	
		MW-38-120618	12/3/2018	1.12	12/6/2018	µg/L	**412**		1	U	**1.90**		**236**		1	U	**89.7**		**13.7**		--	
MW-39	BCPZ 11/2016	MW-39-120716			12/7/2016	µg/L	**6,320**		**682**		**1,290**		**3,650**		50	U[b]	**311**		**86**		--	
		MW-39-031417			3/14/2017	µg/L	**6,370**		**431**		**2,200**		**3,700**		10	U[b]	**199**		**117**		--	
		MW-39-032017			3/20/2017	µg/L	**7,340**		**704**		**2,990**		**4,050**		100	U[b]	**248**		500	U[b]	--	
		MW-39-033117			3/31/2017	µg/L	**7,540**		**899**		**3,140**		**4,400**		50	U[b]	**272**		250	U[b]	--	
		MW-39-040617			4/6/2017	µg/L	**6,180**		**754**		**3,280**		**3,860**		50	U[b]	**257**		250	U[b]	--	
		MW-39-062817			6/28/2017	µg/L	**5,470**		**58**		**3,360**		**3,900**		20	U[b]	**239**		100	U[b]	--	
		MW-39-071717			7/17/2017	µg/L	**4,690**		100	U	**3,760**		**4,580**		100	U[b]	**344**		500	U[b]	--	
		MW-39-080117			8/1/2017	µg/L	**4,630**		100	U	**2,880**		**4,740**		100	U[b]	**348**		500	U[b]	--	
		MW-39-090817			9/8/2017	µg/L	**3,380**		**10.7**		**1,040**		**2,740**		1	U	**376**		**15.6**		--	
		MW-39-100417	10/3/2017	3.75	10/4/2017	µg/L	**1,560**		50	U	**365**		**1,350**		50	U[b]	**305**		250	U[b]	--	
		MW-39-110817	11/7/2017	4.89	11/8/2017	µg/L	**878**		50	U	**123**		**368**		50	U[b]	**442**		250	U[b]	--	
		MW-39-120617	12/4/2017	5.72	12/6/2017	µg/L	**345**		50	U	**69**		**150**		50	U[b]	**355**		250	U[b]	--	
		MW-39-D-120617	12/4/2017	5.72	12/6/2017	µg/L	**286**		1	U	**31**		**131**		1	U	**353**		5	U	--	
		MW-39-010918	1/8/2018	4.86	1/9/2018	µg/L	**23.8**		5	U	5	U	15	U	5	U	**370**		25	U	--	
		MW-39-020618	2/5/2018	4.85	2/6/2018	µg/L	**46.9**		5	U	5	U	15	U	5	U	**263**		25	U	--	
		MW-39-030818	3/5/2018	4.66	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**304**		5	U	--	
		MW-39-040618	4/5/2018	4.54	4/6/2018	µg/L	**1**		1	U	1	U	3	U	1	U	**297**		5	U	--	
		MW-39-050318	5/2/2018	4.48	5/3/2018	µg/L	10	U	10	U	10	U	30	U	10	U[b]	**287**		50	U[b]	--	
		MW-39-060518	6/4/2018	4.34	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**322**		5	U	--	
		MW-39-071218	7/11/2018	4.75	7/12/2018	µg/L	**1**		1	U	1	U	3	U	1	U	**244**		5	U	--	
		MW-39-091218	9/10/2018	5.12	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**176**		5	U	--	
		MW-39-D-091218	9/10/2018	5.12	9/12/2018	µg/L	**1.84**		1	U	1	U	3	U	1	U	**187**		5	U	--	
		MW-39-120618	12/3/2018	4.45	12/6/2018	µg/L	**30.6**		1	U	**7.49**		**29.3**		1	U	**156**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-40	BCPZ 11/2016	MW-40-120716			12/7/2016	µg/L	**6,730**		**588**		**7,460**		**3,390**		50	U[b]	**373**		**64.8**		--	
		MW-40-031417			3/14/2017	µg/L	**11,600**		**1,280**		**16,100**		**7,260**		50	U[b]	**691**		250	U[b]	--	
		MW-40-032017			3/20/2017	µg/L	**12,300**		**1,330**		**19,600**		**7,500**		200	U[b]	**654**		1,000	U[b]	--	
		MW-40-033117			3/31/2017	µg/L	**13,300**		**1,500**		**19,500**		**8,070**		100	U[b]	**727**		500	U[b]	--	
		MW-40-040617			4/6/2017	µg/L	**10,400**		**1,180**		**16,200**		**6,570**		200	U[b]	**650**		1,000	U[b]	--	
		MW-40-062817			6/28/2017	µg/L	**9,250**		**1,030**		**19,200**		**6,540**		500	U[b]	**590**		2,500	U[b]	--	
		MW-40-071717			7/17/2017	µg/L	**11,400**		**1,210**		**25,300**		**7,430**		500	U[b]	**727**		2,500	U[b]	--	
		MW-40-080117			8/1/2017	µg/L	**12,000**		**1,120**		**23,200**		**8,070**		500	U[b]	**631**		2,500	U[b]	--	
		MW-40-090817			9/8/2017	µg/L	**14,300**		**1,250**		**28,700**		**9,250**		20	U[b]	**716**		**219**		--	
		MW-40-100417	10/3/2017	1.95	10/4/2017	µg/L	**13,800**		1,000	U[b]	**28,800**		**9,530**		1,000	U[b]	1,000	U[b]	5,000	U[b]	--	
		MW-40-110817	11/7/2017	2.11	11/8/2017	µg/L	**13,500**		1,000	U[b]	**23,000**		**9,290**		1,000	U[b]	1,000	U[b]	5,000	U[b]	--	
		MW-40-120617	12/4/2017	3.43	12/6/2017	µg/L	**14,300**		1,000	U[b]	**22,300**		**10,100**		1,000	U[b]	1,000	U[b]	5,000	U[b]	--	
		MW-40-010918	1/8/2018	2.72	1/9/2018	µg/L	**12,400**		**773**		**22,300**		**10,200**		200	U[b]	**497**		1,000	U[b]	--	
		MW-40-020618	2/5/2018	2.75	2/6/2018	µg/L	**11,100**		**777**		**20,300**		**9,350**		200	U[b]	**373**		1,000	U[b]	--	
		MW-40-030818	3/5/2018	2.44	3/8/2018	µg/L	**8,450**		**498**		**14,500**		**7,580**		50	U[b]	**337**		250	U[b]	--	
		MW-40-040618	4/5/2018	2.32	4/6/2018	µg/L	**6,710**		**212**		**8,350**		**5,460**		100	U[b]	**423**		500	U[b]	--	
		MW-40-050318	5/2/2018	2.23	5/3/2018	µg/L	**2,890**		100	U	**3,490**		**3,350**		100	U[b]	**288**		500	U[b]	--	
		MW-40-060518	6/4/2018	1.98	6/5/2018	µg/L	**472**		**16.8**		**514**		**1,490**		1	U	**255**		**20.4**		--	
		MW-40-071218	7/11/2018	2.44	7/12/2018	µg/L	**148**		**6.85**		**28.7**		**197**		1	U	**152**		**8.62**		--	
		MW-40-080218	8/1/2018	2.38	8/2/2018	µg/L	**123**		**4.46**		**9.67**		**93.2**		1	U	**183**		5	U	--	
		MW-40-091218	9/10/2018	2.77	9/12/2018	µg/L	**28**		**1.67**		**15.3**		**14.0**		1	U	**112**		5	U	--	
		MW-40-110218	11/2/2018	2.64	11/2/2018	µg/L	**6.40**		1	U	**2.05**		3	U	1	U	**76.7**		5	U	--	
		MW-40-120618	12/3/2018	2.27	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**36.2**		5	U	--	
MW-41	BCPZ (outside sparging system limits) 11/2016	MW-41-120716			12/7/2016	µg/L	**212**		2	U	2	U	**155**		2	U	**6.7**		**5.6**		--	
		MW-41-031417			3/14/2017	µg/L	**469**		**1.78**		1	U	**275**		1	U	**4.34**		**18.1**		--	
		MW-41-032017			3/20/2017	µg/L	**424**		**2.62**		1	U	**342**		1	U	1	U	**16.9**		--	
		MW-41-033117			3/31/2017	µg/L	**449**		5	U	5	U	**343**		5	U[b]	5	U	25	U[b]	--	
		MW-41-040617			4/6/2017	µg/L	**470**		**2.06**		1	U	**258**		1	U	**3.84**		**10.6**		--	
		MW-41-062817			6/28/2017	µg/L	**292**		**8.83**		**2.09**		**271**		1	U	**3.36**		**13.3**		--	
		MW-41-071717			7/17/2017	µg/L	**487**		**15.8**		**3.09**		**366**		1	U	**3.62**		**27.9**		--	
		MW-41-080117			8/1/2017	µg/L	**371**		10	U	10	U	**260**		10	U[b]	10	U	50	U[b]	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-41	BCPZ (outside sparging system limits) 11/2016	MW-41-090817			9/8/2017	µg/L	**189**		**1.51**		1	U	**90**		1	U	**3.74**		5	U	--	
		MW-41-100417	10/3/2017	4.37	10/4/2017	µg/L	**93.5**		1	U	1	U	**59.9**		1	U	**1.84**		5	U	--	
		MW-41-110817	11/7/2017	4.39	11/8/2017	µg/L	**99.6**		1	U	1	U	**56.6**		1	U	**2.46**		**5.68**		--	
		MW-41-120617	12/4/2017	5.55	12/6/2017	µg/L	**27.6**		1	U	1	U	**11.1**		1	U	**1.62**		5	U	--	
		MW-41-010918	1/8/2018	4.40	1/9/2018	µg/L	**2.06**		1	U	1	U	3	U	1	U	**1.43**		5	U	--	
		MW-41-020618	2/5/2018	3.82	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-030818	3/5/2018	3.94	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-040618	4/5/2018	4.00	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-050318	5/2/2018	3.8	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-060518	6/4/2018	3.69	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-071218	7/11/2018	4.07	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-091218	9/10/2018	4.25	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-120618	12/3/2018	3.66	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-41-D-120618	12/3/2018	3.66	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-42	BCPZ (outside sparging system limits) 11/2016	MW-42-120716			12/7/2016	µg/L	**3.8**		1	U	1	U	**2.7**		1	U	1	U	1	U	--	
		MW-42-031417			3/14/2017	µg/L	**19.3**		1	U	1	U	3	U	1	U	**1.12**		5	U	--	
		MW-42-032017			3/20/2017	µg/L	**59.6**		1	U	1	U	**16.9**		1	U	**1.24**		5	U	--	
		MW-42-033117			3/31/2017	µg/L	**135**		1	U	1	U	**73.8**		1	U	1	U	**5.19**		--	
		MW-42-040617			4/6/2017	µg/L	**93.5**		1	U	1	U	**53.3**		1	U	**1.18**		5	U	--	
		MW-42-062817			6/28/2017	µg/L	**15.1**		1	U	1	U	**11.7**		1	U	**1.25**		5	U	--	
		MW-42-090817			9/8/2017	µg/L	**143**		1	U	1	U	**100**		1	U	**1.51**		**5.52**		--	
		MW-42-120617	12/4/2017	5.26	12/6/2017	µg/L	**9.82**		1	U	1	U	**45**		1	U	**1.24**		5	U	--	
		MW-42-030818	3/5/2018	4.86	3/8/2018	µg/L	**1.02**		1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-42-060518	6/4/2018	5.37	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-42-091218	9/10/2018	4.96	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-42-120618	12/3/2018	4.37	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-43	BCPZ (outside sparging system limits) 10/2017	MW-43-110817	11/7/2017	4.45	11/8/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-120617	12/4/2017	4.50	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-010918	1/8/2018	4.35	1/9/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-020618	2/5/2018	3.70	2/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-030818	3/5/2018	3.90	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-43	BCPZ (outside sparging system limits) 10/2017	MW-43-040618	4/5/2018	4.18	4/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-050318	5/2/2018	4.26	5/3/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-060618	6/4/2018	4.28	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-071218	7/11/2018	4.74	7/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**4.42**		5	U	--	
		MW-43-091218	9/10/2018	5.24	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43-120618	12/3/2018	4.24	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-43B	BCPZ (outside sparging system limits) 10/2017	MW-43B-120617	12/4/2017	4.08	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43B-030818	3/5/2018	1.21	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43B-060618	6/4/2018	0.9	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43B-091218	9/10/2018	1.88	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-43B-120618	12/3/2018	2.3	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-44	SBZ (outside sparging system limits) 01/2017	--			3/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-44-062917			6/29/2017	µg/L	**1.06**		1	U	**7.12**		**3.11**		1	U	1	U	5	U	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	9.40	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-44-030818	3/5/2018	4.00	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44D-030818	3/5/2018	4.00	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44-060518	6/4/2018	3.16	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44-091318	9/10/2018	8.65	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44-120518	12/3/2018	3.22	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-44B	SBZ (outside sparging system limits) 01/2017	MW-44B-031317			3/13/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-062817			6/28/2017	µg/L	1	U	1	U	**2.39**		3	U	1	U	1	U	5	U	--	
		MW-44B-090717			9/7/2017	µg/L	1	U	1	U	**3.07**		3	U	1	U	1	U	5	U	--	
		MW-44B-120517	12/4/2017	14.32	12/5/2017	µg/L	1	U	1	U	**2.27**		3	U	1	U	1	U	5	U	--	
		MW-44B-030818	3/5/2018	12.10	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-060518	6/4/2018	9.5	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-D-060518	6/4/2018	9.5	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-091118	9/10/2018	12.35	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-44B-120518	12/3/2018	11.36	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-45	Hayfield (outside	--			3/13/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	sparging system	--			3/20/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	limits)	--			3/31/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
	01/2017	--			4/6/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--			5/3/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-45-062917			6/29/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45-071717			7/17/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45-080217			8/2/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	10/3/2017	14.25	10/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	11/7/2017	14.24	11/8/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	12/4/2017	14.22	12/4/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	1/8/2018	14.25	1/8/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		--	2/5/2018	13.95	2/6/2018	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-45-030618	3/5/2018	12.31	3/6/2018	µg/L	**24.3**		**6.11**		**28.9**		**41.2**		1	U	1	U	5	U	--	
		MW-45-040618	4/5/2018	11.30	4/6/2018	µg/L	**21.9**		**3.08**		**19.6**		**36.6**		1	U	1	U	5	U	--	
		MW-45-050318	5/2/2018	10.74	5/3/2018	µg/L	**2.65**		1	U	1	U	1	U	1	U	**3.35**		5	U	--	
		MW-45-060718	6/4/2018	24.15	6/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45-071318	7/11/2018	10.66	7/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45-091318	9/10/2018	12	9/13/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**46.3**		5	U	--	
		MW-45-120518	12/3/2018	10.94	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**3.67**		5	U	--	
MW-45B	Hayfield (outside	MW-45B-031317			3/13/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	sparging system	MW-45B-032017			3/20/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	limits)	MW-45B-033117			3/31/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	01/2017	MW-45B-040617			4/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-45B-062817			6/28/2017	µg/L	1	U	1	U	**1.73**		3	U	1	U	1	U	5	U	--	
		--			9/5/2017	--	NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW		NS-IW	
		MW-45B-120717	12/4/2017	15.93	12/7/2017	µg/L	1	U	1	U	**3.26**		3	U	1	U	1	U	5	U	--	
		MW-45B-030618	3/5/2018	14.65	3/6/2018	µg/L	1	U	1	U	**2.75**		3	U	1	U	1	U	5	U	--	
		MW-45B-060718	6/4/2018	25.13	6/7/2018	µg/L	1	U	1	U	**1.94**		3	U	1	U	1	U	5	U	--	
		MW-45B-091118	9/10/2018	12.84	9/11/2018	µg/L	1	U	1	U	**1.16**		3	U	1	U	1	U	5	U	--	
		MW-45B-120518	12/3/2018	13.13	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						µg/L	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-46	CCPZ (outside	MW-46-120617	12/4/2017	9.48	12/6/2017	µg/L	**4.97**		1	U	1	U	**7.74**		1	U	**85.5**		5	U	--	
	sparging system	MW-46-030618	3/5/2018	6.33	3/6/2018	µg/L	**173**		**1.76**		**16.5**		**29.5**		1	U	**129**		**7.21**		--	
	limits)	MW-46-060518	6/4/2018	5.2	6/5/2018	µg/L	**294**		**1**	U	**11.8**		**147**		1	U	**184**		5	U	--	
	09/2017	MW-46-080218	8/1/2018	6.67	8/2/2018	µg/L	**1520**		**4.24**		**92.1**		**763**		1	U	**200**		**20.7**		--	
		MW-46-091118	9/10/2018	7.88	9/11/2018	µg/L	**1510**		**6.81**		**64**		**597**		1	U	**311**		**23.4**		--	
		MW-46-110218	11/2/2018	7.95	11/2/2018	µg/L	**1790**		**7.1**		**120**		**740**		1	U	**299**		**16.6**		--	
		MW-46-120518	12/3/2018	5.25	12/5/2018	µg/L	**1250**		**3.07**		**46.7**		**521**		**1.90**		**290**		**7.38**		--	
MW-47	Hayfield (outside	MW-47-120617	12/4/2017	17.75	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	sparging system	MW-47-030718	3/5/2018	14.74	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	limits)	MW-47-060618	6/4/2018	13.92	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	09/2017	MW-47-091218	9/10/2018	19.42	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-47-120618	12/3/2018	18.88	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-48B	Hayfield (outside	MW-48B-120617	12/4/2017	18.22	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	**2.92**		5	U	--	
	sparging system	MW-48B-030718	3/5/2018	16.70	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.97**		5	U	--	
	limits)	MW-48B-060618	6/4/2018	15.91	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.12**		5	U	--	
	10/2017	MW-48B-D-060618	6/4/2018	15.91	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**2.11**		5	U	--	
		MW-48B-091218	9/10/2018	17.45	9/12/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**1.80**		5	U	--	
		MW-48B-120618	12/3/2018	16.4	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**1.56**		5	U	--	
MW-49	BCPZ (outside	MW-49-120617	12/4/2017	20.29	12/6/2017	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	sparging system	MW-49-030818	3/5/2018	17.68	3/8/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	limits)	MW-49-060518	6/4/2018	14.95	6/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
	09/2017	MW-49-091118	9/10/2018	18.28	9/11/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-49-120518	12/3/2018	17.49	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
		MW-49-D-120518	12/3/2018	17.49	12/5/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-50B	Hayfield (outside	MW-50B-120617	12/4/2017	21.37	12/6/2017	µg/L	**1.37**		1	U	1	U	3	U	1	U	**35.5**		5	U	--	
	sparging system	MW-50B-030718	3/5/2018	19.10	3/7/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**26.7**		5	U	--	
	limits)	MW-50B-060618	6/4/2018	18.36	6/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	**21.8**		5	U	--	
	10/2017	MW-50B-091218	9/10/2018	23.28	9/12/2018	µg/L	**150**		**1.2**		**57.9**		**47.8**		1	U	**87.9**		5	U	--	
		MW-50B-120618	12/3/2018	26.06	12/6/2018	µg/L	**27.4**		1	U	**3.21**		3	U	1	U	**40.6**		5	U	--	

Table 6. Analytical Results for Groundwater

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location	Zone and Installation Date	Sample ID	Gauging Date	Depth to Water	Sample Date	Units	Analyte																	
							Benzene		Ethylbenzene		Toluene		Total Xylenes		1,2-DCA		MTBE		Naphthalene		EDB	
RBSL[a]:						**µg/L**	5.0		700		1,000		10,000		5.0		40		25		0.05	
MW-51	Hayfield (outside s	MW-51-100518	10/5/2018	18.84	10/5/2018	µg/L	1	U	1	U	**1.88**		3	U	1	U	1	U	5	U	--	
	09/2018	MW-51-120618	12/3/2018	17.38	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-52	Hayfield (outside s	MW-52-100518	10/5/2018	16.9	10/5/2018	µg/L	1	U	1	U	**1.25**		3	U	1	U	**3.12**		5	U	--	
	09/2018	MW-52-120618	12/3/2018	15.8	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-53	Hayfield (outside s	MW-53-100518	10/5/2018	11.54	10/5/2018	µg/L	1	U	1	U	**5.43**		3	U	1	U	1	U	5	U	--	
	08/2018	MW-53-D-100518	10/5/2018	11.54	10/5/2018	µg/L	1	U	1	U	**2.11**		3	U	1	U	1	U	5	U	--	
		MW-53-120618	12/3/2018	6.81	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	
MW-54	Hayfield	MW-54-100518	10/5/2018	11.57	10/5/2018	µg/L	1	U	1	U	**1.72**		3	U	1	U	**1.35**		5	U	--	
	08/2018	MW-54-120618	12/3/2018	12.95	12/6/2018	µg/L	1	U	1	U	1	U	3	U	1	U	1	U	5	U	--	

Notes:

[a] RBSL = Risk-based screening level identified in South Carolina Underground Storage Tank Management Division Programmatic Quality Assurance Program Plan, Revision 3.1, Table D1 "RBSLs for Groundwater", February 2016

[b] The analyte was analyzed for, but was not detected above the laboratory reporting/quantitation limit. However, the laboratory reporting/quantitation limit is above the screening criteria. The actual absence or presence of this analyte between the screening criteria and the laboratory reporting/quantitation limit can not be determined.

[c] Unable to collect depth to water due to fluctuation of the well from air bubbling.

Samples analyzed by EPA Methods SW 8260B and 8011.

SBZ = Shallow Bedrock Zone

BCPZ = Brown's Creek Protection Zone

CCPZ = Cupboard Creek Protection Zone

Bold indicates the analyte was detected above the method detection limit.

Gray shading indicates the analyte exceeded RBSLs.

µg/L = microgram(s) per liter

1,2-DCA = 1,2-dichloroethane

EDB = 1,2-dibromoethane

ID = identification

MTBE = methyl tertiary butyl ether

MW = monitoring well

NS-FP = sample not collected due to the presence of free product in the well

NS-HS = sample not collected due to health and safety concerns

NS-IW = sample not collected due to insufficient volume of water in well

NS-OL = sample not collected because it was overlooked in the field

NS-SL = sample not analyzed due to sample being lost in transit to laboratory

NS-PS = sample not collected due to observation of product sheen in well

U = analyte was not detected above the reported sample quantitation limit

Table 7. Cumulative Product Shipped from the Site

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Date	Destination	Total Product (gal)		Date	Destination	Total Product (gal)
12/9/2014	PPL Greensboro	4,289		6/3/2015	Allied Energies	4,214
12/9/2014	PPL Greensboro	3,100		8/10/2015	Allied Energies	6,000
12/12/2014	PPL Greensboro	1,189		11/2/2015	Allied Energies	5,800
12/30/2014	Crystal Clean (FCC)	5,057		11/13/2015	Crystal Clean (FCC)	2,900
12/31/2014	Crystal Clean (FCC)	5,333		12/1/2015	Allied Energies	6,690
1/4/2015	Crystal Clean (FCC)	5,000		12/1/2015	Allied Energies	6,700
1/4/2015	Crystal Clean (FCC)	2,872		12/7/2015	Crystal Clean (FCC)	500
1/5/2015	Crystal Clean (FCC)	5,013		9/28/2016	Shamrock	495
1/6/2015	Crystal Clean (FCC)	4,800		10/17/2016	Shamrock	110
1/7/2015	Allied Energies	6,532		10/24/2016	Shamrock	85
1/7/2015	Allied Energies	6,425		10/31/2016	Shamrock	70
1/7/2015	Allied Energies	8,200		11/10/2016	Shamrock	168
1/9/2015	Allied Energies	6,482		1/18/2017	A&D Archdale, NC	3,758
1/9/2015	Allied Energies	7,825		3/3/2017	A&D Archdale, NC	460
1/12/2015	Allied Energies	6,540		3/8/2017	A&D Archdale, NC	500
1/12/2015	Allied Energies	6,467		3/15/2017	A&D Archdale, NC	4,189
1/13/2015	Allied Energies	6,732		4/3/2017	A&D Archdale, NC	458
1/13/2015	Allied Energies	6,595		4/19/2017	A&D Archdale, NC	927
1/15/2015	Allied Energies	6,500		4/19/2017	A&D Archdale, NC	747
1/22/2015	Allied Energies	5,791		5/22/2017	A&D Archdale, NC	50
1/23/2015	Allied Energies	5,450		6/7/2017	A&D Archdale, NC	658
1/27/2015	Allied Energies	5,791		6/29/2017	A&D Archdale, NC	695
1/27/2015	Allied Energies	5,557		8/25/2017	A&D Archdale, NC	566
1/27/2015	Allied Energies	6,043		9/8/2017	A&D Archdale, NC	99
1/28/2015	Allied Energies	4,411		1/8/2018	A&D Archdale, NC	6
2/5/2015	Allied Energies	5,513		12/4/2018	Remaining in poly tanks	11.5
2/11/2015	Allied Energies	5,732			**Total (gallons)**	**222,986**
2/11/2015	Allied Energies	5,606			**Total (barrels)**	**5,309**
2/25/2015	Allied Energies	5,583				
3/4/2015	Allied Energies	4,000				
3/16/2015	Allied Energies	5,200				
6/3/2015	Allied Energies	6,500				

Notes:

Gasoline and water are field-segregated using two 1,550-gallon poly tanks prior to offsite disposal.

A&D = A&D Environmental

gal = gallons

ID = identification

NC = North Carolina

PPL = Plantation Pipe Line Company

Table 8. Stream Gauge Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Date Installed	Stream Bottom Elevation (ft amsl)	Elevation of Zero Mark (ft amsl)
SW-01	Manually	3/29/2016	812.39	812.82
SW-02	Manually	3/29/2016	808.36	808.65
SW-03	Manually	3/29/2016	815.05	815.09
SW-05	Manually	3/29/2016	838.69	838.75
SW-08	Manually	3/29/2016	802.14	802.04
SW-10	Manually	3/29/2016	776.62	778.09
SW-14	Manually	7/18/2017	837.13	NS

Notes:
amsl = above mean sea level relative to North American Vertical Datum of 1988 (NAVD88). Benchmark is 34.8289659 degrees north, 82.3710354 degrees west (NAD83, 2011), elevation 929.1 ft NAVD88.
ft = feet
ID = identification
NS = location not surveyed
SW = surface water

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
Monitoring Wells																			
MW-01	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	850.25	853.07	15.61	8	2	13.00	837.2	5.82	15.82	3.0	13.0	847.2	837.2	10.00
MW-01B	Schramm Air Rig	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	850.45	852.99	45.26	10	6	38.50	812.0	21.03	41.03	18.5	38.5	832.0	812.0	20.00
MW-02	CME 750 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	841.24	841.04	19.78	8	2	20.00	821.2	4.80	19.80	5.0	20.0	836.2	821.2	15.00
MW-02B	Schramm Air Rig/rehabbed (10/5/2017) with a Mobile Drill B57	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	841.18	841.19	81.55	10	2	81.70	759.5	70.00	81.70	70.0	81.7	771.2	759.5	13.00
MW-03	CME 550 HSA	MW-10136	6/23/2015	Still in use	Monitoring Well/Gauging	838.38	838.36	22.19	8	2	20.00	818.4	4.98	19.98	5.0	20.0	833.4	818.4	15.00
MW-04	CME 550 HSA	MW-10136	6/23/2015	Still in use	Monitoring Well/Gauging	844.51	844.42	20.65	8	2	20.00	824.5	4.91	19.91	5.0	20.0	839.5	824.5	15.00
MW-05	CME 550 HSA	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	851.15	851.11	19.89	8	2	20.00	831.1	4.96	19.96	5.0	20.0	846.1	831.1	15.00
MW-06	CME 550 HSA	MW-10136	6/24/2015	Still in use	Monitoring Well/Gauging	852.98	852.92	19.20	8	2	19.60	833.4	4.54	19.54	5.0	19.6	848.0	833.4	15.00
MW-06B	Mobile Drill B57	MW-11117	10/17/2017	Still in use	Monitoring Well/Gauging	852.42	852.57	85.65	13.75	4	85.20	767.2	65.50	85.50	65.5	85.5	786.9	766.9	20.00
MW-07	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	853.02	853.02	13.60	8	2	13.50	839.5	3.50	13.50	3.5	13.5	849.5	839.5	10.00
MW-08	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	844.75	844.72	19.80	8	2	19.70	825.1	4.67	19.67	4.7	19.7	840.1	825.1	15.00
MW-09	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	843.72	843.63	20.21	8	2	19.50	824.2	4.41	19.41	4.5	19.5	839.2	824.2	15.00
MW-09B	Mobile Drill B57	MW-11117	10/17/2017	Still in use	Monitoring Well/Gauging	843.71	843.92	151.00	13.75	4	151.00	692.7	132.20	151.00	132.2	151.0	711.5	692.7	20.00
MW-10	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	842.33	845.41	23.54	8	2	20.00	822.3	8.08	23.08	5.0	20.0	837.3	822.3	15.00
MW-11	CME 550 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	852.36	855.63	32.50	8	2	25.20	827.2	13.27	28.27	14.2	25.0	838.2	827.4	15.00
MW-12	CME 550 HSA	MW-10136	6/25/2015	Still in use	Monitoring Well/Gauging	832.20	834.53	21.69	8	2	19.30	812.9	6.63	21.63	4.3	19.3	827.9	812.9	15.00
MW-12B	Geoprobe 3230 DT HSA	MW-10460	12/22/2015	Still in use	Monitoring Well/Gauging	832.26	834.98	45.81	10	6	43.00	789.3	35.72	45.72	33.0	43.0	799.3	789.3	10.00
MW-13	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	845.93	848.84	22.18	8	2	19.00	826.9	6.92	21.92	4.0	19.0	841.9	826.9	15.00
MW-13B	Geoprobe 3230 DT HSA	MW-10461	12/21/2015	Still in use	Monitoring Well/Gauging	847.19	849.82	55.36	10	6	58.00	789.2	50.64	60.64	48.0	58.0	799.2	789.2	10.00
MW-14	CME 550 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	836.47	838.70	22.20	8	2	19.30	817.2	6.53	21.53	4.3	19.3	832.2	817.2	15.00
MW-14B	Mobile ST Schramm	MW-10578	5/3/2016	Still in use	Monitoring Well/Gauging	837.12	840.20	76.97	10	6	76.90	760.2	66.07	76.07	66.0	76.0	771.1	761.1	10.00
MW-15	CME 550 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	828.68	831.03	21.22	8	2	19.00	809.7	6.35	21.35	4.0	19.0	824.7	809.7	15.00
MW-15B	CME 550 HSA	MW-10136	7/28/2015	Still in use	Monitoring Well/Gauging	828.66	831.29	74.41	10	6	77.85	750.8	70.48	80.48	67.9	77.9	760.8	750.8	10.00
MW-16	CME 750 HSA	MW-10136	6/26/2015	Still in use	Monitoring Well/Gauging	847.63	847.67	20.37	8	2	20.00	827.6	5.03	20.03	5.0	20.0	842.6	827.6	15.00
MW-17	CME 750 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	855.32	855.35	15.30	8	2	11.00	844.3	6.03	11.03	6.0	11.0	849.3	844.3	5.00
MW-17B	Geoprobe 3230 DT HSA	MW-10462	1/7/2016	Still in use	Monitoring Well/Gauging	855.37	855.37	27.50	10	6	27.00	828.4	17.00	27.00	17.0	27.0	838.4	828.4	10.00
MW-18	CME 550 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	846.82	846.89	19.75	8	2	20.00	826.8	5.06	20.06	5.0	20.0	841.8	826.8	15.00
MW-19	CME 750 HSA	MW-10136	6/29/2015	Still in use	Monitoring Well/Gauging	851.23	853.94	12.13	8	2	9.50	841.7	7.20	12.20	4.5	9.5	846.7	841.7	5.00
MW-20	CME 750 HSA	MW-10136	6/30/2015	Still in use	Monitoring Well/Gauging	853.07	852.89	19.45	8	2	19.00	834.1	3.81	18.81	4.0	19.0	849.1	834.1	15.00
MW-21	CME 750 HSA	MW-10136	6/30/2015	Still in use	Monitoring Well/Gauging	855.68	855.77	20.70	8	2	20.00	835.7	5.09	20.09	5.0	20.0	850.7	835.7	15.00
MW-22	CME 750 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	854.62	854.60	10.30	8	2	11.00	843.6	5.98	10.98	6.0	11.0	848.6	843.6	5.00
MW-23	CME 750 HSA	MW-10136	7/1/2015	Still in use	Monitoring Well/Gauging	846.66	849.57	23.50	8	2	20.00	826.7	7.91	22.91	5.0	20.0	841.7	826.7	15.00

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
MW-23B	CME 550 HSA	MW-10136	7/22/2015	Still in use	Monitoring Well/Gauging	846.81	849.69	53.48	10	6	50.50	796.3	30.88	53.38	28.0	50.5	818.8	796.3	22.50
MW-24	CME 550 HSA	MW-10136	7/15/2015	Still in use	Monitoring Well/Gauging	815.72	817.92	15.30	8	2	13.00	802.7	10.20	15.20	8.0	13.0	807.7	802.7	5.00
MW-24B	CME 550 HSA	MW-10136	7/20/2015	Still in use	Monitoring Well/Gauging	815.83	818.72	45.10	10	6	39.50	776.3	22.39	42.39	19.5	39.5	796.3	776.3	20.00
MW-25	Geoprobe 3230 DT HSA	MW-10463	1/5/2016	Still in use	Monitoring Well/Gauging	823.46	826.18	18.07	8	2	15.00	808.5	8.04	18.04	5.0	15.0	818.5	808.5	10.00
MW-25B	Geoprobe 3230 DT HSA	MW-10464	1/5/2016	Still in use	Monitoring Well/Gauging	822.59	823.81	59.00	10	6	58.00	764.6	49.22	59.22	48.0	58.0	774.6	764.6	10.00
MW-26	Geoprobe 3230 DT HSA	MW-10465	1/4/2016	Still in use	Monitoring Well/Gauging	844.76	847.56	17.15	8	2	15.25	829.5	7.27	17.27	5.0	15.0	839.8	829.8	10.00
MW-26B	Geoprobe 3230 DT HSA	MW-10466	1/4/2016	Still in use	Monitoring Well/Gauging	844.81	847.81	43.84	10	6	38.00	806.8	29.00	41.00	26.0	38.0	818.8	806.8	12.00
MW-27	Geoprobe 3230 DT HSA	MW-10467	1/5/2016	Still in use	Monitoring Well/Gauging	854.22	854.11	29.51	8	2	30.25	824.0	15.11	30.11	15.0	30.0	839.2	824.2	15.00
MW-27B	CME 550 HSA / Schramm	MW-10578	4/26/2016	Still in use	Monitoring Well/Gauging	854.27	857.14	41.45	10	6	46.00	808.3	31.45	41.45	36.0	46.0	818.3	808.3	10.00
MW-28	Geoprobe 3230 DT HSA	MW-10468	1/5/2016	Still in use	Monitoring Well/Gauging	841.49	844.31	25.93	8	2	25.25	816.2	13.50	23.50	15.0	25.0	826.5	816.5	10.00
MW-29	Geoprobe 3230 DT HSA	MW-10469	1/4/2016	Still in use	Monitoring Well/Gauging	852.07	852.20	15.10	8	2	15.25	836.8	5.00	15.00	5.0	15.0	847.1	837.1	10.00
MW-30	Geoprobe 3230 DT HSA	MW-10470	1/6/2016	Still in use	Monitoring Well/Gauging	841.21	841.28	14.69	8	2	15.25	826.0	5.00	15.00	5.0	15.0	836.2	826.2	10.00
MW-31	CME 550 HSA	MW-10578	4/19/2016	Still in use	Monitoring Well/Gauging	842.26	845.04	28.20	8	2	25.00	817.3	13.20	28.20	10.0	25.0	832.3	817.3	15.00
MW-31B	CME 550 HSA / Schramm	MW-10578	4/22/2016	Still in use	Monitoring Well/Gauging	842.01	844.94	79.25	10	6	76.00	766.0	68.25	79.25	65.0	76.0	777.0	766.0	11.00
MW-32	CME 550 HSA	MW-10578	4/19/2016	Still in use	Monitoring Well/Gauging	839.81	842.93	29.09	8	2	26.00	813.8	13.09	28.09	10.0	25.0	829.8	814.8	15.00
MW-33	CME 550 HSA	MW-10578	4/15/2016	Still in use	Monitoring Well/Gauging	846.20	849.20	28.30	8	2	27.00	819.2	11.30	26.30	10.0	25.0	836.2	821.2	15.00
MW-33T	CME 550 HSA/Air Rotary	MW-10578	4/14/2016	Still in use	Monitoring Well/Gauging	846.15	849.11	100.35	8	2	96.50	749.7	87.85	97.85	84.0	94.0	762.2	752.2	10.00
MW-34	Hand Auger	MW-10994	3/16/2017	Still in use	Monitoring Well/Gauging	813.99	816.35	7.86	4	2	5.00	809.0	5.36	7.86	2.5	5.0	811.5	809.0	2.50
MW-35	CME 550 HSA	MW-10578	4/20/2016	Still in use	Monitoring Well/Gauging	826.22	829.40	28.42	8	2	26.00	800.2	12.42	27.42	10.0	25.0	816.2	801.2	15.00
MW-36	CME 550 HSA	MW-10578	4/22/2016	Still in use	Monitoring Well/Gauging	858.66	858.47	23.65	8	2	24.50	834.2	8.65	23.65	9.5	24.5	849.2	834.2	15.00
MW-36B	CME 550 HSA / Schramm	MW-10578	4/28/2016	Still in use	Monitoring Well/Gauging	858.49	858.15	47.54	10	6	54.90	803.6	36.64	46.64	44.0	54.0	814.5	804.5	10.00
MW-37	Geoprobe 8040 HSA	MW-10759	8/9/2016	Still in use	Monitoring Well/Gauging	810.93	813.92	18.11	6.25	2	16.00	794.9	7.11	17.11	5.0	15.0	805.9	795.9	10.00
MW-38	Geoprobe 8040 HSA	MW-10759	8/9/2016	Still in use	Monitoring Well/Gauging	810.49	813.28	11.61	6.25	2	9.10	801.4	6.41	11.41	3.9	8.9	806.6	801.6	5.00
MW-39	Geoprobe 8040 HSA	MW-10759	11/29/2016	Still in use	Monitoring Well/Gauging	816.92	819.90	13.01	6.25	2	11.00	805.9	7.01	12.01	5.0	10.0	811.9	806.9	5.00
MW-40	Geoprobe 8040 HSA	MW-10759	11/30/2016	Still in use	Monitoring Well/Gauging	814.75	817.79	13.18	6.25	2	11.00	803.8	7.18	12.18	5.0	10.0	809.8	804.8	5.00
MW-41	Geoprobe 8040 HSA	MW-10759	11/28/2016	Still in use	Monitoring Well/Gauging	816.67	819.68	13.20	6.25	2	11.00	805.7	7.20	12.20	5.0	10.0	811.7	806.7	5.00
MW-42	Geoprobe 8040 HSA	MW-10759	11/28/2016	Still in use	Monitoring Well/Gauging	817.31	820.33	13.40	6.25	2	11.00	806.3	7.40	12.40	5.0	10.0	812.3	807.3	5.00
MW-43	Mobile Drill B57	MW-10964	10/20/2017	Still in use	Monitoring Well/Gauging	815.92	818.12	10.30	8.5	2	7.50	808.42	5.30	10.30	2.5	7.5	813.42	808.42	5.00
MW-43B	Mobile Drill B57	MW-10964	10/20/2017	Still in use	Monitoring Well/Gauging	816.08	818.80	54.40	13.75	4	51.00	765.08	34.40	54.40	31.0	51.0	785.08	765.08	20.00

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
MW-44	Hollow Stem Auger	MW-10964	1/23/2017	Still in use	Monitoring Well/Gauging	853.82	853.67	9.82	6.25	2	10.00	843.8	4.82	9.82	5.0	10.0	848.8	843.8	5.00
MW-44B	Hollow Stem Auger/Wire Line/Air Rotary	MW-10964	1/23/2017	Still in use	Monitoring Well/Gauging	853.66	853.38	34.50	10.25	4	37.10	816.6	13.50	34.50	16.1	37.1	837.6	816.6	21.00
MW-45	Hollow Stem Auger	MW-10964	1/26/2017	Still in use	Monitoring Well/Gauging	852.39	852.47	14.42	6.25	2	14.00	838.4	4.42	14.42	4.0	14.0	848.4	838.4	10.00
MW-45B	Hollow Stem Auger/Wire Line/Air Rotary	MW-10964	1/25/2017	Still in use	Monitoring Well/Gauging	852.69	852.85	40.30	10.25	4	40.30	812.4	19.00	40.30	19.0	40.3	833.7	812.4	21.30
MW-46	Geoprobe 8040 DT	MW-11117	9/13/2017	Still in use	Monitoring Well/Gauging	842.43	845.47	17.05	8.5	2	14.00	828.4	12.05	17.05	9.0	14.0	833.4	828.4	5.00
MW-47	Geoprobe 8040 DT	MW-11117	9/14/2017	Still in use	Monitoring Well/Gauging	839.89	842.98	22.79	8.5	2	20.00	819.9	12.79	22.79	10.0	20.0	829.9	819.9	10.00
MW-48B	Mobile Drill B57	MW-11117	10/18/2017	Still in use	Monitoring Well/Gauging	829.53	832.34	94.50	13.75	4	91.00	738.5	74.50	94.50	71.0	91.0	758.5	738.5	20.00
MW-49	Geoprobe 8040 DT	MW-11117	9/14/2017	Still in use	Monitoring Well/Gauging	843.65	846.78	23.30	8.5	2	21.00	822.7	8.30	23.30	6.0	21.0	837.7	822.7	15.00
MW-50B	Mobile Drill B57	MW-11247	10/17/2017	Still in use	Monitoring Well/Gauging	847.11	850.34	109.60	13.75	4	106.00	741.1	89.60	109.60	96.0	106.0	751.1	741.1	20.00
MW-51	CME 750 HSA	MW-11508	9/5/2018	Still in use	Monitoring Well/Gauging	831.92	828.77	25.34	6.25	2	22.50	809.4	10.45	25.45	7.3	22.3	824.6	809.6	15.00
MW-52	CME 750 HSA	MW-11508	9/4/2018	Still in use	Monitoring Well/Gauging	830.09	826.72	33.43	6.25	2	28.50	801.6	16.37	31.37	13.0	28.0	817.1	802.1	15.00
MW-53	CME 750 HSA	MW-11508	8/28/2018	Still in use	Monitoring Well/Gauging	837.24	837.37	21.32	8.0	2	21.80	815.4	6.00	21.00	6.0	21.0	831.2	816.2	15.00
MW-54	CME 750 HSA	MW-11508	8/30/2018	Still in use	Monitoring Well/Gauging	840.83	840.79	25.58	8.0	2	25.20	815.6	9.80	24.80	9.8	24.8	831.0	816.0	15.00
Recovery Wells																			
RW-01	HSA	MW-09978	1/28/2015	Still in use	Gauging/LNAPL Recovery	849.49	851.92	20.80	6.25	4	17	832.5	4.44	19.44	2.0	17.0	847.5	832.5	15.00
RW-02	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	850.22	852.69	25.72	6.25	4	23	827.2	15.47	25.47	13.0	23.0	837.2	827.2	10.00
RW-03	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	850.03	852.34	33.39	6.25	4	31.2	818.8	18.51	33.51	16.2	31.2	833.8	818.8	15.00
RW-04	HSA	MW-09978	1/29/2015	Still in use	Gauging/LNAPL Recovery	852.15	853.93	35.04	6.25	4	33	819.2	14.78	34.78	13.0	33.0	839.2	819.2	20.00
RW-05	HSA	MW-09978	1/30/2015	Still in use	Gauging/LNAPL Recovery	850.99	853.53	38.25	6.25	4	34.5	816.5	22.04	37.04	19.5	34.5	831.5	816.5	15.00
RW-06	HSA	MW-09978	1/30/2015	Still in use	Gauging/LNAPL Recovery	844.21	846.21	38.50	6.25	4	38.5	805.7	20.49	40.49	18.5	38.5	825.7	805.7	20.00
RW-07	HSA	MW-09978	2/2/2015	Still in use	Gauging/LNAPL Recovery	841.01	843.19	38.00	6.25	4	38	803.0	15.18	40.18	13.0	38.0	828.0	803.0	25.00
RW-08	HSA	MW-09978	2/2/2015	Still in use	Gauging/LNAPL Recovery	833.46	835.48	33.50	6.25	4	33.5	800.0	10.52	35.52	8.5	33.5	825.0	800.0	25.00
RW-09	HSA	MW-09978	2/3/2015	Still in use	Gauging/LNAPL Recovery	831.13	835.12	42.13	6.25	4	41.5	789.6	15.49	45.49	11.5	41.5	819.6	789.6	30.00
RW-10	HSA	MW-10006	2/4/2015	Still in use	Gauging/LNAPL Recovery	846.76	848.53	66.51	6.25	4	68.5	778.3	5.27	70.27	3.5	68.5	843.3	778.3	65.00
RW-11	HSA	MW-10006	2/4/2015	Still in use	Gauging/LNAPL Recovery	851.03	852.97	21.40	6.25	4	19.5	831.5	6.44	21.44	4.5	19.5	846.5	831.5	15.00
RW-12	HSA	MW-10006	2/5/2015	Still in use	Gauging/LNAPL Recovery	851.64	854.49	16.90	6.25	4	14	837.6	6.90	16.90	4.0	14.0	847.6	837.6	10.00
RW-14	HSA	MW-10006	2/6/2015	Still in use	Gauging/LNAPL Recovery	826.25	827.54	55.00	6.25	4	55	771.2	5.00	55.00	5.0	55.0	821.2	771.2	50.00
RW-15	HSA	MW-10006	2/10/2015	Still in use	Gauging/LNAPL Recovery	849.48	851.64	36.50	6.25	4	36.5	813.0	1.50	36.50	1.5	36.5	848.0	813.0	35.00
Recovery Sumps																			
RS-01	Trackhoe	MW-09978	12/29/2014	Still in use	Gauging/LNAPL Recovery	847.95	849.13	23.60	NA	4	22.42	825.5	3.18	23.60	2.0	22.4	845.9	825.5	20.42
RS-02	Trackhoe	MW-09978	12/29/2014	Still in use	Gauging/LNAPL Recovery	848.54	849.52	20.00	NA	4	19.02	829.5	2.98	20.00	2.0	19.0	846.5	829.5	17.02
RS-04	Trackhoe	MW-09978	12/30/2014	Still in use	Gauging/LNAPL Recovery	850.36	851.47	10.75	NA	4	9.64	840.7	3.11	10.75	2.0	9.6	848.4	840.7	7.64
RS-05	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	847.14	848.31	25.20	NA	4	24.03	823.1	3.17	25.20	2.0	24.0	845.1	823.1	22.03
RS-06	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	848.25	849.47	25.18	NA	4	23.96	824.3	3.22	25.18	2.0	24.0	846.2	824.3	21.96

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
RS-07	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	854.06	855.08	16.65	NA	4	15.63	838.4	3.02	16.65	2.0	15.6	852.1	838.4	13.63
RS-08	Trackhoe	MW-09978	12/31/2014	Still in use	Gauging/LNAPL Recovery	852.65	854.24	20.22	NA	4	18.63	834.0	3.59	20.22	2.0	18.6	850.7	834.0	16.63
RS-09	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.75	847.60	18.85	NA	4	18.00	828.8	2.85	18.85	2.0	18.0	844.8	828.8	16.00
RS-10	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.28	847.42	20.06	NA	4	18.92	827.4	3.14	20.06	2.0	18.9	844.3	827.4	16.92
RS-11	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.35	847.44	22.06	NA	4	20.97	825.4	3.09	22.06	2.0	21.0	844.3	825.4	18.97
RS-12	Trackhoe	MW-09978	1/7/2015	Still in use	Gauging/LNAPL Recovery	846.58	847.74	21.29	NA	4	20.13	826.5	3.16	21.29	2.0	20.1	844.6	826.5	18.13
RS-13	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	845.39	845.98	19.92	NA	4	19.33	826.1	1.96	19.92	1.4	19.3	844.0	826.1	17.96
RS-14	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	844.66	845.97	19.93	NA	4	18.62	826.0	3.31	19.93	2.0	18.6	842.7	826.0	16.62
RS-15	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	845.36	846.41	19.93	NA	4	18.88	826.5	3.05	19.93	2.0	18.9	843.4	826.5	16.88
RS-16	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	844.56	845.44	19.98	NA	4	19.10	825.5	2.88	19.98	2.0	19.1	842.6	825.5	17.10
RS-17	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	843.29	844.22	19.91	NA	4	18.98	824.3	2.93	19.91	2.0	19.0	841.3	824.3	16.98
RS-18	Trackhoe	MW-09978	1/8/2015	Still in use	Gauging/LNAPL Recovery	846.82	847.89	19.98	NA	4	18.91	827.9	3.07	19.98	2.0	18.9	844.8	827.9	16.91
RS-20	Trackhoe	MW-09978	3/19/2015	Still in use	Gauging/LNAPL Recovery	841.73	842.69	11.84	NA	4	9.91	831.8	3.93	11.84	2.0	9.9	839.7	831.8	7.91
Recovery Trench Sumps																			
RT-1A	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	852.86	854.06	20.89	NA	4	20.00	832.9	3.20	21.20	2.0	20.0	850.9	832.9	18.00
RT-1B	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	853.29	854.15	21.10	NA	4	20.00	833.3	2.86	20.86	2.0	20.0	851.3	833.3	18.00
RT-1C	Trackhoe	MW-09978	1/6/2015	Still in use	Gauging/LNAPL Recovery	853.55	854.55	21.27	NA	4	20.00	833.5	3.00	21.00	2.0	20.0	851.5	833.5	18.00
RT-2A	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	815.66	817.48	10.81	NA	4	10.00	805.7	3.82	11.82	2.0	10.0	813.7	805.7	8.00
RT-2B	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	816.72	817.61	10.82	NA	4	10.00	806.7	2.89	10.89	2.0	10.0	814.7	806.7	8.00
RT-2C	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	816.86	818.06	10.23	NA	4	10.00	806.9	3.20	11.20	2.0	10.0	814.9	806.9	8.00
RT-2D	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.11	818.12	10.21	NA	4	10.00	807.1	3.01	11.01	2.0	10.0	815.1	807.1	8.00
RT-2E	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.32	818.25	10.24	NA	4	10.00	807.3	2.93	10.93	2.0	10.0	815.3	807.3	8.00
RT-2F	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.74	818.57	10.23	NA	4	10.00	807.7	2.83	10.83	2.0	10.0	815.7	807.7	8.00
RT-2G	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	819.27	820.07	10.24	NA	4	10.00	809.3	2.80	10.80	2.0	10.0	817.3	809.3	8.00
RT-2I	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	819.23	819.51	10.20	NA	4	10.00	809.2	2.28	10.28	2.0	10.0	817.2	809.2	8.00
RT-2J	Trackhoe	MW-09978	1/22/2015	Still in use	Gauging/LNAPL Recovery	817.47	817.63	10.22	NA	4	10.00	807.5	2.16	10.16	2.0	10.0	815.5	807.5	8.00
RT-2K	Trackhoe	MW-09978	3/20/2015	Still in use	Gauging/LNAPL Recovery	816.11	817.40	4.14	NA	4	2.50	813.6	2.64	4.14	1.0	2.5	815.1	813.6	1.50
RT-2L	Trackhoe	MW-09978	3/20/2015	Still in use	Gauging/LNAPL Recovery	817.95	819.54	6.60	NA	4	3.71	814.2	3.89	6.60	1.0	3.7	816.9	814.2	2.71
Piezometers																			
TW-28	DPT	MW-09978	1/23/2015	Still in use	Gauging	851.57	851.42	31.84	2.2	1	30	821.6	11.84	31.84	10.0	32.0	841.6	819.6	20.00
TW-41	DPT	MW-09978	1/25/2015	Still in use	Gauging	849.38	849.38	32.15	2.2	1	34	815.4	7.15	32.15	9.0	32.1	840.4	817.2	25.00
TW-42	DPT	MW-09978	1/25/2015	Still in use	Gauging	847.02	846.84	27.50	2.2	1	29.5	817.5	7.50	27.50	9.5	27.7	837.5	819.3	20.00
TW-45	DPT	MW-09978	1/25/2015	Still in use	Gauging	848.26	848.31	36.86	2.2	1	37.5	810.8	11.86	36.86	12.5	36.8	835.8	811.4	25.00
TW-55	DPT	MW-10006	2/5/2015	Still in use	Gauging	846.00	845.93	41.50	2.7	1	43	803.0	11.50	41.50	13.0	41.6	833.0	804.4	30.00
TW-59	DPT	MW-09978	1/30/2015	Still in use	Gauging	834.84	834.78	21.15	2.7	1	22	812.8	6.15	21.15	7.0	21.2	827.8	813.6	15.00
TW-60	DPT	MW-09978	1/30/2015	Still in use	Gauging	828.00	828.03	37.20	2.7	1	41.5	786.5	2.20	37.20	6.5	37.2	821.5	790.8	35.00
TW-64	DPT	MW-09978	2/2/2015	Still in use	Gauging	845.89	845.88	52.85	2.2	1	55	790.9	2.85	52.85	5.0	52.9	840.9	793.0	50.00

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
TW-66	DPT	MW-09978	2/2/2015	Still in use	Gauging	820.18	820.31	23.81	2.7	1	24	796.2	3.81	23.81	4.0	23.7	816.2	796.5	20.00
TW-67	DPT	MW-09978	2/3/2015	Still in use	Gauging	852.88	852.71	26.47	2.7	1	27	825.9	6.47	26.47	7.0	26.6	845.9	826.2	20.00
TW-73	DPT	MW-09978	2/3/2015	Still in use	Gauging	850.60	850.53	16.00	2.7	1	16	834.6	6.00	16.00	6.0	16.1	844.6	834.5	10.00
TW-94	DPT	MW-10006	2/10/2015	Still in use	Gauging	840.75	840.58	40.00	2.7	1	40	800.8	5.00	40.00	5.0	40.2	835.8	800.6	35.00
TW-96	DPT	MW-10006	2/11/2015	Still in use	Gauging	840.52	840.40	28.76	2.7	1	30	810.5	3.76	28.76	5.0	28.9	835.5	811.6	25.00
Vertical Air Sparging Wells																			
VAS-01	Mobile B57 HSA	SCHE03020469	7/28/2016	Still in use	Cupboard Creek Protection	853.269	NS	NA	8.50	2.00	32.20	NA	NA	NA	28.70	31.20	NA	NA	2.50
VAS-02	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	852.360	NS	NA	8.50	2.00	27.00	NA	NA	NA	23.50	26.00	NA	NA	2.50
VAS-03	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	852.132	NS	NA	8.50	2.00	18.30	NA	NA	NA	14.80	17.30	NA	NA	2.50
VAS-04	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	852.056	NS	NA	8.50	2.00	16.70	NA	NA	NA	13.20	15.70	NA	NA	2.50
VAS-05	Mobile B57 HSA	SCHE03020469	7/27/2016	Still in use	Cupboard Creek Protection	851.559	NS	NA	8.50	2.00	13.00	NA	NA	NA	9.50	12.00	NA	NA	2.50
VAS-06	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	851.612	NS	NA	8.50	2.00	14.40	NA	NA	NA	10.90	13.40	NA	NA	2.50
VAS-07	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	851.603	NS	NA	8.50	2.00	19.40	NA	NA	NA	15.90	18.40	NA	NA	2.50
VAS-08	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.583	NS	NA	8.50	2.00	22.00	NA	NA	NA	18.50	21.00	NA	NA	2.50
VAS-09	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.607	NS	NA	8.50	2.00	14.00	NA	NA	NA	10.50	13.00	NA	NA	2.50
VAS-10	Mobile B57 HSA	SCHE03020469	7/25/2016	Still in use	Cupboard Creek Protection	851.411	NS	NA	8.50	2.00	16.10	NA	NA	NA	12.60	15.10	NA	NA	2.50
VAS-11	Mobile B57 HSA	SCHE03020469	7/28/2016	Still in use	Cupboard Creek Protection	852.476	NS	NA	8.50	2.00	25.30	NA	NA	NA	21.80	24.30	NA	NA	2.50
VAS-12	Geoprobe 8040 HSA	SCHE03020469	8/5/2016	Still in use	Cupboard Creek Protection	851.535	NS	NA	8.50	2.00	24.20	NA	NA	NA	20.70	23.20	NA	NA	2.50
VAS-13	Geoprobe 8040 HSA	SCHE03020469	8/5/2016	Still in use	Cupboard Creek Protection	851.701	NS	NA	8.50	2.00	19.60	NA	NA	NA	16.10	18.60	NA	NA	2.50
VAS-14	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	851.239	NS	NA	8.50	2.00	16.20	NA	NA	NA	12.70	15.20	NA	NA	2.50
VAS-15	Geoprobe 8040 HSA	SCHE03020469	8/4/2016	Still in use	Cupboard Creek Protection	850.732	NS	NA	8.50	2.00	15.50	NA	NA	NA	12.00	14.50	NA	NA	2.50
VAS-16	Geoprobe 8040 HSA	SCHE03020469	8/3/2016	Still in use	Cupboard Creek Protection	850.305	NS	NA	8.50	2.00	17.90	NA	NA	NA	14.40	16.90	NA	NA	2.50
VAS-17	Geoprobe 8040 HSA	SCHE03020469	8/3/2016	Still in use	Cupboard Creek Protection	849.842	NS	NA	8.50	2.00	19.30	NA	NA	NA	15.80	18.30	NA	NA	2.50
VAS-18	Geoprobe 8040 HSA	SCHE03020469	8/8/2016	Still in use	Cupboard Creek Protection	849.513	NS	NA	8.50	2.00	16.50	NA	NA	NA	13.00	15.50	NA	NA	2.50
VAS-19	Mobile B57 HSA	SCHE03020469	7/26/2016	Still in use	Cupboard Creek Protection	850.465	NS	NA	8.50	2.00	17.20	NA	NA	NA	13.60	16.10	NA	NA	2.50
VAS-20	Mobile B57 HSA	SCHE03020469	7/19/2016	Still in use	Brown's Creek Protection	827.789	NS	NA	8.50	2.00	47.60	NA	NA	NA	44.60	47.10	NA	NA	2.50
VAS-21	Mobile B57 HSA	SCHE03020469	7/19/2016	Still in use	Brown's Creek Protection	826.304	NS	NA	8.50	2.00	53.50	NA	NA	NA	50.00	52.50	NA	NA	2.50
VAS-22	Mobile B57 HSA	SCHE03020469	7/21/2016	Still in use	Brown's Creek Protection	827.394	NS	NA	8.50	2.00	57.00	NA	NA	NA	53.50	56.00	NA	NA	2.50
VAS-23	Mobile B57 HSA	SCHE03020469	7/22/2016	Still in use	Brown's Creek Protection	827.211	NS	NA	8.50	2.00	49.50	NA	NA	NA	46.00	48.50	NA	NA	2.50
VAS-24	Mobile B57 HSA	SCHE03020469	7/5/2016	Still in use	Brown's Creek Protection	826.803	NS	NA	8.50	2.00	58.50	NA	NA	NA	55.00	57.50	NA	NA	2.50
VAS-25	Mobile B57 HSA	SCHE03020469	7/11/2016	Still in use	Brown's Creek Protection	826.411	NS	NA	8.50	2.00	54.00	NA	NA	NA	50.50	53.00	NA	NA	2.50
VAS-26	Mobile B57 HSA	SCHE03020469	7/11/2016	Still in use	Brown's Creek Protection	825.180	NS	NA	8.50	2.00	55.00	NA	NA	NA	51.50	54.00	NA	NA	2.50
VAS-27	Mobile B57 HSA	SCHE03020469	7/8/2016	Still in use	Brown's Creek Protection	826.369	NS	NA	8.50	2.00	54.00	NA	NA	NA	50.50	53.00	NA	NA	2.50
VAS-28	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	828.930	NS	NA	8.50	2.00	23.10	NA	NA	NA	19.80	22.30	NA	NA	2.50
VAS-29	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	832.025	NS	NA	8.50	2.00	27.50	NA	NA	NA	24.00	26.50	NA	NA	2.50
VAS-30	Mobile B57 HSA	SCHE03020469	6/21/2016	Still in use	Brown's Creek Protection	831.485	NS	NA	8.50	2.00	52.90	NA	NA	NA	49.40	51.90	NA	NA	2.50
VAS-31	Mobile B57 HSA	SCHE03020469	6/21/2016	Still in use	Brown's Creek Protection	828.337	NS	NA	8.50	2.00	42.00	NA	NA	NA	38.50	41.00	NA	NA	2.50

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Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
VAS-32	Mobile B57 HSA	SCHE03020469	6/30/2016	Still in use	Brown's Creek Protection	836.257	NS	NA	8.50	2.00	43.00	NA	NA	NA	39.50	42.00	NA	NA	2.50
VAS-33	Mobile B57 HSA	SCHE03020469	6/29/2016	Still in use	Brown's Creek Protection	840.900	NS	NA	8.50	2.00	52.60	NA	NA	NA	49.10	51.60	NA	NA	2.50
VAS-34	Mobile B57 HSA	SCHE03020469	7/13/2016	Still in use	Brown's Creek Protection	836.585	NS	NA	8.50	2.00	53.50	NA	NA	NA	50.00	52.50	NA	NA	2.50
VAS-35	Mobile B57 HSA	SCHE03020469	7/13/2016	Still in use	Brown's Creek Protection	831.212	NS	NA	8.50	2.00	40.00	NA	NA	NA	36.50	39.00	NA	NA	2.50
VAS-36	Mobile B57 HSA	SCHE03020469	7/7/2016	Still in use	Brown's Creek Protection	831.361	NS	NA	8.50	2.00	33.20	NA	NA	NA	29.70	32.20	NA	NA	2.50
VAS-37	Mobile B57 HSA	SCHE03020469	7/7/2016	Still in use	Brown's Creek Protection	832.454	NS	NA	8.50	2.00	16.50	NA	NA	NA	13.00	15.50	NA	NA	2.50
VAS-38	Mobile B57 HSA	SCHE03020469	7/6/2016	Still in use	Brown's Creek Protection	834.566	NS	NA	8.50	2.00	21.10	NA	NA	NA	16.60	19.10	NA	NA	2.50
VAS-39	Mobile B57 HSA	SCHE03020469	6/22/2016	Still in use	Brown's Creek Protection	835.956	NS	NA	8.50	2.00	42.40	NA	NA	NA	38.90	41.40	NA	NA	2.50
VAS-40	Mobile B57 HSA	SCHE03020469	6/23/2016	Still in use	Brown's Creek Protection	833.753	NS	NA	8.50	2.00	40.00	NA	NA	NA	36.50	39.00	NA	NA	2.50
VAS-41	Mobile B57 HSA	SCHE03020469	6/28/2016	Still in use	Brown's Creek Protection	845.071	NS	NA	8.50	2.00	27.80	NA	NA	NA	24.30	26.80	NA	NA	2.50
VAS-42A	Mobile B57 HSA	SCHE03020469	7/14/2016	Still in use	Brown's Creek Protection	845.304	NS	NA	8.50	2.00	39.30	NA	NA	NA	35.80	38.30	NA	NA	2.50
VAS-43A	Mobile B57 HSA	SCHE03020469	7/15/2016	Still in use	Brown's Creek Protection	843.078	NS	NA	8.50	2.00	66.50	NA	NA	NA	63.00	65.50	NA	NA	2.50
VAS-44A	Mobile B57 HSA	SCHE03020469	7/18/2016	Still in use	Brown's Creek Protection	838.353	NS	NA	8.50	2.00	72.50	NA	NA	NA	69.00	71.50	NA	NA	2.50
VAS-46	Mobile B57 HSA	SCHE03020469	6/24/2016	Still in use	Brown's Creek Protection	839.503	NS	NA	8.50	2.00	20.80	NA	NA	NA	18.00	20.50	NA	NA	2.50
VAS-47	CME-750	SCHE03020469M2	8/27/2018	Still in use	Brown's Creek Protection	848.370	NS	NA	8.00	2.00	33.20	NA	NA	NA	30.20	32.20	NA	NA	2.00
VAS-48	CME-750	SCHE03020469M2	8/16/2018	Still in use	Brown's Creek Protection	846.580	NS	NA	8.00	2.00	35.70	NA	NA	NA	32.70	34.70	NA	NA	2.00
VAS-49	CME-750	SCHE03020469M2	8/28/2018	Still in use	Brown's Creek Protection	849.730	NS	NA	8.00	2.00	33.70	NA	NA	NA	30.70	32.70	NA	NA	2.00
VAS-50	CME-750	SCHE03020469M2	8/16/2018	Still in use	Brown's Creek Protection	850.110	NS	NA	8.00	2.00	27.80	NA	NA	NA	24.80	26.80	NA	NA	2.00
VAS-51	CME-750	SCHE03020469M2	8/15/2018	Still in use	Brown's Creek Protection	851.900	NS	NA	8.00	2.00	30.00	NA	NA	NA	27.00	29.00	NA	NA	2.00
VAS-52	CME-750	SCHE03020469M2	8/14/2018	Still in use	Brown's Creek Protection	851.970	NS	NA	8.00	2.00	34.50	NA	NA	NA	31.50	33.50	NA	NA	2.00
VAS-53	CME-750	SCHE03020469M2	8/14/2018	Still in use	Brown's Creek Protection	852.880	NS	NA	8.00	2.00	26.70	NA	NA	NA	23.70	25.70	NA	NA	2.00
VAS-54	Geoprobe 8040 HSA	SCHE03020469M2	8/13/2018	Still in use	Brown's Creek Protection	852.770	NS	NA	4.25	2.00	19.20	NA	NA	NA	16.20	18.20	NA	NA	2.00
VAS-55	CME-750	SCHE03020469M2	9/7/2018	Still in use	Cupboard Creek Protection	854.710	NS	NA	6.25	2.00	28.90	NA	NA	NA	25.90	27.90	NA	NA	2.00
VAS-56	CME-750	SCHE03020469M2	9/7/2018	Still in use	Cupboard Creek Protection	855.730	NS	NA	6.25	2.00	28.20	NA	NA	NA	25.20	27.20	NA	NA	2.00
VAS-57	CME-750	SCHE03020469M2	9/5/2018	Still in use	Cupboard Creek Protection	856.620	NS	NA	6.25	2.00	31.50	NA	NA	NA	28.50	30.50	NA	NA	2.00
VAS-58	CME-750	SCHE03020469M2	9/5/2018	Still in use	Cupboard Creek Protection	855.980	NS	NA	6.25	2.00	31.30	NA	NA	NA	28.30	30.30	NA	NA	2.00
VAS-59	CME-750	SCHE03020469M2	9/6/2018	Still in use	Cupboard Creek Protection	854.740	NS	NA	6.25	2.00	8.80	NA	NA	NA	6.80	8.80	NA	NA	2.00

Table 9. Well Construction Information
Plantation Pipe Line Company
Lewis Drive Remediation Site, Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Location ID	Installation Method	Permit #	Date Installed	Date Abandoned	Purpose	Ground Surface Elevation (ft amsl)	TOC Elevation (ft amsl)	Measured Depth to Bottom (ft BTOC)	Bore Hole Diameter (in)	Well Dia (in)	Well Depth (ft bgs)	Bottom of Well (ft amsl)	Top of Screen or Open Borehole Interval (ft BTOC)	Bottom of Screen or Open Borehole Interval (ft BTOC)	Top of Screen or Open Borehole Interval (ft bgs)	Bottom of Screen or Open Borehole Interval (ft bgs)	Top of Screen or Open Borehole Interval (ft amsl)	Bottom of Screen or Open Borehole Interval (ft amsl)	Length of Screen or Open Borehole Interval (ft)
Vertical Bedrock Sparging Wells																			
VBS-01	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/28/2017	Still in use	Brown's Creek Protection	NS	NS	38.15	4.00	2.00	38.50	NA	NA	NA	34.50	38.50	NA	NA	2.00
VBS-02	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/28/2017	Still in use	Brown's Creek Protection	NS	NS	31.05	4.00	2.00	31.00	NA	NA	NA	27.00	31.00	NA	NA	2.00
VBS-03	Hollow Stem Auger/Wire Line/Air Rotary	SCHE03020469M	1/27/2017	Still in use	Brown's Creek Protection	NS	NS	36.20	4.00	2.00	36.20	NA	NA	NA	32.20	36.20	NA	NA	2.00

Notes:
amsl = above mean sea level relative to North American Vertical Datum of 1988 (NAVD88). Benchmark is 34.8289659 degrees north, 82.3710354 degrees west (NAD83, 2011), elevation 929.1 ft NAVD88.

bgs = below ground surface
BTOC = below top of casing
DPT = direct push
ft = feet
HSA = hollow-stem auger
in = inches
NA = not applicable
NS = location not surveyed
RNE = Refusal not encountered
TOC = top of casing
ID = identification
RS = recovery sump
RT = recovery trench
RW = recovery well
TW = temporary well
MW = monitoring well
VAS = vertical air sparging well
VBS = vertical bedrock sparging well

Table 10. Revised Groundwater Monitoring Plan

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency[a]:	Contaminant Reduction Evaluation			Biodegradation Evaluation		Zone of Influence[b]	
	Baseline	Mid-Quarter	Quarterly	Baseline	Quarterly	Mid-Quarter	Quarterly
Analytes:	BTEX, Naphthalene, MTBE (and 1,2-DCA for groundwater samples only)[c]			Nitrate, Sulfate, Ferrous Iron, Carbon Dioxide, Methane, and Alkalinity[d]		Dissolved Oxygen	
Well ID							
Brown's Creek Protection Zone							
MW-12	Y		Y	Y	Y		Y
MW-12B	Y		Y				Y
MW-15	Y		Y	Y	Y	Y	Y
MW-15B	Y	Y	Y				Y
MW-24	Y		Y				
MW-24B	Y		Y				
MW-25	Y		Y	Y	Y		Y
MW-25B	Y		Y				Y
MW-28	Y		Y	Y	Y		Y
MW-34		Y	Y				
MW-35	Y		Y	Y	Y		
MW-37	Y	Y	Y				
MW-38	Y	Y	Y				
MW-39	Y	Y	Y				
MW-40	Y	Y	Y	Y	Y		
MW-41	Y	Y	Y				
MW-42	Y		Y	Y	Y		
MW-43			Y				
MW-43B			Y				
MW-49			Y				
Brown's Creek Subtotal:	*16*	*7*	*20*	*7*	*7*	*1*	*7*
Cupboard Creek Protection Zone							
MW-19	Y		Y	Y	Y		Y
MW-20	Y	Y	Y	Y	Y	Y	Y
MW-23	Y		Y				
MW-23B	Y		Y				
MW-26	Y	Y	Y				
MW-26B	Y		Y				
MW-29	Y		Y				Y
MW-46			Y				
Cupboard Creek Subtotal:	*7*	*2*	*8*	*2*	*2*	*1*	*3*

Table 10. Revised Groundwater Monitoring Plan

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency[a]:	Contaminant Reduction Evaluation			Biodegradation Evaluation		Zone of Influence[b]	
	Baseline	Mid-Quarter	Quarterly	Baseline	Quarterly	Mid-Quarter	Quarterly
Analytes:	BTEX, Naphthalene, MTBE (and 1,2-DCA for groundwater samples only)[c]			Nitrate, Sulfate, Ferrous Iron, Carbon Dioxide, Methane, and Alkalinity[d]		Dissolved Oxygen	
Hayfield Zone							
MW-02	Y		Y	Y	Y		Y
MW-02B	Y		Y				Y
MW-03	Y		Y	Y	Y		Y
MW-04	Y		Y	Y	Y		Y
MW-05	Y		Y				
MW-06	Y		Y				
MW-06B			Y				
MW-07	Y	Y	Y				
MW-08	Y		Y	Y	Y	Y	Y
MW-09	Y		Y	Y	Y		Y
MW-09B			Y				
MW-10	Y		Y	Y	Y		Y
MW-13	Y		Y				
MW-13B	Y		Y				
MW-14	Y		Y				
MW-14B	Y		Y				
MW-16	Y		Y	Y	Y	Y	Y
MW-17	Y		Y				
MW-17B	Y	Y	Y				
MW-18	Y		Y	Y	Y	Y	Y
MW-21	Y		Y				
MW-30	Y		Y				Y
MW-31	Y		Y				
MW-31B							
MW-32	Y		Y	Y	Y		
MW-33							
MW-33T			Y				
MW-36	Y	Y	Y				
MW-36B	Y		Y				
MW-45	Y		Y				
MW-45B	Y		Y				

Table 10. Revised Groundwater Monitoring Plan

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency[a]:	Contaminant Reduction Evaluation			Biodegradation Evaluation		Zone of Influence[b]	
	Baseline	Mid-Quarter	Quarterly	Baseline	Quarterly	Mid-Quarter	Quarterly
Analytes:	BTEX, Naphthalene, MTBE (and 1,2-DCA for groundwater samples only)[c]			Nitrate, Sulfate, Ferrous Iron, Carbon Dioxide, Methane, and Alkalinity[d]		Dissolved Oxygen	
MW-47			Y				
MW-48B			Y				
MW-50B			Y				
MW-51			Y				Y
MW-52			Y				Y
MW-53			Y				Y
MW-54			Y				Y
TW-55							Y
TW-59							Y
TW-60							Y
TW-64							Y
TW-66							Y
TW-67							Y
TW-73							Y
TW-96							Y
Hayfield Subtotal:	*26*	*3*	*36*	*9*	*9*	*3*	*22*
Shallow Bedrock Zone							
MW-01	Y		Y	Y	Y		Y
MW-01B	Y		Y				Y
MW-11	Y		Y	Y	Y	Y	Y
MW-22	Y		Y	Y	Y		Y
MW-27	Y		Y				
MW-27B	Y		Y				
MW-44	Y		Y				
MW-44B	Y		Y				
Shallow Bedrock Subtotal:	*8*	*0*	*8*	*3*	*3*	*1*	*4*

Table 10. Revised Groundwater Monitoring Plan

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency[a]:	Contaminant Reduction Evaluation			Biodegradation Evaluation		Zone of Influence[b]	
	Baseline	Mid-Quarter	Quarterly	Baseline	Quarterly	Mid-Quarter	Quarterly
Analytes:	BTEX, Naphthalene, MTBE (and 1,2-DCA for groundwater samples only)[c]			Nitrate, Sulfate, Ferrous Iron, Carbon Dioxide, Methane, and Alkalinity[d]		Dissolved Oxygen	
Surface Water							
SW-01		Y	Y				Y
SW-02		Y	Y				
SW-03			Y				Y
SW-04		Y	Y				
SW-05		Y	Y				Y
SW-07			Y				
SW-08			Y				
SW-09			Y				
SW-10			Y				
SW-11			Y				
SW-12		Y	Y				Y
SW-13		Y	Y				Y
SW-14		Y	Y				
Surface Water Subtotal:	*0*	*7*	*13*	*0*	*0*	*0*	*5*
Grand Totals:	**57**	**19**	**85**	**21**	**21**	**6**	**41**

Notes:

[a] Any alterations to the monitoring frequency after the first year will be proposed to the South Carolina Department of Health and Environmental Control as needed and will be summarized in the Annual Report.

[b] Zone of influence monitoring for dissolved oxygen will be performed monthly for Year 1 and as-needed thereafter as air sparge flow rates are adjusted.

[c] Contaminant Reduction Evaluation: BTEX, naphthalene, MTBE, and 1,2-DCA by EPA Method 8260B.

[d] Biodegradation Evaluation: Nitrate by EPA Method SM2320B, sulfate by EPA Method D516-9002, ferrous iron by EPA Method SM3500 FE D, carbon dioxide and methane by EPA Method RSK-175, and alkalinity by Method SM2320B.

1,2-DCA = 1,2-dichloroethane

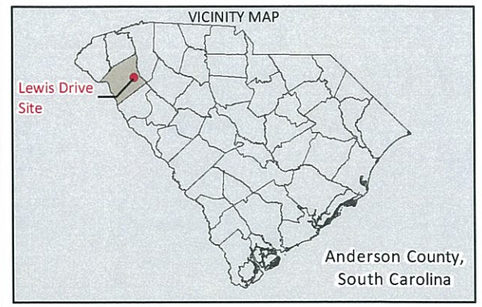
BTEX = benzene, toluene, ethylbenzene, and xylenes

EPA = U.S. Environmental Protection Agency

MTBE = methyl tertiary butyl ether

Y = yes

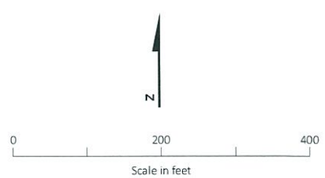
Figures



LEGEND

- Release Point
- Residuum Monitoring Well
- Bedrock Monitoring Well
- Proposed Monitoring Well
- Piezometer
- Recovery Sump
- Recovery Trench Point
- Recovery Well (4" diameter)
- Surface Water Sampling Location
- Seep Location
- Newly Installed Vertical Sparging Well
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Pipeline
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- National Hydrography Dataset Stream
- Intermittent Stream
- Inspection Route for Sheen or Distressed Vegetation
- AS System Compound
- Remediation Zone

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)



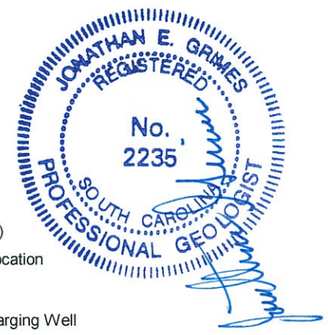
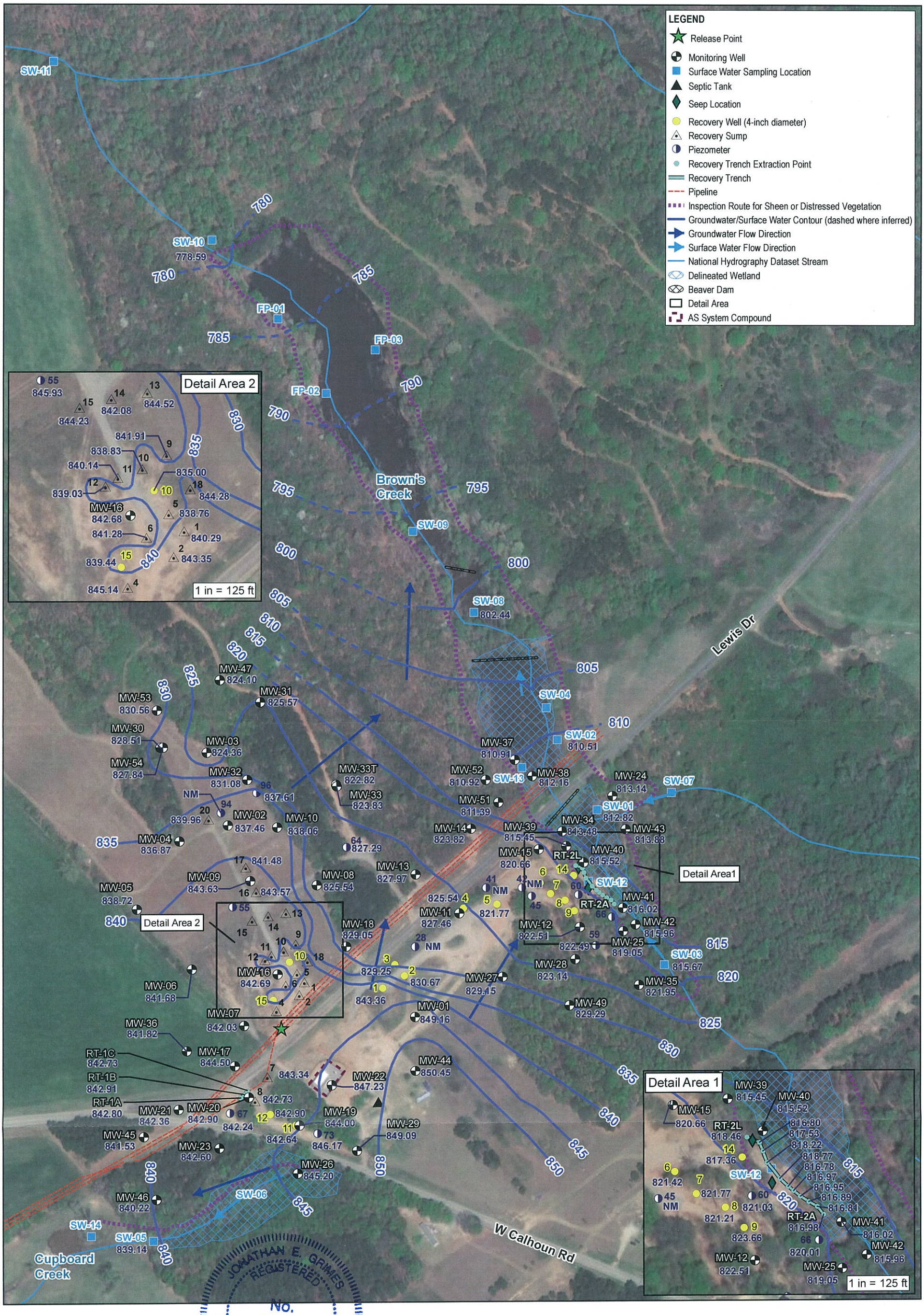


Figure 1. Site Overview
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"



829.25 Corrected Groundwater Elevation as of 12/3/2018 in feet above mean sea level

NM Not Measured

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

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N

0 250 500

Scale in Feet

Figure 2A. Residuum Groundwater and Surface Water Elevation Map
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JACOBS

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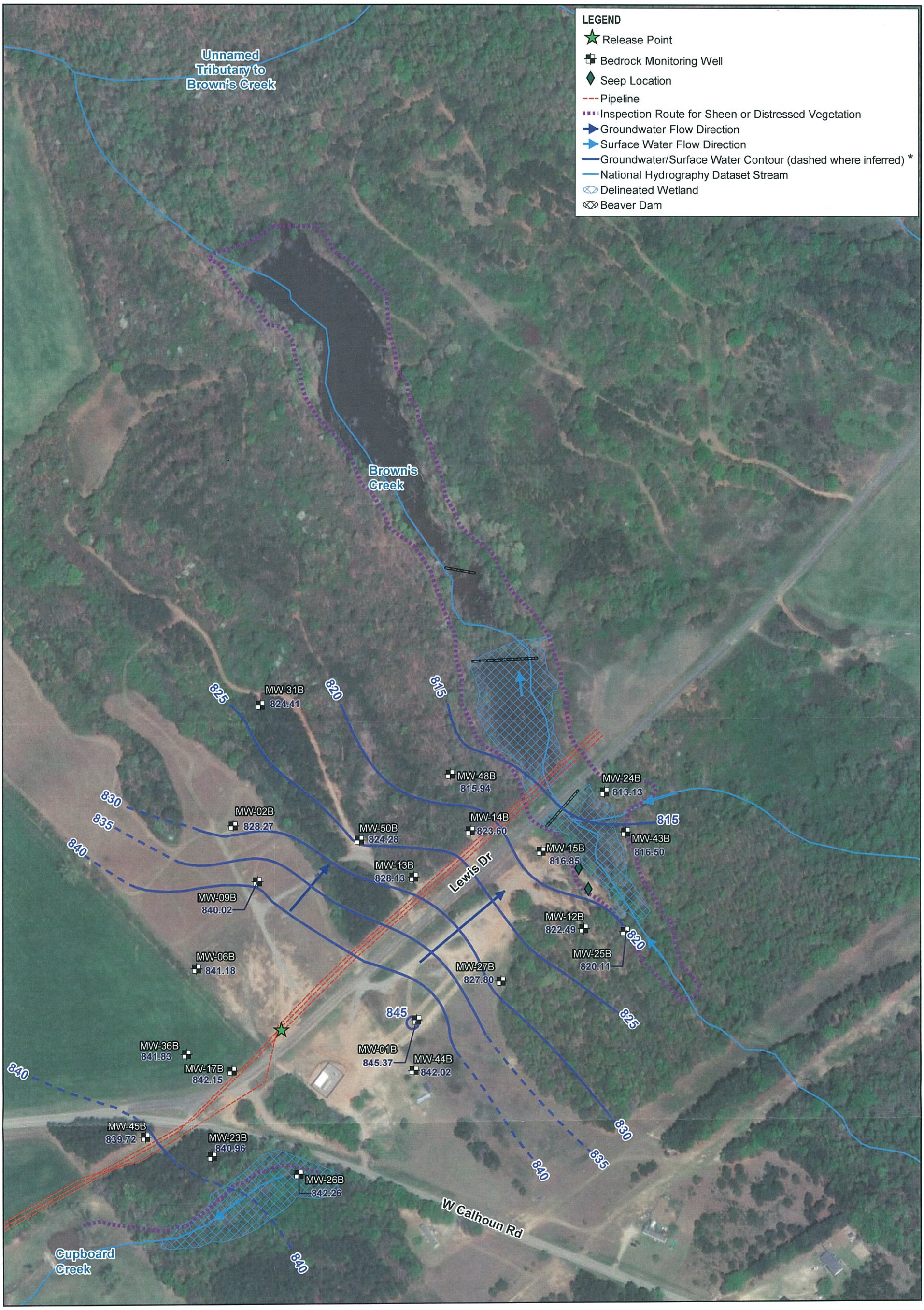

828.27 Corrected Groundwater Elevation as of 12/3/2018 in feet above mean sea level

* Based on 2014 Belton West, SC USGS Topographic map

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

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Figure 2B. Bedrock Groundwater Elevation Map
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

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LEGEND

- Release Point
- Monitoring Well
- Bedrock Monitoring Well
- Seep Location
- Recovery Sump
- Piezometer ("R" indicates Replacement)
- Recovery Well (4-inch diameter)
- Well Contains Product as of 12/3/18
- Newly Installed Vertical Sparging Well
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Surface Water Sampling Location
- Septic Tank
- Recovery Trench Extraction Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Pipeline
- National Hydrography Dataset Stream
- Delineated Wetland
- Beaver Dam
- Detail Area

0.02 Product thickness in feet as of 12/3/2018
NP No product detected
NM Not measured
PS Product sheen

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

N

0 175 350
Scale in Feet

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REGISTERED
No. 2235
SOUTH CAROLINA
PROFESSIONAL GEOLOGIST

Figure 3. Site Features with Measurable Product
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

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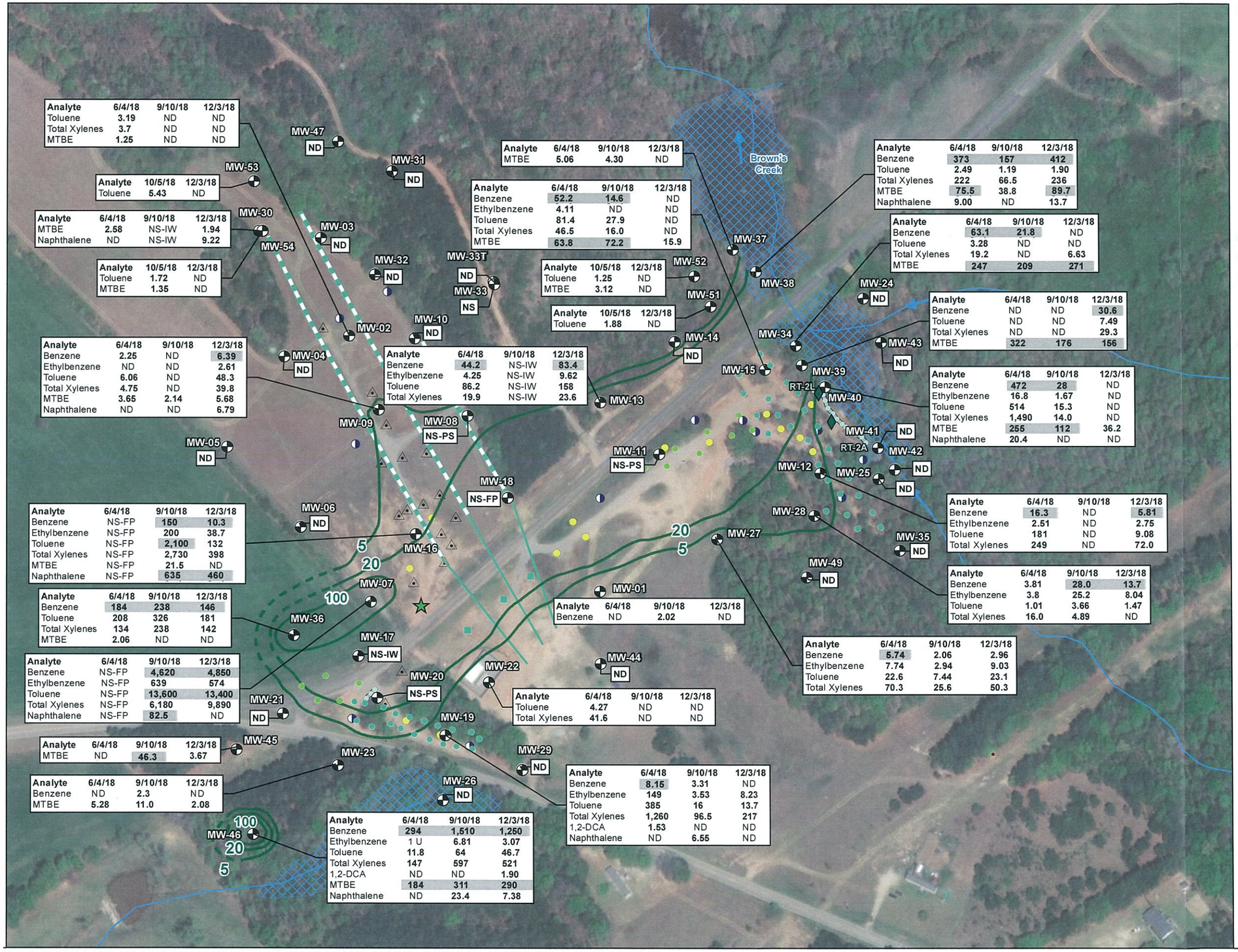


Analyte	6/4/18	9/10/18	12/3/18
Toluene	3.19	ND	ND
Total Xylenes	3.7	ND	ND
MTBE	1.25	ND	ND

Analyte	10/5/18	12/3/18
Toluene	5.43	ND

Analyte	6/4/18	9/10/18	12/3/18
MTBE	2.58	NS-IW	1.94
Naphthalene	ND	NS-IW	9.22

Analyte	10/5/18	12/3/18
Toluene	1.72	ND
MTBE	1.35	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	2.25	ND	6.39
Ethylbenzene	ND	ND	2.61
Toluene	6.06	ND	48.3
Total Xylenes	4.75	ND	39.8
MTBE	3.65	2.14	5.68
Naphthalene	ND	ND	6.79

Analyte	6/4/18	9/10/18	12/3/18
MTBE	5.06	4.30	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	52.2	14.6	ND
Ethylbenzene	4.11	ND	ND
Toluene	81.4	27.9	ND
Total Xylenes	46.5	16.0	ND
MTBE	63.8	72.2	15.9

Analyte	10/5/18	12/3/18
Toluene	1.25	ND
MTBE	3.12	ND

Analyte	10/5/18	12/3/18
Toluene	1.88	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	44.2	NS-IW	83.4
Ethylbenzene	4.25	NS-IW	9.62
Toluene	86.2	NS-IW	158
Total Xylenes	19.9	NS-IW	23.6

Analyte	6/4/18	9/10/18	12/3/18
Benzene	373	157	412
Toluene	2.49	1.19	1.90
Total Xylenes	222	66.5	236
MTBE	75.5	38.8	89.7
Naphthalene	9.00	ND	13.7

Analyte	6/4/18	9/10/18	12/3/18
Benzene	63.1	21.8	ND
Toluene	3.28	ND	ND
Total Xylenes	19.2	ND	6.63
MTBE	247	209	271

Analyte	6/4/18	9/10/18	12/3/18
Benzene	ND	ND	30.6
Toluene	ND	ND	7.49
Total Xylenes	ND	ND	29.3
MTBE	322	176	156

Analyte	6/4/18	9/10/18	12/3/18
Benzene	472	28	ND
Ethylbenzene	16.8	1.67	ND
Toluene	514	15.3	ND
Total Xylenes	1,490	14.0	ND
MTBE	255	112	36.2
Naphthalene	20.4	ND	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	16.3	ND	5.81
Ethylbenzene	2.51	ND	2.75
Toluene	181	ND	9.08
Total Xylenes	249	ND	72.0

Analyte	6/4/18	9/10/18	12/3/18
Benzene	3.81	28.0	13.7
Ethylbenzene	3.8	25.2	8.04
Toluene	1.01	3.66	1.47
Total Xylenes	16.0	4.89	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	5.74	2.06	2.96
Ethylbenzene	7.74	2.94	9.03
Toluene	22.6	7.44	23.1
Total Xylenes	70.3	25.6	50.3

Analyte	6/4/18	9/10/18	12/3/18
Benzene	NS-FP	150	10.3
Ethylbenzene	NS-FP	200	38.7
Toluene	NS-FP	2,100	132
Total Xylenes	NS-FP	2,730	398
MTBE	NS-FP	21.5	ND
Naphthalene	NS-FP	635	460

Analyte	6/4/18	9/10/18	12/3/18
Benzene	184	238	146
Toluene	208	326	181
Total Xylenes	134	238	142
MTBE	2.06	ND	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	NS-FP	4,620	4,850
Ethylbenzene	NS-FP	639	574
Toluene	NS-FP	13,600	13,400
Total Xylenes	NS-FP	6,180	9,890
Naphthalene	NS-FP	82.5	ND

Analyte	6/4/18	9/10/18	12/3/18
MTBE	ND	46.3	3.67

Analyte	6/4/18	9/10/18	12/3/18
Benzene	ND	2.3	ND
MTBE	5.28	11.0	2.08

Analyte	6/4/18	9/10/18	12/3/18
Benzene	294	1,510	1,250
Ethylbenzene	1 U	6.81	3.07
Toluene	11.8	64	46.7
Total Xylenes	147	597	521
1,2-DCA	ND	ND	1.90
MTBE	184	311	290
Naphthalene	ND	23.4	7.38

Analyte	6/4/18	9/10/18	12/3/18
Benzene	8.15	3.31	ND
Ethylbenzene	149	3.53	8.23
Toluene	385	16	13.7
Total Xylenes	1,260	96.5	217
1,2-DCA	1.53	ND	ND
Naphthalene	ND	6.55	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	ND	2.02	ND

Analyte	6/4/18	9/10/18	12/3/18
Toluene	4.27	ND	ND
Total Xylenes	41.6	ND	ND

LEGEND

- Release Point
- Residuum Monitoring Well
- Piezometer
- Newly Installed Vertical Sparging Well
- Vertical Bedrock Sparging Well
- Vertical Saprolite Sparging Well
- Seep Location
- Recovery Well (4" diameter)
- Recovery Sump
- Recovery Trench Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Dissolved Benzene Plume Extent (µg/L) (Dashed where inferred)
- National Hydrography Dataset Stream
- Delineated Wetland

NOTES:
1. Total Xylenes is the sum of m&p xylenes and o-xylene.
2. MTBE = Methyl Tertiary Butyl Ether
3. 1,2-DCA = 1,2-dichloroethane
4. Analyte concentration in microgram(s) per liter (µg/L)
5. Only detected analytes are shown on map.
6. ND = Groundwater was collected and analyzed, but no analytes were detected above the reported sample quantitation limit.
7. NS = Not scheduled to be sampled for this event
8. NS-FP = Sample not collected due to the presence of free product in the well
9. NS-PS = Sample not collected due product sheen observed in well
10. NS-IW = Sample not collected due to insufficient volume of water in well

Gray shading indicates the analyte exceeded risk-based screening levels (RBSLs) identified in South Carolina Underground Storage Tank Management Division Programmatic Quality Assurance Program Plan Revision 3.1, Table D1 "RBSLs for Groundwater", February 2016.

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

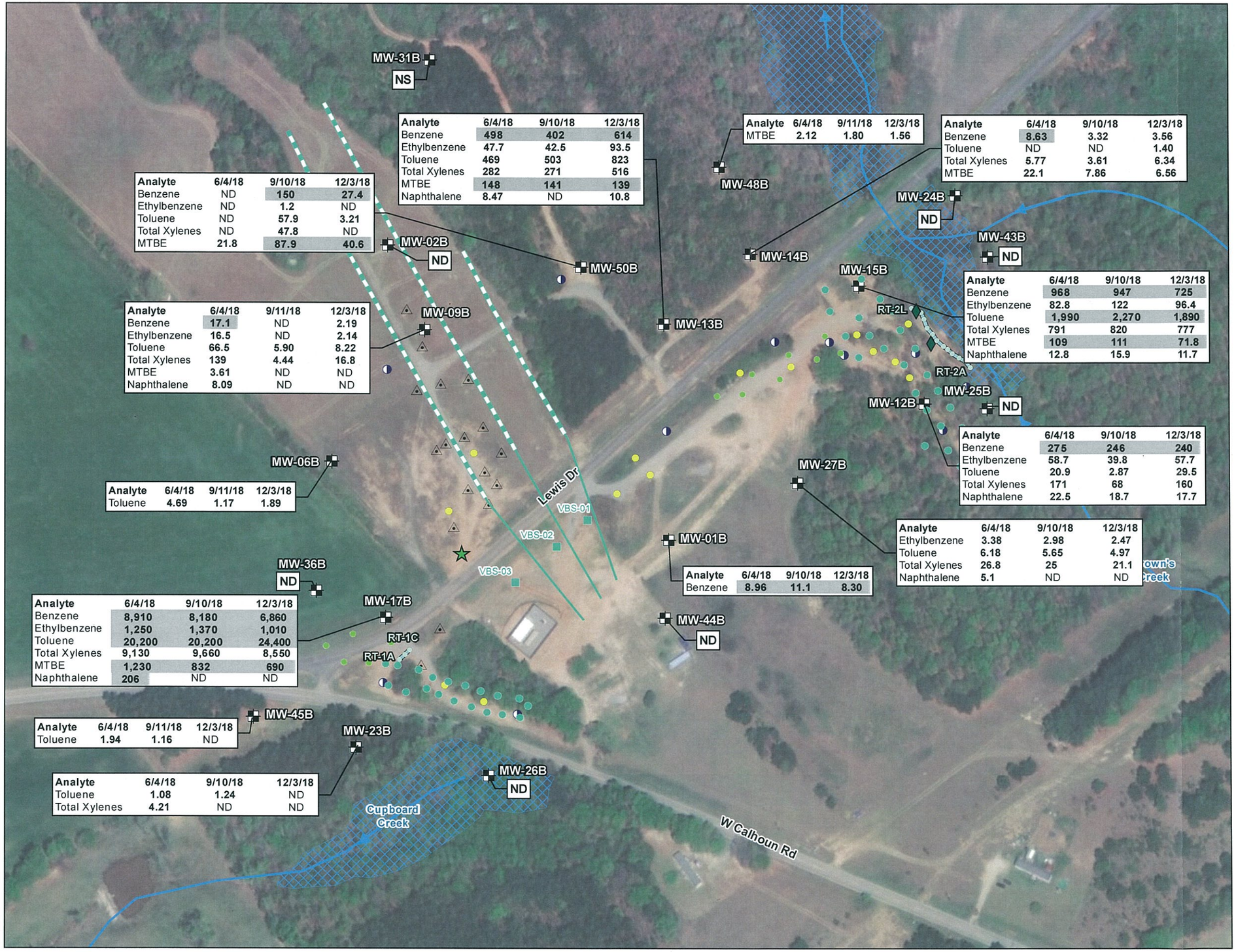
0 200 400
Approximate scale in feet

JONATHAN E. GRIMES REGISTERED No. 2235 SOUTH CAROLINA PROFESSIONAL GEOLOGIST

Figure 4A. Groundwater Analytical Results in Residuum Aquifer, June, September/October, and December 2018
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

JACOBS

\\BROOKSIDEFILES\GIS_SHARE\ENBG\00_PROJ\K\KINDERMORGAN\654558LEWISDR_ER\GIS\MAPS\QUARTERLY_REPORTS\QR4_JAN2019\FIGURE4A_GW_RESULTS_RESIDUUM_QR4.MXD SCYR 3/11/2019



Analyte	6/4/18	9/10/18	12/3/18
Benzene	498	402	614
Ethylbenzene	47.7	42.5	93.5
Toluene	469	503	823
Total Xylenes	282	271	516
MTBE	148	141	139
Naphthalene	8.47	ND	10.8

Analyte	6/4/18	9/10/18	12/3/18
Benzene	ND	150	27.4
Ethylbenzene	ND	1.2	ND
Toluene	ND	57.9	3.21
Total Xylenes	ND	47.8	ND
MTBE	21.8	87.9	40.6

Analyte	6/4/18	9/11/18	12/3/18
Benzene	17.1	ND	2.19
Ethylbenzene	16.5	ND	2.14
Toluene	66.5	5.90	8.22
Total Xylenes	139	4.44	16.8
MTBE	3.61	ND	ND
Naphthalene	8.09	ND	ND

Analyte	6/4/18	9/11/18	12/3/18
Toluene	4.69	1.17	1.89

Analyte	6/4/18	9/10/18	12/3/18
Benzene	8,910	8,180	6,860
Ethylbenzene	1,250	1,370	1,010
Toluene	20,200	20,200	24,400
Total Xylenes	9,130	9,660	8,550
MTBE	1,230	832	690
Naphthalene	206	ND	ND

Analyte	6/4/18	9/11/18	12/3/18
Toluene	1.94	1.16	ND

Analyte	6/4/18	9/10/18	12/3/18
Toluene	1.08	1.24	ND
Total Xylenes	4.21	ND	ND

Analyte	6/4/18	9/11/18	12/3/18
MTBE	2.12	1.80	1.56

Analyte	6/4/18	9/10/18	12/3/18
Benzene	8.63	3.32	3.56
Toluene	ND	ND	1.40
Total Xylenes	5.77	3.61	6.34
MTBE	22.1	7.86	6.56

Analyte	6/4/18	9/10/18	12/3/18
Benzene	968	947	725
Ethylbenzene	82.8	122	96.4
Toluene	1,990	2,270	1,890
Total Xylenes	791	820	777
MTBE	109	111	71.8
Naphthalene	12.8	15.9	11.7

Analyte	6/4/18	9/10/18	12/3/18
Benzene	275	246	240
Ethylbenzene	58.7	39.8	57.7
Toluene	20.9	2.87	29.5
Total Xylenes	171	68	160
Naphthalene	22.5	18.7	17.7

Analyte	6/4/18	9/10/18	12/3/18
Ethylbenzene	3.38	2.98	2.47
Toluene	6.18	5.65	4.97
Total Xylenes	26.8	25	21.1
Naphthalene	5.1	ND	ND

Analyte	6/4/18	9/10/18	12/3/18
Benzene	8.96	11.1	8.30

LEGEND

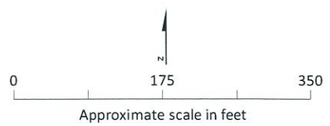
- Release Point
- Bedrock Monitoring Well
- Piezometer
- Newly Installed Vertical Sparging Well
- Vertical Bedrock Sparing Well
- Vertical Saprolite Sparing Well
- Seep Location
- Recovery Well (4" diameter)
- Recovery Sump
- Recovery Trench Point
- Recovery Trench
- Surface Water Flow Direction
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- National Hydrography Dataset Stream
- Delineated Wetland

NOTES:

All analyte concentrations in microgram(s) per liter (µg/L).
µg/L = microgram(s) per liter
Total Xylenes is the sum of m&p xylenes and o-xylene.
MTBE = Methyl Tertiary Butyl Ether
Only detected analytes are shown on map.
ND = Groundwater was collected and analyzed, but no analytes were detected above the reported sample quantitation limit.
NS = Not sampled during this event.

Gray shading indicates the analyte exceeded risk-based screening levels (RBSLs) identified in South Carolina Underground Storage Tank Management Division Programmatic Quality Assurance Program Plan Revision 3.1, Table D1 "RBSLs for Groundwater", February 2016.

Base Map Sources:
*Environmental Systems Research Institute (ESRI) ArcMap World Imagery, 2017. Basemap features are approximate.
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)



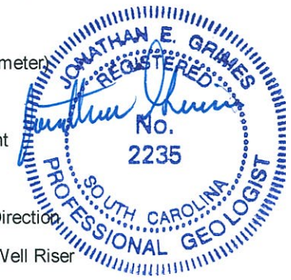


Figure 4B. Groundwater Analytical Results in Bedrock Aquifer, June, September, and December 2018
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

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Appendix A
Field Notes, Gauging Sheets, and Purge Logs

Location BELTON, SC Date FRIDAY 10/05/18

Project / Client LEWIS DRIVE (699847/699858)

AUTHOR: M. WARREN

TASK: PRODUCT RECOVERY / GROUNDWATER SAMPLING

STAFF: M. WARREN (FTL/BIO), M. CHERNOFF (ENV. SCI)

WEATHER: MID 80's / HUMID / SUNNY

EQUIPMENT: SOLINST: 27681
MINIRAE: 39588
→ LOT #EBI-248-100-6 EXP: 4/9/22

CALIBRATION: MINIRAE → 100.8 ppm

0700 TEAM ARRIVES ON SITE AND GEARS UP.

0730 TEAM HOLDS PTSP.

1140 TEAM BREAKS FOR LUNCH

1240 TEAM RETURNS FROM LUNCH

1241 TEAM GEARS UP FOR SAMPLING OF NEWLY INSTALLED WELLS. TEAM SWITCHES DI PROBE TO A CLEAN/NEW PELICAN METER SN: 01-6520.

1340 MW-54-100518

1355 MW-53-100518

1356 MW-53-D-100518

1422 READJUST RS-14 DTS = 6.65

1434 READJUST RS-17 DTS = 6.62

MW

Location BELTON, SC Date 10/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1455	MW-S1-100518
1505	MW-S2-100518
1515	FB01-100518
1525	TB01-100518
1600	REPLACED SOIL IN RS-08
1610	TEAM DEPARTS FIELD.

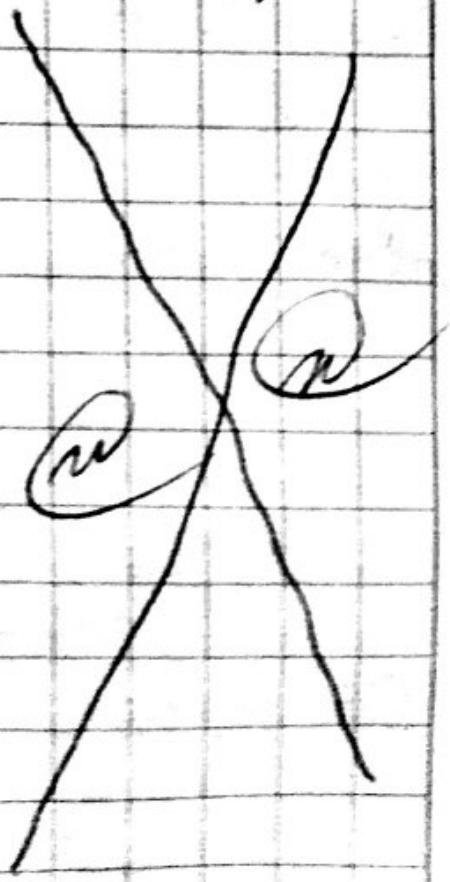
10/05/18

Location BELTON, SC Date 11/6/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TIME	WELL ID ~~DTP~~	DTP ~~DTW~~	DTW	P.I.D/COMMENTS
1000	RW-11	11.39	11.40	186.7 ppm
1008	RW-12	13.59	13.61	
1024	RS-08	—	12.84	NEEDS NEW CAP SOCK WT = 445 g
1027	MW-20	11.23	12.00	886.7 ppm
1034	RS ~~BS~~-07	—	12.69	
1031	*RT-1A	—	13.12	SOCK WT = 365 g
1032	RT-1B	—	12.54	SOCK WT = 645 g
1033	*RT-1C	—	12.56	BOLT CUTTERS SOCK WT = 645 g
1043	RW-01	—	13.83	NEEDS CAP REPLACED
1046	MW-11	30.66	30.27	399.4 ppm
1051	RW-06	—	26.36	
1058	RW-08	—	16.55	
1102	RW-09	14.28	14.46	
1104	RT-2A	—	0.82	
1105	RT-2B	—	0.91	
1106	RT-2C	—	1.13	
1107	RT-2D	—	1.13	
1108	RT-2E	—	1.15	
1109	RT-2F	—	2.93	
1110	RT-2G	—	3.56	
1111	RT-2I	—	2.84	
1112	RT-2J	—	1.09	
1113	RT-2K	—	0.94	SOCK WT = 750 g



Location BELTON, SC Date 11/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

WELL ID ~~TIME~~	TIME @ ~~WELL~~	DTP	DTW	PID/COMMENTS
RT-2L	1114	—	2.38	
RW-14	1119	11.47	12.44	INTERMITTENT SOLID BEEPING BETWEEN DTP->DTW SPARGE SYSTEM ON
MW-15	1612	—	11.70	
RS-20	1256	—	6.62	
RS-04	1300	—	9.77	
RS-06	1303	—	9.99	
* MW-16	~~13:09~~	NO KEY ACCESS		STRIPPED BOLTS
RS-12	13:09	—	7.62	
RS-11	13:13	—	7.28	
RS-09	13:17	—	8.25	
RS-18	13:25	—	9.25	
* MW-18	NO KEY ACCESS			
* MW-08	1450	11.02	19.29	TRIPLE CHECKED AND WITH NEW BATTERY
RS-13	1330	—	5.87	
RS-15	1335	—	5.73	
RS-16	1338	—	6.42	
		SKIMMERS		
☆ RS-17	1343	5.14	5.16	PR = ALL WATER
☆ RS-14	1355	5.25	5.27	PR = ALL WATER
RS-10	1403	—	7.28	PR = ALL WATER
RW-10	1412	—	10.97	PR = ALL WATER
RS-05	1420	~~10.22~~ 9.21 @	~~10.24~~ 9.23 @	PR = 0.20Z
RS-01	1458	10.22	10.24	PR = 0.20Z

Location BELTON, SC Date 11/01/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

WELL ID	TIME	DTP	DTW	PID/COMMENTS
RS-02	1510	—	9.80	PR = 0.20Z
RW-15	1518	—	13.08	PR = ALL WATER
RW-02	1545	23.38 ① ②	23.39	PR = ALL WATER
RW-03	1540	24.11	24.12	PR = DRY
RW-04	1555	29.59	29.70	PR = ALL WATER
RW-05	1608	33.45	33.46	PR = 0.05oz
RW-07	1624	—	11.70	PR = DRY

1135 TEAM DEPARTS FIELD FOR LUNCH.

1235 TEAM RETURNS FROM LUNCH.

1720 TEAM COMPLETES GAUGING AND PRODUCT RECOVERY AND DEPARTS FIELD.

11/01/18

Location BELTON, SC Date 11/2/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING

STAFF M. WARREN (ETL/BID) K. GHENOFF (ENVSI)

WEATHER MID 60'S, HUMID, THUNDERSTORMS IN AFTERNOON.

EQUIPMENT: MINIRAE # 36353
CALGAS LOT # 6BI-248-100-14E
EXPIRATION DATE: 06/21/22
YSI PRO DISPLAY # 41767
HOCH 2100 39526
GEOSUB 04A0145
HONDA GENERATOR

0245 TEAM ARRIVES ON SITE AND HOLDS PTSP. TEAM GEARS UP FOR DAY

0255 BEGIN MINIRAE, YSI PRO AND HOCH 2100 CALIBRATIONS

SOLUTION	LOT #	EXP DATE	CAL
1.413 mS/cm	866038	5/19	
pH 10	2604837	2/19	
pH 7	2605406	4/19	SEE time
pH 4	2604892	03/20	8:35
240.0 mV	8C1682	6/19	

MINIRAE # 36353 → 100.0 ppm

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

SOLUTION	LOT#	EXP	CAL
10.00 NTU	A8115	08/19	9.52
20.00 NTU	A8113	08/19	20.1
100.00 NTU	A8100	07/19	98.4
800.00 NTU	A8120	08/19	798.0

8133 Calibration

cond standard = 1.413 mS/cm

Cond in mS/cm

19.4°C	1454 uS/cm	After 1.41 mS/cm	GLP
pH 7	7.10 mv	-27.2	pH slope 56.72
pH 4	4.0 mv	143.5	pH slope % 95.95
pH 10	10.06 mv	190.1	

cond cell constant

4.7824

ORP

Temp	Before	After	Standard
18.4°C	245.1 mv	240.0 mv	240.0 mv

DO

Temp	Before	After	Barometer	DO sensor value
16.6°C	107.0 %	9.72 mg/L	758.8	4.045220

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

0920 BEGIN PUMP SETUP ON MW-17

1000 START PUMP ON MW-17

1130 HEAVY RAINS WITH RADAR SHOWING LIGHTNING BEGINS. TEAM BREAKS FOR LUNCH

1105 MW-17B-110218

1107 MW-17B-D-110218

1310 TEAM RETURNS FROM LUNCH/ WEATHER DELAY

1315 TEAM BEGINS PUMP SETUP ON MW-23

1335 BEGIN PUMP

1345 COLLECT MW-23-110218

1415 TEAM ARRIVES AT MW-46 WITH ALL EQUIPMENT AND BEGINS PUMP SETUP.

1439 BEGIN PUMP

1450 COLLECT MW-46-110218

1530 ARRIVE AT MW-40 AND BEGIN PUMP SETUP

1553 BEGIN PUMP

1600 COLLECT MW-40-110218

1625 ARRIVE AT MW-34 AND BEGIN PUMP SETUP.

Location BELTON, SC Date 11/02/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1436 BEGIN PUMP

1657 TB01 - 110218

1700 FB01 - 110218

1712 TEAM DEPARTS FIELD

11/02/18

Rite in the Rain

Location BELTON, SC Date 12/3/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK: GROUNDWATER/SURFACE WATER GAUGING AND PRODUCT RECOVERY

STAFF: M. WARREN (FTL/BIO), K. RILL (CHERNOFF (ENV SCI), JAMIE MORGAN (ENV. SCI), EVELYN HARKER (GEO)

WEATHER: MID 60'S, MOSTLY SUNNY

EQUIPMENT: SOINST: 037366
SOLINST: 042848
(A) MINIRAE: 39947
(B) MINIRAE 21579
(A) ISO LOT # JBH-248-100-19
(B) ISO EXP: 10/5/2021
(A) ISO LOT # JBH-248-100-19
(B) ISO EXP: 10/5/2021

CALIBRATION MINIRAE (A) 39947
0.0 → 100.2 ppm
MINIRAE (B) 21579
0.0 → 100.2 ppm

0845 TEAM ARRIVES ONSITE AND HOLDS PTSP

1000 TEAM BEGINS GAUGING

1215 TEAM BREAKS FOR LUNCH.

Rite in the Rain

140

Location BELTON, SC Date 12/03/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1315	TEAM RETURNS FROM LUNCH				
1730	TEAM DEPARTS FIELD (SUNDOWN).				

12/03/18

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR M. WARREN

TASK: GROUNDWATER/SURFACE WATER GAUGING AND PRODUCT RECOVERY. SURFACE WATER SAMPLING AND GROUNDWATER LOW FLOW SAMPLING (2)

STAFF SEE PAGE 139

WEATHER M.O 50's, PARTIAL SUN (2)

EQUIPMENT SEE PAGE 139

CALIBRATION MINIRAE 39947 → 100.0ppm

MINIRAE 21579 → 100.0ppm

0700 TEAM ARRIVES ONSITE AND GEARS UP FOR FIELD DAY. TEAM HOLDS PTSP. (2)

0735 TEAM BEGINS GAUGING. (2)

0838 RSC RW-17 DEPTH TO SKIMMER (DTS) = 6.79

* DTW WAS ABOVE SKIMMER AT 2.68 ft

0856 RS-14 DTS = 7.03

* DTW WAS ABOVE SKIMMER AT 2.91 ft

0903 DTS = 4.64 RS-10

0909 RS-05 DTS = 6.81 ft

0915 RW-10 DTS = 6.87 ft

0925 RS-01 DTS = 5.88

0935 RS-02 DTS = 5.04

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / J. MORGAN

0933 RW-15 DTS = 11.02

0945 RW-02 DTS = 19.69

0947 RW-03 DTS = 20.65

0949 RW-04 DTS = 30.55.

DTP: 28.01 DTW = 28.31

* DTP AND DTW WERE ABOVE SKIMMER WHILE TAKING DTS. WILL ADJUST SKIMMER.

0952 DTS = 31.40 RW-05

0955 RW-07 DTS = 19.90

1000 TEAM COMPLETES GAUGING, AND SWITCHES GEARS TO LOW FLOW, SURFACE WATER SAMPLES AND HYDRASLEEVE COLLECTION AND QCs DATA

~~SW-11 120418~~

~~1250~~

~~1250~~ ~~SW-07 120418~~

1325 ~~SW-11-120418~~

1335 SW-10-120418

1355 SW-09-120418

1410 SW-08-120418

~~1410~~ ~~SW-07-120~~ SW-13-120418

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN / J. MORGAN

~~1425~~	~~SW-04-120418~~ SAMPLE BROKE
1430	SW-02-120418
1440	SW-01-120418 collected @ tree by gauge staff
1455	SW-07-120418
	~~SW-05-120418~~
	~~SW-14-120418~~
1505	SW-14-120418
1530	SW-05-120418
1540	SW-03-120418
1550	SW-12-120418
1555	SW-04-120418
1600	TB01-120418

1630 CHECK MW-20 WITH BAILER FOR FORMATION OF PRODUCT. PRODUCT PRESENT.

1640 CHECK MW-08 WITH BAILER FOR FORMATION OF PRODUCT PRODUCT PRESENT, SEE PHOTO

1650 CHECK MW-11 F WITH BAILER FOR FORMATION OF PRODUCT PRODUCT PRESENT

1100 TEAM BREAKS FOR LUNCH

1200 TEAM ARRIVES BACK TO FIELD

1200 TEAM BEGINS CALIBRATION OF

Rate in the rain

144

Location BELTON, SC Date 12/04/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1200 CONT FOR MW-19 LOW FLOW PARAMETERS, J. MORGAN AND K. CHERNOFF BEGIN SURFACE WATER SAMPLING

CALIBRATION

SOLUTION	EXP	LOT #	CALIBRATON
pH7	8/20	2808E52	6.88 → 7.00
pH4	3/20	2804882	3.91 → 4.00
pH10	3/20	2806E50	9.99 → 10.00
0NTU	9/19	18189441	0.6 → 0.0
126NTU	2/19	18B1804401	1.16 → 126.0
1.413 mS/cm	2/28/19	8GB770	1.406 → 1.413
240.0mV	6/19	8G1682	244.7 → 240.0

1300 @ ~~1430~~ M. WARREN AND E. HARKER BEGIN LOW FLOW SETUP FOR MW-19

1320 BEGIN PUMP FOR MW-19.

1341 MW-19 PUMPED DRY, WILL RETURN TO SAMPLE.

1400 E. HARKER AND M. WARREN RETURN TO UTV TO ORGANIZE ALL EQUIPMENT FOR TOMORROW

1700 TEAM DEPARTS FIELD,

12/4/18

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

TASK GROUNDWATER SAMPLING

WEATHER MID 30'S SUNNY

EQUIPMENT MINI RAE #

CALIBRATION → 100.0 ppm

TEAM. EVELYN HANLER, M. WARREN

0715 TEAM ARRIVES ONSITE

0730 TEAM HOLDS PTSP

0815 TEAM BEGINS GROUNDWATER SAMPLING

0820 MW-29-120518

0840 MW-26B-120518

0835 MW-26-120518

0855 MW-23-120518

0856 MW-23D-120518

0910 MW-23B-120518

0920 BOBBI COLEMAN FROM DHEC STOPPED TO ASK ABOUT GROUNDWATER LEVELS. M. WARREN REPLIED THAT I DO NOT KNOW CONSISTENT LEVELS

0935 MW-45B-120518

0940 MW-45-120518

1000 MW-46-120518

1030 MW-21-120518

Rite in the Rain

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1040 MW-17B-120518

1125 MW-44-120518

1135 MW-44B-120518

1150 MW-01-120518 Fe^{2+} 200 mg/L

1205 MW-01B-120518

1220 TEAM ~~DEPARTS~~ BREAKS FOR LUNCH

0920 BOBBI COLEMAN ASKED ABOUT SURFACE WATER LEVELS AND IF I KNEW WHY THEY WERE LOW AND IF I KNEW OF ANY OBSTRUCTIONS TO FLOW. I REPLIED THAT I HAVE NOT WALKED UPSTREAM OF SW03. I ALSO POINTED OUT HOW ACTIVE THE BEAVERS HAVE BEEN. ——— (M)

0940 BOBBI COLEMAN DEPARTED FIELD

1220 TEAM BREAKS FOR LUNCH

1320 TEAM RETURNS FROM LUNCH

1400 MW-27B-120518

1405 MW-27-120518

1420 MW-12-120518 Fe^{2+} 10 mg/L

1430 MW-12B-120518

1445 MW-28-120518 Fe^{2+} = 2.25

(M)

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1505	MW-49-120518	
1506	MW-49-D-120518	
1525	MW-35-120518	$Fe^{2+}=0.0\frac{mg}{L}$
1540	MW-25-120518	$Fe^{2+}=0.0\frac{mg}{L}$
1545	MW-25B-120518	
1550	FB01-120518	
1555	TB01-120518	
1440	MW-22-120518	$Fe^{2+}=0.0\frac{mg}{L}$

NOTE: MW-22 COLLECTED BY JM AND KC VIA LOW FLOW AND IS RECORDED IN SECOND FIELD BOOK

1630 MW-19-120518 $Fe^{2+}=0.0\frac{mg}{L}$

NOTE: MW-19 COLLECTED BY JM AND KC VIA LOW FLOW AN IS RECORDED IN SECOND FIELD BOOK

1700: M. WARREN AND E. HARLEY DEPART FIELD.

12/05/18

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR K. CHERNOFF

0715 - BEGIN CALIBRATION

solution	Exp Lot #	Calibration
pH 7	see solutions	7.00 → 7.00
pH 4	on page 144	4.04 → 4.00
pH 10		9.94 → 10.00
0 NTU		24.5 → 0.0
126 NTU		120.8 → 126.0
~~1.413 mS/cm~~		REJECTED
~~240.0~~ ~~126~~ 0.0 NTU		1.1 → 0
126 NTU		118.3 → 126.0
~~1.413 mS/cm~~ DO%		102.1% → 101.0%
1.413 mS/cm		1.415 → 1.413
~~240.0~~ mV		256.3 → 240.0

PID CALIBRATION SERIAL #039947

ZERO ~~SP~~ CALIB = 0.0

SPAN CALIB = 100.0 ppm

0820 BEGIN LOW FLOW SETUP FOR MW-13

0838 - BEGIN PUMP FOR MW-12

~~0845~~ 0910 - ~~FROM~~ WELL RUN DRY

Rite in the Rain

Location BELTON, SC Date 12/05/18

Project / Client LEWIS DRIVE

AUTHOR K. CHERNOFF

0905 - Bobbie from DHEC observes pumping

0932 - BEGIN SETUP FOR MW-30

~~093~~ 9:55 - BEGIN PUMP

10:33 - ~~Pum~~ WELL RUNS DRY WILL WAIT FOR RECHARGE BEFORE SAMPLE

11:24 BEGIN SETUP FOR 27B

1145 START PUMP

1150 WELL FOUND TO BE MULTI~~DEEPER~~ LOW FLOW ABANDONED, WILL SAMPLE WITH HYDROSLEEVE DTW = 39.84 TD = 52.82

1343 - BEGIN ~~START~~ SETUP FOR MW-22

1355 - ~~B~~ START PUMP FOR MW-22

1435 - FIELD PARAMETERS STABILIZE

1440 - BEGIN SAMPLING MW-22

1440	MW-22-120518	Ferrous = 0.0 mg/L
1630	MW-19-120518	Ferrous = 1.5 mg/L

1713 - CLEANED & COLLECTED TRASH DUMPED BUCKETS INTO COLLECTION BINS & LOCKED COMPOUND 12/5/18

8

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR M. WARREN

TASK: GROUNDWATER SAMPLING

WEATHER: MID 40's / SUNNY

TEAM: M. WARREN, E. HARKER, J. MORGAN, K. CHERNOFF

EQUIPMENT: NONE

0830 TEAM ARRIVES ON SITE AND HOLDS PTSP.

0940 MW-33T-120618

0955 MW-31-120618

1005 MW-47-120618

1020 MW-10-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

1035 MW-32-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

1050 MW-03-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

1115 MW-53-120618

1120 MW-54-120618

1140 MW-04-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

1150 MW-05-120618

1210 TEAM BREAKS FOR LUNCH

1310 TEAM RETURNS FROM LUNCH

1340 MW-42-120618 $Fe^{2+}=0.0\ \frac{mg}{L}$

1350 MW-41-120618

1351 MW-41-D-120618

1400 MW-40-120618 $Fe^{2+}=1.5\ \frac{mg}{L}$

1415 MW-39-120618 ★2-VOC

1420 MW-34-120618 ●2-VOC

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

✓1430	MW-15-120618	Fe^{2+}=0.0 mg/L
✓1435	MW-15B-120618	2-VOC
1457	MW-13 DTW = 20.68	
✓1505	MW-24MBB-120618	2-VOC
✓1515	MW-24-120618	2-VOC
✓1520	MW-43-120618	2-VOC
✓1525	MW-43B-120618	2-VOC
✓1540	MW-37-120618	2 VOC
✓1545	MW-38-120618	2 VOC
✓1425	MW-36D-120618	
✓1325	MW-07-120618	
✓1040	MW-09B-120618	
✓1505	MW-13B-120618	
✓1415	MW-36-120618	
✓1515	MW-14B-120618	
✓1150	MW-06-120618	
✓1525	MW-14-120618	
✓1135	MW-06B-120618	
✓1545	MW-50B-120618	
✓1435	MW-36B-120618	
✓0945	MW-02B-120618	
✓1345	MW-16-120618	Fe^{2+}=0.0 mg/L
✓1005	MW-02-120618	Fe^{2+}=0.0 mg/L
✓1055	MW-09-120618	Fe^{2+}=0.0 mg/L

10

Location BELTON, SC Date 12/06/18

Project / Client LEWIS DRIVE

AUTHOR: M. WARREN

1400	FB01 - 120618
1405	TB01 - 120618
1406	TB02 - 120618
1555	MW - 48B - 120618
1610	MW-51-120618
1620	MW-52-120618

1630 TEAM COMPLETES SAMPLING FOR DAY AND BEGINS COC AND SHIPPING PREPARATION.

1700 TEAM DEPARTS FIELD.

12/06/18

Location BELTON, SOUTH CAROLINA Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRILL CHERNOFF

TASK: GROUNDWATER SAMPLING

WEATHER: MID 30'S / INTERMITTENT SHOWERS CLOUDY

08:30 TEAM ARRIVES

0921 MW-30-120718

0924 MW-30-D-120718

1004 MW-13-120718

1135 AW-528-120718

PURGED AW-528 3 minutes and recieved 1.5 gallons H_2O Full Flow, no purge necessary

11:40 : PURGE unnecessary AS WELL FLOWS 1 gallon / 3 seconds

1150 AW-339203-17-120718

1205 - TEAM BREAKS FOR LUNCH

1305 - TEAM RETURNS,

RS 17 readjusted skimmer to 1.74ft

1335 RS-14 - readjusted to 2.9ft

Location BELTON, SC Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRILL CHERNOFF

1348 - RS-10 Readjusted to 7.59ft BGS SKIMMER

1355 - RS 05 READJUSTED SKIMMER TO 8.95 ft BGS

1411 RS 01 READJUSTED SKIMMER TO 7.85 ft BGS

1425 RS 02 READJUSTED SKIMMER TO 5.18 ft

1435 RS 15 READJUSTED SKIMMER TO 11.20 ft BGS

1445 READJUSTED SKIMMER RW03 TO 22.09 ft BGS

1450 READJUSTED SKIMMER RW02 TO 21.02 ft BGS

1455 READJUSTSKIMMER RW04 TO 27.52 ft BGS

15:10 READJUSTED SKIMMER RW07 TO 20.42 ft BGS

1920 READJUSTED SKIMMER RW-10 TO 12.52

Rite in the Rain

Location BELTON, SC Date 12/07/18

Project / Client LEWIS DRIVE

AUTHOR: KIRIN CHENNOFF

1545 CLEANED RW-10 SCREEN FROM BLOCKAGE W/ SOFT BRISTLE PAINT BRUSH & GASOLINE

1610 TB01-120718

1615 FB01-120718

1620 TB02-120718

1630 TEAM BEGINS MATERIALS ORGANIZATION AND PACKS COOLERS FOR SHIPMENT.

1700 TEAM DEPARTS FIELD.

12/07/18

Location Date

Project / Client

Location Lewis Drive Date 12/12/2018

Project / Client PPL SWH04

O&M / System Expansion Oversight

0820 (cont) Fence replacement near Calhoun Rd / Lewis Drive intersection.

1145 silt fence in Calhoun Rd area replace. A&D break for lunch

1215 resume work in Brown's Creek area. Begin plumbing in wellheads.

- A&D glues up all well head fittings for brown's Creek area wells. Once glued they begin to set up welder / fuser to install the glued fittings and weld to HDPE lines. Find that ISCO (rental) did not send correct fittings for 3/4" pipe for the machine.
- Chris Hellmann makes several calls and finds ISCO shop in Spartanburg that may have the correct fittings.

1415 A&D depart site to Spartanburg, SC. Chris to let me know status once they get to the ISCO facility.

- I contact Lydia Ross to let her know

Rite in the Rain

Location Lewis Drive Date 12/12/18

Project / Client PPL SWIDA

0am Isyslyn Expansion Oversight

1415 (cont) what the sidewalk is.
- There is a chance that parts will need to be over-lighted.
- Lydia Ross instructed to pair VAS wells 47 + 49 and 50 + 53 together to the 4 lines at Brown's Creek junction area.

VAS 47 - paired (49)
VAS 48 - single
VAS 49 - paired (47)
VAS 50 - paired (53)
VAS 51 - single
VAS 52 - single
VAS 53 - paired (50)
VAS 54 - single

1515 depart site.

SAS

Location Lewis Drive Date 12/13/2018

Project / Client PPL SMIOA

O&M/System Expansion

objective: Oversight System expansion activities

personnel: Scott Smith / Jacobs
Chris Hallauer, Dreston Hallauer / A&D

weather: high 55°F, mostly cloudy

0730 Arrive onsite. Complete PTSP/SWP and inspect site while waiting for A&D arrival.

- Found site looking ok. No issues to report.

0830 A&D onsite. Review today's scope, PTSP/SWP.

0845 ~~Re~~sume work plumbing well heads in Brown's Creek area after picking up missing parts for HDPE fusing equipment yesterday afternoon.

- While they get started Brown's creek, I begin identifying lines in junction area and what parts of manifold they correspond to.

1015 A&D approximately 1/2 done w/ well head connections.

1200 Well heads @ Brown's Creek all tied in. A&D Break for Lunch

Rite in the Rain

24

Location Lewis Drive Date 12/15/2010

Project / Client PR Summer

GPM / System Expansion

1300 HRS resume work @ Brown's Creek.

- Began by clearing out junction Carson rd mini ex so well lines can be plumbed to spares
- Camper fitting for damaged line repair wasn't in, shipment was to be here on Tuesday. The line repair will be delayed until shipment arrives

1480 once junction area cleared more, found that there were 8 Spare lines, not 6 as originally thought, no need to pair wells. Wells connected in Following order:

GT-1 → VAS 47
GT-2 → VAS 48
GT-3 → VAS 49
GT-4 → VAS 50
GT-5 → VAS 51
GT-6 → VAS 52
GT-7 → VAS 53
GT-8 → VAS 54

Location Lewis Drive Date 12/13/2018

Project / Client PPL SMIOA

OEM / System Expansion

1430 (Cont) HDPE welding begins -
- I place IDS on manifold for G17 and on individual trunk lines.
1632 Begin pressure Test for Group 7 wells. Set each to 50 psi, will check for 10 minutes.
- ADDED 50 psi to each well, well head valve closed, once 50 psi reached, turned off pressure regulator, back to 0 psi and closed diaphragm valve on each trunk line.
1642 pressure Test passes, no issues. AED begin cleanup for the night
1700 AED off site. I open all well head valves VAS 47-54 and all open and ready to go.
1745 depart site

SAS

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** _____

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. Warren, ~~K. Seton~~, K. Chernoff **Date:** 10/05/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
RW-11	0743	—	—	12.50	16.57	--	
RW-12	0745	—	—	13.03	24.22	--	
RS-08	1316	—	—	12.97	17.79	--	Sock Weight = 690g ☆REPLACED SOCK
MW-20	0754	0.0	—	11.22	19.40	--	POTENTIAL INCONSISTENT SOLID BEEP AT SURFACE
RS-07	0756	—	—	12.68	15.75	--	
RT-1A	0800	—	—	12.64	18.60	--	Sock Weight = 595g
RT-1B	0800	—	—	12.63	17.62	--	Sock Weight = 620g
RT-1C	0800	—	—	13.22	18.50	--	Sock Weight = 355g
RW-01	0814	—	—	16.12	20.75	--	
MW-11	0817	0.0	29.56	29.62	32.40	--	
RW-06	0826	—	—	26.31	38.80	--	
RW-08	0820	—	—	16.22	34.39	--	
RW-09	0825	—	—	13.88	38.02	--	
RT-2A	0836	—	—	0.70	7.35	--	
RT-2B	0836	—	—	0.60	7.13	--	
RT-2C	0839	—	—	1.50	9.32	--	
RT-2D	0840	—	—	1.66	7.28	--	
RT-2E	0841	—	—	1.74	8.38	--	
RT-2F	0842	—	—	2.10	9.30	--	
RT-2G	0845	—	—	2.68	10.05	--	
RT-2I	0847	—	—	2.44	10.00	--	
RT-2J	0848	—	—	0.92	10.00	--	
RT-2K	0850	—	—	1.18	2.20	--	Sock Weight = 690g
RT-2L	0852	—	—	2.61	5.82	--	
RW-14	1523	—	9.88	10.49	51.12	--	INCONSISTENT SOLID BEEP B/W 9.88-10.49, SPARGE ON
MW-15	0905	—	11.41	11.42	19.18	--	
RS-20	0917	—	—	9.40	10.44	--	
RS-04	0920	—	—	9.72	10.12	--	
RS-06	0921	—	—	10.50	24.31	--	

	TIME	PID	DTP	DTW	TD	DO	COMMENTS
MW-16	0947	0.0	—	6.20	20.58	--	
RS-12	0935	—	—	8.20	29.10	--	
RS-11	0937	—	—	7.86	16.82	--	
RS-09	0940	—	—	10.19	16.11	--	
RS-18	0945	—	—	10.20	19.25	--	
MW-18	0948	14600.0	16.11	18.57	20.11	--	
MW-08	0958	0.0	13.10	13.11	19.84	--	
RS-13	1000	0.0	—	10.01	17.70	--	
RS-15	1006	—	—	8.37	17.55	--	
RS-16	1004	16.9	—	7.88	18.46	--	
Skimmers					--	--	-
RS-17	1025	—	—	8.19	18.97	--	Prod. Rec = DRY *READJUST DTS TO 6.62'
RS-14	1030	—	—	8.50	19.04	--	Prod. Rec = DRY *READJUST DTS TO 6.65
RS-10	1032	—	—	8.19	19.99	--	Prod. Rec = 0.05oz
RW-10	1040	—	—	9.95	57.46	--	Prod. Rec = DRY *MUD AROUND CASING
RS-05	1045	—	9.85	9.98	24.97	--	Prod. Rec = 0.5 oz
RS-01	1047	—	—	11.10	22.46	--	Prod. Rec = DRY
RS-02	1052	—	—	11.25	19.38	--	Prod. Rec = DRY
RW-15	1058	—	—	13.61	38.67	--	Prod. Rec = 0.05oz
RW-02	1117	—	—	23.38	26.50	--	Prod. Rec = DRY
RW-03	1111	—	23.97	23.99	33.81	--	Prod. Rec = 0.05oz
RW-04	1125	—	25.59	29.70	38.65	--	Prod. Rec = 0.05oz
RW-05	1130	—	33.06	33.09	37.53	--	Prod. Rec = 65.0 oz
RW-07	1138	—	—	23.18	42.78	--	Prod. Rec = DRY
MWs to Sample					--	--	-
MW-51	1455	0.0	—	18.84	25.34	--	
MW-52	1515	0.0	—	16.90	33.43	--	
MW-53	1355	0.0	—	11.54	21.32	--	
MW-54	1340	0.0	—	11.57-11.78	25.58	--	BUBBING IN WELL, APPX. DTW

-- Locations with Socks

-- Locations with skimmers

- wells historically found to have product

BTOC - below top of casing

ft - feet

PN - Project Number

[1]Total depths collected 4/5/18

WL - Water Level

ppm - parts per million

SM - Site Manager

Prod. Rec = Product Recovered

Data entered by Kirill Chernoff on 11/1/18 QCd by Melissa Warren 11/1//18

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** Mis 70's, humid, cloudy

PN: 699847.LD.PR

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. Warren, K. Chernoff **Date:** 11/1/2018

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
RW-11	10:00	**186.7**	**11.39**	**11.40**	16.57	--	
RW-12	10:08		**13.59**	**13.61**	24.22	--	
RS-08	10:24		-	**12.84**	17.79	--	**Sock Weight = 445g, needs new cap**
MW-20	10:27	**886.7**	**11.23**	**12.00**	19.40	--	
RS-07	10:34		-	**12.69**	15.75	--	
RT-1A	10:31		-	**13.12**	18.60	--	**Sock Weight = 365g**
RT-1B	10:32		-	**12.54**	17.62	--	**Sock Weight = 645g**
RT-1C	10:33		-	**12.56**	18.50	--	**Sock Weight = 645g, bolt cutters to change lock**
RW-01	10:43		-	**13.83**	20.75	--	needs cap replaced
MW-11	10:46	**399.4**	**30.66**	**30.77**	32.40	--	
RW-06	10:51		-	**26.36**	38.80	--	
RW-08	10:58		-	**16.55**	34.39	--	
RW-09	11:02		**14.28**	**14.46**	38.02	--	
RT-2A	11:04		-	**0.82**	7.35	--	
RT-2B	11:05		-	**0.91**	7.13	--	
RT-2C	11:06		-	**1.13**	9.32	--	
RT-2D	11:07		-	**1.13**	7.28	--	
RT-2E	11:08		-	**1.15**	8.38	--	
RT-2F	11:09		-	**2.93**	9.30	--	
RT-2G	11:10		-	**3.56**	10.05	--	
RT-2I	11:11		-	**2.84**	10.00	--	
RT-2J	11:12		-	**1.09**	10.00	--	
RT-2K	11:13		-	**0.94**	2.20	--	**Sock Weight = 750g**
RT-2L	11:14			**2.38**	5.82	--	
RW-14	11:19		**11.47**	**12.44**	51.12	--	intermittent solid beeping between DTP to DTW, sparge system on
MW-15	16:12		-	**11.70**	19.18	--	
RS-20	12:56		-	**6.62**	10.44	--	
RS-04	13:00		-	**9.77**	10.12	--	

RS-06	13:03		**-**	**9.99**	24.31	**--**	
MW-16	no	**key**	**access**		20.58	**--**	stripped bolts
RS-12	13:09		**-**	**7.62**	29.10	**--**	
RS-11	13:13		**-**	**7.28**	16.82	**--**	
RS-09	13:17		**-**	**8.25**	16.11	**--**	
RS-18	13:25		**-**	**9.25**	19.25	**--**	
MW-18	no	**key**	**Access**		20.11	**--**	
MW-08	14:50		**11.02**	**19.29**	19.84	**--**	tiriple checked with new battery; however, water level tape and probe did not confirm product in well.
RS-13	13:30		**-**	**5.87**	17.70	**--**	
RS-15	13:35		**-**	**5.73**	17.55	**--**	
RS-16	13:38		**-**	**6.42**	18.46	**--**	
Skimmers					**--**	**--**	**--**
RS-17	13:43		**5.14**	**5.16**	18.97	**--**	**Prod. Rec = All Water**
RS-14	13:55		**5.25**	**5.27**	19.04	**--**	**Prod. Rec = All Water**
RS-10	14:03		**-**	**7.28**	19.99	**--**	**Prod. Rec = All Water**
RW-10	14:12		**-**	**10.97**	57.46	**--**	**Prod. Rec = All Water**
RS-05	14:20		**9.21**	**9.23**	24.97	**--**	**Prod. Rec = 0.2oz**
RS-01	14:58		**10.22**	**10.24**	22.46	**--**	**Prod. Rec = 0.2oz**
RS-02	15:10		**-**	**9.80**	19.38	**--**	**Prod. Rec = 0.2oz**
RW-15	15:18		**-**	**13.08**	38.67	**--**	**Prod. Rec = All Water**
RW-02	15:45		**23.38**	**23.39**	26.50	**--**	**Prod. Rec = All Water**
RW-03	15:40		**24.11**	**24.12**	33.81	**--**	**Prod. Rec = Dry**
RW-04	15:55		**29.59**	**29.70**	38.65	**--**	**Prod. Rec = All Water**
RW-05	16:08		**33.45**	**33.46**	37.53	**--**	**Prod. Rec = 0.05oz**
RW-07	16:24		**-**	**11.70**	42.78	**--**	**Prod. Rec = Dry**

-- Locations with Socks

-- Locations with skimmers

- wells historically found to have product

BTOC - below top of casing

ft - feet

PN - Project Number

[1]Total depths collected 4/5/18

WL - Water Level

ppm - parts per million

SM - Site Manager

Prod. Rec = Product Recovered

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** Sunny, clear H 66°F / L 36°F
rain in previous 48 hours
PN: 699858.LD.MR.GW
Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe
Technicians: JM & KC **Date:** 12/3/2018

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-29	1000	0.1	–	3.11	14.95	~~7.35~~	has TROLL
TW-73	1015	0.0	–	4.36	14.07	0.96	one bolt broken
MW-19	1025	220.6	–	9.94	12.15	5.45	strong odor on probe, no odor detected
RW-11	1035	–	–	10.33	19.37	–	strong odor on probe, no odor detected
RW-12	1040	–	–	11.59	16.65	–	
RS-08	1045	–	–	11.51	19.32	–	Sock Weight = 0.5 kg NEW SOCK = 0.1 kg, odor on probe
MW-20	1050	44.8	–	9.99	19.40	0.91	sheen on collected water above cap & odor
RS-07	1105	–	–	11.74	15.62	–	no odor
RT-1A	1110	–	–	11.26	18.81	–	Sock Weight = 0.705 kg NEW SOCK = 0.09 kg, Odor on probe
RT-1B	1115	–	–	11.24	17.66	–	Sock Weight = 0.705 kg NEW SOCK = 0.08 kg
RT-1C	1120	–	–	11.82	18.94	–	Sock Weight = 0.46 kg NEW SOCK = 0.09 kg, odor on probe
TW-67	1135	0.7	–	10.47	26.46	7.48	water above cap; no odor
MW-26	1155	0.3	–	2.36	17.12	–	no odor
MW-26B	1200	–	–	5.55	43.66	–	no odor
SW-06	1205	–	–	–	–	–	DRY NO WATER
MW-23	1145	0.2	–	6.97	23.21	–	no odor
MW-23B	1150	–	–	8.73	56.34	–	no odor
MW-46	1330	–	–	5.25	17.18	–	slight odor on probe, no product
SW-05	1335	–	–	–	–	4.10	WL= 0.39
MW-45	1325	0.0	–	10.94	14.45	–	no odor
MW-45B	1320	–	–	13:13	41.74	–	no odor
MW-21	1345	–	–	13:41	20.17	–	no odor
MW-17	~~1400~~ 1405	–	–	10.85	~~11.24 11.24 18.71~~	–	odor while opening well
MW-17B	1400	–	~~12.23~~ –	13.22 ~~18.71~~	~~18.71 18.71 18.71~~	–	odor while opening well
MW-22	~~1405~~ 1415	0.0	–	7.37	10.34	1.23	slight odor on probe
MW-44	~~1415~~ 1430	–	–	3.22	~~9.78 20.17~~	–	no odor on probe
MW-44B	~~1430~~ 1425	–	–	11.36	~~35.36 18.71~~	–	
MW-01	~~1425~~ 1435	0.3	–	7.91	16.58	2.40	has BaroTROLL, no odor on probe
MW-01B	1440	0.2	–	7.02	44.52	0.92	no odor
RW-01	1445	–	8.51	8.72	~~21.11~~	–	intermittent solid bags at 8.51-8.72, broken cap
MW-27	1500	–	–	24.96	29.72	–	strong odor when opening, silverish sheen on top inside casing

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: JM & KC **Date:**

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-27B	1505	--	--	~~29.23~~	~~30.09~~	--	no odor TD = 52.82 DTW = 29.34
MW-11	1510	513.9	--	28.17	32.40	N/A	strong odor but no product detected, NO DO b/c assumed product
RW-06	1530	--	--	24.79	39.94	--	no odor
RW-08	1535	--	--	14.27	35.37	--	slight odor on probe
RW-09	1540	--	--	11.46	37.21	--	slight odor
MW-12	1545	6.9	--	12.02	21.03	1.26	has TROLL
MW-12B	1550	9.7	--	12.49	44.31	1.02	no odor
TW-59					22.00		
MW-28	1600	0.1	--	2.17	26.08	0.89	no odor
MW-49	1630	--	--	17.49	23.42	--	
MW-35	1620	0.0	--	7.45	26.26	--	
SW-03	1625	--	--	--	--	9.50	WL= 0.58
MW-25	1610	0.0	--	7.13	18.08	8.86	has TROLL, no odor
MW-25B	1615	0.1	--	3.70	53.13	1.15	
MW-42	1635	--	--	4.37	13.39	--	
MW-41	1640	0.0	--	3.66	13.19	--	
TW-60					40.50		
TW-~~68~~ 56	1645	0.3	--	0.3	23.70	8.75	no odor
RT-2A	1655	--	--	0.5	7.00	--	no odor
RT-2B	1700	--	--	0.8	6.61	--	
RT-2C	1702	--	--	1.17	9.45	--	
RT-2D	1705	--	--	~~1.17~~ ~~1.17~~	7.24	--	
RT-2E	1706	--	--	1.28	8.37	--	
RT-2F	1707	--	--	1.79	9.34	--	
RT-2G	1708	--	--	1.30	10.07	--	
RT-2I	1710	--	--	1.29	10.07	--	
RT-2J	1711	--	--	0.40	10.08	--	
RT-2K	1713	--	--	0.60	2.13	--	Sock Weight =
RT-2L	1715	--	--	1.08	5.79	--	
SW-12		--	--	--	--		
MW-40					13.15	--	has TROLL

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** _____

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: _____ **Date:** _____

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
RW-14		--	—			--	
MW-39			—		13.03	--	has TROLL
MW-34			—		7.82	--	
MW-15			—		19.18		
MW-15B			—		80.90		
MW-38	1650		—	1.12	11.51	--	
MW-37	1646	--	—	~~1.12~~ 3.01	18.11	--	
SW-02	1712	--	--	--	--		WL= 1.86
SW-08	1640	--	--	--	--		WL= 0.40
SW-10	1620	--	--	--	--		WL= 0.50
MW-24	1658	--	—	4.78	15.33	--	
MW-24B	1655	--	—	5.59	46.23	--	
SW-01	1701	--	--	--	--	N/A	WL= Dry
MW-43	1704		—	4.24	10.30	--	
MW-43B	1706	--	—	2.30	56.06	--	
MW-13	1544	--	—	20.87	22.20	--	
MW-13B	1547	--	—	21.69	~~22.20~~ 50.97	--	
MW-14	1538	--	—	14.88	22.22	--	
MW-14B	1540	--	—	16.60	69.84	--	
MW-51	1530		—	17.38	25.38	4.33	
MW-52	1527		—	15.80	32.93	4.05	
~~MW-53~~							
~~MW-54~~							
SW-13	1651	--	--	--	--	4.21	
TW-64	1515		—	18.59	52.85	8.80	
MW-50B	1456	--	—	26.06	45.65	--	
MW-48B	1500	--	—	16.40	97.36	--	
MW-33	1451	--	—	~~26.72~~ 26.37	28.40	--	
MW-33T	1449	--	—	26.29	99.67	--	
MW-31	1442		—	19.47	28.03	--	
MW-31B	1443	--	—	20.53	70.95	--	
MW-54	1353	0.2	—	12.95	25.55	9.15	
MW-53	1400	0.7	—	6.81	21.12	6.90	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 60'S / MOSTLY SUNNY

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. WARREN, E HARKER, J MORGAN, K. CHERNOFF **Date:** 12/3/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-47	14:38	--	—	18.88	22.90	--	
MW-10	1425	0.2	—	~~7.35~~	23.21	9.72	has BaroTROLL
TW-96	1420	0.2	—	~~2.79~~	27.33	9.78	
MW-32	1415	--	—	14.85	28.70	--	
MW-03	1405	0.1	—	14.00	20.28	9.46	
MW-30	1352	0.3	—	12.77	14.70	6.90	ADD MW-54 BEFORE THIS CELL THEN MS-53
MW-04	1345	0.3	—	7.55	19.56	8.80	
MW-05	1341	1.3	—	12.39	19.90	--	
RS-20	1335	--	—	2.73	10.34	--	
MW-02	1332	0.4	—	3.58	17.97 ~~20.58~~	9.48	has TROLL
MW-02B	1325	0.6	—	12.92	81.72	9.58	
MW-09	1319	8.2	—	0.0	19.85 ~~20.21~~	9.00	
MW-09B	1208	--	—	3.90	128.32	--	REPLACE WELL CAP
TW-55	1200	0.4	—	0.0	27.33	9.60	
MW-06	1150	--	—	11.24	19.40	--	
MW-06B	1152	--	—	11.34	88.25	--	
MW-07	1141	547.8	—	10.99	13.82 ~~14.34~~	--	
RS-04	1140	--	—	6.33	~~10.05~~ ~~18.35~~	--	
RS-06	1135	--	—	8.19	23.75	--	
MW-16	1119	189.2	—	4.98	2003 20.58	8.62	AIR SPARGING ON, APPX DTW GIVEN
RS-12	1110	--	—	8.41	20.10	--	
RS-11	1107	--	—	7.30	16.50	--	
RS-09	1105	—	—	5.69	15.80	—	REPLACE LOCK
RS-18	1100	--	—	3.61	19.10	--	
MW-18	1045	2110	17.83	17.85	19.10 ~~20.11~~	PRODUCT	
MW-08	1036	0.0	9.40	19.18	20.89 ~~19.84~~	PRODUCT	PRODUCT CONFIRMED WITH BAILER
RS-13	1025	--	—	1.46	17.54	--	~~PRODUCT CONFIRMED WITH BAILER~~
RS-15	1021	--	—	2.18	15.34	--	BIO SHEEN AT TOP OF WATER
RS-16	1015	--	—	1.87	19.10	--	~~BIO SHEEN AT TOP OF WATER~~
MW-36		--				--	
MW-36B		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** _____

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: _____ **Date:** _____

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-29					14.95		has TROLL
TW-73					14.07		
MW-19					12.15		
RW-11		--				--	
RW-12		--				--	
RS-08		--				--	**Sock Weight =**
MW-20					19.40		
RS-07		--				--	
RT-1A		--				--	**Sock Weight =**
RT-1B		--				--	**Sock Weight =**
RT-1C		--				--	**Sock Weight =**
TW-67					26.46		
MW-26					17.12	--	
MW-26B		--				--	
SW-06		--				--	
MW-23					23.21	--	
MW-23B		--				--	
MW-46		--				--	
SW-05		--			--		**WL=**
MW-45					14.45	--	
MW-45B		--				--	
MW-21		--				--	
MW-17		--				--	
MW-17B		--				--	
MW-22					10.34		
MW-44		--				--	
MW-44B		--				--	
MW-01					16.58		has BaroTROLL
MW-01B					44.52		
RW-01		--				--	
MW-27		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** _____

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: _____ **Date:** _____

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-27B		--				--	
MW-11					32.40		
RW-06		--				--	
RW-08		--				--	
RW-09		--				--	
MW-12					21.03		has TROLL
MW-12B					44.31		
TW-59	0739	0.0	—	12.29	20.30 ~~22.00~~	9.71	
MW-28					26.08		
MW-49		--				--	
MW-35					26.26	--	
SW-03		--	--	--	--		WL=
MW-25					18.08		has TROLL
MW-25B					53.13		
MW-42		--				--	
MW-41					13.19	--	
TW-60	0754	5.1	—	7.00	40.70 ~~40.50~~	3.42	
TW-66					23.70		
RT-2A		--				--	
RT-2B		--				--	
RT-2C		--				--	
RT-2D		--				--	
RT-2E		--				--	
RT-2F		--				--	
RT-2G		--				--	
RT-2I		--				--	
RT-2J		--				--	
RT-2K	0810	--				--	Sock Weight = 0.760 Kg KEYLOCK = 0.095 Kg
RT-2L		--				--	
SW-12	0802	--	--	--	--	7.17	
MW-40	0805	—	—	2.27	13.15	--	has TROLL

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: **Date:** 12/4/2018

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
RW-14	0805	--	—	10.18	51.22	--	no odor
MW-39	0755	0.9	—	4.45	13.03	--	has TROLL no odor
MW-34	0800	6.1	—	2.87	7.82	--	no odor
MW-15	0740	0.0	—	10.37	19.18	7.54	no odor
MW-15B	0745	62.7	—	14.44	80.90	1.24	no odor
MW-38					11.51	--	
MW-37		--				--	
SW-02		--	--	--	--		WL=
SW-08		--	--	--	--		WL=
SW-10		--	--	--	--		WL=
MW-24		--				--	
MW-24B		--				--	
SW-01		--	--	--	--		WL=
MW-43					10.30	--	
MW-43B		--				--	
MW-13		--				--	
MW-13B		--				--	
MW-14		--				--	
MW-14B		--				--	
MW-51							
MW-52							
MW-53							
MW-54							
SW-13		--	--	--	--		
TW-64					52.85		
MW-50B		--				--	
MW-48B		--				--	
MW-33		--				--	
MW-33T		--				--	
MW-31					28.03	--	
MW-31B		--				--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:**

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: **Date:**

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
MW-47		--				--	
MW-10					23.21		has BaroTROLL
TW-96					27.33		
MW-32		--				--	
MW-03					20.28		
MW-30					14.70		
MW-04					19.56		
MW-05					19.90	--	
RS-20		--				--	
MW-02					20.58		has TROLL
MW-02B					81.72		
MW-09					20.21		
MW-09B		--				--	
TW-55					27.33		
MW-06		--				--	
MW-06B		--				--	
MW-07					14.34	--	
RS-04		--				--	
RS-06		--				--	
MW-16					20.58		
RS-12		--				--	
RS-11		--				--	
RS-09							
RS-18		--				--	
MW-18					20.11		
MW-08					19.84		
RS-13		--				--	
RS-15		--				--	
RS-16		--				--	
MW-36	0820	--	—	16.65	23.70	--	some odor while venting
MW-36B	0825	--	—	16.32	46.38	--	

Table 2 - DO Measurement List

SM: Tom Wiley **Client:** Plantation Pipe Line **Weather:** MID 50's, PARTIAL SUN

PN: 699858.LD.MR.GW

Project: Monthly Monitoring **Measuring Method:** YSI proODO, Oil/Water Interface Probe

Technicians: M. VALLEN, K. CHERNOFF, E. HARKER, J MORGAN **Date:** 12/4/18

Sample Location	Time	PID Reading (ppm)	Depth to Product (ft BTOC)	Depth to Water (ft BTOC)	Total Depth[1] (ft BTOC)	DO(mg/L)	Comments (i.e. lid bolted down, missing bolts, condition of cap, replace cap, vault bolted down, water in vault, smell, etc.)
Skimmers	--	--	--	--	--	--	--
RS-17	0842	--	--	2.74	19.14	--	Prod. Rec = ALL WATER IN CANNISTER, ODOR PRESENT
RS-14	0856	--	3.89	3.90	19.04	--	Prod. Rec = ALL WATER IN CANNISTER, ODOR PRESENT
RS-10	0903	--	--	8.59	20.06	--	Prod. Rec = SLICK CANNISTER, CANNISTER WAS OPEN, DRY
RW-10	0915	--	--	13.53	51.30	--	Prod. Rec = 0.2, CHANGE SKIMMER, SEDIMENT STUCK
RS-05	0913	--	9.4	9.95	25.0	--	Prod. Rec = 0.2 oz
RS-01	0925	--	8.83	8.85	22.50	--	Prod. Rec = DRY
RS-02	0930	--	6.17	6.18	19.43	--	Prod. Rec = CANNISTER WAS WARM, EMPTY, PRODUCT VISIBLE ON SIDE OF CANNISTER
RW-15	0935	--	12.20	12.20	40.15	--	Prod. Rec = POSSIBLE POCKET OF PRODUCT DETECTED
RW-02	0943	--	--	22.02	5.70	--	Prod. Rec = 0.2 oz
RW-03	0947	--	--	23.09	33.48	--	Prod. Rec = DRY
RW-04	0949	--	28.34	28.52	37.38	--	Prod. Rec = ~~20.0 oz~~ DRY
RW-05	0952	--	31.75	31.81	38.72	--	Prod. Rec = 20.0 oz
RW-07	0955	--	--	21.42	41.66	--	Prod. Rec = SMALL AMOUNT OF WATER IN SKIMMER

-- Locations with Socks

-- Locations with skimmers

- wells historically found to have product

BTOC - below top of casing

ft - feet

PN - Project Number

WL - Water Level

[1]Total depths collected 4/5/18

ppm - parts per million

SM - Site Manager

Prod. Rec = Product Recovered

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-40
Field Crew: M. WARREN, K. CHENOFF
Well Depth (ft): 13.16
DTW (ft): 2.64
Water Column (ft): 10.52
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.71
Depth of Screen (ft):
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: HERON H2250
Pump type (please circle): (TYPHOON) Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 0.0 after venting, if initially high middle of sampling 0.0 closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (GAL/MIN) (~~ml/min~~)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1551	2.29	← DTW BEFORE PUMP IS ON W/ ALL EQUIPMENT IN WELL								
1553	BEGIN	PUMP 1		5.14	19.3	0.046	151.9	3.51	49.9	
1555	8.6	0.25	1.5	4.78	19.1	0.047	138.	0.46	18.6	INCREASED ~~REDUCED~~ SPEED
1557	10.38	1.00	3.5	4.87	19.7	0.046	128.3	0.47	58.9	
1559	10.95	1.00	~~5.5~~ 5.0	4.90	19.7	0.046	118.5	0.47	45.7	
1600 ~~1560~~	COLLECT	MW-40-110218								

Remarks:
1 WELL VOL = 1.71
3 WELL VOL = 5.14
5 WELL VOL = 8.56

★ 1601 RECHARGE TO 9.45 FT
★ TOTAL PURGED = 5.5 GAL

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.95
Depth sample was acquired: 12.75
Sample Methodology: Pump
Sample Date/Time: 11/02/18 @ 1560 MW-40-110218
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET [ ] OF [ ]

SAMPLING LOG

Well Number: MW-23
Field Crew: M. WALKEN, K. CHERNOFF
Well Depth (ft): 23.11
DTW (ft): 9.19
Water Column (ft): 13.92
Well Diameter (in): 2"
Gal. Per ft: 0.163
Well volume (gal): 2.27
Depth of Screen (ft):

Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: HERON # 2280
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 0490145

PID reading: opening well 0.0 after venting, if initially high middle of sampling 0.0 closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (GAL/MIN) (~~ml/min~~)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1335	START	PUMP								
1337	9.96	.6	1.25	4.87	18.6	0.050	170.7	2.99	59.9	CLEAR/NO ODOR
1340	10.04	1.2	5.0	4.70	18.6	0.050	168.4	3.08	22.2	CLEAR/NO ODOR
1343	10.07	0.9	7.25	4.66	18.6	0.055	167.5	3.02	8.13	CLEAR/NO ODOR
1345	10.07	1.2	9.0	COLLECT SAMPLE	MW-23-110218					

Remarks:

1 WELL VOL = 2.27
3 WELL VOL = 6.8

* SAMPLE COLLECTED AFTER PURGING 4 WELL VOLUMES
* FAST RECHARGE RATE, DTW MEASURED AT 1346 TO BE 9.86 ft

SAMPLING INFORMATION:

Depth to Water Before Sampling: 10.07
Depth sample was acquired:
Sample Methodology: Pump
Sample Date/Time: 11/02/18 @ 1345 MW-23-110218
Signed Sampler:
Filtered Metals Collected: Y / (N)
Filter Size:
Sample Observations: CLEAR/NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-17B
Field Crew: M. WARREN K. CHERNOFF
Well Depth (ft): 29.55
DTW (ft): 14.67
Water Column (ft): 14.88
Well Diameter (in): 4"
Gal. Per ft: 0.653
Well volume (gal): 9.72
Depth of Screen (ft): —
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
(4")	0.653	8"	2.611

Water level indicator, serial number: HERON # 2280
Pump type (please circle): (TYPHOON) Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 173.0 after venting, if initially high 7.5 middle of sampling 7.5 closing well 0.0

Field Parameters

Time	DTW (toc)	GAL/MIN Flow Rate ~~(ml/min)~~	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1000	BEGIN PUMP AT MW-17B				★GENERATOR OUTPUT INCREASED FOR CONTROLLER					
1008	START PUMP									
1014	15.49	0.4	2	6.51	19.8	0.115	21.8	0.77	34.0	—
1019	15.49	0.4	4	6.00	19.9	0.110	14.5	0.22	34.0	—
1024	15.37	0.4	6	5.77	19.9	0.103	5.2	0.18	9.08	—
1029	15.45	0.4	8	5.62	19.9	0.097	-14.6	0.11	9.08	INCREASED PUMP
1039	15.60	0.6	14	5.55	19.9	0.095	-29.5	0.07	6.11	INCREASED PUMP
1049	15.90	1.0	28	5.47	19.9	0.095	-33.8	0.07	4.63	—
1059	16.20	1.0	38	5.45	19.9	0.095	-38.0	0.00	3.92	—
1105	16.25	1.0	48	COLLECT SAMPLE:			MW-17B-110218			—
1107	—	—	—	COLLECT SAMPLE:			MW-17B-D-110218			—

11/02/18

Remarks:
1105 COLLECT SAMPLE MW-17B-110218
MW-17B-D-110218

SAMPLING INFORMATION:

Depth to Water Before Sampling: 16.25
Depth sample was acquired: 25.0 ft
Sample Methodology: PUMP
Sample Date/Time: 11/02/18 MW-17B-110218 @ 1105 / MW-17B-D-110218 @ 1107
Signed Sampler:
Filtered Metals Collected: Y (N) Filter Size:
Sample Observations: CLEAR / ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

ch2m

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-34-110218
Field Crew: M. WARREN, K. CHELNOFF
Well Depth (ft): 7.80
DTW (ft): 2.90
Water Column (ft): 4.9
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.798
Depth of Screen (ft):
Purge Methodology:

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: HERON #2280
Pump type (please circle): TYPHOON Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 1.2 after venting, if initially high: middle of sampling 0.0 closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1436	BEGIN PUMP									(2)
1436	WELL PUMPED DRY, WATER WAS A LIGHT STRAW COLOR, NO ODOR									
1444	COLLECT MW-34-110218									(3)
	DURING SAMPLE COLLECTION, SAMPLE WAS COLLECTED IN THE ORDER OF a, b, c DURING RECHARGE. LABELS ARE LISTED AS MW-34-110218a, b, c. SAMPLES WERE COLLECTED APPX 1 MIN APART AND COMPLETED AT 1444.									

11/2/18

Remarks:
1 WELL VOL = 0.798 gal
3 WELL VOL = 2.396 gal
5 WELL VOL = 4.00 gal

* SEE NOTES ABOVE

SAMPLING INFORMATION:

Depth to Water Before Sampling: ~~2.2~~ ~~7.60~~ 7.60 Depth sample was acquired: 7.60
Sample Methodology: Pump
Sample Date/Time: 1444 @ 11/02/18 MW-34-110218
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR / NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other

ch2m·

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-46
Field Crew: K. CHERNOFF, M. WARREN
Well Depth (ft): 17.03
DTW (ft): 7.95
Water Column (ft): 9.08
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 1.48
Depth of Screen (ft):

Site: Lewis Drive Site, Belton, SC
Date: 11/02/18
Purge Methodology:

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: HERON # 2280
Pump type (please circle): (TYPHOON) Peristaltic Bladder
Pump serial number: 04A0145

PID reading: opening well 0.0 after venting, if initially high middle of sampling 0.0 closing well 0.0

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1439	8.97	BEGIN Pump								
1440	9.89	1.0	1.0	4.60	19.0	0.028	181.5	1.63	18.4	CLEAR/NO ODOR
1443	10.92	0.9	3.5	4.53	19.0	0.029	171.7	0.73	3.8	CLEAR NO ODOR
1446	11.19	1.0	6.5	4.52	19.0	0.030	164.9	0.24	1.71	
1449	11.24	0.8	8.75	4.54	19.0	0.030	160.2	0.17	1.40	
1450	11.30	0.9	9.5	COLLECT SAMPLE			MW-46-110218			

Remarks:
1 WELL VOLUME = 1.48 GAL
3 WELL VOLUME = 4.44 gal
5 WELL VOLUME = 7.40 GAL

* AT 1451, DTW RECHARGED TO 9.25 ft

SAMPLING INFORMATION:

Depth to Water Before Sampling: 11.30 Depth sample was acquired: 17.00 ft
Sample Methodology: Pump
Sample Date/Time: 11/02/18 @ 1450 MW-46-110218
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: CLEAR NO ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER: 699858.LD.MR.GW

WELL NUMBER

SHEET 1 OF 1

SAMPLING LOG

Well Number: MW-19
Field Crew: M. WARREN, E. HARKER
Well Depth (ft): 12.15 Purge
DTW (ft): 9.71 Methodology: LOW FLOW
Water Column (ft): 2.44
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.39
Depth of Screen (ft): 4.5 - 9.5

Site: Lewis Drive Site, Belton, SC
Date: 12/04/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
2"	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: opening well 218.4 after venting, if initially high middle of sampling 32.7 closing well 5.2

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA (2)
1320	START PUMP									
1325	10.39	100	0.0	6.43	18.3	0.369	6.2	1.26	244.1	LIGHT GREY/ODOR
1330	10.87	100	0.25	6.39	18.2	0.363	12.1	0.38	140.6	LIGHT GREY/ODOR
1335	11.46	100	0.50	6.25	18.3	0.307	39.8	0.38	153.3	LIGHT GREY/ODOR
1340	12.10	100	0.75	6.18	18.5	0.263	57.7	0.38	400.2	LIGHT GREY/ODOR
1341	WELL PURGED DRY									

12/4/18

Remarks: TEAM PURGED WELL DRY, WILL RETURN TOMORROW TO COLLECT SAMPLE.

SAMPLING INFORMATION:

Depth to Water Before Sampling: N/A
Depth sample was acquired:
Sample Methodology:
Sample Date/Time:
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size:
Sample Observations:
Parameters (please circle): VOCs SVOCs Dissolved Metals Other:

5mm=.5L .1L X

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-13
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-13
Field Crew: JM & KC
Well Depth (ft): 22.20
DTW (ft): 20.77
Water Column (ft): ~~20.77~~ 1.43
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.233
Depth of Screen (ft): 4.0 - 19.0

Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	(0.163)	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: ~~0.3~~ 659.6 opening well; after venting, if initially high; middle of sampling; closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
0838	Began	pump	DTW	= 20.77						
0840	21.44	100	0.2	5.82	12.9	0.241	42.2	0.89	13.7	slight odor
0845	21.53		0.4	5.77	13.8	0.166	50.5	0.47	18.1	
0850	21.52		0.5	5.71	13.5	0.143	63.5	0.30	11.0	sun on WQ meter
0855	21.93	↓	0.6	5.79	15.0	0.165	50.1	0.23	13.2	well going dry - bubble
0900	22.17	100	0.7	5.69	14.5	0.139	63.3	0.14	137.1	bubbles causing turb.
0905	22.18	100	0.8	—	13.4	0.124	72.2	0.09	114.2	issues @ bottom & wet
0910	well	ran	dry,	will	let	recharge	before	sample		

2L

Remarks: Bobby Gilmore/Caldwell on site - regulator from DHEC @0905
- Well dry before stabilization
Total Gal purged = 0.8 gal

SAMPLING INFORMATION:

Depth to Water Before Sampling: Depth sample was acquired:
Sample Methodology: N/A
Sample Date/Time:
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-30
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-30
Field Crew: KL & JM
Well Depth (ft): 14.70
DTW (ft): 11.97
Water Column (ft): 2.72
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.445
Depth of Screen (ft): 5-15

Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/06/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2")	0.163	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: opening well | after venting, if initially high | middle of sampling | closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
~~0950~~ 0955	Began	TBD purging								
1000 ~~0955~~	12.47	100	0.12	4.90	15.9	0.030	199.0	1.20	2.0	clear, no odor
1005	12.78	100	0.17	4.95	16.1	0.028	187.9	2.30	3.0	clear, no odor
1010	13.08	100	0.25	4.90	16.0	0.025	198.2	4.79	0.8	clear, no odor
1015 ~~1000~~	13.42	100	0.70	4.88	16.1	0.025	214.5	5.16	0.4	clear, no odor
1020	13.76	100	1.0	4.91	16.1	0.025	225.2	5.56	0.4	clear, no odor
1025 ~~1030~~	14.14	100	1.15	~~4.95~~ 4.93	16.2	0.025	232.3	6.05	0.8	clear, no odor
1030 ~~1035~~	14.44	100	1.20	4.95	16.1	0.025	236.6	6.46	2.0	clear, no odor
1032 ~~1035~~		WELL RAN	DRY							well going dry Bubbles

Remarks:
~~well going~~
- WELL DRY BEFORE STARTLIZATION AT 10:33
- INCREASES IN DO LIKELY DO TO BUBBLES, RISE IN TURBIDITY LIKELY DUE TO SEDIMENT

1.25 GALLONS TOTAL PURGED

SAMPLING INFORMATION:

Depth to Water Before Sampling: ~~11.97~~
Depth sample was acquired:
Sample Methodology:
Sample Date/Time: N/A
Signed Sampler:
Filtered Metals Collected: Y / N Filter Size:
Sample Observations:
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other:

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-22
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-22
Field Crew: JM & KC
Well Depth (ft): 10.34
DTW (ft): ~~7.37~~ 7.18
Water Column (ft): 3.16
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 0.515
Depth of Screen (ft):

Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/05/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2)	(0.163)	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: R7582

PID reading: 0.0 opening well; after venting, if initially high; middle of sampling; closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
1350	Opened	well	cap							
1355	Began	purging								
1400	7.18	100		~~6.26~~	~~0.185~~	~~0~~				
14:05	7.34	100	0.01	6.55	18.0	0.185	128.4	2.37	2.8	~~clear, no odor~~ ~~Murky, Clear~~
14:10	7.47	100	~~0.15~~	5.80	18.9	0.187	157.9	1.97	2.2	clear, no odor
14:15	7.53	100	0.25	5.74	19.2	0.167	168.7	2.02	2.3	clear, no odor
14:20	7.59	100	~~0.35~~	5.65	19.5	0.159	184.9	2.22	1.5	clear, no odor
14:25	7.65	100	0.56	5.57	19.6	0.153	199.7	2.18	1.0	clear, no odor
14:30	7.70	100	0.65	5.51	19.7	0.149	214.5	2.32	0.8	clear, no odor
14:35	7.77	100	0.80	5.41	19.7	0.146	225.8	2.13	0.7	clear, no odor
1440	SAMPLES	COLLECTED								

Remarks:
PARAMETERS STABILIZE AT 14:35
Ferrous = 0.0 mg/L

MW-22-120518

SAMPLING INFORMATION:

Depth to Water Before Sampling: 7.77
Depth sample was acquired: 10.00
Sample Methodology: Low Flow
Sample Date/Time: N/A 12/5/18 @ 1440
Signed Sampler:
Filtered Metals Collected: Y / (N) Filter Size: 0
Sample Observations: Clear, no odor
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other: MNA / Fe 2+

JACOBS

PROJECT NUMBER	WELL NUMBER
699858.LD.MR.GW	MW-19
	SHEET 1 OF 1

LOW FLOW SAMPLING LOG

Well Number: MW-19
Field Crew: JM & KC
Well Depth (ft): 12.15
DTW (ft): 9.54
Water Column (ft): 2.61
Well Diameter (in): 2
Gal. Per ft: 0.163
Well volume (gal): 4.254
Depth of Screen (ft):
Purge Methodology: Low Flow

Site: Lewis Drive Site, Belton, SC
Date: 12/5/18

Diameter	Gal. Per Foot	Diameter	Gal. Per Foot
(2)	(0.163)	5"	1.02
3"	0.367	6"	1.469
4"	0.653	8"	2.611

Water level indicator, serial number: 042848
Pump type (please circle): (Peristaltic) Bladder
Pump serial number: 27582

PID reading: 232.2 opening well; after venting, if initially high; middle of sampling; closing well

Field Parameters

Time	DTW (toc)	Flow Rate (ml/min)	Total Volume (gal)	pH (Std. Units)	Temp (°C)	Cond. (mS/cm)	ORP (mV)	D.O. (mg/L)	Turbidity (NTU)	Color/Odor
Stabilization	<0.33' or 4"	100-500	NA	±0.1 SU	±1°C	±5%	±20 mV	within 0.2 mg/L	±10% or < 10	NA
—	PARAMETERS		COLLECTED		ON	12/4				
1620	9.54	Checked recharge								strong odor
~~1640~~										
1630	Collected samples									

Remarks: Fe+2 = 1.5 ppm

SAMPLING INFORMATION:

Depth to Water Before Sampling: 9.54 Depth sample was acquired: 10.50
Sample Methodology: LOW FLOW - PREVIOUSLY PURGED
Sample Date/Time: 12/5/18
Signed Sample: R. M—
Filtered Metals Collected: Y / (N) Filter Size:
Sample Observations: SLIGHTLY TURBID @ BEGINNING, SOME SEDIMENT, STRONG ODOR
Parameters (please circle): (VOCs) SVOCs Dissolved Metals Other MNA/FE+2

Appendix B
Analytical Laboratory Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 24, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1032503
Samples Received:	10/06/2018
Project Number:	699858.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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MW-54-100518 L1032503-01 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 13:40 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 22:10	10/08/18 22:10	LRL

MW-53-100518 L1032503-02 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 13:55 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 22:29	10/08/18 22:29	LRL

MW-53-D-100518 L1032503-03 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 13:56 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 22:47	10/08/18 22:47	LRL

MW-51-100518 L1032503-04 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 14:55 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 23:06	10/08/18 23:06	LRL

MW-52-100518 L1032503-05 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 15:05 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 23:25	10/08/18 23:25	LRL

FB01-100518 L1032503-06 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 15:15 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 23:43	10/08/18 23:43	LRL

TB01-100518 L1032503-07 GW

Collected by: Melissa Warren | Collected date/time: 10/05/18 15:25 | Received date/time: 10/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1177826	1	10/08/18 20:18	10/08/18 20:18	GLN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 22:10	WG1177826
Toluene	1.72		1.00	1	10/08/2018 22:10	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 22:10	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 22:10	WG1177826
Methyl tert-butyl ether	1.35		1.00	1	10/08/2018 22:10	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 22:10	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 22:10	WG1177826
(S) Toluene-d8	*98.1*		*80.0-120*		*10/08/2018 22:10*	WG1177826
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/08/2018 22:10*	WG1177826
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*10/08/2018 22:10*	WG1177826

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 22:29	WG1177826
Toluene	5.43		1.00	1	10/08/2018 22:29	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 22:29	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 22:29	WG1177826
Methyl tert-butyl ether	ND		1.00	1	10/08/2018 22:29	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 22:29	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 22:29	WG1177826
(S) Toluene-d8	*101*		*80.0-120*		*10/08/2018 22:29*	WG1177826
(S) Dibromofluoromethane	*105*		*75.0-120*		*10/08/2018 22:29*	WG1177826
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*10/08/2018 22:29*	WG1177826

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 22:47	WG1177826
Toluene	2.11		1.00	1	10/08/2018 22:47	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 22:47	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 22:47	WG1177826
Methyl tert-butyl ether	ND		1.00	1	10/08/2018 22:47	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 22:47	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 22:47	WG1177826
(S) Toluene-d8	*98.6*		*80.0-120*		*10/08/2018 22:47*	WG1177826
(S) Dibromofluoromethane	*107*		*75.0-120*		*10/08/2018 22:47*	WG1177826
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/08/2018 22:47*	WG1177826

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 23:06	WG1177826
Toluene	1.88		1.00	1	10/08/2018 23:06	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 23:06	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 23:06	WG1177826
Methyl tert-butyl ether	ND		1.00	1	10/08/2018 23:06	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 23:06	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 23:06	WG1177826
(S) Toluene-d8	*97.7*		*80.0-120*		*10/08/2018 23:06*	WG1177826
(S) Dibromofluoromethane	*105*		*75.0-120*		*10/08/2018 23:06*	WG1177826
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/08/2018 23:06*	WG1177826

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 23:25	WG1177826
Toluene	1.25		1.00	1	10/08/2018 23:25	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 23:25	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 23:25	WG1177826
Methyl tert-butyl ether	3.12		1.00	1	10/08/2018 23:25	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 23:25	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 23:25	WG1177826
(S) Toluene-d8	*99.1*		*80.0-120*		*10/08/2018 23:25*	WG1177826
(S) Dibromofluoromethane	*110*		*75.0-120*		*10/08/2018 23:25*	WG1177826
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/08/2018 23:25*	WG1177826

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	10/08/2018 23:43	WG1177826
Toluene	ND		1.00	1	10/08/2018 23:43	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 23:43	WG1177826
Total Xylenes	ND		3.00	1	10/08/2018 23:43	WG1177826
Methyl tert-butyl ether	ND		1.00	1	10/08/2018 23:43	WG1177826
Naphthalene	ND		5.00	1	10/08/2018 23:43	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 23:43	WG1177826
(S) Toluene-d8	*100*		*80.0-120*		*10/08/2018 23:43*	WG1177826
(S) Dibromofluoromethane	*105*		*75.0-120*		*10/08/2018 23:43*	WG1177826
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*10/08/2018 23:43*	WG1177826

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	10/08/2018 20:18	WG1177826
Benzene	ND		1.00	1	10/08/2018 20:18	WG1177826
Bromochloromethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Bromodichloromethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Bromoform	ND		1.00	1	10/08/2018 20:18	WG1177826
Bromomethane	ND		5.00	1	10/08/2018 20:18	WG1177826
Carbon disulfide	ND		1.00	1	10/08/2018 20:18	WG1177826
Carbon tetrachloride	ND		1.00	1	10/08/2018 20:18	WG1177826
Chlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
Chlorodibromomethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Chloroethane	ND		5.00	1	10/08/2018 20:18	WG1177826
Chloroform	ND		5.00	1	10/08/2018 20:18	WG1177826
Chloromethane	ND		2.50	1	10/08/2018 20:18	WG1177826
Cyclohexane	ND		1.00	1	10/08/2018 20:18	WG1177826
1,2-Dibromo-3-Chloropropane	ND		5.00	1	10/08/2018 20:18	WG1177826
1,2-Dibromoethane	ND		1.00	1	10/08/2018 20:18	WG1177826
1,2-Dichlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,3-Dichlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,4-Dichlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
Dichlorodifluoromethane	ND		5.00	1	10/08/2018 20:18	WG1177826
1,1-Dichloroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
1,2-Dichloroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
1,1-Dichloroethene	ND	J4	1.00	1	10/08/2018 20:18	WG1177826
cis-1,2-Dichloroethene	ND		1.00	1	10/08/2018 20:18	WG1177826
trans-1,2-Dichloroethene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,2-Dichloropropane	ND		1.00	1	10/08/2018 20:18	WG1177826
cis-1,3-Dichloropropene	ND		1.00	1	10/08/2018 20:18	WG1177826
trans-1,3-Dichloropropene	ND		1.00	1	10/08/2018 20:18	WG1177826
Ethylbenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
2-Hexanone	ND		10.0	1	10/08/2018 20:18	WG1177826
Isopropylbenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
2-Butanone (MEK)	ND		10.0	1	10/08/2018 20:18	WG1177826
Methyl Acetate	ND		20.0	1	10/08/2018 20:18	WG1177826
Methyl Cyclohexane	ND		1.00	1	10/08/2018 20:18	WG1177826
Methylene Chloride	ND		5.00	1	10/08/2018 20:18	WG1177826
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	10/08/2018 20:18	WG1177826
Methyl tert-butyl ether	ND		1.00	1	10/08/2018 20:18	WG1177826
Styrene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,1,2,2-Tetrachloroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Tetrachloroethene	ND		1.00	1	10/08/2018 20:18	WG1177826
Toluene	1.49		1.00	1	10/08/2018 20:18	WG1177826
1,2,3-Trichlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,2,4-Trichlorobenzene	ND		1.00	1	10/08/2018 20:18	WG1177826
1,1,1-Trichloroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
1,1,2-Trichloroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Trichloroethene	ND		1.00	1	10/08/2018 20:18	WG1177826
Trichlorofluoromethane	ND		5.00	1	10/08/2018 20:18	WG1177826
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	10/08/2018 20:18	WG1177826
Vinyl chloride	ND		1.00	1	10/08/2018 20:18	WG1177826
Xylenes, Total	ND		3.00	1	10/08/2018 20:18	WG1177826
(S) Toluene-d8	*96.4*		*80.0-120*		*10/08/2018 20:18*	WG1177826
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/08/2018 20:18*	WG1177826
(S) a,a,a-Trifluorotoluene	*99.3*		*80.0-120*		*10/08/2018 20:18*	WG1177826
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/08/2018 20:18*	WG1177826

Method Blank (MB)

(MB) R3350363-2 10/08/18 18:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	0.745	J	0.260	1.00
1,2-Dichloroethane	U		0.361	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00

Method Blank (MB)

(MB) R3350363-2 10/08/18 18:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Tetrachloroethene	U		0.372	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
Toluene	U		0.412	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*96.5*			*80.0-120*
(S) Dibromofluoromethane	*110*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*99.2*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3350363-1 10/08/18 18:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	117	93.2	19.0-160	
Bromodichloromethane	25.0	25.6	102	75.0-120	
Bromochloromethane	25.0	23.7	94.9	76.0-122	
Bromoform	25.0	25.6	102	68.0-132	
Bromomethane	25.0	20.8	83.4	10.0-160	
Carbon disulfide	25.0	17.3	69.2	61.0-128	
Carbon tetrachloride	25.0	23.9	95.7	68.0-126	
Chlorobenzene	25.0	22.9	91.6	80.0-121	
Chlorodibromomethane	25.0	22.4	89.7	77.0-125	
Benzene	25.0	22.7	90.8	70.0-123	
Chloroethane	25.0	20.1	80.4	47.0-150	
Chloroform	25.0	23.1	92.6	73.0-120	
Chloromethane	25.0	24.9	99.7	41.0-142	
1,2-Dibromo-3-Chloropropane	25.0	22.6	90.4	58.0-134	
1,2-Dibromoethane	25.0	23.4	93.4	80.0-122	
1,2-Dichlorobenzene	25.0	24.0	96.0	79.0-121	
1,3-Dichlorobenzene	25.0	24.1	96.5	79.0-120	
1,4-Dichlorobenzene	25.0	23.7	95.0	79.0-120	

Laboratory Control Sample (LCS)

(LCS) R3350363-1 10/08/18 18:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dichlorodifluoromethane	25.0	26.0	104	51.0-149	
1,1-Dichloroethane	25.0	23.7	94.8	70.0-126	
1,1-Dichloroethene	25.0	17.7	70.6	71.0-124	J4
cis-1,2-Dichloroethene	25.0	22.8	91.1	73.0-120	
trans-1,2-Dichloroethene	25.0	22.1	88.3	73.0-120	
1,2-Dichloropropane	25.0	25.7	103	77.0-125	
cis-1,3-Dichloropropene	25.0	23.8	95.2	80.0-123	
trans-1,3-Dichloropropene	25.0	23.6	94.5	78.0-124	
1,2-Dichloroethane	25.0	25.2	101	70.0-128	
2-Hexanone	125	119	95.4	67.0-149	
Isopropylbenzene	25.0	25.4	102	76.0-127	
2-Butanone (MEK)	125	132	106	44.0-160	
Methylene Chloride	25.0	22.1	88.4	67.0-120	
4-Methyl-2-pentanone (MIBK)	125	127	101	68.0-142	
Ethylbenzene	25.0	22.9	91.6	79.0-123	
Naphthalene	25.0	23.0	91.9	54.0-135	
Styrene	25.0	27.4	110	73.0-130	
1,1,2,2-Tetrachloroethane	25.0	26.3	105	65.0-130	
Tetrachloroethene	25.0	22.1	88.5	72.0-132	
1,1,2-Trichlorotrifluoroethane	25.0	18.5	73.9	69.0-132	
1,2,3-Trichlorobenzene	25.0	23.0	92.0	50.0-138	
1,2,4-Trichlorobenzene	25.0	23.4	93.6	57.0-137	
1,1,1-Trichloroethane	25.0	24.4	97.4	73.0-124	
1,1,2-Trichloroethane	25.0	23.6	94.5	80.0-120	
Methyl tert-butyl ether	25.0	23.1	92.5	68.0-125	
Trichloroethene	25.0	22.2	88.8	78.0-124	
Trichlorofluoromethane	25.0	22.2	88.6	59.0-147	
Vinyl chloride	25.0	20.8	83.3	67.0-131	
Toluene	25.0	21.9	87.5	79.0-120	
Xylenes, Total	75.0	69.3	92.4	79.0-123	
(S) Toluene-d8			*98.4*	*80.0-120*	
(S) Dibromofluoromethane			*102*	*75.0-120*	
(S) a,a,a-Trifluorotoluene			*109*	*80.0-120*	
(S) 4-Bromofluorobenzene			*105*	*77.0-126*	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

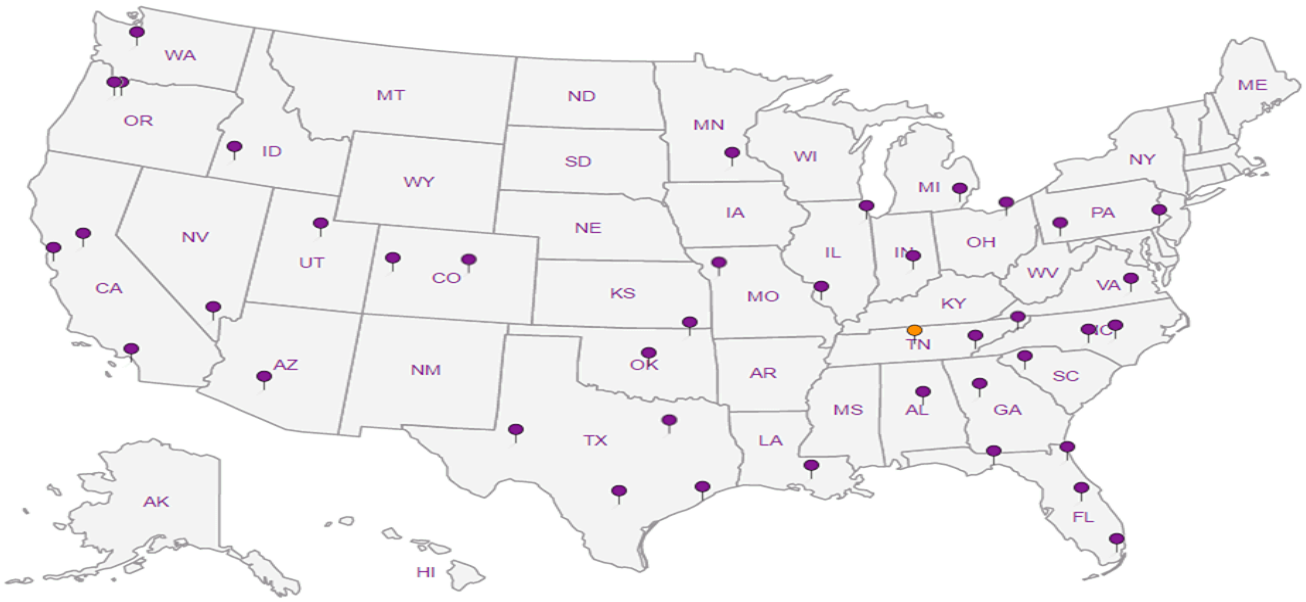
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; kyle.sexton@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N X Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-54-100518	GRAB	GW	N/A	10/05/18	1340	3	X			-01
MW-53-100518		GW			1355	3	X		TIME = 1355	-02
MW-53-D-100518		GW			1356	3	X		DUP	-03
MW-51-100518		GW			1455	3	X			-04
MW-52-100518		GW			1505	3	X			-05
FB01-100518		GW			1515	3	X		FIELDBLANK	-06
TB01-100518		GW			1525	3	X		TRIP BLANK	-07
		GW				3	X			
		GW				3	X			
		GW				3	X			

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: V8260BTEXMNSC = BTEX,MTBE,Naphthalene,1,2-DCA.

RAD SCREEN: 0.0 mR/hr

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/05/18	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 10/6/18 Time: 0845

Trip Blank Received: Yes / No HCl / MeoH TBR

Temp: 4.2-0K °C Bottles Received: 18

Hold:

If preservation required by Login: Date/Time

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1032503
C187

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P662161
TSR: 526 - Chris McCord
PB: 7-6-18
Shipped Via: FedEx Ground

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 15, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1040865
Samples Received:	11/03/2018
Project Number:	699858.2D.MR.GW
Description:	Lewis Drive Ground Water
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-17B-110218 L1040865-01 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 11:05 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	20	11/04/18 05:29	11/04/18 05:29	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1193522	500	11/09/18 02:13	11/09/18 02:13	GLN

MW-17B-D-110218 L1040865-02 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 11:07 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	10	11/04/18 05:49	11/04/18 05:49	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1193522	500	11/09/18 02:35	11/09/18 02:35	GLN

MW-23-110218 L1040865-03 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 13:45 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	1	11/04/18 06:09	11/04/18 06:09	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1193522	1	11/09/18 02:57	11/09/18 02:57	GLN

MW-34-110218 L1040865-04 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 14:44 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191460	1	11/05/18 13:08	11/05/18 13:08	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1195296	5	11/12/18 18:05	11/12/18 18:05	GLN

MW-40-110218 L1040865-05 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 16:00 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	1	11/04/18 06:49	11/04/18 06:49	GLN

MW-46-110218 L1040865-06 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 14:50 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	1	11/04/18 07:10	11/04/18 07:10	GLN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1193522	25	11/09/18 03:19	11/09/18 03:19	GLN

FB01-110218 L1040865-07 GW

Collected by: Melissa Warren | Collected date/time: 11/02/18 17:00 | Received date/time: 11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191101	1	11/04/18 07:30	11/04/18 07:30	GLN

TB01-110218 L1040865-08 GW

Collected by	Collected date/time	Received date/time
Melissa Warren	11/02/18 16:57	11/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1191460	1	11/05/18 10:36	11/05/18 10:36	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	7770		500	500	11/09/2018 02:13	WG1193522
Toluene	12700		500	500	11/09/2018 02:13	WG1193522
Ethylbenzene	1080		20.0	20	11/04/2018 05:29	WG1191101
Total Xylenes	7380		60.0	20	11/04/2018 05:29	WG1191101
Methyl tert-butyl ether	841		20.0	20	11/04/2018 05:29	WG1191101
Naphthalene	113		100	20	11/04/2018 05:29	WG1191101
1,2-Dichloroethane	ND	J4	20.0	20	11/04/2018 05:29	WG1191101
(S) Toluene-d8	*99.6*		*80.0-120*		*11/04/2018 05:29*	WG1191101
(S) Toluene-d8	*94.7*		*80.0-120*		*11/09/2018 02:13*	WG1193522
(S) Dibromofluoromethane	*105*		*75.0-120*		*11/04/2018 05:29*	WG1191101
(S) Dibromofluoromethane	*115*		*75.0-120*		*11/09/2018 02:13*	WG1193522
(S) 4-Bromofluorobenzene	*86.1*		*77.0-126*		*11/04/2018 05:29*	WG1191101
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*11/09/2018 02:13*	WG1193522

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	7670		500	500	11/09/2018 02:35	WG1193522
Toluene	12900		500	500	11/09/2018 02:35	WG1193522
Ethylbenzene	1070		10.0	10	11/04/2018 05:49	WG1191101
Total Xylenes	5130		1500	500	11/09/2018 02:35	WG1193522
Methyl tert-butyl ether	888		10.0	10	11/04/2018 05:49	WG1191101
Naphthalene	126		50.0	10	11/04/2018 05:49	WG1191101
1,2-Dichloroethane	ND	J4	10.0	10	11/04/2018 05:49	WG1191101
(S) Toluene-d8	*103*		*80.0-120*		*11/04/2018 05:49*	WG1191101
(S) Toluene-d8	*93.1*		*80.0-120*		*11/09/2018 02:35*	WG1193522
(S) Dibromofluoromethane	*107*		*75.0-120*		*11/04/2018 05:49*	WG1191101
(S) Dibromofluoromethane	*112*		*75.0-120*		*11/09/2018 02:35*	WG1193522
(S) 4-Bromofluorobenzene	*87.4*		*77.0-126*		*11/04/2018 05:49*	WG1191101
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*11/09/2018 02:35*	WG1193522

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	11.1		1.00	1	11/09/2018 02:57	WG1193522
Toluene	2.48		1.00	1	11/09/2018 02:57	WG1193522
Ethylbenzene	ND		1.00	1	11/04/2018 06:09	WG1191101
Total Xylenes	4.85		3.00	1	11/09/2018 02:57	WG1193522
Methyl tert-butyl ether	8.35		1.00	1	11/04/2018 06:09	WG1191101
Naphthalene	ND		5.00	1	11/04/2018 06:09	WG1191101
1,2-Dichloroethane	ND	J4	1.00	1	11/04/2018 06:09	WG1191101
(S) Toluene-d8	*100*		*80.0-120*		*11/04/2018 06:09*	WG1191101
(S) Toluene-d8	*94.6*		*80.0-120*		*11/09/2018 02:57*	WG1193522
(S) Dibromofluoromethane	*103*		*75.0-120*		*11/04/2018 06:09*	WG1191101
(S) Dibromofluoromethane	*111*		*75.0-120*		*11/09/2018 02:57*	WG1193522
(S) 4-Bromofluorobenzene	*86.6*		*77.0-126*		*11/04/2018 06:09*	WG1191101
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*11/09/2018 02:57*	WG1193522

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	75.1		1.00	1	11/05/2018 13:08	WG1191460
Toluene	1.53		1.00	1	11/05/2018 13:08	WG1191460
Ethylbenzene	ND		1.00	1	11/05/2018 13:08	WG1191460
Total Xylenes	8.16		3.00	1	11/05/2018 13:08	WG1191460
Methyl tert-butyl ether	302		5.00	5	11/12/2018 18:05	WG1195296
Naphthalene	ND		5.00	1	11/05/2018 13:08	WG1191460
1,2-Dichloroethane	ND		1.00	1	11/05/2018 13:08	WG1191460
(S) Toluene-d8	*93.7*		*80.0-120*		*11/05/2018 13:08*	WG1191460
(S) Toluene-d8	*97.0*		*80.0-120*		*11/12/2018 18:05*	WG1195296
(S) Dibromofluoromethane	*101*		*75.0-120*		*11/05/2018 13:08*	WG1191460
(S) Dibromofluoromethane	*110*		*75.0-120*		*11/12/2018 18:05*	WG1195296
(S) 4-Bromofluorobenzene	*99.7*		*77.0-126*		*11/05/2018 13:08*	WG1191460
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*11/12/2018 18:05*	WG1195296

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	6.40		1.00	1	11/04/2018 06:49	WG1191101
Toluene	2.05		1.00	1	11/04/2018 06:49	WG1191101
Ethylbenzene	ND		1.00	1	11/04/2018 06:49	WG1191101
Total Xylenes	ND		3.00	1	11/04/2018 06:49	WG1191101
Methyl tert-butyl ether	76.7		1.00	1	11/04/2018 06:49	WG1191101
Naphthalene	ND		5.00	1	11/04/2018 06:49	WG1191101
1,2-Dichloroethane	ND	J4	1.00	1	11/04/2018 06:49	WG1191101
(S) Toluene-d8	*99.1*		*80.0-120*		*11/04/2018 06:49*	WG1191101
(S) Dibromofluoromethane	*102*		*75.0-120*		*11/04/2018 06:49*	WG1191101
(S) 4-Bromofluorobenzene	*88.2*		*77.0-126*		*11/04/2018 06:49*	WG1191101

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1790		25.0	25	11/09/2018 03:19	WG1193522
Toluene	120		1.00	1	11/04/2018 07:10	WG1191101
Ethylbenzene	7.10		1.00	1	11/04/2018 07:10	WG1191101
Total Xylenes	740		75.0	25	11/09/2018 03:19	WG1193522
Methyl tert-butyl ether	299		25.0	25	11/09/2018 03:19	WG1193522
Naphthalene	16.6		5.00	1	11/04/2018 07:10	WG1191101
1,2-Dichloroethane	ND	J4	1.00	1	11/04/2018 07:10	WG1191101
(S) Toluene-d8	*99.9*		*80.0-120*		*11/04/2018 07:10*	WG1191101
(S) Toluene-d8	*93.8*		*80.0-120*		*11/09/2018 03:19*	WG1193522
(S) Dibromofluoromethane	*104*		*75.0-120*		*11/04/2018 07:10*	WG1191101
(S) Dibromofluoromethane	*114*		*75.0-120*		*11/09/2018 03:19*	WG1193522
(S) 4-Bromofluorobenzene	*90.1*		*77.0-126*		*11/04/2018 07:10*	WG1191101
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*11/09/2018 03:19*	WG1193522

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	11/04/2018 07:30	WG1191101
Toluene	ND		1.00	1	11/04/2018 07:30	WG1191101
Ethylbenzene	ND		1.00	1	11/04/2018 07:30	WG1191101
Total Xylenes	ND		3.00	1	11/04/2018 07:30	WG1191101
Methyl tert-butyl ether	ND		1.00	1	11/04/2018 07:30	WG1191101
Naphthalene	ND		5.00	1	11/04/2018 07:30	WG1191101
1,2-Dichloroethane	ND	J4	1.00	1	11/04/2018 07:30	WG1191101
(S) Toluene-d8	*101*		*80.0-120*		*11/04/2018 07:30*	WG1191101
(S) Dibromofluoromethane	*106*		*75.0-120*		*11/04/2018 07:30*	WG1191101
(S) 4-Bromofluorobenzene	*87.3*		*77.0-126*		*11/04/2018 07:30*	WG1191101

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	11/05/2018 10:36	WG1191460
Benzene	ND		1.00	1	11/05/2018 10:36	WG1191460
Bromodichloromethane	ND		1.00	1	11/05/2018 10:36	WG1191460
Bromoform	ND		1.00	1	11/05/2018 10:36	WG1191460
Bromomethane	ND		5.00	1	11/05/2018 10:36	WG1191460
Carbon disulfide	ND		1.00	1	11/05/2018 10:36	WG1191460
Carbon tetrachloride	ND		1.00	1	11/05/2018 10:36	WG1191460
Chlorobenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
Chlorodibromomethane	ND		1.00	1	11/05/2018 10:36	WG1191460
Chloroethane	ND		5.00	1	11/05/2018 10:36	WG1191460
Chloroform	ND		5.00	1	11/05/2018 10:36	WG1191460
Chloromethane	ND		2.50	1	11/05/2018 10:36	WG1191460
1,2-Dibromo-3-Chloropropane	ND		5.00	1	11/05/2018 10:36	WG1191460
1,2-Dibromoethane	ND		1.00	1	11/05/2018 10:36	WG1191460
1,2-Dichlorobenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
1,3-Dichlorobenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
1,4-Dichlorobenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
1,1-Dichloroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
1,2-Dichloroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
1,1-Dichloroethene	ND		1.00	1	11/05/2018 10:36	WG1191460
cis-1,2-Dichloroethene	ND		1.00	1	11/05/2018 10:36	WG1191460
trans-1,2-Dichloroethene	ND		1.00	1	11/05/2018 10:36	WG1191460
1,2-Dichloropropane	ND		1.00	1	11/05/2018 10:36	WG1191460
cis-1,3-Dichloropropene	ND		1.00	1	11/05/2018 10:36	WG1191460
trans-1,3-Dichloropropene	ND		1.00	1	11/05/2018 10:36	WG1191460
Di-isopropyl ether	ND		1.00	1	11/05/2018 10:36	WG1191460
Ethylbenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
2-Butanone (MEK)	ND		10.0	1	11/05/2018 10:36	WG1191460
2-Hexanone	ND		10.0	1	11/05/2018 10:36	WG1191460
Methylene Chloride	ND		5.00	1	11/05/2018 10:36	WG1191460
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	11/05/2018 10:36	WG1191460
Methyl tert-butyl ether	ND		1.00	1	11/05/2018 10:36	WG1191460
Naphthalene	ND		5.00	1	11/05/2018 10:36	WG1191460
Styrene	ND		1.00	1	11/05/2018 10:36	WG1191460
1,1,2,2-Tetrachloroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
Tetrachloroethene	ND		1.00	1	11/05/2018 10:36	WG1191460
Toluene	1.88		1.00	1	11/05/2018 10:36	WG1191460
1,1,1-Trichloroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
1,1,2-Trichloroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
Trichloroethene	ND		1.00	1	11/05/2018 10:36	WG1191460
Vinyl chloride	ND		1.00	1	11/05/2018 10:36	WG1191460
o-Xylene	ND		1.00	1	11/05/2018 10:36	WG1191460
m&p-Xylene	ND		2.00	1	11/05/2018 10:36	WG1191460
Xylenes, Total	ND		3.00	1	11/05/2018 10:36	WG1191460
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	11/05/2018 10:36	WG1191460
1,2,3-Trimethylbenzene	ND		1.00	1	11/05/2018 10:36	WG1191460
(S) Toluene-d8	*96.1*		*80.0-120*		*11/05/2018 10:36*	WG1191460
(S) Dibromofluoromethane	*103*		*75.0-120*		*11/05/2018 10:36*	WG1191460
(S) a,a,a-Trifluorotoluene	*94.3*		*80.0-120*		*11/05/2018 10:36*	WG1191460
(S) 4-Bromofluorobenzene	*99.7*		*77.0-126*		*11/05/2018 10:36*	WG1191460

Method Blank (MB)

(MB) R3358132-3 11/04/18 01:49

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	4.10		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*98.9*			*80.0-120*
(S) Dibromofluoromethane	*105*			*75.0-120*
(S) 4-Bromofluorobenzene	*86.9*			*77.0-126*

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

(LCS) R3358132-1 11/04/18 00:49 • (LCSD) R3358132-2 11/04/18 01:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	25.8	25.7	103	103	70.0-123			0.267	20
1,2-Dichloroethane	25.0	33.5	33.3	134	133	70.0-128	J4	J4	0.555	20
Ethylbenzene	25.0	22.9	22.6	91.5	90.3	79.0-123			1.25	20
Methyl tert-butyl ether	25.0	27.0	26.7	108	107	68.0-125			1.22	20
Naphthalene	25.0	15.0	17.1	59.9	68.3	54.0-135			13.1	20
Toluene	25.0	23.7	23.5	94.6	93.9	79.0-120			0.751	20
Xylenes, Total	75.0	72.0	71.5	96.0	95.3	79.0-123			0.697	20
(S) Toluene-d8				*99.0*	*98.9*	*80.0-120*				
(S) Dibromofluoromethane				*106*	*106*	*75.0-120*				
(S) 4-Bromofluorobenzene				*84.8*	*87.1*	*77.0-126*				

Method Blank (MB)

(MB) R3358109-3 11/05/18 10:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,4-Dichlorobenzene	U		0.274	1.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
Di-isopropyl ether	U		0.320	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
2-Butanone (MEK)	U		3.93	10.0
Methyl tert-butyl ether	U		0.367	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Tetrachloroethene	U		0.372	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00

Method Blank (MB)

(MB) R3358109-3 11/05/18 10:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trimethylbenzene	U		0.321	1.00
Trichloroethene	U		0.398	1.00
Xylenes, Total	U		1.06	3.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	*95.8*			*80.0-120*
(S) Dibromofluoromethane	*103*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*97.2*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*77.0-126*

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

(LCS) R3358109-1 11/05/18 09:11 • (LCSD) R3358109-2 11/05/18 09:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	26.4	26.2	106	105	70.0-123			0.770	20
Acetone	125	139	147	111	117	19.0-160			5.33	27
Bromodichloromethane	25.0	25.3	25.1	101	101	75.0-120			0.653	20
Bromoform	25.0	24.6	24.7	98.4	98.7	68.0-132			0.302	20
Bromomethane	25.0	20.4	24.8	81.5	99.1	10.0-160			19.5	25
1,3-Dichlorobenzene	25.0	26.2	27.3	105	109	79.0-120			4.14	20
Carbon disulfide	25.0	26.3	26.9	105	108	61.0-128			2.33	20
Carbon tetrachloride	25.0	26.7	27.7	107	111	68.0-126			3.63	20
Chlorobenzene	25.0	25.9	26.6	104	106	80.0-121			2.58	20
Chlorodibromomethane	25.0	25.5	26.1	102	104	77.0-125			2.19	20
Chloroethane	25.0	29.5	29.2	118	117	47.0-150			0.877	20
Chloroform	25.0	24.1	24.8	96.2	99.4	73.0-120			3.21	20
Chloromethane	25.0	25.6	29.0	103	116	41.0-142			12.2	20
1,2-Dibromo-3-Chloropropane	25.0	25.4	25.6	101	102	58.0-134			0.869	20
1,2-Dibromoethane	25.0	25.3	26.2	101	105	80.0-122			3.57	20
1,2-Dichlorobenzene	25.0	26.1	27.0	105	108	79.0-121			3.17	20
Ethylbenzene	25.0	25.7	26.5	103	106	79.0-123			2.84	20
1,4-Dichlorobenzene	25.0	23.8	24.4	95.2	97.6	79.0-120			2.55	20
1,1-Dichloroethane	25.0	26.0	27.0	104	108	70.0-126			3.87	20
1,2-Dichloroethane	25.0	27.2	27.4	109	110	70.0-128			0.764	20
1,1-Dichloroethene	25.0	27.1	27.5	108	110	71.0-124			1.45	20
cis-1,2-Dichloroethene	25.0	25.6	26.1	102	104	73.0-120			2.19	20
trans-1,2-Dichloroethene	25.0	26.5	27.4	106	110	73.0-120			3.50	20

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

(LCS) R3358109-1 11/05/18 09:11 • (LCSD) R3358109-2 11/05/18 09:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,2-Dichloropropane	25.0	26.2	27.0	105	108	77.0-125			3.25	20
cis-1,3-Dichloropropene	25.0	26.1	27.8	104	111	80.0-123			6.12	20
trans-1,3-Dichloropropene	25.0	26.5	27.3	106	109	78.0-124			2.92	20
Methyl tert-butyl ether	25.0	25.6	26.3	103	105	68.0-125			2.53	20
Naphthalene	25.0	24.5	25.1	97.9	100	54.0-135			2.34	20
2-Hexanone	125	128	131	103	105	67.0-149			2.03	20
Toluene	25.0	23.8	24.9	95.2	99.6	79.0-120			4.58	20
1,1,2-Trichlorotrifluoroethane	25.0	29.0	29.8	116	119	69.0-132			2.71	20
2-Butanone (MEK)	125	140	146	112	117	44.0-160			4.54	20
Methylene Chloride	25.0	24.1	25.5	96.5	102	67.0-120			5.51	20
4-Methyl-2-pentanone (MIBK)	125	133	136	106	109	68.0-142			2.73	20
Styrene	25.0	26.6	26.8	106	107	73.0-130			0.840	20
Xylenes, Total	75.0	76.5	78.5	102	105	79.0-123			2.58	20
1,1,2,2-Tetrachloroethane	25.0	24.4	24.6	97.8	98.5	65.0-130			0.686	20
Tetrachloroethene	25.0	26.3	27.6	105	111	72.0-132			4.83	20
1,1,1-Trichloroethane	25.0	26.7	26.8	107	107	73.0-124			0.599	20
1,1,2-Trichloroethane	25.0	24.6	25.5	98.3	102	80.0-120			3.71	20
Trichloroethene	25.0	26.5	26.7	106	107	78.0-124			0.873	20
Vinyl chloride	25.0	28.1	28.3	113	113	67.0-131			0.504	20
(S) Toluene-d8				*95.6*	*97.4*	*80.0-120*				
(S) Dibromofluoromethane				*98.8*	*103*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*98.4*	*98.1*	*80.0-120*				
(S) 4-Bromofluorobenzene				*96.7*	*97.5*	*77.0-126*				

L1040827-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040827-01 11/05/18 16:36 • (MS) R3358109-4 11/05/18 16:55 • (MSD) R3358109-5 11/05/18 17:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	ND	26.2	28.1	105	112	1	17.0-158			6.89	27
Acetone	125	ND	132	141	106	113	1	10.0-160			6.73	35
Bromodichloromethane	25.0	ND	24.5	27.0	97.9	108	1	31.0-150			10.0	27
Bromoform	25.0	ND	23.7	25.8	94.8	103	1	29.0-150			8.53	29
Bromomethane	25.0	ND	20.6	23.8	82.4	95.2	1	10.0-160			14.4	38
Carbon disulfide	25.0	ND	26.5	26.7	106	107	1	10.0-156			0.924	28
Carbon tetrachloride	25.0	ND	27.0	28.7	108	115	1	23.0-159			5.80	28
Chlorobenzene	25.0	ND	25.7	27.6	103	111	1	33.0-152			7.16	27
Chlorodibromomethane	25.0	ND	24.3	26.4	97.2	106	1	37.0-149			8.17	27
Chloroethane	25.0	ND	28.6	28.0	114	112	1	10.0-160			2.05	30

L1040827-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1040827-01 11/05/18 16:36 • (MS) R3358109-4 11/05/18 16:55 • (MSD) R3358109-5 11/05/18 17:14

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloroform	25.0	ND	24.4	25.7	97.4	103	1	29.0-154			5.46	28
Chloromethane	25.0	ND	25.2	29.0	101	116	1	10.0-160			14.1	29
1,2-Dibromo-3-Chloropropane	25.0		24.6	27.1	98.5	109	1	22.0-151			9.67	34
1,2-Dibromoethane	25.0		25.2	26.8	101	107	1	34.0-147			6.42	27
Ethylbenzene	25.0	ND	25.8	27.4	103	110	1	30.0-155			6.25	27
1,2-Dichlorobenzene	25.0	ND	26.0	28.4	104	113	1	34.0-149			8.67	28
1,3-Dichlorobenzene	25.0		25.6	28.2	102	113	1	36.0-146			9.89	27
1,4-Dichlorobenzene	25.0	ND	23.3	26.4	93.4	106	1	35.0-142			12.4	27
1,1-Dichloroethane	25.0	ND	26.7	27.1	107	108	1	25.0-158			1.53	27
1,2-Dichloroethane	25.0	ND	27.6	27.9	110	112	1	29.0-151			1.32	27
1,1-Dichloroethene	25.0	ND	27.6	27.8	110	111	1	11.0-160			0.737	29
cis-1,2-Dichloroethene	25.0	ND	26.3	26.9	105	108	1	10.0-160			2.59	27
trans-1,2-Dichloroethene	25.0	ND	26.8	27.5	107	110	1	17.0-153			2.46	27
1,2-Dichloropropane	25.0	ND	26.2	28.6	105	114	1	30.0-156			8.81	27
cis-1,3-Dichloropropene	25.0	ND	25.9	26.8	104	107	1	34.0-149			3.61	28
Naphthalene	25.0		23.1	26.8	92.5	107	1	12.0-156			14.6	35
trans-1,3-Dichloropropene	25.0	ND	25.5	27.0	102	108	1	32.0-149			5.50	28
Di-isopropyl ether	25.0		26.6	27.6	106	110	1	21.0-160			3.88	28
2-Hexanone	125	ND	122	132	98.0	105	1	21.0-160			7.30	29
Toluene	25.0	ND	23.9	25.5	95.8	102	1	26.0-154			6.25	28
2-Butanone (MEK)	125	ND	138	148	110	118	1	10.0-160			6.87	32
Methylene Chloride	25.0	ND	25.0	25.5	99.8	102	1	23.0-144			2.01	28
4-Methyl-2-pentanone (MIBK)	125	ND	131	140	105	112	1	29.0-160			6.42	29
Methyl tert-butyl ether	25.0		25.4	26.1	102	104	1	28.0-150			2.62	29
o-Xylene	25.0		24.4	26.4	97.4	106	1	45.0-144			8.23	26
Xylenes, Total	75.0	ND	75.5	81.7	101	109	1	29.0-154			7.89	28
m&p-Xylenes	50.0		51.1	55.3	102	111	1	43.0-146			7.89	26
Styrene	25.0	ND	26.8	29.5	107	118	1	33.0-155			9.53	28
1,1,2,2-Tetrachloroethane	25.0	ND	24.0	26.4	96.2	106	1	33.0-150			9.49	28
Tetrachloroethene	25.0	ND	26.8	27.8	107	111	1	10.0-160			3.73	27
1,1,2-Trichlorotrifluoroethane	25.0		27.9	27.7	112	111	1	23.0-160			1.01	30
1,1,1-Trichloroethane	25.0	ND	27.2	28.5	109	114	1	23.0-160			4.50	28
1,1,2-Trichloroethane	25.0	ND	24.4	25.9	97.7	104	1	35.0-147			6.02	27
Trichloroethene	25.0	ND	26.1	28.2	104	113	1	10.0-160			7.78	25
1,2,3-Trimethylbenzene	25.0		25.1	28.2	100	113	1	32.0-149			11.5	28
Vinyl chloride	25.0	ND	27.4	28.0	109	112	1	10.0-160			2.23	27
(S) Toluene-d8					*94.8*	*91.0*		*80.0-120*				
(S) Dibromofluoromethane					*103*	*100*		*75.0-120*				
(S) a,a,a-Trifluorotoluene					*95.1*	*97.7*		*80.0-120*				
(S) 4-Bromofluorobenzene					*97.7*	*99.4*		*77.0-126*				

Method Blank (MB)

(MB) R3358438-3 11/08/18 22:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*96.4*			*80.0-120*
(S) Dibromofluoromethane	*112*			*75.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*

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

(LCS) R3358438-1 11/08/18 21:07 • (LCSD) R3358438-2 11/08/18 21:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	25.0	24.9	22.8	99.4	91.1	70.0-123			8.70	20
Methyl tert-butyl ether	25.0	25.4	23.1	101	92.3	68.0-125			9.42	20
Toluene	25.0	22.2	21.2	88.9	84.9	79.0-120			4.57	20
Xylenes, Total	75.0	66.6	62.8	88.8	83.7	79.0-123			5.87	20
(S) Toluene-d8				*95.0*	*95.0*	*80.0-120*				
(S) Dibromofluoromethane				*110*	*107*	*75.0-120*				
(S) 4-Bromofluorobenzene				*104*	*103*	*77.0-126*				

Method Blank (MB)

(MB) R3359153-3 11/12/18 14:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methyl tert-butyl ether	U		0.367	1.00
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*107*			*75.0-120*
(S) 4-Bromofluorobenzene	*97.5*			*77.0-126*

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

(LCS) R3359153-1 11/12/18 12:58 • (LCSD) R3359153-2 11/12/18 13:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	25.0	24.8	24.3	99.1	97.0	68.0-125			2.17	20
(S) Toluene-d8				*95.1*	*98.5*	*80.0-120*				
(S) Dibromofluoromethane				*107*	*102*	*75.0-120*				
(S) 4-Bromofluorobenzene				*99.2*	*101*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

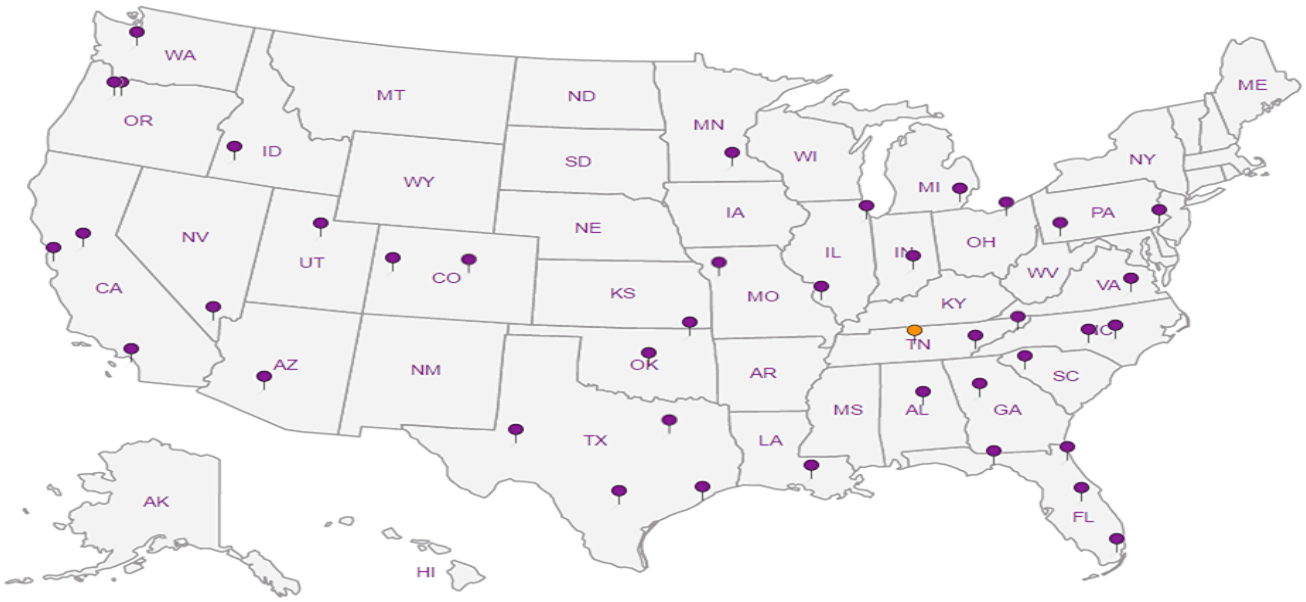
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; scott.powell@ch2m.com;

Project Description: Lewis Drive ~~Surface~~ GROUND Water

City/State Collected: BELTON, SOUTH CAROLINA

Phone: 770-604-9182
Fax:

Client Project # 699858.20.MR.GW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): MELISSA WARLEN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y V

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC -TB 40mlAmb - NoPres-BK										Remarks	Sample # (lab only)
MW-17B-110218	GRAB	GW	N/A	11.02.18	11:05	3	X												01
MW-17B-D-110218	GRAB	GW		11.02.18	11:07	3	X												DUP 02
MW-23-110218	GRAB	GW		11.02.18	1345	3	X												03
MW-34-110218	GRAB	GW		11.02.18	1444	3	X												04
MW-40-110218	GRAB	GW		11.02.18	1600	3	X												05
MW-46-110218	GRAB	GW		11.02.18	1450	3	X												06
FB01-110218	GRAB	GW		11.02.18	1700	3	X											S	FIELD BLANK
TB01-110218	GRAB	GW		11.02.18	1657	~~1~~ 3	~~1~~ 3	X										B	TRIP BLANK

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: V8260BTEXMNSC=BTEX,Naphthalene,MTBE

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4492 6220 1442

Trip Blank Received: (Yes / No) HCl / MeoH TBR

Temp: 1.0 °C Bottles Received: 21 TB

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: __Y __N

	Date:	Time:	
Relinquished by: (Signature)	11/02/18	1750	Received by: (Signature)
Relinquished by: (Signature)			Received by: (Signature)
Relinquished by: (Signature)			Received for lab by: (Signature)

Date: 11/3/18 Time: 8:45

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 104865

A122

Acctnum: KINCH2MGA

Template: T132193

Prelogin: P662162

TSR: 526 - Chris McCord

PB: 7.6.18G

Shipped Via: FedEx Ground

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 14, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1050205
Samples Received:	12/06/2018
Project Number:	699858CH.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-29-120518 L1050205-01 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 08:20 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 04:56	12/07/18 04:56	TJJ

MW-26B-120518 L1050205-02 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 08:40 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 08:00	12/07/18 08:00	TJJ

MW-26-120518 L1050205-03 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 08:35 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 08:18	12/07/18 08:18	TJJ

MW-23-120518 L1050205-04 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 08:55 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 08:37	12/07/18 08:37	TJJ

MW-23-D-120518 L1050205-05 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 08:56 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 08:56	12/07/18 08:56	TJJ

MW-23B-120518 L1050205-06 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 09:10 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 09:14	12/07/18 09:14	TJJ

MW-45B-120518 L1050205-07 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 09:35 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 09:33	12/07/18 09:33	TJJ

MW-45-120518 L1050205-08 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 09:40 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 09:51	12/07/18 09:51	TJJ

MW-46-120518 L1050205-09 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 10:00 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 10:10	12/07/18 10:10	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207423	10	12/07/18 20:27	12/07/18 20:27	PP

MW-21-120518 L1050205-10 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 10:30 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 10:29	12/07/18 10:29	TJJ

MW-17B-120518 L1050205-11 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 10:40 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	50	12/07/18 10:47	12/07/18 10:47	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209225	200	12/12/18 01:03	12/12/18 01:03	JHH

MW-44-120518 L1050205-12 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 11:25 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 11:06	12/07/18 11:06	TJJ

MW-44B-120518 L1050205-13 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 11:35 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 11:25	12/07/18 11:25	TJJ

MW-01-120518 L1050205-14 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 11:50 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:17	12/12/18 18:17	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:17	12/12/18 18:17	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 18:02	12/06/18 18:02	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:03	12/13/18 11:03	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 11:43	12/07/18 11:43	TJJ

MW-01B-120518 L1050205-15 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 12:05 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 12:02	12/07/18 12:02	TJJ

MW-27B-120518 L1050205-16 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:00 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 12:47	12/07/18 12:47	TJJ

MW-27-120518 L1050205-17 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:05 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 13:06	12/07/18 13:06	TJJ

MW-12-120518 L1050205-18 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:20 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:24	12/12/18 18:24	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:24	12/12/18 18:24	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 18:51	12/06/18 18:51	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:06	12/13/18 11:06	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 13:24	12/07/18 13:24	TJJ

MW-12B-120518 L1050205-19 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:30 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 13:43	12/07/18 13:43	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207423	5	12/07/18 21:08	12/07/18 21:08	PP

MW-28-120518 L1050205-20 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:45 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:32	12/12/18 18:32	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:32	12/12/18 18:32	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 19:08	12/06/18 19:08	ELN
Wet Chemistry by Method 9056A	WG1206539	5	12/07/18 09:12	12/07/18 09:12	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:08	12/13/18 11:08	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206953	1	12/07/18 14:01	12/07/18 14:01	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207423	1	12/07/18 21:28	12/07/18 21:28	PP

MW-49-120518 L1050205-21 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:05 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 16:04	12/07/18 16:04	ACG

MW-49-D-120518 L1050205-22 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:06 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 16:22	12/07/18 16:22	ACG

MW-35-120518 L1050205-23 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:25 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:38	12/12/18 18:38	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:38	12/12/18 18:38	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 19:24	12/06/18 19:24	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:10	12/13/18 11:10	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 16:41	12/07/18 16:41	ACG

MW-25-120518 L1050205-24 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:40 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:44	12/12/18 18:44	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:44	12/12/18 18:44	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 19:40	12/06/18 19:40	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:13	12/13/18 11:13	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 16:59	12/07/18 16:59	ACG

MW-25B-120518 L1050205-25 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:45 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208056	1	12/10/18 05:50	12/10/18 05:50	JAH

FB01-120518 L1050205-26 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:50 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 17:36	12/07/18 17:36	ACG

TB01-120518 L1050205-27 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 15:55 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208022	1	12/09/18 16:57	12/09/18 16:57	JAH

MW-22-120518 L1050205-28 GW

Collected by: Melissa Warren | Collected date/time: 12/05/18 14:40 | Received date/time: 12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 18:51	12/12/18 18:51	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 18:51	12/12/18 18:51	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 19:57	12/06/18 19:57	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:16	12/13/18 11:16	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	1	12/07/18 17:55	12/07/18 17:55	ACG

MW-19-120518 L1050205-29 GW

Collected by	Collected date/time	Received date/time
Melissa Warren	12/05/18 16:30	12/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1208885	1	12/12/18 19:06	12/12/18 19:06	JD
Wet Chemistry by Method 4500CO2 D-2011	WG1208885	1	12/12/18 19:06	12/12/18 19:06	GB
Wet Chemistry by Method 9056A	WG1206539	1	12/06/18 20:13	12/06/18 20:13	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209729	1	12/13/18 11:22	12/13/18 11:22	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207345	5	12/07/18 18:14	12/07/18 18:14	ACG

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 04:56	WG1206953
Toluene	ND		1.00	1	12/07/2018 04:56	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 04:56	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 04:56	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 04:56	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 04:56	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 04:56	WG1206953
(S) Toluene-d8	*98.7*		*80.0-120*		*12/07/2018 04:56*	WG1206953
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/07/2018 04:56*	WG1206953
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 04:56*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 08:00	WG1206953
Toluene	ND		1.00	1	12/07/2018 08:00	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 08:00	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 08:00	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 08:00	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 08:00	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 08:00	WG1206953
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2018 08:00*	WG1206953
(S) Dibromofluoromethane	*105*		*75.0-120*		*12/07/2018 08:00*	WG1206953
(S) 4-Bromofluorobenzene	*118*		*77.0-126*		*12/07/2018 08:00*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 08:18	WG1206953
Toluene	ND		1.00	1	12/07/2018 08:18	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 08:18	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 08:18	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 08:18	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 08:18	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 08:18	WG1206953
(S) Toluene-d8	*101*		*80.0-120*		*12/07/2018 08:18*	WG1206953
(S) Dibromofluoromethane	*107*		*75.0-120*		*12/07/2018 08:18*	WG1206953
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 08:18*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 08:37	WG1206953
Toluene	ND		1.00	1	12/07/2018 08:37	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 08:37	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 08:37	WG1206953
Methyl tert-butyl ether	2.08		1.00	1	12/07/2018 08:37	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 08:37	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 08:37	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 08:37*	WG1206953
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 08:37*	WG1206953
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*12/07/2018 08:37*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 08:56	WG1206953
Toluene	ND		1.00	1	12/07/2018 08:56	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 08:56	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 08:56	WG1206953
Methyl tert-butyl ether	2.03		1.00	1	12/07/2018 08:56	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 08:56	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 08:56	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 08:56*	WG1206953
(S) Dibromofluoromethane	*105*		*75.0-120*		*12/07/2018 08:56*	WG1206953
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*12/07/2018 08:56*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 09:14	WG1206953
Toluene	ND		1.00	1	12/07/2018 09:14	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 09:14	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 09:14	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 09:14	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 09:14	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 09:14	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 09:14*	WG1206953
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/07/2018 09:14*	WG1206953
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*12/07/2018 09:14*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 09:33	WG1206953
Toluene	ND		1.00	1	12/07/2018 09:33	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 09:33	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 09:33	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 09:33	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 09:33	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 09:33	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 09:33*	WG1206953
(S) Dibromofluoromethane	*99.6*		*75.0-120*		*12/07/2018 09:33*	WG1206953
(S) 4-Bromofluorobenzene	*119*		*77.0-126*		*12/07/2018 09:33*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 09:51	WG1206953
Toluene	ND		1.00	1	12/07/2018 09:51	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 09:51	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 09:51	WG1206953
Methyl tert-butyl ether	3.67		1.00	1	12/07/2018 09:51	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 09:51	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 09:51	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 09:51*	WG1206953
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 09:51*	WG1206953
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 09:51*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	1250		10.0	10	12/07/2018 20:27	WG1207423
Toluene	46.7		1.00	1	12/07/2018 10:10	WG1206953
Ethylbenzene	3.07		1.00	1	12/07/2018 10:10	WG1206953
Total Xylenes	521		30.0	10	12/07/2018 20:27	WG1207423
Methyl tert-butyl ether	290		10.0	10	12/07/2018 20:27	WG1207423
Naphthalene	7.38		5.00	1	12/07/2018 10:10	WG1206953
1,2-Dichloroethane	1.90		1.00	1	12/07/2018 10:10	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 10:10*	WG1206953
(S) Toluene-d8	*108*		*80.0-120*		*12/07/2018 20:27*	WG1207423
(S) Dibromofluoromethane	*96.8*		*75.0-120*		*12/07/2018 10:10*	WG1206953
(S) Dibromofluoromethane	*91.0*		*75.0-120*		*12/07/2018 20:27*	WG1207423
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 10:10*	WG1206953
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/07/2018 20:27*	WG1207423

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 10:29	WG1206953
Toluene	ND		1.00	1	12/07/2018 10:29	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 10:29	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 10:29	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 10:29	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 10:29	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 10:29	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 10:29*	WG1206953
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/07/2018 10:29*	WG1206953
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*12/07/2018 10:29*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	6860		50.0	50	12/07/2018 10:47	WG1206953
Toluene	24400		200	200	12/12/2018 01:03	WG1209225
Ethylbenzene	1010		50.0	50	12/07/2018 10:47	WG1206953
Total Xylenes	8550		150	50	12/07/2018 10:47	WG1206953
Methyl tert-butyl ether	690		50.0	50	12/07/2018 10:47	WG1206953
Naphthalene	ND		250	50	12/07/2018 10:47	WG1206953
1,2-Dichloroethane	ND		50.0	50	12/07/2018 10:47	WG1206953
(S) Toluene-d8	*105*		*80.0-120*		*12/07/2018 10:47*	WG1206953
(S) Toluene-d8	*104*		*80.0-120*		*12/12/2018 01:03*	WG1209225
(S) Dibromofluoromethane	*98.9*		*75.0-120*		*12/07/2018 10:47*	WG1206953
(S) Dibromofluoromethane	*110*		*75.0-120*		*12/12/2018 01:03*	WG1209225
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*12/07/2018 10:47*	WG1206953
(S) 4-Bromofluorobenzene	*96.4*		*77.0-126*		*12/12/2018 01:03*	WG1209225

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 11:06	WG1206953
Toluene	ND		1.00	1	12/07/2018 11:06	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 11:06	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 11:06	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 11:06	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 11:06	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 11:06	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 11:06*	WG1206953
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/07/2018 11:06*	WG1206953
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*12/07/2018 11:06*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 11:25	WG1206953
Toluene	ND		1.00	1	12/07/2018 11:25	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 11:25	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 11:25	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 11:25	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 11:25	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 11:25	WG1206953
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2018 11:25*	WG1206953
(S) Dibromofluoromethane	*101*		*75.0-120*		*12/07/2018 11:25*	WG1206953
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*12/07/2018 11:25*	WG1206953

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	12/12/2018 18:17	WG1208885

Sample Narrative:
L1050205-14 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	24200	T8	20000	1	12/12/2018 18:17	WG1208885

Sample Narrative:
L1050205-14 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	ND		100	1	12/06/2018 18:02	WG1206539
Sulfate	ND		5000	1	12/06/2018 18:02	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	12/13/2018 11:03	WG1209729

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/07/2018 11:43	WG1206953
Toluene	ND		1.00	1	12/07/2018 11:43	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 11:43	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 11:43	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 11:43	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 11:43	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 11:43	WG1206953
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 11:43*	WG1206953
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 11:43*	WG1206953
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*12/07/2018 11:43*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	8.30		1.00	1	12/07/2018 12:02	WG1206953
Toluene	ND		1.00	1	12/07/2018 12:02	WG1206953
Ethylbenzene	ND		1.00	1	12/07/2018 12:02	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 12:02	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 12:02	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 12:02	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 12:02	WG1206953
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 12:02*	WG1206953
(S) Dibromofluoromethane	*97.9*		*75.0-120*		*12/07/2018 12:02*	WG1206953
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 12:02*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 12:47	WG1206953
Toluene	4.97		1.00	1	12/07/2018 12:47	WG1206953
Ethylbenzene	2.47		1.00	1	12/07/2018 12:47	WG1206953
Total Xylenes	21.1		3.00	1	12/07/2018 12:47	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 12:47	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 12:47	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 12:47	WG1206953
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2018 12:47*	WG1206953
(S) Dibromofluoromethane	*105*		*75.0-120*		*12/07/2018 12:47*	WG1206953
(S) 4-Bromofluorobenzene	*116*		*77.0-126*		*12/07/2018 12:47*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.96		1.00	1	12/07/2018 13:06	WG1206953
Toluene	23.1		1.00	1	12/07/2018 13:06	WG1206953
Ethylbenzene	9.03		1.00	1	12/07/2018 13:06	WG1206953
Total Xylenes	50.3		3.00	1	12/07/2018 13:06	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 13:06	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 13:06	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 13:06	WG1206953
(S) Toluene-d8	*106*		*80.0-120*		*12/07/2018 13:06*	WG1206953
(S) Dibromofluoromethane	*96.5*		*75.0-120*		*12/07/2018 13:06*	WG1206953
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*12/07/2018 13:06*	WG1206953

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	39300		20000	1	12/12/2018 18:24	WG1208885

Sample Narrative:
L1050205-18 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	22500	T8	20000	1	12/12/2018 18:24	WG1208885

Sample Narrative:
L1050205-18 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/06/2018 18:51	WG1206539
Sulfate	ND		5000	1	12/06/2018 18:51	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	17.8		10.0	1	12/13/2018 11:06	WG1209729

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	5.81		1.00	1	12/07/2018 13:24	WG1206953
Toluene	9.08		1.00	1	12/07/2018 13:24	WG1206953
Ethylbenzene	2.75		1.00	1	12/07/2018 13:24	WG1206953
Total Xylenes	72.0		3.00	1	12/07/2018 13:24	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 13:24	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 13:24	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 13:24	WG1206953
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2018 13:24*	WG1206953
(S) Dibromofluoromethane	*100*		*75.0-120*		*12/07/2018 13:24*	WG1206953
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 13:24*	WG1206953

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	240		5.00	5	12/07/2018 21:08	WG1207423
Toluene	29.5		1.00	1	12/07/2018 13:43	WG1206953
Ethylbenzene	57.7		1.00	1	12/07/2018 13:43	WG1206953
Total Xylenes	160		3.00	1	12/07/2018 13:43	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 13:43	WG1206953
Naphthalene	17.7		5.00	1	12/07/2018 13:43	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 13:43	WG1206953
(S) Toluene-d8	*106*		*80.0-120*		*12/07/2018 13:43*	WG1206953
(S) Toluene-d8	*106*		*80.0-120*		*12/07/2018 21:08*	WG1207423
(S) Dibromofluoromethane	*92.3*		*75.0-120*		*12/07/2018 13:43*	WG1206953
(S) Dibromofluoromethane	*94.3*		*75.0-120*		*12/07/2018 21:08*	WG1207423
(S) 4-Bromofluorobenzene	*116*		*77.0-126*		*12/07/2018 13:43*	WG1206953
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/07/2018 21:08*	WG1207423

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	32100		20000	1	12/12/2018 18:32	WG1208885

Sample Narrative:
L1050205-20 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	ND	T8	20000	1	12/12/2018 18:32	WG1208885

Sample Narrative:
L1050205-20 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	ND		100	1	12/06/2018 19:08	WG1206539
Sulfate	120000		25000	5	12/07/2018 09:12	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	27.9		10.0	1	12/13/2018 11:08	WG1209729

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	13.7		1.00	1	12/07/2018 21:28	WG1207423
Toluene	1.47		1.00	1	12/07/2018 14:01	WG1206953
Ethylbenzene	8.04		1.00	1	12/07/2018 14:01	WG1206953
Total Xylenes	ND		3.00	1	12/07/2018 14:01	WG1206953
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 14:01	WG1206953
Naphthalene	ND		5.00	1	12/07/2018 14:01	WG1206953
1,2-Dichloroethane	ND		1.00	1	12/07/2018 14:01	WG1206953
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 14:01*	WG1206953
(S) Toluene-d8	*106*		*80.0-120*		*12/07/2018 21:28*	WG1207423
(S) Dibromofluoromethane	*98.5*		*75.0-120*		*12/07/2018 14:01*	WG1206953
(S) Dibromofluoromethane	*93.7*		*75.0-120*		*12/07/2018 21:28*	WG1207423
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 14:01*	WG1206953
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*12/07/2018 21:28*	WG1207423

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 16:04	WG1207345
Toluene	ND		1.00	1	12/07/2018 16:04	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 16:04	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 16:04	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 16:04	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 16:04	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 16:04	WG1207345
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 16:04*	WG1207345
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 16:04*	WG1207345
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/07/2018 16:04*	WG1207345

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 16:22	WG1207345
Toluene	ND		1.00	1	12/07/2018 16:22	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 16:22	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 16:22	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 16:22	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 16:22	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 16:22	WG1207345
(S) Toluene-d8	*102*		*80.0-120*		*12/07/2018 16:22*	WG1207345
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 16:22*	WG1207345
(S) 4-Bromofluorobenzene	*116*		*77.0-126*		*12/07/2018 16:22*	WG1207345

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	12/12/2018 18:38	WG1208885

Sample Narrative:
L1050205-23 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	32200	T8	20000	1	12/12/2018 18:38	WG1208885

Sample Narrative:
L1050205-23 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	1430		100	1	12/06/2018 19:24	WG1206539
Sulfate	ND		5000	1	12/06/2018 19:24	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	12/13/2018 11:10	WG1209729

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/07/2018 16:41	WG1207345
Toluene	ND		1.00	1	12/07/2018 16:41	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 16:41	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 16:41	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 16:41	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 16:41	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 16:41	WG1207345
(S) Toluene-d8	*103*		*80.0-120*		*12/07/2018 16:41*	WG1207345
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/07/2018 16:41*	WG1207345
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*12/07/2018 16:41*	WG1207345

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	ND		20000	1	12/12/2018 18:44	WG1208885

Sample Narrative:
L1050205-24 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	20300	T8	20000	1	12/12/2018 18:44	WG1208885

Sample Narrative:
L1050205-24 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	360		100	1	12/06/2018 19:40	WG1206539
Sulfate	ND		5000	1	12/06/2018 19:40	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	ND		10.0	1	12/13/2018 11:13	WG1209729

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		1.00	1	12/07/2018 16:59	WG1207345
Toluene	ND		1.00	1	12/07/2018 16:59	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 16:59	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 16:59	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 16:59	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 16:59	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 16:59	WG1207345
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 16:59*	WG1207345
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/07/2018 16:59*	WG1207345
(S) 4-Bromofluorobenzene	*115*		*77.0-126*		*12/07/2018 16:59*	WG1207345

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/10/2018 05:50	WG1208056
Toluene	ND		1.00	1	12/10/2018 05:50	WG1208056
Ethylbenzene	ND		1.00	1	12/10/2018 05:50	WG1208056
Total Xylenes	ND		3.00	1	12/10/2018 05:50	WG1208056
Methyl tert-butyl ether	ND		1.00	1	12/10/2018 05:50	WG1208056
Naphthalene	ND		5.00	1	12/10/2018 05:50	WG1208056
1,2-Dichloroethane	ND		1.00	1	12/10/2018 05:50	WG1208056
(S) Toluene-d8	*108*		*80.0-120*		*12/10/2018 05:50*	WG1208056
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/10/2018 05:50*	WG1208056
(S) 4-Bromofluorobenzene	*94.9*		*77.0-126*		*12/10/2018 05:50*	WG1208056

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 17:36	WG1207345
Toluene	ND		1.00	1	12/07/2018 17:36	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 17:36	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 17:36	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 17:36	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 17:36	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 17:36	WG1207345
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 17:36*	WG1207345
(S) Dibromofluoromethane	*99.8*		*75.0-120*		*12/07/2018 17:36*	WG1207345
(S) 4-Bromofluorobenzene	*116*		*77.0-126*		*12/07/2018 17:36*	WG1207345

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	12/09/2018 16:57	WG1208022
Benzene	ND		1.00	1	12/09/2018 16:57	WG1208022
Bromochloromethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Bromodichloromethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Bromoform	ND		1.00	1	12/09/2018 16:57	WG1208022
Bromomethane	ND		5.00	1	12/09/2018 16:57	WG1208022
Carbon disulfide	ND		1.00	1	12/09/2018 16:57	WG1208022
Carbon tetrachloride	ND		1.00	1	12/09/2018 16:57	WG1208022
Chlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
Chlorodibromomethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Chloroethane	ND		5.00	1	12/09/2018 16:57	WG1208022
Chloroform	ND		5.00	1	12/09/2018 16:57	WG1208022
Chloromethane	ND		2.50	1	12/09/2018 16:57	WG1208022
Cyclohexane	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/09/2018 16:57	WG1208022
1,2-Dibromoethane	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2-Dichlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,3-Dichlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,4-Dichlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
Dichlorodifluoromethane	ND		5.00	1	12/09/2018 16:57	WG1208022
1,1-Dichloroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2-Dichloroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
1,1-Dichloroethene	ND		1.00	1	12/09/2018 16:57	WG1208022
cis-1,2-Dichloroethene	ND		1.00	1	12/09/2018 16:57	WG1208022
trans-1,2-Dichloroethene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2-Dichloropropane	ND		1.00	1	12/09/2018 16:57	WG1208022
cis-1,3-Dichloropropene	ND		1.00	1	12/09/2018 16:57	WG1208022
trans-1,3-Dichloropropene	ND		1.00	1	12/09/2018 16:57	WG1208022
Ethylbenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
2-Hexanone	ND		10.0	1	12/09/2018 16:57	WG1208022
Isopropylbenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
2-Butanone (MEK)	ND		10.0	1	12/09/2018 16:57	WG1208022
Methyl Acetate	ND		20.0	1	12/09/2018 16:57	WG1208022
Methyl Cyclohexane	ND		1.00	1	12/09/2018 16:57	WG1208022
Methylene Chloride	ND		5.00	1	12/09/2018 16:57	WG1208022
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/09/2018 16:57	WG1208022
Methyl tert-butyl ether	ND		1.00	1	12/09/2018 16:57	WG1208022
Styrene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Tetrachloroethene	ND		1.00	1	12/09/2018 16:57	WG1208022
Toluene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2,3-Trichlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,2,4-Trichlorobenzene	ND		1.00	1	12/09/2018 16:57	WG1208022
1,1,1-Trichloroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
1,1,2-Trichloroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Trichloroethene	ND		1.00	1	12/09/2018 16:57	WG1208022
Trichlorofluoromethane	ND		5.00	1	12/09/2018 16:57	WG1208022
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/09/2018 16:57	WG1208022
Vinyl chloride	ND		1.00	1	12/09/2018 16:57	WG1208022
Xylenes, Total	ND		3.00	1	12/09/2018 16:57	WG1208022
(S) Toluene-d8	*105*		*80.0-120*		*12/09/2018 16:57*	WG1208022
(S) Dibromofluoromethane	*91.0*		*75.0-120*		*12/09/2018 16:57*	WG1208022
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/09/2018 16:57*	WG1208022
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/09/2018 16:57*	WG1208022

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/12/2018 18:51	WG1208885

Sample Narrative:
L1050205-28 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	21200	T8	20000	1	12/12/2018 18:51	WG1208885

Sample Narrative:
L1050205-28 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	4380		100	1	12/06/2018 19:57	WG1206539
Sulfate	30400		5000	1	12/06/2018 19:57	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	16.9		10.0	1	12/13/2018 11:16	WG1209729

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/07/2018 17:55	WG1207345
Toluene	ND		1.00	1	12/07/2018 17:55	WG1207345
Ethylbenzene	ND		1.00	1	12/07/2018 17:55	WG1207345
Total Xylenes	ND		3.00	1	12/07/2018 17:55	WG1207345
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 17:55	WG1207345
Naphthalene	ND		5.00	1	12/07/2018 17:55	WG1207345
1,2-Dichloroethane	ND		1.00	1	12/07/2018 17:55	WG1207345
(S) Toluene-d8	*101*		*80.0-120*		*12/07/2018 17:55*	WG1207345
(S) Dibromofluoromethane	*105*		*75.0-120*		*12/07/2018 17:55*	WG1207345
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*12/07/2018 17:55*	WG1207345

Wet Chemistry by Method 2320 B-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Alkalinity	47000		20000	1	12/12/2018 19:06	WG1208885

Sample Narrative:
L1050205-29 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Free Carbon Dioxide	119000	T8	20000	1	12/12/2018 19:06	WG1208885

Sample Narrative:
L1050205-29 WG1208885: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Nitrate as (N)	ND		100	1	12/06/2018 20:13	WG1206539
Sulfate	ND		5000	1	12/06/2018 20:13	WG1206539

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Methane	866		10.0	1	12/13/2018 11:22	WG1209729

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	ND		5.00	5	12/07/2018 18:14	WG1207345
Toluene	13.7		5.00	5	12/07/2018 18:14	WG1207345
Ethylbenzene	8.23		5.00	5	12/07/2018 18:14	WG1207345
Total Xylenes	217		15.0	5	12/07/2018 18:14	WG1207345
Methyl tert-butyl ether	ND		5.00	5	12/07/2018 18:14	WG1207345
Naphthalene	ND		25.0	5	12/07/2018 18:14	WG1207345
1,2-Dichloroethane	ND		5.00	5	12/07/2018 18:14	WG1207345
(S) Toluene-d8	*104*		*80.0-120*		*12/07/2018 18:14*	WG1207345
(S) Dibromofluoromethane	*99.6*		*75.0-120*		*12/07/2018 18:14*	WG1207345
(S) 4-Bromofluorobenzene	*117*		*77.0-126*		*12/07/2018 18:14*	WG1207345

Method Blank (MB)

(MB) R3367919-1 12/12/18 17:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1050253-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050253-01 12/12/18 17:46 • (DUP) R3367919-5 12/12/18 17:53

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	237000	239000	1	0.578		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1052020-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1052020-01 12/12/18 20:44 • (DUP) R3367919-8 12/12/18 20:51

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	72800	72600	1	0.326		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3367919-7 12/12/18 18:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	107000	107	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3367919-2 12/12/18 17:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Free Carbon Dioxide	U		6670	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1050253-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050253-01 12/12/18 17:46 • (DUP) R3367919-6 12/12/18 17:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1052020-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1052020-01 12/12/18 20:44 • (DUP) R3367919-9 12/12/18 20:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	10.9	J	20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3366145-1 12/06/18 13:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L1050133-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050133-01 12/06/18 16:24 • (DUP) R3366145-3 12/06/18 16:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	1120	1110	1	0.889		15
Sulfate	42800	43100	1	0.848		15

L1050249-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050249-01 12/06/18 22:08 • (DUP) R3366145-6 12/06/18 22:24

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	ND	0.000	1	0.000		15
Sulfate	14400	14500	1	0.664		15

Laboratory Control Sample (LCS)

(LCS) R3366145-2 12/06/18 14:09

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate	8000	7800	97.5	80.0-120	
Sulfate	40000	39000	97.5	80.0-120	

L1050133-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050133-01 12/06/18 16:24 • (MS) R3366145-4 12/06/18 16:56 • (MSD) R3366145-5 12/06/18 17:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	1120	5890	5910	95.4	95.9	1	80.0-120			0.424	15
Sulfate	50000	42800	89300	89800	93.0	94.1	1	80.0-120			0.579	15

L1050249-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1050249-01 12/06/18 22:08 • (MS) R3366145-7 12/06/18 22:41

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	ND	4860	97.1	1	80.0-120	
Sulfate	50000	14400	63500	98.3	1	80.0-120	

Method Blank (MB)

(MB) R3367925-1 12/13/18 10:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0

L1052017-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1052017-01 12/13/18 10:56 • (DUP) R3367925-2 12/13/18 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20

L1050694-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1050694-03 12/13/18 11:35 • (DUP) R3367925-3 12/13/18 13:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	ND	0.000	1	0.000		20

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

(LCS) R3367925-4 12/13/18 13:20 • (LCSD) R3367925-5 12/13/18 13:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	72.6	73.8	107	109	85.0-115			1.53	20

Method Blank (MB)

(MB) R3366337-3 12/07/18 04:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*105*			*75.0-120*
(S) 4-Bromofluorobenzene	*116*			*77.0-126*

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

(LCS) R3366337-1 12/07/18 03:42 • (LCSD) R3366337-2 12/07/18 04:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	23.3	22.6	93.1	90.4	70.0-123			2.96	20
1,2-Dichloroethane	25.0	21.0	20.7	84.0	82.8	70.0-128			1.48	20
Ethylbenzene	25.0	26.3	26.5	105	106	79.0-123			0.905	20
Methyl tert-butyl ether	25.0	23.6	22.8	94.5	91.1	68.0-125			3.65	20
Naphthalene	25.0	24.2	22.8	96.6	91.1	54.0-135			5.90	20
Toluene	25.0	23.4	23.2	93.8	92.9	79.0-120			0.877	20
Xylenes, Total	75.0	78.6	79.1	105	105	79.0-123			0.634	20
(S) Toluene-d8				*101*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*99.0*	*96.3*	*75.0-120*				
(S) 4-Bromofluorobenzene				*115*	*115*	*77.0-126*				

Method Blank (MB)

(MB) R3366533-3 12/07/18 15:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*103*			*75.0-120*
(S) 4-Bromofluorobenzene	*115*			*77.0-126*

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

(LCS) R3366533-1 12/07/18 14:49 • (LCSD) R3366533-2 12/07/18 15:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	20.8	20.8	83.4	83.1	70.0-123			0.264	20
1,2-Dichloroethane	25.0	19.3	19.5	77.3	77.9	70.0-128			0.822	20
Ethylbenzene	25.0	23.4	23.6	93.6	94.3	79.0-123			0.748	20
Naphthalene	25.0	22.8	23.1	91.3	92.2	54.0-135			0.960	20
Methyl tert-butyl ether	25.0	22.6	22.6	90.5	90.2	68.0-125			0.323	20
Toluene	25.0	20.8	21.3	83.2	85.2	79.0-120			2.45	20
Xylenes, Total	75.0	70.4	72.3	93.9	96.4	79.0-123			2.66	20
(S) Toluene-d8				*101*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*98.4*	*97.7*	*75.0-120*				
(S) 4-Bromofluorobenzene				*112*	*113*	*77.0-126*				

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

Method Blank (MB)

(MB) R3367223-3 12/07/18 19:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*109*			*80.0-120*
(S) Dibromofluoromethane	*93.6*			*75.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*

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

(LCS) R3367223-1 12/07/18 18:14 • (LCSD) R3367223-2 12/07/18 18:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	20.8	21.2	83.2	84.6	70.0-123			1.74	20
Methyl tert-butyl ether	25.0	22.1	22.3	88.3	89.2	68.0-125			0.927	20
Xylenes, Total	75.0	73.2	75.2	97.6	100	79.0-123			2.70	20
(S) Toluene-d8				*103*	*108*	*80.0-120*				
(S) Dibromofluoromethane				*93.7*	*93.9*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*104*	*77.0-126*				

Method Blank (MB)

(MB) R3367516-3 12/09/18 16:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3367516-3 12/09/18 16:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) a,a,a-Trifluorotoluene	*100*			*80.0-120*
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*91.3*			*75.0-120*
(S) 4-Bromofluorobenzene	*100*			*77.0-126*

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

(LCS) R3367516-1 12/09/18 14:34 • (LCSD) R3367516-2 12/09/18 14:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	97.6	99.8	78.1	79.8	19.0-160			2.22	27
Benzene	25.0	21.8	22.0	87.1	87.9	70.0-123			0.906	20
Bromodichloromethane	25.0	23.7	24.3	95.0	97.2	75.0-120			2.27	20
Bromochloromethane	25.0	24.8	24.4	99.4	97.7	76.0-122			1.68	20
Bromoform	25.0	24.1	24.7	96.4	98.7	68.0-132			2.32	20
Bromomethane	25.0	23.6	28.0	94.2	112	10.0-160			17.1	25
Carbon disulfide	25.0	21.0	21.5	83.9	86.0	61.0-128			2.43	20
Carbon tetrachloride	25.0	22.9	24.3	91.6	97.1	68.0-126			5.89	20
Chlorobenzene	25.0	25.7	27.0	103	108	80.0-121			4.77	20
Chlorodibromomethane	25.0	25.9	26.2	104	105	77.0-125			1.10	20
Chloroethane	25.0	26.8	27.4	107	109	47.0-150			2.10	20
Chloroform	25.0	24.1	24.1	96.5	96.4	73.0-120			0.159	20
Chloromethane	25.0	24.0	25.5	96.2	102	41.0-142			5.81	20
1,2-Dibromo-3-Chloropropane	25.0	22.8	23.3	91.0	93.2	58.0-134			2.40	20
1,2-Dibromoethane	25.0	25.2	25.9	101	104	80.0-122			2.65	20
1,2-Dichlorobenzene	25.0	26.3	26.8	105	107	79.0-121			2.10	20
1,3-Dichlorobenzene	25.0	26.9	27.1	108	108	79.0-120			0.708	20
1,4-Dichlorobenzene	25.0	25.8	26.0	103	104	79.0-120			0.673	20
Dichlorodifluoromethane	25.0	30.9	31.5	123	126	51.0-149			2.09	20

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

(LCS) R3367516-1 12/09/18 14:34 • (LCSD) R3367516-2 12/09/18 14:54

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethane	25.0	23.9	24.1	95.7	96.3	70.0-126			0.601	20
1,2-Dichloroethane	25.0	24.5	24.9	97.8	99.6	70.0-128			1.81	20
1,1-Dichloroethene	25.0	22.8	23.5	91.1	94.0	71.0-124			3.07	20
cis-1,2-Dichloroethene	25.0	23.0	22.9	91.9	91.7	73.0-120			0.234	20
trans-1,2-Dichloroethene	25.0	23.3	23.6	93.4	94.5	73.0-120			1.17	20
1,2-Dichloropropane	25.0	25.2	26.0	101	104	77.0-125			3.29	20
cis-1,3-Dichloropropene	25.0	25.0	26.2	99.9	105	80.0-123			4.91	20
trans-1,3-Dichloropropene	25.0	25.6	26.2	102	105	78.0-124			2.40	20
Ethylbenzene	25.0	26.6	26.8	106	107	79.0-123			0.814	20
2-Hexanone	125	125	129	99.7	103	67.0-149			3.76	20
Isopropylbenzene	25.0	25.1	26.0	100	104	76.0-127			3.52	20
2-Butanone (MEK)	125	110	110	87.6	88.3	44.0-160			0.815	20
Methylene Chloride	25.0	22.8	23.0	91.0	92.0	67.0-120			1.13	20
4-Methyl-2-pentanone (MIBK)	125	123	127	98.7	102	68.0-142			2.96	20
Methyl tert-butyl ether	25.0	23.7	23.7	95.0	94.6	68.0-125			0.373	20
Styrene	25.0	25.2	25.3	101	101	73.0-130			0.535	20
1,1,2,2-Tetrachloroethane	25.0	24.2	24.2	96.9	96.8	65.0-130			0.0228	20
Tetrachloroethene	25.0	26.8	28.0	107	112	72.0-132			4.19	20
Toluene	25.0	23.6	24.6	94.6	98.4	79.0-120			4.02	20
1,1,2-Trichlorotrifluoroethane	25.0	23.0	24.0	92.1	96.2	69.0-132			4.36	20
1,2,3-Trichlorobenzene	25.0	27.3	28.0	109	112	50.0-138			2.42	20
1,2,4-Trichlorobenzene	25.0	27.6	28.0	110	112	57.0-137			1.43	20
1,1,1-Trichloroethane	25.0	23.1	23.5	92.4	93.8	73.0-124			1.56	20
1,1,2-Trichloroethane	25.0	25.9	26.8	104	107	80.0-120			3.28	20
Trichloroethene	25.0	25.6	26.8	102	107	78.0-124			4.70	20
Trichlorofluoromethane	25.0	31.0	30.9	124	124	59.0-147			0.164	20
Vinyl chloride	25.0	29.3	29.6	117	118	67.0-131			1.05	20
Xylenes, Total	75.0	77.4	80.1	103	107	79.0-123			3.43	20
(S) a,a,a-Trifluorotoluene				*101*	*101*	*80.0-120*				
(S) Toluene-d8				*101*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*92.3*	*92.1*	*75.0-120*				
(S) 4-Bromofluorobenzene				*96.1*	*98.6*	*77.0-126*				

Method Blank (MB)

(MB) R3366656-3 12/09/18 22:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	1.50	J	1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*109*			*80.0-120*
(S) Dibromofluoromethane	*104*			*75.0-120*
(S) 4-Bromofluorobenzene	*98.9*			*77.0-126*

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

(LCS) R3366656-1 12/09/18 21:14 • (LCSD) R3366656-2 12/09/18 21:34

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	25.5	24.4	102	97.8	70.0-123			4.06	20
1,2-Dichloroethane	25.0	27.6	25.7	110	103	70.0-128			7.31	20
Ethylbenzene	25.0	26.8	26.1	107	104	79.0-123			2.42	20
Naphthalene	25.0	33.4	33.0	134	132	54.0-135			1.32	20
Methyl tert-butyl ether	25.0	26.4	25.8	105	103	68.0-125			2.33	20
Toluene	25.0	25.1	24.2	100	97.0	79.0-120			3.56	20
Xylenes, Total	75.0	82.3	78.2	110	104	79.0-123			5.11	20
(S) Toluene-d8				*106*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*105*	*104*	*75.0-120*				
(S) 4-Bromofluorobenzene				*105*	*103*	*77.0-126*				

Method Blank (MB)

(MB) R3367512-3 12/11/18 19:22

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*108*			*75.0-120*
(S) 4-Bromofluorobenzene	*96.7*			*77.0-126*

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

(LCS) R3367512-1 12/11/18 18:19 • (LCSD) R3367512-2 12/11/18 18:40

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Toluene	25.0	26.4	26.1	106	105	79.0-120			0.978	20
(S) Toluene-d8				*103*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*107*	*107*	*75.0-120*				
(S) 4-Bromofluorobenzene				*95.6*	*95.4*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

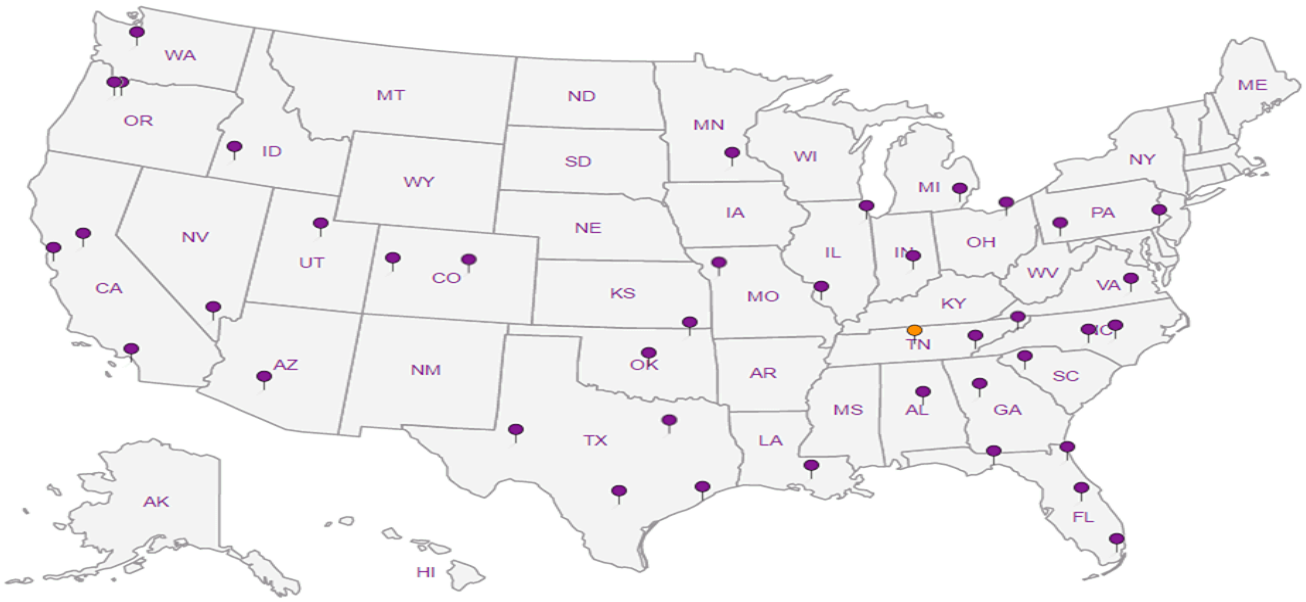
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Pres Chk

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 6998SCH.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARNER

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y Y

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-29-120518	GRAB	GW	N/A	12/05/18	0820	3				Y			01
MW-26B-120518		GW			0840	3				Y			02
MW-26-120518		GW			0835	3				Y			03
MW-23-120518		GW			0855	3				Y			04
MW-23-D-120518		GW			0856	3				Y			05
MW-23B-120518		GW			0910	3				Y			06
MW-45B-120518		GW			0935	3				Y			07
MW-45-120518		GW			0940	3				Y			08
MW-46-120518		GW			1000	3				Y			09
MW-21-120518		GW			1030	3				Y			10

Chain of Custody Page 1 of 3

Pace Analytical
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1050205

H116

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____

Tracking # 4492 6226 1974

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	12/05/18	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
				0.3+0.3=0.7 1 1 9	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
			BE Farris	12/6/18 0845	

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 2 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1050205

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-17B-120518	GRAB	GW	NA	12/05/18	1040	3				X			11
MW-44-120518		GW			1125	3				X			12
MW-44B-120518		GW			1135	3				X			13
MW-01-120518		GW			1150	7	X	X	X	X			14
MW-01B-120518		GW			1205	3				X			15
MW-27B-120518		GW			~~1458~~ 1328	3				X		TIME 1400	16
MW-27-120518		GW			1405	3				X			17
MW-12-120518		GW			1420	7	X	X	X	X			18
MW-12B-120518		GW			1430	3				X			19
MW-28-120518		GW			1445	7	X	X	X	X			20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP X Y __N
COC Signed/Accurate: X Y __N
Bottles Arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: X Y __N
Preservation Correct/Checked: X Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	12/05/18	1730		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 0.5+0.2=0.7 119	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/6/18 Time: 0845	Hold: Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.HD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARNER

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-49-120518	GRAB	GW	NA	12/05/18	1505	3				X			21
MW-49-D-120518		GW			1506	3				X			22
MW-35-120518		GW			1525	7	X	X	X	X			23
MW-25-120518		GW			1540	7	X	X	X	X			24
MW-25B-120518		GW			1545	3				X			25
FB01-120518		GW			1550	3				X			26
TB01-120518		GW			1555	1					X		27
MW-22-120518	↓	GW	↓	↓	1440	7	X	X	X	X			28
MW-19-120518	↓	GW	↓	↓	1630	7	X	X	X	X			29

Chain of Custody Page 3 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1050205

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
	12/05/18	1730		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
				6.5 +0.2 -0.7 1/9
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				12/6/18 0845

If preservation required by Login: Date/Time

Hold:

Condition/NCF OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 18, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1050634
Samples Received:	12/07/2018
Project Number:	699858CH.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

MW-33T-120618 L1050634-01 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 09:40 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 08:40	12/08/18 08:40	TJJ

MW-31-120618 L1050634-02 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 09:55 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 08:59	12/08/18 08:59	TJJ

MW-47-120618 L1050634-03 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:05 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 09:19	12/08/18 09:19	TJJ

MW-10-120618 L1050634-04 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:20 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:06	12/13/18 17:06	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:06	12/13/18 17:06	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 18:40	12/07/18 18:40	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 13:54	12/13/18 13:54	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 09:39	12/08/18 09:39	TJJ

MW-32-120618 L1050634-05 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:35 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:12	12/13/18 17:12	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:12	12/13/18 17:12	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 19:30	12/07/18 19:30	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 13:57	12/13/18 13:57	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 09:58	12/08/18 09:58	TJJ

MW-03-120618 L1050634-06 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:50 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:19	12/13/18 17:19	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:19	12/13/18 17:19	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 19:46	12/07/18 19:46	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 13:59	12/13/18 13:59	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 10:18	12/08/18 10:18	TJJ

MW-53-120618 L1050634-07 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:15 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 10:38	12/08/18 10:38	TJJ

MW-54-120618 L1050634-08 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:20 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 10:58	12/08/18 10:58	TJJ

MW-04-120618 L1050634-09 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:40 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:25	12/13/18 17:25	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:25	12/13/18 17:25	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 20:02	12/07/18 20:02	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:06	12/13/18 14:06	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 11:18	12/08/18 11:18	TJJ

MW-05-120618 L1050634-10 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:50 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 12:12	12/08/18 12:12	TJJ

MW-42-120618 L1050634-11 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 13:40 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:31	12/13/18 17:31	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:31	12/13/18 17:31	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 20:52	12/07/18 20:52	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:11	12/13/18 14:11	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 12:32	12/08/18 12:32	TJJ

MW-41-120618 L1050634-12 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 13:50 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 12:52	12/08/18 12:52	TJJ

MW-41-D-120618 L1050634-13 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 13:51 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 13:12	12/08/18 13:12	TJJ

MW-40-120618 L1050634-14 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:00 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:37	12/13/18 17:37	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:37	12/13/18 17:37	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 21:08	12/07/18 21:08	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:14	12/13/18 14:14	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 13:31	12/08/18 13:31	TJJ

MW-39-120618 L1050634-15 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:15 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 13:51	12/08/18 13:51	TJJ

MW-34-120618 L1050634-16 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:20 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 14:11	12/08/18 14:11	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209936	5	12/13/18 01:15	12/13/18 01:15	BMB

MW-15-120618 L1050634-17 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:30 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:44	12/13/18 17:44	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:44	12/13/18 17:44	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 21:24	12/07/18 21:24	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:16	12/13/18 14:16	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 14:30	12/08/18 14:30	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209936	1	12/13/18 01:35	12/13/18 01:35	BMB

MW-15B-120618 L1050634-18 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:35 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 14:50	12/08/18 14:50	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209936	20	12/13/18 01:55	12/13/18 01:55	BMB

MW-24B-120618 L1050634-19 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:05 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 15:10	12/08/18 15:10	TJJ
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209936	1	12/13/18 02:15	12/13/18 02:15	BMB

MW-24-120618 L1050634-20 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:15 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207493	1	12/08/18 15:30	12/08/18 15:30	TJJ

MW-43-120618 L1050634-21 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:20 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 16:22	12/08/18 16:22	JCP

MW-43B-120618 L1050634-22 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:25 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 16:40	12/08/18 16:40	JCP

MW-37-120618 L1050634-23 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:40 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 16:59	12/08/18 16:59	JCP

MW-38-120618 L1050634-24 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:45 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 17:18	12/08/18 17:18	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1209270	10	12/12/18 15:44	12/12/18 15:44	JHH

MW-36-D-120618 L1050634-25 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:25 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 17:36	12/08/18 17:36	JCP

MW-07-120618 L1050634-26 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 13:25 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	100	12/08/18 17:55	12/08/18 17:55	JCP

MW-09B-120618 L1050634-27 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:40 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 18:13	12/08/18 18:13	JCP

MW-13B-120618 L1050634-28 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:05 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 18:32	12/08/18 18:32	JCP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1210481	20	12/13/18 21:12	12/13/18 21:12	BMB

MW-36-120618 L1050634-29 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:15 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 18:51	12/08/18 18:51	JCP

MW-14B-120618 L1050634-30 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:15 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 19:09	12/08/18 19:09	JCP

MW-06-120618 L1050634-31 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:50 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 19:28	12/08/18 19:28	JCP

MW-14-120618 L1050634-32 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:25 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 19:47	12/08/18 19:47	JCP

MW-06B-120618 L1050634-33 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 11:35 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 20:05	12/08/18 20:05	JCP

MW-50B-120618 L1050634-34 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 15:45 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 20:24	12/08/18 20:24	JCP

MW-36B-120618 L1050634-35 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:35 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 20:43	12/08/18 20:43	JCP

MW-02B-120618 L1050634-36 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 09:45 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 21:01	12/08/18 21:01	JCP

MW-16-120618 L1050634-37 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 13:45 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:50	12/13/18 17:50	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:50	12/13/18 17:50	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 21:41	12/07/18 21:41	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:18	12/13/18 14:18	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	5	12/08/18 21:20	12/08/18 21:20	JCP

MW-02-120618 L1050634-38 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:05 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 17:56	12/13/18 17:56	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 17:56	12/13/18 17:56	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 21:57	12/07/18 21:57	ELN
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:20	12/13/18 14:20	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 21:39	12/08/18 21:39	JCP

MW-09-120618 L1050634-39 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 10:55 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG1209619	1	12/13/18 18:03	12/13/18 18:03	GB
Wet Chemistry by Method 4500CO2 D-2011	WG1209619	1	12/13/18 18:03	12/13/18 18:03	GB
Wet Chemistry by Method 9056A	WG1207082	1	12/07/18 22:14	12/07/18 22:14	MCG
Volatile Organic Compounds (GC) by Method RSK175	WG1209834	1	12/13/18 14:22	12/13/18 14:22	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 21:57	12/08/18 21:57	JCP

FB01-120618 L1050634-40 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:00 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207762	1	12/08/18 22:16	12/08/18 22:16	JCP

TB01-120618 L1050634-41 GW

Collected by: Melissa Warren | Collected date/time: 12/06/18 14:05 | Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207794	1	12/08/18 16:40	12/08/18 16:40	JCP

TB02-120618 L1050634-42 GW

Collected by: Melissa Warren
Collected date/time: 12/06/18 14:06
Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207794	1	12/08/18 16:59	12/08/18 16:59	JCP

MW-48B-120618 L1050634-43 GW

Collected by: Melissa Warren
Collected date/time: 12/06/18 15:55
Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207768	1	12/09/18 09:49	12/09/18 09:49	JCP

MW-51-120618 L1050634-44 GW

Collected by: Melissa Warren
Collected date/time: 12/06/18 16:10
Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207768	1	12/09/18 10:07	12/09/18 10:07	JCP

MW-52-120618 L1050634-45 GW

Collected by: Melissa Warren
Collected date/time: 12/06/18 16:20
Received date/time: 12/07/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207768	1	12/09/18 10:26	12/09/18 10:26	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 08:40	WG1207493
Toluene	ND		1.00	1	12/08/2018 08:40	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 08:40	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 08:40	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 08:40	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 08:40	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 08:40	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 08:40*	WG1207493
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*12/08/2018 08:40*	WG1207493
(S) 4-Bromofluorobenzene	*90.8*		*77.0-126*		*12/08/2018 08:40*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 08:59	WG1207493
Toluene	ND		1.00	1	12/08/2018 08:59	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 08:59	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 08:59	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 08:59	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 08:59	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 08:59	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 08:59*	WG1207493
(S) Dibromofluoromethane	*92.3*		*75.0-120*		*12/08/2018 08:59*	WG1207493
(S) 4-Bromofluorobenzene	*90.7*		*77.0-126*		*12/08/2018 08:59*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 09:19	WG1207493
Toluene	ND		1.00	1	12/08/2018 09:19	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 09:19	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 09:19	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 09:19	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 09:19	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 09:19	WG1207493
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 09:19*	WG1207493
(S) Dibromofluoromethane	*92.0*		*75.0-120*		*12/08/2018 09:19*	WG1207493
(S) 4-Bromofluorobenzene	*91.1*		*77.0-126*		*12/08/2018 09:19*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:06	WG1209619

Sample Narrative:
L1050634-04 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	28200	T8	20000	1	12/13/2018 17:06	WG1209619

Sample Narrative:
L1050634-04 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2018 18:40	WG1207082
Sulfate	ND		5000	1	12/07/2018 18:40	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 13:54	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 09:39	WG1207493
Toluene	ND		1.00	1	12/08/2018 09:39	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 09:39	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 09:39	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 09:39	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 09:39	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 09:39	WG1207493
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 09:39*	WG1207493
(S) Dibromofluoromethane	*91.4*		*75.0-120*		*12/08/2018 09:39*	WG1207493
(S) 4-Bromofluorobenzene	*92.4*		*77.0-126*		*12/08/2018 09:39*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:12	WG1209619

Sample Narrative:
L1050634-05 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/13/2018 17:12	WG1209619

Sample Narrative:
L1050634-05 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	214		100	1	12/07/2018 19:30	WG1207082
Sulfate	ND		5000	1	12/07/2018 19:30	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 13:57	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 09:58	WG1207493
Toluene	ND		1.00	1	12/08/2018 09:58	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 09:58	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 09:58	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 09:58	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 09:58	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 09:58	WG1207493
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 09:58*	WG1207493
(S) Dibromofluoromethane	*92.0*		*75.0-120*		*12/08/2018 09:58*	WG1207493
(S) 4-Bromofluorobenzene	*93.2*		*77.0-126*		*12/08/2018 09:58*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:19	WG1209619

Sample Narrative:
L1050634-06 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/13/2018 17:19	WG1209619

Sample Narrative:
L1050634-06 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	944		100	1	12/07/2018 19:46	WG1207082
Sulfate	ND		5000	1	12/07/2018 19:46	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 13:59	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 10:18	WG1207493
Toluene	ND		1.00	1	12/08/2018 10:18	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 10:18	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 10:18	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 10:18	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 10:18	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 10:18	WG1207493
(S) Toluene-d8	*106*		*80.0-120*		*12/08/2018 10:18*	WG1207493
(S) Dibromofluoromethane	*90.6*		*75.0-120*		*12/08/2018 10:18*	WG1207493
(S) 4-Bromofluorobenzene	*90.6*		*77.0-126*		*12/08/2018 10:18*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 10:38	WG1207493
Toluene	ND		1.00	1	12/08/2018 10:38	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 10:38	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 10:38	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 10:38	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 10:38	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 10:38	WG1207493
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2018 10:38*	WG1207493
(S) Dibromofluoromethane	*89.9*		*75.0-120*		*12/08/2018 10:38*	WG1207493
(S) 4-Bromofluorobenzene	*91.0*		*77.0-126*		*12/08/2018 10:38*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 10:58	WG1207493
Toluene	ND		1.00	1	12/08/2018 10:58	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 10:58	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 10:58	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 10:58	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 10:58	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 10:58	WG1207493
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2018 10:58*	WG1207493
(S) Dibromofluoromethane	*94.1*		*75.0-120*		*12/08/2018 10:58*	WG1207493
(S) 4-Bromofluorobenzene	*90.5*		*77.0-126*		*12/08/2018 10:58*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:25	WG1209619

Sample Narrative:
L1050634-09 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	36900	T8	20000	1	12/13/2018 17:25	WG1209619

Sample Narrative:
L1050634-09 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2018 20:02	WG1207082
Sulfate	ND		5000	1	12/07/2018 20:02	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:06	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 11:18	WG1207493
Toluene	ND		1.00	1	12/08/2018 11:18	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 11:18	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 11:18	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 11:18	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 11:18	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 11:18	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 11:18*	WG1207493
(S) Dibromofluoromethane	*91.7*		*75.0-120*		*12/08/2018 11:18*	WG1207493
(S) 4-Bromofluorobenzene	*92.0*		*77.0-126*		*12/08/2018 11:18*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 12:12	WG1207493
Toluene	ND		1.00	1	12/08/2018 12:12	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 12:12	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 12:12	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 12:12	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 12:12	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 12:12	WG1207493
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 12:12*	WG1207493
(S) Dibromofluoromethane	*91.6*		*75.0-120*		*12/08/2018 12:12*	WG1207493
(S) 4-Bromofluorobenzene	*90.9*		*77.0-126*		*12/08/2018 12:12*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:31	WG1209619

Sample Narrative:
L1050634-11 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	20000	T8	20000	1	12/13/2018 17:31	WG1209619

Sample Narrative:
L1050634-11 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	167		100	1	12/07/2018 20:52	WG1207082
Sulfate	ND		5000	1	12/07/2018 20:52	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:11	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 12:32	WG1207493
Toluene	ND		1.00	1	12/08/2018 12:32	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 12:32	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 12:32	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 12:32	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 12:32	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 12:32	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 12:32*	WG1207493
(S) Dibromofluoromethane	*90.4*		*75.0-120*		*12/08/2018 12:32*	WG1207493
(S) 4-Bromofluorobenzene	*92.4*		*77.0-126*		*12/08/2018 12:32*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 12:52	WG1207493
Toluene	ND		1.00	1	12/08/2018 12:52	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 12:52	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 12:52	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 12:52	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 12:52	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 12:52	WG1207493
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 12:52*	WG1207493
(S) Dibromofluoromethane	*90.1*		*75.0-120*		*12/08/2018 12:52*	WG1207493
(S) 4-Bromofluorobenzene	*89.7*		*77.0-126*		*12/08/2018 12:52*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 13:12	WG1207493
Toluene	ND		1.00	1	12/08/2018 13:12	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 13:12	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 13:12	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 13:12	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 13:12	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 13:12	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 13:12*	WG1207493
(S) Dibromofluoromethane	*90.4*		*75.0-120*		*12/08/2018 13:12*	WG1207493
(S) 4-Bromofluorobenzene	*92.2*		*77.0-126*		*12/08/2018 13:12*	WG1207493

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:37	WG1209619

Sample Narrative:
L1050634-14 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	22000	T8	20000	1	12/13/2018 17:37	WG1209619

Sample Narrative:
L1050634-14 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2018 21:08	WG1207082
Sulfate	ND		5000	1	12/07/2018 21:08	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	11.2		10.0	1	12/13/2018 14:14	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 13:31	WG1207493
Toluene	ND		1.00	1	12/08/2018 13:31	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 13:31	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 13:31	WG1207493
Methyl tert-butyl ether	36.2		1.00	1	12/08/2018 13:31	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 13:31	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 13:31	WG1207493
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 13:31*	WG1207493
(S) Dibromofluoromethane	*91.7*		*75.0-120*		*12/08/2018 13:31*	WG1207493
(S) 4-Bromofluorobenzene	*97.1*		*77.0-126*		*12/08/2018 13:31*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	30.6		1.00	1	12/08/2018 13:51	WG1207493
Toluene	7.49		1.00	1	12/08/2018 13:51	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 13:51	WG1207493
Total Xylenes	29.3	J4	3.00	1	12/08/2018 13:51	WG1207493
Methyl tert-butyl ether	156		1.00	1	12/08/2018 13:51	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 13:51	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 13:51	WG1207493
(S) Toluene-d8	*106*		*80.0-120*		*12/08/2018 13:51*	WG1207493
(S) Dibromofluoromethane	*89.3*		*75.0-120*		*12/08/2018 13:51*	WG1207493
(S) 4-Bromofluorobenzene	*95.7*		*77.0-126*		*12/08/2018 13:51*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 14:11	WG1207493
Toluene	ND		1.00	1	12/08/2018 14:11	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 14:11	WG1207493
Total Xylenes	6.63	J4	3.00	1	12/08/2018 14:11	WG1207493
Methyl tert-butyl ether	271		5.00	5	12/13/2018 01:15	WG1209936
Naphthalene	ND		5.00	1	12/08/2018 14:11	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 14:11	WG1207493
(S) Toluene-d8	*106*		*80.0-120*		*12/08/2018 14:11*	WG1207493
(S) Toluene-d8	*107*		*80.0-120*		*12/13/2018 01:15*	WG1209936
(S) Dibromofluoromethane	*91.4*		*75.0-120*		*12/08/2018 14:11*	WG1207493
(S) Dibromofluoromethane	*84.9*		*75.0-120*		*12/13/2018 01:15*	WG1209936
(S) 4-Bromofluorobenzene	*93.7*		*77.0-126*		*12/08/2018 14:11*	WG1207493
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*12/13/2018 01:15*	WG1209936

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:44	WG1209619

Sample Narrative:
L1050634-17 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/13/2018 17:44	WG1209619

Sample Narrative:
L1050634-17 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	672		100	1	12/07/2018 21:24	WG1207082
Sulfate	ND		5000	1	12/07/2018 21:24	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:16	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 14:30	WG1207493
Toluene	ND		1.00	1	12/08/2018 14:30	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 14:30	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 14:30	WG1207493
Methyl tert-butyl ether	15.9		1.00	1	12/13/2018 01:35	WG1209936
Naphthalene	ND		5.00	1	12/08/2018 14:30	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 14:30	WG1207493
(S) Toluene-d8	*107*		*80.0-120*		*12/08/2018 14:30*	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/13/2018 01:35*	WG1209936
(S) Dibromofluoromethane	*91.4*		*75.0-120*		*12/08/2018 14:30*	WG1207493
(S) Dibromofluoromethane	*85.2*		*75.0-120*		*12/13/2018 01:35*	WG1209936
(S) 4-Bromofluorobenzene	*91.9*		*77.0-126*		*12/08/2018 14:30*	WG1207493
(S) 4-Bromofluorobenzene	*98.0*		*77.0-126*		*12/13/2018 01:35*	WG1209936

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	725		20.0	20	12/13/2018 01:55	WG1209936
Toluene	1890		20.0	20	12/13/2018 01:55	WG1209936
Ethylbenzene	96.4		1.00	1	12/08/2018 14:50	WG1207493
Total Xylenes	777		60.0	20	12/13/2018 01:55	WG1209936
Methyl tert-butyl ether	71.8		1.00	1	12/08/2018 14:50	WG1207493
Naphthalene	11.7		5.00	1	12/08/2018 14:50	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 14:50	WG1207493
(S) Toluene-d8	*111*		*80.0-120*		*12/08/2018 14:50*	WG1207493
(S) Toluene-d8	*101*		*80.0-120*		*12/13/2018 01:55*	WG1209936
(S) Dibromofluoromethane	*68.1*	J2	*75.0-120*		*12/08/2018 14:50*	WG1207493
(S) Dibromofluoromethane	*83.2*		*75.0-120*		*12/13/2018 01:55*	WG1209936
(S) 4-Bromofluorobenzene	*94.3*		*77.0-126*		*12/08/2018 14:50*	WG1207493
(S) 4-Bromofluorobenzene	*97.4*		*77.0-126*		*12/13/2018 01:55*	WG1209936

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 15:10	WG1207493
Toluene	ND		1.00	1	12/13/2018 02:15	WG1209936
Ethylbenzene	ND		1.00	1	12/08/2018 15:10	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 15:10	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 15:10	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 15:10	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 15:10	WG1207493
(S) Toluene-d8	*107*		*80.0-120*		*12/08/2018 15:10*	WG1207493
(S) Toluene-d8	*106*		*80.0-120*		*12/13/2018 02:15*	WG1209936
(S) Dibromofluoromethane	*90.5*		*75.0-120*		*12/08/2018 15:10*	WG1207493
(S) Dibromofluoromethane	*86.7*		*75.0-120*		*12/13/2018 02:15*	WG1209936
(S) 4-Bromofluorobenzene	*93.3*		*77.0-126*		*12/08/2018 15:10*	WG1207493
(S) 4-Bromofluorobenzene	*98.0*		*77.0-126*		*12/13/2018 02:15*	WG1209936

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 15:30	WG1207493
Toluene	ND		1.00	1	12/08/2018 15:30	WG1207493
Ethylbenzene	ND		1.00	1	12/08/2018 15:30	WG1207493
Total Xylenes	ND	J4	3.00	1	12/08/2018 15:30	WG1207493
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 15:30	WG1207493
Naphthalene	ND		5.00	1	12/08/2018 15:30	WG1207493
1,2-Dichloroethane	ND		1.00	1	12/08/2018 15:30	WG1207493
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 15:30*	WG1207493
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*12/08/2018 15:30*	WG1207493
(S) 4-Bromofluorobenzene	*94.1*		*77.0-126*		*12/08/2018 15:30*	WG1207493

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 16:22	WG1207762
Toluene	ND		1.00	1	12/08/2018 16:22	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 16:22	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 16:22	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 16:22	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 16:22	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 16:22	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 16:22*	WG1207762
(S) Dibromofluoromethane	*109*		*75.0-120*		*12/08/2018 16:22*	WG1207762
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/08/2018 16:22*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 16:40	WG1207762
Toluene	ND		1.00	1	12/08/2018 16:40	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 16:40	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 16:40	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 16:40	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 16:40	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 16:40	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 16:40*	WG1207762
(S) Dibromofluoromethane	*111*		*75.0-120*		*12/08/2018 16:40*	WG1207762
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/08/2018 16:40*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 16:59	WG1207762
Toluene	ND		1.00	1	12/08/2018 16:59	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 16:59	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 16:59	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 16:59	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 16:59	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 16:59	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 16:59*	WG1207762
(S) Dibromofluoromethane	*111*		*75.0-120*		*12/08/2018 16:59*	WG1207762
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/08/2018 16:59*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	412		10.0	10	12/12/2018 15:44	WG1209270
Toluene	1.90		1.00	1	12/08/2018 17:18	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 17:18	WG1207762
Total Xylenes	236		30.0	10	12/12/2018 15:44	WG1209270
Methyl tert-butyl ether	89.7		1.00	1	12/08/2018 17:18	WG1207762
Naphthalene	13.7		5.00	1	12/08/2018 17:18	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 17:18	WG1207762
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2018 17:18*	WG1207762
(S) Toluene-d8	*108*		*80.0-120*		*12/12/2018 15:44*	WG1209270
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/08/2018 17:18*	WG1207762
(S) Dibromofluoromethane	*107*		*75.0-120*		*12/12/2018 15:44*	WG1209270
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*12/08/2018 17:18*	WG1207762
(S) 4-Bromofluorobenzene	*97.8*		*77.0-126*		*12/12/2018 15:44*	WG1209270

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	143		1.00	1	12/08/2018 17:36	WG1207762
Toluene	175		1.00	1	12/08/2018 17:36	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 17:36	WG1207762
Total Xylenes	134		3.00	1	12/08/2018 17:36	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 17:36	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 17:36	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 17:36	WG1207762
(S) Toluene-d8	*106*		*80.0-120*		*12/08/2018 17:36*	WG1207762
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/08/2018 17:36*	WG1207762
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*12/08/2018 17:36*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	4850		100	100	12/08/2018 17:55	WG1207762
Toluene	13400		100	100	12/08/2018 17:55	WG1207762
Ethylbenzene	574		100	100	12/08/2018 17:55	WG1207762
Total Xylenes	9890		300	100	12/08/2018 17:55	WG1207762
Methyl tert-butyl ether	ND		100	100	12/08/2018 17:55	WG1207762
Naphthalene	ND		500	100	12/08/2018 17:55	WG1207762
1,2-Dichloroethane	ND		100	100	12/08/2018 17:55	WG1207762
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2018 17:55*	WG1207762
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/08/2018 17:55*	WG1207762
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*12/08/2018 17:55*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	2.19		1.00	1	12/08/2018 18:13	WG1207762
Toluene	8.22		1.00	1	12/08/2018 18:13	WG1207762
Ethylbenzene	2.14		1.00	1	12/08/2018 18:13	WG1207762
Total Xylenes	16.8		3.00	1	12/08/2018 18:13	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 18:13	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 18:13	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 18:13	WG1207762
(S) Toluene-d8	*104*		*80.0-120*		*12/08/2018 18:13*	WG1207762
(S) Dibromofluoromethane	*108*		*75.0-120*		*12/08/2018 18:13*	WG1207762
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*12/08/2018 18:13*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	614		20.0	20	12/13/2018 21:12	WG1210481
Toluene	823		20.0	20	12/13/2018 21:12	WG1210481
Ethylbenzene	93.5		1.00	1	12/08/2018 18:32	WG1207762
Total Xylenes	516		60.0	20	12/13/2018 21:12	WG1210481
Methyl tert-butyl ether	139		20.0	20	12/13/2018 21:12	WG1210481
Naphthalene	10.8		5.00	1	12/08/2018 18:32	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 18:32	WG1207762
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 18:32*	WG1207762
(S) Toluene-d8	*110*		*80.0-120*		*12/13/2018 21:12*	WG1210481
(S) Dibromofluoromethane	*100*		*75.0-120*		*12/08/2018 18:32*	WG1207762
(S) Dibromofluoromethane	*110*		*75.0-120*		*12/13/2018 21:12*	WG1210481
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*12/08/2018 18:32*	WG1207762
(S) 4-Bromofluorobenzene	*97.9*		*77.0-126*		*12/13/2018 21:12*	WG1210481

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	146		1.00	1	12/08/2018 18:51	WG1207762
Toluene	181		1.00	1	12/08/2018 18:51	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 18:51	WG1207762
Total Xylenes	142		3.00	1	12/08/2018 18:51	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 18:51	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 18:51	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 18:51	WG1207762
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 18:51*	WG1207762
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/08/2018 18:51*	WG1207762
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*12/08/2018 18:51*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	3.56		1.00	1	12/08/2018 19:09	WG1207762
Toluene	1.40		1.00	1	12/08/2018 19:09	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 19:09	WG1207762
Total Xylenes	6.34		3.00	1	12/08/2018 19:09	WG1207762
Methyl tert-butyl ether	6.56		1.00	1	12/08/2018 19:09	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 19:09	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 19:09	WG1207762
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2018 19:09*	WG1207762
(S) Dibromofluoromethane	*107*		*75.0-120*		*12/08/2018 19:09*	WG1207762
(S) 4-Bromofluorobenzene	*111*		*77.0-126*		*12/08/2018 19:09*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 19:28	WG1207762
Toluene	ND		1.00	1	12/08/2018 19:28	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 19:28	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 19:28	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 19:28	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 19:28	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 19:28	WG1207762
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2018 19:28*	WG1207762
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/08/2018 19:28*	WG1207762
(S) 4-Bromofluorobenzene	*113*		*77.0-126*		*12/08/2018 19:28*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 19:47	WG1207762
Toluene	ND		1.00	1	12/08/2018 19:47	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 19:47	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 19:47	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 19:47	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 19:47	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 19:47	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 19:47*	WG1207762
(S) Dibromofluoromethane	*114*		*75.0-120*		*12/08/2018 19:47*	WG1207762
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/08/2018 19:47*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 20:05	WG1207762
Toluene	1.89		1.00	1	12/08/2018 20:05	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 20:05	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 20:05	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 20:05	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 20:05	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 20:05	WG1207762
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2018 20:05*	WG1207762
(S) Dibromofluoromethane	*106*		*75.0-120*		*12/08/2018 20:05*	WG1207762
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*12/08/2018 20:05*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	27.4		1.00	1	12/08/2018 20:24	WG1207762
Toluene	3.21		1.00	1	12/08/2018 20:24	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 20:24	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 20:24	WG1207762
Methyl tert-butyl ether	40.6		1.00	1	12/08/2018 20:24	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 20:24	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 20:24	WG1207762
(S) Toluene-d8	*103*		*80.0-120*		*12/08/2018 20:24*	WG1207762
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/08/2018 20:24*	WG1207762
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/08/2018 20:24*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 20:43	WG1207762
Toluene	ND		1.00	1	12/08/2018 20:43	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 20:43	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 20:43	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 20:43	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 20:43	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 20:43	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 20:43*	WG1207762
(S) Dibromofluoromethane	*108*		*75.0-120*		*12/08/2018 20:43*	WG1207762
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*12/08/2018 20:43*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 21:01	WG1207762
Toluene	ND		1.00	1	12/08/2018 21:01	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 21:01	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 21:01	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 21:01	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 21:01	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 21:01	WG1207762
(S) Toluene-d8	*101*		*80.0-120*		*12/08/2018 21:01*	WG1207762
(S) Dibromofluoromethane	*104*		*75.0-120*		*12/08/2018 21:01*	WG1207762
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/08/2018 21:01*	WG1207762

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:50	WG1209619

Sample Narrative:
L1050634-37 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	44900	T8	20000	1	12/13/2018 17:50	WG1209619

Sample Narrative:
L1050634-37 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2018 21:41	WG1207082
Sulfate	ND		5000	1	12/07/2018 21:41	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:18	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	10.3		5.00	5	12/08/2018 21:20	WG1207762
Toluene	132		5.00	5	12/08/2018 21:20	WG1207762
Ethylbenzene	38.7		5.00	5	12/08/2018 21:20	WG1207762
Total Xylenes	398		15.0	5	12/08/2018 21:20	WG1207762
Methyl tert-butyl ether	ND		5.00	5	12/08/2018 21:20	WG1207762
Naphthalene	460		25.0	5	12/08/2018 21:20	WG1207762
1,2-Dichloroethane	ND		5.00	5	12/08/2018 21:20	WG1207762
(S) Toluene-d8	*99.3*		*80.0-120*		*12/08/2018 21:20*	WG1207762
(S) Dibromofluoromethane	*110*		*75.0-120*		*12/08/2018 21:20*	WG1207762
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*12/08/2018 21:20*	WG1207762

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 17:56	WG1209619

Sample Narrative:
L1050634-38 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/13/2018 17:56	WG1209619

Sample Narrative:
L1050634-38 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	ND		100	1	12/07/2018 21:57	WG1207082
Sulfate	ND		5000	1	12/07/2018 21:57	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:20	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 21:39	WG1207762
Toluene	ND		1.00	1	12/08/2018 21:39	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 21:39	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 21:39	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 21:39	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 21:39	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 21:39	WG1207762
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 21:39*	WG1207762
(S) Dibromofluoromethane	*101*		*75.0-120*		*12/08/2018 21:39*	WG1207762
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*12/08/2018 21:39*	WG1207762

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Alkalinity	ND		20000	1	12/13/2018 18:03	WG1209619

Sample Narrative:
L1050634-39 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Free Carbon Dioxide	ND	T8	20000	1	12/13/2018 18:03	WG1209619

Sample Narrative:
L1050634-39 WG1209619: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Nitrate as (N)	190		100	1	12/07/2018 22:14	WG1207082
Sulfate	ND		5000	1	12/07/2018 22:14	WG1207082

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Methane	ND		10.0	1	12/13/2018 14:22	WG1209834

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	6.39		1.00	1	12/08/2018 21:57	WG1207762
Toluene	48.3		1.00	1	12/08/2018 21:57	WG1207762
Ethylbenzene	2.61		1.00	1	12/08/2018 21:57	WG1207762
Total Xylenes	39.8		3.00	1	12/08/2018 21:57	WG1207762
Methyl tert-butyl ether	5.68		1.00	1	12/08/2018 21:57	WG1207762
Naphthalene	6.79		5.00	1	12/08/2018 21:57	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 21:57	WG1207762
(S) Toluene-d8	*105*		*80.0-120*		*12/08/2018 21:57*	WG1207762
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/08/2018 21:57*	WG1207762
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*12/08/2018 21:57*	WG1207762

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/08/2018 22:16	WG1207762
Toluene	ND		1.00	1	12/08/2018 22:16	WG1207762
Ethylbenzene	ND		1.00	1	12/08/2018 22:16	WG1207762
Total Xylenes	ND		3.00	1	12/08/2018 22:16	WG1207762
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 22:16	WG1207762
Naphthalene	ND		5.00	1	12/08/2018 22:16	WG1207762
1,2-Dichloroethane	ND		1.00	1	12/08/2018 22:16	WG1207762
(S) Toluene-d8	*102*		*80.0-120*		*12/08/2018 22:16*	WG1207762
(S) Dibromofluoromethane	*108*		*75.0-120*		*12/08/2018 22:16*	WG1207762
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*12/08/2018 22:16*	WG1207762

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	12/08/2018 16:40	WG1207794
Benzene	ND		1.00	1	12/08/2018 16:40	WG1207794
Bromochloromethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Bromodichloromethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Bromoform	ND		1.00	1	12/08/2018 16:40	WG1207794
Bromomethane	ND		5.00	1	12/08/2018 16:40	WG1207794
Carbon disulfide	ND		1.00	1	12/08/2018 16:40	WG1207794
Carbon tetrachloride	ND		1.00	1	12/08/2018 16:40	WG1207794
Chlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
Chlorodibromomethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Chloroethane	ND		5.00	1	12/08/2018 16:40	WG1207794
Chloroform	ND		5.00	1	12/08/2018 16:40	WG1207794
Chloromethane	ND		2.50	1	12/08/2018 16:40	WG1207794
Cyclohexane	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/08/2018 16:40	WG1207794
1,2-Dibromoethane	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2-Dichlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,3-Dichlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,4-Dichlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
Dichlorodifluoromethane	ND		5.00	1	12/08/2018 16:40	WG1207794
1,1-Dichloroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2-Dichloroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
1,1-Dichloroethene	ND		1.00	1	12/08/2018 16:40	WG1207794
cis-1,2-Dichloroethene	ND		1.00	1	12/08/2018 16:40	WG1207794
trans-1,2-Dichloroethene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2-Dichloropropane	ND		1.00	1	12/08/2018 16:40	WG1207794
cis-1,3-Dichloropropene	ND		1.00	1	12/08/2018 16:40	WG1207794
trans-1,3-Dichloropropene	ND		1.00	1	12/08/2018 16:40	WG1207794
Ethylbenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
2-Hexanone	ND		10.0	1	12/08/2018 16:40	WG1207794
Isopropylbenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
2-Butanone (MEK)	ND		10.0	1	12/08/2018 16:40	WG1207794
Methyl Acetate	ND		20.0	1	12/08/2018 16:40	WG1207794
Methyl Cyclohexane	ND		1.00	1	12/08/2018 16:40	WG1207794
Methylene Chloride	ND		5.00	1	12/08/2018 16:40	WG1207794
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/08/2018 16:40	WG1207794
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 16:40	WG1207794
Styrene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Tetrachloroethene	ND		1.00	1	12/08/2018 16:40	WG1207794
Toluene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2,3-Trichlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,2,4-Trichlorobenzene	ND		1.00	1	12/08/2018 16:40	WG1207794
1,1,1-Trichloroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
1,1,2-Trichloroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Trichloroethene	ND		1.00	1	12/08/2018 16:40	WG1207794
Trichlorofluoromethane	ND		5.00	1	12/08/2018 16:40	WG1207794
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/08/2018 16:40	WG1207794
Vinyl chloride	ND		1.00	1	12/08/2018 16:40	WG1207794
Xylenes, Total	ND		3.00	1	12/08/2018 16:40	WG1207794
(S) Toluene-d8	*93.9*		*80.0-120*		*12/08/2018 16:40*	WG1207794
(S) Dibromofluoromethane	*106*		*75.0-120*		*12/08/2018 16:40*	WG1207794
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/08/2018 16:40*	WG1207794
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*12/08/2018 16:40*	WG1207794

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	12/08/2018 16:59	WG1207794
Benzene	ND		1.00	1	12/08/2018 16:59	WG1207794
Bromochloromethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Bromodichloromethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Bromoform	ND		1.00	1	12/08/2018 16:59	WG1207794
Bromomethane	ND		5.00	1	12/08/2018 16:59	WG1207794
Carbon disulfide	ND		1.00	1	12/08/2018 16:59	WG1207794
Carbon tetrachloride	ND		1.00	1	12/08/2018 16:59	WG1207794
Chlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
Chlorodibromomethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Chloroethane	ND		5.00	1	12/08/2018 16:59	WG1207794
Chloroform	ND		5.00	1	12/08/2018 16:59	WG1207794
Chloromethane	ND		2.50	1	12/08/2018 16:59	WG1207794
Cyclohexane	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/08/2018 16:59	WG1207794
1,2-Dibromoethane	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2-Dichlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,3-Dichlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,4-Dichlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
Dichlorodifluoromethane	ND		5.00	1	12/08/2018 16:59	WG1207794
1,1-Dichloroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2-Dichloroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
1,1-Dichloroethene	ND		1.00	1	12/08/2018 16:59	WG1207794
cis-1,2-Dichloroethene	ND		1.00	1	12/08/2018 16:59	WG1207794
trans-1,2-Dichloroethene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2-Dichloropropane	ND		1.00	1	12/08/2018 16:59	WG1207794
cis-1,3-Dichloropropene	ND		1.00	1	12/08/2018 16:59	WG1207794
trans-1,3-Dichloropropene	ND		1.00	1	12/08/2018 16:59	WG1207794
Ethylbenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
2-Hexanone	ND		10.0	1	12/08/2018 16:59	WG1207794
Isopropylbenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
2-Butanone (MEK)	ND		10.0	1	12/08/2018 16:59	WG1207794
Methyl Acetate	ND		20.0	1	12/08/2018 16:59	WG1207794
Methyl Cyclohexane	ND		1.00	1	12/08/2018 16:59	WG1207794
Methylene Chloride	ND		5.00	1	12/08/2018 16:59	WG1207794
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/08/2018 16:59	WG1207794
Methyl tert-butyl ether	ND		1.00	1	12/08/2018 16:59	WG1207794
Styrene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Tetrachloroethene	ND		1.00	1	12/08/2018 16:59	WG1207794
Toluene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2,3-Trichlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,2,4-Trichlorobenzene	ND		1.00	1	12/08/2018 16:59	WG1207794
1,1,1-Trichloroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
1,1,2-Trichloroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Trichloroethene	ND		1.00	1	12/08/2018 16:59	WG1207794
Trichlorofluoromethane	ND		5.00	1	12/08/2018 16:59	WG1207794
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/08/2018 16:59	WG1207794
Vinyl chloride	ND		1.00	1	12/08/2018 16:59	WG1207794
Xylenes, Total	ND		3.00	1	12/08/2018 16:59	WG1207794
(S) Toluene-d8	*97.8*		*80.0-120*		*12/08/2018 16:59*	WG1207794
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/08/2018 16:59*	WG1207794
(S) a,a,a-Trifluorotoluene	*99.3*		*80.0-120*		*12/08/2018 16:59*	WG1207794
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*12/08/2018 16:59*	WG1207794

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2018 09:49	WG1207768
Toluene	ND		1.00	1	12/09/2018 09:49	WG1207768
Ethylbenzene	ND		1.00	1	12/09/2018 09:49	WG1207768
Total Xylenes	ND		3.00	1	12/09/2018 09:49	WG1207768
Methyl tert-butyl ether	1.56		1.00	1	12/09/2018 09:49	WG1207768
Naphthalene	ND		5.00	1	12/09/2018 09:49	WG1207768
1,2-Dichloroethane	ND		1.00	1	12/09/2018 09:49	WG1207768
(S) Toluene-d8	*104*		*80.0-120*		*12/09/2018 09:49*	WG1207768
(S) Dibromofluoromethane	*99.6*		*75.0-120*		*12/09/2018 09:49*	WG1207768
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/09/2018 09:49*	WG1207768

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2018 10:07	WG1207768
Toluene	ND		1.00	1	12/09/2018 10:07	WG1207768
Ethylbenzene	ND		1.00	1	12/09/2018 10:07	WG1207768
Total Xylenes	ND		3.00	1	12/09/2018 10:07	WG1207768
Methyl tert-butyl ether	ND		1.00	1	12/09/2018 10:07	WG1207768
Naphthalene	ND		5.00	1	12/09/2018 10:07	WG1207768
1,2-Dichloroethane	ND		1.00	1	12/09/2018 10:07	WG1207768
(S) Toluene-d8	*102*		*80.0-120*		*12/09/2018 10:07*	WG1207768
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/09/2018 10:07*	WG1207768
(S) 4-Bromofluorobenzene	*114*		*77.0-126*		*12/09/2018 10:07*	WG1207768

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/09/2018 10:26	WG1207768
Toluene	ND		1.00	1	12/09/2018 10:26	WG1207768
Ethylbenzene	ND		1.00	1	12/09/2018 10:26	WG1207768
Total Xylenes	ND		3.00	1	12/09/2018 10:26	WG1207768
Methyl tert-butyl ether	ND		1.00	1	12/09/2018 10:26	WG1207768
Naphthalene	ND		5.00	1	12/09/2018 10:26	WG1207768
1,2-Dichloroethane	ND		1.00	1	12/09/2018 10:26	WG1207768
(S) Toluene-d8	*102*		*80.0-120*		*12/09/2018 10:26*	WG1207768
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/09/2018 10:26*	WG1207768
(S) 4-Bromofluorobenzene	*112*		*77.0-126*		*12/09/2018 10:26*	WG1207768

Method Blank (MB)

(MB) R3368218-1 12/13/18 15:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Alkalinity	U		2710	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1050556-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050556-01 12/13/18 15:53 • (DUP) R3368218-3 12/13/18 16:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	22600	21700	1	4.13		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1051606-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1051606-01 12/13/18 18:27 • (DUP) R3368218-6 12/13/18 18:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	120000	120000	1	0.0477		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3368218-5 12/13/18 16:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	108000	108	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3368218-2 12/13/18 15:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Free Carbon Dioxide	U		6670	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1050556-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050556-01 12/13/18 15:53 • (DUP) R3368218-4 12/13/18 16:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	U	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1051606-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1051606-01 12/13/18 18:27 • (DUP) R3368218-7 12/13/18 18:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3366381-1 12/07/18 09:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

L1050630-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1050630-01 12/07/18 15:23 • (DUP) R3366381-4 12/07/18 15:40

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	55000	55600	10	1.08		15
Sulfate	335000	346000	10	2.96		15

L1050634-39 Original Sample (OS) • Duplicate (DUP)

(OS) L1050634-39 12/07/18 22:14 • (DUP) R3366381-7 12/07/18 22:30

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate	190	207	1	8.71		15
Sulfate	ND	1540	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3366381-2 12/07/18 09:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate	8000	8010	100	80.0-120	
Sulfate	40000	38800	97.1	80.0-120	

L1050634-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1050634-04 12/07/18 18:40 • (MS) R3366381-5 12/07/18 18:57 • (MSD) R3366381-6 12/07/18 19:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	ND	4630	4780	92.6	95.6	1	80.0-120			3.21	15
Sulfate	50000	ND	48800	49900	96.7	98.8	1	80.0-120			2.11	15

L1050634-39 Original Sample (OS) • Matrix Spike (MS)

(OS) L1050634-39 12/07/18 22:14 • (MS) R3366381-8 12/07/18 22:47

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate	5000	190	5010	96.4	1	80.0-120	
Sulfate	50000	ND	50900	98.7	1	80.0-120	

Method Blank (MB)

(MB) R3367951-1 12/13/18 13:33

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methane	U		2.91	10.0

L1050634-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1050634-09 12/13/18 14:06 • (DUP) R3367951-2 12/13/18 14:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20

L1050634-37 Original Sample (OS) • Duplicate (DUP)

(OS) L1050634-37 12/13/18 14:18 • (DUP) R3367951-3 12/13/18 14:42

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	0.000	1	0.000		20

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

(LCS) R3367951-4 12/13/18 14:56 • (LCSD) R3367951-5 12/13/18 15:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	67.8	72.8	72.7	107	107	85.0-115			0.176	20

Method Blank (MB)

(MB) R3367649-2 12/08/18 08:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*90.0*			*75.0-120*
(S) 4-Bromofluorobenzene	*92.1*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3367649-1 12/08/18 07:40

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	25.4	102	70.0-123	
1,2-Dichloroethane	25.0	24.1	96.3	70.0-128	
Ethylbenzene	25.0	30.2	121	79.0-123	
Methyl tert-butyl ether	25.0	24.5	97.9	68.0-125	
Naphthalene	25.0	21.9	87.8	54.0-135	
Toluene	25.0	28.9	116	79.0-120	
Xylenes, Total	75.0	92.5	123	79.0-123	J4
(S) Toluene-d8			*104*	*80.0-120*	
(S) Dibromofluoromethane			*88.6*	*75.0-120*	
(S) 4-Bromofluorobenzene			*91.8*	*77.0-126*	

Method Blank (MB)

(MB) R3367262-3 12/08/18 16:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*104*			*80.0-120*
(S) Dibromofluoromethane	*105*			*75.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*

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

(LCS) R3367262-1 12/08/18 15:04 • (LCSD) R3367262-2 12/08/18 15:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	21.7	21.6	86.9	86.5	70.0-123			0.507	20
1,2-Dichloroethane	25.0	21.6	20.5	86.2	82.1	70.0-128			4.94	20
Ethylbenzene	25.0	24.0	24.3	96.2	97.4	79.0-123			1.21	20
Methyl tert-butyl ether	25.0	27.0	26.5	108	106	68.0-125			1.98	20
Naphthalene	25.0	24.3	24.3	97.2	97.1	54.0-135			0.0768	20
Toluene	25.0	20.8	21.0	83.1	84.1	79.0-120			1.18	20
Xylenes, Total	75.0	73.6	74.6	98.1	99.5	79.0-123			1.35	20
(S) Toluene-d8				*99.2*	*100*	*80.0-120*				
(S) Dibromofluoromethane				*108*	*107*	*75.0-120*				
(S) 4-Bromofluorobenzene				*99.4*	*108*	*77.0-126*				

Method Blank (MB)

(MB) R3367247-3 12/09/18 07:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*102*			*80.0-120*
(S) Dibromofluoromethane	*105*			*75.0-120*
(S) 4-Bromofluorobenzene	*112*			*77.0-126*

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

(LCS) R3367247-1 12/09/18 06:42 • (LCSD) R3367247-2 12/09/18 07:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.4	22.5	89.6	89.8	70.0-123			0.274	20
1,2-Dichloroethane	25.0	20.5	20.2	81.8	80.9	70.0-128			1.15	20
Ethylbenzene	25.0	24.2	24.8	96.9	99.3	79.0-123			2.40	20
Methyl tert-butyl ether	25.0	22.6	22.5	90.4	89.8	68.0-125			0.653	20
Naphthalene	25.0	22.9	23.8	91.6	95.3	54.0-135			3.99	20
Toluene	25.0	21.9	22.1	87.6	88.3	79.0-120			0.786	20
Xylenes, Total	75.0	73.4	74.0	97.9	98.7	79.0-123			0.814	20
(S) Toluene-d8				*101*	*101*	*80.0-120*				
(S) Dibromofluoromethane				*99.5*	*100*	*75.0-120*				
(S) 4-Bromofluorobenzene				*112*	*113*	*77.0-126*				

Method Blank (MB)

(MB) R3366769-4 12/08/18 14:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromochloromethane	U		0.520	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Cyclohexane	U		0.390	1.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
1,2-Dibromoethane	U		0.381	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethane	U		0.259	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
Methyl Acetate	U		4.30	20.0
Methyl Cyclohexane	U		0.380	1.00
2-Butanone (MEK)	U		3.93	10.0
Methyl tert-butyl ether	U		0.367	1.00
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3366769-4 12/08/18 14:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Xylenes, Total	U		1.06	3.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	*95.4*			*80.0-120*
(S) a,a,a-Trifluorotoluene	*98.7*			*80.0-120*
(S) Dibromofluoromethane	*103*			*75.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*

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

(LCS) R3366769-1 12/08/18 13:25 • (LCSD) R3366769-2 12/08/18 13:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	27.1	24.9	109	99.8	70.0-123			8.45	20
Bromochloromethane	25.0	26.4	25.2	106	101	76.0-122			4.91	20
Carbon disulfide	25.0	25.0	23.5	100	93.9	61.0-128			6.43	20
Acetone	125	149	174	119	139	19.0-160			15.3	27
Bromodichloromethane	25.0	25.7	25.7	103	103	75.0-120			0.0366	20
Bromoform	25.0	24.9	23.8	99.7	95.3	68.0-132			4.52	20
Bromomethane	25.0	17.6	18.7	70.3	74.7	10.0-160			6.02	25
1,2-Dibromoethane	25.0	26.3	25.4	105	102	80.0-122			3.40	20
Carbon tetrachloride	25.0	28.0	25.1	112	100	68.0-126			11.1	20
Chlorobenzene	25.0	26.0	24.3	104	97.3	80.0-121			6.86	20
Chlorodibromomethane	25.0	26.7	25.1	107	100	77.0-125			6.46	20
Chloroethane	25.0	30.7	26.4	123	106	47.0-150			15.0	20
Chloroform	25.0	24.4	23.3	97.7	93.2	73.0-120			4.72	20
Chloromethane	25.0	22.7	21.3	90.7	85.4	41.0-142			6.09	20
1,2-Dichloroethane	25.0	28.7	26.6	115	107	70.0-128			7.53	20
1,2-Dibromo-3-Chloropropane	25.0	23.0	23.5	92.1	93.9	58.0-134			1.91	20
1,2-Dichlorobenzene	25.0	25.4	24.8	102	99.3	79.0-121			2.22	20
1,3-Dichlorobenzene	25.0	25.2	23.7	101	94.8	79.0-120			6.25	20
1,4-Dichlorobenzene	25.0	23.3	21.7	93.2	87.0	79.0-120			6.93	20

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

(LCS) R3366769-1 12/08/18 13:25 • (LCSD) R3366769-2 12/08/18 13:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dichlorodifluoromethane	25.0	33.3	29.9	133	119	51.0-149			11.1	20
1,1-Dichloroethane	25.0	27.1	24.6	108	98.3	70.0-126			9.61	20
Ethylbenzene	25.0	25.4	23.0	101	92.2	79.0-123			9.54	20
1,1-Dichloroethene	25.0	26.5	24.2	106	97.0	71.0-124			8.93	20
2-Hexanone	125	128	128	102	103	67.0-149			0.605	20
cis-1,2-Dichloroethene	25.0	26.1	23.9	104	95.6	73.0-120			8.65	20
trans-1,2-Dichloroethene	25.0	25.7	23.8	103	95.1	73.0-120			7.89	20
1,2-Dichloropropane	25.0	26.8	26.4	107	106	77.0-125			1.51	20
cis-1,3-Dichloropropene	25.0	27.1	25.9	108	104	80.0-123			4.36	20
trans-1,3-Dichloropropene	25.0	26.3	25.6	105	102	78.0-124			2.96	20
Methyl tert-butyl ether	25.0	26.2	25.7	105	103	68.0-125			1.74	20
Isopropylbenzene	25.0	23.8	22.2	95.1	88.7	76.0-127			6.93	20
2-Butanone (MEK)	125	145	154	116	123	44.0-160			5.80	20
Toluene	25.0	24.4	22.9	97.6	91.5	79.0-120			6.51	20
Methylene Chloride	25.0	26.0	23.6	104	94.4	67.0-120			9.88	20
4-Methyl-2-pentanone (MIBK)	125	141	136	113	109	68.0-142			3.87	20
Styrene	25.0	25.8	24.0	103	96.1	73.0-130			7.28	20
1,1,2,2-Tetrachloroethane	25.0	22.1	21.5	88.6	86.0	65.0-130			2.99	20
Tetrachloroethene	25.0	25.9	24.0	104	96.1	72.0-132			7.58	20
Xylenes, Total	75.0	74.5	69.6	99.3	92.8	79.0-123			6.80	20
1,1,2-Trichlorotrifluoroethane	25.0	28.5	24.7	114	98.6	69.0-132			14.3	20
1,2,3-Trichlorobenzene	25.0	22.6	22.3	90.2	89.1	50.0-138			1.28	20
1,2,4-Trichlorobenzene	25.0	21.1	19.9	84.6	79.4	57.0-137			6.31	20
1,1,1-Trichloroethane	25.0	27.4	25.4	110	102	73.0-124			7.56	20
1,1,2-Trichloroethane	25.0	25.8	24.4	103	97.5	80.0-120			5.55	20
Trichloroethene	25.0	28.4	26.7	114	107	78.0-124			6.11	20
Trichlorofluoromethane	25.0	30.8	29.0	123	116	59.0-147			5.86	20
Vinyl chloride	25.0	27.7	24.3	111	97.0	67.0-131			13.3	20
(S) Toluene-d8				*96.3*	*94.5*	*80.0-120*				
(S) a,a,a-Trifluorotoluene				*99.2*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*100*	*100*	*75.0-120*				
(S) 4-Bromofluorobenzene				*97.4*	*99.8*	*77.0-126*				

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

Method Blank (MB)

(MB) R3367986-3 12/12/18 13:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.331	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*110*			*80.0-120*
(S) Dibromofluoromethane	*106*			*75.0-120*
(S) 4-Bromofluorobenzene	*96.0*			*77.0-126*

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

(LCS) R3367986-1 12/12/18 12:12 • (LCSD) R3367986-2 12/12/18 12:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	25.0	24.5	24.8	98.1	99.1	70.0-123			1.04	20
Xylenes, Total	75.0	80.8	82.3	108	110	79.0-123			1.84	20
(S) Toluene-d8				*106*	*106*	*80.0-120*				
(S) Dibromofluoromethane				*106*	*105*	*75.0-120*				
(S) 4-Bromofluorobenzene				*98.0*	*96.1*	*77.0-126*				

Method Blank (MB)

(MB) R3368076-3 12/12/18 22:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*108*			*80.0-120*
(S) Dibromofluoromethane	*86.3*			*75.0-120*
(S) 4-Bromofluorobenzene	*98.5*			*77.0-126*

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

(LCS) R3368076-1 12/12/18 21:20 • (LCSD) R3368076-2 12/12/18 21:40

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.4	21.6	89.5	86.5	70.0-123			3.30	20
Methyl tert-butyl ether	25.0	21.3	20.3	85.2	81.4	68.0-125			4.61	20
Toluene	25.0	26.2	26.0	105	104	79.0-120			0.698	20
Xylenes, Total	75.0	83.9	83.5	112	111	79.0-123			0.478	20
(S) Toluene-d8				*103*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*84.5*	*84.2*	*75.0-120*				
(S) 4-Bromofluorobenzene				*95.0*	*95.4*	*77.0-126*				

Method Blank (MB)

(MB) R3368192-3 12/13/18 15:15

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Methyl tert-butyl ether	U		0.367	1.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*96.2*			*80.0-120*
(S) Dibromofluoromethane	*116*			*75.0-120*
(S) 4-Bromofluorobenzene	*98.2*			*77.0-126*

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

(LCS) R3368192-1 12/13/18 13:55 • (LCSD) R3368192-2 12/13/18 14:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	25.5	24.6	102	98.2	70.0-123			3.81	20
Methyl tert-butyl ether	25.0	26.5	23.8	106	95.2	68.0-125			10.9	20
Toluene	25.0	21.7	20.4	86.9	81.7	79.0-120			6.21	20
Xylenes, Total	75.0	76.3	73.2	102	97.6	79.0-123			4.15	20
(S) Toluene-d8				*102*	*93.2*	*80.0-120*				
(S) Dibromofluoromethane				*118*	*109*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*96.3*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

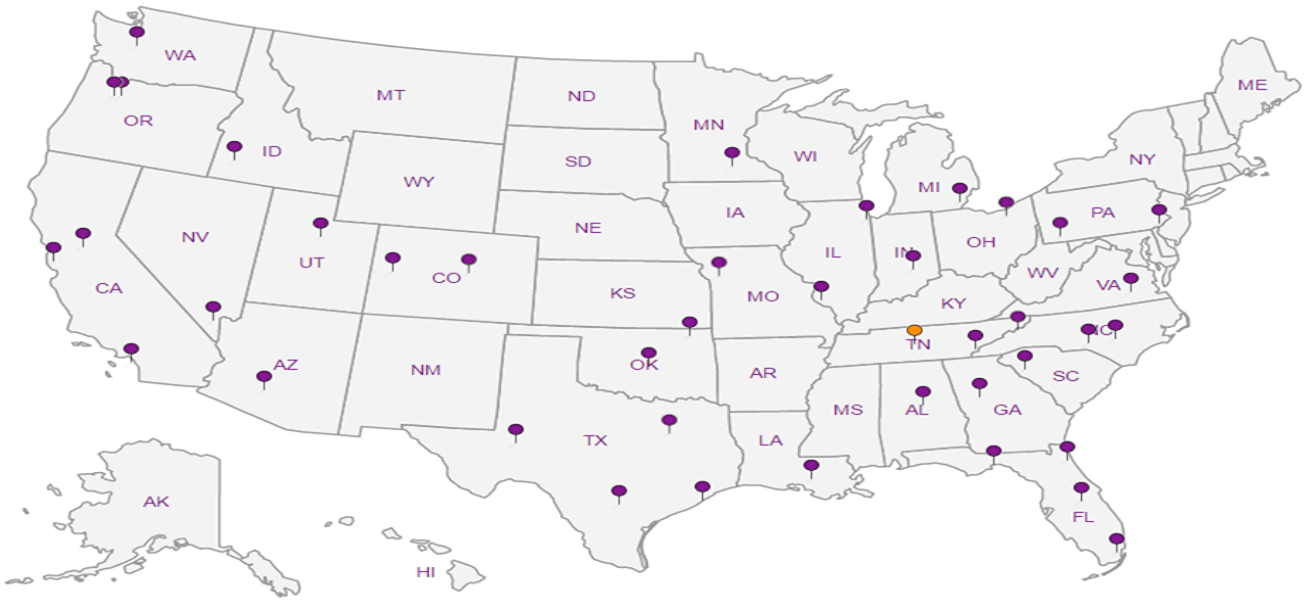
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MRGW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-33T-120618	GRAB	GW	NA	12/06/18	0940	3				X			-01
MW-31-120618		GW			0955	3				X			02
MW-47-120618		GW			1005	3				X			03
MW-10-120618		GW			1020	7	X	X	X	X			04
MW-32-120618		GW			1035	7	X	X	X	X			05
MW-03-120618		GW			1050	7	X	X	X	X			06
MW-53-120618		GW			1115	3				X			07
MW-54-120618		GW			1120	3				X			08
MW-04-120618		GW			1140	7	X	X	X	X			09
MW-05-120618		GW			1150	3				X			10

Chain of Custody Page 1 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1050634

F133

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P682251
TSR: 526 - Chris McCord
PB: 11-28-18

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking # 4674 3503 6331 6384

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/06/18	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
2 HCL / MeoH TBR

Temp: 0.4 °C Bottles Received: 155

Date: 12/7/18 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH, LD, MR, GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 2 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1056634

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P682251
TSR: 526 - Chris McCord
PB: 11-28-18

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-42-120618	GRAB	GW	NA	12/06/18	1340	7	X	X	X	X			-11
MW-41-120618		GW			1350	3				X			12
MW-41-D-120618		GW			1351	3				X			13
MW-40-120618		GW			1400	7	X	X	X	X			14
MW-39-120618		GW			1415	2				X		LMT VOL	15
MW-34-120618		GW			1420	2				X		LMT VOL	16
MW-15-120618		GW			1430	7	X	X	X	X			17
MW-15B-120618		GW			1435	2				X		LMT. VOL	18
MW-24B-120618		GW			1505	2				X		LMT. VOL	19
MW-24-120618	↓	GW	↓	↓	1515	2				X		LMT. VOL	20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier

Tracking # 4624 3008 6373 / 6384

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: X Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	12/06/18	1730		2 X	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.4-0.1-0.3 °C Bottles Received: 155	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/7/18 Time: 900	Hold: / Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1050634

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P682251
TSR: 526 - Chris McCord
PB: 11-28-18

Shipped Via: FedEX Ground

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-43-120618	GRAB	GW	NA	12/06/18	1520	2					X		LMT VOL	21
MW-43B-120618		GW			1525	2							LMT VOL	22
MW-37-120618		GW			1540	2							LMT VOL	23
MW-38-120618		GW			1545	2							LMT VOL	24
MW-36-D-120618		GW			1425	3								25
MW-07-120618		GW			1325	3								26
MW-09B-120618		GW			1040	3								27
MW-13B-120618		GW			1505	3								28
MW-36-120618		GW			1415	3								29
MW-14B-120618		GW			1515	3								30

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4624 3008 6373

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No (HCL / MeoH TBR)	
	12/06/18	1730		2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
				0.4 : 0.1 : 0.5 #3 155	
Relinquished by : (Signature)	Date:	Time:	Received for lab by (Signature)	Date:	Time:	Hold:	Condition: NCF / OK
				12/7/18	900		

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y Y

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-06-120618	GRAB	GW	NA	12/06/18	1150	3				Y			31
MW-14-120618		GW			1525	3				Y			32
MW-06B-120618		GW			1135	3				Y			33
MW-50B-120618		GW			1545	3				Y			34
MW-36B-120618		GW			1435	3				Y			35
MW-02B-120618		GW			0945	3				Y			36
MW-16-120618		GW			1345	7	Y	Y	Y	Y			37
MW-02-120618		GW			1005	7	Y	Y	Y	Y			38
MW-09-120618		GW			1055	7	Y	Y	Y	Y			39
FB01-120618		GW			1400	3				Y			40

Chain of Custody Page 4 of 5

Pace Analytical*
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1065634

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P682251
TSR: 526 - Chris McCord
PB: 11-28-18

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier __ _____

Tracking # 4624 3007 6373 / 6384

Trip Blank Received: Yes / No (HCL / MeoH) TBR
2

Temp: °C Bottles Received: 0.4-0.1-0.3 4: 155

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓ __N
COC Signed/Accurate: ✓ __N
Bottles arrive intact: ✓ __N
Correct bottles used: ✓ __N
Sufficient volume sent: ✓ __Y __N
If Applicable
VOA Zero Headspace: ✓ __N
Preservation Correct/Checked: ✓ __N
RAD SCREEN: <0.5 mR/hr

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/06/18	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Date: 12/7/18 Time: 980

Chain of Custody Page 5 of 5

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1056634

Table #

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P682251
TSR: 526 - Chris McCord
PB: 11-28-18

Shipped Via: FedEX Ground

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Report to: Bethany Garvey

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARNER

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
TB01-120618	GRAB	GW	NA	12/06/18	1405	1					X		41
TB02-120618		GW			1406	1					X		42
MW-48B-120618		GW			1555	3				X			43
MW-51-120618		GW			1610	3				X			44
MW-52-120618		GW			1620	3				X			45
		GW											

Analysis / Container / Preservative

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: X Y __N
Preservation Correct/Checked: X Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/06/18	1730	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: (Yes) / No
HCL / MeoH
TBR
2

Temp: 11.4 °C Bottles Received: 155

Date: 12/7/18 Time: 950

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 14, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1051352
Samples Received:	12/08/2018
Project Number:	699858CH.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

AW-528-120718 L1051352-01 GW

Collected by: Melissa Warren
Collected date/time: 12/07/18 11:35
Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208605	1	12/11/18 04:59	12/11/18 04:59	JCP

AW-33920317-120718 L1051352-02 GW

Collected by: Melissa Warren
Collected date/time: 12/07/18 11:35
Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208605	1	12/11/18 05:19	12/11/18 05:19	JCP

TB02-120718 L1051352-03 GW

Collected by: Melissa Warren
Collected date/time: 12/07/18 16:20
Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208605	1	12/11/18 01:01	12/11/18 01:01	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/11/2018 04:59	WG1208605
Toluene	ND		1.00	1	12/11/2018 04:59	WG1208605
Ethylbenzene	ND		1.00	1	12/11/2018 04:59	WG1208605
Total Xylenes	ND		3.00	1	12/11/2018 04:59	WG1208605
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 04:59	WG1208605
Naphthalene	ND		5.00	1	12/11/2018 04:59	WG1208605
1,2-Dichloroethane	ND		1.00	1	12/11/2018 04:59	WG1208605
(S) Toluene-d8	*103*		*80.0-120*		*12/11/2018 04:59*	WG1208605
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/11/2018 04:59*	WG1208605
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/11/2018 04:59*	WG1208605

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/11/2018 05:19	WG1208605
Toluene	ND		1.00	1	12/11/2018 05:19	WG1208605
Ethylbenzene	ND		1.00	1	12/11/2018 05:19	WG1208605
Total Xylenes	ND		3.00	1	12/11/2018 05:19	WG1208605
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 05:19	WG1208605
Naphthalene	ND		5.00	1	12/11/2018 05:19	WG1208605
1,2-Dichloroethane	ND		1.00	1	12/11/2018 05:19	WG1208605
(S) Toluene-d8	*104*		*80.0-120*		*12/11/2018 05:19*	WG1208605
(S) Dibromofluoromethane	*97.4*		*75.0-120*		*12/11/2018 05:19*	WG1208605
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*12/11/2018 05:19*	WG1208605

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	12/11/2018 01:01	WG1208605
Benzene	ND		1.00	1	12/11/2018 01:01	WG1208605
Bromochloromethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Bromodichloromethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Bromoform	ND		1.00	1	12/11/2018 01:01	WG1208605
Bromomethane	ND		5.00	1	12/11/2018 01:01	WG1208605
Carbon disulfide	ND		1.00	1	12/11/2018 01:01	WG1208605
Carbon tetrachloride	ND		1.00	1	12/11/2018 01:01	WG1208605
Chlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
Chlorodibromomethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Chloroethane	ND		5.00	1	12/11/2018 01:01	WG1208605
Chloroform	ND		5.00	1	12/11/2018 01:01	WG1208605
Chloromethane	ND		2.50	1	12/11/2018 01:01	WG1208605
Cyclohexane	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/11/2018 01:01	WG1208605
1,2-Dibromoethane	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2-Dichlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,3-Dichlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,4-Dichlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
Dichlorodifluoromethane	ND		5.00	1	12/11/2018 01:01	WG1208605
1,1-Dichloroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2-Dichloroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
1,1-Dichloroethene	ND		1.00	1	12/11/2018 01:01	WG1208605
cis-1,2-Dichloroethene	ND		1.00	1	12/11/2018 01:01	WG1208605
trans-1,2-Dichloroethene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2-Dichloropropane	ND		1.00	1	12/11/2018 01:01	WG1208605
cis-1,3-Dichloropropene	ND		1.00	1	12/11/2018 01:01	WG1208605
trans-1,3-Dichloropropene	ND		1.00	1	12/11/2018 01:01	WG1208605
Ethylbenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
2-Hexanone	ND		10.0	1	12/11/2018 01:01	WG1208605
Isopropylbenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
2-Butanone (MEK)	ND		10.0	1	12/11/2018 01:01	WG1208605
Methyl Acetate	ND		20.0	1	12/11/2018 01:01	WG1208605
Methyl Cyclohexane	ND		1.00	1	12/11/2018 01:01	WG1208605
Methylene Chloride	ND		5.00	1	12/11/2018 01:01	WG1208605
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/11/2018 01:01	WG1208605
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 01:01	WG1208605
Styrene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Tetrachloroethene	ND		1.00	1	12/11/2018 01:01	WG1208605
Toluene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2,3-Trichlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,2,4-Trichlorobenzene	ND		1.00	1	12/11/2018 01:01	WG1208605
1,1,1-Trichloroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
1,1,2-Trichloroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Trichloroethene	ND		1.00	1	12/11/2018 01:01	WG1208605
Trichlorofluoromethane	ND		5.00	1	12/11/2018 01:01	WG1208605
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/11/2018 01:01	WG1208605
Vinyl chloride	ND		1.00	1	12/11/2018 01:01	WG1208605
Xylenes, Total	ND		3.00	1	12/11/2018 01:01	WG1208605
(S) Toluene-d8	*102*		*80.0-120*		*12/11/2018 01:01*	WG1208605
(S) Dibromofluoromethane	*100*		*75.0-120*		*12/11/2018 01:01*	WG1208605
(S) a,a,a-Trifluorotoluene	*101*		*80.0-120*		*12/11/2018 01:01*	WG1208605
(S) 4-Bromofluorobenzene	*118*		*77.0-126*		*12/11/2018 01:01*	WG1208605

Method Blank (MB)

(MB) R3367936-3 12/11/18 00:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Methyl Acetate	U		4.30	20.0

Method Blank (MB)

(MB) R3367936-3 12/11/18 00:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Tetrachloroethene	U		0.372	1.00
Methyl Cyclohexane	U		0.380	1.00
Toluene	U		0.412	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*102*			*75.0-120*
(S) 4-Bromofluorobenzene	*117*			*77.0-126*
(S) a,a,a-Trifluorotoluene	*98.1*			*80.0-120*

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

(LCS) R3367936-1 12/10/18 23:02 • (LCSD) R3367936-2 12/10/18 23:22

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	125	123	121	98.8	96.6	19.0-160			2.21	27
Benzene	25.0	24.7	26.9	98.6	108	70.0-123			8.87	20
Bromodichloromethane	25.0	24.2	25.7	96.8	103	75.0-120			5.86	20
Bromochloromethane	25.0	24.5	24.5	98.0	98.0	76.0-122			0.0146	20
Bromoform	25.0	26.0	27.9	104	112	68.0-132			6.93	20
Bromomethane	25.0	26.5	30.8	106	123	10.0-160			14.9	25
Carbon disulfide	25.0	26.6	29.3	106	117	61.0-128			9.76	20
Carbon tetrachloride	25.0	22.3	23.4	89.2	93.8	68.0-126			5.05	20
Chlorobenzene	25.0	23.9	24.3	95.6	97.1	80.0-121			1.56	20
Chlorodibromomethane	25.0	23.1	24.0	92.3	95.9	77.0-125			3.81	20
Chloroethane	25.0	25.5	29.2	102	117	47.0-150			13.6	20
Chloroform	25.0	25.0	26.8	99.9	107	73.0-120			7.10	20
Chloromethane	25.0	23.1	25.9	92.5	104	41.0-142			11.4	20
1,2-Dibromo-3-Chloropropane	25.0	22.9	24.9	91.5	99.4	58.0-134			8.34	20
1,2-Dibromoethane	25.0	24.0	24.7	95.8	99.0	80.0-122			3.24	20
1,2-Dichlorobenzene	25.0	21.4	25.6	85.6	102	79.0-121			17.9	20
1,3-Dichlorobenzene	25.0	24.8	26.0	99.0	104	79.0-120			4.93	20
1,4-Dichlorobenzene	25.0	25.0	25.3	99.9	101	79.0-120			1.38	20

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

(LCS) R3367936-1 12/10/18 23:02 • (LCSD) R3367936-2 12/10/18 23:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dichlorodifluoromethane	25.0	26.7	31.2	107	125	51.0-149			15.5	20
1,1-Dichloroethane	25.0	25.2	26.4	101	105	70.0-126			4.40	20
1,2-Dichloroethane	25.0	25.8	26.4	103	106	70.0-128			2.42	20
1,1-Dichloroethene	25.0	26.4	28.1	106	112	71.0-124			6.23	20
cis-1,2-Dichloroethene	25.0	26.4	26.8	106	107	73.0-120			1.35	20
trans-1,2-Dichloroethene	25.0	25.5	27.2	102	109	73.0-120			6.59	20
1,2-Dichloropropane	25.0	25.8	27.3	103	109	77.0-125			5.70	20
cis-1,3-Dichloropropene	25.0	25.0	26.7	100	107	80.0-123			6.44	20
trans-1,3-Dichloropropene	25.0	25.2	26.2	101	105	78.0-124			3.55	20
Ethylbenzene	25.0	23.6	24.5	94.6	98.0	79.0-123			3.51	20
2-Hexanone	125	119	125	95.1	100	67.0-149			5.06	20
Isopropylbenzene	25.0	26.1	28.1	105	112	76.0-127			7.15	20
2-Butanone (MEK)	125	131	129	105	103	44.0-160			1.52	20
Methylene Chloride	25.0	24.2	26.3	96.9	105	67.0-120			8.18	20
4-Methyl-2-pentanone (MIBK)	125	111	116	89.1	92.8	68.0-142			4.17	20
Methyl tert-butyl ether	25.0	25.7	28.4	103	114	68.0-125			9.99	20
Naphthalene	25.0	20.5	23.9	82.0	95.5	54.0-135			15.1	20
Styrene	25.0	26.5	29.0	106	116	73.0-130			9.18	20
1,1,2,2-Tetrachloroethane	25.0	26.4	29.2	105	117	65.0-130			10.1	20
1,1,2-Trichlorotrifluoroethane	25.0	26.2	28.1	105	112	69.0-132			6.84	20
Tetrachloroethene	25.0	22.2	23.3	88.8	93.2	72.0-132			4.78	20
Toluene	25.0	24.0	24.9	96.1	99.5	79.0-120			3.51	20
1,2,3-Trichlorobenzene	25.0	19.0	22.3	76.1	89.1	50.0-138			15.8	20
1,2,4-Trichlorobenzene	25.0	22.8	22.7	91.3	90.8	57.0-137			0.493	20
1,1,1-Trichloroethane	25.0	24.8	25.4	99.2	102	73.0-124			2.31	20
1,1,2-Trichloroethane	25.0	24.8	26.4	99.1	106	80.0-120			6.38	20
Trichloroethene	25.0	24.7	24.2	98.9	96.7	78.0-124			2.20	20
Trichlorofluoromethane	25.0	25.4	27.3	102	109	59.0-147			6.88	20
Vinyl chloride	25.0	26.0	29.5	104	118	67.0-131			12.7	20
Xylenes, Total	75.0	65.0	67.8	86.7	90.4	79.0-123			4.22	20
(S) Toluene-d8				*101*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*100*	*102*	*75.0-120*				
(S) 4-Bromofluorobenzene				*107*	*114*	*77.0-126*				
(S) a,a,a-Trifluorotoluene				*100*	*98.9*	*80.0-120*				

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

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

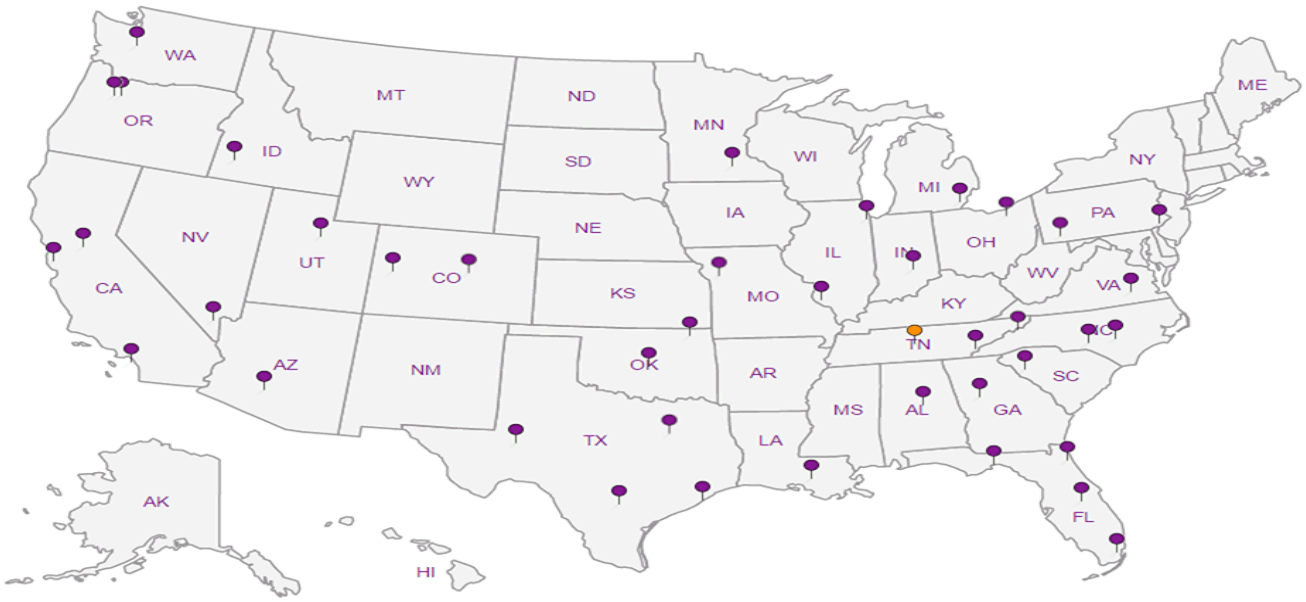
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bgarvey@ch2m.com; tom.wiley@ch2m.com; kyle.sexton@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH-LD,MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
AW-528-120718	GRAB	GW	NA	12/07/18	1135	3	X			-01
AW-33920317-120718	GRAB	GW	NA	12/07/18	1135	3	X			-02
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
		GW				3	X			
TB02-120718		GW			1620	1		X	TRIP BLK	-03

Analysis / Container / Preservative

Pres Chk: X Y

Chain of Custody Page 1 of 1

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1051352
A208

Acctnum: KINCH2MGA
Template: T131319
Prelogin: P662161
TSR: 526 - Chris McCord
PB: 7-6-18

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: V8260BTEXMNSC = BTEX,MTBE,Naphthalene,1,2-DCA.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS X FedEx __ Courier __ _____

Tracking # 4492 6226 1950

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X __N
If Applicable
VOA Zero Headspace: X __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/07/18	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Carol Kemp

Trip Blank Received: (Yes) No
HCl / MeoH
TBR

Temp: 0.5 °C Bottles Received: 6

Date: 10/8/18 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Conditions: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 14, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1051357
Samples Received:	12/08/2018
Project Number:	699858CH.LD.MR.GW
Description:	Lewis Drive Groundwater
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-30-120718 L1051357-01 GW

Collected by: Melissa Warren | Collected date/time: 12/07/18 09:21 | Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208597	1	12/11/18 04:09	12/11/18 04:09	JHH

MW-30-D-120718 L1051357-02 GW

Collected by: Melissa Warren | Collected date/time: 12/07/18 09:24 | Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208597	1	12/11/18 04:29	12/11/18 04:29	JHH

MW-13-120718 L1051357-03 GW

Collected by: Melissa Warren | Collected date/time: 12/07/18 10:04 | Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208597	1	12/11/18 04:50	12/11/18 04:50	JHH

FB01-120718 L1051357-04 GW

Collected by: Melissa Warren | Collected date/time: 12/07/18 16:15 | Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208597	1	12/11/18 05:10	12/11/18 05:10	JHH

TB01-120718 L1051357-05 GW

Collected by: Melissa Warren | Collected date/time: 12/07/18 16:10 | Received date/time: 12/08/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1208605	1	12/11/18 01:20	12/11/18 01:20	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/11/2018 04:09	WG1208597
Toluene	ND		1.00	1	12/11/2018 04:09	WG1208597
Ethylbenzene	ND		1.00	1	12/11/2018 04:09	WG1208597
Total Xylenes	ND		3.00	1	12/11/2018 04:09	WG1208597
Methyl tert-butyl ether	1.94		1.00	1	12/11/2018 04:09	WG1208597
Naphthalene	9.22		5.00	1	12/11/2018 04:09	WG1208597
1,2-Dichloroethane	ND		1.00	1	12/11/2018 04:09	WG1208597
(S) Toluene-d8	*105*		*80.0-120*		*12/11/2018 04:09*	WG1208597
(S) Dibromofluoromethane	*99.8*		*75.0-120*		*12/11/2018 04:09*	WG1208597
(S) 4-Bromofluorobenzene	*98.1*		*77.0-126*		*12/11/2018 04:09*	WG1208597

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/11/2018 04:29	WG1208597
Toluene	ND		1.00	1	12/11/2018 04:29	WG1208597
Ethylbenzene	ND		1.00	1	12/11/2018 04:29	WG1208597
Total Xylenes	ND		3.00	1	12/11/2018 04:29	WG1208597
Methyl tert-butyl ether	2.05		1.00	1	12/11/2018 04:29	WG1208597
Naphthalene	ND		5.00	1	12/11/2018 04:29	WG1208597
1,2-Dichloroethane	ND		1.00	1	12/11/2018 04:29	WG1208597
(S) Toluene-d8	*107*		*80.0-120*		*12/11/2018 04:29*	WG1208597
(S) Dibromofluoromethane	*103*		*75.0-120*		*12/11/2018 04:29*	WG1208597
(S) 4-Bromofluorobenzene	*99.0*		*77.0-126*		*12/11/2018 04:29*	WG1208597

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	83.4		1.00	1	12/11/2018 04:50	WG1208597
Toluene	158		1.00	1	12/11/2018 04:50	WG1208597
Ethylbenzene	9.62		1.00	1	12/11/2018 04:50	WG1208597
Total Xylenes	23.6		3.00	1	12/11/2018 04:50	WG1208597
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 04:50	WG1208597
Naphthalene	ND		5.00	1	12/11/2018 04:50	WG1208597
1,2-Dichloroethane	ND		1.00	1	12/11/2018 04:50	WG1208597
(S) Toluene-d8	*106*		*80.0-120*		*12/11/2018 04:50*	WG1208597
(S) Dibromofluoromethane	*101*		*75.0-120*		*12/11/2018 04:50*	WG1208597
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/11/2018 04:50*	WG1208597

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/11/2018 05:10	WG1208597
Toluene	ND		1.00	1	12/11/2018 05:10	WG1208597
Ethylbenzene	ND		1.00	1	12/11/2018 05:10	WG1208597
Total Xylenes	ND		3.00	1	12/11/2018 05:10	WG1208597
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 05:10	WG1208597
Naphthalene	ND		5.00	1	12/11/2018 05:10	WG1208597
1,2-Dichloroethane	ND		1.00	1	12/11/2018 05:10	WG1208597
(S) Toluene-d8	*106*		*80.0-120*		*12/11/2018 05:10*	WG1208597
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/11/2018 05:10*	WG1208597
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*12/11/2018 05:10*	WG1208597

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		50.0	1	12/11/2018 01:20	WG1208605
Benzene	ND		1.00	1	12/11/2018 01:20	WG1208605
Bromochloromethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Bromodichloromethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Bromoform	ND		1.00	1	12/11/2018 01:20	WG1208605
Bromomethane	ND		5.00	1	12/11/2018 01:20	WG1208605
Carbon disulfide	ND		1.00	1	12/11/2018 01:20	WG1208605
Carbon tetrachloride	ND		1.00	1	12/11/2018 01:20	WG1208605
Chlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
Chlorodibromomethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Chloroethane	ND		5.00	1	12/11/2018 01:20	WG1208605
Chloroform	ND		5.00	1	12/11/2018 01:20	WG1208605
Chloromethane	ND		2.50	1	12/11/2018 01:20	WG1208605
Cyclohexane	ND		1.00	1	12/11/2018 01:20	WG1208605
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/11/2018 01:20	WG1208605
1,2-Dibromoethane	ND		1.00	1	12/11/2018 01:20	WG1208605
1,2-Dichlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,3-Dichlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,4-Dichlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
Dichlorodifluoromethane	ND		5.00	1	12/11/2018 01:20	WG1208605
1,1-Dichloroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
1,2-Dichloroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
1,1-Dichloroethene	ND		1.00	1	12/11/2018 01:20	WG1208605
cis-1,2-Dichloroethene	ND		1.00	1	12/11/2018 01:20	WG1208605
trans-1,2-Dichloroethene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,2-Dichloropropane	ND		1.00	1	12/11/2018 01:20	WG1208605
cis-1,3-Dichloropropene	ND		1.00	1	12/11/2018 01:20	WG1208605
trans-1,3-Dichloropropene	ND		1.00	1	12/11/2018 01:20	WG1208605
Ethylbenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
2-Hexanone	ND		10.0	1	12/11/2018 01:20	WG1208605
Isopropylbenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
2-Butanone (MEK)	ND		10.0	1	12/11/2018 01:20	WG1208605
Methyl Acetate	ND		20.0	1	12/11/2018 01:20	WG1208605
Methyl Cyclohexane	ND		1.00	1	12/11/2018 01:20	WG1208605
Methylene Chloride	ND		5.00	1	12/11/2018 01:20	WG1208605
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/11/2018 01:20	WG1208605
Methyl tert-butyl ether	ND		1.00	1	12/11/2018 01:20	WG1208605
Styrene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Tetrachloroethene	ND		1.00	1	12/11/2018 01:20	WG1208605
Toluene	2.43		1.00	1	12/11/2018 01:20	WG1208605
1,2,3-Trichlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,2,4-Trichlorobenzene	ND		1.00	1	12/11/2018 01:20	WG1208605
1,1,1-Trichloroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
1,1,2-Trichloroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Trichloroethene	ND		1.00	1	12/11/2018 01:20	WG1208605
Trichlorofluoromethane	ND		5.00	1	12/11/2018 01:20	WG1208605
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/11/2018 01:20	WG1208605
Vinyl chloride	ND		1.00	1	12/11/2018 01:20	WG1208605
Xylenes, Total	ND		3.00	1	12/11/2018 01:20	WG1208605
(S) Toluene-d8	*103*		*80.0-120*		*12/11/2018 01:20*	WG1208605
(S) Dibromofluoromethane	*98.5*		*75.0-120*		*12/11/2018 01:20*	WG1208605
(S) a,a,a-Trifluorotoluene	*100*		*80.0-120*		*12/11/2018 01:20*	WG1208605
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*12/11/2018 01:20*	WG1208605

Method Blank (MB)

(MB) R3368062-2 12/10/18 21:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
1,2-Dichloroethane	U		0.361	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*107*			*80.0-120*
(S) Dibromofluoromethane	*101*			*75.0-120*
(S) 4-Bromofluorobenzene	*96.6*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3368062-1 12/10/18 20:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	24.4	97.5	70.0-123	
1,2-Dichloroethane	25.0	26.5	106	70.0-128	
Ethylbenzene	25.0	27.4	109	79.0-123	
Methyl tert-butyl ether	25.0	25.5	102	68.0-125	
Naphthalene	25.0	26.9	108	54.0-135	
Toluene	25.0	25.4	102	79.0-120	
Xylenes, Total	75.0	82.6	110	79.0-123	
(S) Toluene-d8			*106*	*80.0-120*	
(S) Dibromofluoromethane			*102*	*75.0-120*	
(S) 4-Bromofluorobenzene			*101*	*77.0-126*	

Method Blank (MB)

(MB) R3367936-3 12/11/18 00:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromochloromethane	U		0.520	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
Cyclohexane	U		0.390	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
Isopropylbenzene	U		0.326	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
Methyl Acetate	U		4.30	20.0
Tetrachloroethene	U		0.372	1.00

Method Blank (MB)

(MB) R3367936-3 12/11/18 00:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methyl Cyclohexane	U		0.380	1.00
Toluene	U		0.412	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*102*			*75.0-120*
(S) 4-Bromofluorobenzene	*117*			*77.0-126*
(S) a,a,a-Trifluorotoluene	*98.1*			*80.0-120*

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

(LCS) R3367936-1 12/10/18 23:02 • (LCSD) R3367936-2 12/10/18 23:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	123	121	98.8	96.6	19.0-160			2.21	27
Benzene	25.0	24.7	26.9	98.6	108	70.0-123			8.87	20
Bromodichloromethane	25.0	24.2	25.7	96.8	103	75.0-120			5.86	20
Bromochloromethane	25.0	24.5	24.5	98.0	98.0	76.0-122			0.0146	20
Bromoform	25.0	26.0	27.9	104	112	68.0-132			6.93	20
Bromomethane	25.0	26.5	30.8	106	123	10.0-160			14.9	25
Carbon disulfide	25.0	26.6	29.3	106	117	61.0-128			9.76	20
Carbon tetrachloride	25.0	22.3	23.4	89.2	93.8	68.0-126			5.05	20
Chlorobenzene	25.0	23.9	24.3	95.6	97.1	80.0-121			1.56	20
Chlorodibromomethane	25.0	23.1	24.0	92.3	95.9	77.0-125			3.81	20
Chloroethane	25.0	25.5	29.2	102	117	47.0-150			13.6	20
Chloroform	25.0	25.0	26.8	99.9	107	73.0-120			7.10	20
Chloromethane	25.0	23.1	25.9	92.5	104	41.0-142			11.4	20
1,2-Dibromo-3-Chloropropane	25.0	22.9	24.9	91.5	99.4	58.0-134			8.34	20
1,2-Dibromoethane	25.0	24.0	24.7	95.8	99.0	80.0-122			3.24	20
1,2-Dichlorobenzene	25.0	21.4	25.6	85.6	102	79.0-121			17.9	20
1,3-Dichlorobenzene	25.0	24.8	26.0	99.0	104	79.0-120			4.93	20
1,4-Dichlorobenzene	25.0	25.0	25.3	99.9	101	79.0-120			1.38	20
Dichlorodifluoromethane	25.0	26.7	31.2	107	125	51.0-149			15.5	20

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

(LCS) R3367936-1 12/10/18 23:02 • (LCSD) R3367936-2 12/10/18 23:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethane	25.0	25.2	26.4	101	105	70.0-126			4.40	20
1,2-Dichloroethane	25.0	25.8	26.4	103	106	70.0-128			2.42	20
1,1-Dichloroethene	25.0	26.4	28.1	106	112	71.0-124			6.23	20
cis-1,2-Dichloroethene	25.0	26.4	26.8	106	107	73.0-120			1.35	20
trans-1,2-Dichloroethene	25.0	25.5	27.2	102	109	73.0-120			6.59	20
1,2-Dichloropropane	25.0	25.8	27.3	103	109	77.0-125			5.70	20
cis-1,3-Dichloropropene	25.0	25.0	26.7	100	107	80.0-123			6.44	20
trans-1,3-Dichloropropene	25.0	25.2	26.2	101	105	78.0-124			3.55	20
Ethylbenzene	25.0	23.6	24.5	94.6	98.0	79.0-123			3.51	20
2-Hexanone	125	119	125	95.1	100	67.0-149			5.06	20
Isopropylbenzene	25.0	26.1	28.1	105	112	76.0-127			7.15	20
2-Butanone (MEK)	125	131	129	105	103	44.0-160			1.52	20
Methylene Chloride	25.0	24.2	26.3	96.9	105	67.0-120			8.18	20
4-Methyl-2-pentanone (MIBK)	125	111	116	89.1	92.8	68.0-142			4.17	20
Methyl tert-butyl ether	25.0	25.7	28.4	103	114	68.0-125			9.99	20
Styrene	25.0	26.5	29.0	106	116	73.0-130			9.18	20
1,1,2,2-Tetrachloroethane	25.0	26.4	29.2	105	117	65.0-130			10.1	20
1,1,2-Trichlorotrifluoroethane	25.0	26.2	28.1	105	112	69.0-132			6.84	20
Tetrachloroethene	25.0	22.2	23.3	88.8	93.2	72.0-132			4.78	20
Toluene	25.0	24.0	24.9	96.1	99.5	79.0-120			3.51	20
1,2,3-Trichlorobenzene	25.0	19.0	22.3	76.1	89.1	50.0-138			15.8	20
1,2,4-Trichlorobenzene	25.0	22.8	22.7	91.3	90.8	57.0-137			0.493	20
1,1,1-Trichloroethane	25.0	24.8	25.4	99.2	102	73.0-124			2.31	20
1,1,2-Trichloroethane	25.0	24.8	26.4	99.1	106	80.0-120			6.38	20
Trichloroethene	25.0	24.7	24.2	98.9	96.7	78.0-124			2.20	20
Trichlorofluoromethane	25.0	25.4	27.3	102	109	59.0-147			6.88	20
Vinyl chloride	25.0	26.0	29.5	104	118	67.0-131			12.7	20
Xylenes, Total	75.0	65.0	67.8	86.7	90.4	79.0-123			4.22	20
(S) Toluene-d8				*101*	*103*	*80.0-120*				
(S) Dibromofluoromethane				*100*	*102*	*75.0-120*				
(S) 4-Bromofluorobenzene				*107*	*114*	*77.0-126*				
(S) a,a,a-Trifluorotoluene				*100*	*98.9*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

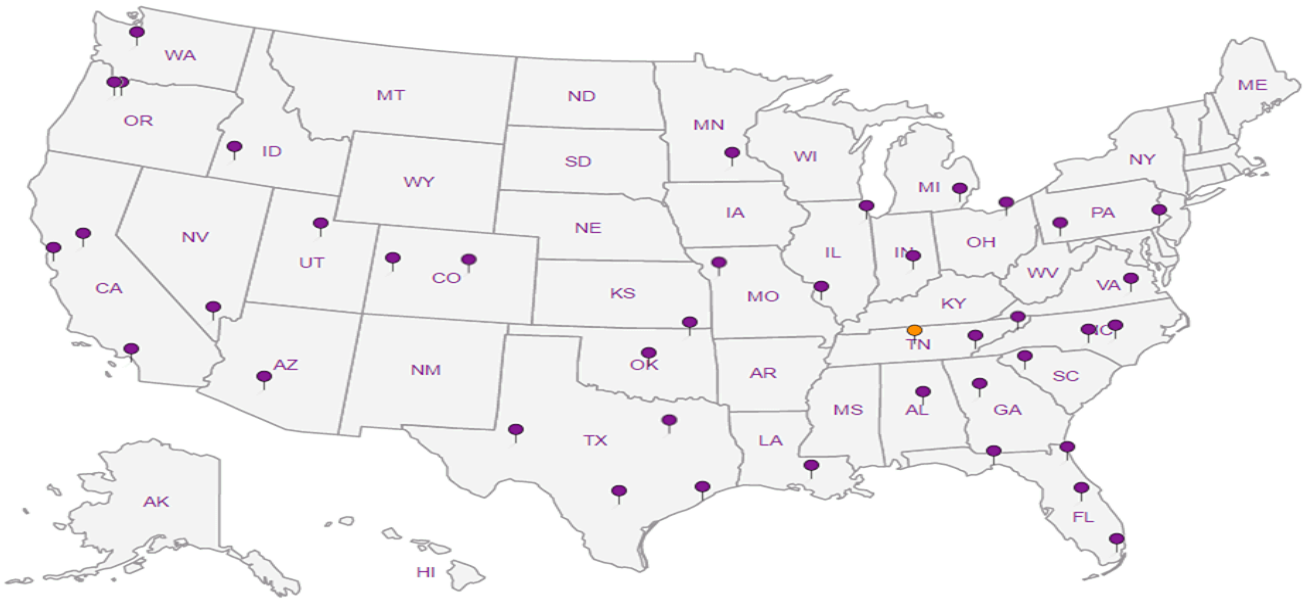
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Groundwater

City/State Collected: BELTON, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.GW

Lab Project # KINCH2MGA-LEWIS12

Collected by (print): MELISSA WARREN

Site/Facility ID # LEWIS DRIVE

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*NITRATE,SULFATE* 125mlHDPE-NoPres	ALK,CO2 125mlHDPE-NoPres	RSK175 40mlAmb HCl	V8260BTEXMNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
MW-30-120718	GRAB	GW	NA	12/07/18	0921	3				X			-01
MW-30-D-120718		GW			0924	3				X			-02
MW-13-120718		GW			1004	3				X			-03
FB01-120718		GW			1615	3				X			-04
TB01-120718		GW			1610	1					X		-05

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L105135?
A206

Acctnum: KINCH2MGA
Template: T130277
Prelogin: P668773
TSR: 526 - Chris McCord
PB: 8-28-18b
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *NITRATE/SULFATE* has a 48hr hold time.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS (FedEx) __ Courier __ _____

Tracking # 4492 6226 194

Sample Receipt Checklist
COC Seal Present/Intact: __NP (Y) __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	12/07/18	1700	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			Carol Kemp

Trip Blank Received: Yes / No (HCL) / MeoH TBR
1

Temp: 1.1-1-1.0 °C Bottles Received: 12

Date: 12/8/18 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 12, 2018

Kinder Morgan- Atlanta, GA

Sample Delivery Group:	L1050020
Samples Received:	12/05/2018
Project Number:	699858CH.LD.MR.SW
Description:	Lewis Drive Surface Water
Site:	LEWIS DRIVE
Report To:	Bethany Garvey 6600 Peachtree Dunwoody Road 400 Embassy Row - Suite 600 Atlanta, GA 30328

Entire Report Reviewed By:

Chris McCord
Project Manager

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 Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

SW-11-120418 L1050020-01 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 13:25 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 20:47	12/05/18 20:47	JCP

SW-10-120418 L1050020-02 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 13:35 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 21:07	12/05/18 21:07	JCP

SW-09-120418 L1050020-03 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 13:55 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 21:26	12/05/18 21:26	JCP

SW-08-120418 L1050020-04 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 14:00 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 21:46	12/05/18 21:46	JCP

SW-13-120418 L1050020-05 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 14:10 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 22:06	12/05/18 22:06	JCP

SW-02-120418 L1050020-06 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 14:30 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 22:26	12/05/18 22:26	JCP

SW-01-120418 L1050020-07 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 14:40 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 22:46	12/05/18 22:46	JCP

SW-07-120418 L1050020-08 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 14:55 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 23:06	12/05/18 23:06	JCP

SW-14-120418 L1050020-09 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 15:05 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 23:25	12/05/18 23:25	JCP

SW-05-120418 L1050020-10 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 15:30 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/05/18 23:45	12/05/18 23:45	JCP

SW-03-120418 L1050020-11 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 15:40 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/06/18 00:05	12/06/18 00:05	JCP

SW-12-120418 L1050020-12 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 15:50 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/06/18 00:24	12/06/18 00:24	JCP

SW-04-120418 L1050020-13 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 15:55 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1206224	1	12/06/18 00:44	12/06/18 00:44	JCP

TB-01-120418 L1050020-14 GW

Collected by: Melissa Warren | Collected date/time: 12/04/18 16:00 | Received date/time: 12/05/18 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207103	1	12/07/18 12:03	12/07/18 12:03	ACG
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1207264	1	12/07/18 19:34	12/07/18 19:34	DWR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 20:47	WG1206224
Toluene	ND		1.00	1	12/05/2018 20:47	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 20:47	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 20:47	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 20:47	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 20:47	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 20:47	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 20:47	WG1206224
(S) Toluene-d8	*110*		*80.0-120*		*12/05/2018 20:47*	WG1206224
(S) Dibromofluoromethane	*91.5*		*75.0-120*		*12/05/2018 20:47*	WG1206224
(S) a,a,a-Trifluorotoluene	*110*		*80.0-120*		*12/05/2018 20:47*	WG1206224
(S) 4-Bromofluorobenzene	*92.9*		*77.0-126*		*12/05/2018 20:47*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 21:07	WG1206224
Toluene	ND		1.00	1	12/05/2018 21:07	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 21:07	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 21:07	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 21:07	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 21:07	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 21:07	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 21:07	WG1206224
(S) Toluene-d8	*103*		*80.0-120*		*12/05/2018 21:07*	WG1206224
(S) Dibromofluoromethane	*97.5*		*75.0-120*		*12/05/2018 21:07*	WG1206224
(S) a,a,a-Trifluorotoluene	*111*		*80.0-120*		*12/05/2018 21:07*	WG1206224
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*12/05/2018 21:07*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 21:26	WG1206224
Toluene	ND		1.00	1	12/05/2018 21:26	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 21:26	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 21:26	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 21:26	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 21:26	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 21:26	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 21:26	WG1206224
(S) Toluene-d8	*104*		*80.0-120*		*12/05/2018 21:26*	WG1206224
(S) Dibromofluoromethane	*96.6*		*75.0-120*		*12/05/2018 21:26*	WG1206224
(S) a,a,a-Trifluorotoluene	*108*		*80.0-120*		*12/05/2018 21:26*	WG1206224
(S) 4-Bromofluorobenzene	*99.1*		*77.0-126*		*12/05/2018 21:26*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 21:46	WG1206224
Toluene	ND		1.00	1	12/05/2018 21:46	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 21:46	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 21:46	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 21:46	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 21:46	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 21:46	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 21:46	WG1206224
(S) Toluene-d8	*106*		*80.0-120*		*12/05/2018 21:46*	WG1206224
(S) Dibromofluoromethane	*93.0*		*75.0-120*		*12/05/2018 21:46*	WG1206224
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*12/05/2018 21:46*	WG1206224
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/05/2018 21:46*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 22:06	WG1206224
Toluene	1.84		1.00	1	12/05/2018 22:06	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 22:06	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 22:06	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 22:06	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 22:06	WG1206224
Methyl tert-butyl ether	3.49		1.00	1	12/05/2018 22:06	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 22:06	WG1206224
(S) Toluene-d8	*104*		*80.0-120*		*12/05/2018 22:06*	WG1206224
(S) Dibromofluoromethane	*91.3*		*75.0-120*		*12/05/2018 22:06*	WG1206224
(S) a,a,a-Trifluorotoluene	*105*		*80.0-120*		*12/05/2018 22:06*	WG1206224
(S) 4-Bromofluorobenzene	*97.1*		*77.0-126*		*12/05/2018 22:06*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	11.9		1.00	1	12/05/2018 22:26	WG1206224
Toluene	1.32		1.00	1	12/05/2018 22:26	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 22:26	WG1206224
o-Xylene	3.75		1.00	1	12/05/2018 22:26	WG1206224
m&p-Xylene	4.40		2.00	1	12/05/2018 22:26	WG1206224
Xylenes, Total	8.15		3.00	1	12/05/2018 22:26	WG1206224
Methyl tert-butyl ether	2.23		1.00	1	12/05/2018 22:26	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 22:26	WG1206224
(S) Toluene-d8	*109*		*80.0-120*		*12/05/2018 22:26*	WG1206224
(S) Dibromofluoromethane	*96.9*		*75.0-120*		*12/05/2018 22:26*	WG1206224
(S) a,a,a-Trifluorotoluene	*104*		*80.0-120*		*12/05/2018 22:26*	WG1206224
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*12/05/2018 22:26*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 22:46	WG1206224
Toluene	ND		1.00	1	12/05/2018 22:46	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 22:46	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 22:46	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 22:46	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 22:46	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 22:46	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 22:46	WG1206224
(S) Toluene-d8	*102*		*80.0-120*		*12/05/2018 22:46*	WG1206224
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*12/05/2018 22:46*	WG1206224
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*12/05/2018 22:46*	WG1206224
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*12/05/2018 22:46*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 23:06	WG1206224
Toluene	ND		1.00	1	12/05/2018 23:06	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 23:06	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 23:06	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 23:06	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 23:06	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 23:06	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 23:06	WG1206224
(S) Toluene-d8	*102*		*80.0-120*		*12/05/2018 23:06*	WG1206224
(S) Dibromofluoromethane	*97.4*		*75.0-120*		*12/05/2018 23:06*	WG1206224
(S) a,a,a-Trifluorotoluene	*113*		*80.0-120*		*12/05/2018 23:06*	WG1206224
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*12/05/2018 23:06*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 23:25	WG1206224
Toluene	ND		1.00	1	12/05/2018 23:25	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 23:25	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 23:25	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 23:25	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 23:25	WG1206224
Methyl tert-butyl ether	1.62		1.00	1	12/05/2018 23:25	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 23:25	WG1206224
(S) Toluene-d8	*105*		*80.0-120*		*12/05/2018 23:25*	WG1206224
(S) Dibromofluoromethane	*89.7*		*75.0-120*		*12/05/2018 23:25*	WG1206224
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*12/05/2018 23:25*	WG1206224
(S) 4-Bromofluorobenzene	*97.9*		*77.0-126*		*12/05/2018 23:25*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/05/2018 23:45	WG1206224
Toluene	ND		1.00	1	12/05/2018 23:45	WG1206224
Ethylbenzene	ND		1.00	1	12/05/2018 23:45	WG1206224
o-Xylene	ND		1.00	1	12/05/2018 23:45	WG1206224
m&p-Xylene	ND		2.00	1	12/05/2018 23:45	WG1206224
Xylenes, Total	ND		3.00	1	12/05/2018 23:45	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/05/2018 23:45	WG1206224
Naphthalene	ND		5.00	1	12/05/2018 23:45	WG1206224
(S) Toluene-d8	*108*		*80.0-120*		*12/05/2018 23:45*	WG1206224
(S) Dibromofluoromethane	*97.9*		*75.0-120*		*12/05/2018 23:45*	WG1206224
(S) a,a,a-Trifluorotoluene	*108*		*80.0-120*		*12/05/2018 23:45*	WG1206224
(S) 4-Bromofluorobenzene	*96.0*		*77.0-126*		*12/05/2018 23:45*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2018 00:05	WG1206224
Toluene	ND		1.00	1	12/06/2018 00:05	WG1206224
Ethylbenzene	ND		1.00	1	12/06/2018 00:05	WG1206224
o-Xylene	ND		1.00	1	12/06/2018 00:05	WG1206224
m&p-Xylene	ND		2.00	1	12/06/2018 00:05	WG1206224
Xylenes, Total	ND		3.00	1	12/06/2018 00:05	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/06/2018 00:05	WG1206224
Naphthalene	ND		5.00	1	12/06/2018 00:05	WG1206224
(S) Toluene-d8	*108*		*80.0-120*		*12/06/2018 00:05*	WG1206224
(S) Dibromofluoromethane	*90.7*		*75.0-120*		*12/06/2018 00:05*	WG1206224
(S) a,a,a-Trifluorotoluene	*121*	J1	*80.0-120*		*12/06/2018 00:05*	WG1206224
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*12/06/2018 00:05*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2018 00:24	WG1206224
Toluene	ND		1.00	1	12/06/2018 00:24	WG1206224
Ethylbenzene	ND		1.00	1	12/06/2018 00:24	WG1206224
o-Xylene	ND		1.00	1	12/06/2018 00:24	WG1206224
m&p-Xylene	ND		2.00	1	12/06/2018 00:24	WG1206224
Xylenes, Total	ND		3.00	1	12/06/2018 00:24	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/06/2018 00:24	WG1206224
Naphthalene	ND		5.00	1	12/06/2018 00:24	WG1206224
(S) Toluene-d8	*110*		*80.0-120*		*12/06/2018 00:24*	WG1206224
(S) Dibromofluoromethane	*94.4*		*75.0-120*		*12/06/2018 00:24*	WG1206224
(S) a,a,a-Trifluorotoluene	*115*		*80.0-120*		*12/06/2018 00:24*	WG1206224
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*12/06/2018 00:24*	WG1206224

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	ND		1.00	1	12/06/2018 00:44	WG1206224
Toluene	ND		1.00	1	12/06/2018 00:44	WG1206224
Ethylbenzene	ND		1.00	1	12/06/2018 00:44	WG1206224
o-Xylene	ND		1.00	1	12/06/2018 00:44	WG1206224
m&p-Xylene	ND		2.00	1	12/06/2018 00:44	WG1206224
Xylenes, Total	ND		3.00	1	12/06/2018 00:44	WG1206224
Methyl tert-butyl ether	ND		1.00	1	12/06/2018 00:44	WG1206224
Naphthalene	ND		5.00	1	12/06/2018 00:44	WG1206224
(S) Toluene-d8	*103*		*80.0-120*		*12/06/2018 00:44*	WG1206224
(S) Dibromofluoromethane	*91.2*		*75.0-120*		*12/06/2018 00:44*	WG1206224
(S) a,a,a-Trifluorotoluene	*107*		*80.0-120*		*12/06/2018 00:44*	WG1206224
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*12/06/2018 00:44*	WG1206224

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		50.0	1	12/07/2018 12:03	WG1207103
Benzene	ND		1.00	1	12/07/2018 12:03	WG1207103
Bromodichloromethane	ND		1.00	1	12/07/2018 12:03	WG1207103
Bromoform	ND		1.00	1	12/07/2018 12:03	WG1207103
Bromomethane	ND		5.00	1	12/07/2018 12:03	WG1207103
Carbon disulfide	ND		1.00	1	12/07/2018 12:03	WG1207103
Carbon tetrachloride	ND		1.00	1	12/07/2018 12:03	WG1207103
Chlorobenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
Chlorodibromomethane	ND		1.00	1	12/07/2018 12:03	WG1207103
Chloroethane	ND		5.00	1	12/07/2018 12:03	WG1207103
Chloroform	ND		5.00	1	12/07/2018 12:03	WG1207103
Chloromethane	ND		2.50	1	12/07/2018 12:03	WG1207103
1,2-Dibromo-3-Chloropropane	ND		5.00	1	12/07/2018 12:03	WG1207103
1,2-Dibromoethane	ND		1.00	1	12/07/2018 12:03	WG1207103
1,2-Dichlorobenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,3-Dichlorobenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,4-Dichlorobenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,1-Dichloroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
1,2-Dichloroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
1,1-Dichloroethene	ND		1.00	1	12/07/2018 19:34	WG1207264
cis-1,2-Dichloroethene	ND		1.00	1	12/07/2018 12:03	WG1207103
trans-1,2-Dichloroethene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,2-Dichloropropane	ND		1.00	1	12/07/2018 12:03	WG1207103
cis-1,3-Dichloropropene	ND		1.00	1	12/07/2018 12:03	WG1207103
trans-1,3-Dichloropropene	ND		1.00	1	12/07/2018 12:03	WG1207103
Di-isopropyl ether	ND		1.00	1	12/07/2018 12:03	WG1207103
Ethylbenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
2-Butanone (MEK)	ND		10.0	1	12/07/2018 12:03	WG1207103
2-Hexanone	ND		10.0	1	12/07/2018 12:03	WG1207103
Methylene Chloride	ND		5.00	1	12/07/2018 12:03	WG1207103
4-Methyl-2-pentanone (MIBK)	ND		10.0	1	12/07/2018 12:03	WG1207103
Methyl tert-butyl ether	ND		1.00	1	12/07/2018 12:03	WG1207103
Naphthalene	ND		5.00	1	12/07/2018 12:03	WG1207103
Styrene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,1,2,2-Tetrachloroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
Tetrachloroethene	ND		1.00	1	12/07/2018 12:03	WG1207103
Toluene	ND		1.00	1	12/07/2018 12:03	WG1207103
1,1,1-Trichloroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
1,1,2-Trichloroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
Trichloroethene	ND		1.00	1	12/07/2018 12:03	WG1207103
Vinyl chloride	ND		1.00	1	12/07/2018 12:03	WG1207103
o-Xylene	ND		1.00	1	12/07/2018 12:03	WG1207103
m&p-Xylene	ND		2.00	1	12/07/2018 12:03	WG1207103
Xylenes, Total	ND		3.00	1	12/07/2018 12:03	WG1207103
1,1,2-Trichlorotrifluoroethane	ND		1.00	1	12/07/2018 12:03	WG1207103
1,2,3-Trimethylbenzene	ND		1.00	1	12/07/2018 12:03	WG1207103
(S) Toluene-d8	*92.9*		*80.0-120*		*12/07/2018 12:03*	WG1207103
(S) Toluene-d8	*111*		*80.0-120*		*12/07/2018 19:34*	WG1207264
(S) Dibromofluoromethane	*102*		*75.0-120*		*12/07/2018 12:03*	WG1207103
(S) Dibromofluoromethane	*91.7*		*75.0-120*		*12/07/2018 19:34*	WG1207264
(S) a,a,a-Trifluorotoluene	*99.1*		*80.0-120*		*12/07/2018 12:03*	WG1207103
(S) a,a,a-Trifluorotoluene	*98.9*		*80.0-120*		*12/07/2018 19:34*	WG1207264
(S) 4-Bromofluorobenzene	*96.7*		*77.0-126*		*12/07/2018 12:03*	WG1207103
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*12/07/2018 19:34*	WG1207264

Method Blank (MB)

(MB) R3365960-2 12/05/18 20:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.331	1.00
Ethylbenzene	U		0.384	1.00
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Toluene	U		0.412	1.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
Xylenes, Total	U		1.06	3.00
(S) a,a,a-Trifluorotoluene	*103*			*80.0-120*
(S) Toluene-d8	*102*			*80.0-120*
(S) Dibromofluoromethane	*88.6*			*75.0-120*
(S) 4-Bromofluorobenzene	*96.0*			*77.0-126*

Laboratory Control Sample (LCS)

(LCS) R3365960-1 12/05/18 19:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	25.0	21.2	84.6	70.0-123	
Ethylbenzene	25.0	26.4	105	79.0-123	
Naphthalene	25.0	23.1	92.6	54.0-135	
Methyl tert-butyl ether	25.0	23.1	92.5	68.0-125	
o-Xylene	25.0	27.5	110	80.0-122	
m&p-Xylenes	50.0	53.5	107	80.0-122	
Toluene	25.0	24.6	98.2	79.0-120	
Xylenes, Total	75.0	81.0	108	79.0-123	
(S) a,a,a-Trifluorotoluene			*105*	*80.0-120*	
(S) Toluene-d8			*115*	*80.0-120*	
(S) Dibromofluoromethane			*94.7*	*75.0-120*	
(S) 4-Bromofluorobenzene			*99.3*	*77.0-126*	

Method Blank (MB)

(MB) R3366238-4 12/07/18 11:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
Benzene	U		0.331	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
Carbon disulfide	U		0.275	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
2-Hexanone	U		3.82	10.0
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
Styrene	U		0.307	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00

Method Blank (MB)

(MB) R3366238-4 12/07/18 11:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,3-Trimethylbenzene	U		0.321	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
o-Xylene	U		0.341	1.00
m&p-Xylenes	U		0.719	2.00
(S) a,a,a-Trifluorotoluene	*96.3*			*80.0-120*
(S) Toluene-d8	*97.1*			*80.0-120*
(S) Dibromofluoromethane	*105*			*75.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*

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

(LCS) R3366238-1 12/07/18 10:20 • (LCSD) R3366238-2 12/07/18 10:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	148	137	118	110	19.0-160			7.42	27
Benzene	25.0	26.9	23.2	108	92.8	70.0-123			14.7	20
Bromodichloromethane	25.0	25.7	23.6	103	94.6	75.0-120			8.31	20
Bromoform	25.0	24.7	24.2	99.0	96.6	68.0-132			2.39	20
Bromomethane	25.0	22.2	20.5	88.8	81.9	10.0-160			8.10	25
Carbon disulfide	25.0	26.2	21.8	105	87.4	61.0-128			18.1	20
Carbon tetrachloride	25.0	26.8	23.8	107	95.2	68.0-126			11.8	20
Chlorobenzene	25.0	25.5	22.8	102	91.3	80.0-121			11.1	20
Chlorodibromomethane	25.0	25.7	25.2	103	101	77.0-125			1.98	20
Chloroethane	25.0	29.4	25.1	117	100	47.0-150			15.7	20
Chloroform	25.0	24.1	21.4	96.2	85.6	73.0-120			11.7	20
Chloromethane	25.0	24.2	22.3	96.8	89.2	41.0-142			8.17	20
1,2-Dibromo-3-Chloropropane	25.0	23.6	23.5	94.3	94.0	58.0-134			0.344	20
1,2-Dibromoethane	25.0	25.7	24.7	103	98.9	80.0-122			4.09	20
1,2-Dichlorobenzene	25.0	25.6	24.1	102	96.5	79.0-121			5.97	20
1,3-Dichlorobenzene	25.0	26.1	23.3	104	93.2	79.0-120			11.2	20
1,4-Dichlorobenzene	25.0	23.8	21.6	95.1	86.3	79.0-120			9.73	20
1,1-Dichloroethane	25.0	26.7	23.4	107	93.7	70.0-126			13.0	20
1,2-Dichloroethane	25.0	27.9	26.2	112	105	70.0-128			6.28	20
cis-1,2-Dichloroethene	25.0	25.8	22.3	103	89.3	73.0-120			14.6	20
trans-1,2-Dichloroethene	25.0	26.5	22.6	106	90.4	73.0-120			15.7	20
1,2-Dichloropropane	25.0	27.3	24.9	109	99.6	77.0-125			9.39	20
cis-1,3-Dichloropropene	25.0	27.0	25.3	108	101	80.0-123			6.33	20
trans-1,3-Dichloropropene	25.0	27.0	25.8	108	103	78.0-124			4.71	20

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

(LCS) R3366238-1 12/07/18 10:20 • (LCSD) R3366238-2 12/07/18 10:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Di-isopropyl ether	25.0	27.8	25.1	111	100	58.0-138			10.1	20
Ethylbenzene	25.0	25.6	22.5	102	89.9	79.0-123			12.8	20
2-Hexanone	125	127	126	101	101	67.0-149			0.595	20
2-Butanone (MEK)	125	142	138	113	110	44.0-160			2.92	20
Methylene Chloride	25.0	25.1	22.1	100	88.6	67.0-120			12.4	20
4-Methyl-2-pentanone (MIBK)	125	137	135	109	108	68.0-142			0.995	20
Methyl tert-butyl ether	25.0	26.4	24.2	106	96.9	68.0-125			8.64	20
Naphthalene	25.0	21.3	21.3	85.2	85.1	54.0-135			0.0438	20
Styrene	25.0	27.1	25.2	109	101	73.0-130			7.22	20
1,1,2,2-Tetrachloroethane	25.0	24.8	23.9	99.1	95.6	65.0-130			3.54	20
Tetrachloroethene	25.0	26.3	23.5	105	94.1	72.0-132			11.3	20
Toluene	25.0	24.1	21.7	96.5	86.7	79.0-120			10.8	20
1,1,2-Trichlorotrifluoroethane	25.0	28.8	24.0	115	96.1	69.0-132			18.1	20
1,1,1-Trichloroethane	25.0	27.2	23.2	109	92.8	73.0-124			16.0	20
1,1,2-Trichloroethane	25.0	24.2	24.3	96.8	97.1	80.0-120			0.318	20
Trichloroethene	25.0	27.2	23.8	109	95.4	78.0-124			13.0	20
1,2,3-Trimethylbenzene	25.0	25.3	23.1	101	92.5	77.0-120			8.96	20
Vinyl chloride	25.0	28.1	23.4	113	93.5	67.0-131			18.5	20
Xylenes, Total	75.0	75.9	68.3	101	91.1	79.0-123			10.5	20
o-Xylene	25.0	25.1	23.1	100	92.3	80.0-122			8.52	20
m&p-Xylenes	50.0	50.8	45.2	102	90.3	80.0-122			11.8	20
(S) a,a,a-Trifluorotoluene				*99.3*	*101*	*80.0-120*				
(S) Toluene-d8				*93.7*	*95.1*	*80.0-120*				
(S) Dibromofluoromethane				*99.8*	*97.7*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*101*	*77.0-126*				

Method Blank (MB)

(MB) R3366472-3 12/07/18 11:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,1-Dichloroethene	U		0.398	1.00
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*96.3*			*75.0-120*
(S) a,a,a-Trifluorotoluene	*97.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*

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

(LCS) R3366472-1 12/07/18 09:43 • (LCSD) R3366472-2 12/07/18 10:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
1,1-Dichloroethene	25.0	22.7	22.1	90.9	88.5	71.0-124			2.64	20
(S) Toluene-d8				*103*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*93.3*	*91.7*	*75.0-120*				
(S) a,a,a-Trifluorotoluene				*98.3*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.5*	*102*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

Pace National 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.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

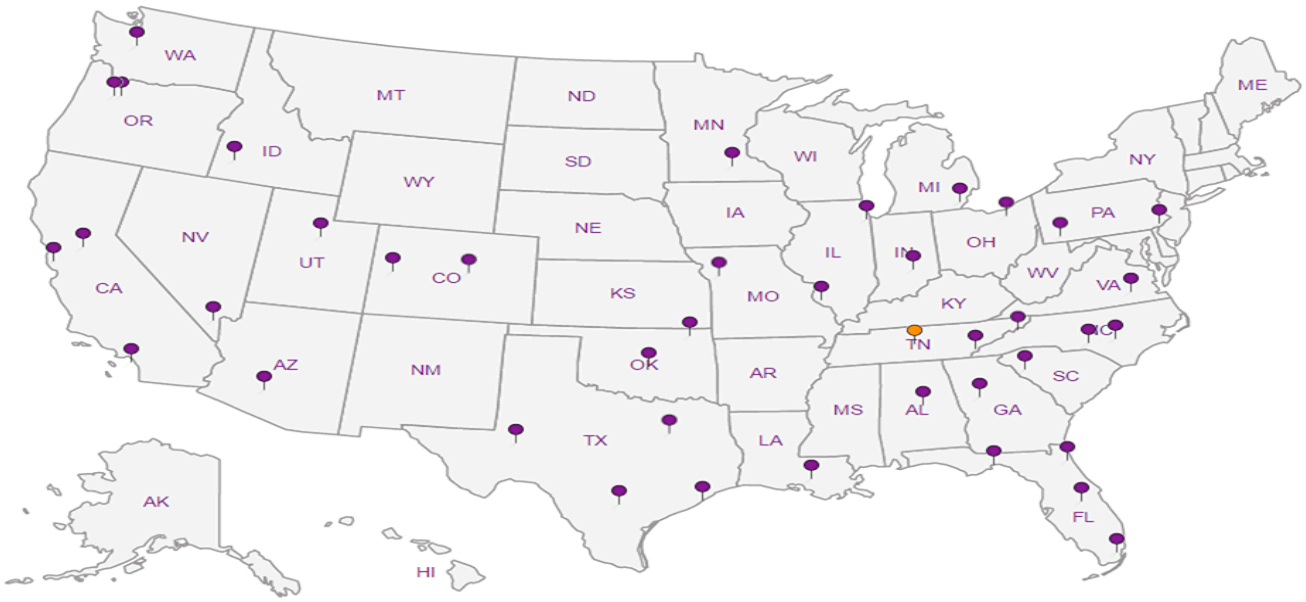
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National 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. Pace National performs all testing at our central laboratory.



Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Surface Water

City/State Collected: Belton, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): Melissa Warren

Site/Facility ID # Lewis Drive

P.O. #

Collected by (signature): M Warren

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Pres Chk: X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Remarks	Sample # (lab only)
SW-11-120418	grab	GW	N/A	12/04/18	1325	3	X			-01
SW-10-120418		GW			1335	3	X			-02
SW-09-120418		GW			1355	3	X			-03
SW-08-120418		GW			1400	3	X			-04
SW-13-120418		GW			1410	3	X			-05
SW-02-120418		GW			1430	3	X			-06
SW-01-120418		GW			1440	3	X			-07
SW-07-120418		GW			1455	3	X			-08
SW-14-120418		GW			1505	3	X			-09
SW-05-120418		GW			1530	3	X			-10

Chain of Custody Page 1 of 2

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1050020

B145

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P682252
TSR: 526 - Chris McCord
PB: 11-29-18

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 499262251920

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Melissa Warren	12/5/18	1700			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2° °C 0.7 0.5 Bottles Received: 40	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/5/18 Time: 0900	Hold: / Condition: NCF / OK

Kinder Morgan- Atlanta, GA

6600 Peachtree Dunwoody Road
400 Embassy Row - Suite 600
Atlanta, GA 30328

Billing Information:
Accounts Payable
1000 Windward Concourse
Ste 450
Alpharetta, GA 30005

Report to: Bethany Garvey

Email To: bethany.garvey@jacobs.com; tom.wiley@jacobs.com

Project Description: Lewis Drive Surface Water

City/State Collected: Belton, SC

Phone: 770-604-9182
Fax:

Client Project # 699858CH.LD.MR.SW

Lab Project # KINCH2MGA-LEWIS

Collected by (print): Melissa Warren

Site/Facility ID # Lewis Drive

P.O. #

Collected by (signature): M Warren

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 2 of 2

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L #

Table #

Acctnum: KINCH2MGA
Template: T130279
Prelogin: P682252
TSR: 526 - Chris McCord
PB: 11-29-18

Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260BTEXNSC 40mlAmb-HCl	V8260TCLSC-TB 40mlAmb-NoPres-Blk	Pres Chk	Remarks	Sample # (lab only)
SW-03-120418	Grab	GW	N/A	12/04/18	1540	3	X				-11
SW-12-120418	"	GW	"	"	1550	3	X				-12
SW-04-120418	"	GW	"	"	1555	3	X				-13
		GW				3	X				-14
		GW				3	X				-15
TB-01-120418		GW			1600	1		X			74

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

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

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y __N
COC Signed/Accurate: Y __N
Bottles arrive intact: Y __N
Correct bottles used: Y __N
Sufficient volume sent: Y __N
If Applicable
VOA Zero Headspace: Y __N
Preservation Correct/Checked: __Y __N
PAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Melissa Warren	12/5/18	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: -0.2°C Bottles Received: 0.7 0.5	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Appendix C
Operation and Maintenance Logs

7/2/18 1030

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/2/18 1030	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	YES	YES
Air Compressor 1 Run Time	(hours)	NA	NA	8876	8876
Air Compressor 1 Load Time	(hours)	NA	NA	6175	6175
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	182
Air Compressor 1 Pressure	(psig)	90 - 110	100	62	62
Air Compressor 2 Run Time	(hours)	NA	NA	6846	6846
Air Compressor 2 Load Time	(hours)	NA	NA	5806.5	5806.5
Air Compressor 2 Temp	(F)	60 - 100	110	189	189
Air Compressor 2 Pressure	(psig)	90 - 110	100	63	63
Receiver Tank Pressure	(psig)	90 - 110	100	70	70
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	60	60
Manifold Temperature	(F)	60 - 100	110	100	100
Manifold Flow Rate	(scfm)	TBD	TBD	1794	1794
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	525
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.1	522.1
HAS-1 Valve Position	(%)	TBD	TBD	70.9	70.9
HAS-1 Pressure	(psig)	10 - 20	30	28	28
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	502
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.7	502.7
HAS-2 Valve Position	(%)	TBD	TBD	33.9	33.9
HAS-2 Pressure	(psig)	10 - 20	30	29	29
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	262.5
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	258.2	258.2
HAS-3 Valve Position	(%)	TBD	TBD	28.2	28.2
HAS-3 Pressure	(psig)	10 - 20	30	20	20

Parts Needed:	
Parts Installed:	

Notes (Include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 5 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
			Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

No wells were operational when data was collected on 7/2/18

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Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 Lewis Drive, Belton, South Carolina
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
~~6/11/18~~ 7/24/18	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		8.6
VAS-18 Pressure	(psig)	10 - 20	30		0
VAS-19 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-19 Pressure	(psig)	10 - 20	30		6
VAS-20 Flow Rate	(scfm)	TBD	TBD		5.3
VAS-20 Pressure	(psig)	10 - 20	30		24
VAS-21 Flow Rate	(scfm)	TBD	TBD		6.4
VAS-21 Pressure	(psig)	10 - 20	30		22
VAS-22 Flow Rate	(scfm)	TBD	TBD		9.4
VAS-22 Pressure	(psig)	10 - 20	30		24
VAS-23 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-23 Pressure	(psig)	10 - 20	30		20
VAS-24 Flow Rate	(scfm)	TBD	TBD		6.7
VAS-24 Pressure	(psig)	10 - 20	30		24
VAS-25 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-25 Pressure	(psig)	10 - 20	30		22
VAS-26 Flow Rate	(scfm)	TBD	TBD		7.8
VAS-26 Pressure	(psig)	10 - 20	30		32
VAS-27 Flow Rate	(scfm)	TBD	TBD		8.0
VAS-27 Pressure	(psig)	10 - 20	30		32
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.1
VAS-28 Pressure	(psig)	10 - 20	30		15
VAS-29 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-29 Pressure	(psig)	10 - 20	30		12
VAS-30 Flow Rate	(scfm)	TBD	TBD		11.0
VAS-30 Pressure	(psig)	10 - 20	30		6
VAS-31 Flow Rate	(scfm)	TBD	TBD		9.3
VAS-31 Pressure	(psig)	10 - 20	30		28
VAS-32 Flow Rate	(scfm)	TBD	TBD		10.0
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		11.8
VAS-33 Pressure	(psig)	10 - 20	30		28
VAS-34 Flow Rate	(scfm)	TBD	TBD		6.9
VAS-34 Pressure	(psig)	10 - 20	30		20

7/2/18 1030

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/2/18 1030	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		6.0
VAS-35 Pressure	(psig)	10 - 20	30		24
VAS-36 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-36 Pressure	(psig)	10 - 20	30		18
VAS-37 Flow Rate	(scfm)	TBD	TBD		10.7
VAS-37 Pressure	(psig)	10 - 20	30		10
VAS-38 Flow Rate	(scfm)	TBD	TBD		10.2
VAS-38 Pressure	(psig)	10 - 20	30		10
VAS-39 Flow Rate	(scfm)	TBD	TBD		8.5
VAS-39 Pressure	(psig)	10 - 20	30		15
VAS-40 Flow Rate	(scfm)	TBD	TBD		4.8
VAS-40 Pressure	(psig)	10 - 20	30		28
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		9.6
VAS-42 Pressure	(psig)	10 - 20	30		15
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		9.7
VAS-45 Pressure	(psig)	10 - 20	30		18
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		14.3
BCA-01 Pressure	(psig)	0 - 5	5		18
BCA-02 Flow Rate	(scfm)	TBD	TBD		13.9
BCA-02 Pressure	(psig)	0 - 5	5		18
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
			Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired / Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		
Activate and inspect condition of receiver auto drain	Each visit	Yes / No	Yes / No		
...	...				
...	...				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired / Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Maintenance was not performed during visit on 7/2/18

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/18/1050	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SC3100102469 Air Permit Exempt

~~Exterior~~ Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	YES	
Air Compressor 1 Run Time	(hours)	NA	NA	9044	
Air Compressor 1 Load Time	(hours)	NA	NA	6343.5	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	73	
Air Compressor 2 Run Time	(hours)	NA	NA	7014.5	
Air Compressor 2 Load Time	(hours)	NA	NA	5975	
Air Compressor 2 Temp	(F)	60 - 100	110	189	
Air Compressor 2 Pressure	(psig)	90 - 110	100	74	
Receiver Tank Pressure	(psig)	90 - 110	100	82	
Receiver Tank Temperature	(F)	60 - 100	110	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	70	
Manifold Temperature	(F)	60 - 100	110	100	
Manifold Flow Rate	(scfm)	TBD	TBD	1805	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.8	
HAS-1 Valve Position	(%)	TBD	TBD	74.3	
HAS-1 Pressure	(psig)	10 - 20	30	27	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.9	
HAS-2 Valve Position	(%)	TBD	TBD	34.9	
HAS-2 Pressure	(psig)	10 - 20	30	29	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	265.4	
HAS-3 Valve Position	(%)	TBD	TBD	28.6	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/18/1050	T. HALLIGAN		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate SCHE0102049 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-01 Pressure	(psig)	10 - 20	30	22	
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD	13.8	
VAS-13 Pressure	(psig)	10 - 20	30	15	
VAS-14 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	14.6	
VAS-15 Pressure	(psig)	10 - 20	30	10	
VAS-16 Flow Rate	(scfm)	TBD	TBD	14.2	
VAS-16 Pressure	(psig)	10 - 20	30	18	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-17 Pressure	(psig)	10 - 20	30	8	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 Lewis Drive, Belton, South Carolina
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/9/13/1050	T. HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20 200 Beko Qwik Pure 350	

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-19 Pressure	(psig)	10 - 20	30	6	
VAS-20 Flow Rate	(scfm)	TBD	TBD	6.2	
VAS-20 Pressure	(psig)	10 - 20	30	22	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	8.6	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	3.9	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-27 Pressure	(psig)	10 - 20	30	30	
VAS-28 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-28 Pressure	(psig)	10 - 20	30	15	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-29 Pressure	(psig)	10 - 20	30	13	
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-30 Pressure	(psig)	10 - 20	30	8	
VAS-31 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-31 Pressure	(psig)	10 - 20	30	28	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	13.1	
VAS-33 Pressure	(psig)	10 - 20	30	20	
VAS-34 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	6.0	
VAS-35 Pressure	(psig)	10 - 20	30	24	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-36 Pressure	(psig)	10 - 20	30	18	
VAS-37 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-38 Pressure	(psig)	10 - 20	30	10	
VAS-39 Flow Rate	(scfm)	TBD	TBD	8.8	
VAS-39 Pressure	(psig)	10 - 20	30	15	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.8	
VAS-40 Pressure	(psig)	10 - 20	30	28	
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-42 Pressure	(psig)	10 - 20	30	15	
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.5	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.1	
BCA-02 Pressure	(psig)	0 - 5	5	20	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

7/9/18 1050 T.HALE/CVL

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
			Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired / Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		
Activate and inspect condition of receiver auto drain	Each visit	Yes / No	Yes / No		
...	...				
...	...				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired / Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Maintenance was not performed during visit on 7/9/18

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	yes	
Air Compressor 1 Run Time	(hours)	NA	NA	9213:44	
Air Compressor 1 Load Time	(hours)	NA	NA	6513:12	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	186	
Air Compressor 1 Pressure	(psig)	90 - 110	100	98	
Air Compressor 2 Run Time	(hours)	NA	NA	7184:3	
Air Compressor 2 Load Time	(hours)	NA	NA	6144:32	
Air Compressor 2 Temp	(F)	60 - 100	110	199	
Air Compressor 2 Pressure	(psig)	90 - 110	100	100	
Receiver Tank Pressure	(psig)	90 - 110	100	110	
Receiver Tank Temperature	(F)	60 - 100	110	—	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	
Manifold Temperature	(F)	60 - 100	110	108	
Manifold Flow Rate	(scfm)	TBD	TBD	1758	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	519.3	
HAS-1 Valve Position	(%)	TBD	TBD	76.4	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	498.4	
HAS-2 Valve Position	(%)	TBD	TBD	44.9	
HAS-2 Pressure	(psig)	10 - 20	30	26	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	260.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.9	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-05 Pressure	(psig)	10 - 20	30	7	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-07 Pressure	(psig)	10 - 20	30	19	
VAS-08 Flow Rate	(scfm)	TBD	TBD	13.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-09 Pressure	(psig)	10 - 20	30	8	
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1206	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	16.0	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	12.2	
VAS-33 Pressure	(psig)	10 - 20	30	19	
VAS-34 Flow Rate	(scfm)	TBD	TBD	7	
VAS-34 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/16/2018 1200	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-43 Pressure	(psig)	10 - 20	30	32	
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.2	
VAS-44 Pressure	(psig)	10 - 20	30	34	
VAS-45 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	15.0	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.8	
BCA-02 Pressure	(psig)	0 - 5	5	19	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
7/16/2018 1200	Scott Snider	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
…	…				
…	…				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired/Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

- clean air compressor inlet filters
- inspect / test water in condensate drums. clear / ok
- spray compound for weeds
- replaced locks on KS12 and RW03

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 1236	Scott Powell	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	
Air Compressor 1 Run Time	(hours)	NA	NA	9405:57	
Air Compressor 1 Load Time	(hours)	NA	NA	6705:24	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	185	
Air Compressor 1 Pressure	(psig)	90 - 110	100	102	
Air Compressor 2 Run Time	(hours)	NA	NA	7376:25	
Air Compressor 2 Load Time	(hours)	NA	NA	6336:44	
Air Compressor 2 Temp	(F)	60 - 100	110	194	
Air Compressor 2 Pressure	(psig)	90 - 110	100	163	
Receiver Tank Pressure	(psig)	90 - 110	100	110	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	100	
Manifold Temperature	(F)	60 - 100	110	164	
Manifold Flow Rate	(scfm)	TBD	TBD	1744	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	522.5	
HAS-1 Valve Position	(%)	TBD	TBD	75.9	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.6	
HAS-2 Valve Position	(%)	TBD	TBD	45.5	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	270.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.0	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-08 Pressure	(psig)	10 - 20	30	20	
VAS-09 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 1230	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-22 Pressure	(psig)	10 - 20	30	22	
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-24 Pressure	(psig)	10 - 20	30	25	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-33 Pressure	(psig)	10 - 20	30	17	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
7/24/2018 1230	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.0	
VAS-43 Pressure	(psig)	10 - 20	30	35	
VAS-44 Flow Rate	(scfm)	TBD	TBD	4.5	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.9	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.7	
BCA-02 Pressure	(psig)	0 - 5	5	19	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	**Biosparging Operation and Maintenance Maintenance Log** *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
7/24/2018 1220	Scott Shiloh	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
…	…				
…	…				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/2018 1010	Scott Smith	←	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	yes	
Air Compressor 1 Run Time	(hours)	NA	NA	9595:15	
Air Compressor 1 Load Time	(hours)	NA	NA	6894:42	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	
Air Compressor 1 Pressure	(psig)	90 - 110	100	88	
Air Compressor 2 Run Time	(hours)	NA	NA	7565:43	
Air Compressor 2 Load Time	(hours)	NA	NA	6526:02	
Air Compressor 2 Temp	(F)	60 - 100	110	187	
Air Compressor 2 Pressure	(psig)	90 - 110	100	89	
Receiver Tank Pressure	(psig)	90 - 110	100	98	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	98	
Manifold Temperature	(F)	60 - 100	110	98	
Manifold Flow Rate	(scfm)	TBD	TBD	1775	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	546.1	
HAS-1 Valve Position	(%)	TBD	TBD	67.8	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Valve Position	(%)	TBD	TBD	37.9	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	285.3	
HAS-3 Valve Position	(%)	TBD	TBD	26.7	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

→ All vertical wells were adjusted to ~10 SCFM after data collection unless pressures already high before adjustment. If SCFM a bit higher than 10 SCFM target but relatively low pressure, flow left as is.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/2018 1010	Scott Gwaltney		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	16.0	
VAS-01 Pressure	(psig)	10 - 20	30	22	
VAS-02 Flow Rate	(scfm)	TBD	TBD	4.2	
VAS-02 Pressure	(psig)	10 - 20	30	36	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-03 Pressure	(psig)	10 - 20	30	11	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-04 Pressure	(psig)	10 - 20	30	4	
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-11 Pressure	(psig)	10 - 20	30	21	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-12 Pressure	(psig)	10 - 20	30	14	
VAS-13 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-13 Pressure	(psig)	10 - 20	30	12	
VAS-14 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-15 Pressure	(psig)	10 - 20	30	8	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-16 Pressure	(psig)	10 - 20	30	12	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-17 Pressure	(psig)	10 - 20	30	10	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/18 1010	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-18 Pressure	(psig)	10 - 20	30	1	
VAS-19 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	7.2	
VAS-20 Pressure	(psig)	10 - 20	30	26	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-21 Pressure	(psig)	10 - 20	30	23	
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-22 Pressure	(psig)	10 - 20	30	22	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	7.3	
VAS-26 Pressure	(psig)	10 - 20	30	26	
VAS-27 Flow Rate	(scfm)	TBD	TBD	3.8	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	7.1	
VAS-28 Pressure	(psig)	10 - 20	30	32	
VAS-29 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-30 Pressure	(psig)	10 - 20	30	12	
VAS-31 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-31 Pressure	(psig)	10 - 20	30	8	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-32 Pressure	(psig)	10 - 20	30	30	
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-34 Pressure	(psig)	10 - 20	30	18	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/1/16 1010	Scott Sm 16	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.4	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.2	
BCA-02 Pressure	(psig)	0 - 5	5	20	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	**Biosparging Operation and Maintenance Maintenance Log** *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/1/2018 1010	Scott Powell	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	Yes / No	Yes / No		
…	…				
…	…				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	
Air Compressor 1 Run Time	(hours)	NA	NA	9736:20	
Air Compressor 1 Load Time	(hours)	NA	NA	7035.46	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	183	
Air Compressor 1 Pressure	(psig)	90 - 110	100	107	
Air Compressor 2 Run Time	(hours)	NA	NA	7706.49	
Air Compressor 2 Load Time	(hours)	NA	NA	6667:07	
Air Compressor 2 Temp	(F)	60 - 100	110	191	
Air Compressor 2 Pressure	(psig)	90 - 110	100	107	
Receiver Tank Pressure	(psig)	90 - 110	100	112	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	
Manifold Temperature	(F)	60 - 100	110	108	
Manifold Flow Rate	(scfm)	TBD	TBD	1725	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	519.9	
HAS-1 Valve Position	(%)	TBD	TBD	77.4	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	501.3	
HAS-2 Valve Position	(%)	TBD	TBD	51.0	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	262.7	
HAS-3 Valve Position	(%)	TBD	TBD	27.6	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	Scott Snider	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-05 Pressure	(psig)	10 - 20	30	7	
VAS-06 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-06 Pressure	(psig)	10 - 20	30	10	
VAS-07 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	9.0	
VAS-23 Pressure	(psig)	10 - 20	30	20	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.4	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/7/2018 0845	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	5.0	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	4.8	
VAS-44 Pressure	(psig)	10 - 20	30	34	
VAS-45 Flow Rate	(scfm)	TBD	TBD	16.0	
VAS-45 Pressure	(psig)	10 - 20	30	17	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.8	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.6	
BCA-02 Pressure	(psig)	0 - 5	5	19	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/7/2018 0845	Scott Shuloa	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired/Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

→ Clean AC inlet air filters w/ onsite water

→ drain sump tank containment after confirming that storm water not impacted by petroleum. No odor, No sheen.

→ Inspect condensate drain water from oil/water separators, find OK. None greasy/oily feel. Clear water.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/2018 0930	Scott Shuler		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	
Air Compressor 1 Run Time	(hours)	NA	NA	9881:07	
Air Compressor 1 Load Time	(hours)	NA	NA	7180:33	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	51	
Air Compressor 2 Run Time	(hours)	NA	NA	7851:34	
Air Compressor 2 Load Time	(hours)	NA	NA	6811:52	
Air Compressor 2 Temp	(F)	60 - 100	110	186	
Air Compressor 2 Pressure	(psig)	90 - 110	100	55	
Receiver Tank Pressure	(psig)	90 - 110	100	60	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	48	
Manifold Temperature	(F)	60 - 100	110	98	
Manifold Flow Rate	(scfm)	TBD	TBD	1793	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.6	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	547.6	
HAS-1 Valve Position	(%)	TBD	TBD	1.7	
HAS-1 Pressure	(psig)	10 - 20	30	26	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.1	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	503.1	
HAS-2 Valve Position	(%)	TBD	TBD	30.1	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	253.1	
HAS-3 Valve Position	(%)	TBD	TBD	29.7	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/2018 0930	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-01 Pressure	(psig)	10 - 20	30	19	
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.9	
VAS-02 Pressure	(psig)	10 - 20	30	28	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	—	
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-11 Pressure	(psig)	10 - 20	30	25	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-12 Pressure	(psig)	10 - 20	30	14	
VAS-13 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-13 Pressure	(psig)	10 - 20	30	12	
VAS-14 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-15 Pressure	(psig)	10 - 20	30	10	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.9	
VAS-16 Pressure	(psig)	10 - 20	30	14	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-17 Pressure	(psig)	10 - 20	30	18	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/18 0932	SCOTT SMITH	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	7.4	
VAS-20 Pressure	(psig)	10 - 20	30	20	
VAS-21 Flow Rate	(scfm)	TBD	TBD	6.7	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.0	
VAS-25 Pressure	(psig)	10 - 20	30	24	
VAS-26 Flow Rate	(scfm)	TBD	TBD	3.4	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-27 Pressure	(psig)	10 - 20	30	33	
VAS-28 Flow Rate	(scfm)	TBD	TBD	8.9	
VAS-28 Pressure	(psig)	10 - 20	30	17	
VAS-29 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-30 Pressure	(psig)	10 - 20	30	10	
VAS-31 Flow Rate	(scfm)	TBD	TBD	8.1	
VAS-31 Pressure	(psig)	10 - 20	30	30	
VAS-32 Flow Rate	(scfm)	TBD	TBD	16.3	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-33 Pressure	(psig)	10 - 20	30	19	
VAS-34 Flow Rate	(scfm)	TBD	TBD	16.5	
VAS-34 Pressure	(psig)	10 - 20	30	21	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/13/18 0930	Scott Gamble	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.3	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.1	
BCA-02 Pressure	(psig)	0 - 5	5	19	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/13/2018 0930	Scott Snider	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	Yes / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / No	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	Yes / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	Yes / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	Yes / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	Yes / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

→ Inspect / test clarity of condensate water, find ok.
→ Find VAS 02 flow low but psi high and unable to adjust. Inspect area around VAS02, find no observable issues.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2018 1130	SCOTT SMIDA	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	
Air Compressor 1 Run Time	(hours)	NA	NA	10075:03	
Air Compressor 1 Load Time	(hours)	NA	NA	7374:30	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	181	
Air Compressor 1 Pressure	(psig)	90 - 110	100	47	
Air Compressor 2 Run Time	(hours)	NA	NA	8045:31	
Air Compressor 2 Load Time	(hours)	NA	NA	7005:49	
Air Compressor 2 Temp	(F)	60 - 100	110	184	
Air Compressor 2 Pressure	(psig)	90 - 110	100	48	
Receiver Tank Pressure	(psig)	90 - 110	100	55	
Receiver Tank Temperature	(F)	60 - 100	110	N/A	
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	44	
Manifold Temperature	(F)	60 - 100	110	90	
Manifold Flow Rate	(scfm)	TBD	TBD	1766	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525.0	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	521.1	
HAS-1 Valve Position	(%)	TBD	TBD	68.7	
HAS-1 Pressure	(psig)	10 - 20	30	25	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502.0	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	504.1	
HAS-2 Valve Position	(%)	TBD	TBD	30.0	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	251.5	
HAS-3 Valve Position	(%)	TBD	TBD	28.1	
HAS-3 Pressure	(psig)	10 - 20	30	20	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/18 1130	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	8.8	
VAS-01 Pressure	(psig)	10 - 20	30	20	
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.6	
VAS-02 Pressure	(psig)	10 - 20	30	29	
VAS-03 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-04 Pressure	(psig)	10 - 20	30	3	
VAS-05 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-06 Pressure	(psig)	10 - 20	30	9	
VAS-07 Flow Rate	(scfm)	TBD	TBD	9.3	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-09 Pressure	(psig)	10 - 20	30	9	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-10 Pressure	(psig)	10 - 20	30	8	
VAS-11 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-11 Pressure	(psig)	10 - 20	30	14	
VAS-12 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-12 Pressure	(psig)	10 - 20	30	15	
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2019 1,36	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-24 Pressure	(psig)	10 - 20	30	23	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-32 Pressure	(psig)	10 - 20	30	17	
VAS-33 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	9.5	
VAS-34 Pressure	(psig)	10 - 20	30	20	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/21/2018 1130	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-35 Pressure	(psig)	10 - 20	30	23	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.3	
VAS-36 Pressure	(psig)	10 - 20	30	17	
VAS-37 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.1	
VAS-39 Pressure	(psig)	10 - 20	30	18	
VAS-40 Flow Rate	(scfm)	TBD	TBD	5.6	
VAS-40 Pressure	(psig)	10 - 20	30	25	
VAS-41 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-41 Pressure	(psig)	20-Oct	30	10	
VAS-42 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	4.1	
VAS-43 Pressure	(psig)	10 - 20	30	32	
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.6	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-45 Pressure	(psig)	10 - 20	30	16	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	12.9	
BCA-01 Pressure	(psig)	0 - 5	5	18	
BCA-02 Flow Rate	(scfm)	TBD	TBD	12.6	
BCA-02 Pressure	(psig)	0 - 5	5	17	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/21/2018 1130	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired/Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	~~Yes / No~~	~~Yes / No~~		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	~~Yes / No~~		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	~~Yes / No~~		
Calibrate EAD	Annually	(Yes) / No	Yes / No	11/2018	

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

→ cleaned compressor inlet filters
→ drained secondary containment
→ placed new non-hazy labels on storage tanks
→ check condensate water, found ok.

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18-1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	YES	
Air Compressor 1 Run Time	(hours)	NA	NA	10,221	
Air Compressor 1 Load Time	(hours)	NA	NA	7,521	
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	186°F	
Air Compressor 1 Pressure	(psig)	90 - 110	100	91	
Air Compressor 2 Run Time	(hours)	NA	NA	8192	
Air Compressor 2 Load Time	(hours)	NA	NA	7152	
Air Compressor 2 Temp	(F)	60 - 100	110	201°F	
Air Compressor 2 Pressure	(psig)	90 - 110	100	94	
Receiver Tank Pressure	(psig)	90 - 110	100	102	
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	92	
Manifold Temperature	(F)	60 - 100	110	110°F	
Manifold Flow Rate	(scfm)	TBD	TBD	1784	
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	525	
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	523.7	
HAS-1 Valve Position	(%)	TBD	TBD	68.8	
HAS-1 Pressure	(psig)	10 - 20	30	25	
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	502	
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	500.1	
HAS-2 Valve Position	(%)	TBD	TBD	39.7	
HAS-2 Pressure	(psig)	10 - 20	30	28	
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	262.5	
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	269.9	
HAS-3 Valve Position	(%)	TBD	TBD	29.8	
HAS-3 Pressure	(psig)	10 - 20	30	19	

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 - 1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCIIF03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD	12.5	
VAS-13 Pressure	(psig)	10 - 20	30	11	
VAS-14 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-15 Pressure	(psig)	10 - 20	30	8	
VAS-16 Flow Rate	(scfm)	TBD	TBD	13.5	
VAS-16 Pressure	(psig)	10 - 20	30	15	
VAS-17 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-17 Pressure	(psig)	10 - 20	30	4	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 1400	T. Wall		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	9.8	
VAS-18 Pressure	(psig)	10 - 20	30	0	
VAS-19 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-19 Pressure	(psig)	10 - 20	30	4	
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-23 Pressure	(psig)	10 - 20	30	22	
VAS-24 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.1	
VAS-34 Pressure	(psig)	10 - 20	30	21	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
8/27/18 1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE.0302046.9 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-35 Pressure	(psig)	10 - 20	30	26	
VAS-36 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-36 Pressure	(psig)	10 - 20	30	20	
VAS-37 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	12.2	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-39 Pressure	(psig)	10 - 20	30	10	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.7	
VAS-40 Pressure	(psig)	10 - 20	30	29	
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.7	
VAS-42 Pressure	(psig)	10 - 20	30	12	
VAS-43 Flow Rate	(scfm)	TBD	TBD		
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD	10.5	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.5	
BCA-01 Pressure	(psig)	0 - 5	5	18	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.2	
BCA-02 Pressure	(psig)	0 - 5	5	18	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log Lewis Drive, Belton, South Carolina
Lewis Drive	Belton, SC	Bill Waldron/PAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
8/27/18/1400	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Bekg Cyclic Prime 350	UIC Permit To Operate: SCR9B1003465 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / (No)		
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / (No)		NO AIR MONITOR
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / (No)		
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Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / (No)		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / (No)		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / (No)		
Coordinate with Airtie to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / (No)		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	(Yes) / No	Yes / (No)		
Test relief valve on receiver tank for proper operation.	Annually	(Yes) / No	Yes / (No)		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/PAL	Scott Powell/ATL	Lewis Drive, Belton, South Carolina

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 / 1100	T. HALL		Air Compressors Condensate Treatment	Sullair 15-20-200 Baker Tank Pump 350	[illegible]

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	YES	YES
Air Compressor 1 Run Time	(hours)	NA	NA	10,410.5	[illegible] 10/4/12,17
Air Compressor 1 Load Time	(hours)	NA	NA	7,594.4	7,594.4
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	185
Air Compressor 1 Pressure	(psig)	90 - 110	100	111	113
Air Compressor 2 Run Time	(hours)	NA	NA	8,381.4	8382.53
Air Compressor 2 Load Time	(hours)	NA	NA	7,266.6	7268.07
Air Compressor 2 Temp	(F)	60 - 100	110	196	195
Air Compressor 2 Pressure	(psig)	90 - 110	100	113	113
Receiver Tank Pressure	(psig)	90 - 110	100	120	124
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	118	118
Manifold Temperature	(F)	60 - 100	110	100	102
Manifold Flow Rate	(scfm)	TBD	TBD	725	796
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	108.8	154.9
HAS-1 Valve Position	(%)	TBD	TBD	41.8	43.5
HAS-1 Pressure	(psig)	10 - 20	30	12	15
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	101.3	149.1
HAS-2 Valve Position	(%)	TBD	TBD	7.4	10.0
HAS-2 Pressure	(psig)	10 - 20	30	8	10
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	100	150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	98.2	154.8
HAS-3 Valve Position	(%)	TBD	TBD	22.3	25.7
HAS-3 Pressure	(psig)	10 - 20	30	18	20

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 1100	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD	8.3	8.5
VAS-01 Pressure	(psig)	10 - 20	30	21	20
VAS-02 Flow Rate	(scfm)	TBD	TBD	2.1	
VAS-02 Pressure	(psig)	10 - 20	30	28	
VAS-03 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-03 Pressure	(psig)	10 - 20	30	10	
VAS-04 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-04 Pressure	(psig)	10 - 20	30	1	
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.8	10.7
VAS-05 Pressure	(psig)	10 - 20	30	6	6
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.6	10.3
VAS-06 Pressure	(psig)	10 - 20	30	8	10
VAS-07 Flow Rate	(scfm)	TBD	TBD	11.0	11.6
VAS-07 Pressure	(psig)	10 - 20	30	20	20
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.6	11.4
VAS-08 Pressure	(psig)	10 - 20	30	22	20
VAS-09 Flow Rate	(scfm)	TBD	TBD	10.9	10.7
VAS-09 Pressure	(psig)	10 - 20	30	8	10
VAS-10 Flow Rate	(scfm)	TBD	TBD	11.0	11.1
VAS-10 Pressure	(psig)	10 - 20	30	10	10
VAS-11 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-11 Pressure	(psig)	10 - 20	30	23	
VAS-12 Flow Rate	(scfm)	TBD	TBD	8.3	
VAS-12 Pressure	(psig)	10 - 20	30	18	
VAS-13 Flow Rate	(scfm)	TBD	TBD	14.1	13.9
VAS-13 Pressure	(psig)	10 - 20	30	12	12
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD	15.7	15.7
VAS-16 Pressure	(psig)	10 - 20	30	15	15
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18/1100	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	12.2	12.3
VAS-22 Pressure	(psig)	10 - 20	30	24	24
VAS-23 Flow Rate	(scfm)	TBD	TBD	13.4	13.3
VAS-23 Pressure	(psig)	10 - 20	30	22	22
VAS-24 Flow Rate	(scfm)	TBD	TBD	13.6	13.6
VAS-24 Pressure	(psig)	10 - 20	30	27	28
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30		
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	12.1	12.2
VAS-32 Pressure	(psig)	10 - 20	30	17	17
VAS-33 Flow Rate	(scfm)	TBD	TBD	13.2	13.0
VAS-33 Pressure	(psig)	10 - 20	30	20	20
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.9	12
VAS-34 Pressure	(psig)	10 - 20	30	22	22

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/4/18 / 1100	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	14.6	
VAS-35 Pressure	(psig)	10 - 20	30	24	
VAS-36 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-36 Pressure	(psig)	10 - 20	30	10	
VAS-37 Flow Rate	(scfm)	TBD	TBD	12.1	
VAS-37 Pressure	(psig)	10 - 20	30	10	
VAS-38 Flow Rate	(scfm)	TBD	TBD	11.6	
VAS-38 Pressure	(psig)	10 - 20	30	11	
VAS-39 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-39 Pressure	(psig)	10 - 20	30	16	
VAS-40 Flow Rate	(scfm)	TBD	TBD	6.7	
VAS-40 Pressure	(psig)	10 - 20	30	28	
VAS-41 Flow Rate	(scfm)	TBD	TBD	10.0	9.9
VAS-41 Pressure	(psig)	20-Oct	30	10	10
VAS-42 Flow Rate	(scfm)	TBD	TBD	10.1	10.0
VAS-42 Pressure	(psig)	10 - 20	30	12	12
VAS-43 Flow Rate	(scfm)	TBD	TBD	3.1	4.0
VAS-43 Pressure	(psig)	10 - 20	30	32	32
VAS-44 Flow Rate	(scfm)	TBD	TBD	3.8	4.9
VAS-44 Pressure	(psig)	10 - 20	30	34	34
VAS-45 Flow Rate	(scfm)	TBD	TBD	11.5	11.3
VAS-45 Pressure	(psig)	10 - 20	30	16	16
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	15.1	14.9
BCA-01 Pressure	(psig)	0 - 5	5	20	20
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.6	14.4
BCA-02 Pressure	(psig)	0 - 5	5	20	20
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/4/18/1100	T.HALL/GVL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / (No)		
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / (No)		NO AIR MONITOR
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / (No)		
...	...				
...	...				
Equipment Maintenance	**Frequency**	**Conditions Good?**	**Repaired/Replaced?**	**Scheduled**	**Comment**
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / (No)		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / (No)		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / (No)		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / (No)		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	(Yes) / No	Yes / (No)		
Test relief valve on receiver tank for proper operation.	Annually	(Yes) / No	Yes / (No)		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	(Yes) / No	Yes / (No)		
Calibrate EAD	Annually	Yes / No	Yes / (No)		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA		YES
Air Compressor 1 Run Time	(hours)	NA	NA		10,602.15
Air Compressor 1 Load Time	(hours)	NA	NA		7,594.35
Air Compressor 1 Discharge Temp	(F)	60 - 100	110		181
Air Compressor 1 Pressure	(psig)	90 - 110	100		107
Air Compressor 2 Run Time	(hours)	NA	NA		8572.51
Air Compressor 2 Load Time	(hours)	NA	NA		7446.15
Air Compressor 2 Temp	(F)	60 - 100	110		194
Air Compressor 2 Pressure	(psig)	90 - 110	100		108
Receiver Tank Pressure	(psig)	90 - 110	100		120
Receiver Tank Temperature	(F)	60 - 100	110		
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100		110
Manifold Temperature	(F)	60 - 100	110		99
Manifold Flow Rate	(scfm)	TBD	TBD		1030
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD		200
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD		230.1
HAS-1 Valve Position	(%)	TBD	TBD		46.8
HAS-1 Pressure	(psig)	10 - 20	30		20
HAS-2 Target Flow Rate	(scfm)	TBD	TBD		200
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD		198.4
HAS-2 Valve Position	(%)	TBD	TBD		12.5
HAS-2 Pressure	(psig)	10 - 20	30		18
HAS-3 Target Flow Rate	(scfm)	TBD	TBD		150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD		146.9
HAS-3 Valve Position	(%)	TBD	TBD		100
HAS-3 Pressure	(psig)	10 - 20	30		20

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. HAW		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		8.0
VAS-01 Pressure	(psig)	10 - 20	30		20
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		16.5
VAS-13 Pressure	(psig)	10 - 20	30		10
VAS-14 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-14 Pressure	(psig)	10 - 20	30		12
VAS-15 Flow Rate	(scfm)	TBD	TBD		12.4
VAS-15 Pressure	(psig)	10 - 20	30		10
VAS-16 Flow Rate	(scfm)	TBD	TBD		14.1
VAS-16 Pressure	(psig)	10 - 20	30		15
VAS-17 Flow Rate	(scfm)	TBD	TBD		10.5
VAS-17 Pressure	(psig)	10 - 20	30		8

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/0900	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		10.1
VAS-18 Pressure	(psig)	10 - 20	30		0
VAS-19 Flow Rate	(scfm)	TBD	TBD		10.3
VAS-19 Pressure	(psig)	10 - 20	30		5
VAS-20 Flow Rate	(scfm)	TBD	TBD		9.2
VAS-20 Pressure	(psig)	10 - 20	30		18
VAS-21 Flow Rate	(scfm)	TBD	TBD		8.6
VAS-21 Pressure	(psig)	10 - 20	30		24
VAS-22 Flow Rate	(scfm)	TBD	TBD		13.0
VAS-22 Pressure	(psig)	10 - 20	30		24
VAS-23 Flow Rate	(scfm)	TBD	TBD		13.0
VAS-23 Pressure	(psig)	10 - 20	30		22
VAS-24 Flow Rate	(scfm)	TBD	TBD		12.3
VAS-24 Pressure	(psig)	10 - 20	30		25
VAS-25 Flow Rate	(scfm)	TBD	TBD		9.9
VAS-25 Pressure	(psig)	10 - 20	30		22
VAS-26 Flow Rate	(scfm)	TBD	TBD		4.7
VAS-26 Pressure	(psig)	10 - 20	30		31
VAS-27 Flow Rate	(scfm)	TBD	TBD		5.0
VAS-27 Pressure	(psig)	10 - 20	30		34
VAS-28 Flow Rate	(scfm)	TBD	TBD		9.0
VAS-28 Pressure	(psig)	10 - 20	30		15
VAS-29 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-29 Pressure	(psig)	10 - 20	30		15
VAS-30 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-30 Pressure	(psig)	10 - 20	30		10
VAS-31 Flow Rate	(scfm)	TBD	TBD		11.0
VAS-31 Pressure	(psig)	10 - 20	30		30
VAS-32 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-32 Pressure	(psig)	10 - 20	30		18
VAS-33 Flow Rate	(scfm)	TBD	TBD		12.6
VAS-33 Pressure	(psig)	10 - 20	30		20
VAS-34 Flow Rate	(scfm)	TBD	TBD		11.7
VAS-34 Pressure	(psig)	10 - 20	30		22

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9-12-18/900	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		10.4
VAS-35 Pressure	(psig)	10 - 20	30		28
VAS-36 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-36 Pressure	(psig)	10 - 20	30		20
VAS-37 Flow Rate	(scfm)	TBD	TBD		12.0
VAS-37 Pressure	(psig)	10 - 20	30		10
VAS-38 Flow Rate	(scfm)	TBD	TBD		11.2
VAS-38 Pressure	(psig)	10 - 20	30		12
VAS-39 Flow Rate	(scfm)	TBD	TBD		10.9
VAS-39 Pressure	(psig)	10 - 20	30		13
VAS-40 Flow Rate	(scfm)	TBD	TBD		6.5
VAS-40 Pressure	(psig)	10 - 20	30		28
VAS-41 Flow Rate	(scfm)	TBD	TBD		
VAS-41 Pressure	(psig)	20-Oct	30		
VAS-42 Flow Rate	(scfm)	TBD	TBD		
VAS-42 Pressure	(psig)	10 - 20	30		18.0
VAS-43 Flow Rate	(scfm)	TBD	TBD		13
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		11.1
VAS-45 Pressure	(psig)	10 - 20	30		18
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD		14.6
BCA-01 Pressure	(psig)	0 - 5	5		20
BCA-02 Flow Rate	(scfm)	TBD	TBD		14.2
BCA-02 Pressure	(psig)	0 - 5	5		20
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9-12-18/0900	T. HALL		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / (No)		
Perform air monitoring near Cupboard Creek.	Each visit	(Yes) / No	Yes / (No)		NO AIR MONITOR
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / (No)		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / (No)		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / (No)		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / (No)		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / No	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / No	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / No	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / No	Yes / No		
Calibrate EAD	Annually	Yes / No	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9 hours 42.120 0846 1530	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	10791.58	10796:03
Air Compressor 1 Load Time	(hours)	NA	NA	7595:61	7598:31
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	182	195
Air Compressor 1 Pressure	(psig)	90 - 110	100	108	102
Air Compressor 2 Run Time	(hours)	NA	NA	8762:32	8765:10
Air Compressor 2 Load Time	(hours)	NA	NA	7635:46	7636:12
Air Compressor 2 Temp	(F)	60 - 100	110	190	Not Operating
Air Compressor 2 Pressure	(psig)	90 - 110	100	108	—
Receiver Tank Pressure	(psig)	90 - 110	100	120	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	—
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	110	102
Manifold Temperature	(F)	60 - 100	110	90	100
Manifold Flow Rate	(scfm)	TBD	TBD	954.2	832.5
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	200	175
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	222.2	178.5
HAS-1 Valve Position	(%)	TBD	TBD	46.8	47.4
HAS-1 Pressure	(psig)	10 - 20	30	19	17
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	200	175
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	199.8	179.4
HAS-2 Valve Position	(%)	TBD	TBD	13.0	9.5
HAS-2 Pressure	(psig)	10 - 20	30	19	15
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	200	150
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	199.5	149.1
HAS-3 Valve Position	(%)	TBD	TBD	32.6	30.1
HAS-3 Pressure	(psig)	10 - 20	30	17	16

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 0940	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		NOT COLLECTED
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD	10.8	
VAS-05 Pressure	(psig)	10 - 20	30	6	
VAS-06 Flow Rate	(scfm)	TBD	TBD	10.6	
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD	.9	
VAS-07 Pressure	(psig)	10 - 20	30	20	
VAS-08 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-08 Pressure	(psig)	10 - 20	30	21	
VAS-09 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-09 Pressure	(psig)	10 - 20	30	↑	
VAS-10 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-10 Pressure	(psig)	10 - 20	30	16	
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD		
VAS-13 Pressure	(psig)	10 - 20	30		
VAS-14 Flow Rate	(scfm)	TBD	TBD		
VAS-14 Pressure	(psig)	10 - 20	30		
VAS-15 Flow Rate	(scfm)	TBD	TBD		
VAS-15 Pressure	(psig)	10 - 20	30		
VAS-16 Flow Rate	(scfm)	TBD	TBD		
VAS-16 Pressure	(psig)	10 - 20	30		
VAS-17 Flow Rate	(scfm)	TBD	TBD		
VAS-17 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 0840 9/21/18	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD		Not collected
VAS-18 Pressure	(psig)	10 - 20	30		
VAS-19 Flow Rate	(scfm)	TBD	TBD		
VAS-19 Pressure	(psig)	10 - 20	30		
VAS-20 Flow Rate	(scfm)	TBD	TBD		
VAS-20 Pressure	(psig)	10 - 20	30		
VAS-21 Flow Rate	(scfm)	TBD	TBD		
VAS-21 Pressure	(psig)	10 - 20	30		
VAS-22 Flow Rate	(scfm)	TBD	TBD	11.9	
VAS-22 Pressure	(psig)	10 - 20	30	24	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.9	
VAS-23 Pressure	(psig)	10 - 20	30	23	
VAS-24 Flow Rate	(scfm)	TBD	TBD	12.0	
VAS-24 Pressure	(psig)	10 - 20	30	25	
VAS-25 Flow Rate	(scfm)	TBD	TBD		
VAS-25 Pressure	(psig)	10 - 20	30		
VAS-26 Flow Rate	(scfm)	TBD	TBD		
VAS-26 Pressure	(psig)	10 - 20	30		
VAS-27 Flow Rate	(scfm)	TBD	TBD		
VAS-27 Pressure	(psig)	10 - 20	30		
VAS-28 Flow Rate	(scfm)	TBD	TBD		
VAS-28 Pressure	(psig)	10 - 20	30	1	
VAS-29 Flow Rate	(scfm)	TBD	TBD		
VAS-29 Pressure	(psig)	10 - 20	30		
VAS-30 Flow Rate	(scfm)	TBD	TBD		
VAS-30 Pressure	(psig)	10 - 20	30		
VAS-31 Flow Rate	(scfm)	TBD	TBD		
VAS-31 Pressure	(psig)	10 - 20	30		
VAS-32 Flow Rate	(scfm)	TBD	TBD	11.5	
VAS-32 Pressure	(psig)	10 - 20	30	18	
VAS-33 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-33 Pressure	(psig)	10 - 20	30	20	
VAS-34 Flow Rate	(scfm)	TBD	TBD	11.7	
VAS-34 Pressure	(psig)	10 - 20	30	22	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/20/2018 9/21/18 0846	Scott Smith		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD		Not collected
VAS-35 Pressure	(psig)	10 - 20	30		
VAS-36 Flow Rate	(scfm)	TBD	TBD		
VAS-36 Pressure	(psig)	10 - 20	30		
VAS-37 Flow Rate	(scfm)	TBD	TBD		
VAS-37 Pressure	(psig)	10 - 20	30		
VAS-38 Flow Rate	(scfm)	TBD	TBD		
VAS-38 Pressure	(psig)	10 - 20	30		
VAS-39 Flow Rate	(scfm)	TBD	TBD		
VAS-39 Pressure	(psig)	10 - 20	30		
VAS-40 Flow Rate	(scfm)	TBD	TBD		
VAS-40 Pressure	(psig)	10 - 20	30		
VAS-41 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-41 Pressure	(psig)	20-Oct	30	9	
VAS-42 Flow Rate	(scfm)	TBD	TBD	9.2	
VAS-42 Pressure	(psig)	10 - 20	30	14	
VAS-43 Flow Rate	(scfm)	TBD	TBD	5.8	
VAS-43 Pressure	(psig)	10 - 20	30	33	
VAS-44 Flow Rate	(scfm)	TBD	TBD	5.2	
VAS-44 Pressure	(psig)	10 - 20	30	36	
VAS-45 Flow Rate	(scfm)	TBD	TBD	11.0	
VAS-45 Pressure	(psig)	10 - 20	30	18	
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.4	
BCA-01 Pressure	(psig)	0 - 5	5	20	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.0	
BCA-02 Pressure	(psig)	0 - 5	5	20	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance Maintenance Log *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/20/2018 0846	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
...	...				
...	...				

Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No	Replace filter cartridges, New	9/20/18
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	(Yes) / No	Yes / No	New annual AQH2 ✓	
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 1 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/24/2018 1330 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Exterior Components	(Units)	Optimal Level	Max Level	Arrival	Departure
System Operating	(Yes/No)	NA	NA	Yes	Yes
Air Compressor 1 Run Time	(hours)	NA	NA	10910:37	16914:00
Air Compressor 1 Load Time	(hours)	NA	NA	7713:05	7716:28
Air Compressor 1 Discharge Temp	(F)	60 - 100	110	187	192
Air Compressor 1 Pressure	(psig)	90 - 110	100	102	102
Air Compressor 2 Run Time	(hours)	NA	NA	8765:10	8768:18
Air Compressor 2 Load Time	(hours)	NA	NA	7636:12	7638:42
Air Compressor 2 Temp	(F)	60 - 100	110	Not operating	186
Air Compressor 2 Pressure	(psig)	90 - 110	100	Not operating	102
Receiver Tank Pressure	(psig)	90 - 110	100	110	110
Receiver Tank Temperature	(F)	60 - 100	110	N/A	N/A
Interior Manifold	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
Manifold Pressure	(psig)	90 - 110	100	102	102
Manifold Temperature	(F)	60 - 100	110	160	106
Manifold Flow Rate	(scfm)	TBD	TBD	920.2	1336
Horizontal Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
HAS-1 Target Flow Rate	(scfm)	TBD	TBD	175.0	325.0
HAS-1 Actual Flow Rate	(scfm)	TBD	TBD	1756	324.7
HAS-1 Valve Position	(%)	TBD	TBD	47.4	52.9
HAS-1 Pressure	(psig)	10 - 20	30	18	23
HAS-2 Target Flow Rate	(scfm)	TBD	TBD	175.0	325.0
HAS-2 Actual Flow Rate	(scfm)	TBD	TBD	173.4	323.7
HAS-2 Valve Position	(%)	TBD	TBD	10.1	19.3
HAS-2 Pressure	(psig)	10 - 20	30	18	23
HAS-3 Target Flow Rate	(scfm)	TBD	TBD	150.0	225.0
HAS-3 Actual Flow Rate	(scfm)	TBD	TBD	149.9	227.0
HAS-3 Valve Position	(%)	TBD	TBD	29.7	36.0
HAS-3 Pressure	(psig)	10 - 20	30	15	19

Parts Needed:	
Parts Installed:	

Notes (include alarms since previous visit):

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 2 of 4
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	*Lewis Drive, Belton, South Carolina*

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/26/2018 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-01 Flow Rate	(scfm)	TBD	TBD		
VAS-01 Pressure	(psig)	10 - 20	30		
VAS-02 Flow Rate	(scfm)	TBD	TBD		
VAS-02 Pressure	(psig)	10 - 20	30		
VAS-03 Flow Rate	(scfm)	TBD	TBD		
VAS-03 Pressure	(psig)	10 - 20	30		
VAS-04 Flow Rate	(scfm)	TBD	TBD		
VAS-04 Pressure	(psig)	10 - 20	30		
VAS-05 Flow Rate	(scfm)	TBD	TBD		
VAS-05 Pressure	(psig)	10 - 20	30		
VAS-06 Flow Rate	(scfm)	TBD	TBD		
VAS-06 Pressure	(psig)	10 - 20	30		
VAS-07 Flow Rate	(scfm)	TBD	TBD		
VAS-07 Pressure	(psig)	10 - 20	30		
VAS-08 Flow Rate	(scfm)	TBD	TBD		
VAS-08 Pressure	(psig)	10 - 20	30		
VAS-09 Flow Rate	(scfm)	TBD	TBD		
VAS-09 Pressure	(psig)	10 - 20	30		
VAS-10 Flow Rate	(scfm)	TBD	TBD		
VAS-10 Pressure	(psig)	10 - 20	30		
VAS-11 Flow Rate	(scfm)	TBD	TBD		
VAS-11 Pressure	(psig)	10 - 20	30		
VAS-12 Flow Rate	(scfm)	TBD	TBD		
VAS-12 Pressure	(psig)	10 - 20	30		
VAS-13 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-13 Pressure	(psig)	10 - 20	30	8	
VAS-14 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-14 Pressure	(psig)	10 - 20	30	12	
VAS-15 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-15 Pressure	(psig)	10 - 20	30	11	
VAS-16 Flow Rate	(scfm)	TBD	TBD	12.8	
VAS-16 Pressure	(psig)	10 - 20	30	16	
VAS-17 Flow Rate	(scfm)	TBD	TBD	10.0	
VAS-17 Pressure	(psig)	10 - 20	30	8	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 3 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/26/2018 1000	Scott Shiloh		Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-18 Flow Rate	(scfm)	TBD	TBD	10.1	
VAS-18 Pressure	(psig)	10 - 20	30	1	
VAS-19 Flow Rate	(scfm)	TBD	TBD	9.9	
VAS-19 Pressure	(psig)	10 - 20	30	5	
VAS-20 Flow Rate	(scfm)	TBD	TBD	10.2	
VAS-20 Pressure	(psig)	10 - 20	30	19	
VAS-21 Flow Rate	(scfm)	TBD	TBD	7.6	
VAS-21 Pressure	(psig)	10 - 20	30	24	
VAS-22 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-22 Pressure	(psig)	10 - 20	30	23	
VAS-23 Flow Rate	(scfm)	TBD	TBD	12.3	
VAS-23 Pressure	(psig)	10 - 20	30	21	
VAS-24 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-24 Pressure	(psig)	10 - 20	30	24	
VAS-25 Flow Rate	(scfm)	TBD	TBD	7.7	
VAS-25 Pressure	(psig)	10 - 20	30	22	
VAS-26 Flow Rate	(scfm)	TBD	TBD	5.3	
VAS-26 Pressure	(psig)	10 - 20	30	31	
VAS-27 Flow Rate	(scfm)	TBD	TBD	4.0	
VAS-27 Pressure	(psig)	10 - 20	30	37	
VAS-28 Flow Rate	(scfm)	TBD	TBD	8.5	
VAS-28 Pressure	(psig)	10 - 20	30	16	
VAS-29 Flow Rate	(scfm)	TBD	TBD	11.3	
VAS-29 Pressure	(psig)	10 - 20	30	15	
VAS-30 Flow Rate	(scfm)	TBD	TBD	11.2	
VAS-30 Pressure	(psig)	10 - 20	30	9	
VAS-31 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-31 Pressure	(psig)	10 - 20	30	29	
VAS-32 Flow Rate	(scfm)	TBD	TBD	10.9	
VAS-32 Pressure	(psig)	10 - 20	30	17	
VAS-33 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-33 Pressure	(psig)	10 - 20	30	18	
VAS-34 Flow Rate	(scfm)	TBD	TBD	10.7	
VAS-34 Pressure	(psig)	10 - 20	30	21	

Site Name	Site Location	Project Manager	Project Engineer	Biosparging Operation and Maintenance System Data Log 4 of 4 *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Permits
9/24/2018 1000	Scott Smith	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Vertical Wells	(Units)	Optimal Level	Max Level	Arrival	Departure
VAS-35 Flow Rate	(scfm)	TBD	TBD	8.7	
VAS-35 Pressure	(psig)	10 - 20	30	27	
VAS-36 Flow Rate	(scfm)	TBD	TBD	9.6	
VAS-36 Pressure	(psig)	10 - 20	30	21	
VAS-37 Flow Rate	(scfm)	TBD	TBD	16.5	
VAS-37 Pressure	(psig)	10 - 20	30	11	
VAS-38 Flow Rate	(scfm)	TBD	TBD	11.4	
VAS-38 Pressure	(psig)	10 - 20	30	12	
VAS-39 Flow Rate	(scfm)	TBD	TBD	16.1	
VAS-39 Pressure	(psig)	10 - 20	30	17	
VAS-40 Flow Rate	(scfm)	TBD	TBD	4.3	
VAS-40 Pressure	(psig)	10 - 20	30	29	
VAS-41 Flow Rate	(scfm)	TBD	TBD	—	
VAS-41 Pressure	(psig)	20-Oct	30	—	
VAS-42 Flow Rate	(scfm)	TBD	TBD	10.4	
VAS-42 Pressure	(psig)	10 - 20	30	13	
VAS-43 Flow Rate	(scfm)	TBD	TBD	—	
VAS-43 Pressure	(psig)	10 - 20	30		
VAS-44 Flow Rate	(scfm)	TBD	TBD		
VAS-44 Pressure	(psig)	10 - 20	30		
VAS-45 Flow Rate	(scfm)	TBD	TBD		
VAS-45 Pressure	(psig)	10 - 20	30		
Brown's Creek Aerators	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BCA-01 Flow Rate	(scfm)	TBD	TBD	14.9	
BCA-01 Pressure	(psig)	0 - 5	5	19	
BCA-02 Flow Rate	(scfm)	TBD	TBD	14.4	
BCA-02 Pressure	(psig)	0 - 5	5	18	
Bedrock Wells	**(Units)**	**Optimal Level**	**Max Level**	**Arrival**	**Departure**
BRS-01 Flow Rate	(scfm)	TBD	TBD		
BRS-01 Pressure	(psig)	10 - 20	30		
BRS-02 Flow Rate	(scfm)	TBD	TBD		
BRS-02 Pressure	(psig)	10 - 20	30		
BRS-03 Flow Rate	(scfm)	TBD	TBD		
BRS-03 Pressure	(psig)	10 - 20	30		

Site Name	Site Location	Project Manager	Project Engineer	**Biosparging Operation and Maintenance Maintenance Log** *Lewis Drive, Belton, South Carolina*
Lewis Drive	Belton, SC	Bill Waldron/RAL	Scott Powell/ATL	

Date & Time	O&M Technician #1	O&M Technician #2	Equipment Type	Equipment Model	Discharge Permit and Expiration Date
9/26/2018 1000	Scott Shuler	—	Air Compressors Condensate Treatment	Sullair TS-20-200 Beko Qwik Pure 350	UIC Permit To Operate: SCHE03020469 Air Permit Exempt

Site Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect condition of Brown's Creek.	Each visit	(Yes) / No	Yes / No		
Perform air monitoring near Cupboard Creek.	Each visit	Yes / (No)	Yes / No		
Activate and inspect condition of receiver auto drain.	Each visit	(Yes) / No	Yes / No		
…	…				
…	…				

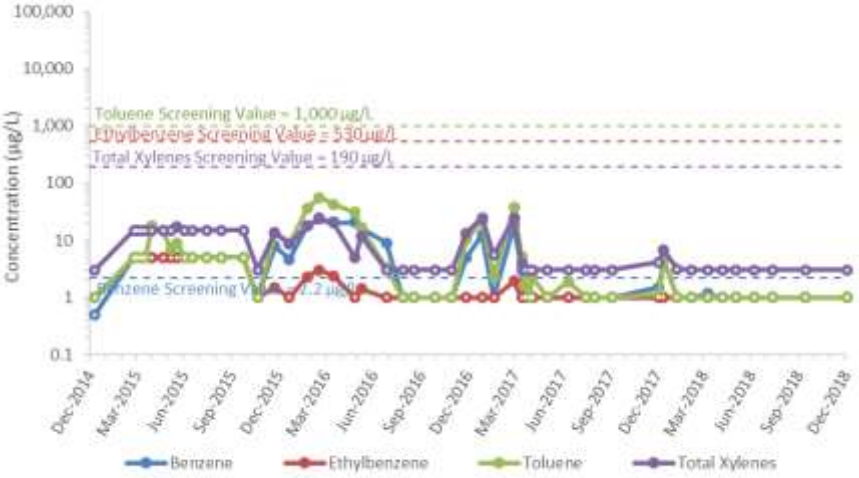
Equipment Maintenance	Frequency	Conditions Good?	Repaired/Replaced?	Scheduled	Comment
Inspect receiver tank and discharge lines.	Monthly	(Yes) / No	Yes / No		
Inspect condensate system components. Drain and clean as needed.	Monthly	(Yes) / No	Yes / No		
Inspect the two fire extinguishers for signs of deterioration. Shake contents.	Monthly	(Yes) / No	Yes / No		
Coordinate with Airite to performed quarterly and annual PM on both machines.	Quarterly	Yes / (No)	Yes / No		
Inspect various building components detailed in Section X.X.X.	Semi-Annually	Yes / (No)	Yes / No		
Test relief valve on receiver tank for proper operation.	Annually	Yes / (No)	Yes / No		
Inspect flow meters per Section X.X.X. Verify calibration.	Annually	Yes / (No)	Yes / No		
Calibrate EAD	Annually	Yes / (No)	Yes / No		

NOTE: Please check the manufacturer's instructions for the specific maintenance schedule and instructions.

Additional Comments:

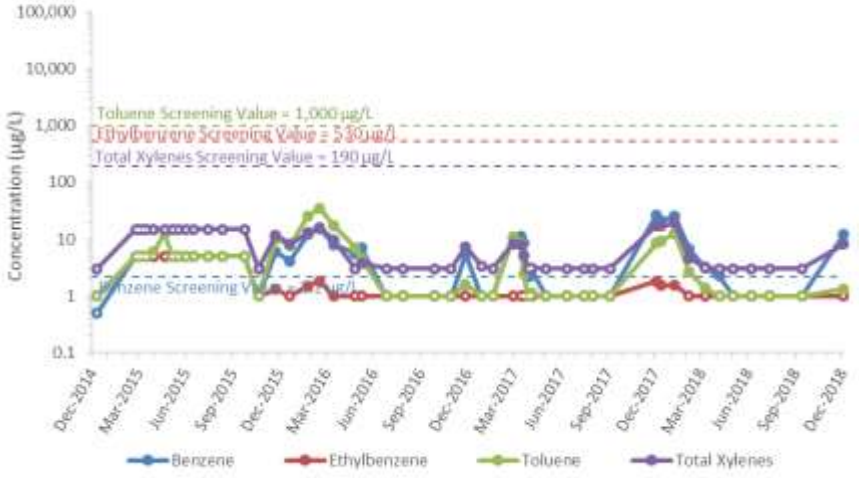
Appendix D
Surface Water Analytical Trends

SW-01



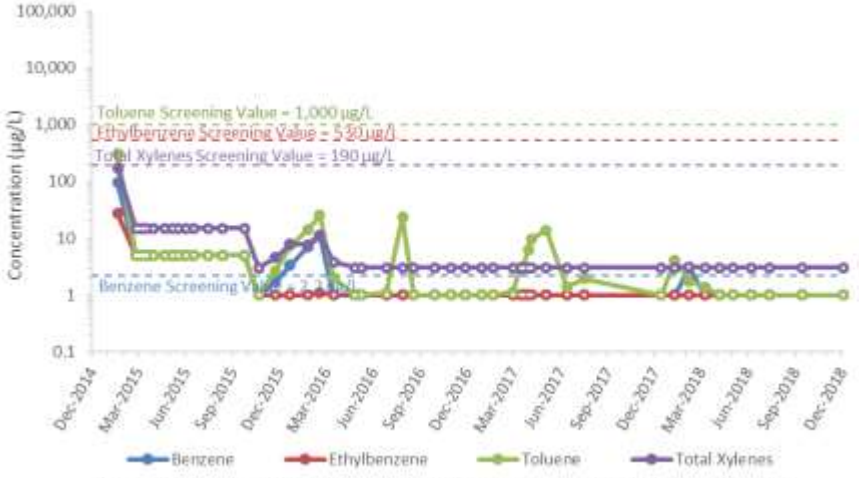
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

SW-02



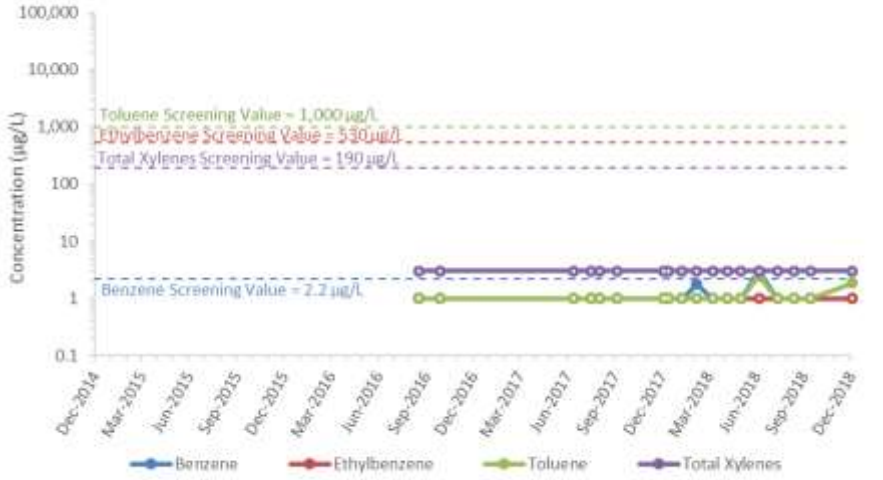
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

SW-04

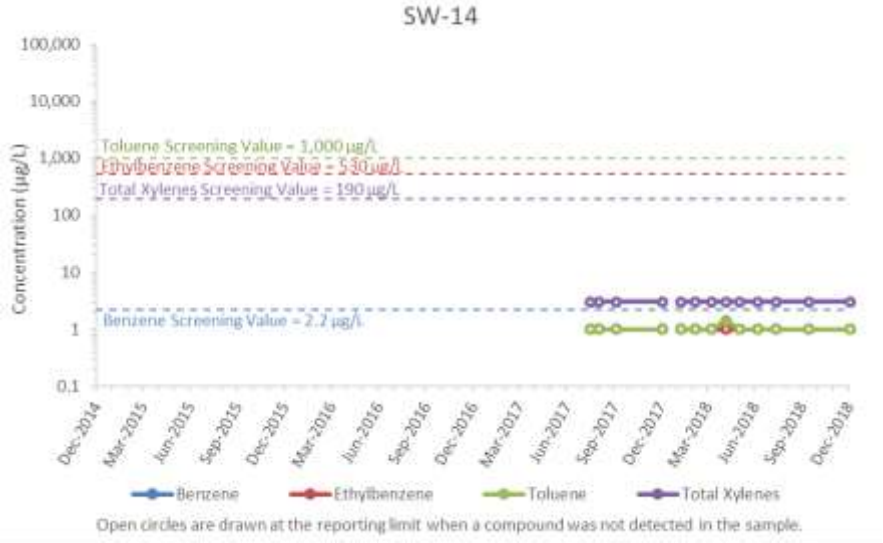


Open circles are drawn at the reporting limit when a compound was not detected in the sample.

Open circles are drawn at the reporting limit when a compound was not detected in the sample.

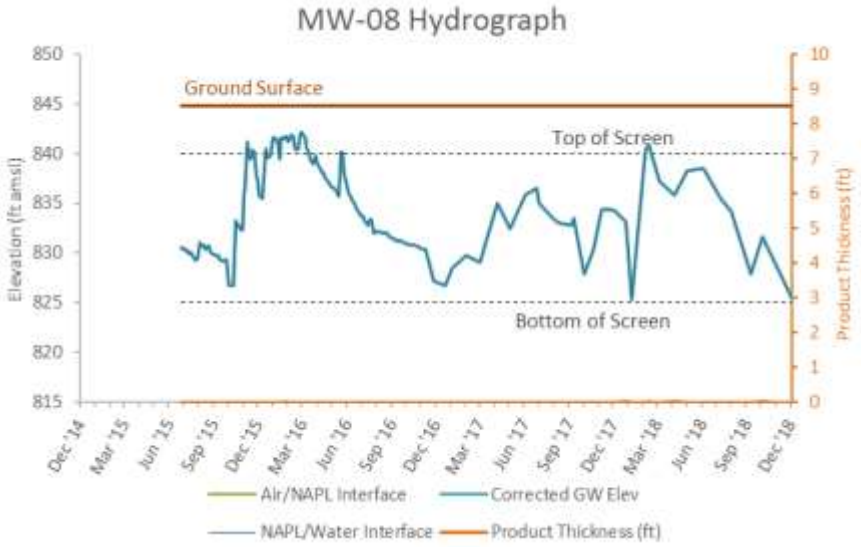


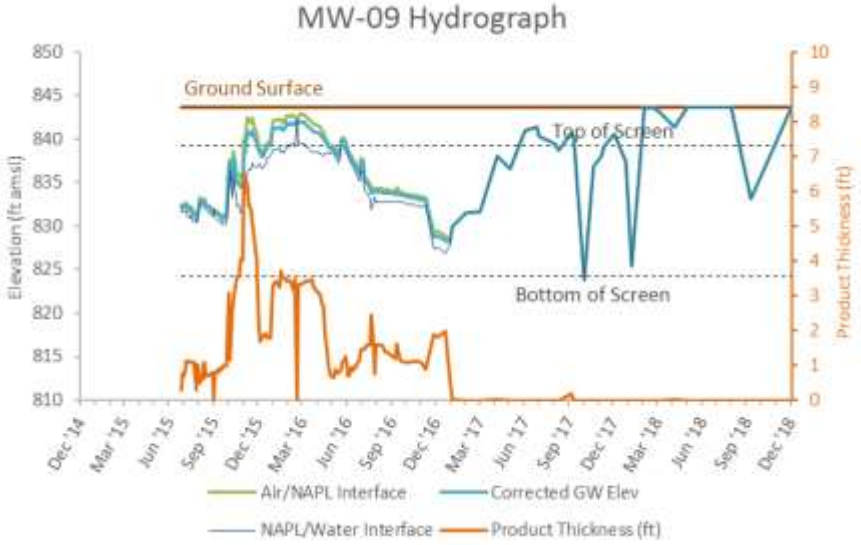
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

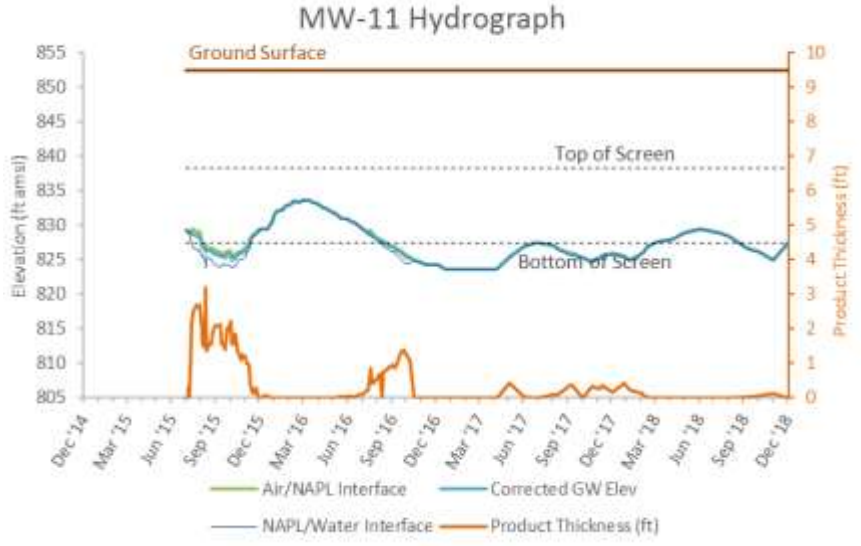


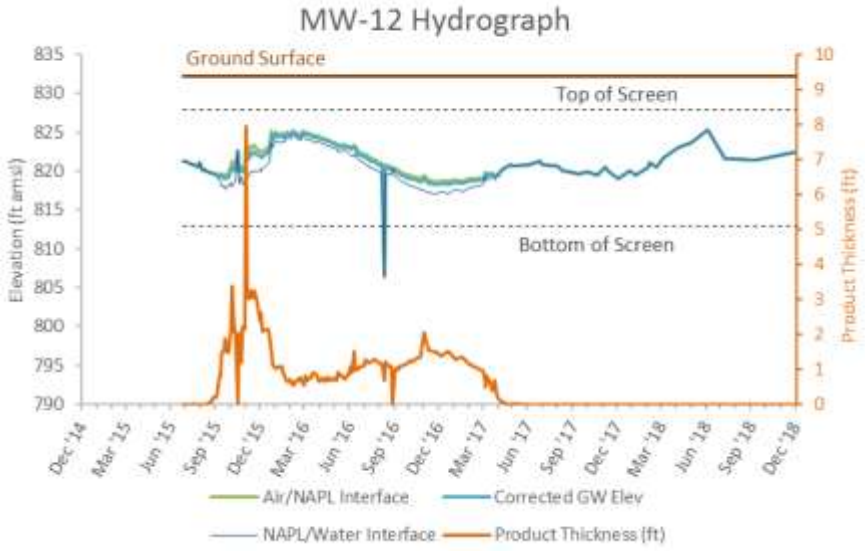
Open circles are drawn at the reporting limit when a compound was not detected in the sample.

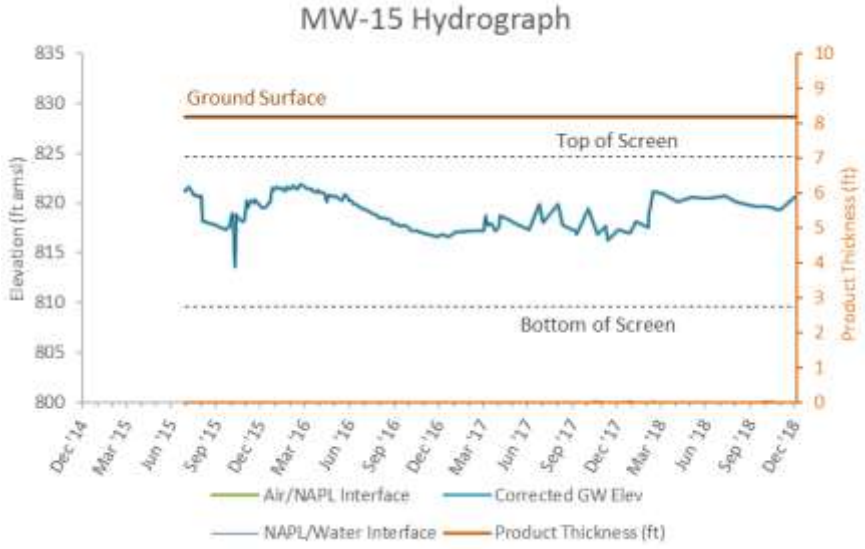
Appendix E
Product Thickness Trends

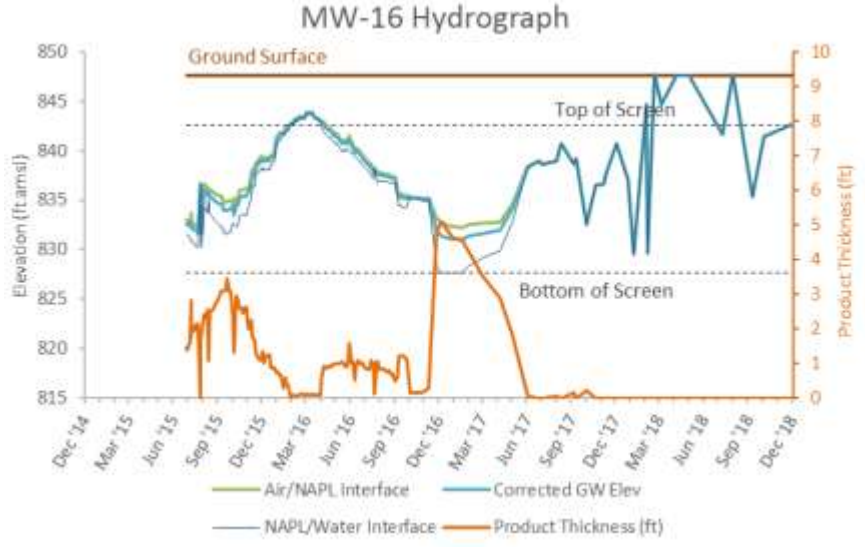

MW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

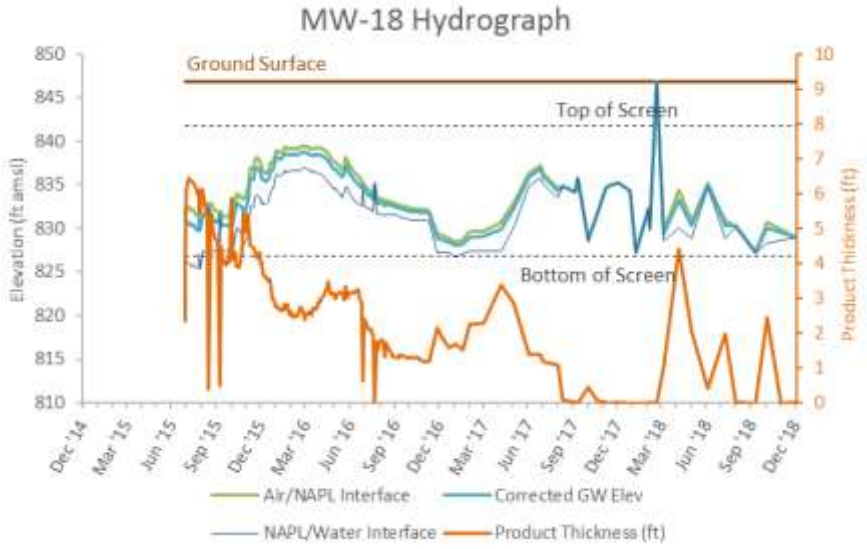

MW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

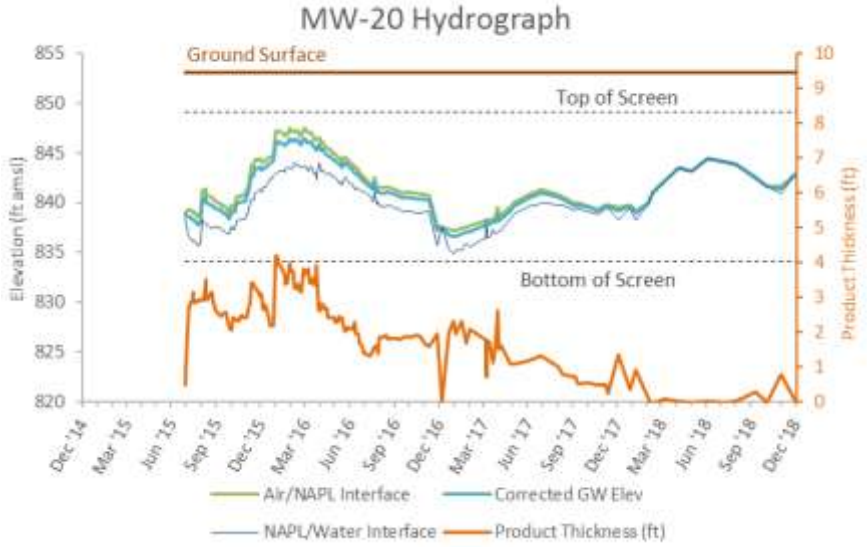

MW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

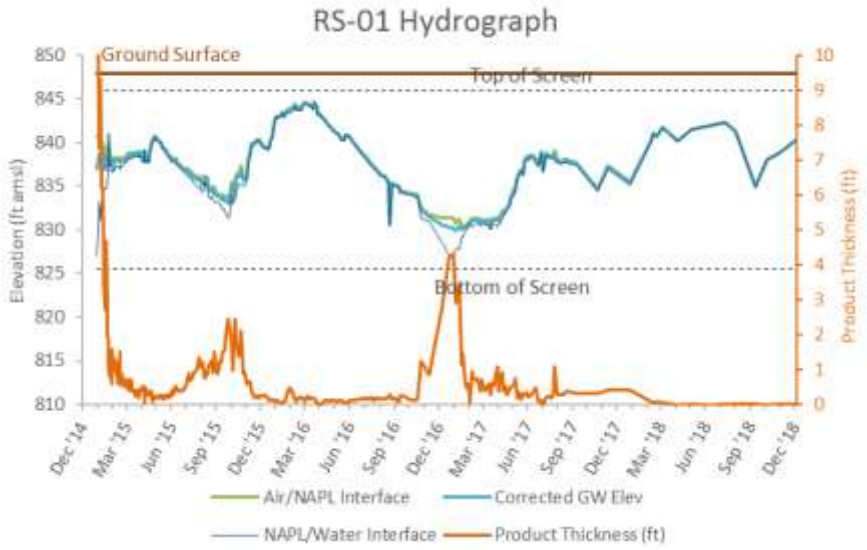

MW-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
795
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

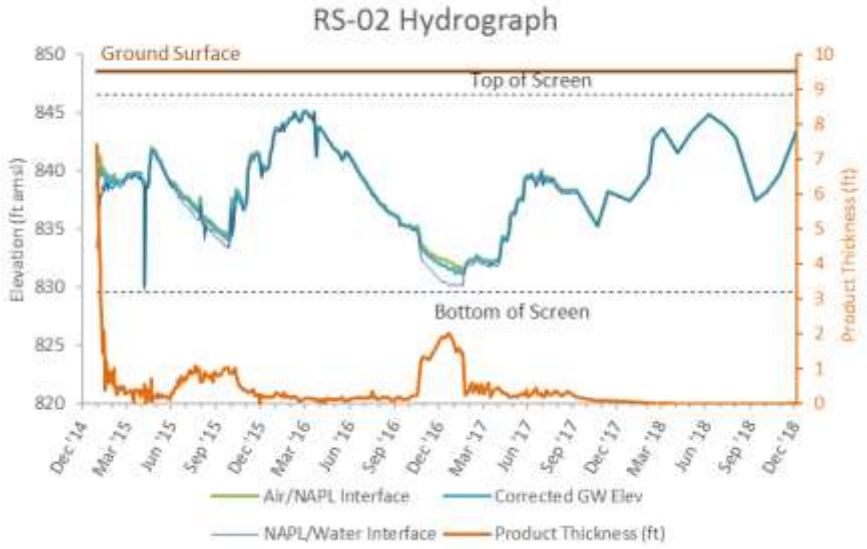

MW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
835
830
825
820
815
810
805
800
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

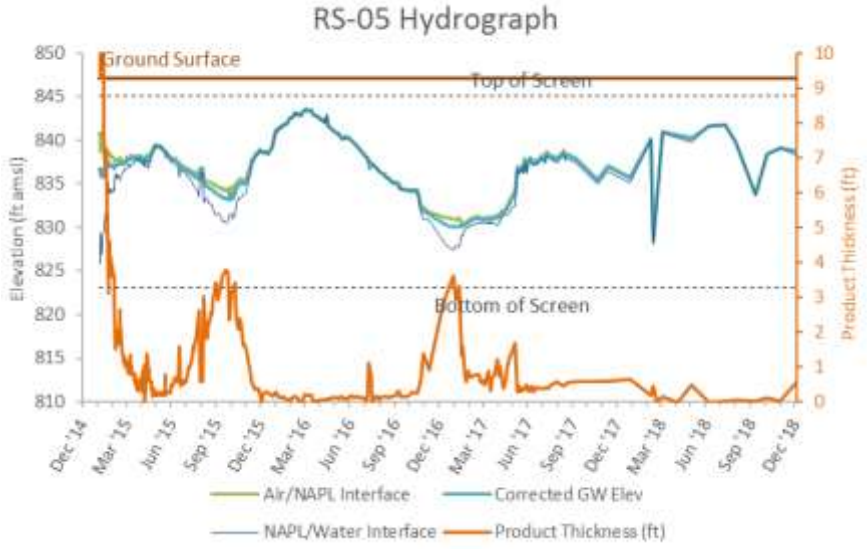

MW-16 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

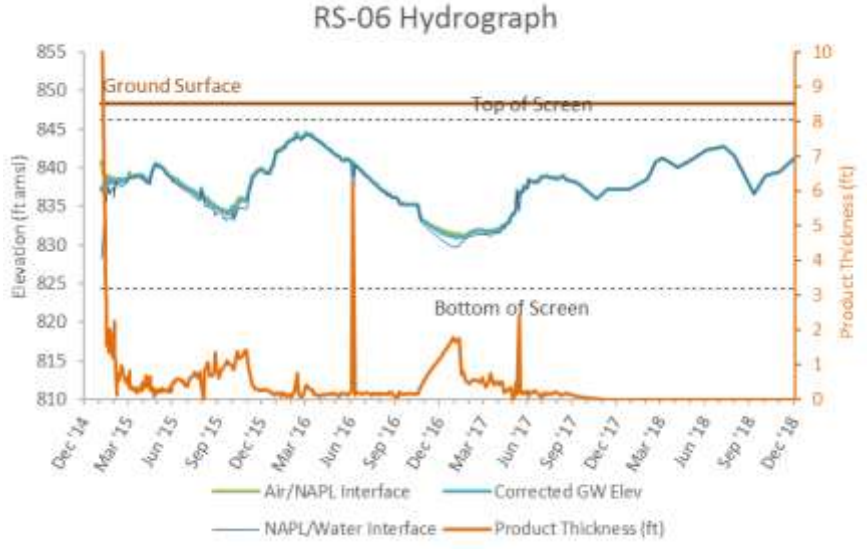

MW-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

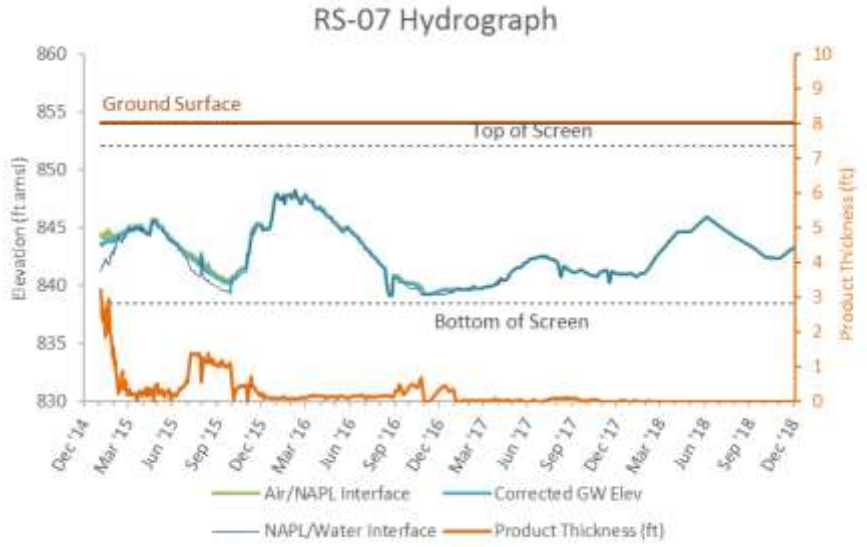

MW-20 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

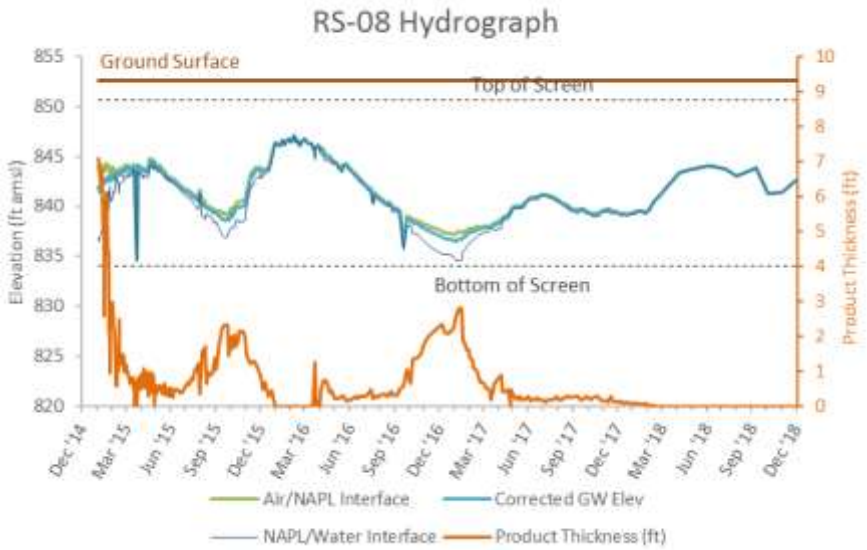

RS-01 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

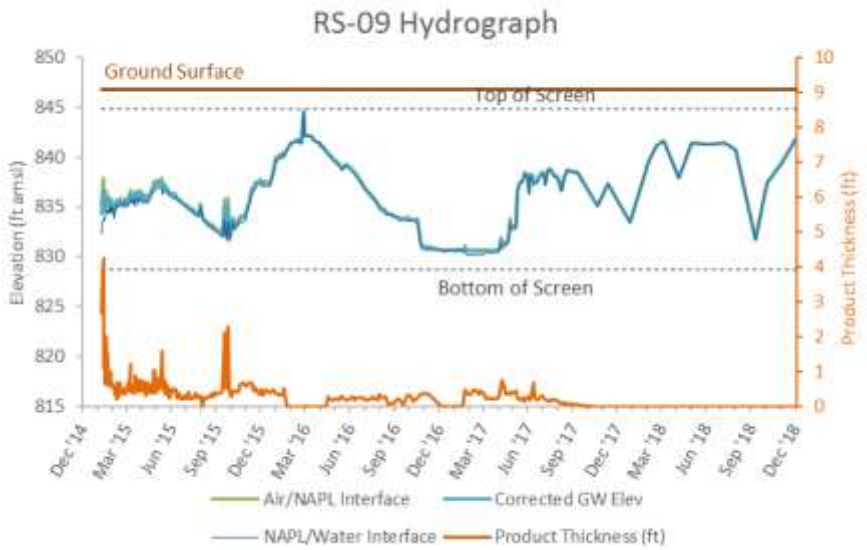

RS-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

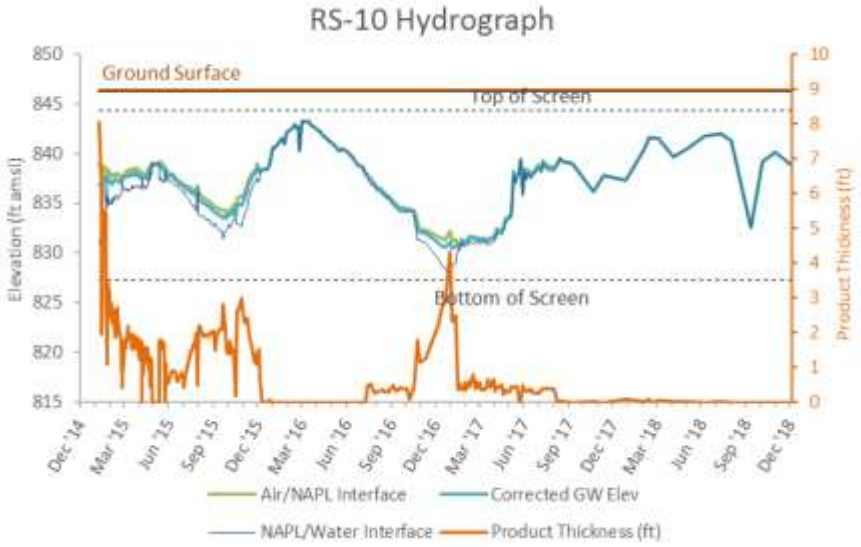

RS-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

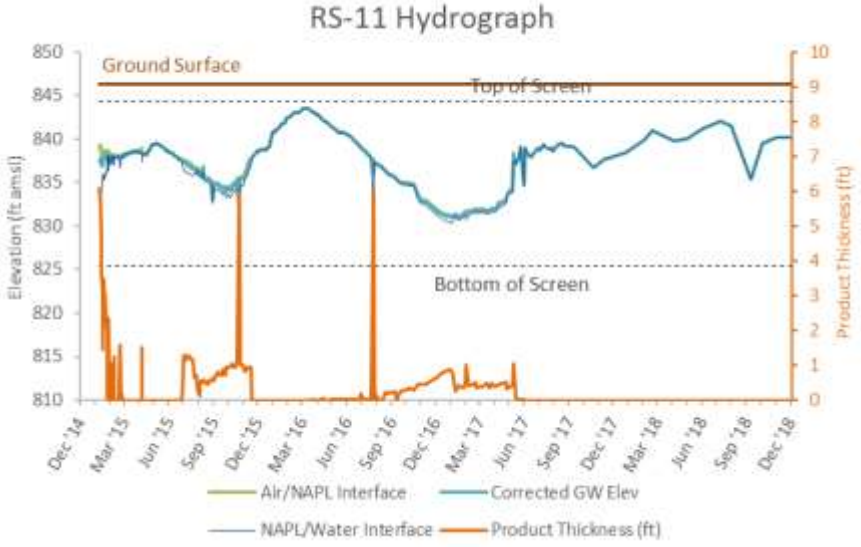

RS-06 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
815
810
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

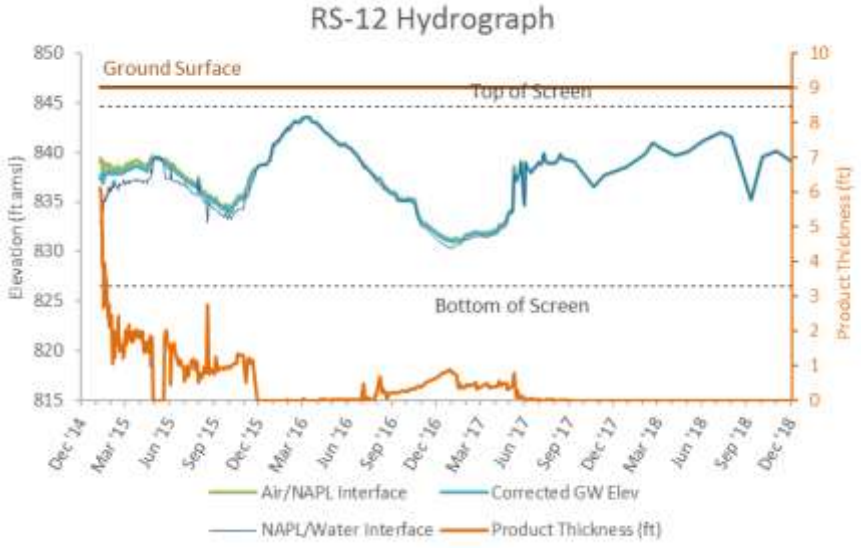

RS-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
855
850
845
840
835
830
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

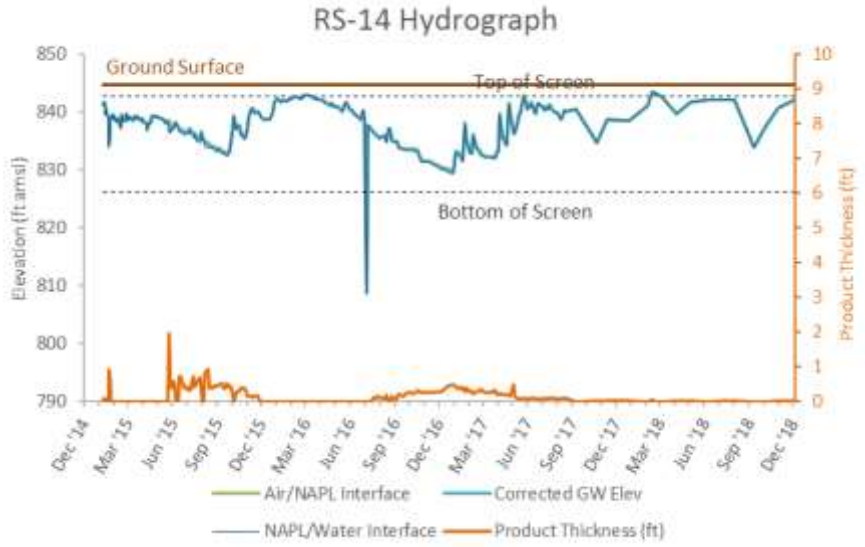

RS-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

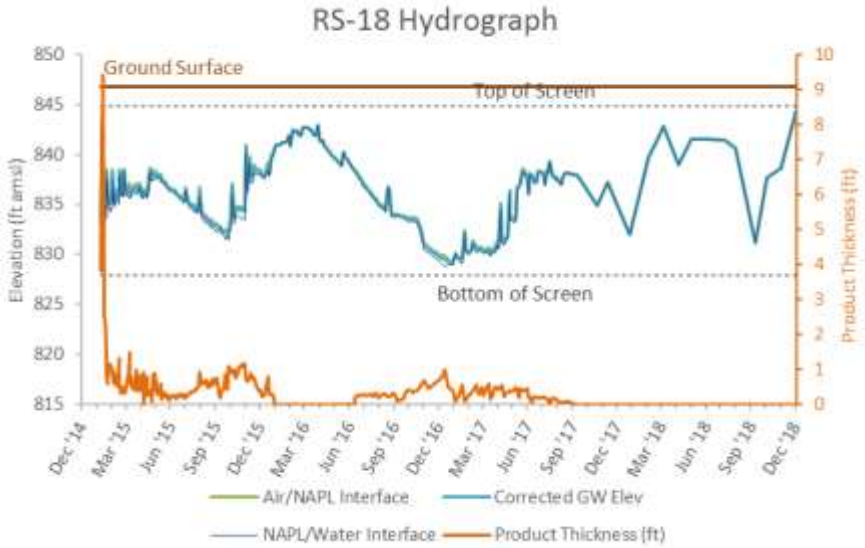

RS-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

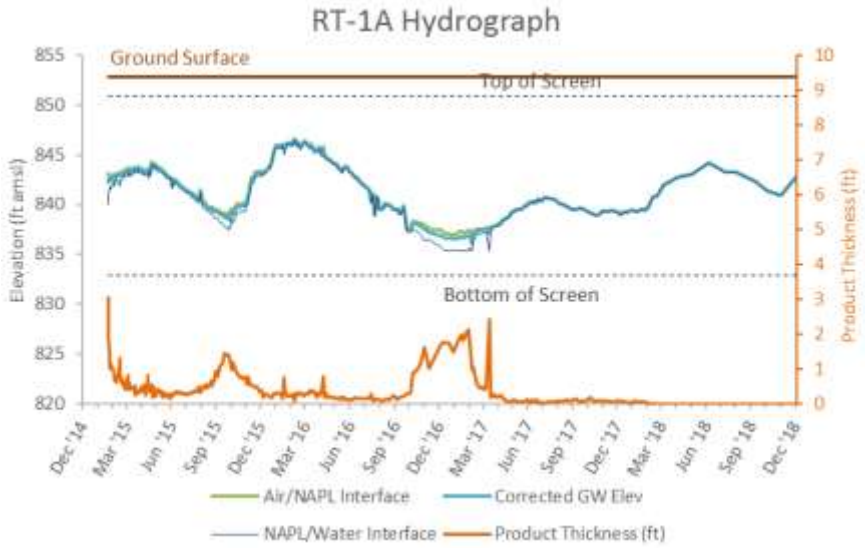

RS-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

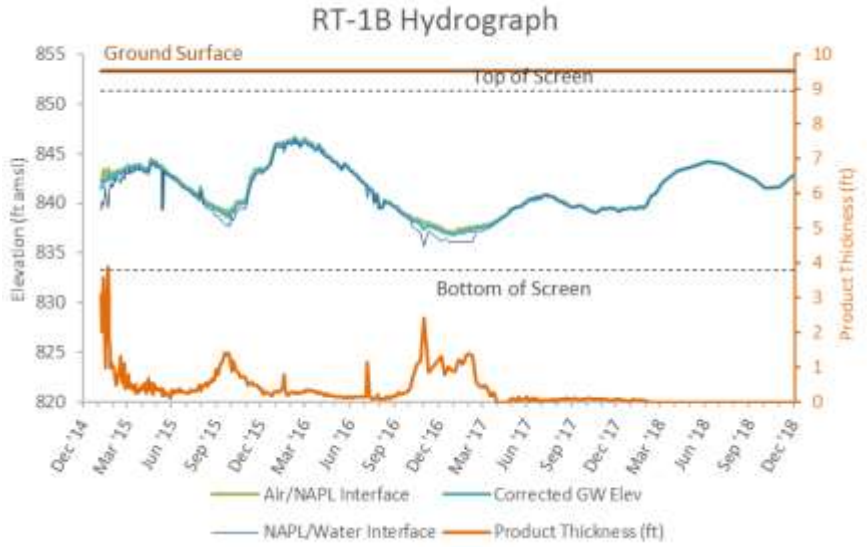

RS-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

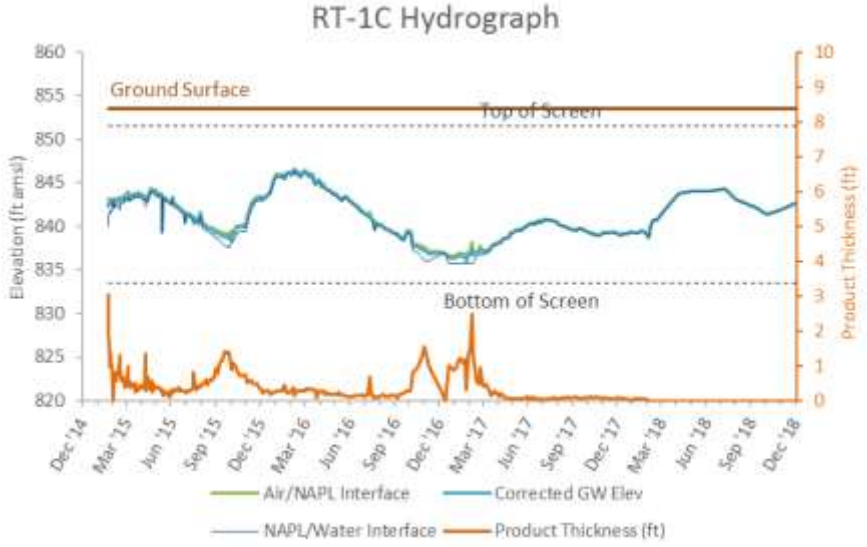

RS-12 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

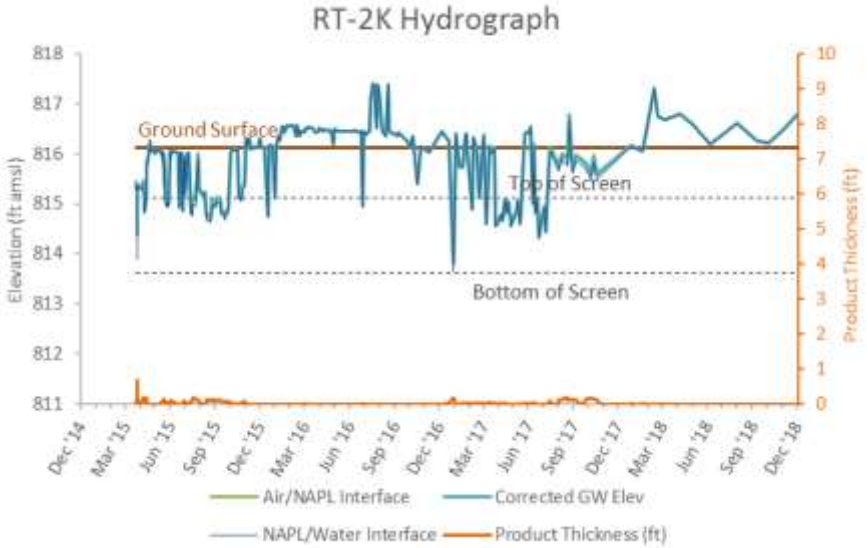

RS-14 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

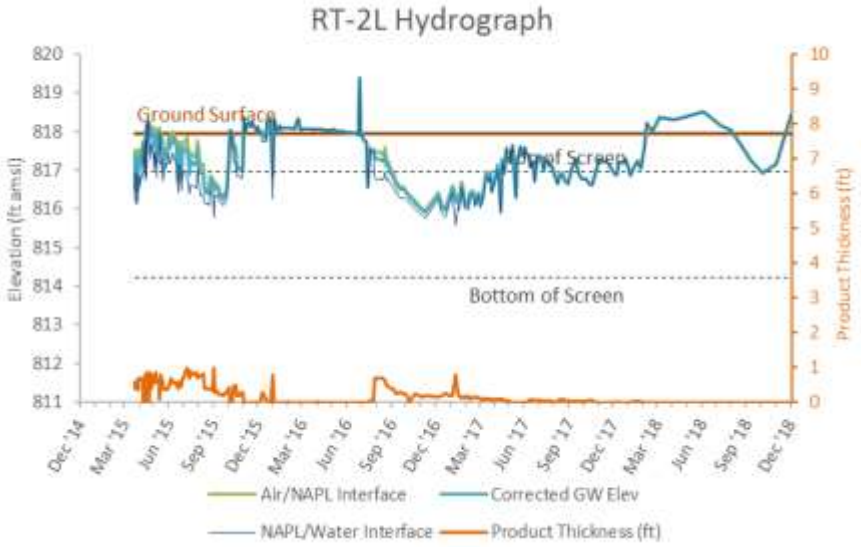

RS-18 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
845
840
835
830
825
820
815
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

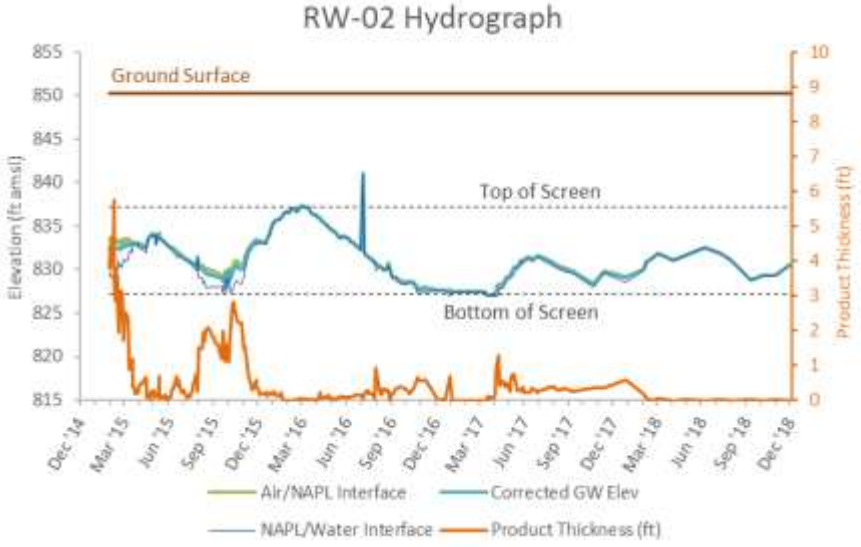

RT-1A Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
855
850
845
840
835
830
825
820
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

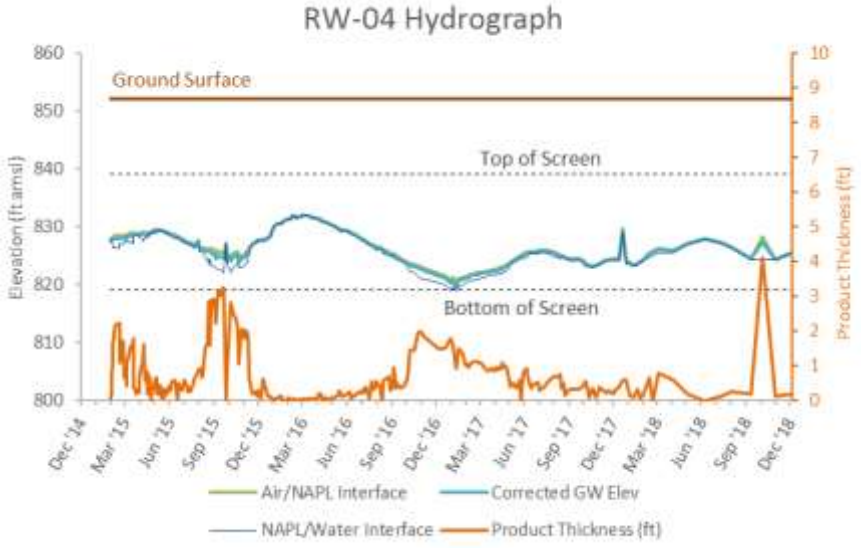

RT-1B Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

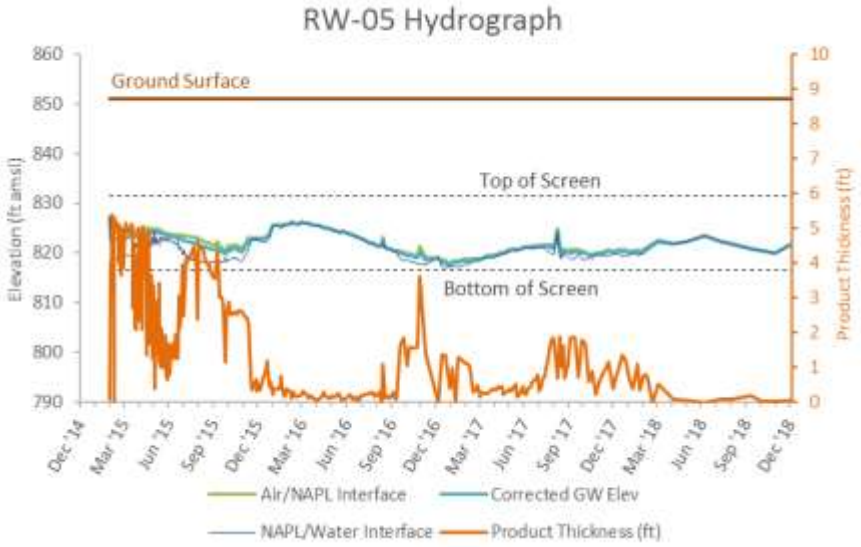

RT-1C Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

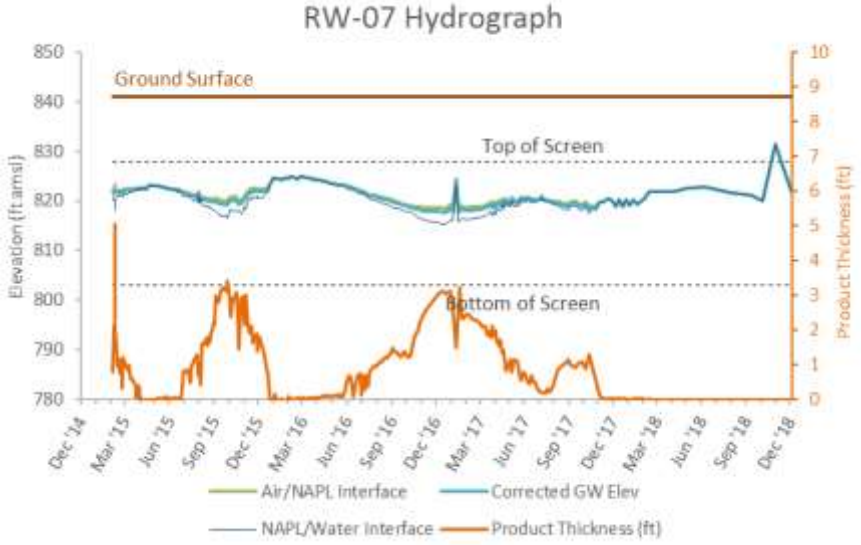

RT-2K Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

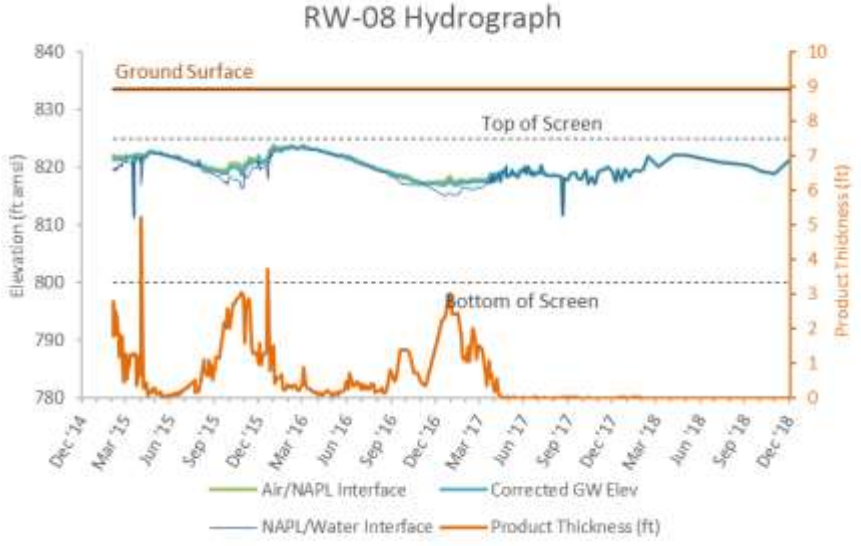

RT-2L Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

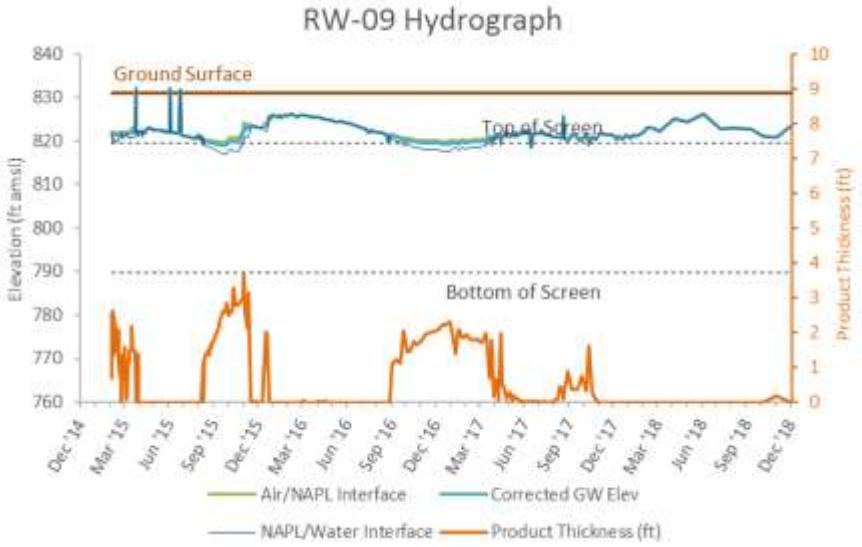

RW-02 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

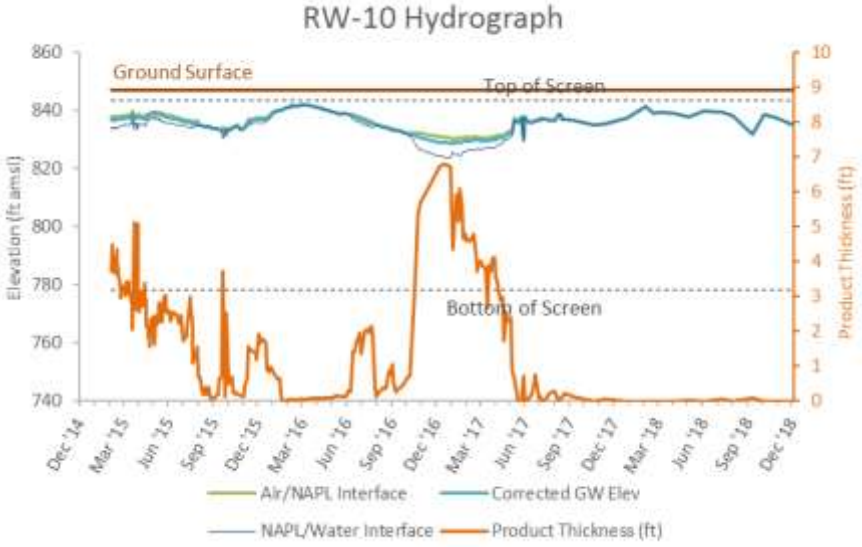

RW-04 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

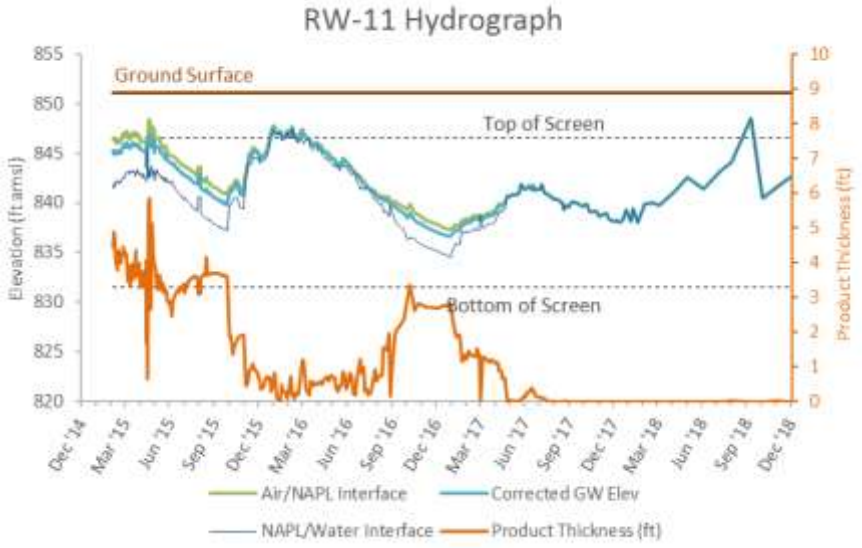

RW-05 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

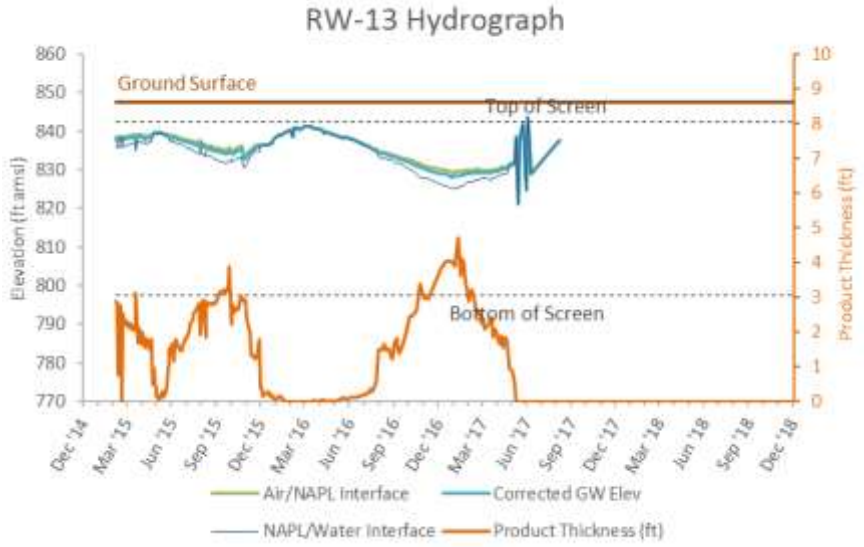

RW-07 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
850
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

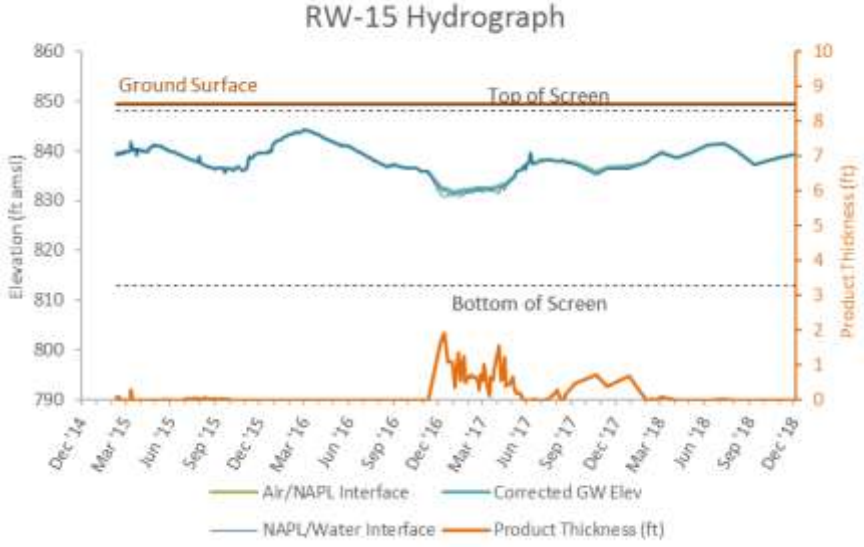

RW-08 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
840
830
820
810
800
790
780
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-09 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-10 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

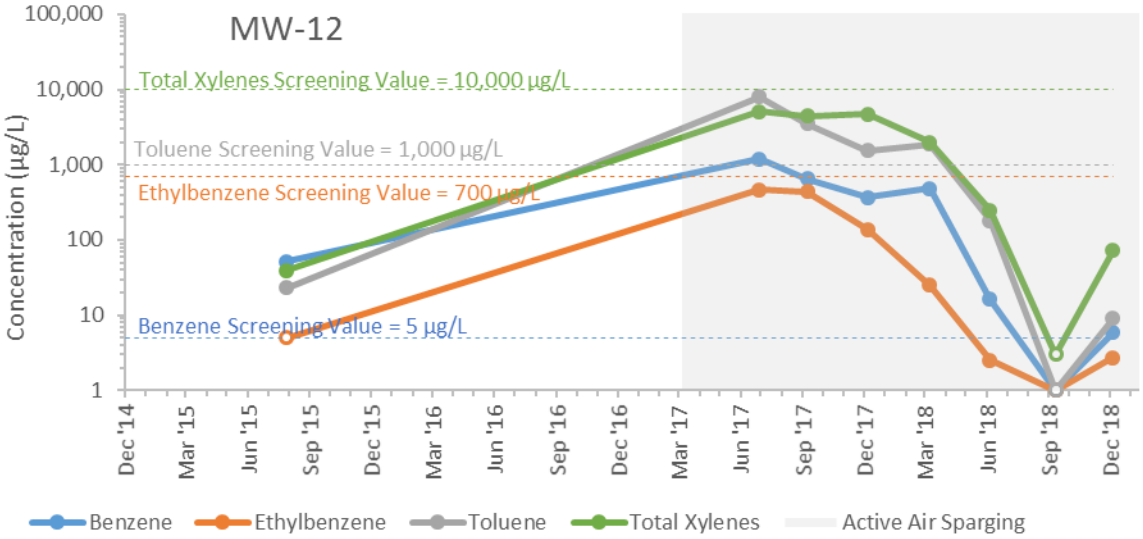

RW-11 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)


RW-13 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
780
770
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

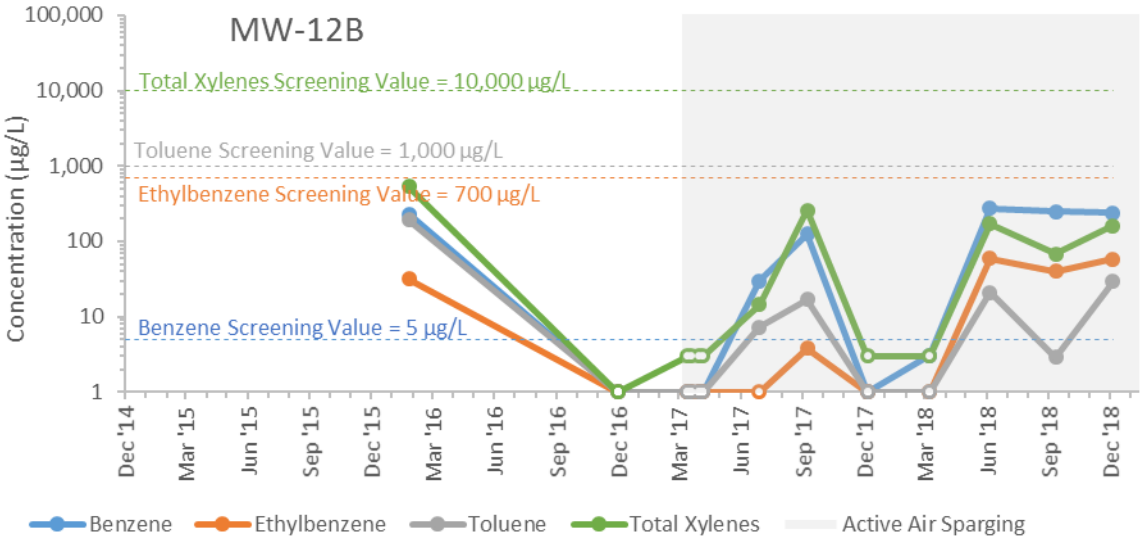

RW-15 Hydrograph
Ground Surface
Top of Screen
Bottom of Screen
Elevation (ft amsl)
Product Thickness (ft)
860
850
840
830
820
810
800
790
10
9
8
7
6
5
4
3
2
1
0
Dec '14
Mar '15
Jun '15
Sep '15
Dec '15
Mar '16
Jun '16
Sep '16
Dec '16
Mar '17
Jun '17
Sep '17
Dec '17
Mar '18
Jun '18
Sep '18
Dec '18
Air/NAPL Interface
Corrected GW Elev
NAPL/Water Interface
Product Thickness (ft)

Appendix F
Groundwater Analytical Trends

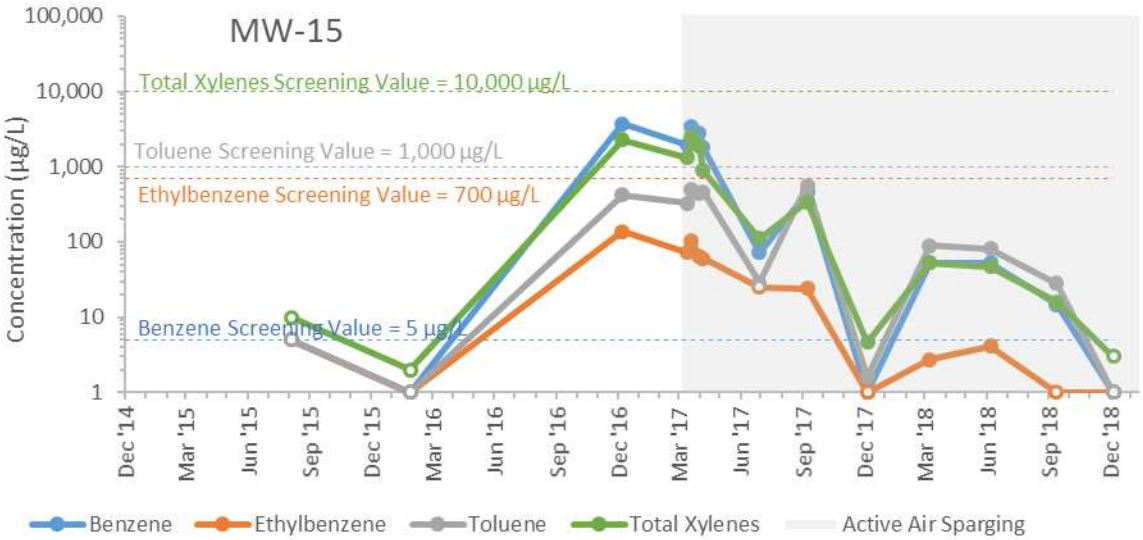
Brown's Creek Monitoring Well Trends:



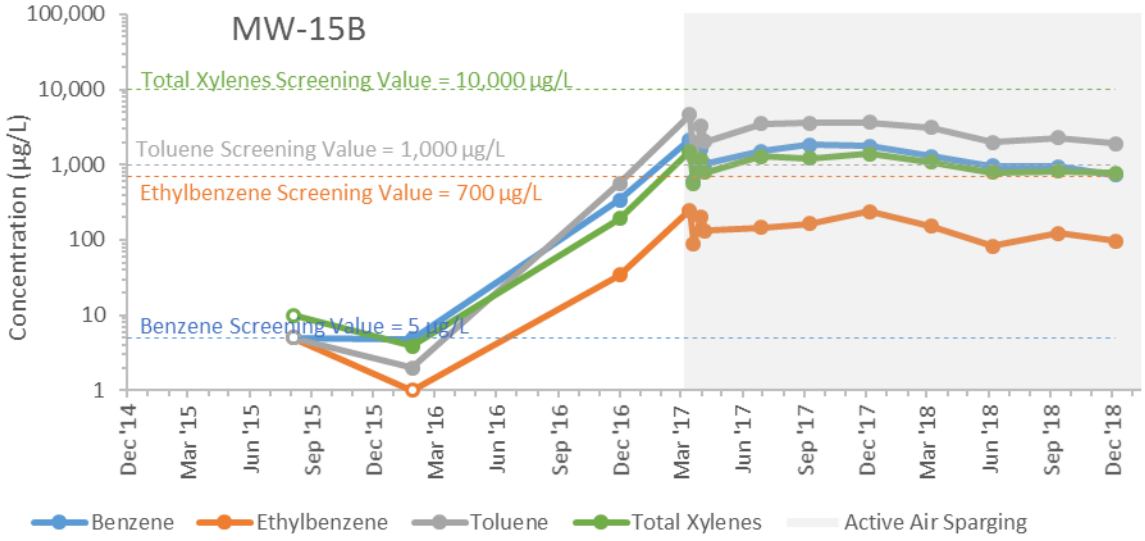
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



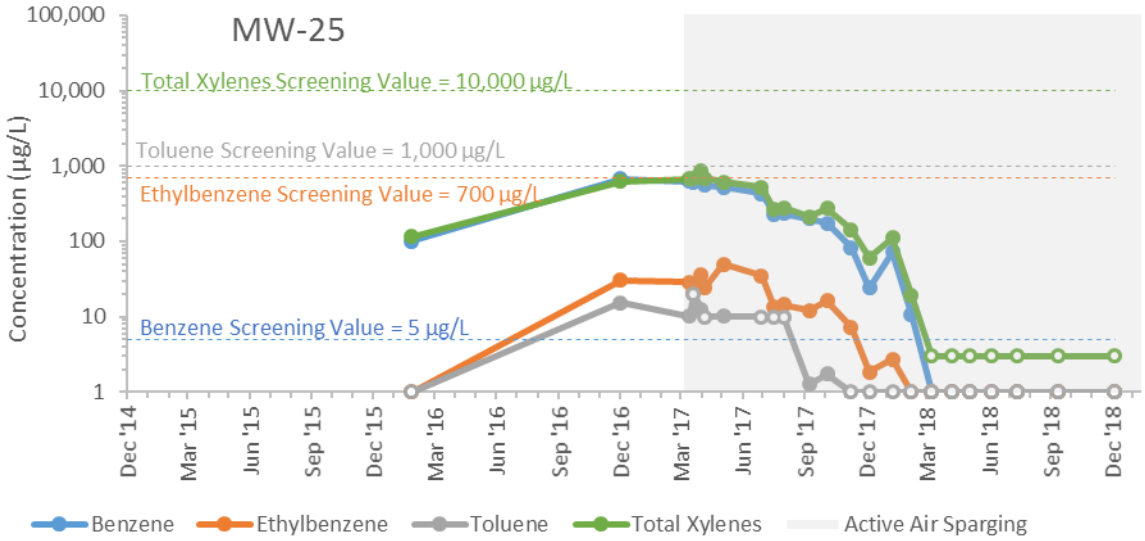
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



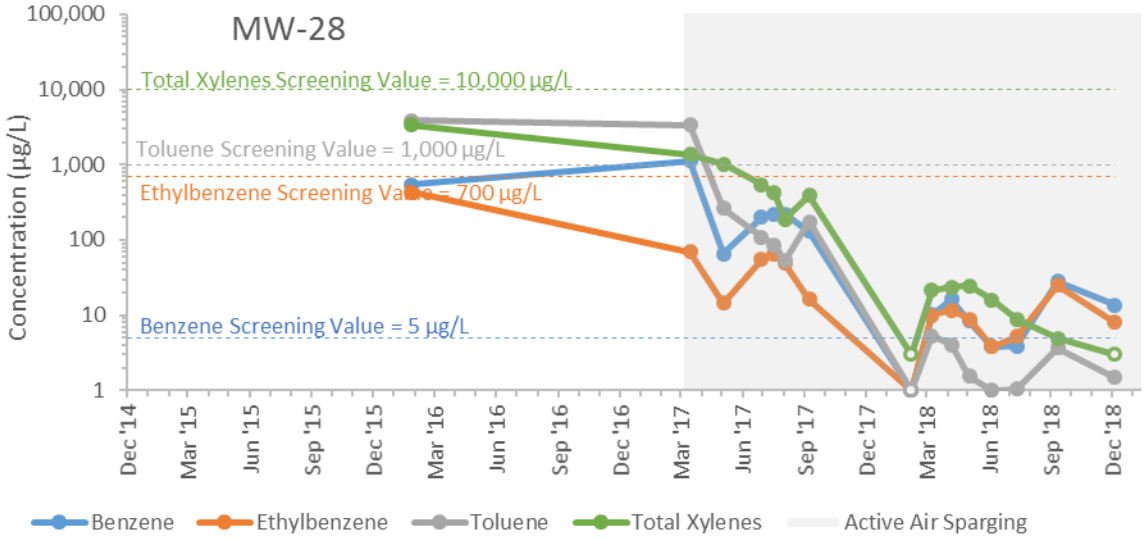
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



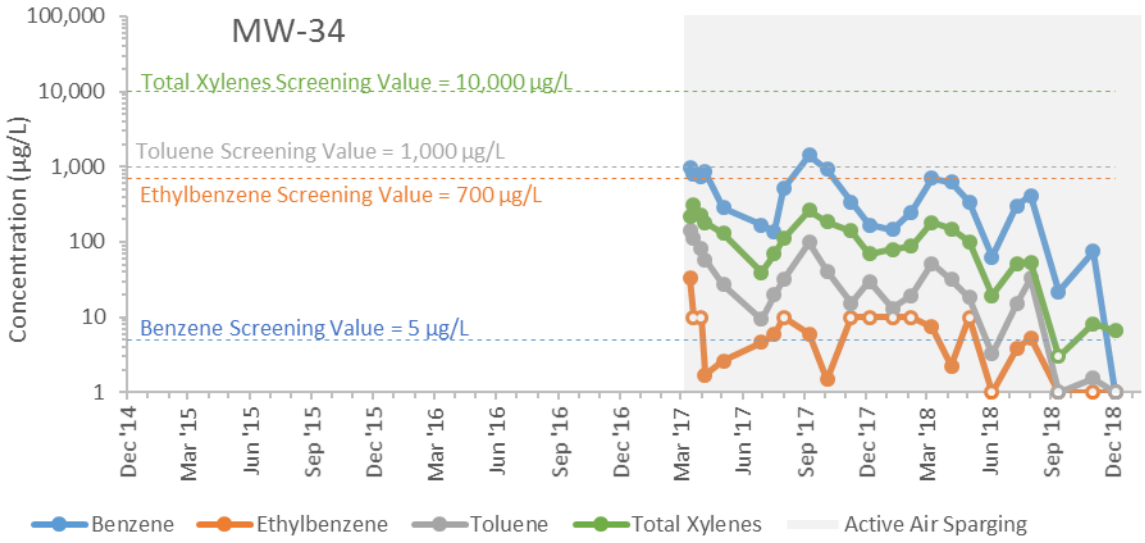
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



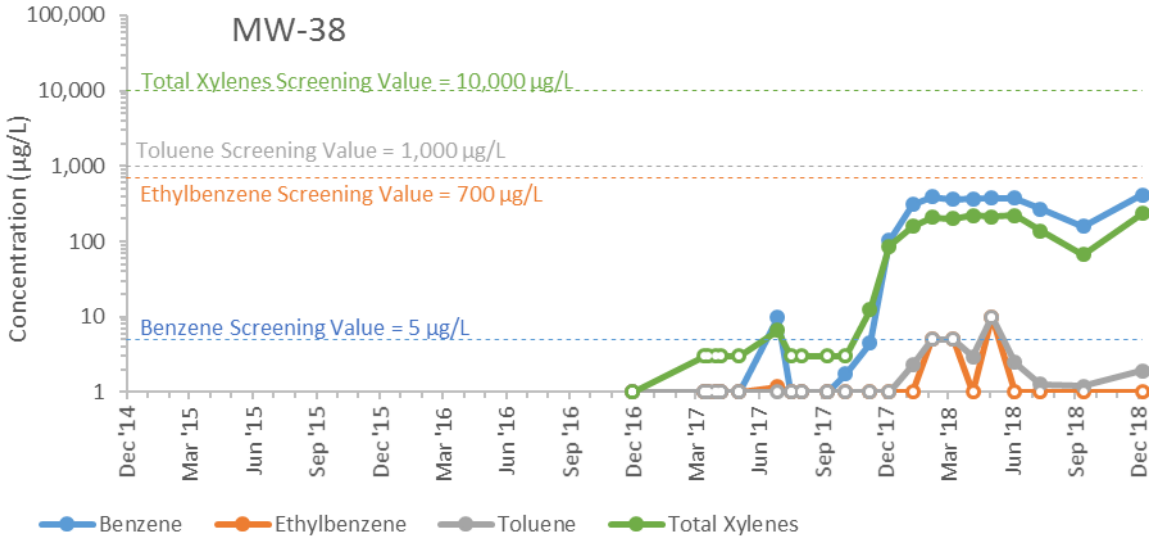
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



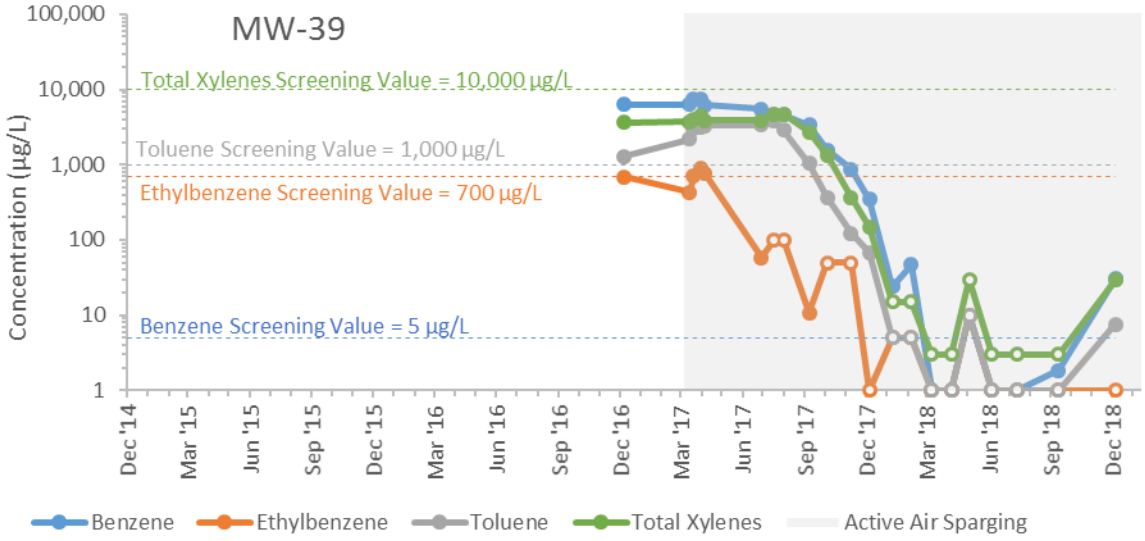
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



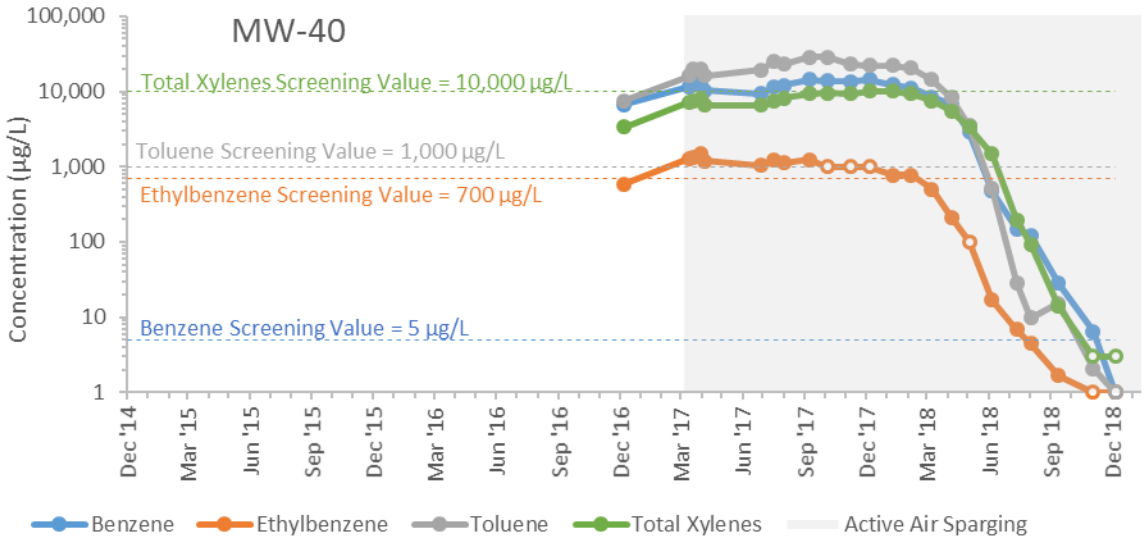
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



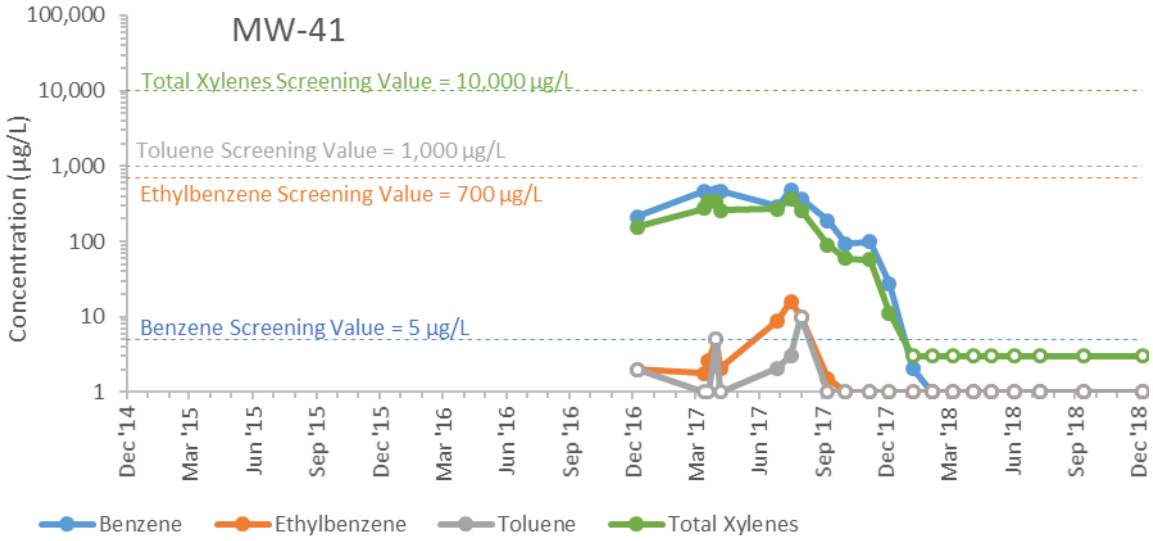
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



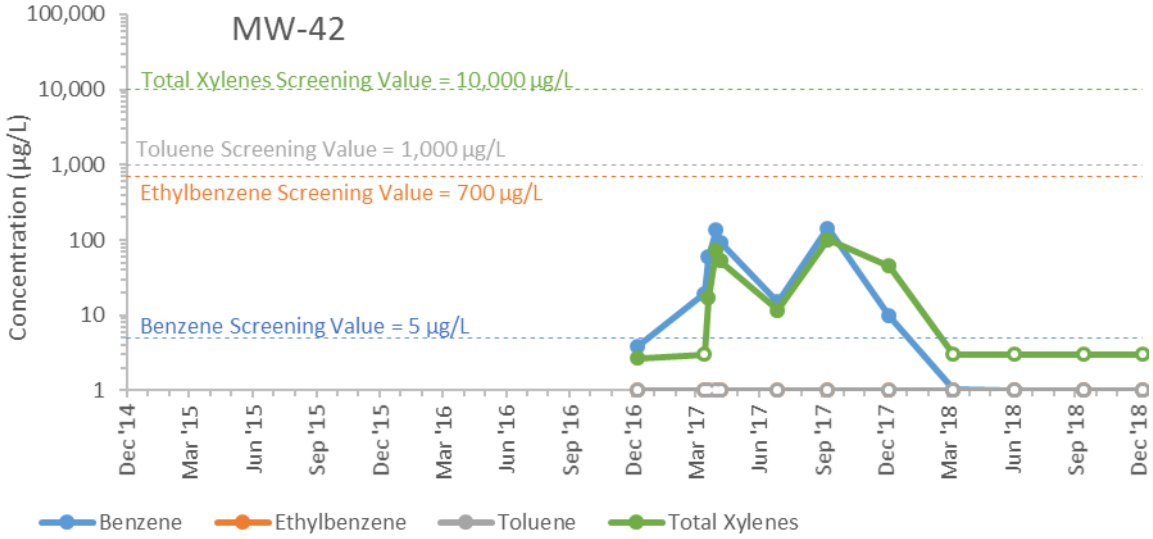
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

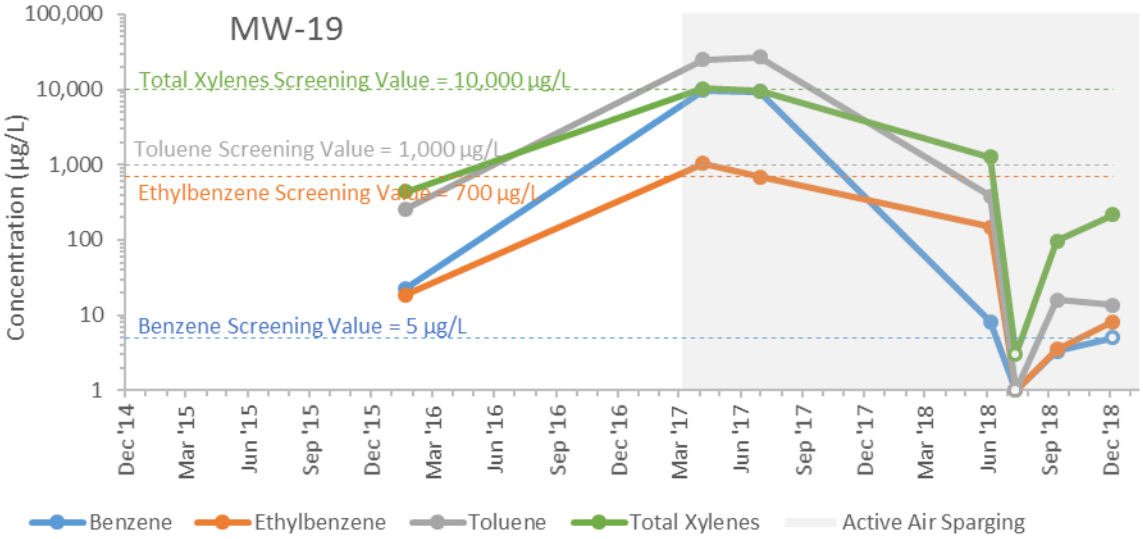


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

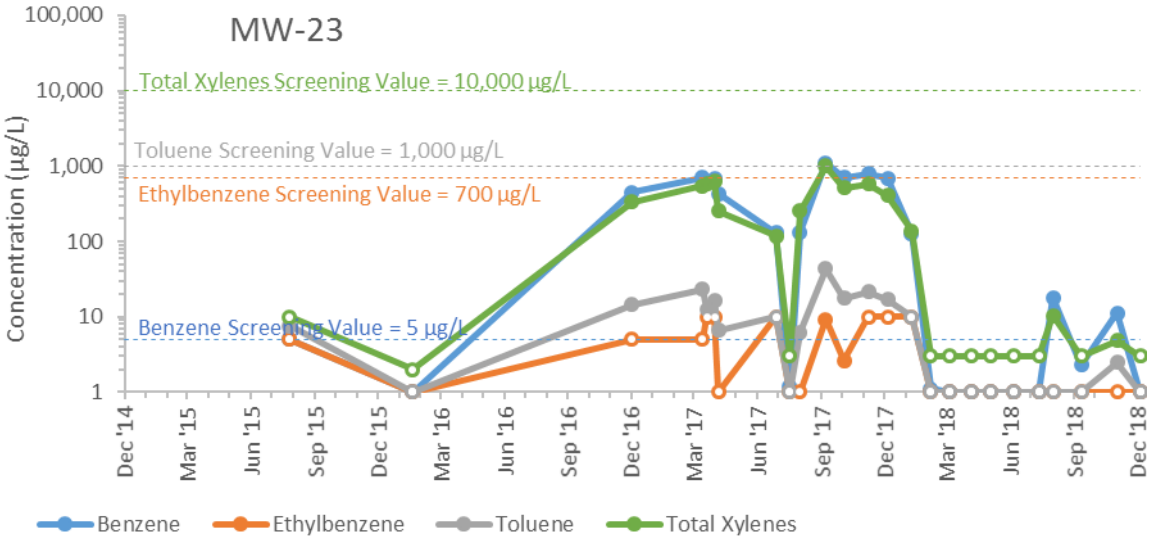


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

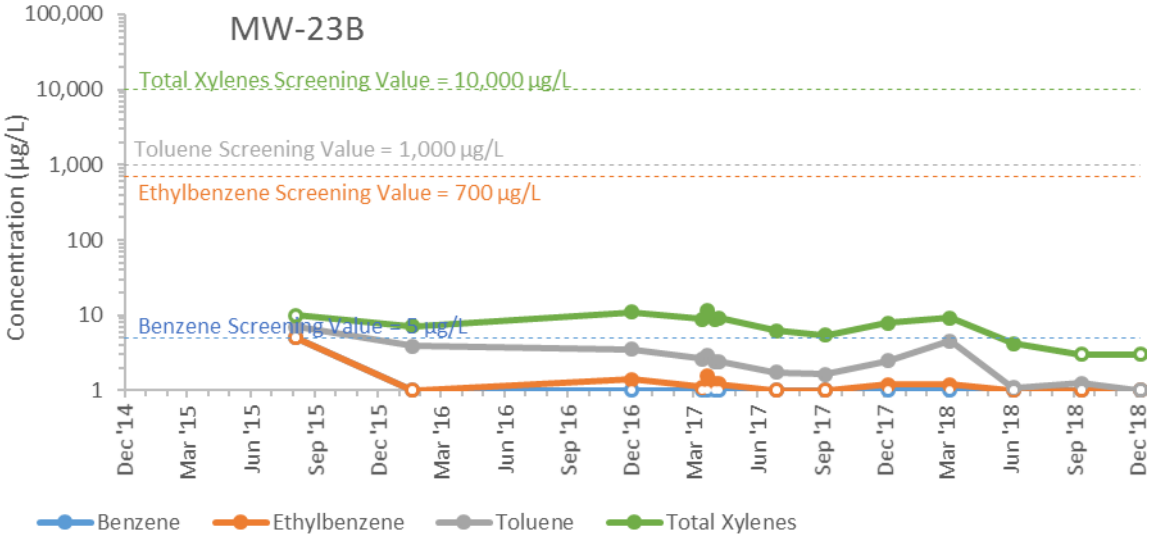
Cupboard Creek Monitoring Well Trends:



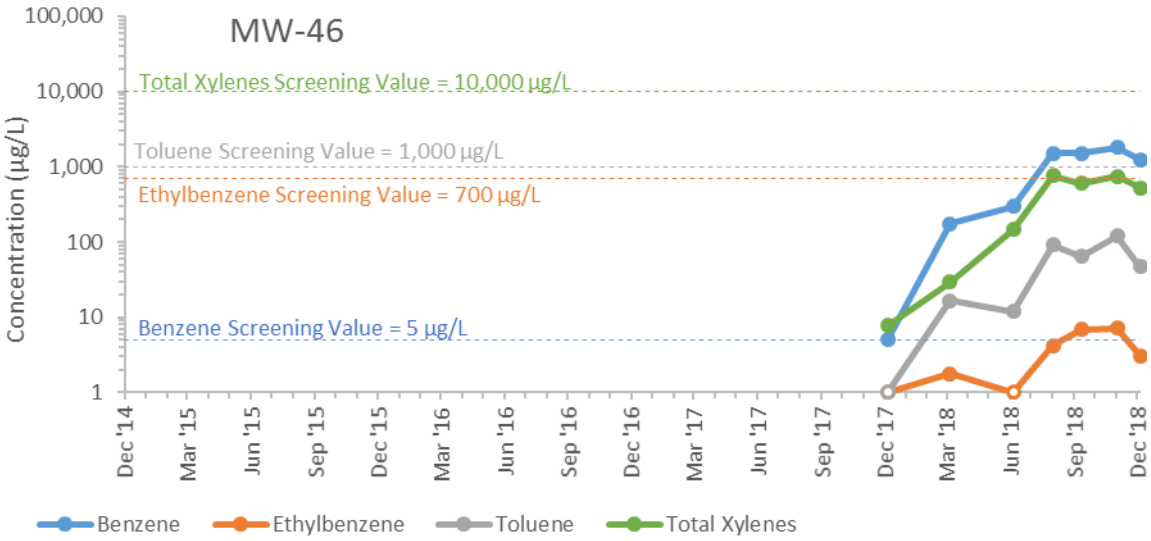
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

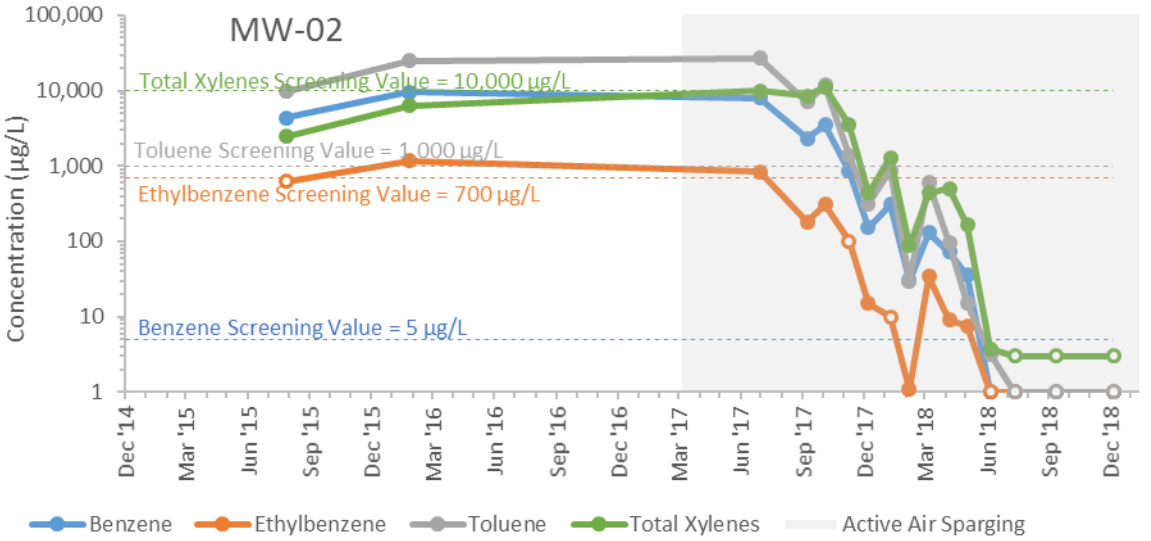


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

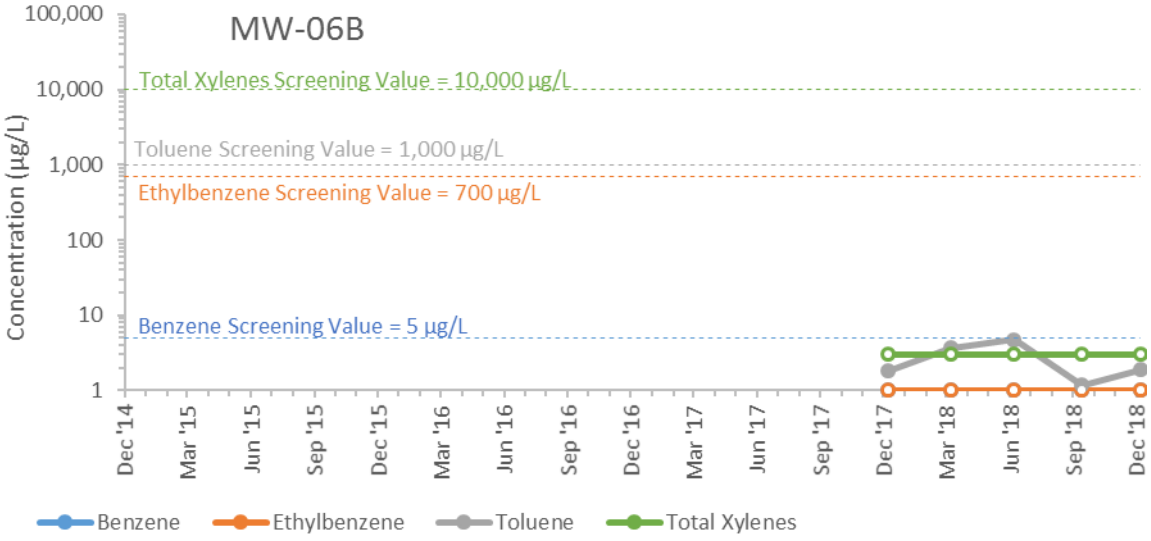


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

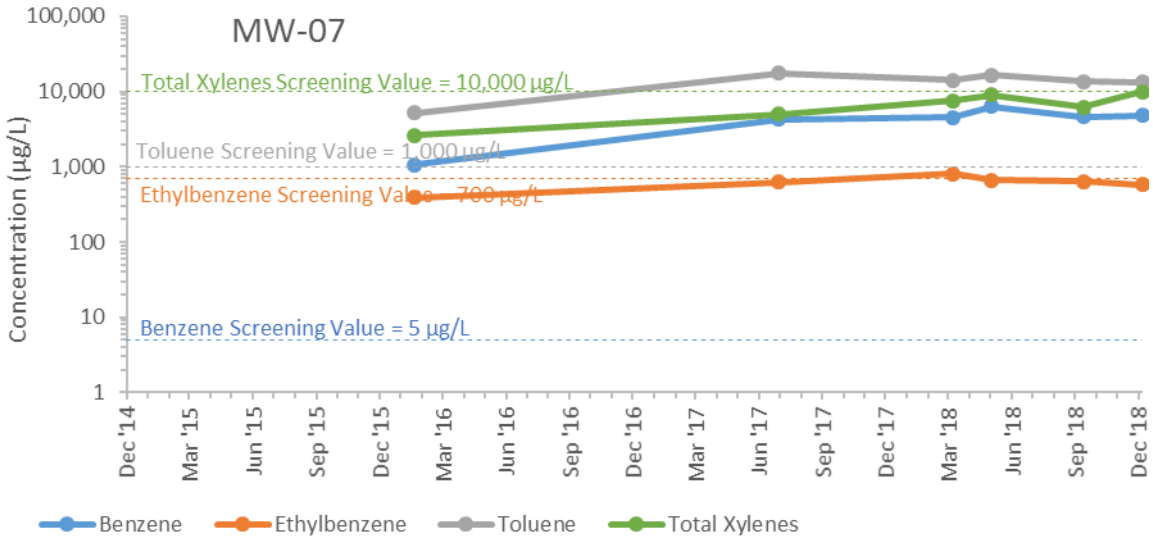
Hayfield Monitoring Well Trends:



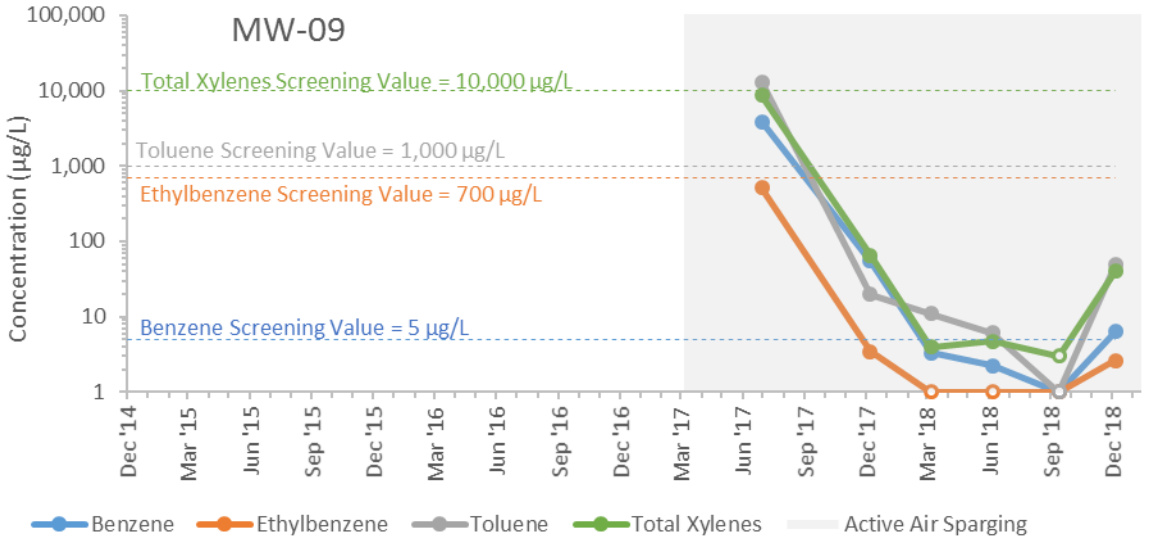
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



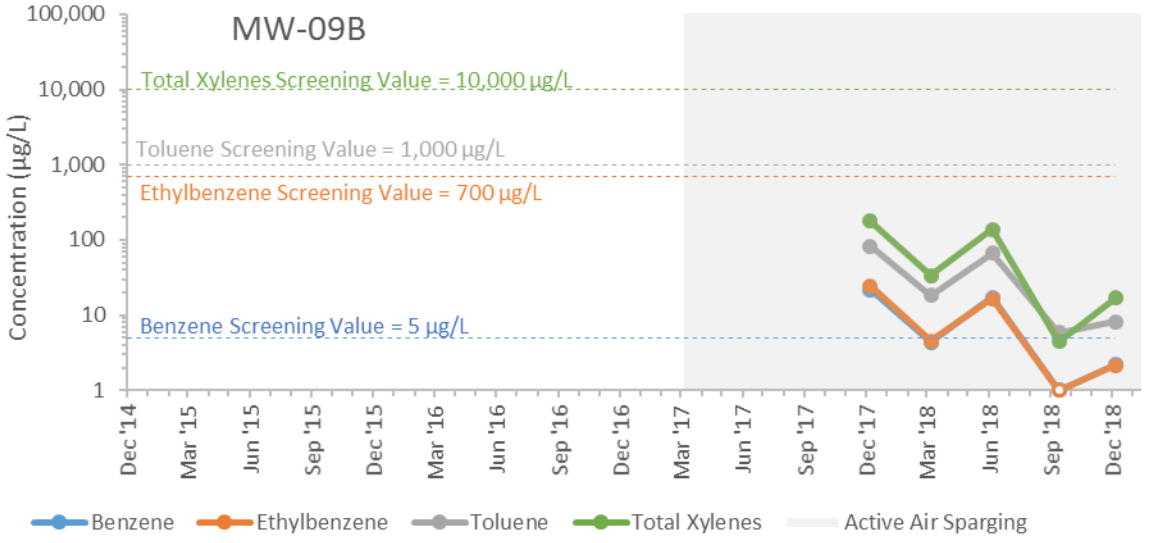
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



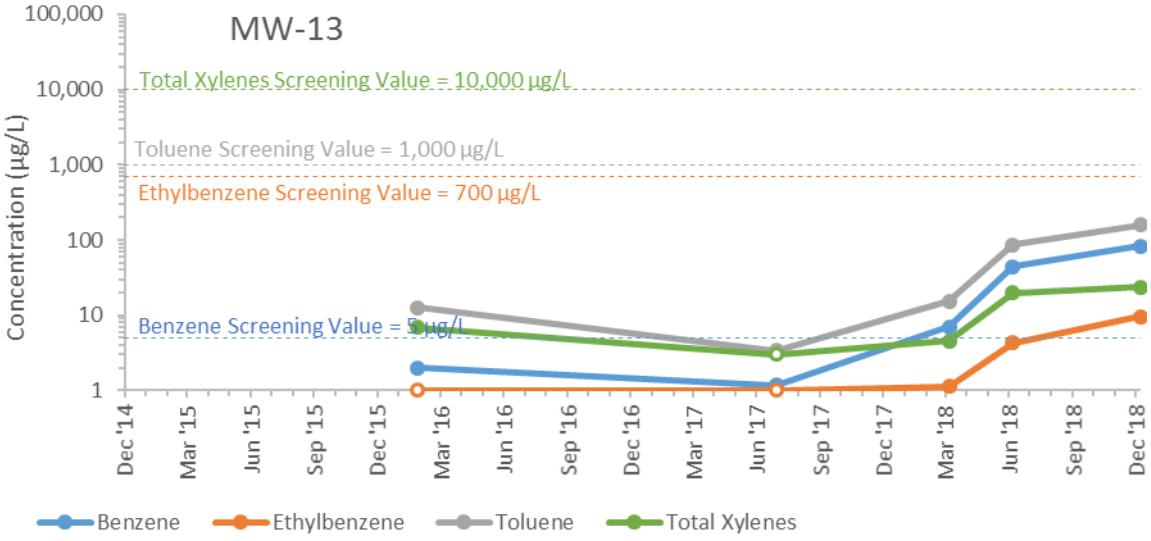
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



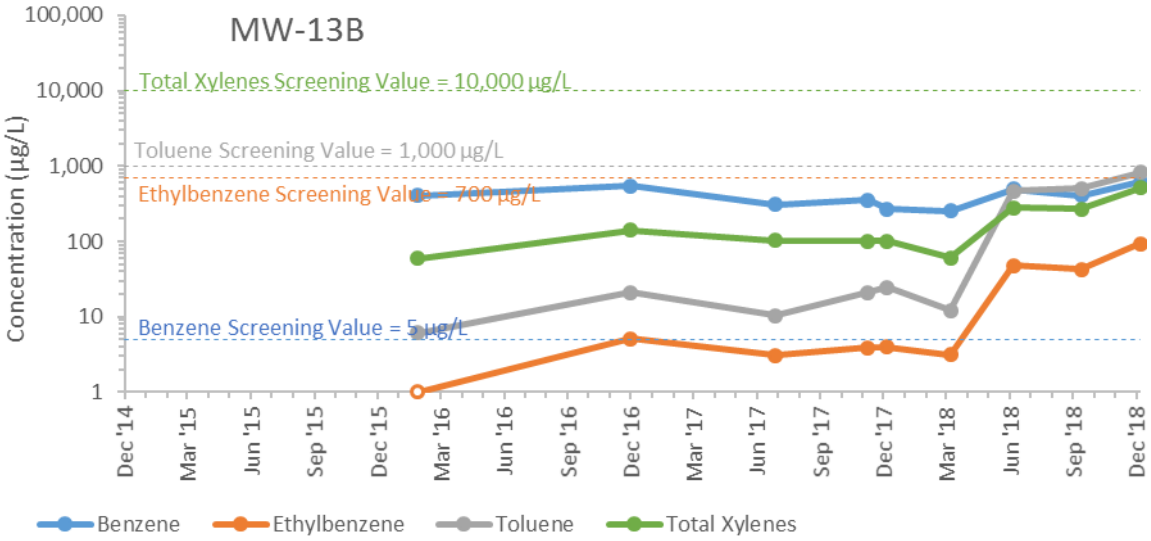
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



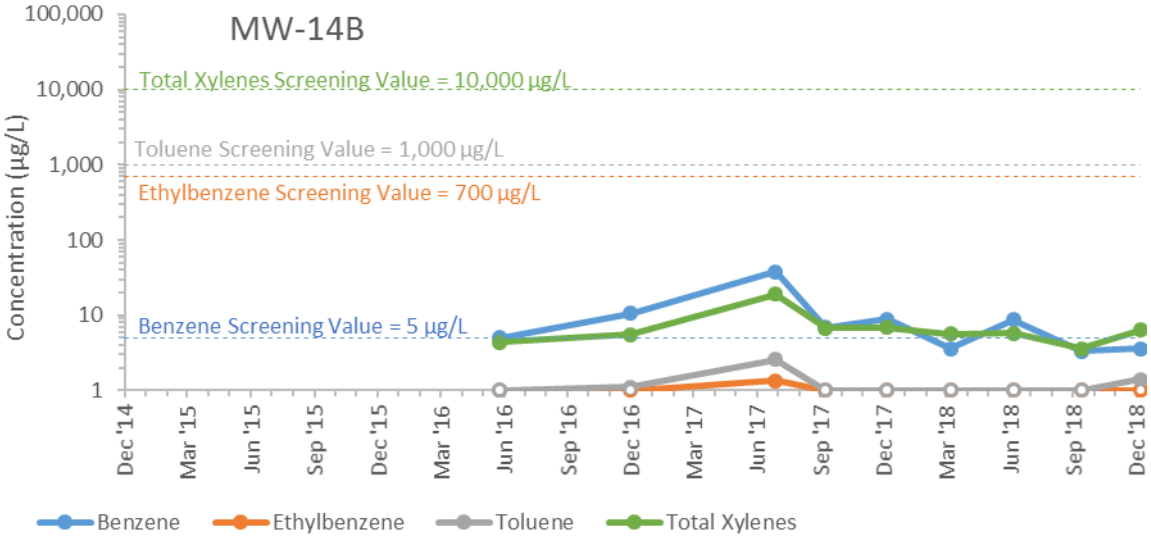
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



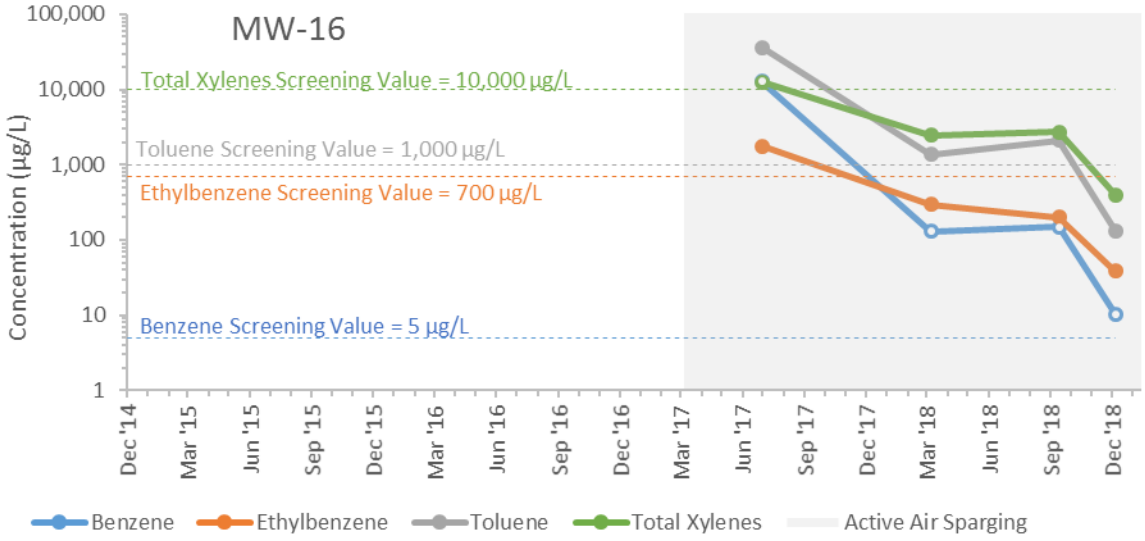
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



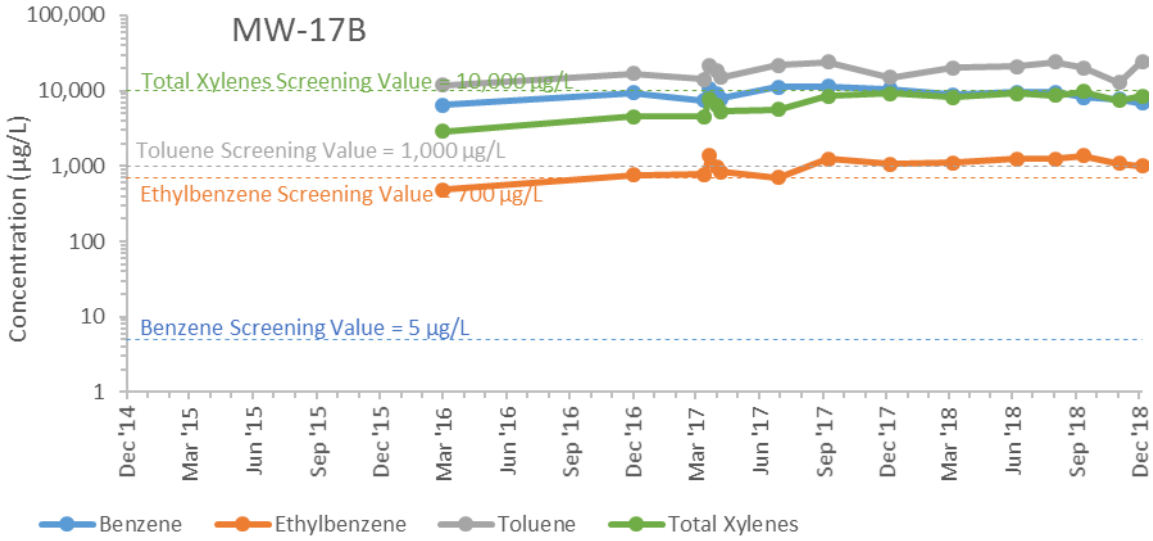
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



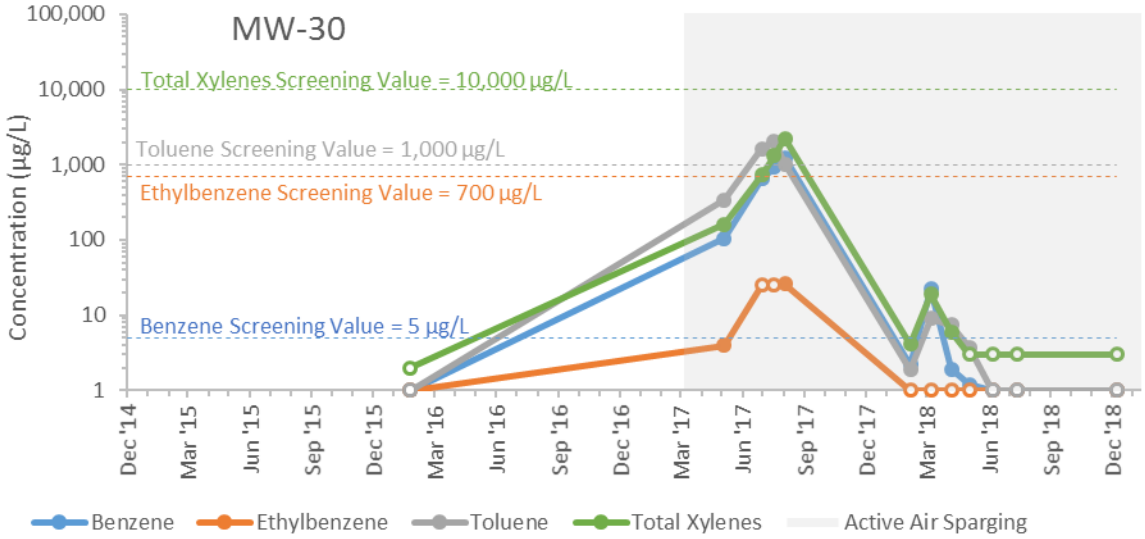
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



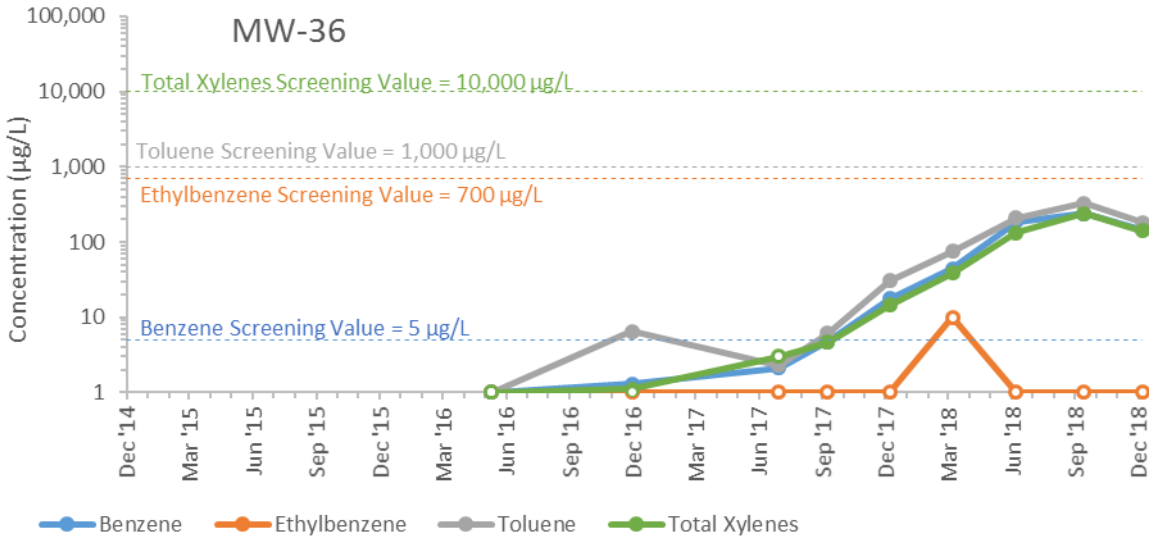
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



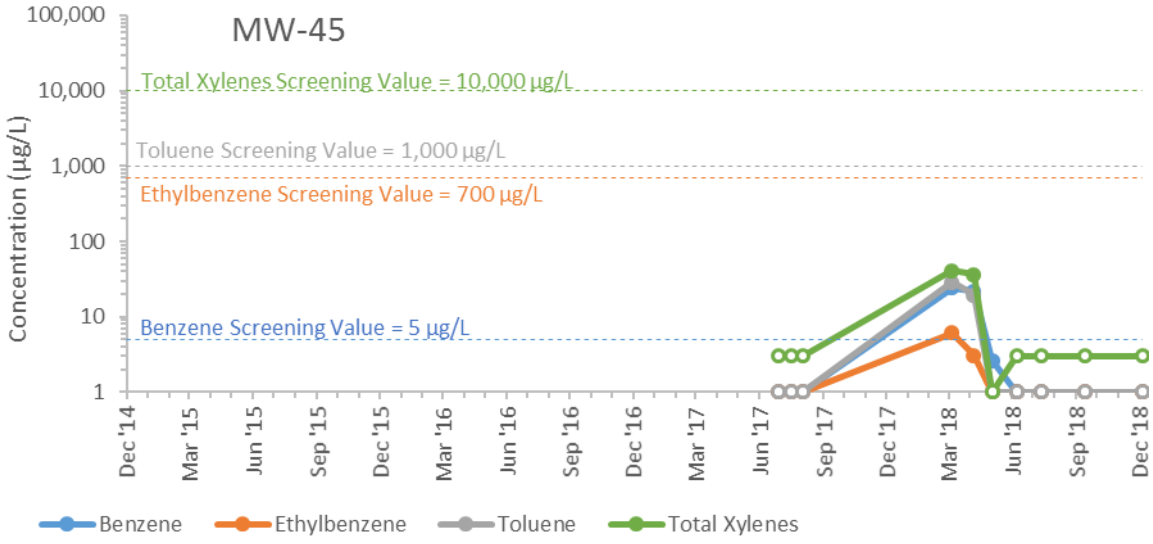
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



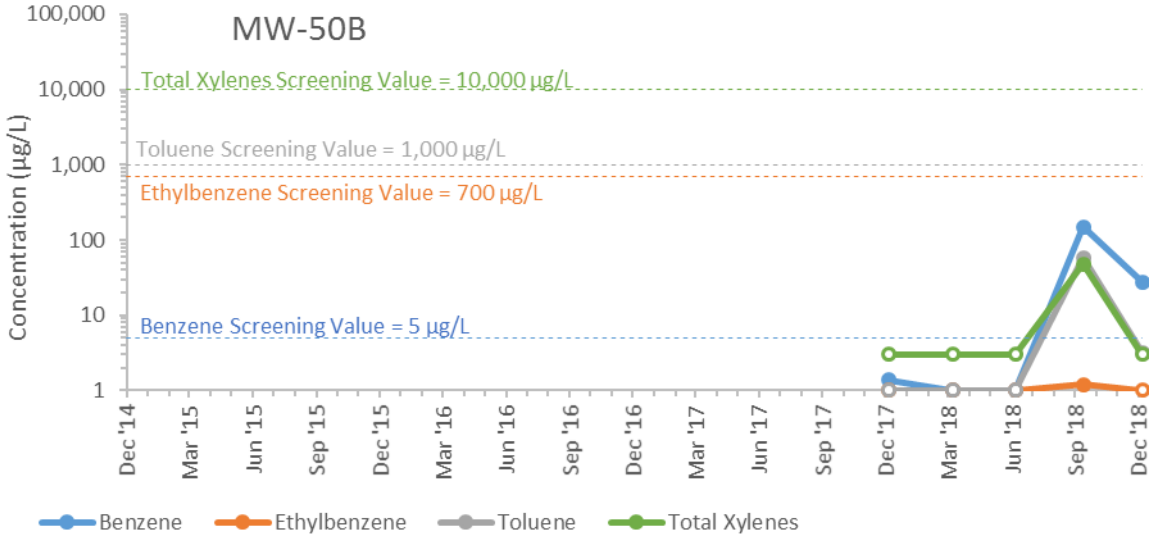
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

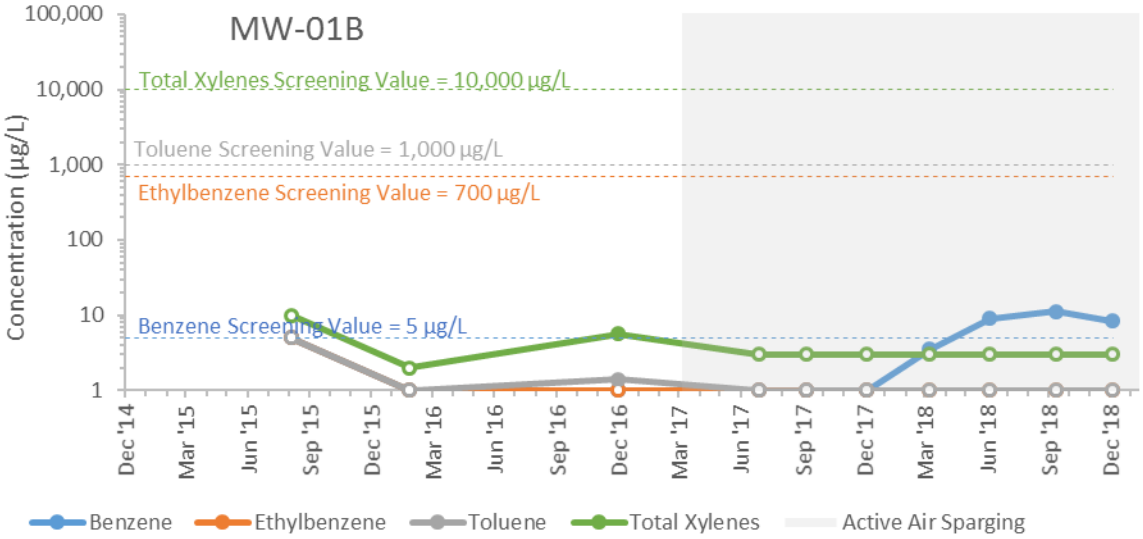


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

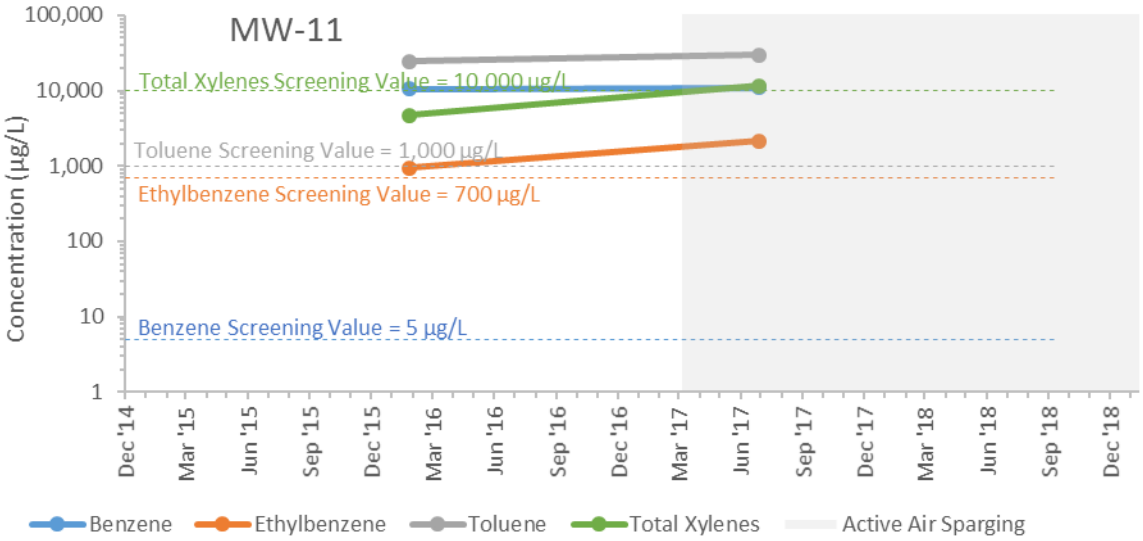


Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.

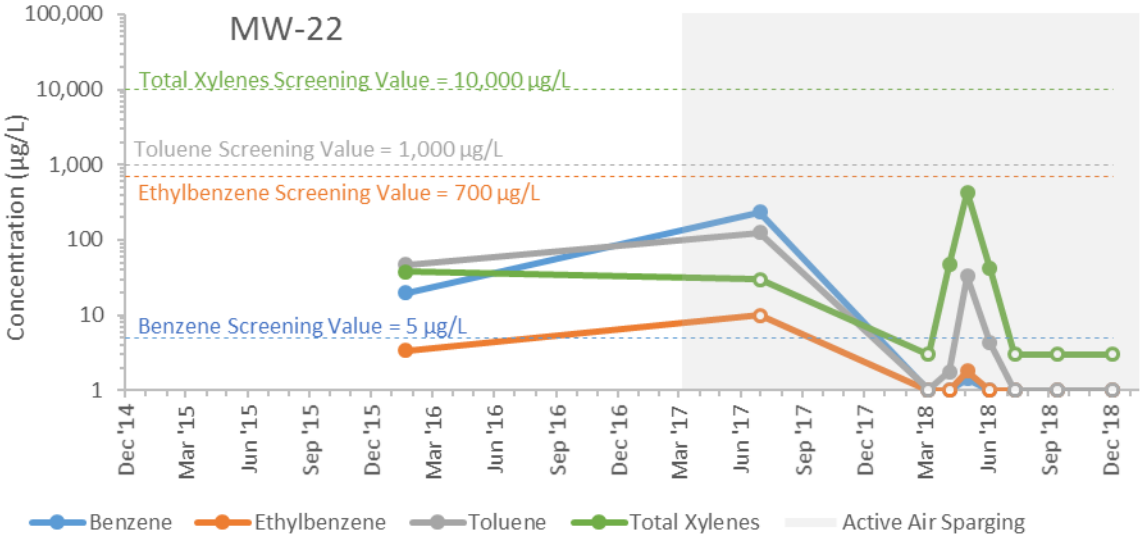
Shallow Bedrock Monitoring Well Trends:



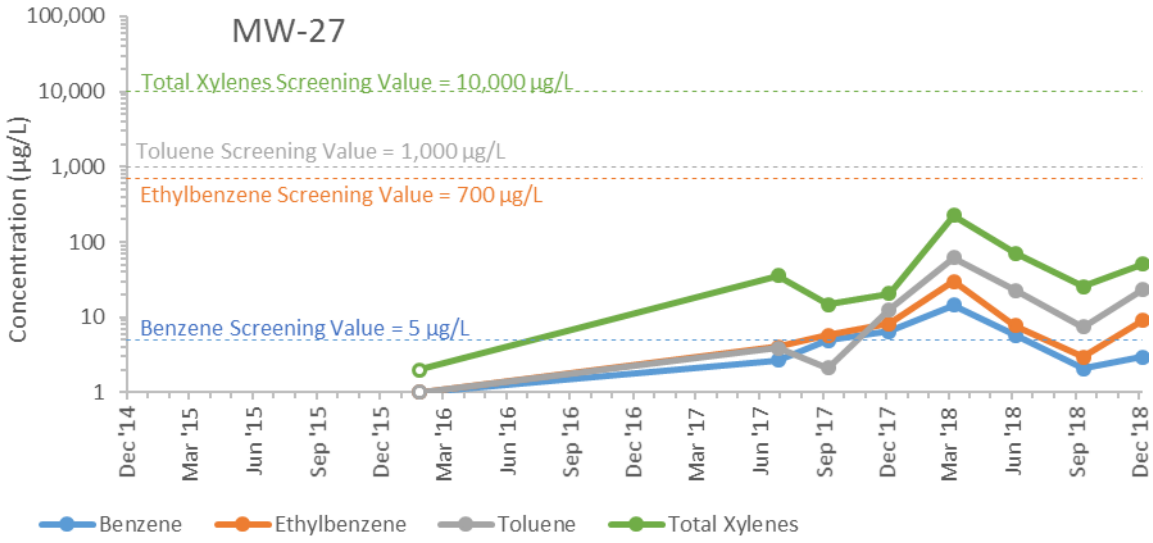
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



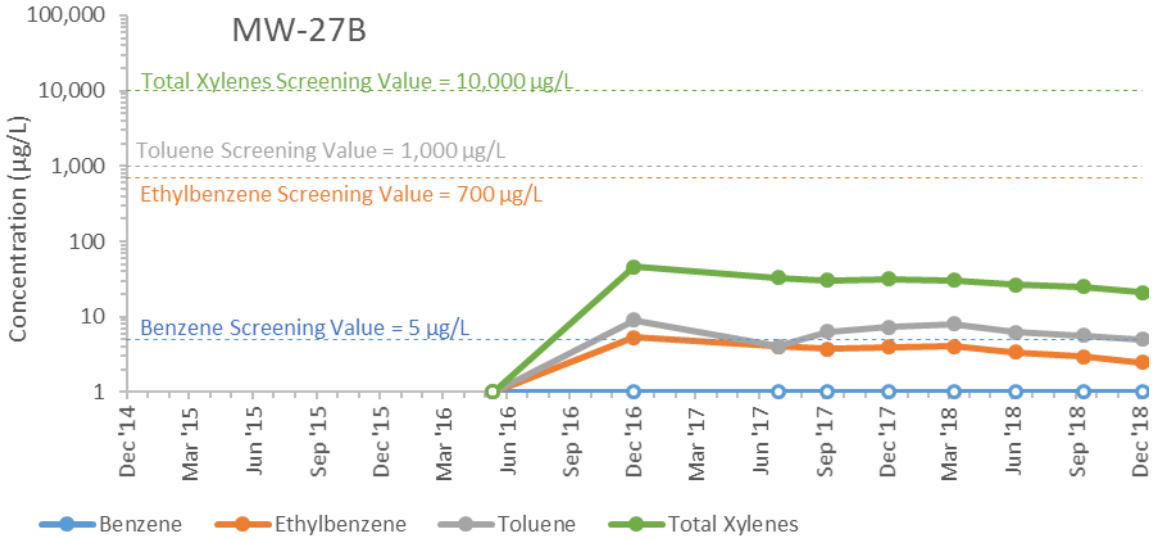
Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.



Note: Open circles denote that the compound was not detected; non-detects are plotted at the reporting limit.